

KAZATOMPROM INTEGRATED ANNUAL REPORT 2021



KAZATOMPROM
NATIONAL ATOMIC COMPANY

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MESSAGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

GRI 102-14

Dear shareholders,

I am pleased to introduce Kazatomprom's integrated annual report for 2021, which contains up-to-date information on the economic, social and environmental aspects of the Company's activities.

Current events in Russia and Ukraine have resulted in increased attention on energy security and diversification of generation sources, pushing nuclear power to the forefront as an indispensable baseload alternative to fossil fuels. Against the backdrop of the global conversation to highlight the climate change challenge and advance the development of low-carbon economies, we have seen politicians, the business community and technical experts showing greater interest in the nuclear industry. As the world's leading producer and supplier of natural uranium, Kazatomprom expects to play a significant role in the energy transition efforts while remaining committed to its long-term value creation strategy. Together with our partners, the Company, meeting high international standards for production and environmental safety, produces over 45% of the world's uranium, using the ISR method.

Despite the ongoing impact of the COVID-19 pandemic throughout 2021, Kazatomprom maintained its leadership position in the international uranium market. That performance efficiency led to a positive impact on the Company's credit ratings, with the international rating agency Moody's upgrading Kazatomprom's rating from Baa3 to Baa2 in 2021, with a stable outlook.

The ongoing development of the Company and the strengthening of its position in the market were facilitated by Kazatomprom's corporate governance system. The primary goal of that system is to increase the long-term value of the Company by building an efficient and transparent business, and by remaining a reliable and efficient partner for customers and shareholders. Based on the results of an independent governance study completed by an international consulting firm last year, Kazatomprom demonstrated a high level of corporate governance, resulting in an upgraded rating from BBB to A.

This result is evidence of the increase in the efficacy of Kazatomprom's internal systems, where protection of shareholders' rights, the efficiency of the Board of Directors and the executive body, as well as the processes that ensure transparency and information disclosure, have all been improved.

In 2021, we saw a number of changes to the composition of the board of directors and the Company's management board, including the departure of our chief executive officer, Mr. Galymzhan Pirmatov. Mr. Pirmatov was instrumental in the success of Kazatomprom's IPO in 2018 and with strong board and management support, he played a key role in establishing robust systems to ensure compliance and transparency. The Company is stronger than ever thanks to the commitment of each top manager and board member, and to those who have departed, we sincerely thank you for your contributions. In alignment with the Company's succession plan and recognizing the need for continuity, Mr. Mazhit Sharipov was appointed to the role of CEO in September, the first time an internal candidate has been promoted to the top position. I am fully confident that Mr. Sharipov's extensive experience and strategic thinking will prove to be of significant value in leading a management group that includes several new top managers, and I am equally confident that the new team will strengthen Kazatomprom's ongoing development to the benefit of all interested parties.

The Company continues to focus on sustainable development. As the world's largest uranium mining company and a leader in the nuclear industry, Kazatomprom understands that it plays a key role in both local and global social development. In its operating regions, the Company continues to be proactive in addressing the impacts of its activities on the environment and in improving social conditions of its employees and surrounding communities. Sustainability is a fundamental component of Kazatomprom's development strategy, and delivering results on our ESG-related goals and objectives is an integral part of our plans. Applying the best international practices in this area, the Company is making significant investments in environmental protection activities, taking all necessary measures to preserve the natural environment around the operations, and using natural resources responsibly to minimize environmental impact.

In 2021, Kazatomprom implemented a number of significant projects. One of the important highlights was the launch of the Company's new plant for the production of fuel assemblies, Ulba FA LLP. The project is a good example of successful multilateral cooperation between the world's leading companies in the nuclear industry. The implementation of an innovative project like Ulba FA LLP for the production of nuclear fuel assemblies is an example of the Company's contribution towards achieving the carbon neutrality goals of the Paris Agreement.

Another significant highlight was the signing of two significant long-term supply contracts with major Chinese energy companies – China National Uranium Company Limited and State Nuclear Uranium Resources Development Company Limited. These business transactions are a testament to Kazatomprom's reputation as a preferred, reliable supplier to the global nuclear fuel market.

During the reporting period, the Company continued to demonstrate strong financial and operational performance notwithstanding the prolonged effect of the global COVID pandemic. In 2021, the payment of dividends to the Company's shareholders based on 2020 results was 52% higher than the dividend paid in 2020. Despite the uncertainty and volatility in international markets caused by external factors, Kazatomprom continues to adhere to its strategy and is delivering value, with great potential to further enhance shareholder value in new growth areas.

The Board of Directors will continue to provide direction and improve the efficiency of the Company's activities, while representing the best interests of all stakeholders in its decision-making.

On behalf of the Board of Directors, I would like to express my gratitude to all of our stakeholders – especially Kazatomprom's shareholders, employees, customers and partners – for their mutually beneficial cooperation in 2021, and look forward to their continued contribution in the years to come.

Neil Longfellow
Chairman of the Board of Directors
Independent Director of NAC Kazatomprom JSC

MESSAGE FROM THE CHAIRMAN OF THE MANAGEMENT BOARD

GRI 102-14

Dear colleagues, partners and investors!

We hereby present Kazatomprom's integrated annual report for 2021, which contains the financial, operational and sustainability results for the national nuclear holding's activities.

Despite the fact that this report is for year 2021, we cannot fail to mention the tragic events of January 2022 that happened in our country. On behalf of the Company, I would like to express gratitude to all employees of the Group for their unity and commitment, and to our partners, customers and shareholders for their support in such a difficult period for the whole country.

We also share the grief with all those affected by the conflict in Ukraine and our sincere hope is for the soonest and peaceful settlement of the situation.

It is important to note that neither the January events in Kazakhstan nor the situation in Ukraine had a significant impact on Kazatomprom operations. All the Company's enterprises keep working without interruption due to the introduction of timely measures to prevent destabilization and to ensure the safety of personnel and production sites. We are monitoring the situation and ready to make decisions that mitigate the risks and provide business continuity and efficiency.

Labor and environmental protection and ensuring industrial, nuclear and radiation safety at all production facilities remains a top priority.

Throughout 2021, the Company successfully coped with all the challenges of the past year, paying considerable attention to building robust business processes and adapting to the pandemic as required, while ensuring the health and well-being of employees, their families and the local population in the regions where the company operates. Thanks to timely preventive measures taken across the organization, there was no significant spread of COVID-19 at our operations, and following effective communications and incentives, nearly all of the Company's employees have now been vaccinated against COVID-19.

Kazatomprom has implemented health and safety management systems that meet international standards at the production sites and as a result of the focus on industrial safety and fostering a culture of safe behavior among employees, there were no industrial accidents at Kazatomprom's enterprises. However, we unfortunately saw the number of accidents and injuries increase compared to last year, including a tragic highway traffic accident that resulted in two fatalities. The Company's management and board of directors took immediate actions to learn and share preventative actions across all operations. In addition, in order to improve road safety awareness, Kazatomprom declared 2022 the Year of Road Transport Security in the Company.

In accordance with the Company's Development Strategy, we continue to improve our performance efficiency and strictly follow key ESG principles. Significant work in this area was completed in 2021, and environmental, social and corporate governance issues will remain among the priorities of Kazatomprom in the future.

The Company is also committed to environmental protection and preserving the natural environment near production sites, and the responsible use of natural resources to minimize its environmental impact.

Despite the challenges of the pandemic, in 2021 Kazatomprom delivered on its operational and financial guidance and kept the position of the largest producer and seller of natural uranium, all without the occurrence of any environmental accidents.

In terms of 2021 financial results, the Company's consolidated revenue was KZT 691 billion, an increase of 18% compared to 2020. Adjusted net profit was 10% higher compared to 2020 reaching KZT 220 billion in 2021, and the total dividend paid out to shareholders in 2021 based on the results of 2020 amounted to KZT 150 billion – an increase of more than 50% over 2020's payment.

During the reporting period, the Company continued working to restructure and dispose of non-core assets in order to focus on growth and value. Kazatomprom sold all enterprises involved in the development of solar energy – including Astana Solar LLP, Kazakhstan Solar Silicon LLP and MK

KazSilicon LLP – to a third party, and Kazatomprom-Damu, a social investment fund that was no longer operational, was also dissolved, reducing the total number of KAP subsidiary companies from 40 to 36.

An important development in the world nuclear community was the creation of the IAEA Group of Vienna, in which Kazatomprom became a co-founder. The Group is expected to serve as a foundation for stimulating innovation in the nuclear sector by expanding efforts to address current global challenges through nuclear technology, while maintaining coordination across industry participants. As a founding member, Kazatomprom will support the international organization in its mission to enhance the contribution of nuclear technology and atomic energy to meet environmental, social and economic goals.

The launch of the Ulba FA LLP plant for the production of fuel assemblies was a significant historical event for the nuclear industry of Kazakhstan. For Kazatomprom, this was a significant step towards the diversification of nuclear fuel cycle products available to customers from the Company. The launch of this innovative enterprise will allow Kazakhstan to enter a limited group of states producing and supplying nuclear fuel for nuclear power plants. This project was implemented under historic cooperation agreements between Kazatomprom and the Chinese nuclear fuel cycle. In accordance with the obligations assumed under the agreements, the Company sold a 49% stake in ME ORTALYK LLP to a subsidiary of CGNPC at fair market value.

Also in 2021, Kazatomprom signed an agreement to invest in ANU Energy OEIC Ltd, a new physical uranium fund established on the Astana International Financial Center platform. The purpose of the fund is to store physical uranium as a long-term investment and provide direct access to commodity-focused funds, sovereign wealth funds, state-owned enterprises, and various categories of emerging market investors, especially those focused on environmental, social responsibility and corporate governance, and clean energy. This project will open new prospects for the development of the uranium industry in Kazakhstan and beyond.

Advancing further cooperation in the scientific and technical sphere, Kazatomprom signed an agreement with the “National Nuclear Center of the Republic of Kazakhstan”, a State enterprise. Under this agreement, scientific and technical projects related to atomic energy, research related to nuclear installations and transportation packaging, and reactor testing of viable materials and components of nuclear fuel will be funded and delivered.

Social development in the regions where the Company is present and the improvement of the quality of life of the local population is also very important to us. In 2021, Kazatomprom implemented a number of social projects, such as the construction of modern children's playgrounds and sports grounds in seven settlements of the Turkestan and Kyzylorda regions. As a socially responsible company, Kazatomprom plans to continue consistent implementation of measures aimed at maintaining strong long-term relationships with local communities.

Kazatomprom will continue to follow its strategy and create long-term value for all stakeholders. I am confident that favorable prospects of the uranium market will strengthen the competitiveness of Kazatomprom, and we will achieve even greater success and deliver strong results in all of the Company's priority areas.

Mazhit Sharipov
Chairman of the Management Board
NAC Kazatomprom JSC

KAZATOMPROM AT A GLANCE – KEY FIGURES 2021

Indicator	2020	2021	Change
Production highlights			
Kazatomprom's ranking in global uranium mining and sales	1	1	–
Kazatomprom's share of the global natural uranium mining market (based on attributable share of production), %	22.5%	24%	1.5%
Kazatomprom's uranium output (in proportion to the shareholding), tonnes	10,736	11,858	10%
Niobium product output, tonnes of Nb	15.4	14.2	(8%)
Beryllium product output, tonnes of Be	1,364.5	1,402.6	3%
Tantalum product output, tonnes of Ta	149.6	163.3	9%
Fuel pellet output, tonnes	60.3	43.5	(28%)
Financial highlights			
Group's revenues, KZT billion	587.5	691.0	18%
Operating profit, KZT billion	223.9	238.2	6%
Net profit, KZT billion	221.4	220.0	(1%)
Net debt/adjusted EBITDA	-0.05	-0.33	>100%
Capital expenditure of mining companies (on a 100% basis) ¹ , KZT billion	60.9	91.1	49%
Earnings per share, KZT/share ²	708	543	(23%)
Adjusted earnings per share, KZT/share ³	769	848	10%
Dividends paid, KZT billion	99.0	150.1	52%
Staff and social sector			
Headcount, employees (100% across the Holding)	21,019	20,643	(2%)
Female share of total headcount, %	18%	18%	
Contributions to budgets for the social and economic development of the regions where the Company operates, KZT million	1,537.3	1,608.6	5%
Occupational Health & Safety			
LTIFR (per 1 million man-hours)	0.25	0.55	120%
Unsafe conditions, unsafe acts, near-miss reporting	35,529	44,271	25%
Number of accidents	8	9	13%
Number of fatalities	1	2	100%
Environmental Performance and Energy Consumption			
Gross energy consumption (heating and electricity), '000 GJ	3,836	4,132	8
Total water withdrawal, '000 m3	10,452.3	10,120.7	(3%)
Gross GHG emissions, t CO ₂ eq	92,590	106,910	15%

¹ Including non-consolidated uranium mining enterprises, JVs and associates, on a 100% basis; not including liquidation funds and liquidation costs, but including general expansion expenses (JV Inkai LLP, Karatau LLP, and JV Katco LLP) of KZT 4.4 billion in 2021 and KZT 2.2 billion in 2020.

² Earnings per share attributable to owners of the Company, basic and diluted, (KZT/share) is calculated as net earnings attributable to owners, divided by the total number of issued shares and rounded to the nearest KZT.

³ Adjusted earnings per share is calculated as net earnings (including net earnings attributable to owners of the Company and non-controlling share) plus/minus one-off effects affecting the Company's annual profit, divided the total number of issued shares and rounded to the nearest KZT.

MILESTONES 2021

April

- Company liquidated Kazatomprom-Damu LLP
- April 21 – Company held an annual competition under the Business Transformation Portfolio
- April 22 – sale and purchase agreement was signed to sell 49% share of ME ORTALYK LLP to a subsidiary of China General Nuclear Power Corporation (CGNPC)
- April 30 – an online forum under the Kazatomprom Business Transformation Strategy and Implementation programme was held

May

- Ulba FA LLP plant received the first order from CGNPC-Uranium Resources Co (CGNPC-URC) to supply fuel assemblies to Chinese nuclear power plants in 2022

July

- July 15-22 – Company paid KZT 150.1 billion in dividends, or KZT 578.67 per ordinary share (one GDR equals one ordinary share)

August

- August 12 – Moody's Investors Service upgraded the Company's rating from Baa3 to Baa2, with stable outlook

September

- September 23 – NAC Kazatomprom JSC became a co-founder of the Vienna Group during the 65th Annual General Conference of the International Atomic Energy Agency (IAEA)
- September 24 – Ulba FA LLP had its fuel fabrication licensed in cooperation with Framatome, receiving the AFA 3G AA Fuel Assembly Production Certificate
- September 24 – first SAP Expert Club meeting, aimed at FI Module related discussions. The Club brought together 52 users from headquarters, Ulba Metallurgical Plant JSC, APPAK LLP, Baiken-U LLP, ME ORTALYK LLP, K-SU LLP, Kyzylkum LLP, RU-6 LLP, and Trading and Transportation Company LLP

October

- October 29 – Ulba FA LLP was recognised by CGNPC-URC as a certified supplier of fuel assemblies to Chinese nuclear power plants

November

- November 5-10 – Company took part in China International Import Expo 2021, Shanghai, held in an online format. On the sidelines of the event, Kazatomprom signed two contracts for the supply of Kazakhstani natural uranium concentrate, one with China National Uranium Company Limited (CNUC), and one with State Nuclear Uranium Resources Development Company Limited (SNURDC)
- Kazatomprom officially signed a framework agreement with Genchi Global Limited to invest in ANU Energy OEIC Ltd Physical Uranium Fund registered with Astana International Financial Centre (AIFC)
- November 10 – Company held an official opening ceremony to launch Ulba FA LLP
- November 19 – 100% shares at KazPV project related subsidiaries – Kazakhstan Solar Silicon LLP, Astana Solar LLP and MK Kazsilicon LLP were sold
- November 26 – an online event under the Kazatomprom Business Transformation programme was held

December

- Following an independent assessment conducted in 2021, the Company's corporate governance rating was upgraded from BBB to A
- Kazatomprom introduced a contouring tool powered by machine learning technologies at JV Khorasan-U LLP, Baiken-U LLP, and Semizbay-U LLP
- Wave 2 of the Integrated Planning System at JV Inkai LLP and Semizbay-U LLP was introduced
- December 30 – sale and purchase agreement on the sale of 40% share at Caustic JSC was concluded between the Company and United Chemical Technologies Trading House LLP, one of the majority shareholders of Caustic JSC
- JV Budenovskoye LLP received an addendum to Subsoil Use Contract for commercial production at blocks 6 and 7 of the Budenovskoye field

- The Company received Subsoil Use Contract for the commercial production of uranium at the Zhalpak field transferred to ME ORTALYK LLP

Kazatomprom Business Model

CAPITAL	STRATEGIC GOALS	OPERATIONAL CYCLE		COMPETITIVE ADVANTAGES	VALUE CREATION
Financial capital	Focus on uranium mining as the core business	MINING		World's largest uranium producer	Revenues – 691.0 billion KZT Dividends paid – 150.1 billion KZT
Natural resources	Streamline production, processing, and sales based on market conditions	NATURAL URANIUM: U ₃ O ₈ 88% of Company's revenues	26 deposits/blocks 14 mining assets	Effective and environmentally efficient mining technologies	Environmental protection – 964.6 million KZT
		RARE METALS: Nb ₄₁ Be ₄ Ta ₇₃	PRIMARY URANIUM MINING Current line of business		Energy efficiency – 840.0 million KZT
Production capital	Create value by enhancing our marketing function and expanding sales channels	PROCESSING		Kazakhstan's national operator	Capital expenditures – 97.4 billion KZT ⁴ Procurements – 227.6 billion KZT
Intellectual property	Introduce best-practice business processes	REFINING AND CONVERSION New line of business	PRODUCTION OF U₃O₈ Current line of business	Successful implementation of partnership projects	Staff training expenses 1.5 billion KZT ⁵
		ENRICHMENT Access to uranium enrichment services			R&D – 3.2 billion KZT
		RECONVERSION, PRODUCTION OF URANIUM DIOXIDE	PRODUCTION OF NUCLEAR FUEL New line of business		

⁴ Includes unconsolidated enterprises – joint ventures and joint-stock companies, 100%, as well as liquidation funds and closure costs.

⁵ Includes expenses for employee professional development, training and retraining, preservation and transfer of knowledge in the Group.

**POWDERS AND
FUEL PELLETS**

Current line of
business

Human capital	Develop a corporate culture appropriate to an industry leader	DISTRIBUTION	Responsible approach to business	H&S investments – 8.29 billion KZT
Social capital and reputation	Sales of uranium products: under long-term and short-term contracts, as well as in the spot market through its Switzerland-based trading subsidiary.	DISTRIBUTION Current line of business	Risk management	Headcount 20,643 employees Contributions to regional development – 1.609 billion KZT
	China, Southeast Asia, North America, South America, Europe	TRANSPORTATION Current line of business		

1. BUSINESS PROFILE

GRI 102-1

Kazakhstan is a uranium mining industry leader, providing more than 45% of the global uranium demand annually, aimed at covering the world's nuclear energy needs. As the national operator of the Republic of Kazakhstan for the exports and imports of uranium, and nuclear fuel for nuclear power plants Kazatomprom has the priority access to one of the world's largest resource bases.

Key indicators and achievements

24% of the global uranium production

14 mining assets

4 exploration projects

100% of reserves can be extracted by in-situ recovery

UN Sustainable Development Goals relevant to Kazatomprom



1.1. Core Operations and Products

GRI 102-2

Kazatomprom is the largest global producer of natural uranium with priority access to one of the world's largest uranium reserves.

Core operations:

- Natural uranium mining
- Production of uranium products
- Prospecting and exploration
- Producing rare metals

Kazatomprom is:

- The world's largest uranium producer: in excess of 20% of the world's uranium production
- Owner of the largest uranium reserves with priority access to a high-quality resource base
- Low-cost and easy-to-scale uranium mining by in-situ recovery
- Industry leader in operational efficiency, occupational health and safety as well as environmental protection
- A leader in the development of strategies for the sustainable, long-term future of the uranium market

1.2. Company's Asset Structure

14 mining assets operating in 26 deposits/blocks located in Kazakhstan, using the insitu recovery (ISR) mining method, including:

- 2 wholly owned uranium mining subsidiaries operating at 5 uranium deposits/blocks
- 12 uranium mining companies partly owned by Kazatomprom that operate in 21 uranium deposits/blocks

Kazatomprom's key assets in 2021

Company	Asset description
Subsoil use	
Subsoil use contracts that grant the Group's subsidiaries mining rights in relation to 17 uranium deposits/blocks located in Shu-Sarysu and Syrdariya regions of Kazakhstan	Proven and probable ore reserves: 351,500 tonnes of UME Measured and estimated mineral resources: 499,400 tonnes of UME
Subsoil use contracts that grant Group's joint ventures and associates mining rights in relation to 9 uranium deposits/blocks in the Shu-Sarysu, Syrdariya, and North Kazakhstan regions	Proven and probable ore reserves: 273,900 tonnes of UME Total mineral resources (including measured, indicated, and inferred resources): 285,00 tonnes of UME
Production	
Ulba Metallurgical Plant JSC	Annual productivity: <ul style="list-style-type: none"> • 3,728 tonnes of U₃O₈ • 317 tonnes of UO₂ powder made from UF₆ • 155 tonnes of UO₂ powder • 108 tonnes of fuel pellets • 1,626.9 tonnes of beryllium products • 141.9 tonnes of tantalum products • 25.2 tonnes of niobium products
Commerce	
Trade House KazakAtom TH AG	Uranium trading
Ancillary businesses	
SKZ-U LLP SSAP LLP	680,000 tonnes of sulphuric acid – total annual production capacity
Volkovgeologia JSC	A prospecting and drilling company
Trade and Transport Company LLP	Transport and logistics company serving production assets
Qorgan-Security LLP	Security services for Kazatomprom, its subsidiaries, and affiliates
KAP Technology LLP	Ensures local and corporate telephone communications, data transmission, and VHF radio communications services to Kazatomprom's entities
Uranenergo LLP	Electricity transmission and distribution, operations of power grid and stations, reliable and uninterrupted power supply to uranium mining enterprises of Kazatomprom
Science, Engineering and Education	
Institute of High Technology LLP	Addresses strategic objectives in Kazakhstan's nuclear sector to drive its innovative development, technological upgrade, palpable improvement in the quality and competitiveness of knowledge-intensive products, conducts R&D activities, works to introduce innovations in the sector, employees training and retraining

1.3. Geography and Market Presence

GRI 102-4

Mineral assets

Company's mineral assets are located in four key administrative districts of Kazakhstan:

- Kyzylorda Region (Shieli and Zhanakorgan districts)
- Turkistan Region (Sozak and Otyrar districts)
- North Kazakhstan Region (Ualikhanov District)
- Akmola Region (Enbekshilder District)

Location of mineral assets and mines



Kazakhstan's uranium provinces and distribution of uranium reserves based on the State Commission on Mineral Reserves standards⁶

Province	Reserves
Caspian	3.1%
North Kazakhstan	13.1%
Shu-Sarysu	66.8%
Pribalkhashskaya	0.7%
Syrdarya	10.2%
Eli	6.1%

⁶ State Commission on Mineral Reserves. Distribution of uranium reserves, in percent. Information provided as of 01.01.2021.

1.4. Uranium Products Market Overview

GRI 102-6

Key highlights, 2021

Global uranium demand with regards to nuclear power plant reactor needs and commercial and strategic reserves	81.8, k tU
Global uranium supply	82.7, k tU
Global natural uranium production	48.4, k tU
Average spot quotes	\$35.05(w) / \$35.28 (m)

Significant developments in the global uranium market

Green Taxonomy of EU	The European Commission has decided to include nuclear energy and natural gas in the EU Green Taxonomy. Within the framework of the taxonomy, restrictions are introduced addressing nuclear energy projects in terms of minimizing radioactive waste. At the time of writing, it was decided that, in the absence of comments, the act on the adoption of taxonomy will take effect on January 1, 2023.
China	Chinese government ratified its 14th Five-Year Plan, covering a wide range of economic goals and providing an overview of the country's plans to develop its energy infrastructure. The plan continues to strongly support nuclear power, envisaging an increase of nearly 40% compared to 2020, with some 70 GW of nuclear power capacity by the end of 2025. By 2030, the capacity is expected to increase up to 100 GW.
Climate Strategy	The UN Climate Change Conference 2021 (COP 26) took place between October 31 – November 13, 2021. According to the Agreement adopted by countries, COP 26 recognizes that limiting global warming to 1.5°C requires rapid, deep and sustained reductions in global greenhouse gas emissions, including a 45% reduction in carbon dioxide by 2030 compared to 2010 levels. The Climate Pact does not specify any technologies, but these decisions implicitly support the accelerated introduction of nuclear power due to its low emissions.
Financial investment companies	In addition to various end-users of uranium products, in 2021 there was an active involvement of financial investment companies focusing on physical uranium storage and representing 'non-traditional demand'. The most significant event was the completion of Sprott Asset Management LP's acquisition of Uranium Participation Corporation (UPC) in July and the subsequent listing of Sprott Physical Uranium Trust (SPUT) on the Toronto Stock Exchange. SPUT used the proceeds of the ongoing investment units for an active campaign to procure natural uranium.
COVID-19	The world continues to struggle with the COVID-19 pandemic, with a focus on rolling out mass vaccination and re-vaccination campaigns. This adversely affected uranium production in a number of countries as operations were closed to protect employee welfare.
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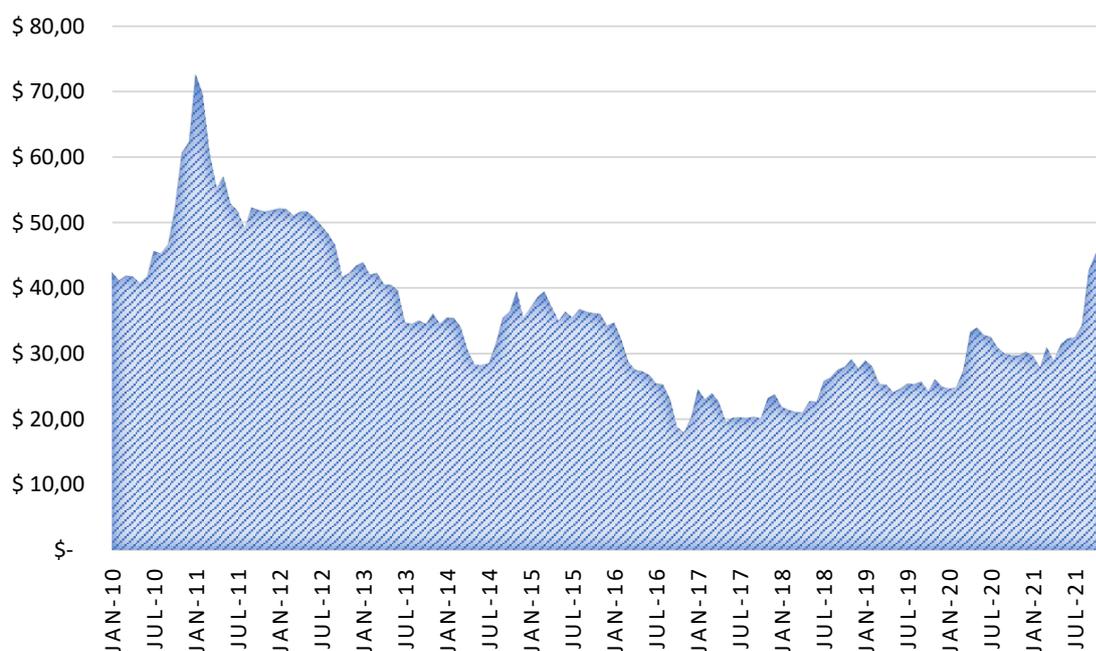
Pricing

As the sale of natural uranium and uranium products is the main source of the Company's income and profit, market prices for uranium products have a significant impact on the Company's financial performance.

Supply-demand balance shapes the market price for uranium products, as for any commodity. The average sales price of uranium sold by any major producer is also quite dependent on the types of contracts concluded and the structure of their sales portfolio (terms, price formulae used in each contract, the proportion of spot and long-term contracts, etc.).

Kazatomprom expects that nuclear power, as a reliable source of carbon-free, base-load electricity, will underpin its position in the broader energy market, resulting in greater demand for uranium in years to come. Kazatomprom is well placed to benefit from this, as it is the key low-cost producer.

Uranium prices, 2010–2021, USD per lb U₃O₈⁷



⁷ Source: TradeTech, UxC.

Uranium output in 2021

GRI 102-7

In 2021, Kazatomprom produced 11,900 tonnes of uranium, which equals 24% of global production which ranked it first globally in terms of natural uranium production. In the context of continued production cuts by a number of key competitors, by the end of 2021, Kazatomprom ranks first in the world in the natural uranium mining.

In August 2021 Kazatomprom announced its intention to continue cutting production by 20% in 2022 against targets under subsoil use contracts. The decision to cut production for another year will reduce the projected global primary uranium output by 5,500 tonnes in 2022, but maintain the uranium production in Kazakhstan at a level similar to that expected in 2021.

At the same time, Kazatomprom plans to maintain production in 2023 at the same level as in 2022, which is expected to be 20% lower than the projected volumes under the subsoil use contracts, keeping production almost at the same level in 2022 and 2023.

On June 24, 2021 Kazatomprom announced the plan to develop blocks 6 and 7 of the Budenovskoye field for the period between 2021- 2045 with a ramp up in production to 2,500 tons of uranium not earlier than 2024, and a maximum possible annual production capacity of up to 6,000 tons of uranium not before than 2026. Specific commissioning dates and future annual production volumes are subject to annual review, and actual production volumes are subject to change depending on Kazatomprom's ongoing analysis of market conditions. According to the written agreements with the JV partners, the entire expected production volume of the JV Budenovskoye between 2024-2026 is fully reserved for feedstock supply to the Russian civil nuclear power industry on market terms under an off-take contract.

Reactors commissioning and decommissioning in 2021

6 nuclear reactors with a total capacity of 5.3 GW were put into operation	
3	China
1	India
1	Pakistan
1	UAE
9 nuclear reactors with a total capacity of 7.7 GW were phased out	
3	Germany
3	United Kingdom
1	United States
1	Pakistan
1	Taiwan Island (China)
Construction of 8 nuclear reactors with a total capacity of 7.0 GW began	
6	China
1	Turkey
1	Russia

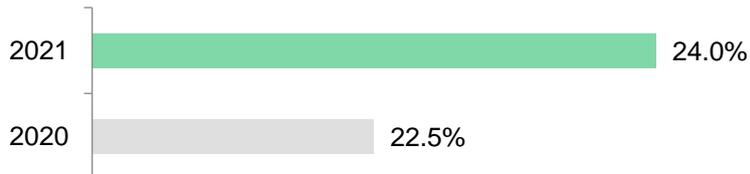
1.5. Analysis of Performance Dynamics

1.5.1. Production highlights

GRI 102-6, 102-7

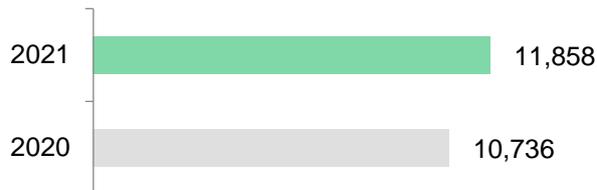
In 2021, Kazatomprom retained its position as the world's largest uranium producer (based on its attributable share of production). According to UxC, the Company's uranium production in 2021 amounted to 24% of the total global primary uranium production. Kazakhstan accounted for more than 45% of global uranium production in 2021.

Kazatomprom's share in the global natural uranium mining market (based on its attributable share of production), %



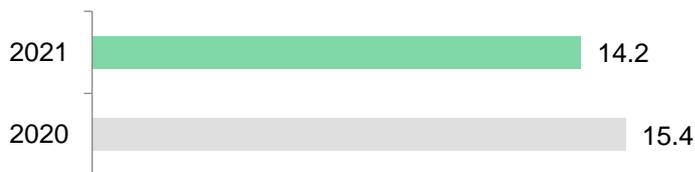
In 2021, Kazatomprom maintained a stable share of the global primary uranium mining market (based on attributable share of production). In the reporting period, Kazatomprom's share increased by 1.5% compared to 2020, allowing it to maintain its position as the world's largest producer and leader uranium sales.

Kazatomprom's uranium output (attributable share of production), tonnes



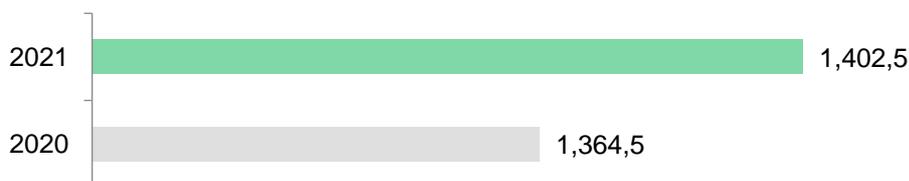
In 2021, U₃O₈ production on both a pro rata and 100% basis was higher than the previous year, due to lower mine development activity and lower staff numbers in the second quarter of 2020 because of the impact of the COVID-19 pandemic.

Niobium product output, tonnes



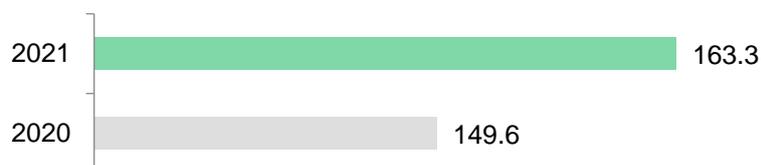
In 2021, niobium production decreased by 7.87% compared to 2020, due to the change in demand for niobium products.

Beryllium product output, tonnes



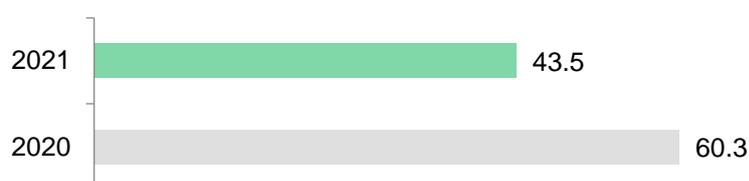
Compared to the level of 2020, the output of beryllium products in volume terms increased by 2.79% in the reporting period, in response to an increased demand for beryllium products.

Tantalum product output, tonnes



Compared to the levels of 2020, the output of tantalum products increased by 9.13% in the reporting period in response to an increased demand from customers.

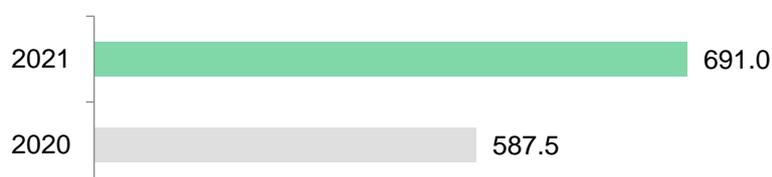
Fuel pellet output, tonnes



The volume of fuel pellets production in 2021 amounted to 43,517 tonnes. Compared to 2020, a 30% decline in production of fuel pellets occurred in the reporting period due to the timing of the acceptance procedure for the 2nd batch of pellets (34 tonnes) at CGNPC.

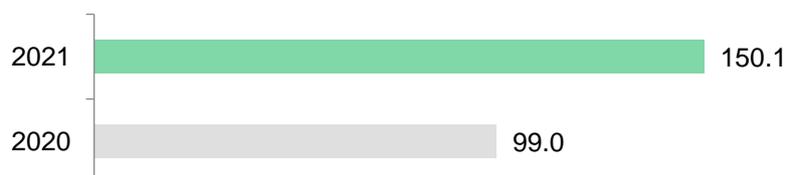
1.5.2. Financial highlights

Group revenue, KZT billion



Group revenues were KZT 691.0 billion in 2020, a 18% YOY increase, mainly due to an increase in the average realization price spurred by a rising market spot price for U₃O₈ and the weakening of the tenge against the US dollar. The growth is also associated with a YOY rise in sales volumes in 2021 of 1%.

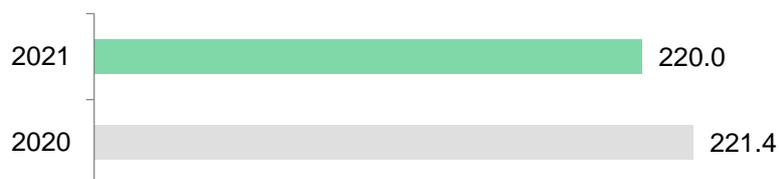
Dividends paid, KZT billion



In July 2021, the Company paid dividends of KZT 150,1 billion to its shareholders based on its 2020 performance, an increase of 52% compared to 2020 when it paid dividends of KZT 99 billion to the shareholders based on the 2019 performance. The increase resulted from higher operating cash flows and inclusion of proceeds from the Group's 2020 sale of its interest in Uranium Enrichment Centre JSC into the calculation of consolidated free cash flow in line with the amended dividend policy approved by the Annual General Meeting of Shareholders in May 2021.

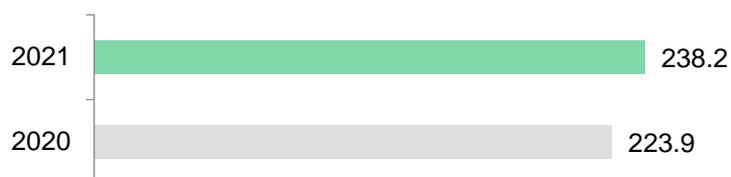
There are no arrangements stating refusal to either dividends payment or withdrawal.

Net profit, KZT billion



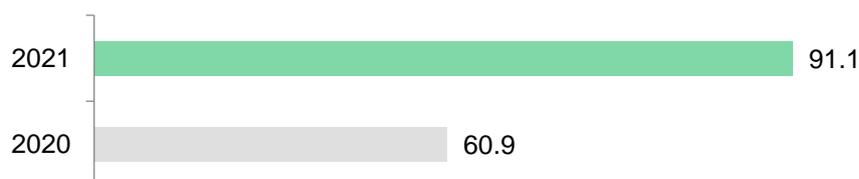
Net profit for the year was KZT 220,0 million, a decrease of 1% against 2020.

Operating profit, KZT billion



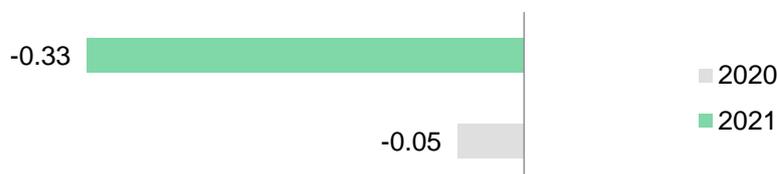
Operating profit in 2021 was KZT 238.2 billion, an increase of 6% compared to 2020 due to an increase in average realized price.

Capital expenditure of mining companies (on a 100% basis), KZT billion



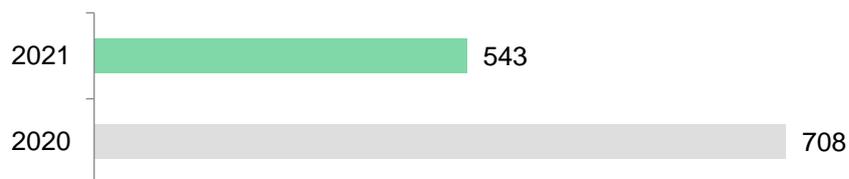
A 49% YOY increase in capital expenditures of mining companies was a result of mining operations deferred from 2020 to 2021 because of a four-month COVID-19 triggered suspension of mining and development in 2020, as well as a result of higher purchase prices for raw materials, supplies, and equipment, and higher cost of drilling. Capital expenditures were lower than normal in 2020, following measures taken that year to prevent the spread of the COVID-19 pandemic.

Net debt/adjusted EBITDA



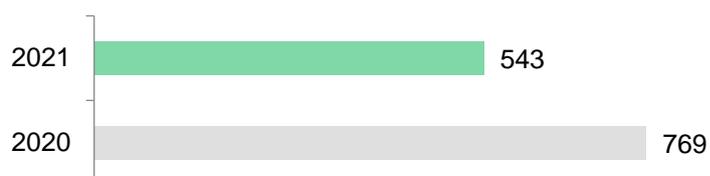
In 2021, the net debt to adjusted EBITDA ratio improved by more than 100% year on year due to increased profitability, reduced debt, and higher free cash including proceeds from the sale of a non-controlling 49% interest in ME ORTALYK LLP of KZT 185,858 million, (a one-time effect). Adjusted EBITDA in 2021 was KZT 350.3 billion, up by 8% year on year. The changes resulted mainly from higher operating profit and an increase in EBITDA of JVs and associates. In 2021, attributable EBITDA reached KZT 276.5 billion, down by 6% year on year, mainly due to a sale of a 49% interest in ME ORTALYK LLP.

Earnings per share, KZT/share



Earnings per share in 2021 were 23% lower than in 2020, which primarily resulted from an increase in earnings attributable to non-controlling interests (NCI), as well as from the sale of the Company's 49% interest at ME ORTALYK LLP.

Adjusted earnings per share, KZT/share



In 2021, the adjusted earnings per share were in line with the increase in adjusted net earnings⁸ for the year. In 2021, there was no temporary effect affecting net earnings.

⁸ For more details, see the Operating and Financial Review section, Consolidated Financial Indicators subsection.

1.6. Sales and Distribution

1.6.1. Sales of uranium products

GRI 102-4, 102-6, 102-7

COVID-19 pandemic did not affect the performance of the Company's sales commitments in 2021. Kazatomprom completed all contractual obligations to customers.

In 2021, the Company sold uranium products directly and through its Swiss trading subsidiary Trade House KazakAtom AG (THK) to 21 clients in eight countries.

Region	2019	2020	2021
America	17%	24%	32%
Asia	53%	43%	41%
Europe	30%	33%	27%

1.6.2. Transportation

GRI 102-9

Kazatomprom deploys safe, secure, and reliable logistics solutions to deliver uranium products to its customers across the globe. Uranium products are shipped by rail or sea in sealed containers and physically protected by armed guards and convoys until they reach their destination. All shipments are insured against any risks associated with the transportation of uranium products.

In 2021, Kazatomprom delivered U₃O₈ and finished uranium products to various destinations, based on customer needs and requirements including:

Converters. The Group transported U₃O₈ to licensed conversion facilities owned by companies such as Honeywell (US), Cameco (Canada), and Orano Cycle (France), first by rail from the Company's operations in Kazakhstan most commonly to the port of St. Petersburg in Russia, then by sea to various ports in the US, Canada and Europe. Afterwards, the material was moved by rail or road to processing facilities and transferred to customer's accounts.

China. When transporting material to China, Company delivered its cargo to the Alashankou railway station near the Kazakhstan-China border

Russia. When shipping to the Russian Federation (recipients include Siberian Chemical Combine JSC (SCC)) Company delivered its cargo by rail to the Tomsk-2 railway station in Russia

India. Company mostly delivered U₃O₈ to destinations in India by rail to the port of St. Petersburg, Russia, further by sea to the port of Mumbai, India. The customer would take title at the port and organised further transportation to the final destination

Argentina. When delivering to Argentina customer would take title at the port and organized further transportation to the final destination

Romania. Delivery was implemented based on DDP (Delivered, Duty Paid) terms

The average cost of shipping products to the destinations indicated in the map below ranges from USD 0.5 to USD 3.5 per kilogram of U₃O₈. Where practical, the Group enters swap agreements in order to minimise delivery times (the physical transportation of materials takes, on average, 100 days, while deliveries under swap agreements can take up to 25 days), reduce transportation costs, and lower risks related to the transportation of uranium products.

⁹ Source: Data by Kazatomprom.



1.7. Development Strategy

Mission

To develop our uranium deposits and value chain components to create long-term value for all Company stakeholders in line with sustainable development principles.

Vision

To become a partner of choice for the global nuclear fuel industry.

Development Strategy Implementation in 2021

Implementation of the Company's 2021-2028 Development Strategy focuses on improving operational efficiency in core activities, continuing business transformation and improving corporate governance and HR management processes. All planned activities were completed in 2021.

Key risks of strategy implementation¹⁰

GRI 102-15

- Major accidents in the nuclear industry could lead to a sharp drop in uranium prices
- Nuclear energy competes with a number of other energy sources, and stable and lower prices for alternative energy sources could lead to a reduction in demand for nuclear feedstock, reductions in nuclear power development and nuclear power plant construction programs and, consequently, a reduction in demand for uranium and its market price
- Nuclear energy is subject to public opinion risks, which could have a material adverse effect on the demand for nuclear energy and lead to increased regulation of nuclear energy industry
- The Group's profitability is directly linked to the uranium market price. The volatility of uranium prices may have a material adverse effect on the Group
- The Group faces competition from other uranium suppliers and may lose out on end users of uranium products
- The Group currently depends on a small number of customers who purchase a significant share of the Group's uranium, and any loss of important customers could have a material adverse effect
- Some of the Group's customers and business partners may be subject to US and EU sanctions and, if this were to occur, such an event could have a material adverse effect
- The complex and non-quantifiable risks that are associated with the sanctions against Russia and the current situation in Ukraine and could undermine the Group's financial stability and trigger social tensions include, but are not limited to, restrictions on mutual settlements in US dollars and other currencies, suspension of transshipments in the territory of the Russian Federation, and physical security of goods
- The Group is a major taxpayer and thus exposed to tax risks, including changes in the uranium extraction tax rate and transfer pricing within the limitation period as the most significant risks
- The United States or other uranium importers may impose tariffs or quotas on uranium imports
- The Group can continue to hold significant U₃O₈ reserves throughout the entire U₃O₈ price cycle
- The Group's uranium mining and transportation operations are subject to operational risks, hazards, and unforeseen disruptions that could cause delays in the production and delivery of the Group's uranium and uranium products, increase the Group's production costs or lead to accidents on the Group's mining sites
- The availability and cost of sulphuric acid significantly affects the continuity and commercial viability of the Group's operations as the Group uses significant quantities of sulphuric acid to extract uranium
- The Group may encounter difficulties in utilising railway lines connecting Kazakhstan with neighbouring countries or other transport infrastructure
- The Group may see unfavorable outlooks regarding its current ore reserves or the discovery of new ore reserves; therefore, estimates or classifications of the Group's uranium ore reserves may be underestimated due to inherent uncertainties in the estimation of ore reserves

¹⁰ Key risks have been identified for 2021 and remain relevant for 2022. For each risk, management strategies have been developed to avoid or mitigate the negative impact of the risks on the Company's operations.

- The Group may be unable to obtain, on commercially acceptable terms, or may not obtain at all, the necessary financing for its operations, strategy, business expansion and local infrastructure
- The Group is exposed to various financial risks related to compliance with certain financial and other restrictive covenants, fluctuations in interest rates and exchange rates, liquidity restrictions or inability to obtain necessary financing, counterparty defaults
- The Group may face arbitration or litigation to which it is not a party, legal consequences of non-compliance / misinterpretation of laws
- The Group's insurance coverage may not be sufficient to cover losses arising from potential operational risks and unforeseen interruptions
- Any failures of the Group's IT systems or cyber-attacks could adversely affect results
- Failure to meet targets for uranium production, output, sales, cost of products and services
- Failure to implement the Group's asset restructuring plan timely
- Failure to improve corporate governance, safety and environmental performance
- Failure to meet targets for the production of fuel assemblies in the Republic of Kazakhstan
- The Group is highly dependent on the macroeconomic, social and political conditions prevailing in Kazakhstan and may be subject to adverse sovereign action by local authorities or be subject to extensive government regulations and laws
- The Group could be affected by labour unrest or rising social unrest in Kazakhstan, which could have a material adverse effect on the Group's business and reputation
- The Group's results of operations are subject to economic, political and legal developments in China, India, and South East Asia
- Unexpected catastrophic events, including acts of vandalism and terrorism, could adversely affect the Group's business
- Deterioration of the epidemiological situation due to COVID-19 pandemic in Kazakhstan may cause deterioration of the Group's financial stability and increase social tension
- The spread of COVID-19 pandemic may lead to additional shutdowns or production cuts, which will affect the Company's performance and may cause the Company to update and/or not meet its 2022 targets

GRI 102-10

Strategy Implementation in 2021

Strategic goals	Key results
Focus on the core business	<p>Company continued to dispose a number of non-core assets as part of the 2021-2025 Comprehensive Privatisation Plan of the Republic of Kazakhstan:</p> <ul style="list-style-type: none"> • KazPV project companies – (Kazakhstan Solar Silicon LLP, Astana Solar LLP, MK KazSilicon LLP) sold through auction bidding on the web portal of the state property register • Caustic JSC – December 30, 2021, Company signed sale and purchase agreement to sell 40% of shares by direct sale to one of the shareholders of Caustic JSC in accordance with the estimated market value. Pursuant to the terms of the agreement, the sale procedure comprises 3 stages. At the time of this report's publication, the Company owns 28% of Caustic JSC shares • Kazatomprom-Damu LLP was liquidated
Optimise mining, processing and sales volumes based on market conditions	Our production expectations remain in line with the market-oriented strategy and production in 2021 was again reduced by 20% compared to the planned production levels under subsoil use contracts
Create value through enhanced sales & marketing capabilities/channels	<ul style="list-style-type: none"> • Successful operation of THK, Kazatomprom's trader • Company signed contracts to supply uranium products to 2 Chinese companies • Company signed a framework agreement on investing in a Kazakhstan physical uranium fund, where Kazatomprom acts as a key supplier. The initial capital contributions to this fund are scheduled for March 2022
Apply best-practice business processes	<ul style="list-style-type: none"> • IT security processes were enhanced at headquarters and subsidiaries

- An automatic monitoring system for radiation hazards at Kazatomprom-SaUran LLP has been developed
- A draft pricing methodology was elaborated for uranium products (UF₆, EUP, fuel pellets, fuel assemblies, etc.) in order to increase the market share through sale of those and thus to generate revenue and net profit growth
- Methodology for natural uranium concentrate pricing was updated to enhance the export potential of the Republic of Kazakhstan by increasing the company's competitive performance in the global uranium market
- A system for monitoring and analysis of the centrifugal pump units' technical condition at JV Khorasan-U LLP (vibration, pressure, temperature sensors) has been developed
- BI-analytical tool for determining ore bodies contour was developed and implemented at JV Khorasan-U LLP, Baiken-U LLP, Semizbay-U LLP
- BI-analytical tools based on Apache Superset open source solution for mining subsidiaries and affiliates were developed to digitize production data for the process drilling phase

Develop industry leader corporate culture

- We have confirmed the TÜV International Certification (Germany) for compliance with international requirements and standards on health care, occupational safety and environmental management
 - In 2021, information on identified hazardous conditions, dangerous actions, and potentially dangerous situations (Near Miss) was provided on an ongoing basis and all the data was available at the eKAP information system
 - We were assigned a Corporate Governance Rating – “A”. This rating serves as an evidence of increased efficiency of our internal systems. Significant qualitative growth has been achieved in observing shareholders' rights, the work of the Board of Directors and the Executive Body, as well as in the processes of information transparency and disclosure
 - A project to diagnose Kazatomprom's corporate culture was launched. We have achieved the target corporate culture level set in 2017. Using the study findings a 2022-2025 roadmap for further development of our corporate culture was elaborated
-

1.8. Business Transformation

1.8.1. Transformation Portfolio

Key changes in 2021 Transformation Portfolio:

2 new events and 1 project added	<ul style="list-style-type: none"> • Digitisation of process drilling data • Updating the pricing methodology for natural uranium concentrate • Implementation of a tool for determining the ore bodies' contour based on machine learning technologies
3 projects completed	<ul style="list-style-type: none"> • Development of an automatic monitoring system for radiation hazardous factors • Implementation of the ice formation monitoring system at Uranenergo LLP • Monitor the implementation of the Integrated Planning System at Semizbay-U LLP and JV Inkai LLP
4 events completed	<ul style="list-style-type: none"> • Modelling production processes in mining companies • Paper-free KAP • Pre-project preparations for data analysis project, Stage I • Updating the pricing methodology for natural uranium concentrate
One project and one event withdrawn to operations and removed from the Portfolio	<ul style="list-style-type: none"> • Developing the corporate culture • Centralisation of "Supplier selection" process

As of December 2021, the Company's transformation portfolio consisted of:

5 projects:

- Automated control system for the pumping fleet
- Upgrade of refining capacity at Kazatomprom-SaUran LLP
- Implementation of a tool for determining the ore bodies contour on the basis of machine learning technologies
- Introducing and developing cybersecurity
- Developing new pricing rules (methodology) for other uranium products (UF₆, enriched uranium product, fuel pellets, fuel assemblies, etc.)

3 events:

- Implementing a safety culture development plan based on the Golden Safety Rules of the VISION ZERO international concept
- Advancing the quality of planning, maintenance and repair works for technological equipment
- Digitisation of process drilling data

1.8.2. Transformation Program Implementation

Key results of 2021:

As part of the Transformation Program, the Company took the following measures:

- Implementing the IT security processes at the headquarters
- Monitoring the IPS system launch at Semizbay-U LLP and JV Inkai LLP
- Completing the development of an automatic monitoring system for radiation hazards
- Developing BI-analytics tools based on open solutions for mining subsidiaries to digitise technological drilling data
- Completing the development of production processes architecture (mining and processing) and data architecture at RU-6 LLP with top-level requirements for IS integration at the mining enterprise

- Completing the development of design and estimate documentation for Kazatomprom-SaUran LLP refining capacity modernization project
- Developing a draft pricing methodology for uranium products (UF₆, EUP, fuel pellets, fuel assemblies, etc.) to increase the market share through sales of other uranium products and to generate revenue and net profit growth through sale of other uranium products
- Updating the methodology for natural uranium concentrate pricing to enhance the export potential of the Republic of Kazakhstan by increasing the company's competitiveness in the global uranium market
- Developing a system for monitoring and analysis of the centrifugal pump units' technical condition at JV Khorasan-U LLP (vibration, pressure, temperature sensors)
- Developing and implementing a geological modelling tool to determine the contour of ore bodies based on machine learning and geostatistics technologies at JV Khorasan-U LLP, Baiken-U LLP, and Semizbay-U LLP

Plans under the 2022 Transformation Programme

- Complete the development of a system for monitoring and analysis of the centrifugal pump units technical condition at JV Inkai LLP (vibration, pressure, temperature sensors)
- Upgrade the refining capacity at Kazatomprom-SaUran LLP
- Complete the development of a methodology for determining drilling performance-related KPIs, including a prototype model for setting the interdependence between the probability of repair works and well parameters
- Complete monitoring of the ore body contour definition tool at JV Khorasan-U LLP, Baiken-U LLP and Semizbay-U LLP providing recommendations for further development (including possible financial project benefits)
- Introduce target IT business processes at KAP Technology LLP
- Complete actions to approve the new pricing methodology for uranium products (UF₆, enriched uranium product (EUP), fuel pellets, fuel assemblies (FAs), etc., by the authorized agency in the Republic of Kazakhstan

1.8.3. IT architecture development

Key events within the scope of the Company's IT architecture development in 2021

1. 24kap.kz introduction

The Company completed the following as part of the Corporate Portal upgrade:

- Development of a new functionality (Orders and Services)
- Migration of existing databases, as well as modernization of the Corporate Portal functionalities created on the basis of MS SharePoint

2. Development of prototype geophysical research system (PGRS) using artificial intelligence technologies

- Development of Terms of Reference for the Industrial PGRS
- The meeting of representatives of the "Digitalisation, automation and robotisation" section of Kazatomprom Scientific and Technical Council has approved an application form and R&D roadmap dedicated to the development of geophysical research support system based on machine learning technologies

3. IT Service Management (ITSM) replication in subsidiaries and affiliates

Replication of three IT processes in twelve subsidiaries and affiliates. Within the framework of replication, the following processes were launched:

- Management of service requests and IT-related incidents
- Management of access to IT services
- Management of IT service agreements

4. Microsoft Licence Purity

- Development of a roadmap for achieving licence purity in Kazatomprom Group (the RM SWP)
- Development and agreement on technical requirements for Microsoft software products, with defined technical and quality specifications for the procured Microsoft software, requirements to the technical support and potential supplier

- Procurement procedures within the framework of Microsoft procurement strategy held according to the agreed schedule and in compliance with the strategy requirements
- Fifteen subsidiaries and affiliates, including the headquarters, became participants of the 2021 Microsoft 2021 Procurement Strategy

New SAP PPM, SAP GRC and SAP HCM development projects 2021

1. GRC Access Control

A key tool to ensure compliance with internal company procedures for data protection, identification of access risks and correct assignment of authority to company staff. Business unit heads became SAP modules owners.

2. SAP Project and Portfolio Management (SAP PPM)

Ensures automation of project management processes and makes project portfolio management much easier. In addition, the Company worked to migrate data to the S/4HANA platform, including integration between SAS IPS and SAP PPM, SAP PPM and SAP ERP via the BW migration to the new SAP BW/4HANA version. BW is also the data transfer intermediary from SAP ERP to the Data Warehouse.

3. SAP MDG system

SAP MDG on the S/4HANA platform was launched in May 2021. As part of the Project, the system was configured to automatically generate short and full name of the Goods, Works and Services (hereinafter referred to as “GWS”) directory using the GWS classifier, maintenance of Plan of Accounts and Primary Cost Types directories, integration with public databases, approval processes for master data requests involving business units of companies, quite simplified system interface and much more. All of this has significantly improved the quality of master data, which has a major impact on procurement, production, logistics and other Company business processes.

4. Robotisation of business processes through RPAs

Transformation team together with the interested Company's structural units developed and implemented RPA robots aimed at automation of routine operations performed by employees both of the headquarters and of the Company's subsidiaries and affiliates. Kazatomprom introduced nine solutions covering treasury, accounting, marketing, industrial safety and other processes. The main areas of robotisation are data transfer between information systems, including SAP ERP, collection and processing of information from external and internal portals, building operational reporting, reconciliation and validation of information. In 2021, we developed and implemented an internal regulatory document governing the robotisation of business processes through RPAs.

5. Geological modelling based on machine learning

As part of Kazatomprom Transformation Programme, a project for implementation of a tool for determining the orebodies contour based on machine learning technologies is in the pipeline. The purpose of this project is to model the contour of orebodies represented by a plan using machine learning and geostatistics algorithms and, as a result, to automate the geological modelling process in terms of the task being studied. As part of this project, the Company internally developed the “Contour” tool, which allows geologists to run various modelling scenarios using accumulated historical data. Together with the staff of subsidiaries and affiliates, the tool is implemented and tested within the selected perimeter.

Additional projects in 2021

Project profile	Results of 2021
Corporate Portal Upgrade	<ul style="list-style-type: none"> • The process of approval and signing of HR-related orders has been automated (online approval, signing and familiarization). • Onboarding new employees is being done online now (induction trainings, signing obligations, submitting employment application form, etc.) • For the convenience of employees, the processes of the Nuclear Industry Trade Union were automated. Employees can apply

beliefs that guide Kazatomprom and its subsidiaries and affiliates. To this end, the Company implemented a project focused on upgrade of Kazatomprom's "Corporate Portal" information system.

online for fitness, health resort treatment, children's camps, as well as submit an application for financial aid

AR & VR

With AR & VR technology, a computer simulation of a three-dimensional image or complete environment is created within a defined and controlled space, with which the user can realistically interact. The goal of virtual reality is to achieve the 'immersion' effect.

- A virtual mine model has been developed by digitising the mine itself and its facilities with drones assisted LiDar technology.
- Seven scenarios of hazardous production situations were developed: scenarios that might occur when acid is discharged from tankers into containers; when sulphuric acid is fed from a container to the process plant; when equipment is serviced and maintained at the sulphuric acid warehouse; when a sulphuric acid tray is maintained and operated at the sulphuric acid warehouse; when a mobile container for chemical treatment at the process plant is filled with sulphuric acid; and when emergency situations are handled; as well as general safety and health care requirements in emergency situations.
- Training courses for operating staff were conducted. Using special equipment and helmet, employees and contractors are visually trained and briefed on safety during maintenance and repair.

IDM

The goal of IDM implementation is to increase the level of information security maturity by implementing a tool that enables centralised management of accounts and access rights in various corporate information systems.

System introduction solved the following tasks:

- Auditing the use of accounts in information systems
- Creating roles and authority matrixes for the staff members included in the Project perimeter
- Automating and improving the efficiency of management of access to IS and resources, and managing the user identification information
- Providing convenient and efficient tool for generating requests for granting and changing access to the IS and resources, reducing the time required to carry out routine operations by employees of organisational units and information system administrators
- Ensuring flexibility, transparency, timeliness of processes of approval, provision and revocation of access to the Company's IS and resources.

IT architecture development plans 2022

The Company has extensive plans for developing the Group's IT architecture and implementing digitalisation projects. In 2022, the plans are to:

- Continue to search for and implement advanced digital technologies applicable to the Group's operations to enhance business opportunities, provide competitive advantages and enhance product value, as well as solutions for data analytics application

- Continue to work on the development of the SAP system (ERP, HCM, GRC, PPM, BW, MDG) to improve the Company's business processes
- The Transformation Team will continue to implement best practices in Data Management and Data Governance as part of Data Governance development. It is planned to build up a concept on establishment of data management office within the Company's organisational structure, as well as to continue formalization and implementation of processes on data management and analytics in the headquarters as well as subsidiaries and affiliates

Milestones 2022

- Phase 1. Implementation of a unified Enterprise Data Warehouse (EDW) and Enterprise service bus for data collection and processing.
- SAP MDG system
- Automation of financial statements consolidation process
- Increasing the level of automated services use
- Smart Mine
- Implementation of the transport accounting system at Volkovgeology JSC

1.8.4. Information security

Business transformation opens up new opportunities for real-time decision-making and increasing the productivity, flexibility, and agility of the industry, while at the same time requires special attention to ensuring information security, cyber resilience and business continuity of information systems.

In order to ensure an appropriate level of cybersecurity, Kazatomprom continuously monitors compliance with information security requirements and strives to develop an information security management system in accordance with the laws of the Republic of Kazakhstan and ISO/IEC 27001.

The Company continues to bring to action the Implementation and Development of Cybersecurity Project as part of the Action Plan for the execution of "Establishment of an Integrated Information Security Management System" mechanism under strategic objective on "Digitalisation and Transformation" to achieve the "Apply best practices in business activities" strategic goal as per the 2018-2028 Kazatomprom Development Strategy. Kazatomprom ensures round-the-clock monitoring and response to information security incidents, and actively interacts with the Digital Security Service and the National Coordination Centre for Information Security. In order to improve and enhance the cyber culture and cyber hygiene in the Group, online training, cyber training sessions and special induction trainings are conducted on an ongoing basis.

In 2021, Kazatomprom and its subsidiaries and affiliates, as well as jointly controlled entities recorded 1,255 IS incidents, of which 67 were high-priority; 524, medium-priority; 664, low-priority, and 0 incident causing financial damage to the Company (1,000+ MCI (monthly calculated indicator)).

To raise awareness on information protection among employees, as well as to inform them about changes in internal documents governing the information security requirements in 2021, an interactive online training for top managers of subsidiaries and affiliates and line managers of the headquarters, and a thematic course for all employees of Kazatomprom were conducted.

As part of the intent on cooperation agreements in information security, the Company works to improve cyber hygiene and digital security, and to ensure participation in forums and meetings to discuss the digitalisation of the nuclear industry and plans for IT and IS systems development, both during the pandemic and in the post-quarantine period.

Information security development plans for 2022:

Kazatomprom will continue to monitor compliance with information security requirements in all existing and developing IT systems, as well as carry out activities to improve cybersecurity and information security awareness among its employees.

In addition, the Company intends to:

- Continue to improve and replicate the processes of the integrated information security management system in accordance with 2019-2028 Kazatomprom Information Security Strategy
- Take measures as part of the Cybersecurity Introduction and Development Project

- Implement the Action Plan for Improvement of the 2022 Information Security Management System
- Continue automation of ISMS processes and implementation of advanced cybersecurity systems.

1.9. Association Membership and International Compliance

GRI 102-12, 102-13

Organization	Website	Member since
Professional nuclear power organisations		
World Nuclear Association, London, UK	http://www.world-nuclear.org	1993
Tantalum-Niobium International Study Center, Brussels, Belgium	http://www.tanb.org	1999
World Nuclear Fuel Market, Norcross, GA, United States	http://www.wnfm.com	2002
Nuclear Energy Institute, Washington, D.C.	http://www.nei.org	2018
World Nuclear Transport Institute, London, UK	https://www.wnti.co.uk	2019
National sectoral organisations		
Nuclear Society of Kazakhstan, Nur-Sultan, Kazakhstan	http://www.nuclear.kz	2002
Association Of Legal Entities “Republican Association Of Mining And Metallurgical Enterprises” (AMME), Nur-Sultan, Kazakhstan	https://agmp.kz	2006
KAZENERGY Kazakhstan Association of Oil&Gas and Energy Sector Organisations, Nur-Sultan, Kazakhstan	http://www.kazenergy.com	2009
Atameken National Chamber of Entrepreneurs of Kazakhstan, Nur-Sultan, Kazakhstan	https://atameken.kz	2013

MINING ASSETS

ME ORTALYK LLP

Subsidiary

Company owns a 51% interest in the authorized capital of ME ORTALYK LLP (China National Nuclear Energy Group owns 49%). The LLP operates at the central block of the Mynkuduk deposit and at the Zhalpak deposit in the Suzak District of Turkistan Region.

Deposit

The Mynkuduk deposit was discovered in 1973, and the commercial operation of the central block began in 2008. A subsoil use contract to develop the Central Mynkuduk deposit block was concluded on 8 July 2005. The rights to the exploration, production and marketing of uranium are valid until 2043.

Pilot production was conducted at the Zhalpak deposit. The exploration contract was concluded on 14 December 2021. In the event of successful production, full-scale production will begin in 2042.

As of 31 December 2021, the total volume of ore reserves of the deposits (including annual depletion) was 37,200 tonnes. Total mineral resources (including reserves) stood at 37,200 tonnes.

Features

Year of creation	2011
Production	1,579 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	471
CEO	Zhumagali Dzhumataevich Markenbayev
Date of the subsoil use contracts	2000-2043
Group's ownership interest	51%
Deposit	1. Mynkuduk, central block 2. Zhalpak

KAZATOMPROM-SAURAN LLP

Subsidiary

Company is the only participant at Kazatomprom-SaUran LLP.

In November 2018, Company transferred to Kazatomprom-SaUran LLP its rights and obligations under subsoil use contracts for the Kanzhugan deposit, the south part of block No. 1 (South) and the north part of block No. 3 (Central) of the Moinkum deposit, the Vostochny block of the Mynkuduk deposit and the Uvanas deposit, together with related manufacturing assets.

Deposit

The Kanzhugan deposit was discovered in 1972; commercial operation began in 1997. A subsoil use contract to develop the Kanzhugan deposit was concluded on 27 November 1996. The rights to the exploration, production, and sale of uranium are valid until 15 November 2022¹¹.

The south part of block No. 1 (South) of the Moinkum deposit was discovered in 1976, the north part of block No. 3 (Central) in 1974. Commercial operation of the southern part of block No. 1 began in 1997, and the northern part of block No. 3 in 2017.

A subsoil use contract for the south part of block No. 1 (South) was concluded on 26 September 2000. The rights to the extraction, exploration, and sale of uranium are valid until 26 September 2021.

A subsoil use contract for the north part of block No. 3 (Central) was concluded on 31 May 2010. The rights to the extraction, exploration, and sale of uranium are valid until 31 May 2041.

The Uvanas deposit was discovered in 1963, and commercial operation began in 1997. A subsoil use contract to develop the Uvanas block was concluded on 27 November 1996. The rights to the exploration, production, and sale of uranium to be valid until 15 November 2022.

The Mynkuduk deposit was discovered in 1973, and commercial operation of the Vostochny block began in 1997. A subsoil use contract to develop the Vostochny block of the Mynkudyk deposit was concluded on 27 November 1996. The rights to the exploration, production, and sale of uranium are valid until 15 November 2022.

Currently, uranium mining in the southern part of block No. 1 (South) of the Moinkum deposit and the Uvanas deposit has been suspended due, to a depletion of reserves. Work is underway to return the territories to the state.

As of 31 December 2021, the total volume of ore reserves of deposits (including annual depletion) was 23,100 tonnes of uranium. Total mineral resources (including reserves) stood at 25,300 tonnes of uranium.

Features

Year of creation	2015
Production	1,493 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	952
CEO	Askar Nurgaliyev ¹²
Date of the subsoil use contracts	1996–2041
Group's ownership interest	100%
Deposit	<ol style="list-style-type: none">1. Kanzhugan (including the Kainarsky block)2. Moinkum, block No. 1 (South), the southern part3. Moinkum, block No. 3 (Central), northern part4. Uvanas5. Mynkuduk, East block

¹¹ The Board of Directors of NAC Kazatomprom JSC is considering extension of the rights to explore, produce and sell uranium for 25 years after the expiration date in 2022.

¹² Orynбек Gylymbek had held the office until 4 November 2021.

RU-6 LLP

Subsidiary

Company is the only participant at RU-6 LLP.

In November 2018, Company transferred to RU-6 LLP its rights and obligations under a subsoil use contract to develop the North Karamurun and South Karamurun deposits in the Shieli District of Kyzylorda Region.

Deposit

The North Karamurun and South Karamurun deposits were discovered in 1979, and commercial operation began in 1997.

A subsoil use contract to develop the North Karamurun and South Karamurun deposits was concluded on 27 November 1996. The rights to the exploration, production, and marketing of uranium are valid until 27 November 2022¹³.

As at 31 December 2020, the total amount of ore reserves in the deposits (including annual depletion) was 13,500 tonnes of uranium. Total mineral resources (including reserves) stood at 13,500 tonnes of uranium

Features

Year of creation	1983
Production	800 tonnes
Location	Republic of Kazakhstan, Kyzylorda Region, Shieli District
Number of employees	432
CEO	Iskakov Daurzhan
Date of the subsoil use contract	1996–2022
Group's ownership interest	100%
Deposit	1. North Karamurun 2. South Karamurun

¹³ The Board of Directors of NAC Kazatomprom JSC is considering extension of the rights to explore, produce and sell uranium for 25 years after the expiration date in 2022.

APPAK LLP

Subsidiary

Company holds a 65% interest in the charter capital of APPAK LLP (Sumitomo Corporation holds 25%, Kansai Electric Power Co., Inc. holds 10%).

The joint venture operates in the Western block of the Mynkuduk deposit in the Suzak District of Turkistan Region.

Deposit

The Mynkuduk deposit was discovered in 1973, commercial operation of the Zapadnoye block began in 2008.

A subsoil use contract was signed on 8 July 2005 to develop the Zapadnoye block of the Mynkuduk deposit. The rights to the exploration, production, and marketing of uranium are valid until 8 July 2035.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 16,300 tonnes of uranium. Total mineral resources (including reserves) stood at 16,300 tonnes of uranium

Features

Year of creation	2005
Production	805 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	329
CEO	Darkhan Abdimoldayev ¹⁴
Date of the subsoil use contract	2005–2035
Group's ownership interest	65%
Deposit	West Mynkuduk

¹⁴ Alexander Avdeev had held the office until 30 November 2021.

JV INKAI LLP

Subsidiary

Company owns a 60% interest in the charter capital of JV Inkai LLP (Cameco holds 40%).

The joint venture operates at block No. 1 of the Inkai deposit in the Suzak District of Turkistan Region.

Deposit

The Inkai deposit was discovered in 1976 and testing of block No. 1 began in 2002.

A subsoil use contract was signed on 13 July 2000 to develop the Inkai deposit, block No. 1. The rights to the exploration, production, and marketing of uranium are valid until 13 July 2045.

As of 31 December 2021, the total volume of ore reserves of deposits (including annual depletion) was 131,300 tonnes of uranium. Total mineral resources (including reserves) stood at 151,800 tonnes of uranium.

Features

Year of creation	1996
Production	3,449 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	723
CEO	Elnar Kairatuly Pernesh
Date of the subsoil use contract	2000–2045
Group's ownership interest	60%
Deposit	Inkai, block No. 1

BAIKEN-U LLP

Subsidiary

Baiken-U LLP is owned 52.5% by the Company, with a direct share of 5% and 47.5% through EnergyAsia (BVI) Limited.

The joint venture operates at the Kharasan-2 block of the North Kharasan deposit in the Zhanakorgan District of Kyzylorda Region.

The deposit is the deepest uranium deposit in Kazakhstan mined using the ISR method.

Deposit

The North Kharasan deposit was discovered in 1972, and commercial operation of the block began in 2010.

A subsoil use contract to develop the Kharasan-2 block of the North Kharasan deposit was concluded on 1 March 2006. The rights to the exploration, production, and marketing of uranium are valid until 1 March 2058.

As of 31 December 2021, the total volume of ore reserves of the deposits (including annual depletion) was 17,000 tonnes. Total mineral resources (including reserves) stood at 17,000 tonnes.

Features

Year of creation	2006
Production	1,230 tonnes
Location	Republic of Kazakhstan, Kyzylorda Region, Zhanakorgan district
Number of employees	458
CEO	Nursultan Ondasyn Ondasynuly ¹⁵
Date of the subsoil use contract	2006–2058
Group's ownership interest	52,5%
Deposit	North Kharasan, Kharasan-2 block

¹⁵ Rinat Baisultanov had held the office until 2 December 2021.

SEMIZBAI-U LLP

Joint venture

Company holds a 51% interest in the charter capital of Semizbai-U LLP (Chinese National Nuclear Power Group holds 49%).

The joint venture operates at the Irkol deposit in the Shielinsky District of Kyzylorda Region and at the Semizbai deposit in the Birzhan Sal district of Akmola Region.

Deposit

The Irkol deposit was discovered in 1976, commercial operation began in 2008. A subsoil use contract to develop the Irkol deposit was concluded on 14 July 2005. The rights to the exploration, production, and marketing of uranium are valid until 4 March 2030.

The Semizbai deposit was discovered in 1973, commercial operation began in 2009. A subsoil use contract to develop the Semizbai deposit was concluded on 2 June 2006. The rights to the exploration, production, and sale of uranium are valid until 2 June 2031.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 24,200 tonnes of uranium. Total mineral resources (including reserves) stood at 24,200 tonnes of uranium.

Features

Year of creation	2006
Production	962 tonnes
Location	Republic of Kazakhstan, Kyzylorda Region, Shielinsky District and Akmola Region, Birzhan Sal district
Number of employees	513
CEO	Zeryhan Mukanov ¹⁶
Date of the subsoil use contracts	2005–2030
Group's ownership interest	51%
Deposit	Irkol Semizbai

¹⁶ Olyhas Kizakbaz had held the office until 19 November 2021.

KARATAU LLP

Joint operations

Company and Uranium One Netherlands B.V. (part of Rosatom Group) each hold a 50% interest in the charter capital of Karatau LLP.

The LLP operates at block No. 2 of the Budenovskoye deposit in the Suzak District of Turkistan Region.

Deposit

The Budenovskoye deposit was discovered in 1979, and the commercial operation of block No 2 began in 2008.

A subsoil use contract was signed on 8 July 2005 to develop block No. 2 of the Budenovskoye deposit. The rights to the exploration, production, and marketing of uranium are valid until 8 July 2040.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 38,700 tonnes of uranium. Total mineral resources (including reserves) stood at 38,700 tonnes of uranium.

Features

Year of creation	2005
Production	2,561 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	532
CEO	Saken Kalibekov ¹⁷
Date of the subsoil use contract	2005–2040
Group's ownership interest	50%
Deposit	Budenovskoye, block No. 2

¹⁷ Nurbek Karibyanov had held the office until 19 November 2021.

JV KHORASAN-U LLP

Subsidiary

Company holds a 50% interest in the charter capital of JV Khorasan-U LLP (Uranium One Utrecht B.V. (part of Rosatom group) holds 30%, Energy Asia Holdings Ltd holds 20%).

The JV operates at the Khorasan-1 block of the North Khorasan deposit in the Zhanakorgan district of Kyzylorda Region.

Deposit

The North Khorasan deposit was discovered in 1972, and commercial operation of the Kharasan-1 block began in 2008.

A subsoil use contract to develop the Khorasan-1 block of the North Khorasan deposit was concluded on 8 July 2005. The rights to the exploration, production, and sale of uranium are valid until 8 July 2058.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 36,600 tonnes of uranium. Total mineral resources (including reserves) stood at 36,600 tonnes of uranium.

Features

Year of creation	2014
Production	1,579 tonnes
Location	Republic of Kazakhstan, Kyzylorda Region, Zhanakorgan district
Number of employees	11
CEO	Adai Esirkepovich Umirbekov
Date of the subsoil use contract	2005–2058
Group's ownership interest	50%
Deposit	North Kharasan, Kharasan-1 block

JV AKBASTAU JSC

Joint operations

Kazatomprom and Uranium One Amsterdam B.V. (Part of Rosatom Group) each hold a 50% interest in JV Akbastau JSC.

The JSC operates at blocks No. 1, No. 3 and No. 4 of the Budenovskoye deposit in the Suzak District of Turkistan Region.

Deposit

The Budenovskoye deposit was discovered in 1976 and commercial operation of blocks No. 1, No. 3, and No. 4 began in 2012.

Subsoil use contracts to develop blocks No. 1, No. 3 and No. 4 of the Budenovskoye deposit were concluded on 20 November 2007. The rights to the exploration, production, and marketing of uranium in area No. 1 are valid until 20 November 2037, and in blocks No. 3 and No. 4 until 20 November 2038.

As of 31 December 2021, the total volume of ore reserves of the deposits (including annual depletion) was 37,900 tonnes. Total mineral resources (including reserves) stood at 37,900 tonnes.

Features

Year of creation	2006
Production	1,545 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	49
CEO	Bakhtiyar Kulmanovich Amirov
Date of the subsoil use contracts	2007–2038
Group's ownership interest	50%
Deposit	Budenovskoye, blocks No. 1, No. 3, No. 4

JV ZARECHNOYE JSC

Associate

Company and Uranium One Holland B.V. (part of the Rosatom group) each own 49.98% of the shares of JV ZARECHNOYE JSC, and Karabaltinsky Mining Plant JSC owns 0.04%.

The joint venture operates in the Zarechnoye deposit in the Otyrar district of Turkistan Region.

Deposit

The Zarechnoye deposit was discovered in 1977, and commercial operation of the deposit began in 2007.

A subsoil use contract to develop the Zarechnoye deposit was concluded on 23 September 2002. The rights to the exploration, production, and marketing of uranium are valid until 23 September 2025.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 5,200 tonnes of uranium. Total mineral resources (including reserves) stood at 5,800 tonnes of uranium

Features

Year of creation	2001
Production	655 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Otyrar District
Number of employees	361
CEO	Zhandos Nurlanovich Bekbaev
Date of the subsoil use contract	2002–2025
Group's ownership interest	49,98
Deposit	Zarechnoye

JV KATCO LLP

Joint venture

Company holds a 49% interest in the charter capital of JV Katco LLP, (Orano (formerly AREVA) holds 51%).

The joint venture operates in the northern part of block No. 1 (South) and at block No. 2 (Tortkuduk) of the Moinkum deposit in the Suzak District of Turkistan Region.

In April 2017, the Company and Orano concluded an agreement under which 60% of the profit distributed by the joint venture is due to the Company from 2022.

Deposit

The Moinkum deposit was discovered in 1976, the commercial operation of block №1 began in 2001.

A subsoil use contract to develop the northern part of block No. 1 (South) and block No. 2 (Tortkuduk) of the Moinkum deposit was concluded on 3 March 2000. The rights to the exploration, production, and sale of uranium are valid until 4 March 2039.

As of 31 December 2021, the total volume of the ore reserves of deposits (including annual depletion) was 52,400 tonnes of uranium. Total mineral resources (including reserves) stood at 54,900 tonnes of uranium.

Features

Year of creation	1996
Production	2,840 tonnes
Location	Republic of Kazakhstan, Turkistan Region
Number of employees	1,256
CEO	Pascal Bastien ¹⁸
Date of the subsoil use contract	2000–2039
Group's ownership interest	49%
Deposit	<ol style="list-style-type: none">1. Moinkum, block No. 1 (South), the northern part2. Moinkum, block No. 2 (Tortkuduk)

¹⁸ Gerard Fries had held the office until 20 December 2021.

JV SOUTHERN MINING AND CHEMICAL COMPANY LLP

Associated Organization

Company holds a 30% interest in the charter capital of JV Southern Mining and Chemical Company LLP (Uranium One Rotterdam B.V. (part of Rosatom Group) holds 70%).

The joint venture operates at the Akdala deposit and at block No. 3 of the Inkai deposit in the Suzak District of Turkistan Region.

Deposit

The Akdala deposit was discovered in 1982, and commercial operation began in 2004. A subsoil use contract to develop the Akdala deposit was concluded on 28 March 2001. The rights to the extraction, exploration, and sale of uranium are valid until 28 March 2026.

The Inkai deposit was discovered in 1976, and commercial operation of block No. 4 began in 2007. A subsoil use contract was signed on 8 July 2005 to develop block No. 4 of the Inkai deposit. The rights to the exploration, production and sale of uranium are valid until 8 July 2029.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 77,900 tonnes of uranium. Total mineral resources (including reserves) stood at 80,000 tonnes of uranium.

Features

Year of creation	2014
Production	2,321 tonnes
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	846
CEO	Erlan Lesbekovich Tashimov
Date of the subsoil use contract	2001–2029
Group's ownership interest	30%
Deposit	Akdala Inkai, block No.4

JV Budenovskoye LLP

Associated Organization

Company holds a 51% interest in the charter capital of JV Budenovskoye LLP (Limited Liability Partnership Stepnogorsk Mining and Chemical Combine holds 49%).

The joint venture operates at block No. 6 and 7 of the Budenovskoye deposit in the Suzak District of Turkistan Region.

Deposit

The Budenovskoye deposit was discovered in 1982, and commercial operation of block No. 6 and 7 is planned in 2022.

As of 31 December 2021, the total amount of ore reserves in the deposits (including annual depletion) was 114,200 tonnes of uranium. Total mineral resources (including reserves) stood at 114,200 tonnes of uranium.

Features

Year of creation	2016
Production	-
Location	Republic of Kazakhstan, Turkistan Region, Suzak District
Number of employees	42
CEO	Medeo Rustam
Date of the subsoil use contract	2020–2045
Group's ownership interest	51%
Deposit	Budenovskoye, block No. 6, 7

2. OPERATING AND FINANCIAL REVIEW

2.1. Significant factors affecting the Group's results of operations

Significant factors that affected the Group's results of operations during 2020 and 2021, and are expected to continue their effect in future, include:

- the price received for the sale of natural uranium and changes in natural uranium product prices
- changes in the Group structure
- the impact of changes in foreign exchange rates
- taxation, including mineral extraction tax
- the cost and availability of sulfuric acid
- pandemic-related costs and availability of critical operating materials
- impact of changes in ore reserves estimates, and transactions with subsidiaries, JVs, JOs and associates
- improved corporate governance rating

2.1.1. Update on recent geopolitical events

Subsequent to financial statements reporting date, significant geopolitical events have occurred in Kazakhstan and in Russia/Ukraine. These events have not had a material impact on the Group's operations to date although the resulting market uncertainty has caused a significant volatility in the tenge exchange rate and traded price of the Company's securities. Management is unable to predict the consequences or future impacts of these events, if any, on the Group's financial position or operating performance. Management will continue to monitor the potential impact of the above events and will take all necessary steps to mitigate the risks and prevent adverse business impacts.

January 2022 civil unrest in Kazakhstan

On 2 January 2022 protests triggered by a rise in fuel prices began in the Mangistau region of Kazakhstan which spread to other regions in the country. The protestors demanded a number of social, economic and political reforms. Although the Government took measures to respond to these demands, including a decrease in fuel prices, the protests escalated into significant social unrest in Almaty and southern regions of the country.

As a result, on 5 January 2022 a state of emergency was declared until 19 January 2022, and restrictions were imposed on communication and transportation of people and vehicles, including railway and airline carriage. Currently, the situation in all regions of the country has stabilized, and the state of emergency has been cancelled. The functioning of utilities and life support systems have been fully restored, and restrictions on communication and transportation have been removed.

Events in Ukraine

On 21 February 2022, the Russian President announced that Russia would recognize independency of the Luhansk People's Republic and Donetsk People's Republic and the Russian military mobilized its troops over the border of Ukraine. As a response to the Russian actions, the United States, the European Union and a number of other countries-imposed sanctions against Russia including the disconnection of a number of Russian financial institutions from SWIFT.

In connection with the sharp devaluation of the Russian ruble, the Tenge exchange rate began to be adjusted. To date, the National Bank of the Republic of Kazakhstan has taken a number of measures to maintain the stability of the Kazakhstan financial system.

Due to active international sanctions processes against Russian banks, including Sberbank, VTB Bank and other organizations, it is inappropriate for the Group to service or interact with these banks and their subsidiaries. The Group has taken measures to redistribute funds to banks that are not under current sanctions.

The Group has a Uranium Processing Agreement with the Uranium Enrichment Center (UEC) (a resident of the Russian Federation). At the date of the financial statements, the Group anticipates that provision of services under this agreement will continue. There may be a risk of difficulty in making mutual settlements in US dollars with UEC in the event of restrictions and blocking of the UEC's foreign

currency accounts or in the event of the withdrawal of Russian banks from the SWIFT system. Potential measures related to the risk of Rosatom being sanctioned are now under consideration.

NAC Kazatomprom JSC has already taken a range of measures to prevent a possible risk associated with mutual settlements with Russian partners, including the payment of dividends. All funds deposited on accounts with Sberbank have been transferred to other second-tier banks. At the time of publication, some subsidiaries and associates were completing the transfer of liquid funds.

On an ongoing basis, the Company monitors and evaluates the US sanctions in terms of their potential impact on the Group's performance, as well as monitor all its counterparties in terms of the US sanctions programmes.

Some of the Group's exported products are transported through the Russian Federation and, accordingly, there are risks associated with both transit through the territory of Russia and the delivery of cargo by sea vessels. The Group constantly monitors the situation with sanctions against Russia and the potential impact on the transportation of finished products. At the date of financial statements, there are no restrictions on the Group's activities related to the supply of the Group's products to end customers.

Being aware of the possible risks associated with the refusal of the European and Chinese suppliers to transport certain goods for the Group's entities (Ulba FA LLP, Ulba Metallurgical Plant, and SKZ-U LLP) across the territory of the Russian Federation and Belarus, the Company develops alternative supply routes, as well as analyses the impact of changes in supply chain logistics on an increase in the transportation costs and production costs in the medium term. The Company has already made value changes to the procurement plans regarding currency exchange rate changes (in the case of a direct impact of the exchange rate on the cost of goods/work/services).

To reduce the risk of revocation of licences and termination of technical support for software and information technology and security equipment by the US and the EU manufacturers, as well as a possible increase in cyberattacks from hacker groups on the territory of Kazakhstan, Kazatomprom constantly monitors and analyses information on the cost of foreign software products, licences, and their technical support, negotiates with vendors and partners on compliance with the current terms of cooperation, as well as strengthens control over the information security and monitors information security threats 24/7 through the OCIS.

2.1.2. Price received for the sale of natural uranium and changes in natural uranium product prices

Spot market prices for U₃O₈, which is the main marketable product of the Group, have the most significant effect on the Group's revenue. The majority of the Group's revenue is derived from sales of U₃O₈ under contracts with price formulae containing a reference to spot price. In addition to spot prices, the Group's effective realized price depends on the proportion of contracts in the portfolio with a fixed price component in a given period. The average realized price for each period can therefore deviate from the prevailing spot market price. More information regarding the impact of spot market prices on average realized price is provided in section "2.7.1. Uranium sales price sensitivity analysis".

The following table provides the average spot price and average realized price per pound of U₃O₈ for the periods indicated.

Average spot price and average sales price per pound U₃O₈

Indicator		2020	2021	Change
Average weekly spot price (per lb U ₃ O ₈) ¹⁹	USD	29.60	35.05	18%
	KZT	12,236	14,932	22%
Average realized price of the Group (per lb U ₃ O ₈)	USD	29.54	33.11	12%
	KZT	12,210	14,108	16%
Average realized price of Kazatomprom (per lb U ₃ O ₈)	USD	29.63	32.33	9%

¹⁹ Prices per UxC LLC.

KZT	12,247	13,776	12%
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The Company's current overall contract portfolio price is closely correlated to current uranium spot prices (see Section "2.7.1. Uranium **sales price sensitivity analysis**"). However, the increase in average realized prices in 2021 was lower than the increase in the spot market price for uranium due to the significant spot price volatility in the uranium market in 2021 (low of 27.35 USD/lb and high of 50.38 USD/lb). During the fourth quarter, many deliveries were based on contract price mechanisms that established a contract price for the delivery, set earlier in the year when the market price was lower and prior to the sharp increase in the market price in September 2021.

For additional details related to specific market developments that influenced the pricing of uranium in 2021, please see the "Financial Standing and Performance Analysis 2021", available on the corporate website.

2.1.3. Changes in the Group structure

In 2021 and 2020 the Group completed several transactions that had a significant impact on reported results.

In 2021:

- As previously disclosed, under the terms of several cooperation agreements between Kazatomprom and China General Nuclear Power Corporation (CGNPC), the parties agreed to construct a fuel assembly plant (Ulba FA LLP) at the Ulba Metallurgical Plant. CGNPC provided a guarantee that Ulba-FA's production will be purchased by CGNPC in exchange for Kazatomprom agreeing to sell a 49% interest in the Company's wholly owned subsidiary, ME ORTALYK LLP, to a subsidiary of CGNPC (the "Transaction"). In April 2021, a Sale and Purchase agreement was signed and the parties agreed to the valuation determined by one of the four major international advisory and professional services firms, whereby a 49% share of the operation was assessed a value of approximately USD 435 million. As of the end of July, the transaction has closed, with government approvals in place and all conditions being met. Re-registration of the entity has been completed and CGN Mining UK Limited (a CGNPC subsidiary) is now a full participant in ME ORTALYK LLP. Kazatomprom retains a controlling 51% interest and CGN Mining UK Limited holds a 49% interest, with each partner purchasing a proportionate share of uranium production from the operation according to its interest.
- In accordance with Comprehensive Privatization Plan for 2021–2025, approved by the Government of the Republic of Kazakhstan, the Company had planned to divest its interest in a number of non-core assets, as presented in the Company's 2018 IPO Prospectus. This included entities of the KazPV project: Astana Solar LLP, Kazakhstan Solar Silicon LLP and MK KazSilicon LLP. In 2021, the Group sold its 100% interest in each of "Kazakhstan Solar Silicon" LLP for KZT 323 million (completed 12 July 2021), Astana Solar LLP for KZT 380 million (completed 23 August 2021) and "MK KazSilicon LLP" for KZT 652 million (completed 19 November 2021).
- In accordance with the privatisation plan of non-core assets as presented in the Company's IPO Prospectus, Kazatomprom and "United Chemical Technologies Trading House" LLP entered into an Agreement on 30 December 2021, for the sale of the Company's 40% share in "Caustic" JSC. On 31 January 2022, partial payment was made for 30% of the Company's total interest in "Caustic" JSC, therefore "United Chemical Technologies Trading House" LLP's interest in "Caustic" JSC increased by 12% (30% of the Company's 40% share). The remaining portion of the Company's shares were transferred to trust management of "United Chemical Technologies Trading House" LLP until full payment for the Company's remaining interest is completed, expected not later than 2023.

In 2020:

- on 17 March 2020, the Group completed the sale of its 50% stake (minus one share) in the Uranium Enrichment Centre JSC to its partner in this joint venture, TVEL JSC (TVEL). The Group kept one share in the Uranium Enrichment Centre JSC, which will retain the right to access uranium enrichment services in accordance with the conditions previously agreed with TVEL. The sale price amounted to Russian rubles 6,253 million or Euro 90 million, fixed at an exchange rate as of 31 December 2019. Actual cash consideration of Euro 90 million (KZT 43,858 million equivalent) was received.

In total, the number of the Group's subsidiaries, JVs, JOs, associates and other equity investments decreased from 40 as at 31 December 2020, to 36 as of 31 December 2021.

2.1.4. Impact of Changes in Exchange Rates

The Group's exposure to currency fluctuations is associated with sales, purchases and loans in foreign currencies. Significant cash flows of the Group are in USD due to:

- uranium is generally priced in USD, therefore most of the Group's consolidated sales revenue is generated in USD (94% in 2021, 91% in 2020)
- the Company purchases uranium and uranium products from its JVs and associates pursuant to KZT-denominated contracts, with the prices determined by reference to prevailing spot market prices of U₃O₈, which are in USD
- most of the Group's borrowings are denominated in USD (88% in 2021, 85% in 2020), which is the principal currency of the Group's revenue

A significant portion of the Group's expenses, including its operating, production and capital expenditures, are denominated in KZT. Accordingly, as most of the Group's revenue is denominated in USD, while a significant share of its costs are KZT-denominated, the Group generally benefits from appreciation of USD against KZT which subsequently has a positive effect on the Group's financial performance. However, the positive effect of an appreciating USD may be fully or partially offset given that the Group has outstanding USD-denominated liabilities although the amounts of such liabilities at 31 December 2021 and 2020 are not significant. In addition, the Company purchases uranium and uranium products from its JVs and associates pursuant to KZT-denominated contracts, with the prices determined by reference to prevailing spot market prices of U₃O₈, which are denominated in USD. Accordingly, a significant appreciation of USD would result in a corresponding increase in the KZT-denominated price of such contracts.

The Group attempts to mitigate the risk of fluctuations in exchange rate, where possible, by matching the currency denomination of its payments with the currency denomination of its cash flows. Through this matching, the Group achieves natural hedging without the use of derivatives.

In 2021, the KZT/USD exchange rate fluctuated between KZT 414.77 and KZT 436.35. At the end of 2021, the National Bank of the Republic of Kazakhstan (NBK) exchange rate was KZT 431.67. Changes in exchange rates had material impact on the Group's financial performance in 2021. The Group's net foreign exchange gain in 2021 amounted KZT 3,345 million.

The following table provides annual average and year-end closing KZT/USD exchange rates, as reported by the NBK, as of 31 December 2021 and 2020.

Annual average and year-end closing rate for KZT/USD

Indicator		2020	2021	Change
Average exchange rate for the period ²⁰	KZT / USD	413.36	426.03	3%
Closing exchange rate for the period	KZT / USD	420.71	431.67	3%

2.1.5. Taxation and Mineral Extraction Tax (MET)

Kazakhstan's MET is determined by applying a 29% tax charge to the taxable base related to mining production costs (based on a formula - see table and footnote below). Taxable expenditures are made up of all direct expenditures associated with mining operations, including wellfield development depreciation charges and any other depreciation charges allocated to direct mining activities, but exclude processing and general and administrative expenses. The MET is calculated separately for each subsoil use license. The resulting MET paid is therefore directly dependent upon the cost of mining operations.

The following table provides a summary of taxes accrued by the Group for the years shown.

Group taxes, KZT million

²⁰ The average rates are calculated as the average of the daily exchange rates on each calendar day.

Indicator	2020	2021	Change
Corporate income tax ²¹	65,492	85,345	30%
Mineral extraction tax ²²	20,110	23,659	18%
Other taxes and payments to budget ²³	55,490	62,572	13%
Total tax accrued	141,092	171,576	22%

Total tax accrued increased by 22% in 2021 compared to 2020, mainly due to an increase in corporate income tax. The increase was due to a higher tax base resulting from higher uranium spot prices and the weakening of the KZT against the USD. The sale of the Uranium Enrichment Centre JSC in the first half of 2020 had a one-off effect on the tax base of corporate income tax (see Section “2.1.3. Changes in the Group structure”). The increase in MET and other taxes is mainly due to an increase in uranium production volumes in 2021 (see Section “2.2.3.2. Uranium *segment production and sales metrics*”).

Following the announcement by the President of the Republic of Kazakhstan in January 2022 that the country’s current tax regime and MET would be subject to revision, government authorities are considering options to increase MET rates for solid minerals, including uranium. Although no decisions or changes in legislation have been made to date, the government has publicly stated that it is considering an increase in the MET rates on uranium from 2023.

2.1.6. Cost and availability of sulfuric acid

Extraction of uranium using the ISR mining method requires substantial amounts of sulfuric acid. If sulfuric acid is unavailable, it could impact the Group’s production schedule, while higher prices for sulfuric acid could adversely impact the Group’s profits.

The Group’s weighted average cost of sulfuric acid increased slightly to KZT 22,740 per tonne in 2021 (from KZT 22,203 per tonne in 2020) and the cost is expected to continue increasing in 2022. On average in 2021, the price of sulfuric acid represented about 13% of the Group’s uranium production costs.

2.1.7. Pandemic-related costs and availability of critical operating materials & equipment

The extraction of uranium using the ISR mining method requires the import of certain key operating materials and components. These items are either imported into Kazakhstan directly by the Group, or they are imported by local suppliers from whom the Group procures such materials. Due to global pandemic-related shipping constraints and export restrictions imposed by some countries, the Group has encountered delays and/or limited access to some key materials & equipment, such as certain types of pipes and pumps, specialised equipment and drilling rigs.

In some cases, shipping and availability constraints have resulted in a higher cost to acquire the necessary operating materials, including inflationary pressure as a result of commodity price changes, driving a slight increase in production costs and a negative impact on profitability. In other cases, there has been a near-complete loss of access to certain materials. Pandemic-related supply chain challenges have continued to result in limited access to certain key operating materials and equipment, which had a material impact on the Company’s wellfield development and production schedules in 2021 (see Section “2.2.3.2. Uranium *segment production and sales metrics*”), adding additional risk to production in 2022 and resulting in a lower and wider ranges for the expected production volume (see Section “

²¹ Applicable rate: 20%; calculation: taxable income (based on tax reporting accounts) multiplied by corporate income tax rate.

²² Applicable rate: 18.5% for uranium cost in pregnant solution; calculation: the tax charge is a cost of mining and is based on a deemed 20% profit margin on certain expenditures, and a MET rate of 18.5%. The tax charge of 29% is determined by the following formula: $(1 + 20\%) \times 18.5\% \div (1 - (1 + 20\%) \times 18.5\%)$.

²³ Includes property tax, land tax, transport tax, social tax, other payments to budget, VAT and PIT (on PIT Company acts as a tax agent).

2.7. Guidance for 2022”).

2.1.8. Impact of changes in Ore Reserves estimates

The Group reviews its JORC-compliant estimates of Ore Reserves and Mineral Resources on an annual basis, including a review of the estimates by a qualified third-party. As a result, certain Ore Reserves and Mineral Resources may be reclassified annually in accordance with applicable standards. Such reclassifications may have an impact on the Group’s financial statements. For example, if a reclassification results in a change to the Group’s life of mine plans, there may be a corresponding impact on depreciation and amortization expenses, impairment charges, as well as mine closure charges incurred at the end of mine life.

2.1.9. Transactions with Subsidiaries, JVs, JOs and Associates

The Company purchases U₃O₈ from its subsidiaries, JOs, JVs and associates, principally at spot price with market-based discounts, which may vary by operation. Purchased volumes generally correspond to the Company’s interest in the respective selling entities.

The Group’s Uranium segment revenue is primarily composed of two streams:

- the sale of U₃O₈ purchased from operations (JVs and associates), third parties, and
- the sale of U₃O₈ produced by the Company and by its consolidated subsidiaries and Jos

Cost of sales of purchased uranium is equal to the purchase price from JVs and associates, which in most cases is the prevailing spot price with certain applicable discounts. The share of results of JVs and associates represents a significant part of the Group’s profits and should be considered in the assessment of the Group’s financial results. In 2021, U₃O₈ was purchased at a weighted average discount of 4.09% on the prevailing spot price.

When uranium produced by the Company, consolidated subsidiaries and JOs, is sold, the cost of sales is predominantly represented by the cost of production. For those sales, the full margin for uranium products including uranium for export is captured in the consolidated results of the Group.

The following table provides the volumes purchased by the Company for the periods indicated.

Volumes of U₃O₈ purchased by the Company, tonnes

Indicator	2020	2021	Change
U ₃ O ₈ purchased from JVs and associate	2,676	2,910	9%
U ₃ O ₈ purchased from JOs and subsidiaries	8,586	9,211	7%
Total	11,262	12,121	8%

The volume of U₃O₈ purchased from JVs and associates, JOs and Subsidiaries comprised 12,121 tonnes in 2021, compared to 11,262 tonnes in 2020, an increase of 8%, mainly due to due to higher 2021 U₃O₈ production volume on both a 100% and attributable basis (see Section “2.2.3.2. Uranium *segment production and sales metrics*”).

In addition to the above volumes, the Company (including its trading subsidiary THK) also purchases volumes from third parties at variable prices.

2.2. Key performance indicators analysis

2.2.1. Consolidated financial metrics

The analysis in this section of the report is based on 12 months ended 31 December 2021 compared to 12 months ended 31 December 2020. The table below provides financial information related to the consolidated results of the Group for 2021 and 2020.

Financial indicators, KZT billion, unless otherwise indicated

Indicator	2020	2021	Change
Revenue	587,457	691,011	18%
Cost of sales	(319,624)	(402,967)	26%
Gross profit	267,833	288,044	8%
Selling expenses	(14,352)	(15,706)	9%
G&A expenses	(29,582)	(34,105)	15%
Operating profit	223,899	238,233	6%
Other income/(loss), including the following one-time effects:	21,159	(8,172)	(139%)
Gain from disposal of joint venture (one-time effect) ²⁴	22,063	-	(100%)
Share of results of associates	39,482	47,294	20%
Share of results of JVs	604	4,289	610%
Pre-tax income	285,144	281,644	(1%)
Corporate income tax	(63,776)	(61,618)	(3%)
Net profit, attributable to:	221,368	220,026	(1%)
- Owners of the Company	183,541	140,773	(23%)
- Non-controlling interest	37,827	79,253	110%
Earnings per share attributable to owners (basic and diluted), KZT/share ²⁵	708	543	(23%)
Adjusted Net profit (net of one-time effects)	199,305	220,026	10%
Adjusted EBITDA ²⁶	325,734	350,294	8%
Attributable EBITDA ²⁷	295,465	276,510	(6%)

2.2.2. Consolidated revenue and other financial metrics

The Group's consolidated revenue was KZT 691,011 million in 2021, an increase of 18% compared to 2020, primarily due to an increase in the average realized price associated with an increase in the spot price for U₃O₈ and the weakening of KZT against USD in 2021. This revenue increase was also supported by a slight increase in sales volume in 2021 in comparison to 2020 (see Section "2.2.3.2. Uranium *segment production and sales metrics*").

The main revenues by source in 2021 compared to 2020, are presented below.

Consolidated revenues, KZT million

Indicator	2020	2021	Change	Proportion	
				2020	2021
Uranium products ²⁸	529,196	625,048	18%	90%	90%
Beryllium products	21,866	26,119	19%	4%	4%
Tantalum products	12,205	15,777	29%	2%	2%
Others	24,190	24,067	(1%)	4%	4%
Total Revenue	587,457	691,011	18%	100%	100%

²⁴ Gain from disposal of joint venture Uranium Enrichment Center JSC.

²⁵ Calculated as: Profit for the year attributable to owners of the Company divided by Total share capital/

²⁶ Adjusted EBITDA is calculated by excluding from EBITDA items not related to the main business and having a one-time effect.

²⁷ Attributable EBITDA (previously "Adjusted Attributable EBITDA") is calculated as Adjusted EBITDA less the share of the results in the net profit in JVs and associates, plus the share of Adjusted EBITDA of JVs and associates engaged in the uranium segment (except JV Budenovskoye LLP's EBITDA due to minor effect it has during each reporting period), less non-controlling share of adjusted EBITDA of APPAK LLP, JV Inkai LLP, Baiken-U LLP, ME ORTALYK LLP and JV Khorasan-U LLP, less any changes in the unrealized gain in the Group.

²⁸ Includes production and sales of UO₂ powder and fuel pellets, as well as uranium products in form of UF₆.

Operating profit in 2021 was KZT 238,233 million, an increase of 6% compared to 2020. The increase was mainly due to an increase in average realized price.

Net profit in 2021 was KZT 220,026 million, a decrease of 1% compared to 2020. Adjusted net profit for 2021 was KZT 220,026 million, an increase of 10% compared to 2020 and consistent with the increase in the operating profit in 2021. In 2020 the gain from disposal of joint venture Uranium Enrichment Center JSC was KZT 22,063 million (see Section “2.1.3. Changes in the Group structure”). In 2021, the Company sold 49% of its interest in ME ORTALYK LLP, while Kazatomprom retains a controlling 51% interest, according to which, under IFRS, the financial effect of this transaction is reflected in cash flows (see Section “

2.5.4.3. **Cash Flows from financing activities**”) and equity in the Financial Statements.

Adjusted EBITDA comprised KZT 350,294 million in 2021, an increase of 8% compared to 2020 due to a higher operating profit, as well as an increase in the EBITDA of JVs and associates. Attributable EBITDA was KZT 276,510 million in 2021, a decrease of 6% compared to 2020 mainly due to the sale of 49% share in ME ORTALYK LLP.

2.2.3. Uranium segment

2.2.3.1. Uranium segment financial metrics

Uranium segment financial metrics (KZT million unless noted)

Indicator		2020	2021	Change
Average exchange rate for the period	KZT/USD	413.36	426.03	3%
Uranium segment revenue ²⁹		527,936	621,706	18%
Including U ₃ O ₈ sales proceeds (across the Group) ³⁰		521,594	606,108	16%
Share of a revenue from uranium products	%	89%	88%	(1%)

Consolidated U₃O₈ sales were KZT 606,108 million in 2021, an increase of 16% compared to 2020, mainly due to a higher spot price for U₃O₈ and weakening of the KZT against the USD in 2021, which resulted in a higher average realized price, supported by slightly higher sales volume.

2.2.3.2. Uranium segment production and sales metrics

Indicator		2020	2021	Change
Production volume of U ₃ O ₈ (100% basis)	tU	19,477	21,819	12%
Production volume of U ₃ O ₈ (attributable basis) ³¹	tU	10,736	11,858	10%
U ₃ O ₈ sales volume (consolidated)	tU	16,432	16,526	1%
Including KAP U ₃ O ₈ sales volume ^{32,33}	tU	14,126	13,586	(4%)
Group inventory of finished goods (U ₃ O ₈)	tU	7,537	8,824	17%
Including KAP inventory of finished goods (U ₃ O ₈) ³⁴	tU	6,761	7,724	14%
Group average realized price	KZT/kg	31,743	36,677	16%
Group average realized price	USD/lb	29.54	33.11	12%
KAP average realized price ³⁵	USD/lb	29.63	32.33	9%
Average weekly spot price	USD/lb	29.60	35.05	18%
Average month-end spot price ³⁶	USD/lb	29.96	35.28	18%

²⁹ This segment does not include production and sales of UO₂ powder. Calculated from Financial Statements Note Segment Information as a sum of external revenue and revenues from other segments for uranium segment.

³⁰ Calculated from Section “Uranium segment production and sales metrics: U₃O₈ sales volume (consolidated) multiplied by group average realized price in KZT/kg”.

³¹ The Production volumes of U₃O₈ (attributable basis) is not equal to the volumes purchased by Company and THK.

³² KAP U₃O₈ sales volume (incl. in Group): includes only the total external sales of KAP HQ and THK. Intercompany transactions between KAP HQ and THK are not included.

³³ Group sales volume and KAP sales volume (incl. in Group) does not include approximately 225 tU equivalent sold as UF₆ in equivalent sold as UF₆ in 1Q20, 4Q21 and 100.5 tU

³⁴ KAP inventory of finished goods (incl. in Group): includes the inventories of KAP HQ and THK.

³⁵ KAP average realized price: the weighted average price per pound for the total external sales of KAP and THK. The pricing of intercompany transactions between KAP and THK are not included.

³⁶ Source: UxC, TradeTech. Values provided represent the average of the uranium spot prices quoted at month end, and not the

All annual operational and sales results in the uranium segment were in line with the updated guidance provided for 2021, which was adjusted in the Company's Third Quarter 2021 Operations and Trading Update.

Production on both a 100% and attributable basis was higher for 2021 compared to the same period in 2020. The pandemic-related safety measures that were implemented in 2020 impacted production volumes throughout the second half of that year – production in 2020 should therefore be considered unusually low. The pandemic-related supply chain challenges have continued to result in limited access to certain key operating materials and equipment (production reagents, certain types of pipes and pumps, specialized equipment, drilling rigs), which had a material impact on the Company's wellfield development and production schedules in 2021, resulting in a decrease of the guidance by approximately 1,000 tU on 100% basis and by almost 540 tU on attributable basis (original 2021 guidance of 22,500 – 22,800 tU on 100% basis, 12,100 – 12,400 tU on attributable basis).

Uranium sales at the Group level in 2021 were in line with 2020. Due to the timing of customer requirements and differences in the timing of deliveries, a larger proportion of both Group and KAP sales occurred in the fourth quarter, resulting in higher sales in the final quarter of 2021 compared to the same period in 2020. KAP sales volume was modestly lower in 2021 compared to 2020 due to additional sales by consolidated subsidiaries to JV partners.

Consolidated Group inventory of finished U₃O₈ products in 2021 amounted to 8,824 tonnes as of 31 December 2021, which was 17% higher than at 31 December 2020. At the Company level, inventory of finished U₃O₈ products was 7,724 tonnes, an increase of 14% compared to 2020. The increase in inventory was mainly related to a higher 2021 U₃O₈ production volume on both a 100% and attributable basis, while sales level remained approximately on the same level as in 2020. Consistent with the Company's value strategy, Kazatomprom's inventory levels vary based on the timing of customer requirements and the resulting differences in the timing of deliveries and mining and sales volumes, in alignment with changing market conditions.

The Group's average realized price in KZT in the 2021 was KZT 36,677 per kg (33.11 USD/lb), an increase of 16% compared to 2020 due to an increase in the average spot price for uranium products, and the weakening of the KZT against the USD. The average sales prices at the KAP level were also higher and for the same reasons.

The Company's current overall contract portfolio price is closely correlated to current uranium spot prices (see Section "2.7.1. Uranium **sales price sensitivity analysis**"). However, the increase in average realized prices in 2021 was lower than the increase in the spot market price for uranium due to the significant spot price volatility in the uranium market in 2021 (low of 27.35 USD/lb and high of 50.38 USD/lb); during the fourth quarter, many deliveries were based on contract price mechanisms that established a contract price for the delivery, set earlier in the year when the market price was lower and prior to the sharp increase in the market price in September 2021.

2.2.3.4. Uranium segment production by operation

The information presented in the table below provides the total uranium production level at each asset (100% basis). The impact of delays and/or limited access to some key materials & equipment in 2021 (see Section "2.1.7. Pandemic-related costs and availability of critical **operating materials & equipment**") and the reduction in wellfield development activity due to the Company's actions to lower staff levels amid the COVID-19 pandemic in 2020 (see Section "2.2.3.2. Uranium **segment production and sales metrics**"), were not equal across all operations due to the nature of the ISR mining process, and differences in the mine plans and development phase at each operation.

Production volume of uranium oxide concentrate, (U₃O₈ tonnes)

Enterprise	Ownership	2020	2021	Change
Kazatomprom-SaUran LLP	100%	1,230	1,493	21%
RU-6 LLP	100%	660	800	21%
APPAK LLP	65%	633	805	27%

average of each weekly quoted spot price, as contract price terms generally refer to a month-end price.

JV Inkai LLP ³⁷	60%	2,693	3,449	28%
Baiken-U LLP	52.5%	1,181	1,230	4%
ME ORTALYK LLP ³⁸	51%	1,308	1,579	21%
Semizbay-U LLP	51%	753	962	28%
Karatau LLP	50%	2,460	2,561	4%
JV Akbastau JSC	50%	1,363	1,545	13%
JV Khorassan-U LLP	50%	1,455	1,579	9%
JV ZARECHNOYE JSC	49/98%	648	655	1%
JV Katco LLP	49%	2,833	2,840	0%
JV SMCC LLP	30%	2,260	2,321	3%
Total		19,477	21,819	12%

2.2.4 UMP Segment

2.2.4.1. UMP segment uranium product sales

UO₂ powder and Fuel pellets

Indicator		2020	2021	Change
Fuel pellets	Sales, tonnes	60.30	43.5	(28%)
Ceramic powder	Sales, tonnes	0.80	10.7	>100%
Dioxide from scraps	Sales, tonnes	56.40	50.60	(10%)

Sales of fuel pellets decreased by 28% to 43.5 tonnes and dioxide from scraps by 10% to 50.6 tonnes in 2021, lower than in 2020 as per customer demand. The significant increase in sales of ceramic powder in 2021 was due to higher demand from customers.

2.2.4.2. UMP segment rare metal product sales

Rare metals products

Indicator		2020	2021	Change
Beryllium products	Sales, tonnes	1,375.08	1,529.31	11%
	KZT/kg	15,902	17,074	7%
Tantalum products	Sales, tonnes	143.73	165,40	15%
	KZT/kg	84,918	95,351	12%
Niobium products	Sales, tonnes	16.11	8.24	(49%)
	KZT/kg	16,846	20,655	23%

Sales volume of beryllium products increased by 11% in 2021 compared to 2020, due to an increase in the number of orders from customers. Sales price increased by 7% in 2021 mainly related to the weakening of KZT against USD and the product mix changing to highly refined products and higher price in the non-ferrous metal market.

Sales volumes and prices for tantalum products were higher in 2021 compared 2020, due to higher consumer demand for tantalum ingots and chips.

Sales of niobium products in 2021 decreased by 49% compared to 2020 due to a decrease in the quantity of orders for niobium hydroxide, although 2021 orders were for more highly refined products of higher value, resulting in a higher selling price in 2021.

2.2.5. Cost of sales

The table below illustrates the components of the Group's cost of sales for 2021 and 2020:

Group's prime cost, KZT million

Indicator	2020	2021	Change	Proportion
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³⁷ For JV Inkai LLP annual share of production on attributable basis is determined as per Implementation Agreement as disclosed in IPO Prospectus. Company's annual attributable share of production in 2021 comprised 1,400 tU.

³⁸ Ownership changed due to the sale of 49% share of ME ORTALYK LLP to CGN Mining UK Limited in mid-2021. Company's annual attributable share of production in 2021 comprised 1,247 tU.

				2020	2021
Materials and supplies	167,546	241,695	44%	53%	60%
Depreciation and amortisation	60,002	66,429	11%	18%	16%
Wages and salaries	31,874	33,294	4%	10%	8%
Taxes other than income tax	23,775	25,474	7%	8%	7%
Processing and other services	19,738	17,404	(12%)	6%	4%
Other	16,689	18,671	12%	5%	5%
Cost of Sales	319,624	402,967	26%	100%	100%

Cost of sales totalled KZT 402,967 million in 2021, an increase of 26% compared to 2020.

The cost of materials and supplies was KZT 241,695 million in 2021, an increase of 44% compared to 2020 due to a significant increase in the proportion of sales of uranium purchased from JVs and associates, as well as from third parties. When such uranium is sold, the cost of sales is predominantly represented by the cost of purchased uranium (accounted in materials and supplies) at the prevailing spot price with certain applicable discounts. The purchase price of materials and supplies, including U₃O₈ also increased as a result of the increase in uranium spot prices and the weakening of the KZT against the USD, and increased inflationary pressure.

Depreciation and amortisation totalled KZT 66,429 million in 2021, an increase of 11% compared to 2020, mainly due to an increase in the costs of repayment of the PGR (see Section “

2.3. Capital expenditures review”).

Wages and salaries totalled KZT 33,294 million in 2021, an increase of 4% compared to 2020, mainly due to an increase in the payroll of main production personnel.

The taxes other than income tax totalled KZT 25,474 million, which is comprised mostly of MET, increased by 7% compared to 2020 due to an increase in uranium production volumes in 2021 (see Section “2.2.3.2. Uranium *segment production and sales metrics*”).

The cost of processing and other services was KZT 17,404 million in 2021, a decrease of 12% compared to 2020, mainly due to a significant increase in the proportion of sales of uranium purchased from JVs and associates as well as from third parties. When such uranium is sold, the cost of sales is predominantly represented by the cost of purchased uranium.

The other categories of costs totalled KZT 18,671 million in 2021, an increase of 12% compared to 2020 due to an increase in maintenance and repair and other overheads.

2.2.5.1. Uranium segment C1 cash cost, all-in sustaining cash cost, and capital expenditure

Indicator		2020	2021	Change
C1 Cash cost (attributable basis)	USD/lb	8.67	8.80	1%
Capital cost (attributable basis)	USD/lb	3.05	3.83	26%
All-in sustaining cash cost (attributable C1 + capital cost)	USD/lb	11.72	12.63	8%
Capital expenditures of mining companies (100% basis) ³⁹		60,947	91,087	49%

Compared to 2020, C1 Cash cost (attributable) increased by 1% mainly due to an increase in the payroll of production personnel, whereas All-in-sustaining cash costs (“AISC”) (attributable C1 + capital cost) increased by 8% in USD equivalent in 2021 due to an increase in capital expenditures of mining companies (see section “

³⁹ Excludes liquidation funds and closure costs and includes expansion investments, however includes total expansion investments (JV Inkai LLP, Karatau LLP, JV Katco LLP) in amount of KZT 4.4 billion in 2021 and KZT 2.2 billion in 2020. Note that in section “

2.3. Capital expenditures review” total results include liquidation funds and closure cost.

2.3. Capital expenditures review). The Company partially shifted wellfield development activities from 2020 to 2021 due to the four-month suspension of wellfield development activity, resulting from the COVID-19 pandemic in 2020, and the shift in schedule resulted in a higher level of capital expenditures in 2021. The results were considerably better than expected and below the guidance ranges provided for 2021 (updated guidance of US\$9.50 – 10.50 for attributable C1 cash cost, US\$13.50 – 14.50 for AISC) primarily due to the weakening of the KZT against the USD in 2021.

Capital expenditures of mining companies (100% basis) comprised KZT 91,087 million, an increase of 49% compared to 2020, primarily due to a shift in wellfield development activities as described above, as well as higher purchase prices for materials, supplies, equipment and cost of drilling. Capital expenditures in 2020 were lower as a result of measures taken to prevent the spread of the COVID-19 pandemic (see section “

2.3. Capital expenditures review”).

Kazatomprom’s attributable C1 cash cost are generally broken down as follows (proportions vary year-to-year, and vary between operations, deposits and regions):

General Attributable Cash cost (C1) Categories

Indicator	2020	2021
Material and supplies	24%	22%
MET	19%	21%
Processing and other services	18%	17%
Wages and salaries	17%	17%
General and administrative expenses	7%	8%
Selling expenses	3%	3%
Others	12%	12%
Total	100%	100%

2.2.6. Selling expenses

Selling expenses, KZT million

Indicator	2020	2021	Change	Proportion	
				2020	2021
Shipping, transportation and storing	10,351	11,110	7%	72%	71%
Wages and salaries	1,139	1,456	28%	8%	9%
Materials	212	306	44%	2%	2%
Rent	113	105	(7%)	1%	1%
Depreciation and amortisation	66	65	(2%)	0%	0%
Others	2,471	2,664	8%	17%	17%
Selling expenses	14,352	15,706	9%	100%	100%

Selling expenses totalled KZT 15,706 million in 2021, an increase of 9% compared to 2020. The increase was mainly due to changes in the delivery destination points for uranium products (see Section “**Ошибка! Источник ссылки не найден.**”), an increase in transportation tariffs and the weakening of the KZT against the USD, as a significant portion of shipping, transportation and storing expenses are denominated in foreign currency.

2.2.7. General & Administrative expenses (G&A)

General & Administrative expenses (G&A), KZT million

Indicator	2020	2021	Change	Proportion	
				2020	2021
G&A expenses	29,582	34,105	15%	100%	100%
Incl. Depreciation and amortisation	1,744	2,493	43%	6%	7%

In comparison to 2020 an increase of G&A expenses was mainly due to a provision for tax fines and penalties for KZT 1,266 million, as well as an increase in wages and salaries and higher depreciation and amortisation. G&A was also lower in 2020 due to the impact of optimisation and cost reduction in relation to the COVID-19 pandemic.

2.2.8. The share of associates’ and JVs’ results

The share of results of associates and JVs in 2021 was KZT 51,583 million, an increase of 29% compared to 2020. The increase was related to an increase in uranium spot prices and weakening of the KZT in 2021, which positively impacted the operating results of the associates and JVs and their resulting contributions to the Group.

2.2.9. Profit before tax and tax expense

Profit before tax and tax expense, KZT million

Indicator	2020	2021	Change
Profit before tax	285,144	281,644	(1%)
Total income tax expense, including:	63,776	61,618	(3%)
Current income tax	65,492	85,345	30%

Deferred income tax	(1,716)	(23,727)	>100%
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The Group's profit before tax was KZT 281,644 million in 2021 which was consistent with 2020. In 2021, corporate income tax expense was KZT 61,618 million, a decrease of 3% compared to 2020, due to an increase deferred income tax and decrease in profit before tax in 2021.

The corporate tax rate applicable to the Group's profits was 20% in 2021 and 2020. Effective income tax rates were 20% and 21% for 2021 and 2020, respectively. The effective tax rate differs from corporate income tax rate primarily due to certain elements of reported income and expenses that are not recognized in tax accounting.

2.3. Capital expenditures review

Most capital expenditures of the Group are incurred by subsidiaries, JO's, JVs and associates engaged in the mining of natural uranium. Such expenditures are comprised of the following key components:

- well construction costs
- expansion costs, which typically include expansion of processing facilities, extension of services and transport routes to new wellfield areas, implementation of new systems and processes
- sustaining capital, largely reflecting recurring, infrastructure, maintenance and equipment replacement related costs, which are assumed to cease three years prior to the end of production at the asset, and
- liquidation fund contributions and mine closure costs (not included in the calculation of AISC)

The following table provides the capital expenditures for the Group's subsidiaries, JOs, JVs and associates engaged in uranium mining for the periods indicated. Capital expenditure amounts shown were derived from stand-alone management information of certain entities within the Group on an unconsolidated basis, and they are therefore not comparable with or reconciled to the amounts of additions to property, plant and equipment as presented in the Financial Statements. Investors and analysts are strongly cautioned to not place undue reliance on capital expenditure information, as it represents unaudited, unconsolidated financial information on an accounting basis that is not in compliance with IFRS.

Capital expenditures of subsidiaries, JOs, JVs and associates of the Group, KZT million

Enterprise	Ownership	2020				2021			Total
		WC ⁴⁰	S&E ⁴¹	LF/C ⁴²	Итого	WC	S&E	LF/C	
Kazatomprom-SaUran LLP	100%	5,231	925	238	6,394	6,094	865	542	7,501
RU-6 LLP	100%	1,902	672	226	2,800	3,392	657	260	4,309
APPAK LLP	65%	2,666	833	142	3,641	6,769	495	1,331	8,595
JV Inkai LLP	60%	4,306	2,203	23	6,532	4,815	3,925	6	8,746
Baiken-U LLP	52.5%	4,634	400	250	5,284	2,679	590	167	3,436
ME ORTALYK LLP	51%	3,451	851	175	4,477	4,487	594	219	5,300
Semizbay-U LLP	51%	3,108	468	211	3,787	4,231	561	177	4,969
JV Budenovskoye LLP	51%	-	-	46	46	1,599	320	(4)	1,915
Karatau LLP	50%	1,713	890	171	2,774	4,667	579	112	5,358
JV Akbastau JSC	50%	2,382	713	106	3,201	4,648	291	222	5,161
JV Khorassan-U LLP	50%	3,698	805	202	4,705	7,645	1,781	171	9,597
JV ZARECHNOYE JSC	49.98%	3,129	263	17	3,409	3,878	291	1,281	5,450
JV Katco LLP	49%	8,237	3,067	13,903	25,207	14,391	5,037	1,467	20,895
JV SMCC LLP	30%	3,772	627	251	4,650	3,927	1,879	374	6,180
Total		48,229	12,717	15,961	76,907	73,222	17,865	6,325	97,412

In order to achieve the planned levels of production, the Group's mining companies assess the required level of wellfield and mining preparation based on the availability of reserves. These costs relate to the capitalized costs of maintaining the sites, with the main component being wellfield construction.

⁴⁰ Well construction.

⁴¹ Production and expansion investments, including total expansion investments (JV Inkai LLP, Karatau LLP, JV Katco LLP) in amount of KZT 4.4 billion in 2021 and KZT 2.2 billion in 2020.

⁴² Liquidation fund / closure. In 2020, JV Katco LLP changed the calculation methodology and replenished its LF/C.

Wellfield construction and sustaining costs, KZT million

Indicator	2020	2021	Change
Well construction	48,229	73,222	52%
Sustaining ⁴³	10,453	13,427	28%
Total wellfield construction and sustaining costs	58,682	86,649	48%
Expansion	2,264	4,438	96%
Capital expenditures of mining companies (100% basis)	60,947	91,087	49%

Wellfield construction and sustaining costs for the 14 mining entities in 2021 comprised KZT 86,649 million, which is 48% higher than in 2020 due to an increase in well construction in 2021 as a result of production reductions associated with a decline in field development activities amid the COVID-19 pandemic in 2020. The results were below the guidance range provided for 2021 (KZT 90 – 100 billion) due to the pandemic-related supply chain challenges (see Section “2.1.7. Pandemic-related costs and availability of critical **operating materials & equipment**”). The pandemic-related safety measures that were implemented in 2020 impacted production volumes throughout the second half of that year – production in 2020 should therefore be considered unusually low.

The information presented in the table below reflects the wellfield development depreciation (commonly known as PGR), property, plant and equipment, and depreciation and amortization data for each mining asset in 2021.

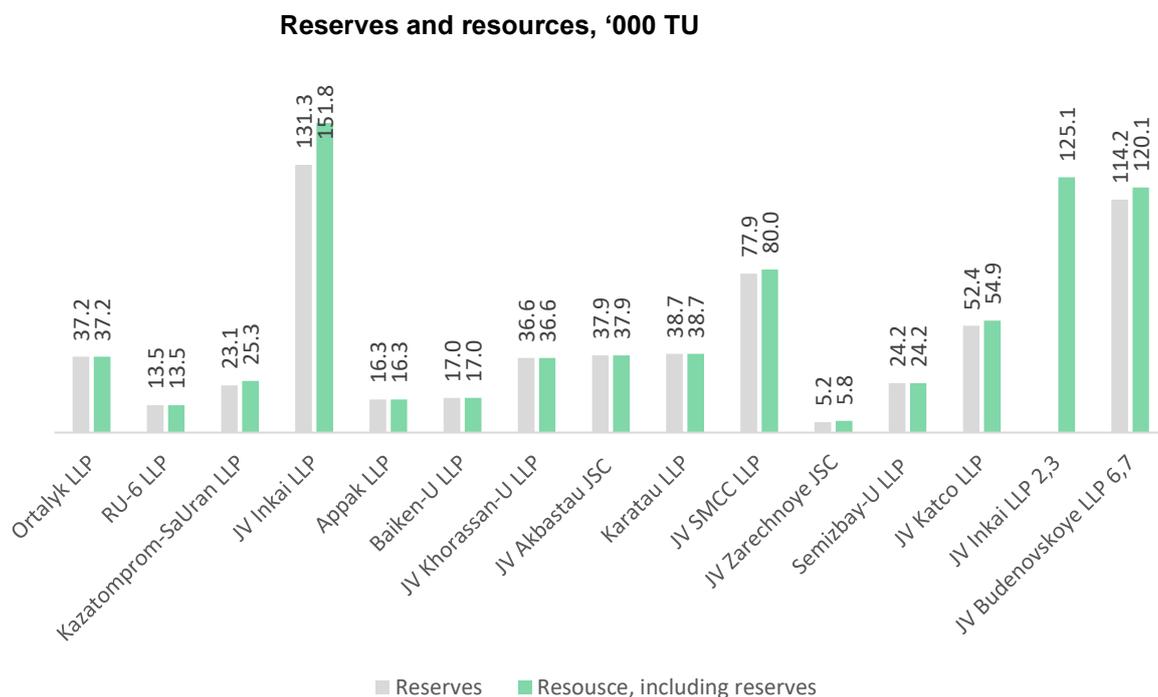
Redemption of mining and preparatory operations, KZT million, unless otherwise indicated

Enterprise	PGR volumes (tU)	PGR at the end of period	Exploration value at the end of period	Historical cost of PPE (excl. wellstock) at the end of period	Carrying amount of PPE (excl. wellstock) at the end of period	D&A (excl. wellstock)
Kazatomprom-SaUran LLP	3,988	15,533	2,575	21,732	10,837	988
RU-6 LLP	2,892	7,689	-	8,125	4,950	516
APPAK LLP	1,570	8,002	1,879	10,290	5,531	387
JV Inkai LLP	3,944	21,300	17,100	102,568	60,614	2,444
Baiken-U LLP	2,597	7,555	5,707	20,627	9,923	976
ME ORTALYK LLP	2,466	10,792	1,130	19,055	11,067	1,005
Semizbay-U LLP	2,529	7,819	36	17,360	8,250	925
JV Budenovskoye LLP	-	493	11,844	414	346	52
Karatau LLP	2,344	7,068	2,651	29,224	14,939	1,476
JV Akbastau JSC	1,730	6,246	6,150	11,475	7,011	383
JV Khorassan-U LLP ⁴⁴	3,041	8,921	8,675	16,609	10,156	712
JV Katco LLP	54,875	25,830	2,532	56,738	20,457	1,428
JV ZARECHNOYE JSC	1,082	6,660	2,432	9,013	2,260	460
JV SMCC LLP	4,471	10,730	5,919	22,380	10,667	1,663

⁴³ Excludes total expansion investments (JV Inkai LLP, Karatau LLP, JV Katco LLP) of KZT 4.4 billion in 2021 and KZT 2.2 billion in 2020.

⁴⁴ Includes the fixed assets of Kyzylkum LLP.

2.4 Reserves and geological surveys



In accordance with the SRK Consulting (UK) Limited letter (dated 15 January 2022), the Ore reserves of all mining assets at 31 December 2021 (including annual depletion) totalled 625.4 thousand tU, (100% basis), with 350.8 thousand tU attributable to the Company. Total mineral resources (including ore reserves) were estimated at 784.4 thousand tU (100% basis), with 495.7 thousand tU attributable to the Company. In comparison to 2020, total mineral resources increased by about 32.4 thousand tU mainly due to an increase in reserves of 32.0 thousand tU from Blocks 6 and 7 of the Budenovskoye deposit and 20.6 thousand tU at Block 1 of the Inikai deposit, partially offset by a decrease of 21.8 thousand tU due to the production related depletion of mineral resources related to mining activities in 2021.

2.5. Liquidity and capital resources

Kazatomprom's management aims to preserve financial stability in a constantly changing market environment. The Group's financial management policy intends to maintain a strong capital base to support existing operations and business development.

The Group's liquidity requirements primarily relate to funding working capital, capital expenditures, service of debt, and payment of dividends. The Group has historically relied primarily on cash flow from operating activities to fund its working capital and long-term capital requirements, and it expects to continue to do so, although it maintains the option to use external financial resources when required. It is expected that there will be no significant change in the sources of the Group's liquidity in the foreseeable future. If required, the Company will consider entering into project financing arrangements to fund certain investment projects.

2.5.1. Cash and available source of financing

The Company's approach to manage the liquidity is to ensure the continued availability of cash sufficient to meet its obligations on time, both in the ordinary course of business and under the distressed conditions, avoiding unacceptable losses and reputation risks.

Cash and available source of financing, KZT million

Indicator	2020	2021	Change
Cash and cash equivalents	113,347	161,190	42%
Term deposit	-	43,220	-
Total cash	113,347	204,410	80%
Undrawn borrowing facilities	241,602	177,902	(26%)

Total cash at 31 December 2021 comprised KZT 204,410 million, compared to KZT 113,347 million on 31 December 2020, due to explanations that are presented below in the Section "2.5.4. Cash Flows".

Undrawn borrowing facilities are the credit lines available to the Group and considered as an additional liquidity source payable within 12 months, primarily used to temporarily cover cash deficits related to uneven receipts of trade receivables. As of 31 December 2021, the Group's revolving credit lines comprised KZT 177,902 million (USD 412 million) and were fully available (as at 31 December 2020: KZT 241,602 million (USD 574 million)) the decrease is primarily due to closure of unclaimed credit lines.

2.5.2. Dividends received and paid

The Company is the parent for the Group, and in addition to revenue from its business operations, it receives dividends from JVs and associates, and from other investments. In 2021 and 2020, the Group received dividends of KZT 17,108 million and KZT 47,886 million, respectively, from its JVs and associates, and other investments. The decrease was primarily due to a change in timing of the dividend payment schedule in 2020 and 2021. Of note in 2020, the Company received dividends covering the 2017-2019 period from JV Katco LLP comprising KZT 30,870 million. The Company balances dividend maximisation and sustainable development goals at subsidiaries, JVs and associates. Dividends received by the Company from investees domiciled in the Republic of Kazakhstan are exempt from dividend tax.

In July 2021, the Company paid a dividend of KZT 150,082 million (KZT 578.67 per ordinary share) to its shareholders based upon the results of 2020 operations. This dividend represented an increase of 52% compared to 2020 when dividends of KZT 99,002 million were paid to shareholders on the results of 2019 operations. The increase was mainly due to higher operating cash flow and the inclusion of receipts from the sale of the Group's interest in Uranium Enrichment Center JSC in the Free Cash Flow (FCF) calculation methodology in accordance with the revised dividend policy approved by shareholders at the Annual General Meeting of shareholders in May 2021.

2.5.3. Working capital

The table below provides a breakdown of the Group's working capital in 2021 and 2020.

Working capital of the Group, KZT million

Indicator	2020	2021	Change
Inventory	233,389	275,856	18%
Receivables	117,418	220,138	87%
Recoverable VAT	48,621	46,447	(4%)
Other current assets	8,159	7,823	(4%)
CIT prepayment	9,986	7,526	(25%)
Payables	(43,948)	(66,014)	50%
Employee remuneration liabilities	(169)	(215)	27%
Income tax liabilities	(927)	(5,096)	450%
Other taxes and compulsory payments liabilities	(8,713)	(17,973)	106%
Other current liabilities ⁴⁵	(34,994)	(57,338)	64%
Net working capital⁴⁶	328,822	411,154	25%

The Group's net working capital remained positive during all periods under review. An increase in receivables was mainly due to the timing of customer requirements and differences in the timing of deliveries. A larger proportion of both Group and KAP sales occurred in the fourth quarter of 2021, resulting in higher sales in the final quarter of 2021 compared to the same period in 2020.

The following table sets forth the components of the Group's inventories in 2021 and 2020.

Group inventories, KZT million

Indicator	2020	2021	Change
Finished goods and goods for resale	185,397	223,750	21%
Including uranium products	183,633	222,195	21%
Work-in-process	22,923	30,409	33%
Raw materials	20,179	14,879	(26%)
Materials in processing	1,204	3,091	157%
Spare parts	682	789	16%
Fuel	655	479	(27%)
Other materials	5,104	5,709	12%
Provision for obsolescence and write-down to net realizable value	(2,755)	(3,250)	18%
Total inventories	233,389	275,856	18%

The Group constantly monitors the uranium market and may pursue a strategy of increasing its inventories in certain market conditions.

The Group's largest inventory item is finished goods and goods for resale, which primarily consists of U₃O₈. The Group's work-in-process increased by 33%, whereas raw materials decreased by 26% due to a shift in the production schedule of uranium products.

An increase in the inventory balance was due to an increase in inventory volume and an increase in spot price of U₃O₈ and weakening of KZT against USD during 2021, which increased the cost of purchased uranium from JVs, associates and third parties. Consistent with the Company's value strategy, Kazatomprom's inventory levels vary based upon timing of customer requirements and the resulting differences in the timing of deliveries, and mining and sales volumes, in alignment with changing market conditions.

2.5.4. Cash Flows

The following cash flow discussion is based on, and should be read in conjunction with the Financial Statements and related notes.

The following table provides the Group's consolidated cash flows in 2021 and 2020.

⁴⁵ Including current portion of lease liabilities (see Section "2.6. Indebtedness").

⁴⁶ Excludes term deposits (see Section "2.5.1. Cash and available source of financing") as these deemed as equivalent to cash.

Consolidated cash flows of the Group, KZT million

Indicator	2020	2021
Cash flows from operating activities ⁴⁷	161,593	118,729
Cash flows from/(used in) investing activities	48,759	(71,241)
Cash flows (used in) financing activities	(201,415)	(1,843)
Net increase/(decrease) in cash and cash equivalents	8,937	45,645

2.5.4.1. Cash Flows from Operating Activities

Operating cash flows totalled KZT 118,729 million, a decrease of 27% compared to KZT 161,593 million in 2020 mainly due to:

- a KZT 96,426 million increase in cash receipts from customers during 2021 compared to 2020, due to growth in the average realized price associated with an increase in the market spot price for U₃O₈ and change in timing of the sales schedule for 2020-2021, and
- a KZT 122,725 million increase in payments for accounts payable to suppliers during the 2020 due to the weakening of the KZT against the USD and an increase in the spot price for U₃O₈ purchased from JV and associates
- a KZT 24,233 million increase in 2021 inflows from VAT refunds from the budget
- a KZT 38,592 million increase in 2021 of income tax paid, of which a one-time effect of KZT 33,466 million is a capital gain tax on sale of 49% share in ME ORTALYK LLP

2.5.4.2. Cash Flows from Investing Activities

Net cash outflows from investing activities were KZT 71,241 million in 2021 compared to Net cash inflows KZT 48,759 million in 2020.

Changes in investing cash flows in 2021 were due to:

- cash consideration received in 2020 from the sale of the investment in joint venture JSC Uranium Enrichment Center of KZT 43,858 million
- a KZT 30,778 million decrease in 2021 in dividends received from associates, joint ventures and other investments (see Section "2.5.2. Dividends received and paid")
- an increase in 2021 in acquisition of property, plant and equipment, acquisition of mine development assets and acquisition of exploration and evaluation assets in sum for KZT 11,296 million primarily due to a shift in wellfield development activities, as well as higher purchase prices for equipment (see Section "
-

⁴⁷ Includes income tax and interest paid.

- **2.3. Capital expenditures review”)**

2.5.4.3. Cash Flows from financing activities

Net cash outflows from financing activities were KZT 1,843 million in 2021 and KZT 201,415 million in 2020. The decrease in outflow was primarily due to proceeds from the sale of a non-controlling 49% interest in ME ORTALYK LLP of KZT 185,858 million, (a one-time effect), an increase in dividends paid to shareholders of KZT 51,080 million (see Section “2.5.2. **Dividends received and paid**”) and a change in the net movement of loan balances in 2021 of KZT 62,315 million compared to 2020.

2.6. Indebtedness

The total debt and guarantees of the Group as of 31 December 2021 were KZT 110,462 million (KZT 117,962 million in 2020).

Total debt, KZT million

Indicator	2020	2021	Change
Bank loans	6,734	-	(100%)
Non-bank loans	91,838	89,308	(3%)
Off-balance sheet guarantees	19,390	21,154	9%
Total debt and guarantees	117,962	110,462	(6%)

The following table summarises the Group's debt for the years ended 31 December 2021 and 2020.

Total Group's indebtedness, KZT million

Indicator	2020	2021	Change
Non-current	76,570	77,850	2%
Bank loans	-	-	
Non-bank loans, including:	76,570	77,850	
<i>Bonds issued</i>	76,300	77,700	
<i>Lease liabilities</i>	270	150	
Current	22,002	11,458	(48%)
Bank loans	6,734	-	
Non-bank loans, including:	15,268	11,458	
<i>Promissory note issued</i>	14,004	10,514	
<i>Lease liabilities</i>	476	141	
<i>Bonds issued</i>	788	803	
Total debt	98,572	89,308	(9%)

As of 31 December, 2021, the Group has no current or long-term bank loans.

The amount of non-bank loans as of 31 December, 2021 comprised KZT 89,308 million and predominantly includes long-term USD-indexed Company coupon bonds with a nominal amount of KZT 70 billion and maturity in October 2024, issued in September 2019 on the Kazakhstan Stock Exchange (KASE).

Promissory notes owned by JV Khorasan-U LLP are with maturity "on demand". As of 31 December 2021, the right to claim under the promissory notes belongs to "Kyzylkum" LLP. In 2021, the notes were partially redeemed.

Guarantees represent off-balance sheet irrevocable obligations of the Group to effect payment in the event that another cannot meet its obligations.

Other liabilities of the Group are finance leases, other debt and leases. According to its loan and guarantee agreements, the Group is required to comply with certain financial covenants based upon the Group's consolidated information, such as debt to equity ratio, and debt to EBITDA ratio. The Group complied with all applicable covenants during the year and as of 31 December 2021.

The following table summarises the Group's weighted average interest rate for bank loans in 2021 and 2020:

Weighted average interest rate of the Group, %

Indicator	2020	2021
Weighted average interest rate, including:	3.12	3.37
Fixed interest rate	3.31	3.52
Floating interest rate	1.99	0.97

As of 31 December, 2021, the weighted average interest rate was 3.37%, which was higher compared to the prior year. The Group's weighted average interest rate on loans and borrowings in 2021 was mainly influenced by the Group's long-term fixed interest rate liabilities (bonds with a coupon of 4% per annum), while floating interest rate loans were attracted for a short-term period - no more than 1 month (in 2020 - for 3-6 months).

As of the end of 2021, the Group's debt is fully formed from fixed interest rate loans (93% as of year-end 2020).

Credit ratings

According to international rating agencies, Kazatomprom's creditworthiness corresponded to Kazakhstan's sovereign credit rating at the time the ratings were assigned. In 2021, Moody's Investors Service upgraded the Company's rating from Baa3 to Baa2 with stable outlook. The Company's underlying credit score has been upgraded by one notch.

Kazatomprom's credit ratings as of 31 December 2021

Fitch Ratings	BBB-	Stable outlook	Confirmed on 19 March 2021
Moody's	Baa2	Stable outlook	Upgraded on 12 August 2021

2.6.1. Net debt / Adjusted EBITDA

The following table summarises the key ratios used by the Company's management to measure financial stability in 2021 and 2020. Management targets a net debt to adjusted EBITDA of less than 1.0.

Net debt/adjusted EBITDA ratio, KZT million

Indicator	2020	2021	Change
Total debt (excluding guarantees)	98,572	89,308	(9%)
Total cash balances	(113,347)	(161,190)	80%
Net debt	(14,775)	(115,102)	>100%
Adjusted EBITDA ⁴⁸	325,734	350,294	8%
Net debt / Adjusted EBITDA (coefficient)	(0.05)	(0.33)	>100%

⁴⁸ Adjusted EBITDA is calculated as Profit before tax – finance income + finance expense +/- Net FX loss/(gain) + Depreciation and amortisation + Impairment losses – reversal of impairment +/- one-off or unusual transactions.

2.7. Guidance for 2022

Guidance for 2022

Indicator	2022
Production volume U ₃ O ₈ , (tU) (100% basis) ⁴⁹ ⁵⁰	21,000 – 22,000
Production volume U ₃ O ₈ , (tU) (attributable basis) ⁵¹	10,900 – 11,500
Group sales volume, (tU) (consolidated) ⁵²	16,300 – 16,800
Incl. KAP sales volume (included in Group sales volume), (tU) ⁵³	13,400 – 13,900
Revenue – consolidated, (KZT billions) ⁵⁴	750-760
Revenue from Group U ₃ O ₈ sales, (KZT billions) ³⁴	610-630
C1 cash cost (attributable basis) (USD/lb) ⁵⁵	\$9.50 – \$11.00
All-in sustaining cash cost (attributable C1 + capital cost) (USD/lb) *	\$16.00 – \$17.50
Total capital expenditures (KZT billions) (100% basis) ⁵⁶	160-170

Kazatomprom's production expectations for 2022 remain consistent with its market-centric strategy and the intention to flex down planned production volumes by 20% for 2018 through 2023 (versus planned production levels under Subsoil Use Agreements). Production volume in 2022 is expected to be between 21,000 tU and 22,000 tU on a 100% basis, which is similar to 2021 at the top end of the range. However, pandemic-related supply chain challenges have continued to result in limited access to certain key operating materials and equipment (production reagents, certain types of pipes and pumps, specialized equipment, drilling rigs), which had a material impact on the Company's wellfield development and production schedules in 2021, adding additional risk to production in 2022 and resulting in a wider range for the expected production volume. On an attributable basis, 2022 production volume is expected to be between 10,900 tU to 11,500 tU, which is lower than 2021 primarily due to the sale of a 49% share of ME ORTALYK LLP to CGN Mining UK Limited in mid-2021, as well as the above-mentioned supply chain risks.

Sales volume guidance for 2022 is also aligned with the Company's market-centric strategy. The Group expects to sell between 16,300 tU and 16,800 tU, which includes KAP sales of between 13,400 tU and 13,900 tU, in line with sales volumes in 2021.

Revenue, C1 cash cost (attributable basis) and All-in Sustaining cash cost (attributable C1 + capital cost) may vary from the guidance provided if the KZT to USD exchange rate fluctuates significantly during 2022. Ranges for C1 cash cost (attributable basis) and All-in Sustaining cash cost (attributable C1 + capital cost) have been increased to reflect the uncertainty in the current geopolitical situation and widening offsetting effects of current KZT devaluation and potential inflationary impacts (see Section

⁴⁹ Production volume (100% basis): Amounts represent the entirety of production of an entity in which the Company has an interest; it disregards that some portion of production may be attributable to the Group's JV partners or other third-party shareholders.

⁵⁰ The duration and full impact of the COVID-19 pandemic is not yet known. Annual production volumes could therefore vary from our expectations.

⁵¹ Production volume (attributable basis): Amounts represent the portion of production of an entity in which the Company has an interest, corresponding only to the size of such interest; it excludes the portion attributable to the JV partners or other third-party shareholders, except for JV Inkai LLP, where the annual share of production is determined as per Implementation Agreement as disclosed in IPO Prospectus. Actual drummed production volumes remain subject to converter adjustments and adjustments for in-process material.

⁵² Group sales volume: includes Kazatomprom's sales and those of its consolidated subsidiaries (according to the definition of the Group provided on page one of this document).

⁵³ KAP sales volume: includes only the total external sales of KAP HQ and THK. Intercompany transactions between KAP HQ and THK are not included.

⁵⁴ Revenue expectations are based on uranium prices taken at a single point in time from third-party sources. The prices used do not reflect any internal estimate from Kazatomprom, and 2022 revenue could be materially impacted by how actual uranium prices and exchange rates vary from the third-party estimates.

⁵⁵ Note that the conversion of kgU to pounds U₃O₈ is 2.5998.

⁵⁶ Total capital expenditures (100% basis): includes only capital expenditures of the mining entities, excluding expansion investments.

“Ошибка! Источник ссылки не найден.”). Guidance will be updated if the recent fluctuations and geopolitical uncertainties persist throughout 2022.

Wellfield development, procurement and supply chain issues, including inflationary pressure on production materials and reagents, are expected to continue throughout 2022, impacting the Company’s financial metrics and giving rise to an expectation that C1 cash cost and All-in Sustaining cash cost will be higher in 2022 than in 2021. In addition, the Company’s costs could be impacted by potential changes to the tax code in Kazakhstan and by possible local social funding requests, although these risks cannot be quantified or estimated at this time.

Total capital expenditures on 100% basis guidance for 2022 increased significantly in comparison to 2021 results to cover the shift in wellfield development activities (see Section “

2.3. Capital expenditures review) and increase in purchase prices for materials, supplies, equipment and cost of drilling.

The Company continues to target an ongoing inventory level of approximately six to seven months of annual attributable production. However, inventory could fall below this level in 2022 due to supply chain challenges and production losses.

2.7.1. Uranium sales price sensitivity analysis

The table below indicates how the Group's U₃O₈ annual average sales price may respond to changes in spot prices (shown in the left column), for a given year (shown across the top row). At present, the table clearly indicates that the Group's U₃O₈ average sales prices are closely correlated with the uranium spot market price.

This sensitivity analysis should be used only as a reference, and actual uranium market spot prices may result in different U₃O₈ annual average sales prices than those shown in the table. The table is based upon several key assumptions, including estimates of future business opportunities, which may change and are subject to risks and uncertainties outside the Group's control. Please review the footnotes under that table and refer to the section "Forward-looking statements for more information".

Correlation between the spot price and the U₃O₈ average sales price

Average Annual Spot Price (USD)	2022E	2023E	2024E	2025E	2026E
20	27	22	22	22	21
30	33	31	31	31	31
40	38	40	40	40	40
50	44	48	48	48	50
60	50	57	57	57	59
70	56	65	66	65	68

Values are rounded to the nearest dollar. The sensitivity analysis above is based on the following key assumptions:

- Annual inflation at 2% in the US
- Analysis is as of 31 December 2021 and prepared for 2022–2026 on the basis of minimum average Group annual sales during the specified period of approximately 18.0 thousand tonnes of uranium in the form of U₃O₈, of which the volumes contracted as of 31 December 2021 will be sold per existing contract terms (i.e. contracts with hybrid pricing mechanisms with a fixed price component (calculated in accordance with an agreed price formula) and / or combination of separate spot, mid-term and long-term prices); Kazatomprom's marketing strategy does not target a specific proportion of fixed and market related contracts in its portfolio in order to remain flexible and react appropriately to market signals
- A difference between sales prices and spot prices is expected for 2022, since numerous sales commitments for 2022 are based on pricing that was locked-in before September 2021, when the spot price started to increase significantly
- For the purpose of the table, uncommitted volumes of U₃O₈ are assumed to be sold under short-term contracts negotiated directly with the customers and based on spot prices

3. SUSTAINABLE DEVELOPMENT

NAC Kazatomprom JSC strives to minimise its environmental impact and at the same time maximise its contribution to sustainable socio-economic development of the regions of presence to improve the living standards of the present and future generations. The principles of sustainable development lie at the core of the Company's operations.

Key indicators and achievements

0.55 LTIFR

94% of Kazatomprom's employees covered by collective bargaining agreements

3.3% reduction in emissions across the Group

UN Sustainable Development Goals relevant to Kazatomprom



3.1. Sustainability Management

Key indicators and achievements

Assessment of sustainability practices maturity across the Company's subsidiaries and affiliates

Updated Map of Stakeholders

Analysis of efforts and costs of sustainable development system rollout at the headquarters

A working group was set to foster a project on decarbonisation strategy development and reaching carbon neutrality

A preliminary analysis of compliance with ESG ratings was done using methodologies of Sustainalytics, MSCI, and SP Global

UN Sustainable Development Goals relevant to Kazatomprom



3.1.1. Sustainability management approach

Kazatomprom contributes to sustainable development, strives to provide and increase long-term economic, social and environmental benefits for both present and future generations. The Company is committed to sustainable growth while ensuring the safest possible production and reducing its environmental footprint.

Company supports the global UN 2030 Agenda for Sustainable Development and contributes to the achievement of the UN Sustainable Development Goals, hardwiring them into its operations. Within the framework of the UN SDGs, a number of benchmarks most consistent with the industry focus and strategy of the Company, and the interests of stakeholders are particularly relevant for Kazatomprom.

GRI 102-16

Principles of sustainable development of NAC Kazatomprom JSC

- Openness
- Accountability
- Transparency
- Ethical behaviour
- Respect
- Legitimacy
- Respect for human rights
- Zero tolerance for corruption
- No conflicts of interest
- Personal example

When determining priority sustainability areas, Kazatomprom follows the principles of the UN Global Compact and the UN Sustainable Development Goals 2030, as well as other international standards and initiatives in this area.

Kazatomprom's priority areas of sustainable development

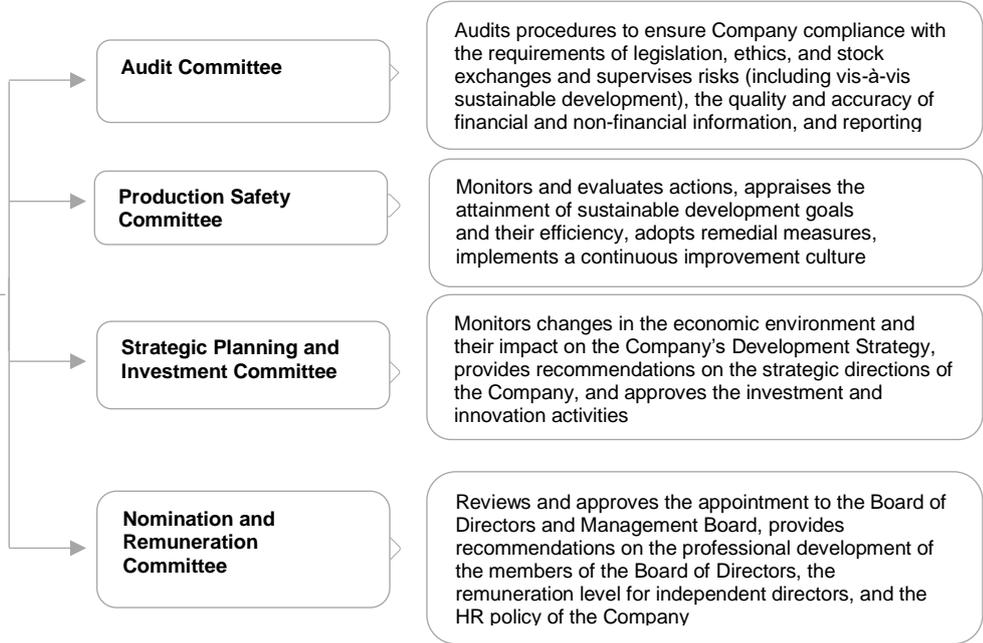
- Economic sustainability
- Human capital and culture development
- Occupational health and safety
- Environmental consciousness
- R&D, innovations, and technological development
- Effective corporate governance and risk culture
- High ethical standards and anti-corruption measures
- Responsible procurement
- Responsible business practices – engagement with stakeholders and local communities and reporting

Structure of management of aspects of sustainable development

Strategic Direction and Control

STRATEGIC LEVEL

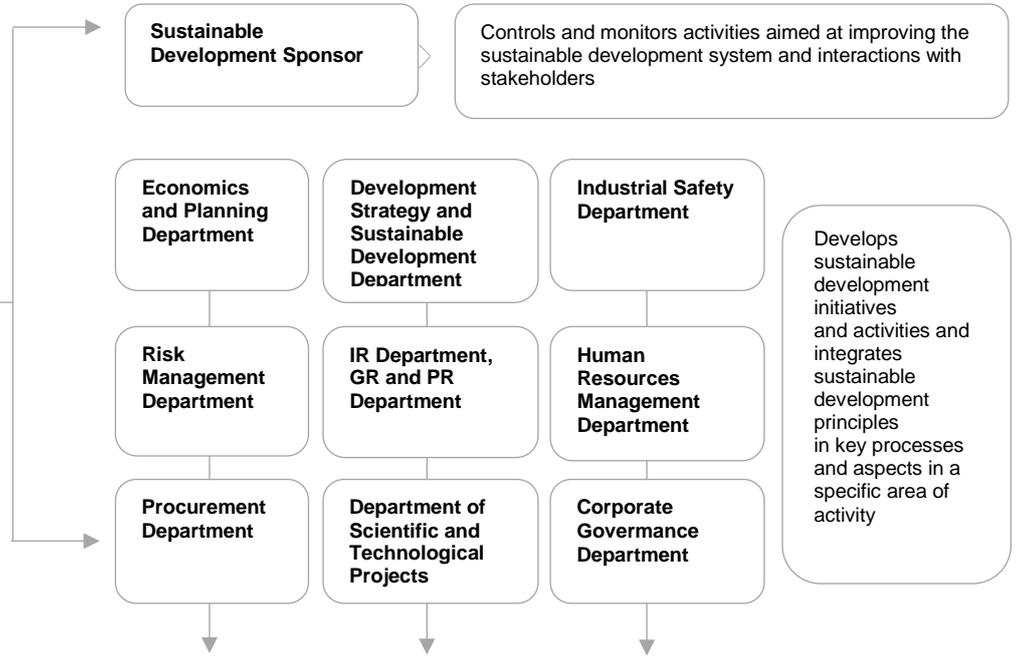
Board of Directors
Provides strategic management and supervises sustainable development activities, considers issues and the results of strategic sustainable development activities



MANAGEMENT LEVEL

Adopts management and operational decisions, monitors the efficiency and implementation of sustainable development initiatives and actions

Management Board
Controls and monitors strategic development activities, programmes and events, and monitors the attainment of sustainable development goals and KPIs

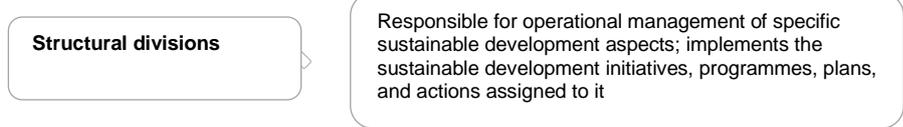


Develops sustainable development initiatives and activities and integrates sustainable development principles in key processes and aspects in a specific area of activity

Implements initiatives and activities in order to attain sustainable development goals, objectives, and KPIs

OPERATIONAL LEVEL

Subsidiaries and affiliates



System of documents in the area of sustainable development

Strategic Documents	Development Strategy
Policies and Codes	Corporate Policy of Sustainable Development
	Code of Ethics and Compliance
	Corporate Governance Code
	Risk Management Policy
	Anti-Corruption and Anti-Fraud Policy
	Policy of Innovation and Technological Development
	Environmental protection
	Social Responsibility
	Policy for H&S, environmental protection measures, environmental and radiation safety hazards
	CSR Policy
	H&S Code and Safety Regulations
HR Policy	
Corporate standards and regulations	Corporate standard in strategic business planning
	Corporate standard “System of standard production safety. Working with subsidiaries in areas of occupational safety”
Rules and procedures	Programme for sustainable development in the areas of corporate and social responsibility in 2017-2019
	Action Plan for energy efficiency and energy saving
	Stakeholder Map
	Digital Transformation Programme
	Procurement Management Rules
	Environmental and Social Action Plan (ESAP)
	Collective bargaining agreement
Social obligations under subsoil use contracts	

Focusing on the best international practices, Kazatomprom integrates the principles of social responsibility into decision-making processes and operations.

The management system currently in place at Kazatomprom includes a risk management system. The Company is confident that timely risk identification and assessment, as well as an adequate response to risks, allow effective decision-making at all levels and ensure the achievement of strategic goals and key performance indicators of the Company. In this regard, Kazatomprom identified risks in the field of sustainable development for the first time in 2021.

For more details, see the Corporate Governance and Ethics section, the Risk Management and Internal Control subsection.

Kazatomprom plans to continue improving its corporate sustainability management practices by developing and implementing internal policies governing various aspects of sustainable development, as well as integrating sustainable development principles into its corporate governance system.

Sustainability Awards

Kazatomprom seeks to further improve its corporate sustainability actions. In 2021, Kazatomprom's Integrated Annual Report 2020 was recognised as the best annual report in the non-financial sector and won the Best Interactive Version of the Annual Report nomination announced by the Kazakhstan Stock Exchange (KASE).

NAC Kazatomprom JSC was among the Top 3 Kazakhstani companies in terms of the completeness and quality of disclosed ESG information. PricewaterhouseCoopers Kazakhstan has ranked the Company as 2nd for its achievements in ESG disclosure in the 2020 Integrated Annual Report.

Supporting sustainability standards and initiatives

GRI 102-12

Standard/Initiative	Participation of NAC Kazatomprom JSC
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UN Conventions, International Labour Organization	We declare support, take it into account in internal corporate documents
UN Sustainable Development Goals 2030	We declare support, take it into account when addressing operations and reporting
Key Indicators for the Sustainable Development Goals of the United Nations Conference on Trade and Development (UNCTAD)	Reporting

Sustainable development system milestones

2011:

- Non-financial reporting standards were included into the Intergrated Annual Report for the first time

2017:

- 2017-2019 Sustainable Development Programme in the field of corporate and social responsibility was developed in 2017

2019:

- Sustainable Development Policy was elaborated and published
- The corporate function of sustainable development management was strengthened through the establishment of a dedicated unit within the Company's structure – Sustainable Development Management Unit
- The Integrated Annual Report included information on approaches to sustainable development management and the Company's contribution to achieving the UN Global Sustainable Development Goals
- Priority UN SDGs and key sub-goals for each of the UN SDGs were identified

2020:

- For the first time, the ESG information in the 2020 Integrated Annual Report was independently assured in line with global best practices.
- In-depth disclosure of GRI indicators

2021:

- Work on climate risk management began
- Sustainable development-related risks have been defined
- The 2021 Integrated Annual Report includes key indicators of the UN Conference on Trade and Development (UNCTAD) Sustainable Development Goals
- The Company successfully passed the first supervisory audit and confirmed its certificate from the TÜV International Certification (Germany) in accordance with the requirements of two international standards, ISO 45001 and ISO 14001
- An energy management system compliant with the international ISO 50001 standard was implemented in all of the Group's companies. Energy audits are regularly carried out as part of the Group's energy management systems

Plans for 2022:

- Identification and assessment of climate risks
- Developing the Decarbonisation Strategy and achieving the carbon neutrality by 2025
- Development of mid-term Sustainability-related Programme
- Development of Policy on Human Rights
- Joining the UN Global Compact
- Expanding the list of GRI indicator disclosure
- Disclosure as recommended by the Task Force on Climate-related Financial Disclosures (TCFD)
- Independent ESG rating

3.1.2. Contribution to the achievement of the UN Sustainable Development Goals

Kazatomprom fully shares the values of the UN Sustainable Development Agenda. The Company recognises the importance of all 17 UN SDGs and, as part of its operations, strives to make a feasible

contribution to their achievement. Due to the specifics of our activities, we have identified 6 priority UN SDGs to which the Company makes the most significant contribution.

Kazatomprom’s Priority UN Sustainable Development Goals

 <p>3 GOOD HEALTH AND WELL-BEING</p>	<p>SDG 3: Ensure healthy lives and promote well-being for all at all ages</p>	 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p>SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all</p>	 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	<p>SDG 12: Ensure sustainable consumption and production patterns</p>
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	<p>SDG 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all</p>	 <p>13 CLIMATE ACTION</p>	<p>SDG 13: Take urgent action to combat climate change and its impacts</p>

The table below provides a brief description of the Company's actions under each of the priority UN SDGs. For more information on the projects and initiatives implemented in 2021 under each goal, see the thematic subsections of the Report.

Contribution to UN Sustainable Development Goals

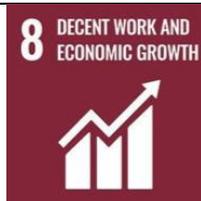
UN SDG	Relevant SDG target	Key results in 2021
 <p>3 GOOD HEALTH AND WELL-BEING</p>	<p>3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and supporting mental health and well-being</p>	<ul style="list-style-type: none"> • KZT 4.4 billion allocated to finance employee health improvement and treatment programmes • KZT 1.1 billion spent to finance actions preserving the health and prevent diseases of employees • The Company took measures to prevent the spread and eliminate the consequences of COVID-19 • Kazatomprom implemented measures to improve the quality of health of employees and draw their attention to a healthy lifestyle
	<p>3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents</p>	<ul style="list-style-type: none"> • 14,100 behavioural audits conducted • 217 managers, including the Chairman of the Management Board, completed the H&S training • We continued the Mal-Zhan Aman project seeking to prevent road traffic accidents involving livestock • The Company's continued using stop cards to stop unsafe works • Assessment questionnaires were introduced for drivers and passengers
	<p>3.9 By 2030, substantially reduce the number of deaths and illnesses due to hazardous chemicals and air, water and soil pollution and contamination</p>	<ul style="list-style-type: none"> • KZT 206.96 million invested in the implementation of Kazatomprom Environmental and Social Action Plan (ESAP) • The Company developed guidelines and projects to enhance the safety culture • Kazatomprom approved and introduced Corporate Standard ST NAC 17.4-2021 System of Environmental Standards. Guidelines for Monitoring of Impact of In-situ Recovery on Ground and Underground Waters of Uranium Deposits • Kazatomprom passed the certification audit of the integrated industrial safety management system and confirmed its certificate from the TÜV International Certification (Germany) in accordance with the requirements of two international standards, ISO 45001 and ISO 14001 • We developed a system for automated monitoring of radiation hazards based on threshold gamma radiation dosimeter readings with the possibility to measure and control the equivalent dose and the equivalent dose rate of external gamma radiation

See Section “Sustainable Development”, subsections “Social Responsibility”, “Health and Safety”



7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	<ul style="list-style-type: none"> • The Company's PV plants generated 3.34 MWh • Kazatomprom implemented projects in support of the global green energy trend
7.3 By 2030, double the global rate of improvement in energy efficiency	<ul style="list-style-type: none"> • KZT 840 million was the actual economic effect of the Company's energy efficiency measures • All enterprises of the Group have the ISO 50001 energy management system in place • Kazatomprom used a number of alternative energy sources (photovoltaic stations, solar heaters, and heat pumps)
7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investments in energy infrastructure and clean energy technology	<ul style="list-style-type: none"> • Kazatomprom took part in the 65th IAEA General Conference and became a co-founder of the Vienna Group

See Section “Sustainable Development”, subsections “Climate Change and Energy Efficiency”, “Environmental Protection”



8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors	<ul style="list-style-type: none"> • The Company has developed its 2022 procurement plans and allocated the full data in SAP ERP system • We replicated IT processes at 12 subsidiaries and affiliates • A roadmap was developed to achieve the license compliance across Kazatomprom • The Group filed 16 intellectual property applications and received 15 intellectual property titles
8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead	<ul style="list-style-type: none"> • Works are underway to generate content for a digital map of the mines in Syrdarya and Shu-Sarysu provinces • Kazatomprom developed a project to introduce an automated emission monitoring system at stationary sources of APPAK LLP and JV Khorasan-U LLP to control the release of chemical compounds into the air, with plans in place to replicate the project at Ulba Metallurgical Plant JSC • We conducted emergency response training on alarm signals in case of a self-sustaining nuclear chain reaction at all nuclear installations of Ulba Metallurgical Plant JSC • The Company developed a project for upgrade of a refinery shop at Kazatomprom-SaUran LLP
8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young	<ul style="list-style-type: none"> • Employees are recruited through employment centres, educational institutions, electronic labour exchange, and other

people and people with disabilities, and equal pay for work of equal value.

Internet resources on a competitive basis In 2021, the competition was ten candidates per job opening in the headquarters and eight candidates per job opening for subsidiaries and affiliates

- The Company finances studies of 320 students majoring in industry-specific areas and occupations in universities and colleges of the Republic of Kazakhstan
- Men and women enjoy equal work, employment, and pay
- A local Izbasar programme is in place designed to develop young specialists

8.8 Protect labour rights and promote safe and secure working environments for all employees, including migrant employees, in particular women migrants, and those in precarious employment

- The collective bargaining agreement covers 94% of employees
- The health and safety management system covers 100% of the Group's employees
- Kazatomprom introduced an Occupational Safety Management System corporate standard at all mining subsidiaries and affiliates

See Section “ Sustainable Development”, subsections “Socio-economic contribution”, “Social Responsibility”, “Procurement Practices”



9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human wellbeing, with a focus on affordable and equitable access for all

- KZT 1.609 billion channelled into the regional budgets for the socio-economic development and infrastructure
- KZT 850.9 million allocated for social projects
- The Company implemented a range of socially significant projects, including the purchase of training equipment, landscaping and improvements of localities, financial assistance to socially vulnerable groups (coal, food packages, school supplies, New Year's gifts)

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

- KZT 48,229 million in well construction costs
- KZT 12,717 million allocated to maintain mining companies

9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of R&D workers per 1 million people and public and private R&D spending

- 57 R&D contracts for a total of KZT 3.24 billion
- 252 employees, including 7 doctors of science and 48 candidates of science, are engaged in research and development
- The Group's employees submitted 2,277 innovation proposals, of which 2,020 were accepted and 1,367 were implemented



<p>9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities</p>	<ul style="list-style-type: none"> • Four contracts were signed to grant the right to use the inventions with JV Southern Mining and Chemical Company LLP, Karatau LLP, Semizbay-U LLP, and ME ORTALYK LLP • Kazatomprom continues cooperation with Satbayev University that is home to the country's first International Science and Education Centre for the Nuclear Industry • The Company signed a number of memoranda of cooperation on R&D and innovations
<p>See Section "Sustainable Development", subsections "Socio-economic contribution, Social Responsibility", "Science and Innovations"</p>	
<p>12.2 By 2030, achieve the sustainable management and efficient use of natural resources</p>	<ul style="list-style-type: none"> • Researches was conducted to improve the environmental safety of production: <ul style="list-style-type: none"> – Studies of the impact of underground uranium leaching processes on groundwater and the development of guidelines (Standard)
<p>12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment</p>	<ul style="list-style-type: none"> • As part of the R&D efforts, the following projects were implemented: <ul style="list-style-type: none"> – Implementing new technologies, materials, and equipment to reduce the production cost of chemical concentrate of natural uranium and uranium oxide – Developing low-acid leaching technology using cavitation-jet technologies in combination with special-purpose chemicals – Studies of trace element and isotopic composition to create portraits of finished products of uranium mining companies • Developing a software prototype that will identify samples of finished products of uranium mining and uranium processing enterprises and generate identification reports
<p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p>	<ul style="list-style-type: none"> • Subsidiaries and affiliates have in-house landfills for placement and long-term storage of drill cuttings classified as non-hazardous waste (the main components are non-toxic and non-radioactive minerals, clay, and sand particles) • Separate collection points and special sites for temporary storage of wastes on the territories of Kazatomprom's mines • Regular timely removal of production and consumption waste for disposal
<p>12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices</p>	<ul style="list-style-type: none"> • Kazatomprom's production processes are powered by the most environmentally friendly in-situ recovery technology

and to integrate sustainability information into their reporting cycle

- The Company annually prepares Integrated Reports where it discloses its influence in ESG areas, in particular, they show how resource consumption in the Group changes over the course of several years thanks to rational management approaches, lean production, and upgrade.

See Section “Sustainable Development”, subsections “Environmental Protection”, “Science and Innovations”



13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

- As part of the corporate decarbonisation and carbon neutrality strategy, we revamped boiler plants at Karatau LLP rotational camp to switch hot water boilers from diesel fuel to liquefied gas in accordance with the safety requirements for gas supply facilities in 2021

13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

- We implemented measures to improve environmental culture: clean-ups, landscaping and territory improvement, planting trees, participation in the Earth Day campaign, etc.

See Section “Sustainable Development”, subsection “Climate Change and Energy Efficiency”

Contribution to the Second Priority UN Sustainable Development Goals

In the reporting period, the company continued to contribute to the achievement of the second priority UN Sustainable Development Goals

UN SDG	Relevant SDG target	Key results in 2021
	4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	<ul style="list-style-type: none"> • The Company took actions to implement the Comprehensive Educational Programme 2019–2023 to streamline employee training, retraining and upskilling • Cooperation with higher educational institutions, internships, and work placement of young specialists • Career guidance at schools
See Section “Sustainable Development”, subsection “Social Responsibility”		
	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimising release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	<ul style="list-style-type: none"> • Subsidiaries and affiliates launch wastewater treatment plants and biological water treatment plants to use purified water for irrigation • Storage ponds, evaporation ponds, filtration fields, septic tanks are in place at mining enterprises • 924 megaliters of water treated at biological treatment facilities • 2,144 megaliters of water treated at primary treatment facilities



6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity

- 5,648 megaliters of reused water
- 8,531.3 megaliters of water withdrawn from groundwater
- 1583 megaliters of water withdrawn from municipal and other water supply systems

See Section “Sustainable Development”, subsection “Environmental Protection”



10.2 By 2030, empower and promote the social, economic and political inclusion of all irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

- No discrimination cases in the Company
- Kazatomprom conducted an anonymous survey to measure employees awareness of protection of rights and interests, anxiety in the team, discrimination, and the problems in communications with managers

See Section “Sustainable Development”, subsection “Social Responsibility”, Section “Corporate Governance and Ethics”, subsection “Corporate Ethics and Compliance”



15.1 By 2020, ensure conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements

- Company approved the standard “Methodological guidelines for monitoring the impact of the ISR technology on groundwater and underground waters at uranium deposits”

15.5 Take urgent and significant action to reduce degradation of natural habitat, halt the loss of biodiversity, and by 2020 protect and prevent the extinction of threatened species

- Employees of 14 subsidiaries and affiliates were trained on assessment of biodiversity at uranium deposits
- We conducted an analysis of the impact on cumulative pollution of air, water resources and/or ecosystems at Ulba Metallurgical Plant JSC
- Kazatomprom assessed the impact of the production of TTC-Shieli and Auto Service on the environment and the local population. No negative impact on flora and fauna was reported near the branches

See Section “Sustainable Development”, subsection “Environmental Protection”



16.5 Substantially reduce corruption and bribery in all their forms

- 55 reports to the Anti-Fraud Hotline were handled
- No corruption cases

See Section "Corporate Governance and Ethics", subsection "Corporate Ethics and Compliance"



17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries

- Kazatomprom is a member of five international nuclear industry organisations and four national sectoral organizations
- The Company worked to see compliance with the requirements of the UN Global Compact in order to further join the UN GC
- The Company annually publishes integrated annual reports where it discloses non-financial reporting indicators in accordance with the GRI
- The Company engages an independent auditor to assure non-financial data in integrated annual reports

See Section Business Profile, subsection "Association Membership and International Compliance"

3.2. Socio-economic Contribution

Key indicators and achievements

Kazatomprom allocated **KZT 1.609 billion** for socio-economic development as part of its commitments under subsoil use contracts

KZT 850.9 million in investment in socially important projects

UN Sustainable Development Goals relevant to Kazatomprom



3.2.1. Management approach

GRI 103-1, 103-2

As a large company, Kazatomprom has a significant impact on the environment and life of local communities. Kazatomprom's mining and production facilities operate in five regions of Kazakhstan: Turkistan, Kyzylorda, East Kazakhstan, Akmola, and Northern Kazakhstan regions. Kazatomprom recognises that the long-term success of its business depends on social and economic stability maintained in the regions of operations and in the country as a whole, on mutually beneficial relations with representatives of the central and local authorities, as well as on the quality of working and living conditions for its employees.

Chief HR and Transformation Officer is responsible for the external social policy and interaction with local communities.

In 2021, the Company consistently implemented measures aimed at ensuring long-term productive relations with the regions where it operates and strengthening its image as a socially responsible business.

In total, Kazatomprom allocated KZT 1.609 billion in 2021 as part of its commitments under subsoil use contracts for socio-economic and infrastructure development to the budgets of the regions where it operates.

Kazatomprom makes a significant contribution to the well-being and socio-economic development of the regions of operations by:

- Generating significant tax revenues for regional budgets
- Making payments to regional budgets under subsoil use contracts
- Providing jobs to the local population

Key indicators of Kazatomprom's economic contribution to the development of regions of operations

Indicator	2019	2020	2021
Taxes and obligatory payments paid, KZT billion	102,4	116,5	153,0
Dividends paid, KZT billion	80.0	99.0	150.1
Average monthly salary of Kazatomprom employees, KZT/month	320,828	331,380	370,894
Ratio of average monthly salary of Kazatomprom employees to average salary in the Republic of Kazakhstan	1.7	1.6	1.5
Kazatomprom's social expenses, KZT million	3,044	3,494	3,451
Share of social expenses in revenue, %	0.6	0.6	0.5

3.2.1.1. Charity and sponsorship

GRI 413-1

In January 2016, the Board of Directors of Samruk-Kazyna JSC approved the Charity Policy and the Charity Programme of the Fund, as part of which Kazatomprom implements projects and programs aimed at solving socially palpable issues.

Volkovgeology JSC won the the Kindest Team nomination for its philanthropic activities, including the organisation of voluntary material aid to an employee's child seriously ill with cancer, the Nauryz Meirimi, Way to School charity campaigns, and other projects.

To support local communities, subsidiaries and affiliates can implement charity initiatives independently. Subsidiaries and affiliates participate in annual charity events and cultural activities in the regions where they operate. In particular, they assist children from orphanages and large families and provide social support and sponsor communities, thus, helping improve local public services and amenities. They also play an active role in environmental campaigns and volunteer clean-up days, as well as in organising public events and celebrations.

In addition, subsidiaries and affiliates implement the community development programmes as part of the Company's philanthropic and sponsorship activities. These programmes are based on the requests of the local communities and vulnerable groups, through the engagement of the Akimats, the Council of Elders, if any, and volunteers. The Company operates a hotline that received requests, including requests from external stakeholders.

3.2.2. Key results in 2021

The Company's enterprises annually implement socially significant projects aimed at the socio-economic and infrastructural development of the regions where the Company operates, including improving the quality of life of employees of the Company and its subsidiaries and affiliates, as well as their family members in the regions where they live.

Kazatomprom initiated a number of socially significant projects in 2021, including the construction of an ambulance station, children's playgrounds and sports grounds, the purchase of educational equipment, improvement of settlements, financial assistance to vulnerable social groups in the form of coal, food baskets, school supplies, New Year presents, as well as a number of other socially significant initiatives.

As of the end of 2021, we allocated KZT 850.9 million for the implementation of socially significant projects.

GRI 413-1

Investments in external social programme, 2021, KZT million

Area	Investment
Healthcare support	479.7
Sports support	109.3
Vulnerable groups support	136.5
Veterans and pensioners support	14.1
Regional social infrastructure development	1.0
Education support	110.3

Healthcare support

Projects in this area seek to support the development of healthcare institutions, including purchase of medical equipment, as well as targeted assistance to people with serious diseases: payment for expensive operations, purchase of medicines and rehabilitation.

In the reporting period, Ulba Metallurgical Plant JSC arranged supply of liquid oxygen, which is produced at the UMP nitrogen-hydrogen-oxygen station, to three medical institutions in Ust-Kamenogorsk, where inpatient clinics for the treatment of patients with COVID-19 are functioning.

In June 2021, JV Katko LLP signed a contract with the Turkistan Oblast Akimat to finance the construction of a 25-brigade regional ambulance station.

Education support

The main areas of science and education development included in Kazatomprom's social policy are comprehensive support and assistance to educational institutions in the regions where it operates.

In 2020, JV KATKO developed a number of projects as part of the 2020-2025 strategy roadmap: among such projects is education and support for schoolchildren and students in Sozak district. 10 students from the region, who are studying at various universities and colleges in Kazakhstan, receive a monthly allowance of KZT 50,000. These are future engineers, doctors, teachers, etc. Also in 2021, the Company assisted 18 students, children of its employees, to obtain higher education. JV KATKO pays for their education in the energy sector at universities of the Republic of Kazakhstan.

In cooperation with the Sozak District Akimat, in 2020-2021, KATKO sponsored a total of KZT 142 million to fully equip multimedia, biology and physics classrooms at 14 schools in Sozak district. The company also began a partnership with the National Geographic Qazaqstan magazine and provided subscriptions to the magazine for 74 schools in Turkistan and the Sozak District. In the framework of cooperation, the editors of the magazine arrange online seminars in the Kazakh language for teachers and students on environmental awareness.

JV KATCO also financed the complete equipping of multimedia classrooms at seven schools of the district for a total of KZT 67.5 million.

Online Leadership Development Camp for High School Students

In 2021, the Young Professionals' Council of Kazatomprom organised an online camp to develop leadership potential for high school students located in the regions where the Company operates. The events took place with the aim of informing about the activities of the nuclear holding company and developing the emotional intelligence, personal, and leadership qualities of schoolchildren.

About 50 students of 9-11 grades of school No. 127 (Shieli village, Kyzylorda region) and 30 pupils of secondary school No. 164 (Kuttykozha village, Kyzylorda region), as well as 50 high school students of Kenesbayev school (Taukent village, Turkistan) and Bokenov school (Kyzemshek village, Turkistan).

Social infrastructure development

GRI 203-1

Identification of current problems in the areas of operation and assistance in their solution and the development of social infrastructure are also among the priorities of Kazatomprom's external social programmes.

In early September 2021, Kazatomprom completed the construction of modern children's playgrounds and sports grounds in seven communities in Turkistan.

SKZ-U LLP provided support to local residents living in Zhanakorgan district of Kyzylorda region. For example, access to drinking water was organised through the Talap-Syrdarya group water pipeline for the sparsely populated village of Kauyk, which is not covered by any state programme to provide clean drinking water because only 34 people live there.

JV Katco LLP financed the construction of a mini-football pitch and a playground in Baldysu village, Sozak district.

Within the framework of the Mal-Zhan Aman project, 1,444 retro-reflective collars for horses, cows and camels grazing along the road, were handed over to owners of households under the sponsorship of APPAK LLP to prevent road accidents at night.

Supporting vulnerable groups

As part of its social support, the Company provides targeted assistance to those in need, supports socially important initiatives and promotes the involvement of employees and active residents to solve social problems in the regions where it operates.

Traditionally, as part of Nauryz Meiramy celebrations, Kazatomprom enterprises arrange various activities in the regions where they operate, aimed at providing assistance and support to families in need. Thus, a charity event called 30 GOOD DEEDS was held in Shieli district, dedicated to the 30th anniversary of Independence of the Republic of Kazakhstan. Employees of RU-6 LLP took an active

part in this charity event. Seventy low-income families with many children from Shieli village received assistance in the form of food baskets. Employees of Korgan-Kazatomprom conducted the Marathon of Good Deeds – *Igi ister kyni* – where employees used their own money to help the families of their colleagues with many children, as well as the children of employees in need of medical treatment. Also, on New Year's Eve, the Council organised a charity event, *Jyly Jurek*, to give New Year's greetings to children from low-income families with many children. Five families with 30 children were covered in Nursultan.

Supporting veterans and pensioners

Kazatomprom pays great attention to supporting veterans and pensioners who are former employees. To mark the Victory Day, we held events to honour veterans of the Great Patriotic War and home front workers. There were gifts and the required assistance provided. An online flash mob 'I remember, I am proud' was organised.

On a continuous basis, APPAK LLP provides assistance to mothers with many children, home front veterans in the care of Karakura Rural District, pensioners aged 90 and over, people with disabilities and low-income families.

3.2.3. Plans for 2022 and a short term

The following social projects are scheduled for 2022:

- Financing the construction and repair of social infrastructure facilities, including the construction of an ambulance station in Turkestan
- Construction of children's and sports grounds
- Providing assistance to socially vulnerable groups (war veterans, pensioners, large families, etc.)
- Organising community events in villages where the Company operates

To engage local residents more actively, Kazatomprom will cooperate with local executive authorities in 2022 to train local residents to register in the HR eKAP information system used to publish job openings in the Company, subsidiaries and affiliates and register potential candidates for employment. Each of the planned meetings in the regions will present the HR eKAP system and explain how to create electronic CVs and responses to job openings.

3.3. Social Responsibility

Key indicators and achievements

KZT 1.476 million in investment in personnel training and development

37,244 man-hours of total employee training time

9% of female top managers

UN Sustainable Development Goals relevant to Kazatomprom



One of the key assets of Kazatomprom is its highly skilled staff. Employees play a key role in production processes, and they are the main driver of success at Kazatomprom.

Kazatomprom has a motivating HR policy, which provides for competitive salaries and a high level of social guarantees (health insurance, pension schemes, health resort treatment and recreation, family programmes, etc.).

3.3.1. Management approach

GRI 103-2

Kazatomprom has designed an effective HR management system aimed to ensure professional development of employees, improving their qualifications, as well as further career growth in the Company.

The Company strives to create equal and fair working conditions for all employees so that they can fulfil their potential regardless of nationality, gender, origin, age, education, social status, religious, political or other beliefs. This approach is in line with the UN SDGs aimed to improve the quality of life and welfare of people of all ages, to provide inclusive and equal quality education and lifelong learning opportunities, and to achieve gender equality and decent working conditions for everyone without exception.

The Company's HR management activities are regulated by Kazatomprom HR Policy 2018-2028. This document is one of the most important tools for achieving the strategic goals of the Company. It is designed to motivate employees, achieve high labour efficiency with due regard to their interests and capabilities, and stimulate the active engagement of personnel in the Company's life.

Key tasks in human resources management at Kazatomprom:

- Recruiting staff on a competitive basis and reducing staff turnover
- Ensuring equal working conditions and promoting the professional, career and personal growth of employees
- Providing training and professional development opportunities
- Accumulating and retaining in-house knowledge
- Improving employees' remuneration and motivation system
- Providing social support to employees, including measures to preserve their physical and mental health, as well as improving their quality of life
- Developing the corporate culture and increasing the employee engagement level
- Maintaining an effective dialogue with employees

Staff recruiting, maintaining a corporate culture and relationships with employees are also based on:

- the Remuneration Policies
- the Rules for the selection and recruitment of personnel
- the Collective Bargaining Agreement
- the Code of Ethics and Compliance

- the Principles of the Corporate Social Responsibility Policy
- International standards and initiatives

GRI 103-3

Human Resources Management Department and other responsible structural units of NAC Kazatomprom JSC are responsible for HR Policy efficiency and direct relations with personnel.

3.3.2. Basic characteristics of the personnel

The total headcount of Kazatomprom personnel (including joint ventures and associates) amounted to 20,643 people. In 2021, the total headcount of the Group's personnel dropped by 1.8% year on year as a result of KazPV projects' divestment, as well as measures to optimise and modernise processes.

GRI 401-1, 102-7

Kazatomprom's workforce during 2019-2021, persons

Indicator	2019	2020	2021
Average staff number at the end of the reporting period	20,592	21,019	20,643
Total headcount (staff members, civil law contracts)	21,138	21,788	21,031

The majority of the Group's employees are employed on long-term contracts (>91%), while around 9% are employed on fixed-term contracts.

GRI 102-8

Kazatomprom's average employees by form of employment, 2019-2021, persons

Indicator	2019	2020	2021
Long-term contract	19,794	19,821	19,122
males	16,188	16,227	15,696
females	3,606	3,594	3,426
Fixed-term contract	798	1,198	1,521
males	565	1,001	1,246
females	233	197	275
Full-time employment	20,577	21,011	20,627
males	16,745	17,222	16,931
females	3,832	3,789	3,696
Part-time employment	15	8	16
males	8	6	11
females	7	2	5
Under civil-law contracts	546	769	388
males	372	518	263
females	174	251	125

The average age of employees was 40 years. Employees under 30 accounted for 13.6%.

GRI 405-1

Kazatomprom's average number of employees by age, 2019-2021

Indicator	2019	2020	2021
Under 30	3,632	3,201	2,799
30 to 50	11,707	12,260	12,034
Over 50	5,253	5,558	5,810
Average workforce age, years	41	41	40

Equal opportunities

GRI 406-1

Kazatomprom follows the non-discrimination principle. The Company prohibits any restriction of employees' labour rights and freedoms or any benefits and advantages received on the ground of gender, race, nationality, language, origin, as well as property, family, social and official status, age, place of residence, religion, beliefs, affiliation/non-affiliation with any public association or social group, as well as other circumstances not related to the employee's professional qualities.

In the reporting period, no cases of discrimination were recorded

Employment of people with disabilities

GRI 405-1

As an equal opportunity employer, Kazatomprom provides jobs for people with disabilities. In 2021, the Group employed 153 persons with disabilities, an increase of 2 persons compared to 2020. The share of employees with disabilities in 2021 was 0.7% of the average employees.

Average number of employees with disabilities, 2019-2021

	2019	2020	2021
	150	151	153

Gender breakdown

Due to the nature of production operations in the mining industry, the share of females in the total number employed by the Group in the reporting period remained at the level of the previous year and at the end of 2021 was 18%, while the share of males was 82%.

Indicator	2019	2020	2021
Males	16,753	17,228	16,942
Females	3,839	3,791	3,701

3.3.3. Talent retention

3.3.3.1. Recruitment and staff turnover

GRI 401-1

In 2021, 3,316 people were employed by the Group, of which 67% work in South Kazakhstan (including Shymkent). Kazatomprom has no policy of preferential hiring of local employees. Selection for candidates is based on the education, qualifications and professional qualities of the applicants.

In 2021, the Group's staff turnover was 13%. Compared to 2020, this indicator slightly increased by 3%.

In 2021, 51% of employees who left the Group were men aged 30-50 years. Its largest share was in the southern region (including Shymkent), and amounted to 66%. This situation is due to the location of the Company's uranium mining operations.

3.3.3.2. Motivation and remuneration

Kazatomprom seeks to ensure decent and timely pay for its employees and applies transparent approaches to material remuneration, striving to maintain wages at a high competitive level on the labour market and in the industry.

The Company has a remuneration system that complies with national legislation and defines minimum wages, working hours and overtime pay.

Systemization of rewards for employees of Kazatomprom companies

On 1 January 2022, Kazatomprom completed the project for systemization of rewards for employees of Kazatomprom companies that was launched in 2019. The project had two stages rolled out in 14 Company's subsidiaries and affiliates with about 6,000 employees. Starting from 1 January 2022, it was also implemented at 7 production and auxiliary subsidiaries with about 12,000 employees. The project made the methodology of the reward system transparent, streamlined and understandable for every employee of NAC Kazatomprom JSC.

The systemization of reward implies:

- Taking a unified approach to the list and amount of payments and to the procedure for their calculation at enterprises, regardless of the nationality of the shareholders, working conditions and the production technologies and capacities used
- Grading 100% of positions in subsidiaries and affiliates
- Keeping or increasing salaries and/or tariff rates
- Comparing annual income of employees at Company's subsidiaries and affiliates with the average income of employees at the same level (grade) in Kazakhstan
- Paying performance bonuses for individual and team performance

- Taking a unified approach to payment for harmful/hazardous and extremely hazardous/significantly hazardous working conditions and to determining the duration of additional leave
- Taking a unified approach to the amount and procedure for payment of leave bonuses by the employer
- Reviewing and eliminating additional payments (personal allowances, workmanship, foreman's allowance, non-transparent bonuses) so that the annual payroll of each employee remains unchanged.

In accordance with the HR Management Corporate Standard of Samruk-Kazyna JSC, the reference wage market for employees of Company's subsidiaries and affiliates is the general industrial market of the Republic of Kazakhstan, and the level of wages tends to its median.

The average monthly salary of Kazatomprom's production personnel increased by 12.7% and amounted to KZT 314,653.

The excess is due to payment for downtime owing to circumstances beyond control of employees and employers related to restricted access to workplaces and to payment for employees involved on weekends during pandemic/quarantine periods. In addition, the implementation of the reward systemisation project included an increase in labour costs to introduce additional payments, such as holiday bonuses from the employer or year-end bonuses, which were not previously available in the budgets of individual enterprises.

Kazatomprom's payroll fund, KZT

Indicator	2019	2020	2021
Average monthly wage of production personnel	263,997	279,202	314,653
Payroll fund, KZT million	64,884	65,707	71,484

Kazatomprom pays special attention to analysing the ratio of remuneration for females and males. Due to the industrial nature of the business, which often requires physical labour, most employees are male. Nevertheless, we do not tolerate any form of discrimination with regard to recruitment, rewards determination, performance appraisal and career development for females.

Long-term and short-term staff motivation

The rewards paid to employees for meeting planned targets, strategic and operational goals of the Group's companies, as well as for generating innovative ideas, high professionalism, and a responsible attitude to work are the key components of the financial remuneration system, which fuels the long-term motivation of personnel.

Additional incentives include:

- Financial assistance for annual leave to support the health of employees
- Additional payments for concurrent employment and mentoring allowances established by the Group's management
- Additional payments to employees living in an environmental disaster zone, depending on the region of residence, in accordance with Kazakh law
- Additional payments to production staff if they work in harmful or dangerous working conditions as prescribed by the laws of the Republic of Kazakhstan

3.3.3.3. Young professionals

Kazatomprom strives to develop and realize the intellectual, professional and creative potential of young specialists. In 2017, Kazatomprom launched the Zhas Orken internship programme for young specialists, initiated by Samruk-Kazyna JSC. In 2021, the Company and its subsidiaries and affiliates had 13 young specialists on 15 rotations. Upon completion of the 2019 Zhas Orken programme, 12 Kazatomprom mentors were awarded with badges of honour and letters of appreciation from Samruk-Kazyna JSC for their contribution to the Zhas Orken programme in 2021.

In 2021, within the framework of replicating the Zhas Orken programme, the Company successfully continued to implement the local Izbasar programme aimed at developing young specialists. The purpose of the programme is to nurture talented leaders with the prospect of gradual career development at Kazatomprom enterprises.

The Izbasar programme provides a unique experience of internships and special training at several Company's enterprises. Thus, in 2021, eight young specialists were selected on a competitive basis to undertake a 15-month paid internship at the Company and its enterprises. As a result of the rotation of the students enrolled under the IZBASAR programme, four graduates of the programme were employed by the Company and its subsidiaries and affiliates.

3.3.3.4. Feedback

GRI 103-2, 413-1

The Company has an effective system of internal communications, which ensures several feedback channels.

The main channel of communication is the Company's Internet resource, kazatomprom.kz. The website provides external stakeholders with the opportunity to leave a written appeal or complaint and, if necessary, to contact the hotline by phone.

The Company supports the development of a feedback culture by:

- Conducting feedback surveys
- Conducting exit interviews
- Developing a corporate portal

The Group's enterprises monitor and analyse inquiries, providing quarterly reports to Kazatomprom's headquarters. Based on the analysis results for each inquiry, we follow up the elimination of violations and make appropriate recommendations.

3.3.4. Staff development and training

GRI 103-1, 103-2

Staff training and development is one of the Company's priorities under the Corporate Culture Transformation and Development Programme. Kazatomprom implements the best and most effective educational practices in the areas of operational efficiency, occupational safety, human rights, labour protection and career guidance. The Company implements programmes to develop leadership competencies and trains mentors and internal coaches. Annually, employees of the Company's enterprises undergo compulsory and professional training.

Education level of Kazatomprom's staff, 2019-2021, %

Indicator	2019	2020	2021
Higher	42.19	42.93	43.81
Secondary vocational	32.13	32.66	33.49
Basic vocational	3.91	3.19	3.26
Secondary	21.70	21.17	19.42
Basic	0.07	0.06	0.02

The Company has a Comprehensive Training Programme 2019-2023, which is aimed at systematizing the processes of training, retraining and advanced training of employees and includes such elements as

- Training at universities and colleges
- Advanced training
- Retention and transfer of knowledge

The training is conducted on the basis of the corporate university at Kazakhstan Nuclear University with the involvement of internal experts and external providers.

Kazatomprom invests a significant amount of resources in the training and development of its employees. In 2021, Kazatomprom invested KZT 1.476 million in employee training and development.

In 2021, the average annual number of training hours was 37,244 man-hours.

Training is based on the principle of self-learning, according to which 70% of training takes place at work, 20% of skills are acquired by employees through the mentoring and coaching programmes, and 10% through training courses and other training programmes.

The HR Department is responsible for supporting managers in training employees, organizing the training process and choosing educational programmes, as well as educational service providers.

3.3.4.1. Training effectiveness evaluation

GRI 103-3

Kazatomprom has introduced a procedure for evaluating the professional, personal, and business as well as managerial qualities by analysing the common and individual performance of each employee. The evaluation and analysis procedure determines the training needs of employees and their future career opportunities. Based on the analysis, we draw up a development plan or corrective plan for the employee, change the remuneration, and promote/demote the employee.

Upon completion of the training, an assessment of the completed training is carried out by filling out questionnaires by the trainees, and then after 3 months, the assessment of the completed training by the head of the trained employee.

3.3.4.2. Training programmes

GRI 404-2

Company pays close attention to improving the practical skills and abilities of employees due to the constantly tightening requirements for their qualifications. Kazatomprom develops and implements advanced training programmes in professional areas, including mandatory training in accordance with the legislation of the Republic of Kazakhstan.

All training programmes of the Company are aimed at improving managerial and personal and business competencies of managers, talents (successors), forming effective and management teams, unlocking internal potential, improving cross-functional interaction, as well as applying the acquired skills in the working environment and achieving better results.

Leadership Development Programme

In 2021, Company continued its Leadership Development Programme for 2018-2021, aimed at developing managers of CEO, CEO-1, and CEO-2 level. The programme for 2018-2021 provides training comprising three areas: self-management, people management and task management.

The purpose of the programme is to transfer the knowledge gained by managers to subsequent levels, including subsidiaries and affiliates of Kazatomprom. Kazakh and international service providers with experience in leadership development, management competencies, coaching tools, and team management were engaged.

It is implemented through a number of projects, such as working sessions in the format of business games triggering team searches for solutions to challenging issues, improving the leadership system and increasing employee engagement.

Over three years, the Programme embraced 23 workshops, training sessions, strategy sessions and business simulations, covering 100% of managers at the level of CEO-1 and CEO-2. 443 man-hours of training were conducted, the total number of academic hours was 220 hours.

Corporate programmes aimed at leadership development, lean production, corporate culture and safety culture are still relevant in 2021.

Kazatomprom's School of Internal Trainers

In 2021, as part of knowledge retention and transfer, candidates were enrolled for the second round of Kazatomprom's School of Internal Trainers. There are specific phases of training and certification. In the last phase, 13 specially trained internal trainers of the Company and its subsidiaries and affiliates will begin to coach staff of the entire Group, in order to meet the need for professional training. The

selection process among candidates for internal trainers in 2021 was carried out in line with the Company's strategic goals.

In the reporting period, Company continued the School of Mine Directors' programme. 15 employees were trained under the first stage of School of Mine Directors' programme. Another 19 managers of production facilities and engineering and technical personnel are also currently attending the second phase.

Company's employees traditionally held master classes in 2021. This training programme was recorded, posted on the Group's corporate portal, and currently available to all employees. Such a format provides for the use of videos as additional training materials featuring unique knowledge and best practices.

Moreover, as part of enhancing financial literacy, master classes were held in 2021 for employees of the Company, subsidiaries and affiliates, with the participation of external experts in economics and finance, internal trainers and employees of relevant structural units of the Company. As part of the internal training development, Kazatomprom held 14 online meetings on sustainable development, HSE, etc.

As part of a professional welfare programme implementation aimed at professional and career achievements of employees, the Company fully implemented a comprehensive staff training and development programme in 2021. In particular, expert master classes and career days were held in order to enhance knowledge of the Company's business processes. A recognition programme was also implemented: professional skills competitions Best Employee of the Year / Zhyl kyzmetkeri.

In 2021, Kazatomprom held its first career hackathon, which included panel discussions with Company experts, and a case championship, the winners of which were given the unique opportunity to participate in individual mentoring, coaching and career sessions with Company top managers and experts, as well as the opportunity to advance to the second stage of the IZBASAR young professionals programme.

3.3.4.3. Talent pool

In 2012, the Company introduced a management succession programme for Kazatomprom, aimed at identifying candidates from among the Group's employees with high potential and a desire to improve their professional qualities and career growth in order to organize succession in the talent pool, as well as continuity in the Company's management system.

During the programme, a mentor is assigned to every successor, who is responsible for the employee development, progress monitoring and support in the course of their ideas implementation. The pool of successors is defined based on the results of employee performance appraisal. Pool owners – the Chairman of the Management Board and functional area managers – are the main contributors to the development of the succession programme.

In 2021, 9 successors were appointed from the pool, representing 69%. From the management pool, 71% were appointed (5 successors). From the functional pool, 67% (4 successors) were appointed.

In 2021, as part of the programme, the Company:

- Updated the composition of managements and functional pools
- Prepared their development plans
- Implemented the mentorship program

Under the mentoring programme, 9 mentors and 79 mentees were trained in effective interaction with mentors and learnt the feedback skills. Over the entire period of the mentoring programme, 47 mentoring sessions were held with the participation of successors from the headquarters, subsidiaries and affiliates as well as CEO-1 level mentors. The total number of mentor sessions reached 47 hours.

On an annual basis, the headquarters reviews the number of appointments to positions from the successor pool.

3.3.4.4. Cooperation with educational institutions

Kazatomprom cooperates with Kazakh universities and colleges, as well as foreign educational institutions. The Group's employees are trained at the expense of the Company.

As of the end of 2021, 376 people were trained in industry-specific specialties, of which 201 were employees of Kazatomprom, its subsidiaries and affiliates and 175 individuals were not employed by Kazatomprom.

In 2021, Company spent KZT 282 million on training of specialists in universities and colleges.

Kazatomprom continues cooperation with the country's International R&D Educational Centre for the Nuclear Industry, where employees of the Company, its subsidiaries and affiliates, as well as individuals are trained at the expense of subsoil users in priority specialties for the nuclear industry.

In 2021, ten employees of subsidiaries and affiliates enrolled on the master's programme, majoring in geology and exploration of solid mineral deposits, as prescribed by the subsoil use contracts.

3.3.5. Staff welfare

GRI 401-2

Kazatomprom fosters social support measures aimed at continuously improving working conditions and the quality of life for employees. Social policy is one of the key pillars of Kazatomprom's stable operation and sustainable development. The Company ensures a comfortable working environment and provides additional guarantees and benefits that provide high social protection for employees.

The core principles of Company's social policy comprise:

- Taking care of employees – physical, financial, mental and social welfare
- Improving working conditions – improving the working environment and the production process
- Improving social and living conditions of employees of the Group's entities – ensuring comfortable working and recreational conditions aimed at health care and safety of workers
- Enhancing staff motivation and creating a favourable psychological climate in the team: recognition programmes (corporate awards, professional skills competitions, “Best Employee of the Year” for employees of the headquarter and “Zhyly Kyzmetkeri”, aimed at raising the prestige of blue-collar jobs and engineers), remote work introduction, financial support for employees with many children, development programmes, workshops in financial literacy and much more

The country's leading industrial company continuously improves its approaches to social security and HR management policies.

Kazatomprom's social support costs by area, 2021, KZT bn

Area	Level of investment
Health care	1.88
Food	3.43

In 2021 Company organised a number of events aimed at self-fulfilment in social functions and supporting the social welfare of employees: Health Marathon, Spartakiada, In the Rhythm of a Healthy Heart, Donor Day, eco projects, social volunteering projects, and corporate events and contests.

Social programmes were launched aiming at ensuring financial welfare, particularly, improving employees' financial literacy and knowledge leading to smart financial decisions. Company initiated meetings with external and internal experts to share expertise on loans, effective management of personal and family budget, etc. Kazatomprom employees had the opportunity to communicate and consult with bank representatives on the possibility of using pension savings.

3.3.5.1. Employee support

Company's current social policy focuses on support to certain categories of employees: single parents, families with many children, parents of children with disabilities, and non-working pensioners upon termination of the employment contract. The Group companies have a unified approach to full-time and part-time employees.

As part of social security, single parents and mothers of three or more children under 12 are granted additional leave. Families with many children and families with disabled children under 18 receive financial assistance.

In 2021, maternity/paternity leave was granted to 345 employees, where 50 are men and 295 are women.

Company provides medical care and additional financial assistance on special occasions and holidays for non-working pensioners, upon termination of employment due to retirement or disability.

On occasion of the 30th anniversary of the Independence of the Republic of Kazakhstan in 2021, the employees with large families of the Company's subsidiaries and affiliates received additional bonuses. There were about 2,500 families.

3.3.5.2. Health care and welfare of employees

GRI 403-6

One of the key Kazatomprom priorities is the health and welfare of its employees. Company has elaborated and implemented various programmes aimed at supporting physical and mental health, as well as increasing financial, social and professional welfare of the employees.

Kazatomprom strives to help each employee develop his or her own conscious attitude to the topic of welfare and the skills necessary to lead a healthy and happy life both at and out of work.

The Company carries out systematic work to improve physical welfare and form healthy habits to enhance the quality of life, improve health and increase productivity.

Effective programmes were implemented in 2021:

- Voluntary health insurance for employees and family members
- Mandatory annual preventive medical examination
- Daily surveys of employees' welfare and mood
- Meetings with experts dedicated to health care and healthy lifestyle, particularly in the field of post-COVID rehabilitation and recovery

3.3.6. Trade unions and human rights

Kazatomprom does not restrict the employees' rights to found or join public organisations that represent their interests. The Group's staff can engage in any political, educational, charitable or social activity, as long as this engagement does not affect the performance of official duties and does not harm society.

Nuclear Industry Workers Trade Union ensures that Kazatomprom has a reliable partnership in complying with labour legislation and actively participates in protecting the interests of employees. As of the end of 2021, 10,700 employees of the Group's enterprises are members of the Trade Union.

Collective bargaining agreements are concluded to regulate labour relations and create conditions for social protection of employees. As part of collective bargaining agreements and fulfilment of commitments, the trade union is allocated funds on an annual basis for events among the Company's employees, medical care, social assistance, cultural, sports and recreational activities and the purchase of vouchers for sanatoriums and children's camps.

Trade union support costs, KZT million

	2019	2020	2021
	572.2	575.5	684.9

3.3.6.1. Collective Bargaining Agreement

GRI 102-41

The Collective Bargaining Agreement is key to protecting labour rights, economic and social guarantees of employees, as well as regulating labour relations and effective dialogue between the Company and employees. The Collective Bargaining Agreement is developed for a three-year period and is subject to regular renewal.

The share of employees covered by the collective bargaining agreements is 94%.

GRI 402-1

An integral condition of the Collective Bargaining Agreement of Kazatomprom is the obligation to notify employees in advance about significant changes in working conditions no later than one month prior to the proposed changes, and in some cases fifteen calendar days.

The provisions of the Collective Bargaining Agreement also regulate recruitment, maintenance of corporate culture and relations with employees. In accordance with the Collective Bargaining Agreements, Kazatomprom provides social support for personnel aimed at continuous improvement of working conditions and the quality of life of employees.

3.3.6.2. Approach to human rights observance

GRI 103-1, 103-2

Human rights protection, social partnership, mutual respect, mutual trust, prevention of any discrimination are the main principles in relations between the Company and its employees.

Kazatomprom prohibits any restriction of employees' labour rights and freedoms or any benefits and advantages received on the ground of gender, race, nationality, language, origin, as well as property, family, social and official status, age, place of residence, religion, beliefs, affiliation/non-affiliation with any public association or social group, as well as other circumstances not related to the employee's professional qualities.

GRI 408-1

Relying on the principles of respect for human rights, Kazatomprom engages those partners and counterparties that comply with the law and the Group's standards of corporate and business ethics. The Company maintains long-term partnerships only with suppliers who share and comply with the Group's ethical principles, who do not accept corruption, who respect human rights, and who care about occupational health and safety. Kazatomprom does not use child labour.

GRI 412-3

Kazatomprom requires compliance with the law and its own corporate standards on occupational safety from suppliers and contractors operating at the Group's facilities. All agreements and contracts of NAC Kazatomprom JSC include provisions on observance of human rights in accordance with the Code of Suppliers and Contractors of NAC Kazatomprom JSC.

Kazatomprom has an Ombudsman Service ensuring:

- human rights compliance within the Company
- employees awareness and comprehension of the Code of Ethics and Compliance
- individual meetings with employees at the enterprises regarding personal matters

Compliance with human rights and international human rights standards is monitored by the Company's compliance officers and trade union organisation. In the event of a rights violation, employees may contact the Company through all of its feedback channels.

GRI 409-1, 411-1

In 2021, no cases of discrimination or other human rights violations were recorded in the Company. There are also no cases of forced or compulsory labour or violations of the rights of indigenous and minority peoples.

3.3.7. Corporate culture and internal communications

Production efficiency and achievement of the Company's strategic development goals are the Company's specific area of focus, which determines the formation of a strong corporate culture. Core

values such as safety, responsibility, professionalism, development and teamwork are actively promoted within the team.

All Company employees understand and share the corporate values, define themselves as part of the team and contribute personally to the common cause.

The high level of development of the Company's corporate culture, in particular, contributed to the rapid adaptation of personnel to the COVID-19 pandemic. During the crisis, the Company was able to provide employees with safe working conditions and demonstrated support and care.

In 2021, in order to determine the further development of corporate culture, the NAC Kazatomprom JSC Corporate Culture Diagnostic project was implemented. The study involved 70% of employees of the Central office and subsidiaries and affiliates. The Company diagnosed the current and target corporate culture, identifying strengths and vectors for further development.

The study results showed that the Company achieved the target level of corporate culture that was set in 2017. The roadmap for further promotion of corporate culture for 2022-2025 was developed based on the study results.

The roadmap for further development of corporate culture for 2022-2025 has been fully implemented. As part of the project, a competency model has been implemented, a succession programme has been developed and implemented, the employee training and performance appraisal system has been improved, and measures have been implemented to increase employee engagement, manage material and non-material incentives, develop the communication system, leadership programmes and strengthen the employer brand.

In order to increase employee engagement and attract the best candidates in the labour market, the Company is actively working to build its Employer Brand. The Company developed an EVP promotion communication strategy.

According to the results of the independent Randstad Employer Brand Research in 2020-2021, Kazatomprom was included in the TOP 10 best employers of Kazakhstan and TOP 3 best employers in the mining and metallurgy industry of the country. This evidences the effectiveness of actions aimed at promoting the employer brand.

Kazatomprom is among the top 10 best employers in Kazakhstan.

Another key element of the corporate culture, aimed at maintaining the Company's corporate values, is social volunteering, which brings employees together and promotes staff involvement in the formation of a positive internal atmosphere and the image of Kazatomprom as a socially responsible Company.

In 2021, employees of the Company and subsidiaries and affiliates continued implementing large-scale volunteering projects.

Area	Programme Description
Vulnerable groups support	Assistance in the form of foodstuffs to socially disadvantaged 70 families with many children in the village of Shiyeli (RU-6 LLP)
	Assistance to mothers with many children, home front veterans, pensioners, people with disabilities, low-income families (APPAK LLP, KAP-Technology JSC, JV ZARECHNOYE JSC, Kazatomprom-SaUran LLP), delivery of tablets, foodstuffs to children from low-income families in Shiyeli district (Semizbay U LLP)
Support for veterans	<ul style="list-style-type: none"> • online flash mob 'I remember, I am proud', subsidiaries and affiliates • online concert honoring veterans, Volkovgeologiya JSC • celebration for veterans at the open-air site of Baiken-U LLP • greetings and presenting gifts to veterans in the village of Zhanakorgan, Yekpindi, Zhaiylma and Talap aul districts

Environmental campaigns	As part of the "Birge-Taza-Kazakhstan" environmental campaign and celebration of the 30th anniversary of Kazakhstan's independence, 30 almond tree seedlings were planted at Nazarbayev University. Employees of OPRAP NGO, trade union organisations and volunteers from subsidiaries and affiliates took part in the campaign
	As part of World Environment Day, clean-up days were arranged: with the participation of Baiken-U LLP management and employees of the headquarters on the bank of the Syrdarya River in Kyzylorda and employees of the Khorasan-2 mine on the mine site (Zhanakorgan district, Kyzylorda region). Eco-projects were also deployed in almost all subsidiaries and affiliates
Support for education	The Young Professionals' Council of Kazatomprom organised an online camp to develop leadership potential for high school students located in the regions where the Company operates

3.3.7.1. Events for employees

Kazatomprom is interested not only in the professional development of employees, but also in the realization of their personal potential. Corporate sport and cultural events help to increase the activity, motivation and involvement of employees in Company's life.

In 2021, given the epidemiological situation in the country, corporate events were held in an online format, while some events were held offline due to the high percentage of vaccinated employees.

Actions aimed at maintaining traditions and corporate spirit within Kazatomprom included:

- Online greetings dedicated to March 8 and May 7
- Nauryz – Dästür online teambuilding
- Children's art competition and online programmes for Children's Day
- Online celebration of the Company's birthday
- Where's the Logic? online game
- Online greetings on Nuclear Industry Workers Day
- New Year online events, a flash mob with the participation of all Kazatomprom's subsidiaries and affiliates "New Year's festive round dance"

In 2021, in order to promote a healthy lifestyle, the Company held the XX Spartakiada Sports Games of Kazatomprom enterprises in online/offline format in seven sports. Tournaments in mini-football, streetball, badminton, track and field and table tennis took place offline. The online format included tournaments in cybersport (PUBG Mobile) and chess. In total, more than 600 employees of the headquarters and subsidiaries of Kazatomprom took part in the Spartakiada.

GRI 403-6

30,000 Kilometres in 30 Days Health Marathon

Goal: to improve the health of employees and to draw attention to healthy lifestyles

Coverage 300 employees of the headquarter as well as subsidiaries and affiliates.

Programme description: employees walked, ran or cycled for 30 days to gain a total of 30,000 km. Results were recorded on the Strava platform. A special motivational Telegram channel was created, where participants shared their results and impressions, and encouraged each other to achieve results and develop healthy habits.

Results: 40,000 km run by participants were converted into KZT. A total of KZT 4 million was allocated to help seven families of employees of RU-6 LLP, Kazatomprom-SaUran LLP, ME ORTALYK LLP and JV ZARECHNOYE JSC who have children with special needs. Two shower chairs and two massage chairs for people with disabilities, a walker for people with cerebral palsy, a computer for home schooling, and funds for surgery and purchase of medicines were raised.

Marathon participant: "The marathon provided very useful and positive moments for me. I began to cherish the sunrise and the sunset, improved my health, became more cheerful, learned that I had many good neighbours, saw many different buildings, plant design in my yard and many other little things".

3.3.7.2. Interaction with management

In 2021, Kazatomprom's internal communications system remained the main tool to ensure that employees were timely informed about current events in the Group and helped maintain a positive atmosphere in the team.

The Company used an online and offline format to hold major organisational events for employees (meetings, management meetings with the team, teambuilding events).

Interviews were held with top managers of subsidiaries and affiliates to inform them about the measures taken at the enterprises to prevent COVID spread. Employees and top management held online meetings.

There is a functioning Kazatomprom RHYTHM programme, which informs employees about the Company's projects. The Qasyndamyz-2020 corporate employee support programme has been implemented, which includes volunteer and charity initiatives to support employees during the pandemic.

Employee awareness of the current situation and important events for the industry is maintained via e-mail – regular newsletters and addresses on behalf of management, as well as the corporate QazAtomNews e-magazine.

3.3.7.3. Level of employee satisfaction and engagement

Kazatomprom's programmes and initiatives dedicated to corporate culture development, improvement of social and labour conditions, safety improvement, material remuneration, motivation and involvement of employees are implemented in accordance with the developed plans and supported by all employees of the Company.

The annual positive performance appraisals are confirmed by regular surveys on the level of social stability.

According to survey results, the social stability level reached 73% at the Group.

In 2021, the Centre for Social Interaction and Communications (PE) conducted research to determine the level of social stability “Samruk Research Service” (SRS) at 18 enterprises of Kazatomprom Group.

3.3.8. Plans for 2022 and a short term

In 2022, Kazatomprom will continue the employee support programmes, retain and develop HR potential, and maintain the level of employee engagement by developing the employer brand, among other things.

The Company plans to pursue activities aimed at improving the efficiency of remuneration and financial incentive system, to continue automation of personnel management processes, to implement management succession and leadership development programmes, to systematise remuneration, and to take measures aimed at improving working conditions.

In accordance with the Company's priorities, we plan to expand work with trade unions as representatives of the social partnership, to implement measures to amend collective bargaining agreements with regard to the distribution of responsibilities between the employee representative and employers, and to maintain social stability, develop a negotiating culture and improve internal communication efficiency.

Aiming to improve employee satisfaction with working conditions, the Company plans to develop and implement standards for catering, provision of protective clothing, organization of living conditions for shift workers, as well as medical care for employees in 2022-2023.

Company has begun to elaborate the Corporate Culture Roadmap, which will help achieve Kazatomprom's target corporate culture model and further promote corporate values.

In line with ESG principles, we are set to introduce practices to maintain and develop diversity and inclusiveness, including the promotion of women's leadership, as well as the implementation of projects to support local communities in the regions of operations.

High production achievements and further development of the Company, development of new types and areas of operations, development and implementation of promising projects will directly depend on the effectiveness of social investments aimed at ensuring a high level of employee engagement and commitment to Kazatomprom's values.

KAZATOMPROM OPERATIONS AND ACTIONS AMID THE COVID-19 PANDEMIC

Following the outbreak of the COVID-19 pandemic in Kazakhstan in 2020, NAC Kazatomprom JSC has been taking all necessary measures to prevent the spread of coronavirus infection among employees of the Group, prioritizing the workers' wellbeing.

The Company is fully aware that a deterioration of the situation triggered by the COVID-19 pandemic in Kazakhstan may undermine the financial stability of the Group and result in social tension in the country.

As of 31 December 2021, the Company registered 1,957 cases of coronavirus infection: 1,941 people recovered and 7 people had active infections.

In 2021, the Company sadly registered four deaths from COVID-19: two cases at Ulba Metallurgical Plant JSC, one case at JV Katco LLP, and one case at JV Inkai LLP.

Kazatomprom continuously monitors the situation related to COVID-19, ensuring the relevance and effectiveness of all existing protocols. During the pandemic, all activities, plans, and working hours of the Group are promptly corrected and updated in accordance with the Resolutions of the Chief State Sanitary Doctor of the Republic of Kazakhstan.

In addition, within the framework of the work of the HSE Committee of Samruk-Kazyna JSC, an exchange of experience was carried out among portfolio companies on the prevention of COVID-19, vaccination and interaction with the Ministry of Health of the Republic of Kazakhstan.

In 2021, the Company continued all preventive measures introduced by the Group in 2020.

Measures to counter the spread of COVID-19

As part of necessary measures to prevent and reduce the staff morbidity risk, Kazatomprom has implemented a number of measures to ensure continued operations. In particular, Kazatomprom has reduced the number of employees involved in production to a minimum since April 2020 to mitigate the risk of exposure to the infection among its workers at mines and the local population living in the regions where the Company operates.

We developed and implemented plans for five protection lines with due regard to the pandemic risks and the Epidemiological Situation Matrix.

1. Timely transfer to teleworking

Thanks to the effective communication system at the Company, we have switched to remote work smoothly and in a fairly short time.

Every employee can continue communicating with colleagues and senior management to resolve urgent issues, receive useful information, and feel involved in the performance of important tasks and objectives.

To support the staff amid the COVID-19 pandemic, the Qasyndamyz-2020 programme was implemented and is operating to ensure psychological and physical support of employees:

- Online breathing and physical exercises for employees and their families
- Support of a volunteer group of the Company's employees: assistance in finding medicines, providing psychological support; webinars to support family members and friends, manage stress, etc.
- Daily survey on the well-being of employees, monitoring of the emotional state, individual consultations with psychologists

In 2021, the Companies worked on the principle of the COVID-free zones to ensure the safety of employees. In August 2021, Kazatomprom took measures to mobilise workers to production units in line with the strict occupational health and safety regulations to minimize the risk of a potential outbreak of viral infection locally or among the population living in the regions where the Company operates.

2. Preventive measures to reduce the risk of infection

We took the following preventive measures to reduce the risk of infection:

- Introducing contactless video thermometry
- Installing disinfection tunnels, introducing PCR testing for staff before coming to work
- Introducing supply of disinfectants, PPE, and antiseptics for personnel
- Ensuring social distancing at work
- Offering vaccinations against influenza. In H2 2021, 25% of the Group's employees were vaccinated
- Setting up quarantine zones in subsidiaries and affiliates, developing action algorithms in case of the detection of COVID-19 among employees, and conducting training drills
- Taking preventive measures according to the approved schedules of shift rotation, with mandatory PCR testing

For each case of disease, we conducted an epidemiological investigation, with the isolation of the infected person, the adoption of the necessary measures to prevent the spread of infection, and establishment of a circle of close contact persons. All sick employees receive a reminder about the self-isolation conditions.

We roll out an extensive awareness-raising campaign on the information platforms of the Group on an ongoing basis, explaining preventive measures, the quarantine regime, and the rules of conduct for employees.

The implemented preventive measures against COVID-19 have helped the Company reduce the coronavirus incidence rate among employees, ensure its uninterrupted operations, and maintain the production capacity.

3. Anti-crisis centre

Due to the widespread use of information systems, Kazatomprom has introduced analytical dashboards (platforms) on COVID-19. This digital solution has been developed to quickly monitor the spread of COVID-19. Analytical dashboards reflect the key indicators of the epidemiologic situation in Kazakhstan and the Company.

In 2021, Kazatomprom implemented the next stage of integration of the information systems of the Republic of Kazakhstan with its eKAP Information System Pass module and the ACS (Access Control Systems) to confirm the availability of PCR test results and Vaccination Passports through the Ashyk system.

Mandatory daily health monitoring has been introduced at all enterprises of the Group. Based on the daily questionnaire data, we developed a tool to promptly track the health of employees, as well as project the incidence rate on the territories where subsidiaries and affiliates operate, and evaluate the effectiveness of anti-epidemic measures taken by the Group.

The system visualizes outbreaks and analytical projections and thus helps take preventive measures and prepare for a possible increase in the incidence rate.

Due to the spread of the new Delta strain in July 2021, an increase in cases took place, which led to the expansion of the so-called red zones, including the cities of Nur-Sultan, Almaty, and Shymkent. In August 2021, the government of Kazakhstan introduced strict restrictions. In July, Kazakhstan saw a surge in coronavirus incidence rate (Delta strain) in some parts of the country. In August 2021, the national government introduced strict restrictions, however, the situation stabilized and the restrictions were partially after the mid-August.

4. Health system support

As part of the fight against the COVID-19 pandemic, the Group's companies support the local residents and medical institutions.

Since the outbreak of the pandemic, RU-6 LLP has purchased and donated an oxygen device to the Central District Hospital. Ulba Metallurgical Plant JSC has sent food packages to its retired employees. Kyzylykum LLP and Khorasan-U LLP refilled 500 oxygen tanks for Zhanakorgan District Hospital. JV Katco LLP purchased six ventilators for hospitals in Turkistan and Shymkent. JV Katco LLP, a Kazakh-French joint venture, allocated KZT 50 million to the Birgemiz Public Foundation, and six ventilators were purchased for hospitals in Turkistan and Shymkent (three per city) for a total of KZT 100 million.

Key figures, 2021

KZT 62.4 million	investment in medical equipment
KZT 854.4 million	financing of medical care and treatment of personnel

As part of the fight against COVID-19, the subsidiaries and affiliates invested KZT 916.8 million in medical equipment and medical care in 2021.

Works performed to prevent COVID-19 have made it possible to prevent the mass spread of COVID-19 among the Company's employees, ensure uninterrupted operations, and maintain the production capacities of subsidiaries and affiliates.

Vaccination campaign

On 1 February 2021 when the mass vaccination was announced, Kazatomprom launched an extensive outreach campaign, explaining the advantages of vaccination and procedures for vaccination in Kazakhstan.

On 19 February 2021, Kazatomprom held the 23rd corporate meeting on occupational safety online, with the participation of reputable experts and scholars. As part of the event, the head of the vaccination department of the Ministry of Health of the Republic of Kazakhstan presented the Company's COVID-19 vaccination programme.

As of the end of 2021, over 90% of the Group's mining operations employees were vaccinated.

In 2021, a series of pulse surveys of employee readiness for vaccination improved the coverage rates of the vaccination campaign. The Company held an information session addressed by the Chairman of the Management Board who spoke about the necessity of vaccination. In addition, Kazatomprom's RHYTHM platform launched an extensive information campaign to promote and explain the need for vaccination (motivational posters, campaign materials on corporate computer screensavers, etc.).

The vaccination rate at Kazatomprom exceeds the vaccination rate across the country.

We arranged mobile vaccination points in offices and production sites. The vaccination status is monitored daily in the eKAP information system.

By the end of 2021, over 94% of the Company's employees (more than 16,500 people) had received their first dose of the vaccine, and more than 93% had been fully vaccinated with two doses.

Key vaccination motivators for Kazatomprom employees:

- One-time payment of KZT 15,000 to vaccinated employees
- Days off additional to a paid leave
- Reduction in the duration of the shift to 15 days upon reaching the rate of employees' vaccination of 70% with the 1st dose and 50% with the 2nd dose
- Rotation shift along the green corridor, bypassing the quarantine zone without PCR testing (suspended when a region of the Company's operations enters the red zone as defined by the Epidemiological Situation Matrix)

3.4. Health and Safety

Key indicators and achievements

KZT 8.29 billion invested in H&S

10,615 employees took advanced H&S training courses

UN Sustainable Development Goals relevant to Kazatomprom

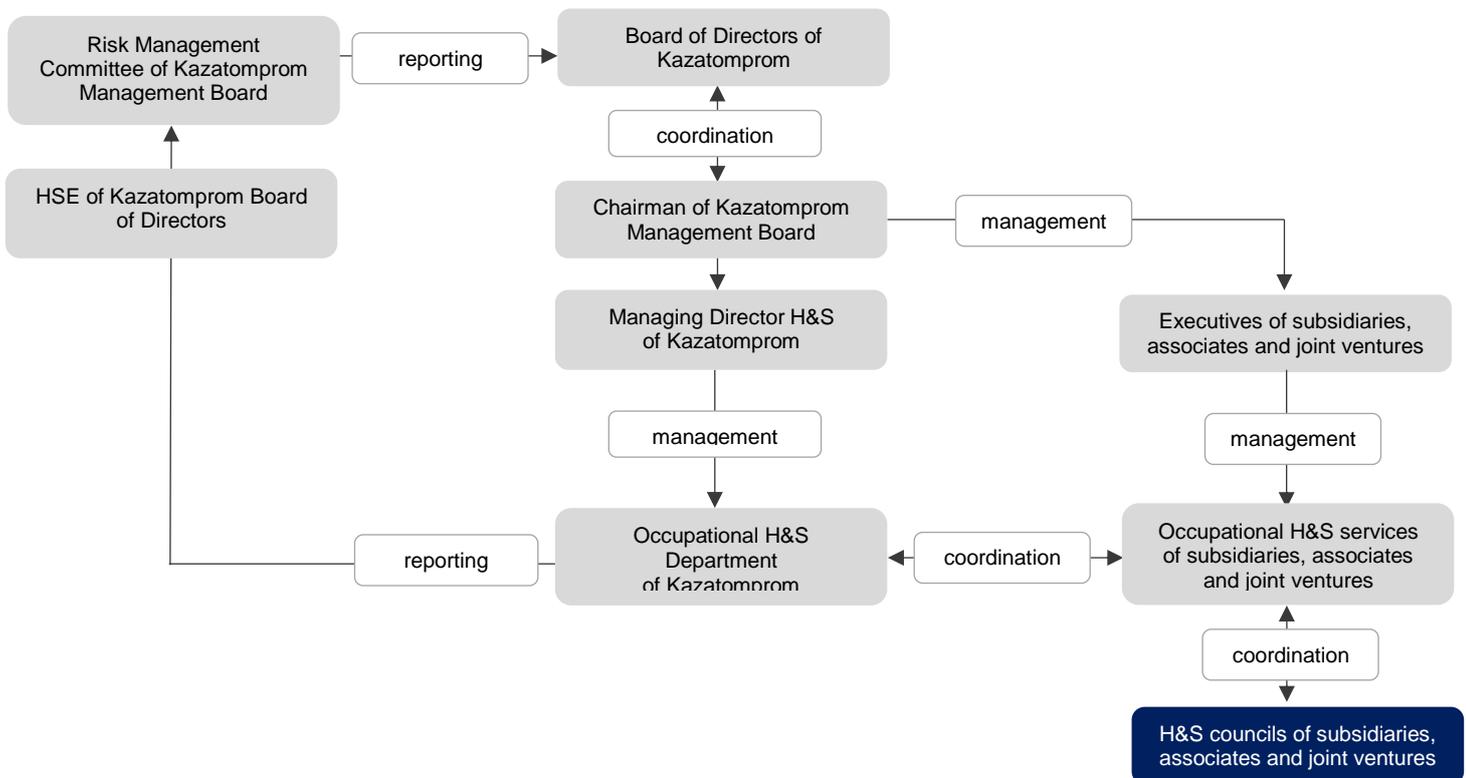


3.4.1. Approach to H&S management

One of Kazatomprom's priorities is to ensure strict compliance with nuclear, radiological and conventional health and safety (H&S) standards and thus provide a high level of health and safety for its workforce. Company continually improves the H&S management. Kazatomprom strictly complied with national and international requirements and standards in all its operations.

The key H&S regulation documents include Kazatomprom's Policy for HSE, Radiological and Nuclear Safety, as well as the H&S Code, Unified Occupational Safety Management System. The documents are binding on all employees and contractors of the Group.

HSE Management System of the Group



The Management Board pays close attention to occupational health and safety. The Management Board Chairman conducts quarterly meetings of the CEOs and executives of subsidiaries and affiliates to discuss the action plans that will help improve the health and safety culture in the Company as well as prevent accidents and injuries.

The enterprises of the Group implement H&S measures as health and safety of employees is the highest priority for Kazatomprom. The HSE of the Board of Directors and the Risk Management Committee of Kazatomprom Management Board regularly review the results of all health and safety measures. The reports on H&S improvements and risk management are submitted to the Board of Directors for consideration and approval.

The HSE Managing Director accountable to the Board Chairman is responsible for the overall coordination of the activities aimed at improving the H&S system in the Company and its subsidiaries and affiliates.

The H&S Department supervised by the HSE Managing Director is responsible for prevention of violations of H&S standards and rules, prompt response to incidents, as well as the monitoring, analysis and control of the H&S risks.

All occupational H&S departments at subsidiaries and affiliates are subordinate to the CEOs. In 2021, the Company continued approving and expanding the functions and powers of the structural units responsible for H&S operational management at subsidiaries and affiliates.

Kazatomprom regularly analyses the structure of qualifications and competences of the H&S units of the Group. Following the analysis, the Company introduces the respective changes to remain in line with the requirements of national laws and the best world's practices and improve the H&S efficiency.

3.4.1.1. Compliance of the management system with the international standards

In 2021, TÜV International Certification conducted an audit of the Company's integrated H&S management system for compliance with ISO 45001 and ISO 14001 for the first time. The audit results confirmed the compliance of the Company's occupational health and safety management system with the requirements of international standards.

3.4.1.2. H&S Risk Assessment

GRI 403-2

The H&S risk management process is an integral part of the H&S management system, as well as of the corporate risk management system. Kazatomprom is actively working to prevent industrial injuries and occupational diseases, as well as to identify, assess, and minimize industrial risks.

All activities of the Group's enterprises are carried out in accordance with the fundamental regulatory and legal H&S documents. The main ones are the Labour Code and the Law of the Republic of Kazakhstan On Civil Protection. The Company also takes into account the requirements of a number of by-laws regulating the procedures for complying with the H&S requirements, in particular, the Rules for Ensuring H&S for Various Types of Activities – Geological Exploration, Mining and Processing of Uranium, Operation of Lifting Mechanisms and Pressure Vessels.

The above documents guide the procedures for investigating accidents and incidents at the Group's enterprises. The Company timely provides information regarding each lost time accidents in the workplace to the authorised government agency. In the case of group accidents or accidents with a severe injury (fatality), the Company is obliged to conduct a special investigation with the involvement of a governmental H&S inspector as required by the laws of the Republic of Kazakhstan.

In accordance with the investigation procedures, Kazatomprom initiates an additional analysis of the accidents, using the Five Whys methodology to reveal the root causes of an incident.

The executives and heads of H&S services of subsidiaries and affiliates initiate meetings to review and analyse all the circumstances of the accidents that have occurred. Based on the results of the meetings, all subsidiaries and affiliates, in accordance with the notification procedures developed by Kazatomprom, receive quarterly information reports on injuries containing a detailed description of the accidents that have occurred, their root causes, and measures taken by the Company. Moreover, an information bulletin is issued and disseminated to all CEOs of subsidiaries and affiliates in case of an incident or accident.

Company keeps a register of risks, with "occupational injury" being the major risk. To reduce occupational injuries, the Company develops and implements comprehensive measures to meet the

established safety standards and constantly improve the level of H&S, as well as prevent occupational injuries.

These comprehensive actions include:

- Developing measures to prevent the recurrence of accidents
- Conducting regular inspections of the Group's assets for compliance with H&S regulatory acts
- Regular informing of subsidiaries and affiliates about the results of the investigation of industrial injuries and providing proposals for the prevention of work-related injuries
- Holding valid and up-to-date workplace certification, which means audits of working conditions and provision of suitable work-ware and protective equipment to employees of subsidiaries and affiliates
- Implementing a corporate plan for the development of the H&S culture
- Keeping records of potentially unsafe conditions, acts, and near-miss incidents at Kazatomprom companies (Near Miss reporting)
- Introducing behavioural H&S audits
- Ongoing use of the tool behavioural H&S audits

In 2021, the Company conducted 14,100 behavioural audits with engagement of the Company's managers and executives of subsidiaries and affiliates to minimize the risk of the human factor.

Since 2018, the Company has been conducting behavioural safety audits. The main goal is to analyse the behaviour of employees at work (when they are performing production tasks) and thus to prevent the behaviour-related risks. Constant analysis and monitoring of data confirms that human factor is the most frequent source of risk at any production company. In addition, the Company provides strict control over compliance of the working conditions at workplaces and production sites with H&S requirements, as well as controls the technical condition of equipment, the availability of all necessary internal documents, including instructions, procedures and standards.

In 2020, Pandemic Risk was added to the corporate risk register. This risk is associated with the spread of SARS-CoV-2 and the start of COVID-19 pandemic. To ensure the safety of workers and the continuity of production during the pandemic, the Company continued managing this risk in 2021.

Kazatomprom has introduced a risk-based approach to improve the H&S system across the Company. As part of this initiative, the Occupational H&S Department of the Group has developed a register of functional risks, which includes the major occupational H&S hazards and risks. The register of functional risks is reviewed and updated annually. The risk-based approach also integrates an approach to planning and conducting inspections/audits. They are carried out as preliminary inspections/audits of the Company's assets to identify the most dangerous production areas. The audit results help focus on the major risks, improve quality, and reduce the waste of time resources.

3.4.1.3. HSE performance

The health and safety of staff is a top priority for Kazatomprom. The Company regularly implements comprehensive measures and world's best practices to prevent accidents and incidents and meet the H&S objectives. Kazatomprom conducts regular campaigns to raise the health and safety awareness of its personnel and thus to improve the safety culture in the Group.

In 2021, the H&S management system covered 100% of the Company's employees, as well as subcontractors' employees.

GRI 403-8, 102-12

Kazatomprom joins Vision Zero international programme

Kazatomprom became a member of the Vision Zero international programme initiated by the International Social Security Association (ISSA) to improve the health and safety of its staff. The Company decided to participate in the initiative to improve the culture of disease prevention and reduce accidents and occupational diseases among employees.

As part of the Vision Zero concept implementation, the Company adopted the Golden Rules to protect the health and safety of its employees. The Rules are binding on all employees and contractors of the Group.

Golden Safety Rules

Take leadership – demonstrate commitment
Identify hazards – control risks
Define targets – develop programmes
Keep improving the safe and healthy system – be extremely well-organized
Ensure safety and health at workplaces, in operation of machines and equipment and handling hazardous substances
Improve qualifications – develop competence
Invest in people – motivate by participation

In 2021, the Company conducted the awareness raising campaign with engagement of executives of subsidiaries and affiliates to explain the Golden Safety Rules to its employees. The TV channels broadcast videos on H&S culture, personal responsibility and leadership to raise the H&S awareness of the Group's employees in the rotation camps of subsidiaries and affiliates.

The health and safety awareness activities require both a systematic approach and investment.

In 2021 Company invested KZT 8.29 billion in health and safety.

Company takes a responsible approach to the health and safety matters, investing heavily in health and safety measures.

Company has developed a system for evaluating the employee performance. The performance appraisal is based on a list of key performance indicators (KPIs). The health and safety of the Group's employees is one of the key performance indicators in this list. "Improving safety culture" indicator is one of the major H&S KPIs, which includes such mandatory elements as "Number of identified hazardous conditions, hazardous actions, and Near-Miss incidents" and "Implementation of corrective measures". This high-level KPI is then cascaded to performance indicators for management, employees of the Company and subsidiaries and affiliates. The KPI assessment system covers all employees of the Company from Kazatomprom Board Chairman to an ordinary employee.

To ensure effective identification and implementation of measures aimed at improving the health and safety management system in the Company, Kazatomprom holds an annual corporate meeting on the H&S performance and plans for the next year. On 19 February 2021, the meeting adopted minutes with specific instructions on H&S improvement measures.

Throughout the year, all subsidiaries and affiliates conducted scheduled inspections for compliance with H&S regulatory legal acts.

In addition, in 2021, the H&S Management System corporate standard was introduced at all mining subsidiaries and affiliates.

The Occupational H&S Management System standard is designed to harmonize the structure and content of the H&S management system of the Company and its subsidiaries and affiliates with the applicable requirements, based on the legislation of the Republic of Kazakhstan, the Reference Model for H&S Management of Samruk-Kazyna Portfolio Companies, as well as advanced international standards and practices.

3.4.2. Performance results

Kazatomprom keeps a register of risks, with occupational injuries indicated as one of the major risks in the Company. We have developed and implemented a list of comprehensive measures to prevent the risk of occupational injury and minimise the consequences in case any risk materialises.

The analysis of the H&S situation shows that major causes of personal injuries at Kazatomprom's subsidiaries and affiliates, as well as at their contractors, include traffic accidents, handling sulphuric acid, falling from height and falling on slippery surfaces.

3.4.3. Occupational injuries and accidents

Despite a consistent decrease in the number of work-related accidents and one of the lowest LTIFR in the industry in 2020, Kazatomprom continues to make every effort to reduce the number of accidents to “zero” and ensure accident-free production activities and safe working conditions for workers.

In 2021, nine accidents were recorded at the Group's enterprises that left 18 people injured. A traffic accident involving Volkovgeologiya JSC employees took place on a road between Turkestan-Taikonur and led to death of two people. A special investigation established that the cause of this accident was a violation of the traffic rules by the driver, in particular his failure to monitor the movement of the vehicle on an ongoing basis.

In 2021, LTIFR made 0.55. The total number of high-impact occupational injuries (excluding fatal accidents) made eight.

Accidents in 2021

Description	Number of accidents
Traffic accidents	2
Chemical burns	1
Fall from height	2
Fall on slippery surface	2
Moving objects	1
Thermal burns	1

GRI 403-9

All accidents were investigated in accordance with the established procedures to determine their root causes and develop prevention measures. The investigation process suggests the assessment of all possible factors, from technical malfunctions of equipment to the fatigue and emotional state of employees.

Company used the investigation results to develop a set of measures that were then communicated to all companies of the Group and introduced in a timely manner.

In 2021, there were no accidents among non full-time employees, but whose work and/or workplace is controlled by the Company.

3.4.4. Preventing occupational injuries

GRI 403-2

The Group constantly implements measures aimed at preventing occupational injuries. In particular, these include:

- Conducting scheduled and unscheduled safety briefings
- Organizing meetings of occupational H&S services to analyse the root causes of accidents and develop prevention measures
- Informing employees about preventive H&S measures
- Employee training and upskilling
- Identifying near misses and taking corrective measures
- Conducting behavioural safety audits
- Using stop cards by workers to stop unsafe work, or refusal by workers to do work if they believe the work cannot be done safely
- Developing and updating internal regulations (standards and instructions) on occupational safety
- Carrying out checks at five levels of production control
- Using Lockout/Tagout
- Training top management at a bespoke course, Leadership in Occupational Safety
- Conducting regular employee surveys to assess satisfaction with the HSE system
- Enhancing the motivation by holding an annual Chairman of the Board Award among employees of subsidiaries, affiliates, and jointly controlled organisations of NAC Kazatomprom JSC in the areas of occupational safety, environmental protection, industrial and radiation safety. The number of identified near-misses is among the criteria to select the best employees.

In 2020, Company introduced a stop card tool across all subsidiaries and affiliates to prevent employees from doing unsafe work. When introducing the stop card procedures, CEOs of the subsidiaries and affiliates addressed all employees to confirm that actions to stop unsafe work would not entail any negative consequences for employees, including no disciplinary sanctions.

Video conference meetings are held monthly with the heads of H&S services of subsidiaries and affiliates to discuss H&S issues, including the circumstances and causes of accidents, as well as serious incidents without consequences. In addition, appropriate measures are being developed to prevent their recurrence, and, if necessary, risk registers are updated. All recommendations for the implementation of activities are then reflected in protocol instructions. Subsidiaries and affiliated companies provide information to the CC on the execution of protocols within the framework of approved reporting.

GRI 403-4

As required by the Labour Code of the Republic of Kazakhstan, Company regularly conducts H&S briefings with employees, regardless of their education, work experience in this profession or position.

The H&S briefing is carried out by the H&S service or by the person authorized by order of the organization, according to the programme developed by the H&S service. The program was approved subject to the requirements of H&S norms, standards, rules and instructions, as well as the requirements for the safe conduct of production works.

In addition, videos with H&S briefings are available to the Group's employees.

H&S measures implemented by the Company's enterprises made it possible to prevent industrial accidents (uncontrolled explosions, releases of hazardous substances or destruction of buildings).

3.4.3. Occupational disease prevention and health protection

In its operations, the Group follows the priority principle, which is to protect worker's life and health. The Company's employees have access to health improvement and spa treatment programmes. These benefits are included in the social benefit package. In addition, as part of a collective bargaining agreement between the Group and the trade union, the employees can enjoy additional programmes for health rehabilitation and treatment. Also, Kazatomprom has a system of medical insurance in place for its employees.

In addition, employees of subsidiaries and affiliates are provided with three meals a day.

GRI 403-6

Health and Safety Programme 180° / 360°

In 2021, as part of the implementation of the first stage of Health Protection 180° / 360° programme developed in accordance with the "Vision Zero" strategy for continuous improvement of the safety and health conditions the Company introduced H&S reporting, including the analysis of the uptake in healthcare and the rate of diseases resulting in temporary disability. The Company provides permanent control to ensure that employees subject to mandatory medical screenings and check-ups can have them on time.

The Healthy Heart Rhythm campaign was timed to celebrate the World Heart Day established by the WHO. The purpose of the initiative was to draw the attention of employees to the existing problem of diseases of the circulatory system and remind them of the need to live a healthy lifestyle.

As part of the campaign, a sociological survey was conducted to identify behavioural risk factors for cardiovascular diseases. The Company also released informational posters and organized lectures to increase the awareness of employees about diseases of the cardiovascular system, their causes and ways to prevent them. In addition, employees could obtain a medical examination with a cardiologist consultation and an ECG. Running from Heart Attack Race was organised at the XX Spartakiad Sports and Athletic Competition of Kazatomprom as part of the initiative.

To manage the risk of COVID-19 pandemic, Kazatomprom developed a framework action plan based on five lines of defence, with account of the Epidemiological Situation Assessment Matrix.

To ensure that more workers take up the COVID-19 vaccine or get a booster vaccine, mobile vaccination teams keep working in offices and at production sites. The Company has developed financial and non-financial incentives for workers to improve vaccination and revaccination uptake. Thanks to an extensive vaccination awareness campaign with engagement of medical experts, there is high COVID-19 vaccination coverage at 94%.

GRI 403-3

The H&S service covers and controls all the Group's production facilities and processes. All subsidiaries and affiliates have medical posts in place to administer urgent medical aid to employees. All medical facilities of the Group are equipped with the necessary equipment, ambulances and medical care supplies: defibrillators, ECG, oxygen cylinders, humidifier (oxygen concentrator), pulse oximeters, etc.

Kazatomprom's health and safety system has proved to be effective for identifying and eliminating hazards, as well as for risk minimization control. In addition, the H&S service performs one more function, which is conducting outreach work among personnel to explain the possibilities of a social package and available additional support.

The total number of medical staff at subsidiaries and affiliates is 185 people, including 31 doctors, 116 paramedics, and 38 nurses.

All subsidiaries and affiliates have insured their employees against work-related accidents. In addition, voluntary medical insurance contracts are concluded.

In 2021, the Company invested KZT 1.1 billion in the H&S initiatives and prevention of occupational diseases.

In accordance with the requirements of the Labour Code of the Republic of Kazakhstan, all Group enterprises have mandatory pre- and post-shift checks for all employees, as well as mandatory annual/regular medical examinations of all Company employees.

Employees of the Group's subsidiaries and affiliates are not allowed to work without passing a pre-shift medical check. The Company continues to introduce an electronic health monitoring system for employees. Some enterprises have introduced e-medical examination systems that include modules for automatic measurement of blood pressure and detection of alcohol or other drug intoxication, etc. In a mid-term perspective, all subsidiaries and affiliates of the Group plan to install similar digital systems for pre-shift checks.

In addition, in accordance with the requirements of the Labour Code of the Republic of Kazakhstan, employees of the Group's contractors who are engaged in hazardous work or who work with machines and mechanisms are also obliged to have pre-shift and post-shift medical check-ups.

Following the results of medical examinations, employees can go through an in-depth medical examination if necessary.

3.4.4. Improving the H&S culture

GRI 403-1, 403-3

All staff of the Group's enterprises are actively engaged in the H&S management, which allows the Company to achieve a high level of health and safety. To ensure effective communication with employees on H&S issues and meet the requirements of the Labour Code of the Republic of Kazakhstan, the Company established special H&S councils that include representatives of the employer, workers, and technical inspectors. The councils exercise control over the compliance with the H&S at workplaces. The H&S inspectors conduct audits of working conditions and workplaces to check their compliance with the H&S requirements. Decisions of the inspectors are binding on the employer and employee of the Group's enterprises.

As part of the implementation of Kazatomprom's Development Strategy 2018-2028, the Company conducted works aimed at improving the H&S system. In particular, the Company took the following actions in 2021:

- The Company got certified according to ISO 45001 (occupational health and safety) and ISO 14001 (environmental management)

- Works were carried out to improve environmental and social stability in the regions of Kazatomprom operations within the framework of the ESAP Roadmap
- A training session was organized for employees of subsidiaries and affiliates who provide H&S briefings on the topic "Effective methods of conducting briefings"
- The corporate standard "Occupational Safety Management System" was developed, approved, and implemented at subsidiaries and affiliates
- An action plan was developed to reduce the level of injuries at subsidiaries and affiliates for 2022
- In addition, the Company implemented a number of measures to reduce the risks of COVID-19 infection among employees
- The Company launched the HSE Club to share information and knowledge and develop measures to improve the H&S management system at the group companies

All these measures in 2021 helped improve health and safety culture of the Group's employees, and will help avoid incidents in the future.

To develop a culture of safety and leadership among managers at all levels in the Company, an educational e-course Leadership in the H&S Culture of Kazatomprom was developed and is currently being implemented. In addition, as part of the H&S system improvement, the Company organized special training for managers and employees of subsidiaries and affiliates to help promote a positive health and safety culture, identify potentially dangerous situations (near misses), unsafe acts and conditions, as well as conduct behavioural safety audits. Also, the Company organized special mandatory H&S courses. To measure the effectiveness of the training, all participants had to complete a knowledge test at the end of the course.

In 2021, 10,615 employees took part in training sessions on H&S culture improvement.

GRI 403-5

Kazatomprom conducts HSE training sessions on a regular basis. The courses can be divided into mandatory and optional. In particular, training courses on compliance with the requirements of the laws of the Republic of Kazakhstan regulating H&S, radiation, nuclear safety, etc. are mandatory, while training courses not required by laws, in particular courses on the development of safety culture, leadership, and responsibility in HSE matters are optional.

The Group engages experts and organisations for the training process. The experts hold all necessary licenses, attestations, certificates and other permits required by the Law of the Republic of Kazakhstan On Permits and Notifications.

The Company has the HSE-Club in place that brings together the heads of occupational H&S services of Kazatomprom, subsidiaries and affiliates. The HSE-Club helps share and use information and knowledge and develops measures to improve the H&S management system at the group companies.

Knowledge tests are used to control the effectiveness of the training.

3.4.5. Managing the health and safety of contractors

GRI 403-7

In its production operations, the Group not only monitors the compliance with all environmental protection standards and requirements at its enterprises, but also requires from all contractors working with Kazatomprom to comply with H&S regulations and standards without exception.

Thus, all the Company's contractors and suppliers of goods, works and services have to comply with Kazatomprom's corporate standard Occupational Health and Safety Standards. Health and Safety Requirements for Contractors.

The Company conducts preliminary review of contractors for their compliance with H&S standards. The experts of the Company check if contractors comply with the H&S requirements as early as at the stage of signing the contract. The Company assesses the risks and sets goals, as well as plans H&S training sessions with account of the information about the incidents relating to the work of contractors. The results are then to be approved by the Occupational Health and Safety Department.

When the work is performed or services rendered, the employees of the Occupational H&S Department and subsidiaries and affiliates also conduct regular audits and exercise control over compliance with the health and safety standards and rules. The H&S services of subsidiaries and affiliates keep records of all accidents that have occurred at contracting organizations. They are authorized to conduct behavioural safety audits in relation to the employees of contractors. Contractors that have long-term contracts with the Group are obliged to introduce procedures for identifying and registering hazardous conditions, dangerous acts and Near Misses.

To improve the H&S knowledge, the Company organizes H&S training courses for employees of contractors as well as invites authorized representatives of contractors to participate in the H&S meetings.

3.4.6. Nuclear safety

To ensure a high level of nuclear safety, the Group's enterprises handling nuclear materials monitor the compliance with the respective technical regulations, instructions, rules and nuclear safety requirements for handling nuclear materials.

At present, the companies of the Group that have nuclear materials include Ulba Metallurgical Plant JSC and Ulba FA LLP.

Kazatomprom monitors the nuclear safety performance and conducts an inventory of nuclear materials in a timely manner to ensure the nuclear safety and security of the Group's companies.

In 2021, the Chief Physicist's Services (CFS) of Ulba Metallurgical Plant JSC and Ulba FA LLP implemented the following actions:

- Regular H&S knowledge testing for specialists of the finished product warehouse, uranium production (UP), the IAEA LEU warehouse, and auxiliary units of Ulba Metallurgical Plant, as well as the area relating to the fuel pellets and fuel assemblies shop and the fuel assemblies shop at Ulba FA LLP
- Commission inspections of nuclear safety at Ulba Metallurgical Plant JSC and Ulba FA LLP
- Emergency response training of staff and services in case of an alarm signalling about a self-sustained nuclear chain reaction in all nuclear hazardous areas of Ulba Metallurgical Plant JSC and Ulba FA LLP
- An on-site audit of the H&S at Ulba FA LLP, which included the inspection of nuclear and radiation safety in accordance with the annual audit plan of the H&S department

The absence of accidents and incidents throughout the reporting year is a signal of the effectiveness of these measures.

3.4.7. Radiation safety

KAP 3

In 2021, Kazatomprom provided regular monitoring of the radiation situation at workplaces, in premises, production sites, and the supervised areas. All radiation indicators are within standard limits and have not changed since 2020.

In 2021, the Company did not register any radiation accidents or incidents at its enterprises. The annual dose of ionising radiation exposure did not exceed reference.

The average radiation exposure for staff was 1.44 mSv/year in 2021, including natural radiation sources. The radiation from the natural background sources ranged from 0.75 to 1.36 mSv/year.

In turn, the maximum annual effective dose for personnel at the Group's assets was 6.19 mSv/year, which is 31% of the permitted dose limit, which is 20 mSv/year.

In 2021, the Company started keeping records of the radiation exposure of staff of contracting organizations. The average radiation exposure for staff of contracting organizations employed at the Group's enterprises and engaged in decontamination of overalls and preparation of shipping packaging kits with finished products was 0.65 mSv/year.

To improve radiation safety and protect personnel, Kazatomprom takes the following radiation safety improvement measures:

- Conducting repair work on the premises and modernizing equipment;
- Repairing and upgrading technological equipment
- Moving low-level radioactive waste to disposal sites;
- Repairing and purchasing radiation control equipment;
- Providing radiation safety training for employees.
- Conducting the certification of people by the authorized state agency responsible for the use of atomic energy

Interaction with the IAEA

In November 2021, employees of the Occupational H&S Department took part in the online IAEA International Conference on Radioactive Waste Management: Solutions for a Sustainable Future. The goal of the event was to exchange information on the practices of the world's leading specialists in the area of handling radioactive materials.

In 2021, the H&S Directorate representatives planned to participate in the second international conference of IAEA on the application of radiation science and technology (ICARST-2021). However, due to the coronavirus pandemic, the conference was postponed to 2022.

3.4.8. Emergency preparedness and response

KAP 2

A set of measures for civil protection, emergency situations and fire safety in 2021

The Company takes ongoing measures to maintain a high level of emergency preparedness. Fire safety systems of the Company are checked on a regular basis: firewater supply system (pumping operation, fire hose check), fire sprinkler system, fire alarm system, and primary fire extinguishing equipment.

Every year, fire-fighting training courses and drills take place as scheduled, with safe evacuation of staff from the Company's buildings to the specially designated assembly points.

In 2021, Kazatomprom updated its Standard ST NAC 13.2-2021 'Ensuring Security. Organization of fire safety at Kazatomprom's enterprises. Instruction on Fire Safety Measures in the Administrative Building of NAC Kazatomprom JSC was elaborated and approved⁵⁷.

In October 2021, competent government authorities carried out planned inspections and evaluation of the individual fire risk of the Company's Head Office for compliance with the requirements of the Fire Safety Regulations of the Republic of Kazakhstan. The results of the inspections showed that the fire hazards did not threaten people's lives.

Based on the results of the international certification audit in the field of fire safety, the building of the Company was in compliance with the requirements of the ISO 14001:2015 and ISO 45001:2018 standards.

In an effort to promote the health and safety, the Company developed and approved a Plan of Civil Protection and a Plan of Action on the Elimination of Facility-based Emergencies in Kazatomprom's office building.

According to the H1 2021 Plan for conducting civil protection training courses and drills in Nur-Sultan, training was held with the simulated evacuation of personnel from the building to assembly points.

⁵⁷ Order No. 132 as of November 12, 2021.

3.5. Climate Change and Energy Efficiency

Key indicators and achievements

106,91 tonnes of CO₂ eq the greenhouse gas emissions from the Company's operations

All enterprises of the Group have implemented an energy management system that manages energy efficiency issues and complies with the requirements of ISO 50001:18001

UN Sustainable Development Goals relevant to Kazatomprom



GRI 103-1, 103-2

Global climate change is associated with a large number of risks and an increase in the number of dangerous climatic events: water scarcity, food shortages, biodiversity loss, and natural disasters, which lead to serious economic consequences, hunger and wars.

To combat climate change and its negative impacts, 197 countries adopted the Paris Agreement on 12 December 2015, striving to reduce significantly global greenhouse gas emissions and limit the global temperature rise to 2 degrees Celsius while at the same time find means to further limit this increase to 1.5 degrees.

Having ratified the Paris Agreement, the Republic of Kazakhstan has chosen a low-carbon development vector for itself. The transition to a low-carbon economy and adaptation to the consequences of climate change are the strategic objectives for Kazakhstan. Kazakhstan has introduced an online system for monitoring, reporting and verification of GHG emission sources at the national level. The government reports annually to the UNFCCC Secretariat on GHG emissions. Emissions from major GHG sources are limited by the National Allocation Plan.

As a member of the International Atomic Energy Agency (IAEA), the Republic of Kazakhstan supports the intentions and actions of the international agency for the application of nuclear science and technology to monitor climate change, mitigate its consequences, and adapt to them, making its own contribution to reducing the impact on climate.

Following global priorities, sharing a national position and striving to contribute to the implementation of the provisions of the Paris Agreement, Kazatomprom considers the fight against climate change as one of its priorities. To this end, the Company is developing a Strategy for decarbonisation and achieving carbon neutrality until 2025, 2030 and 2060, which will include a Program and Action Plan to reduce GHG emissions in the context of each subsidiary and affiliate of the Company for the period up to 2025, 2030 and 2060.

Low-carbon initiatives of NAC Kazatomprom JSC:

- Transition to low-carbon energy sources (gas)
- Energy production from renewable sources – solar collectors, heat pump units, wind turbines are installed at the Group's production sites
- Regular monitoring and control of greenhouse gas emissions (Scope 1)

Monitoring and recording of greenhouse gas emissions is carried out by the Industrial Safety Department, which reports directly to the Chairman of the Management Board of Kazatomprom. The Company also monitors the state of technological facilities and environmental objects, as well as introduces the best available technologies, resource and energy saving technologies.

The Company discloses data on greenhouse gas emissions, which is in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The Company is working to deepen

the disclosure of climate-related risks and opportunities under the TCFD methodology in future reporting periods.

In 2021, a GHG inventory was conducted, including Scope 1 and Scope 2 emissions.

Greenhouse gas emissions from operations of subsidiaries and affiliates are mainly related to auxiliary processes associated with the main production.

The main sources of greenhouse gases are:

- boiler installations for heating industrial and residential premises
- vehicles for transportation of goods and personnel
- compressor units for supplying compressed air to technological processes
- diesel generator sets to provide emergency power supply
- other sources

The coefficients used for GHG emission calculations comply with the *Guidelines for the calculation of greenhouse gas emissions from thermal power plants and boiler houses* and the *Guidelines for the calculation of greenhouse gas emissions into the atmosphere from motor transport enterprises* issued by the Ministry of Environment and Water Resources of the Republic of Kazakhstan.

In 2021, the greenhouse gas emissions from the Company's operations amounted to 106,91 tonnes of CO₂ eq. The increase in GHG emissions in 2021 was associated with an increase in fuel consumption by vehicles, an increase in drilling and the resumption of other works due to the ease of quarantine measures.

GRI 305-1

Direct greenhouse gas emissions, 2019-2021 (Scope 1), '000 tonnes of CO₂-eq.⁵⁸

Indicator	2019	2020	2021
Direct greenhouse gas emissions	107,60	92,59	106,91

GRI 305-2

Indirect GHG emissions, 2019–2021 (Scope 2), tonnes of CO₂-eq.⁵⁹

Activity	Electricity consumption-related			Thermal energy consumption-related			Total emissions		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Uranium mining and processing	569 878	532 920	554 960	945	546	518	570 823	533 466	555 477
Nuclear fuel cycle and metallurgy	128 717	135 196	130 871	94 931	96 378	103 927	223 648	231 574	234 798
Ancillary activities	45 838	52 929	50 902	1 813	1 915	1 376	47 651	54 844	52 279
Total	744 433	721 045	736 733	97 688	98 838	105 821	842 122	819 883	842 554

Annual greenhouse gas emissions at each subsidiary and affiliate do not exceed the threshold of 20,000 tonnes of CO₂ equivalent as adopted at the national level for reporting emissions and participating in the Kazakhstan Emissions Trading System.

In the reporting period, Kazatomprom held several campaigns to help reduce the Company's contribution to climate change. In particular, we continued planting trees on the territory of the fields and in the adjacent settlements. We also held a Car-Free Day when stakeholders ditched private cars for a day and used public transport, reducing greenhouse gas emissions from fuel combustion.

⁵⁸ In the calculation of greenhouse gas emissions, the base year is 2019.

⁵⁹ These indicators were calculated on the basis of a market method that displays the intensity of GHG emissions from facilities generating electric and thermal power. According to this method, Kazatomprom's total Scope 2 GHG emissions are calculated as the GHG emissions of the electric and thermal power producers from whom it is purchased.

Kazatomprom employees took part in the Earth Hour campaign, within which it was supposed to disconnect all devices from electricity for an hour not only to save electricity and reduce greenhouse gas emissions associated with its consumption, but also to draw public attention to the climate change issues.

3.5.1. Energy efficiency and energy saving

GRI 103-2, 103-3, 302-4

To minimise its impact on the environment and reduce its ecological footprint, the Company lays emphasis on programmes reduce and optimising the energy use.

All enterprises of the Group have implemented an energy management system that manages energy efficiency issues and complies with the requirements of ISO 50001:18001.

By introducing energy-efficient equipment, rationally using natural resources, and modernising production processes, Kazatomprom improves energy efficiency and reduces the energy intensity of production. In the field of energy consumption and energy efficiency improvement, the Company's management has established a KPI that does not allow exceeding the annual planned specific electricity consumption rates for uranium production.

An energy audit is conducted at the Group's enterprises once every five years to assess the possibility and potential for energy saving. Its results are used by all enterprises of Kazatomprom when developing an Action Plan for energy saving and energy efficiency improvement. The plan is formed annually as part of the Implementation Plan of the Kazatomprom Development Strategy for 2022-2031.

In 2021, the Company implemented a set of measures to improve energy efficiency. The actual economic effect from the implementation of measures was KZT 840 million, or up by 3.6% of the target.

The amount of fuel and energy resources saved as a result of energy saving and energy efficiency measures in 2021 amounted to 170,000 GJ.

In 2021, the Company increased its energy consumption by 8% compared to 2020, due to increased production, extraction, and processing of raw materials.

GRI 102-48, 302-1, 302-4

Energy consumption, '000 GJ⁶⁰

Indicator	2019	2020	2021
Thermal energy	11,659	921	994
Electricity	5,341	2,916	3,138
Total energy consumption	17,000	3,836	4,132

Use of primary energy sources, '000 GJ

Source type	2019	2020	2021
Non-renewable:			
Coal	12.3	17.9	17.6
Fuel (gasoline, fuel oil, diesel)	1,595	1,318	1,431
Renewable:			
Renewable energy sources	20	21	19

Energy Efficient Solutions at Uranenergo LLP

The disconnection of overhead power lines (OL) is among key issues that help ensure the reliability of power supply. This disconnection may result from natural atmospheric phenomena: lightning surge, wind, and ice load. At the same time, the simultaneous load in the form of ice and wind bears the most severe consequences of technological violations on overhead lines (breakage, overlap, overheating of wires) that affect the technical and economic indicators of power quality.

In 2020, Uranenergo LLP entered into an agreement with Meteor Plant for the installation of an automated information system for monitoring ice loads on the 110 kV overhead lines of Uranenergo

⁶⁰ Taking into account the disclosure expansion and inclusion of Caustic JSC.

LLP (icing control post, wind, ice load and wire temperature sensors). Commissioned in 2021, the installation has significantly reduced the risks of breaking the wires of overhead lines during natural weather conditions, which had a positive impact on the quality of power supply.

Development and Implementation of Heat Supply Modes

Kazatomprom has begun work on the development and implementation of an installation for optimal heat supply modes. By implementing the functions of automatic control of boiler equipment and automatic control of technological parameters based on automatic information and measuring system for electric power technical metering (AIMS EPTM), by connecting outdoor temperature sensors, the Company wants to achieve economical, reliable and high-quality control of heating systems. The installation will automatically regulate the temperature of the heat carrier in the system according to the specified parameters, depending on changes in the outside air temperature.

3.5.1.1. Energy intensity

GRI 302-3

In 2021, the consumption of fuel and energy resources (FER) at the Group's enterprises increased by 9.4% compared to 2020. This is due to an increase in production, extraction and processing of raw materials. At the same time, specific energy intensity decreased by 1.9% in 2021.

Energy intensity⁶¹

Indicator	2019	2020	2021
Consumption of fuel and energy resources for production, extraction and processing of raw materials, '000 GJ	6,948	4,252	4,590
Production, extraction and processing of raw materials, tonnes	22,761	19,587	21,834
Specific energy intensity, '000 GJ/t	0.305	0.217	0.210

3.5.1.2. Alternative energy

Kazatomprom aims to improve the efficiency of its energy supply by moving from carbon-intensive energy production to a more sustainable one. In this regard, Kazatomprom enterprises actively use alternative energy sources, which allow saving fuel and energy resources and helping to reduce greenhouse gas emissions:

- Photovoltaic stations (PV)
- Solar collectors (or solar water heaters)
- Heat pump units (HPU)

Electricity generation by PV stations, MWh

Indicator	2019	2020	2021
Amount of generated energy, MWh	4.32	3.52	3.34

Effect from the use of alternative energy sources in 2021, KZT

Photovoltaic stations	90,950,000
Solar collectors	29,902,000
Heat pump installations	20,888,000

The Company is looking for ways to use new alternative energy sources at its enterprises. In this regard, JV South Mining Chemical Company LLP plans to design and install a 100 kW wind turbine in 2022 at the South Inkai mine.

3.3.5.2. Plans for 2022 and a medium term

Actions are planned for 2022 to assess products' carbon footprint with the development of decarbonisation and carbon neutrality programme for the Company's enterprises.

⁶¹ Taking into account the disclosure expansion and inclusion of Caustic JSC.

The solution to the issue of developing renewable energy sources and reducing greenhouse gas emissions for Kazatomprom enterprises is the further development of energy saving and energy efficiency, the main directions of which are:

- rational distribution and use of electricity, lighting, heating, hot water supply and ventilation systems
- Measures to modernize electrical equipment, replacing them with energy-saving ones
- Implement the process of ensuring the proper technical condition and rational operation of power equipment and power plants, ensuring the proper technical condition of power equipment and power plants

As renewable energy sources a number of the Company's enterprises are gradually installing solar collectors for hot water supply and heat pumping units for heating and hot water supply. These measures will reduce the cost of diesel fuel and consequently reduce greenhouse gas emissions. In 2022, activities are planned to design and install a 100 kW wind turbine generator at the Yuzhny Inkai mine, JV SMCC LLP; work is underway to re-equip the boiler plants of the shift camp of Karatau LLP with the conversion of water heating boilers from diesel fuel to liquefied gas with commissioning in Q2 2022.

3.6. Environmental protection

Key indicators and achievements

KZT 964.6 million in investment in environmental protection

3.2% reduction in the total water withdrawal

UN Sustainable Development Goals relevant to Kazatomprom



3.6.1. Environmental protection management

Environmental protection is a top priority for the Group. Kazatomprom recognises its responsibility for its environment footprint, as well as its impact on health, safety and quality of life. The Company takes all necessary measures to ensure environmental safety, preserves the natural environment in the areas of its operation, rationally uses the natural resources and minimises its environmental impact.

The principles of environmental protection management of the Group are outlined in Kazatomprom's Policy for H&S, environmental protection, radiation and nuclear safety.

When implementing its target production plans Kazatomprom tries not only to provide people with clean energy, but also save the planet for future generations. To this end, the Company has set the goal to achieve a zero environmental footprint.

The implementation of comprehensive measures and activities in the area of environmental protection means that the Company takes consistent efforts to minimise the negative environmental footprint, increases the level of environmental safety, and guarantees sustainable development of its enterprises.

GRI 102-11

The Company applies the precautionary principle, especially in the area of HSE. This principle is hardwired into the risk management.

Kazatomprom introduces new technologies and the world's best practices to improve environmental protection (EP) processes and ensure rational use of natural resources. The Company uses the most environmentally friendly method for the extraction of uranium, in-situ recovery of uranium (ISR), also known as *in-situ recovery*. This technology reduces the risk of harm to the health and safety of employees and the population and allows for natural restoration of groundwater following the completion of mining. This technology does not lead to radioactive contamination of vast areas.

The Group identified the UN Sustainable Development Goals 3, 7, 8, 9, 12, and 13 as the major EP objectives within the framework of the 2030 Agenda for Sustainable Development along with radiation and nuclear safety goal.

In 2021, ME ORTALYK LLP received an award For Contribution to the Environment and received letters of appreciation from Algys Khat – Paryz, an annual republican competition on business social responsibility in the nomination Contribution to the Social Well-being of the Population and Improvement of the Environment.

The environmental management system functioning as part of the integrated HSE Management System of the Group allows the Company to coordinate environmental protection efforts with the its activities aimed at ensuring industrial, nuclear and radiation safety, as well as with other related areas.

The Occupational Health and Safety Department of Kazatomprom manages environmental activities at the headquarter. At the same time, subsidiaries and affiliates of the Group set up divisions responsible for managing environmental protection activities locally.

Kazatomprom management provides regular control over the environmental management situation. The Occupational H&S Department provides weekly environmental management reports to the Chairman and members of the Management Board of the Company during the board or production meetings. In addition, the department prepares a quarterly report on the implementation of the ESAP Roadmap and submits it to the members of the HSE Committee.

Key Documents Regulating Environmental Protection Issues

- Kazatomprom’s policy on occupational health and safety, environmental protection, radiation and nuclear safety
- Corporate social responsibility policy of Kazatomprom
- Rules of production and consumption waste management at Kazatomprom enterprises
- Corporate standard, Methodology of calculating waste generation standards per unit of production at Kazatomprom’s enterprises
- Corporate standard, System of HSE Standards. HSE Requirements to Contractors
- Methodological Guidelines for the Management of Radioactive Waste Prior to Landfill
- Methodological Guidelines for Monitoring of the Impact on Ground and Underground Water in ISR Mining of Uranium
- Methodological Guidelines on Liquidation Cost Estimate Calculation and Procedures for Regular Analysis of Current Liquidation Costs (measurement of asset retirement obligations (ARO))
- Guidelines for Assessment of Biodiversity at Uranium Deposits, Production Facilities and Adjacent Territories
- Manual Establishing the criteria for eliminating the consequences of uranium mining activity of enterprises
- Manual Procedures for developing processes for the exchange of environmental information at Kazatomprom
- Manual Development of the Plan for Engagement with Stakeholders of Subsidiaries and Affiliates of Kazatomprom on Environmental and Social Matters

Kazatomprom: Caring for the Environment

On June 4, 2021, to mark the World Environment Day, the H&S department of Kazatomprom held an online event Kazatomprom: Caring for the Environment! on the RHYTHM platform. Representatives of Kazatomprom declared the Company's readiness for new challenges and changes related to global trends and new environmental legislation of the Republic of Kazakhstan, as well as presented the work of the headquarters for coordinating environmental protection areas, and the projects on biodiversity, landscaping and recycling implemented at enterprises. During the event, the Managing Director for Industrial Safety Manas Iskakov emphasised once again that the top priorities of the Group include industrial safety and environmental protection, protection of the nature, and measures to minimise the environmental footprint in the regions of presence.

3.6.1.1. ESAP Roadmap Implementation

In 2021, in an effort to implement the Environmental and Social Action Plan (ESAP), Kazatomprom:

- Studied the impact of production facilities on the environment and the local population
- Worked to build a sectoral system of environmental regulation and monitoring of uranium mining enterprises
- Continued developing corporate standards of occupational safety at operating sites
- The Green Financing Policy of NAC Kazatomprom JSC was approved

3.6.1.2. Monitoring and control

GRI 413-1

As required by the environmental laws of the Republic of Kazakhstan, the Group's subsidiaries and affiliates carried out quarterly industrial environmental control (IEC) with the involvement of accredited contracting organizations (laboratories) as per the IEC Schedule in the reporting period.

As part of the implementation of objectives to improve environmental impact forecasting and monitoring as well as planning for mine closures in 2021, Kazatomprom improved its environmental expertise. In addition, the Centre for Environmental Design and Monitoring completed the R&D work Study of the Environmental and Social Impacts of the In-situ Leach Mining Facilities on the Environment and the Local Population.

In the reporting period, subsidiaries and affiliates received decisions to determine the category of a facility with a negative environmental footprint in accordance with the requirements of the new Environmental Code of the Republic of Kazakhstan.

To introduce the best available technologies at Kazatomprom enterprises in 2021-2022, Ulba Metallurgical Plant JSC conducted a comprehensive technological audit of the enterprise. According to the opinion of the International Centre for Green Technologies and Investment Projects based on the results of a comprehensive technological audit: Ulba Metallurgical Plant JSC has implemented the best available techniques as to the implementation of technological processes and environmental protection. The recommendation is to include the indicators of the implementation of the main technological processes of UMP established during the audit in the National Reference Book of Best Available Technologies.

3.6.1.2. Certification

All production facilities of the Group have the environmental management systems and energy management systems in place that are ISO 14001 and ISO 50001 certified.

In 2021, Kazatomprom successfully passed the first supervisory audit and confirmed its certificate from TÜV International Certification as part of its commitment to improving the environmental management approaches.

An independent audit certified that Kazatomprom complies with the requirements of international standards ISO 14001:2015 (environmental management systems) and ISO 45001:2018 (occupational health and safety management) when organizing export deliveries of natural uranium compounds.

3.6.1.3. Environmental protection training

To provide more effective environmental management and obtain the necessary competencies and knowledge about the Good International Industry Practice (GIIP), the Company organises regular training sessions for the heads of subsidiaries and affiliates and specialists responsible for subsoil protection, environmental and social issues.

HSE training programmes include:

- Managing production and consumption waste at Kazatomprom companies
- Implementing industrial environmental control (monitoring) at Kazatomprom companies
- Assessing biodiversity in uranium deposits
- Developing processes for the exchange of environmental information based on ISO 14063:2020. Internal audit (new version of the standard)
- Certification course “Organising stakeholder engagement based on the AA1000SES standard”
- Roadmap for the Environmental and Social Action Plan (ESAP) at Kazatomprom, key areas and its implementation

In 2021, 244 employees of the Group, in particular, the heads of subsidiaries and affiliates and specialists responsible for subsoil protection, environmental and social issues of different structural units attended the training sessions:

- Methods of quantitative assessment of direct and indirect greenhouse gas emissions and calculation of carbon footprint of products
- Environmental and social studies of the possible man-made impact of the Kazatomprom enterprises’ production activities on the environment and the population
- Handling low radioactive waste (LRW) and ways to reduce the volume of LRW at Kazatomprom’s enterprises
- H&S audit of contractors providing services on the contract and production sites of Kazatomprom enterprises
- Establishing the requirements for the Plan for liquidation (decommissioning) of nuclear facilities
- Carrying out environmental communications at the enterprise: Stakeholder Engagement Plan for Kazatomprom subsidiaries and affiliates
- The Company held 16 training seminars/webinars that brought together 620 trainees from the central office, subsidiaries, and affiliates of Kazatomprom over the entire period of implementation of the 2018-2021 ESAP Plan

3.6.1.4 Investment in environmental protection

The Group invests heavily in environmental actions. In 2021, Kazatomprom's total cost of environmental protection measures amounted to KZT 964.6 million. In 2021, Kazatomprom paid KZT 187,6 million in emission taxes.

GRI 307-1

In 2021, the fines and economic sanctions for non-compliance with the requirements of environmental laws at the enterprises of the Group reached KZT 12.4 million in general. In the reporting period, Kazatomprom did not participate in the legal proceedings related to significant violations of environmental legislation.

Investment in environmental measures, 2021, KZT million

Improvement of technological processes, including reduction of fugitive emissions into the environment	100.4
Improving the efficiency of existing dust and gas collection and water treatment plants	87.5
Carrying out R&D activities in the area of environmental protection	127.1

3.6.1.5. Environmental assessment of suppliers

GRI 103-2

The Company requires that its suppliers of goods, works and services, as well as contractors, comply with the corporate standard *The System of HSE Standards*. These requirements are mandatory for contractors, and are also advisory in nature for contractors.

At the stage of selecting a supplier and concluding an agreement with a counterparty, Kazatomprom informs counterparties of the need to ensure compliance with the Company's environmental requirements. The Occupational H&S Department is also obliged to participate in the contract negotiation process to ensure that the necessary safety conditions and commitments are included in the respective contracts with contractors and suppliers.

The Occupational H&S Department, together with the occupational H&S services of subsidiaries and affiliates, control the operations of contractors directly on the ground by conducting the respective inspections and making reports, which provide the assessment of the contractors work, the number of inspections and detected violations.

3.6.2. Emissions

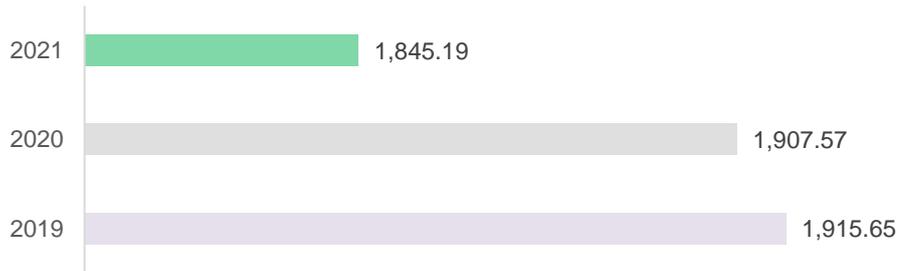
The Company sells its products to 8 countries that use nuclear energy. By doing this, the Company contributes to low carbon industry development in these countries and helps reduce emissions.

Kazatomprom seeks to reduce the negative impact of its production on air quality by introducing technological improvements, thereby contributing to the reduction of emissions of harmful substances. The Group is implementing a number of measures aimed at reducing emissions into the atmosphere and monitoring the air quality:

- monitoring of air quality
- using modern gas treatment systems, energy-saving technologies and photovoltaic stations, which reduce emissions
- using dust and gas catching collectors for dust cleaning and purification of process gases, coming from VGTP calcination furnaces. This facility eliminates the emission of radiation dust and minimises emissions to the environment by 20%

Overall, emissions at the Group's enterprises reduced by 3.3% in 2021, from 1,907.57 tonnes in 2020 to 1,845.19 tonnes in 2021. The reduction in emissions is associated with environmental protection measures implemented by subsidiaries and affiliates under the the current emissions permits.

Changes in emissions, 2019-2021, tonnes



The Group's companies actively use solar energy to generate electricity, thereby reducing air emissions resulting from the consumption of traditional fuels such as fuel oil and coal. The reduction in CO2 emissions amounted to about 3% of the total emissions.

The annual electricity output generated by the Group's solar photovoltaic plants is 3.34 MWh. The generated electricity is used for own needs, allowing annual savings of KZT 90 million. Excess electricity is supplied to local power grids for use by households and businesses in the regions where the Group operates.

3.6.3. Water resources

Efficient management of water resources is an integral part of the Company's Policy for H&S, environmental protection, nuclear and radiation safety, which, among other things, contributes to improving interaction with local communities, the state, and investors. The company is committed to reducing water consumption and is making every effort to reduce water withdrawals and increase recycling. Kazatomprom regularly monitors and assesses the risks of water supply in all regions of its presence. In some regions of operation, the Company provides water supply to the local population and industry. Demineralised water is a raw material for generating electricity supplied to the external network for the needs of local communities.

When using water resources in production, the Company follows the UN Agenda for Sustainable Development 2030, including SDG 6, Ensure the availability and sustainable management of water and sanitation for all, and also operates in accordance with the Water Code of the Republic Kazakhstan (Article 66). The Company uses water in accordance with water resources protection permit documents. At the same time, the water supply of enterprises is divided into industrial, technical, and potable.

3.6.3.1. Water consumption and water withdrawal

GRI 303-1

Water is withdrawn in line with the technological regulations for production sewage water, as well as requirements ensuring the supply of drinking water to the population. Groundwater is taken from the water withdrawal sites against a permit for special use of water issued by the Basin Inspectorates for Regulation of the Use and Protection of Water Resources under the Committee for Water Resources of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan.

Enterprises providing centralised and non-centralised water supply for industrial and non-industrial needs, keep monitoring water withdrawal, conduct regular monitoring of the state of water withdrawal facilities, internal water supply systems, and water metering units.

The water facilities used by the Group's entities to withdraw water are not particularly vulnerable due to their size, role or status as a rare, endangered or critically endangered system. The Group's entities withdraw water in accordance with the permits and their withdrawal does not have a significant impact on water sources.

Requirements for water meters are established by the Water Code of the Republic of Kazakhstan, technical regulations, rules for the selection, installation and operation of water meters in water supply and sanitation systems.

GRI 303-3

Total water withdrawal, '000 m3

Source	2021
Surface water	6.5
fresh water	-
other water	6.5
Ground water	8,531.3
fresh water	3,802.7
other water	4,728.7
Municipal and other water supply systems	1,582.9
fresh water	1,582.9
other water	-
Total	10,120.7

In 2021, total water withdrawal reduced by 3.2%: from 10,452,300 m³ in 2020 to 10,120,700 m³ of water in 2021.

In the reporting period, the water withdrawal structure did not change. Groundwater accounts for 84% of the total amount of withdrawn water. 0.06% of water is taken from surface sources, and we are witnessing a constant reduction in water intake from surface sources. Water withdrawal from municipal and other water supply systems increased by 39,9%, from 1,131,100 m³ to 1,582,900 m³. The increase in water consumption was associated with an increase in uranium mining in 2021.

Kazatomprom endeavours to reduce the volume of water it uses in production. To this end, some of enterprises use closed water cycles. In 2021, the volume of recycled and reused water amounted to 50,384 m³, down by 0.59% against 2020.

GRI 102-48

Recycled and reused water, '000 m3⁶²

Indicator	2019	2020	2021
Total volume of recycled and reused water	50,443	50,683	50,384

3.6.3.2. Total wastewater discharges

The Group's entities produce industrial, storm and domestic wastewater as a result of water use. After treatment through storm sewer outlet, water is discharged to surface water bodies from storm waste water from the territory of industrial site and normatively clean water not used in the technological process. In addition, mine wastewater is discharged into a storage pond.

GRI 303-2

All discharges are treated and meet regulatory requirements of the quality of discharged water according to Kazakhstan Methodology for Emission Rates. Monitoring of the condition of water bodies, including the determination of the chemical composition of surface, underground and waste water, is carried out regularly by the Company's industrial and sanitary laboratories. The monitoring programme includes studies of wastewater quality at all industrial sites that are connected to centralised sewerage.

In 2021, subsidiaries and affiliates of the Group did not exceed the limits of contaminants in discharges as set for water bodies with fisheries.

In 2021, the wastewater discharged by Kazatomprom reached 4,823,000 m³, down by 7.9% compared to 2020.

GRI 303-4

Total wastewater discharge, m³ ⁶³

Indicator	2019	2020	2021
Total wastewater discharge	5,674,500	5,239,400	4,823,000

⁶² Includes the updated data from S&As in 2019, 2020.

⁶³ The Company does not keep records of water discharge by category.

In the reporting period, JV Inkai LLP carried out standardised procedures to clean sewage septic tanks. During the cleaning, 150 tonnes of sludge were removed. The works helped prevent exceeding the maximum permissible concentrations in waste water and excluded the excess of the content of pollutants in the outlets.

3.6.3.3. Ground water

Uranium mining using the ISR method poses a risk of groundwater contamination. To ensure the safety of the population and minimize the environmental risk at all Kazatomprom mines in accordance with sanitary requirements, the design documentation substantiated the size of the buffer zone.

As part of industrial environmental control, the Group's entities constantly monitor the state of groundwater in accordance with established legislative and corporate requirements.

In 2021, the Company approved Methodological Guidelines for the Monitoring of the Impact on Ground and Underground Water in ISR Mining of Uranium, The implementation of the standard is scheduled for 2022. The standard is designed to establish uniform requirements for monitoring the state of natural waters in the areas where Kazatomprom's uranium deposits are located during mining operations using the ISR method.

3.6.4. Waste management

GRI 306-1, 306-2, 103-1, 103-2

In their production operations, enterprises of Kazatomprom generate industrial and municipal waste. Safe waste management and disposal are priority objectives for the Company. If it is impossible to process waste, we ensure detoxication and environmentally safe disposal of waste or transfer waste to specialised organisations.

When handling waste, the Group is guided by the requirements of national legislation, which obliges the enterprises to ensure separate collection of all generated waste, depending on their type and composition, for subsequent disposal, processing and disposal. Subsidiaries and affiliates have temporary sites equipped for containers and metal containers in place. They are marked with clearly visible identification marks indicating the type of waste, as well as the degree of hazard.

Corporate waste management standards:

- Rules of production and consumption waste management at Kazatomprom enterprises
- Methodological Guidelines for the Management of Radioactive Waste Prior to Landfill
- Methodology on calculating waste generation standards per unit of production at Kazatomprom's enterprises

Key waste generated by the Company:

- Solid and liquid radioactive waste
- Overburden rocks generated during the mining of fluorite copper-molybdenum ores
- Drilling mud from drilling at the ISR mining sites
- Fluoric gypsum from the production of hydrofluoric acid
- Ash and slag waste from the production of thermal energy
- Household waste
- Waste oil products
- Car tyres

According to the approved Waste Management Programmes and Waste Management Action Plans, the Company take the following actions:

- Ongoing monitoring of the placement (storage) of waste drilling mud in landfills for non-radioactive drilling mud
- Regular and timely removal of production and consumption waste for disposal
- Separate collection points and special places for temporary storage of production and consumption waste are arranged in the territory of the mines

The Company exercises mandatory control over the prevention of waste generation. All planned activities are carried out in accordance with the work plans, the results are properly recorded. No serious violations were identified during the reporting period.

GRI 306-3

As of the end of the reporting period, the total amount of accumulated waste made 1,016.6 tonnes, down by 10% compared to 2020. Industrial waste account for 87.9% of the total waste volume. In 2021, the total volume of industrial waste decreased by 10.3%.

The Company has adopted a separate waste collection system. Temporary storage of production and consumption waste on the territory of subsidiaries and affiliates is organised in specially designated places equipped for this purpose. Hazardous industrial waste is transferred for storage, processing and disposal to specialised enterprises. Passports have been developed for the entire list of hazardous wastes, which indicate the basic information about the waste: name, list of hazardous properties, composition, toxicity and precautions for waste handling.

Kazatomprom transports hazardous waste in accordance with the applicable law and exclusively with engagement of licensed organizations. In 2021, the Company did not carry out transboundary transportation of hazardous waste.

3.6.4.1. Solid low radioactive waste management

In its operations, uranium mining enterprises generate only solid low-level radioactive waste.

Solid radioactive waste generated during mining is found in:

- radioactively contaminated soil in areas where industrial solutions are supplied through pipelines
- waste consisting of spent ion-exchange resins recovered from the production cycle
- radioactively contaminated liquid solution from collection tanks
- parts of equipment and metal structures taken out from production

The Group's mining enterprises dispose of solid radioactive waste in specially designated areas for disposal in accordance with the laws of Kazakhstan. Such types of solid radioactive waste are characterised as low-level and are the least hazardous solid radioactive waste in terms of radiation level.

Contribution of various types of SLRW to total radioactive waste (RW) at the Group's uranium mining entities, 2021, %

SLRW types	Contribution to total RW
Sand and sludge from the sand trap, contaminated soil	75.3
Ion-exchange resin	1.9
Metal waste	2.6
Overalls, PPE, rags, filters	6.2
Plastic waste (types, etc.)	1.2
Other radioactive waste	12.8

3.6.5. Biodiversity

GRI 103-1

Understanding the importance of preserving the biodiversity in the region of its presence, the Company makes efforts to study the state of flora and fauna in the territory of uranium deposits.

Under a contract made with Laboratory-Atmosfera LLP, the project assessing the impact of Ulba Metallurgical Plant JSC on cumulative pollution of air, water resources and/or ecosystems found that the fauna was represented by various animals, mainly rodents, and there were no large mammals or endangered animal species.

In 2021, LLC ROYAL assessed the impact made by the production operations of TTC-Shieli and Auto Service, branches of Trade and Transport Company LLP, on the environment and the local population. Following visual observations of the flora and fauna, the organisation found that there was no negative impact on the flora and fauna near the branches.

All subsidiaries and affiliates within the scope of the project for the implementation of the ESAP Plan were covered by biodiversity assessment studies carried out in the territories adjacent to the production sites of Kazatomprom.

GRI 304-1

The total area of land owned, leased and managed by the Group is 51,923.55 hectares. There are no nature reserves or other specially protected natural sites on the territory of Kazatomprom's uranium deposits or near their borders.

GRI 304-4

The Company's activities do not pose a threat to animal and plant species listed in the Red Book of the International Union for the Conservation of Nature and Natural Resources (IUCN) and the Red Book of the Republic of Kazakhstan and endangered.

GRI 304-2

Kazatomprom carries out its activities on the industrial land and areas of settlements in accordance with the current legislation. The activities of the Group do not have a direct material impact on biodiversity.

As part of the implementation of ESAP Roadmap, the Company has the objective to determine the impact of mining activities on habitats, vegetation, and protected animal species.

Efforts taken by the Company:

- Providing analysis of the environmental footprint of the operations of the Karamurun, Kharasan-1 and Kulandy mines
- Collecting and analysing the available background data
- Conducting a sociological study of local residents to assess the environmental impact of deposits on the social environment
- Organising an expedition to study vegetation, wild animals, and grazing areas
- Determining the control points and background sites for ecological researches

As part of ESAP Biodiversity Roadmap implementation, Kazatomprom is implementing the Programme of Bird Protection from the impact of Kazatomprom power lines.

In 2021, Kazatomprom initiated the creation of a map showing habitats disturbed by mining operations. In order to more accurately determine habitats and identify sensitive ecosystems, biodiversity studies are carried out with account the seasonal migration of birds and mammals.

The Company has developed the Corporate Standard Methodological Guidelines for Assessing Biodiversity at Uranium Deposits, Production Facilities and Adjacent Territories and submitted it to subsidiaries and affiliates for implementation.

GRI 304-3

Kazatomprom regularly carries out activities aimed at restoring lands disturbed as a result of operation of mining enterprises. While developing the deposits, the Company carries out reclamation works to restore the landscape and vegetation and return the land into the economic use. As of the end of 2021, preparations were underway for liquidation and reclamation work in the contract areas of two deposits of Kazatomprom – Uvanas and South Moinkum (the southern part of block No. 1 (South) of the Moinkum deposit).

According to legal requirements, three years prior to termination of operations at the deposits, Kazatomprom should prepare draft liquidation plans, which include information on the fauna and flora of the site, the consequences of subsoil use, which are subject to liquidation, measures to rehabilitate flora and fauna, and plans for the reclamation of disturbed land.

Liquidation plans also include a set of works carried out after land reclamation:

- Monitoring the condition of hydrobionts at the adjacent water facilities
- Monitoring vegetation and microflora at the territory of plant and the adjacent areas
- Monitoring animals at the territory of plant and the adjacent areas

In 2021, IHT LLP conducted works to isolate the impact directly related to the production operation of uranium mining enterprises from the general anthropogenic impact in the region with significant environmental problems associated with natural climatic conditions (soil salinity, poor quality of drinking water, arid climate); the ecological catastrophe caused by the drying up of the Aral Sea (salt dust storms, reduction of biodiversity, reduction of soil fertility). The purpose of the initiative was to develop measures to minimise the man-made impact, subject to environmental and social risks.

Following the results, the Company prepared a final report on the implementation of the Environmental and Social Action Plan (ESAP) of Kazatomprom for the period from 2019 to 2021.

In 2022, the Company will continue research to assess the environmental condition and biodiversity at the uranium deposits of Kazatomprom.

3.6.6. Plans for 2022 and a medium term

In 2022, Kazatomprom plans to implement a number of HSE measures:

- Establish key performance indicators for the heads of subsidiaries and affiliates focused on the implementation of the ESAP Roadmap bullets
- Continue training employees of subsidiaries and affiliates responsible for environmental protection, in particular: production and consumption waste management, biodiversity assessment at uranium mining deposits, environmental monitoring at enterprises
- Conduct research to explore the impact of Kazatomprom's operations on the environment and the local population (Environmental and Social Research Programme, ESRP) and the Zero Waste Programme of Kazatomprom, seeking to develop measures to reduce and minimise production and consumption waste generated at the enterprises of the uranium mining industry;
- Provide quantitative assessment of the carbon footprint of products, following the development of the Carbon Neutrality Programme
- Continue the efforts of the internal group on planning the closure of production facilities and the decommissioning of the enterprises
- Complete the development of the environmental performance rating of Kazatomprom
- Implement the corporate standard Methodological Guidelines on Liquidation Cost Estimate Calculation and Procedures for Regular Analysis of Current Liquidation Costs (measurement of asset retirement obligations (ARO))
- Implement the standard Methodological Guidelines for Monitoring of the Impact on Ground and Underground Water in ISR Mining of Uranium
- Implement the standard Guidelines for Assessment of Biodiversity at Uranium Deposits, Production Facilities and Adjacent Territories
- Conduct a second surveillance audit of the environmental management system (EMS), the health and safety management system (OHS&OHS) for compliance with the requirements of ISO 14001:2015 and ISO 45001:2018
- Implement the criteria developed for compiling the environmental rating of Kazatomprom enterprises
- Update the standards on radiation safety: ST NAC 12.1-2010 Procedures for the Admission of Staff of Kazatomprom enterprises for Performing Radiation-hazardous Works and ST NAC 19-2016 Procedures for Organising and Conducting a Radiation Survey of the Production Area Using the Gamma Ray Surveying
- Continue efforts to create a database of the environmental monitoring system and the environment of uranium mining enterprises of Kazatomprom
- Update the corporate standard Methodological Guidelines for Management of Radioactive Waste Prior to their Disposal

Moreover, the Group's specialists plan to take part in IAEA's technical meetings, seminars and training sessions on safety, decommissioning of uranium production facilities, reclamation of uranium deposits, and uranium heritage sites.

DEPOSIT LIFECYCLE MANAGEMENT

KAP1

The Group operates 26 deposits (sites). The deposit is developed by the ISL method in succession by dividing it into technological blocks. It takes an average of three to four years to develop one technological block at the deposit.

Uranium mining by the ISL method involves a set of operations:

- mining preparation works (construction of technological holes, installation of trunk and intra-block piping, acidification of the mining mass)
- uranium leaching directly in the subsurface and production of productive solutions (active leaching, leaching and additional leaching)

Advantages of natural uranium mining by the ISL method compared to conventional uranium mining:

- Lower cost of mine development
- Shorter construction time
- Lower cost of production
- Reduced environmental impact
- Reduced risk to health and safety

Uranium mining by the ISR method in Kazakhstan



3.7. Stakeholder Engagement

Key indicators and achievements

KZT 220.03 million in retained economic value

UN Sustainable Development Goals relevant to Kazatomprom



GRI 102-43

Kazatomprom sees its mission in creating value for stakeholders in alignment with their interests and needs. To deliver on this mission, the Company is building a system of effective interaction with stakeholders, using various engagement methods and communication channels, and paying special attention to improving two-way communication systems and receiving feedback.

Key underlying documents regulating the Company's stakeholder engagement:

- Kazatomprom Disclosure Policy approved by the Board Director on 19 November 2018
- Stakeholder Map approved by the Management Board on 18 March 2021

To meet the needs and expectations of its stakeholders, Kazatomprom has built effective communication channels.

In 2021, due to the COVID-19 pandemic, all meetings and events took place online using audio and video conferencing technologies to minimise the risk of coronavirus infection.

3.7.1. Stakeholder definition

GRI 102-42

To identify and select stakeholders for further engagement, Kazatomprom relies on the assessment of the impact on its current operations and strategic development, as well as the established practice of the Company's engagement with external stakeholders and their dependence on its performance.

GRI 102-40

Key stakeholders:

- Shareholders
- Partners
- Creditors
- GWS suppliers
- Consumers
- Subsidiaries and affiliates
- Management and personnel
- Central government authorities
- Local governments
- Trade unions
- Media
- Civil-society organisations and local population
- Business communities
- International organisations
- Investment analysts
- Social project development fund
- Stock exchanges

GRI 102-43

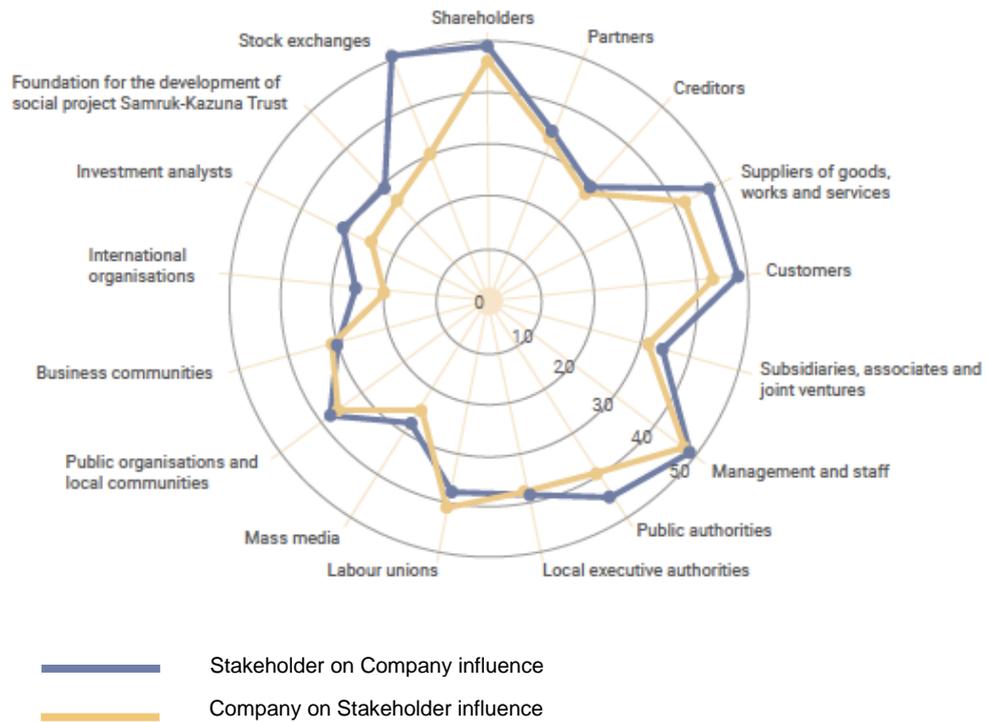
The Company has developed a Stakeholder Map that takes into account the interests and needs of all stakeholders.

Realising the consequences of its operations, Kazatomprom engages with stakeholders in line with the following principles:

- Materiality in assessing the issues they face
- Providing an adequate response to stakeholders' requests

The Stakeholder Map is annually updated to assess the mutual influence of Kazatomprom and its stakeholders, as well as the effectiveness of the stakeholder engagement plan. In 2021, the relevance of the map was confirmed by results of a management survey.

Kazatomprom Stakeholder Map 2021



A list of stakeholder groups

Stakeholder's interest in the Company	Stakeholder engagement mechanisms
Shareholders	
<ul style="list-style-type: none"> • Economic profit / consolidated net profit /economic performance • Free funds for development and dividends • Net asset value (NAV) • Corporate governance rating • Market share / Market presence • Minimisation of environmental emissions 	<ul style="list-style-type: none"> • Decisions of the General Meeting of Shareholders of the Company, the Board of Directors and Management Board of the Fund, the Board of Directors of the Company • Joint working groups, meetings, negotiations • Discussion of the implementation status of sustainable development processes with the Fund • Regular reporting to shareholders, including Samruk-Kazyna, according to the agreed format • Special session on sustainable development with the relevant board of directors • Correspondence on the activities of the Group • Surveys, questionnaires, testing • Internal corporate communication channels • Annual report and website of the Company
Customers	
<ul style="list-style-type: none"> • Market share / Market presence • Products and service labelling • Marketing communications • Minimisation of environmental emissions 	<ul style="list-style-type: none"> • Customer feedback • Meetings, negotiations, questionnaires • Signing of agreements, memoranda, strategic cooperation agreements • Hotline • Annual report and website of the Company
Investment analysts	
<ul style="list-style-type: none"> • Analysis of various aspects of the Company • Inclusion of the Company in analytical ratings 	<ul style="list-style-type: none"> • Conferences, forums, annual meetings with investors • Meetings, negotiations, questionnaires • Annual report and website of the Company • Quaterly operating expenses • Quarterly financial reporting and press statements
Management and staff	
<ul style="list-style-type: none"> • Employment, relations between employees and management, non-discrimination/diversity and equal opportunities / level of employee satisfaction with work and the work of Company-controlled services • Training and education • Improvements to the production safety culture 	<ul style="list-style-type: none"> • Fair and transparent conditions for staff remuneration, professional growth of employees, safe working conditions • Staff development • Production safety briefings and implementation of programmes to improve working conditions

- Implementation of measures for social support of workers and members of their families
- Continuing education, training and staff development programmes
- Regular meetings with management, negotiations
- Notification of employees on the activities of the Company, professional growth opportunities through corporate magazines, social networks
- Surveys, questionnaires, testing
- Hotline, channels of internal corporate communication, website of the Company

Suppliers of goods, works and services

- | | |
|--|---|
| <ul style="list-style-type: none"> • Equal access to tenders • Investment and procurement practices / benefits from the implementation of category-based procurement strategies • Energy / specific weighting of energy costs in the production cost of finished products • Support for domestic manufacturers | <ul style="list-style-type: none"> • Requests for quotations • Regular analytical meetings, negotiations, business correspondence • Signing of agreements, memoranda, strategic cooperation agreements, licensing • Information/reporting on the implementation of production, investment and social plans and obligations forwarded to the Company • Reporting on the results of the financial and economic activities of the Company • Consideration of letters (appeals) addressed to the Company • Surveys, questionnaires, testing • Hotline • Annual report and website of the Company |
|--|---|

Business communities (Associations, National Chamber of Entrepreneurs, Union of Legal Entities)

- | | |
|--|---|
| <ul style="list-style-type: none"> • Participation of the Company in improvements in and compliance with industry standards • Participation of the Company in improvements to the business environment • Support for the Company at the state authorities through mechanisms of interaction of the business environment with the state authorities, assistance with the promotion of the legislative initiatives of the Company | <ul style="list-style-type: none"> • Development of proposals on amendments and addenda to the legislation of the Republic of Kazakhstan • Signing of agreements, memoranda, strategic cooperation agreements • Creation of working groups, meetings, negotiations, questionnaires • Annual report and website of the Company |
|--|---|

Partners

Market share / market presence

Unit production cost of U3O8 produced by the Company and all uranium mining subsidiaries

- Memorandums of association
- Decisions of the General Meeting of Shareholders/participants of subsidiaries, associates and joint ventures, boards of directors, Supervisory Board of subsidiaries, associates and joint ventures, joint consultative and advisory bodies
- Joint working groups, joint inspections
- Meetings, negotiations, business correspondence, questionnaires
- Reports on current activities
- Correspondence on the activities of subsidiaries, associates and joint ventures
- Annual report and website of the Company

Public authorities

- Compliance, stability and business sustainability
- Creation and maintenance of jobs
- Representation of the country's economic interests in the international arena (economic, political and image benefits for the country through the prism of development of the uranium industry in Kazakhstan)
- Increase in the level of energy and resource efficiency of production
- Minimization of environmental emissions

- Verification of the compliance by the Company's subsidiaries, associates and joint ventures with licensing and contractual obligations
- Audit of compliance with the legislation of the Republic of Kazakhstan, development of proposals on amendments to the legislation of the Republic of Kazakhstan
- Coordination of the subsoil use contract and state registration of the right of subsoil use
- Submission of information/reporting on the implementation of production, investment and social plans and obligations further to requests
- Oral negotiations, business correspondence, control, production, operational and other meetings, questionnaires
- Reports on the performance by the Company's subsidiaries, associates and joint ventures of licensing and contractual obligations, submission of quarterly reports to the Ministry of Energy of the Republic of Kazakhstan, reporting on the results of the financial and economic activities of the Company
- Hotline
- Annual report and website of the Company

International organisations

- Participation of the Company in international agreements, initiatives

- Conferences, forums, annual meetings
- Signing of agreements, memoranda, strategic cooperation agreements

	<ul style="list-style-type: none"> • Creation of working groups, meetings, negotiations, questionnaires • Annual report and website of the Company
Creditors	
<ul style="list-style-type: none"> • Economic profit / consolidated net profit / economic performance • Free funds for development and dividends • Net asset value (NAV) • Investment and procurement practices / benefits from the implementation of category-based procurement strategies 	<ul style="list-style-type: none"> • Regular analytical meetings and negotiations, business correspondence, questionnaires • Publication of information about the Company in the media • Hotline • Annual report and website of the Company
Local executive authorities	
<ul style="list-style-type: none"> • Compliance with requirements, creation and retention of workplaces, sponsorship and charitable assistance • Occupational health and safety of the employees of the Company • Increase in the level of energy and resource efficiency of production, minimisation of environmental emissions 	<ul style="list-style-type: none"> • Memoranda of cooperation between the local executive authorities and the Company in order to support and develop the social sector of the regions • General agreements between the local executive authorities and the Company on the financing of the social sector of the regions • Hotline, social networks • Annual report and website of the Company
Public organisations and local communities	
<ul style="list-style-type: none"> • Improvements to the production safety culture • Increase in the level of energy and resource efficiency of production • Minimisation of environmental emissions • Compliance with legislative requirements, sponsorship and charitable assistance • Training and education 	<ul style="list-style-type: none"> • Holding of public hearings • Development of proposals on amendments and addenda to the legislation of the Republic of Kazakhstan • Publication of information about the Company in the media • Surveys, questionnaires, testing • Information on the current activities of the Company, subsidiaries, associates and joint ventures • Letters (complaints) to the Company • Hotline, social networks • Annual report and website of the Company
Trade union	
<ul style="list-style-type: none"> • Creation and retention of workplaces • Improvements to the production safety culture 	<ul style="list-style-type: none"> • Holding of public hearings • Signing of agreements, memoranda, strategic cooperation agreements • Regulation of employment relations with the employees of the Company through the collective bargaining agreement

- Remuneration of employees in accordance with the labour legislation of the Republic of Kazakhstan, training and education, safe working conditions
- Notification on the current activities of subsidiaries, associates and joint ventures
- Letters (complaints) to the Company
- Hotline, social networks, corporate communications channels
- Annual report and website of the Company

Subsidiaries, associates and joint ventures

- | | |
|--|---|
| <ul style="list-style-type: none"> • Employment and level of remuneration, relations between employees and management, non-discrimination, diversity and equal opportunities • Improvements to the production safety culture, training and education • Market share / market presence, products and service labelling | <ul style="list-style-type: none"> • Decisions of the Company as a participant/shareholder of the subsidiaries, associates and joint ventures • Reporting in accordance with the Non-Disclosure Agreement between Samruk-Kazyna and Kazatomprom • Decisions of the General Meeting of Shareholders of the Company/participants in subsidiaries, associates and joint ventures • Audit of compliance with the legislation of the Republic of Kazakhstan and the internal regulations of the Group • Audit of the fulfillment of the license and contractual obligations of the Company's subsidiaries • Development of proposals on amendments and addenda to the legislation of the Republic of Kazakhstan • Provision of information at the request of the state authorities on different lines of business of the Company • Signing of agreements, memoranda, strategic cooperation agreements • Orders and instructions, management hearings from subsidiaries, associates and joint ventures • Information/reports on the implementation of production, investment and social plan/commitments sent to the Company • Operational and other meetings, public hearings • Production safety briefings, training and education • Hotline, social networks, corporate communications channels, annual report and the website of the Company |
|--|---|

Specialized organisations (including Samruk-Kazyna Trust Social Project Development Fund)

- | | |
|---|--|
| <ul style="list-style-type: none"> • Implementation of projects and programs aimed at addressing socially significant issues | <ul style="list-style-type: none"> • Incoming and outgoing letters • Business correspondence |
|---|--|

- Implementation of the functions of a single charitable operator Samruk-Kazyna group companies

- Meetings, negotiations, etc.
- Current operations reports
- Publication of information about the Company in media
- Hotline
- Company's website

Stock exchanges

- Compliance with rules and procedures
- Timely submission of financial statements and other information

- Meetings and negotiations
 - Company's website
 - Report
 - Current operations reports
 - Websites of exchange regulators
-

3.7.2. Stakeholder engagement in the preparations of the Integrated Annual Reports

GRI 102-44

To boost transparency and accountability of Kazatomprom, representatives of the key stakeholder groups are engaged in the preparations of the reports by participating in dialogues to discuss socially significant aspects of the Company's operations and disclosing this in the reports. Stakeholder engagement is an integral part of international standards: AA1000 Stakeholder Engagement Standard (2015), Sustainability Reporting Standards (GRI SRS), and International Framework for Integrated Reporting.

When preparing the IAR, the Company sends forms to be filled in by stakeholders:

- Questioning about the level of disclosure of information about various aspects of the Company's operations in the integrated annual report for the previous reporting period
- Surveying to determine the topics material for disclosure in the upcoming integrated annual report

Consideration of stakeholder recommendations

Stakeholder recommendations	Consideration of recommendations in the sections of IAR 2021
Providing more information regarding planned activities for all sections of the report	Taken into account in all sections of the IAR
Paying more attention to corporate social responsibility	Taken into account in the Sustainable Development section
Expanding the scope of sustainability in the supply chain	Taken into account in the Sustainable Development section
Paying more attention to sustainability risks	Taken into account in the Corporate Governance and Ethics section

3.7.3. Consultations between stakeholders and the Company

GRI 102-21

Kazatomprom has adopted specific procedures for conducting consultations on economic, environmental and social issues between key stakeholder groups and the highest governing body.

Economic, environmental and social issues are regularly considered by the specialised Committees of the Board of Directors and the supervisory boards of subsidiaries and affiliates. Committees under Board of Directors provide preliminary consideration and elaboration of the most important matters reserved for the Board of Directors and develop recommendations for making decisions on these matters. The Board of Directors strives to successfully cope and quickly adapt to a constantly changing environment and comply with the most important principles of corporate governance.

3.7.4. Creating economic value

Kazatomprom openly and transparently informs shareholders, employees, partners and other stakeholders about its efforts taken to create economic value. Disclosure of this indicator helps the Company's stakeholders see how the Group creates and distributes economic value over the reporting period.

Retained economic value amounted to KZT 220.03 billion in 2021.

GRI 201-1

Generated and distributed direct economic value, KZT billion

Article	Stakeholder group	2019	2020	2021
Direct economic value created				
Income ⁶⁴	Broad stakeholder group	621.13	667.12	761.53
Distributed economic value, incl.				

⁶⁴ Revenues are calculated in line with the GRI Standards methodology and include revenues and all incomes of the Company.

Operating expenses ⁶⁵	Suppliers of goods, works and services	273.42	288.11	373.59
Salaries	Staff	49.15	50.72	53.05
Interest and dividend expenses	Shareholders, creditors, investment analysts	11.96	7.68	6.71
Taxes other than income tax		27.79	24.73	26.14
Income tax expense	State bodies	33.51	63.78	61.62
Other expenses		8.51	9.73	15.86
Social spending (investment in local communities)	Local population	1.07	1.01	4.54
Retained economic value		213.75	221.37	220.03

⁶⁵ Operating expenses include the following items: cost of sales (excluding wages and taxes), selling expenses (excluding wages and taxes), general and administrative expenses (excluding wages and taxes).

3.8. Procurement Practices

Key indicators and achievements

KZT 227.64 billion in total amount under the Procurements Plan

80% of local content in goods, works and services

UN Sustainable Development Goals relevant to Kazatomprom



GRI 102-9

Given the scale of Kazatomprom's business and the vast geography of its operations, efficient, timely, and complete provision of the necessary resources, combined with the best procurement terms and conditions, is paramount to the success of the Company's business.

Responsible procurement contributes to the development of mutually beneficial partnerships, increases the efficiency of interaction with suppliers and contractors, as well as improves the efficiency, control and transparency of procurement activities within the supply chain.

The Group's key procurement priorities in the reporting period:

- Enhancing the transparency of processes via automation and digitalisation
- Optimising the procurement management structure at the Company, subsidiaries and affiliates
- Developing the category management in procurement

Procurement Department under the Managing Director for Procurement delivers procurement function within the Company. The department is taking efforts to maximize the business value in various forms: quality, timeliness, safety, productivity, risk reduction. To this end, Kazatomprom keeps expanding the professional competencies of the Procurement Department employees and applying new technological solutions

The procurement activity of the company is regulated by the following key documents:

- The Procedures for procurement by the Samruk-Kazyna JSC National Welfare Fund and legal entities, which are 50-plus percent owned directly or indirectly by Samruk-Kazyna JSC on the basis of the right of ownership or trust management as amended and approved by the decision of the Board of Directors of Samruk-Kazyna JSC (Minutes No. 192 dd. 18 February 2022)⁶⁶
- Standard for managing the procurement activities of the National Welfare Fund "Samruk-Kazyna" and legal entities, which are 50-plus percent owned directly or indirectly by Samruk-Kazyna JSC on the basis of the right of ownership or trust management, as amended and approved by the decision of the Board of Directors of Samruk-Kazyna JSC (minutes No. 02/22 dd. 11 January 2022, minutes No. 12/22 dd. 18 February 2022)⁶⁷

3.8.1. Summary of Kazatomprom's procurements in 2021

The total procurement amount under the Procurement Plans for the Company's Group amounted to KZT 227.64 billion. The company concluded contracts for KZT 212.02 billion in total. At the same time, the procurement plans have been implemented by 93.14%.

Single source procurements (SS) account for KZT 20.86 billion or 9.8% of the total amount of purchases.

⁶⁶ On 3 March 2021, a restated document was approved with effect from 1 April 2022.

⁶⁷ The document was valid until 1 April 2022.

Procurements made on the basis of an open tender (OT) and quotation requests (QR) account for KZT 84.3 billion or 39.76% of the total amount of purchases.

A total amount of procurements as part of intercompany cooperation was KZT 65.41 billion or 31% of the total amount.

The share of local content in the group of companies of the Foundation is 80% against the plan of 77%. At the same time, the amount of executed contracts for the group of Kazatomprom's enterprises for the goods under the Economy of Simple Things programme amounted to KZT 36.34 billion, or 87%.

To increase the share of competitive purchases, the Company conducts outreach with potential suppliers on the terms of registration and submission of tender documents, while eliminating excessive requirements for suppliers and reducing administrative costs that do not affect the production process.

3.8.2. Planned and actual benefits of category procurements (category procurement management)

In 2021, the Company implemented 18 procurement category strategies in accordance with the Procurement Plan 2021: 7 procurement category strategies of Kazatomprom and 11 procurement category strategies of the Fund.

In 2021, the actual volume of category procurement strategies in the Group made KZT 23.5 billion.

Following implementation of category-based procurement strategies of the Company and the Fund, actual benefits reached KZT 1.4 billion against the planned indicator of KZT 1.23 billion.

The target indicators of benefits from the implementation of procurement category strategies for 2021 set by the Competence Centre of the Fund for Kazatomprom amounted to KZT 2.19 billion. However, following the adjustment of the target indicators of benefits of the Foundation's portfolio companies, the amount of benefits was reduced to KZT 1.23 billion.

In 2021, because of the pandemic restrictions and logistics problems at the border with China, subsidiaries and affiliates of Kazatomprom faced problems with implementation of some category procurement strategies. This also refers to "HDPE and PVC pipes" procurement category strategies, where force majeure circumstances arose as a result of shortage in the main raw materials in the territory of the Republic of Kazakhstan. Almost 36% of major batches of pipes were not delivered to the mining enterprises of Kazatomprom. The above factors had a significant impact on the results of Kazatomprom category procurements.

Company's Procurement Category strategies in 2021

Group strategy	Foundation strategy
Transportation and distribution services	Electricity
Pumps, components and spare parts	Cars and buses
Pipes	Health insurance
Flow meters	Safety footwear
Ion exchange resin	Cabling and wiring products
Hydrogen peroxide	Fuel
Ammonia products	IT equipment and communication equipment
	IT software
	Oils and greases
	Trucks and special equipment
	Safety clothing and PPE

To increase the share of competitive purchases, Kazatomprom conducts outreach with potential suppliers to clarify the terms and conditions of tender documents, eliminates excessive requirements for suppliers and administrative costs that do not affect the production process. Planned single-source procurements are transferred to tender procedures.

3.8.3. Digitalisation of procurement

In 2021, the Company continued to implement its procurement plans fully in the SAP ERP system. This functionality enables the quick consolidation of the planned procurements, taking into account the goods in transit and in stock.

The procurement plans for 2022 have also been made in the SAP ERP system. Work is currently underway on the direct automated integration of the SAP ERP system and the e-procurement information system 2.0 where procurement plans will be developed, adjusted, and approved. The expected delivery term is July 2022.

3.8.4. Support of local suppliers

GRI 204-1

To comply with the public policy, as well as to support local suppliers in the region, the Company assists in concluding contracts for the procurement of products, works, and services between its subsidiaries and affiliates and local suppliers.

In 2021, the Group continued controlling the procurements of goods produced by domestic producers in the light industry as well as furniture, and food industries and the production of construction materials from manufacturers listed on the Samruk-Kazyna's Register.

As part of the Economy of Simple Things Programme in six sectors of economy (consumer goods, furniture, food, construction, machine building, and chemicals), products and goods are purchased from the manufacturers of the Holding.

The local content in the EST procurements accounted for 87% of the total procurements in accordance with the established indicators in procurement.

KZT 1.3 billion was the total amount of 27 offtake contracts concluded under the Programme for Facilitation of Creation of New Production in the reporting period.

The Central Project Office engaging the Company's subsidiaries and affiliates continues its work at the platform of Samruk-Kazyna Contract LLP to support domestic producers. The platform is used to conclude offtake contracts with producers. In addition, works are underway to search for new domestic producers adapted to the needs of the industry.

In 2021, local content in goods, works and services reached 80% against the target of 77%, compared to 75% year on year.

Percentage of local suppliers in procurements, %

Indicator	2019	2020	2021
Percentage	77	75	80

3.8.5. Plans for 2022 and a short term

The Company plans to continue optimizing procurement processes and developing automation of procurement processes.

As part of the implementation of SAP as the Group's ERP system, Kazatomprom will also continue to implement initiatives for proper separation of duties and access control.

3.9. Science and Innovations

Key indicators and achievements

KZT 3.24 billion under 57 R&D contracts in total

16 applications filed for intellectual property

2,277 innovation proposals were submitted by the Group's employees, of which 2,020 were accepted and 1,367 were implemented

UN Sustainable Development Goals relevant to Kazatomprom



3.9.1. Managing R&D and innovations

R&D and innovations play a significant role in the implementation of Kazatomprom's strategic priorities for maintaining production output, increasing efficiency, and reducing a negative environmental footprint.

For more information about Kazatomprom's Innovative and Technological Development Strategy and Policy 2014-2022, as well as the R&D Management Policy, see Kazatomprom Integrated Annual Report 2019.

The following companies contribute the most in achieving the strategic objectives in the field of R&D and innovations management, which are an increase in added value and knowledge intensity of Kazakhstani uranium products:

- Volkovgeologia JSC: geology, geotechnology and mining and preparation operations, repair and restoration works of wells and associated extraction of rare metals and rare earth metals at uranium deposits
- High Technology Institute LLP: extraction and processing of productive solutions, associated extraction of rare-earth metals
- Ulba Metallurgical Plant JSC: advanced technologies of the nuclear fuel cycle (NFC), production and processing of rare metals (RM) and rare-earth metals (REM)
- NAC Kazatomprom JSC: digitalisation, automation and robotisation. Commercialisation of intellectual property objects and technology transfer

The Department of Scientific and Technological Projects of Kazatomprom is responsible for the general coordination of R&D activities, as well as the management and commercialisation of intellectual property.

In 2021, the Company held one event where subsidiaries and affiliates of Kazatomprom presented their implemented R&D projects. Such events seek to improve the coordination of scientific activities and the implementation of the R&D at production facilities.

Results in 2021

- Ten meetings of Scientific and Technical Councils and eight meetings of Specialized Scientific and Technical Councils were held to discuss priority R&D areas of the Group
- The Company developed rules to evaluate its R&D efficiency.
- We developed Regulation on the "I Have an Idea" Idea Management System at Kazatomprom.
- Kazatomprom revised Regulations on Scientific and Technical Council.
- Memoranda on cooperation on R&D and innovations were signed with:
 - National Centre for Technological Projections
 - Park of Innovative Technologies operating under the brand name of Tech Garden
 - Bekturov Institute of Chemical Sciences

The Company adopted procedures for enrolment in specialised universities of the Russian Federation in PhD and postgraduate programmes as part of its efforts to train the R&D staff pool at Kazatomprom, subsidiaries and affiliates

In total, 252 employees are engaged in research and development in the subdivisions of JSC Volkovgeologia, Institute of High Technologies LLP, Ulba Metallurgical Plant JSC, including 7 doctors of science and 48 candidates of science.

KZT 3.24 billion was the total amount of 57 R&D contracts concluded in 2021 by Kazatomprom and its subsidiaries and affiliates, of which 53 contracts were signed by subsidiaries and affiliates (KZT 2.92 billion) and 4 contracts by Kazatomprom (KZT 0.32 billion). The Company utilized KZT 2.45 billion in 2021, including KZT 0.35 billion under contracts of Kazatomprom and KZT 2.09 billion under contracts of subsidiaries and affiliates.

To commercialise the R&D results, four contracts were signed in 2021 to grant the right to use the inventions of Kazatomprom:

- Recovery of natural uranium concentrate from uranium-bearing solutions between Kazatomprom and JV Southern Mining and Chemical Company LLP
- Recovery of natural uranium concentrate from uranium-bearing solutions between Kazatomprom and Karatau LLP
- Recovery of a chemical concentrate of natural uranium from rich eluate between Kazatomprom and Semizbay-U LLP
- The copyright for the software package for studying uranium mining by the in-situ recovery and obtaining the Simulator v. 3.0 between Kazatomprom and ME ORTALYK LLP

The Company filed 16 intellectual property applications and received 15 titles of protection.

In addition, work and negotiations are ongoing to conclude license agreements between Kazatomprom and its subsidiaries and affiliates (JV ZARECHNOYE JSC, ME ORTALYK LLP) on granting the right to use the invention “Method for obtaining a chemical concentrate of natural uranium from rich eluate”.

3.9.3. Scientific developments

Almost all R&D projects of the Group seek to improve and upgrade production. Several major R&D projects were implemented in 2021:

Project	Result in 2021
Introduction of new technologies, materials, and equipment to reduce the cost of the chemical concentrate of natural uranium and uranium oxide	Work began on industrial testing of a rich eluate nanofiltration unit, the technological modes of nanofiltration and the technical and economic indicators of this technology were determined. Implemented at Kazatomprom-SaUran LLP in 2021
Development of low-acid leaching technology using cavitation-jet technologies in combination with special purpose chemical reagents	Industrial testing conducted in 2021 showed that it could be used for the ISR. It is planned to continue work on establishing the technical and economic efficiency of the technology in 2022
Study of trace element and isotopic composition to create portraits of finished products of uranium mining enterprises	The effectiveness of this work lies in the fact that the presence of a database of portraits will reduce the risk of unauthorized use, loss and theft of finished products at enterprises and ensure compliance with current and future IAEA requirements in terms of control over illicit trafficking in nuclear materials and technologies

In 2021, a software prototype was developed in the Microsoft Excel environment using VBA and PowerMap. The Base prototype allows to carry out the identification of samples of finished products of uranium mining and uranium processing enterprises and to generate a report on the results of identification. An archive of GP

samples has been created, allowing, if necessary, to carry out an operational procedure for identifying the material and its belonging to a particular manufacturer.

One of the significant areas of work for scientific research is environmental. In 2021, several studies were conducted to improve the environmental friendliness of production:

Studies	Target	Results in 2021
Study of the impact of uranium leaching on groundwater and development of guidelines (standard) for	<p>Contamination control of aquifers in uranium deposits and minimisation of contamination risks thanks to ISR uranium mining by the Customer's enterprises</p> <p>Development of an action plan to obtain convincing evidence that ISR mining has no irreversible negative impact on groundwater</p> <p>Development of a methodology for interpreting aquifer monitoring data applicable to mining operations and deposit liquidation plans</p>	<p>Kazatomprom Standard on "Methodological guidelines for organizing monitoring of the impact of ISR on natural waters of uranium deposits" was developed and put into effect. The document regulates the procedure for conducting industrial environmental monitoring of the state of groundwater during the implementation of the ISR of uranium and upon completion of this process by uranium mining enterprises.</p>
Development of a system for automatic monitoring of radiation hazards using gamma radiation threshold dosimeters with the ability to measure and control the equivalent dose and the equivalent dose rate of external gamma radiation	<p>The system will provide:</p> <ul style="list-style-type: none"> • impact assessment of the radiation factors on various categories of personnel and the population • collection of information about the gamma radiation in the area with its automatic referencing to the geographic coordinates during the gamma screening when an employee is walking • automatic generation of electronic reports and cartograms via a convenient and user-friendly software interface. The use of dosimeters developed in the course of R&D as individual dosimeters gives a number of advantages to an employee such as: <ul style="list-style-type: none"> • real-time display of direct indication of accumulated dose and dose rate in the automatic monitoring information system • dose rate alarms that can alert a person wearing the dosimeter, when the specified dose rate or accumulated dose is exceeded • measurement with high accuracy of a wide range of accumulated radiation doses from normal (μSv) to emergency levels (hundreds of mSv or Sv) 	<p>The automatic monitoring system based on individual dosimeters RKS01IM was put into pilot operation at NAC Kazatomprom JSC on 29 December 2021 to test various operating modes.</p>

3.9.4. Innovations

The Group encourages its employees to innovate, using mechanisms for submitting, processing, evaluating, and reviewing innovation proposals. An additional incentive for innovations is an annual contest of innovations held among subsidiaries and affiliates.

Results in 2021:

- The Group's employees submitted 2,277 innovation proposals, of which 2,020 were accepted and 1,367 were implemented. KZT 1.34 billion is the expected economic effect of the implemented proposals.
- The contest of innovations was held with two new nominations:
 - The best innovation proposal within the framework of the GreenMindset – Green Thinking initiative: innovation proposals are selected that have a cumulative effect: economic, social and reputation'
 - The best digital solution for production: innovation proposals are selected that have a great economic effect from reducing the cost of production or improve the quality of production.

Contest of Innovation

NAC Kazatomprom JSC holds an annual contest of innovations (the Contest) among subsidiaries and affiliates.

The contest has three stages:

- Internal selection of contestants at enterprises
- Selection of contestants by the organizing committee
- Selection of winners in nominations by the expert committee

The contest operator is the Department of Scientific and Technological Projects of NAC Kazatomprom JSC.

According to the results of the contest, which took place in 2021, the proposal on “Processing of substandard uranium-containing semi-products with the production of rich eluates with subsequent sale” by Kazatomprom-SaUran LLP was recognised as the best innovation proposal creating an economic effect for 2020.

The proposal on “Method of sampling of Natural Uranium Chemical Concentrate (NUCC) with TUK-118 and a cover-template for its implementation” by Semizbay-U LLP was recognised as the best innovation proposal creating a social or other effect.

The proposal on “The use of nitric acid leachate in the process of enrichment and washing of fluorine concentrate Ermakov deposit” by Ulba Metallurgical Plant JSC was recognised as the best innovation proposal within the framework of the Green Mindset – Green Thinking initiative in 2020.

The proposal on “Application of video surveillance cameras for visual inspection of the inside of the lining and the condition of walking hearth furnace heaters” by UMP JSC was recognised as the best digital solution in production for 2020.

Semizbay-U LLP was recognised as the most innovative enterprise based on the contest results.

All winners were awarded diplomas and certificates, and the best innovators were awarded badges of merit.

3.9.5. Plans for 2022 and a short term:

Pursuing a new approach to R&D management, the Group will take the following actions in 2022:

- Updating the internal regulatory documents to raise 1% of funds from subsoil users for science
- Revising the composition of scientific and technical councils
- Continuing coordination of the implementation of R&D results through a platform for presentation of completed research projects.

In addition, we are set to launch “I have an Idea” Idea Management System.

In addition, Kazatomprom will work to improve the scientific competencies of subsidiaries and affiliates' employees involved in R&D. This will contribute to the improvement of the quality of R&D as part of the implementation of R&D licence terms and conditions.

4. CORPORATE GOVERNANCE AND BUSINESS ETHICS

Kazatomprom JSC continues to develop an effective corporate governance system in line with the laws of the Republic of Kazakhstan and world's best practices. The Company makes ongoing efforts to improve its governance practices so that they support the current operations of the Company, meet changing needs that emerge as the business grows, and ensure respect for the rights of shareholders and all stakeholders.

Key performance indicators and achievements

Women account for 25% of the Board of Directors

Kazatomprom's corporate governance system was independently rated "A"

UN Sustainable Development Goals relevant to Kazatomprom



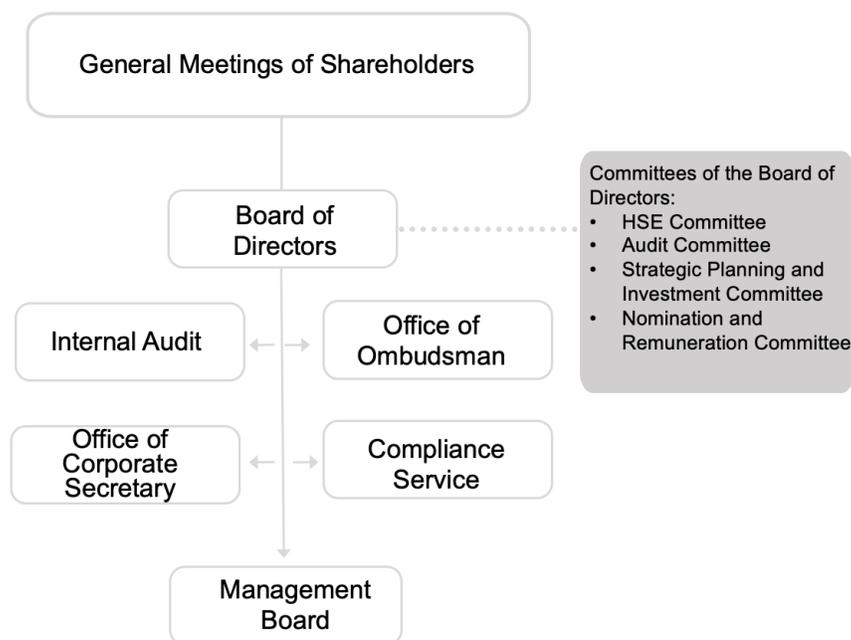
4.1. Corporate Governance System

Company's corporate governance system seeks to ensure proper management and control, growth of long-term shareholder value, and sustainable development. Corporate governance rests on three pillars: efficiency, effectiveness, and transparency. Company continues improving its corporate governance system, ensuring the rights of shareholders and all stakeholders.

Principles	Objectives
Protection of shareholders' rights and interests	Improve transparency
Effective management of the Company and the effective operation of the Board of Directors and the Management Board	Maintain effective long-term relationships with shareholders and stakeholders
Transparency and objectivity of operations	Ensure transparent governance
Lawfulness and ethics	Improve corporate governance
Effective dividend policy	Reaffirm the Company's commitment to good corporate governance standards
Effective HR policy	
Occupational health and safety	
Environmental protection	
Settlement of corporate conflicts and conflicts of interest	
Responsibility	

Kazatomprom's corporate governance structure

GRI 102-18



Kazatomprom's key corporate governance policies

Document name	Effective date of the latest version
Charter	20 May 2021 ⁶⁸

⁶⁸ Amendments and supplements made by the General Meetings of Shareholders on 19 May 2019 and 20 May 2021.

Regulations on the Board of Directors	18 May 2020
Regulations on the Management Board	26 June 2019
Regulations on Committees	30 April 2019
Corporate Governance Code	27 May 2015
Management policy for Kazatomprom's subsidiaries and affiliates	19 March 2020

4.1.2. Corporate governance rating

In 2021, Samruk-Kazyna JSC, a major shareholder of Kazatomprom JSC, engaged an independent consultant «PricewaterhouseCoopers» to conduct a corporate governance assessment to rate the Company's corporate governance system.

Following the assessment, Kazatomprom's corporate governance system was assigned an A rating.

This serves as a proof of an enhanced efficacy of the Company's internal management system. Adherence to the principles of respect for shareholder rights, transparency, and disclosure have resulted in a significant progress of the Board of Directors and Management Board's function.

Company has developed a 2022 action plan to further improve its corporate governance system.

4.1.3. Key improvements in 2021

In the reporting period, the majority of the planned measures for 2021 has been implemented, which were developed following the results of independent assessment of corporate governance system based on corresponding Methodology of Samruk-Kazyna JSC. Particularly, Company has implemented the following key measures:

- Held a Strategic Session with the Board of Directors, the Chairman and members of the Management Board to discuss strategic initiatives
- HSE Committee received information for review on the implementation of the sustainable development system on a semi-annual basis, including information on sustainable development spending
- The Company developed and approved rules for the selection of Kazatomprom's representatives as members of the supervisory boards and/or boards of directors of the Company's subsidiaries and affiliates
- The management succession plan was updated
- An environmental rating methodology has been developed for the Group followed by assessment reports on the environmental rating statuses within the Group
- A list of key environmental indicators has been set followed by an initial test rating
- Regulatory documents on risk management, continuity and sustainable development have been updated
- The information disclosure efficiency was assessed by means of target questionnaire with the results presented to the Board of Directors. Feedback received from the external stakeholder community shows the Company's disclosure practices and transparency rates have progressed, resulting in higher rates than expected
- The Company's Internal Audit Service completed a self-assessment resulting in adherence to 43 out of 47 applicable international internal auditing standards.
- Kazatomprom completed actions planned for 2021 to integrate the sustainable development system into the planning and budgeting processes of the Company, its subsidiaries and affiliates, update the planning and budgeting processes to include risk assessment into planning and reporting, and integrate key risk indicators into planning, reporting, and accounting

4.2. Corporate Governance Code

The Corporate Governance Code of the Company has been developed in accordance with the laws of the Republic of Kazakhstan, policies of Samruk-Kazyna JSC and Samruk-Kazyna JSC Transformation Programme. The Code adheres to the Kazakhstani and international corporate governance practices and sets principles for the corporate governance system within the Company.

Company's corporate governance system complies with the key listing rules of the stock exchanges on which its securities are traded and the corporate governance principles recognised by the global business community (such as the OECD Principles of Corporate Governance).

4.2.1. Compliance with the Corporate Governance Code

In line with the Corporate Governance Code, the Office of the Corporate Secretary has analysed compliance with the principles and provisions of the Corporate Governance Code across the Company in 2021. According to its findings, 88% of the provisions of the Code were fully complied with, and 2% were partially complied with.⁶⁹ The remaining 10% of the provisions do not apply to the Company.

Compliance with the Corporate Governance Code

Section	In compliance	Partly in compliance	Non-compliant	Not applicable
Shareholders' rights and fair treatment of shareholders	83	13	–	4
Efficiency Board of Directors and Executive Body	96	1	–	3
Risk management, internal control and audit	97	3	–	
Transparency	97	–	–	3

Adherence to the AIX corporate governance principles

AIX has the general principles of corporate governance in place for listed companies. Kazatomprom's Corporate Governance Code is largely consistent with these principles. Moreover, the Company's Code contains certain provisions ensuring the compliance with Samruk-Kazyna's goals and projections. Any Group's initiatives that relate to its non-core business are subject to review and verification by the Board of Directors chaired by an independent director.

Compliance with KASE's corporate governance principles

In 2013, KASE adapted the International Finance Corporation's (IFC) corporate governance scorecard, allowing joint stock companies listed on KASE to use this tool for assessing their level of corporate governance. Assessed against the six categories, the Company mostly meets the criteria set out in the score card.

Differences between the Company's Corporate Governance Code and the UK Corporate Governance Code⁷⁰

The main differences between the Company's Corporate Governance Code and the provisions of the UK Corporate Governance Code are described below.

- Under the UK Corporate Governance Code, when 20% or more of votes have been cast against the board recommendation for a resolution, the company should explain, when announcing voting results, what actions it intends to take to consult shareholders to understand the reasons behind the result. An update on the views received from the shareholders and actions taken should be published no later than six months after the shareholder meeting. The board of directors should then provide a final summary in the annual report and, if applicable, in the explanatory notes to resolutions at the next shareholder meeting, on the impact the feedback has had on the decisions the board has taken.

⁶⁹ For more information about the Code compliance audit findings 2021, see the compliance report on the Company's website.

⁷⁰ The differences are indicated on the basis of a literal comparison of the contents of the Code of Corporate Governance of the Company and the UK Code of Corporate Governance. However, such differences do not imply in practice complete non-compliance with the provisions of the UK Code.

- The Corporate Governance Code of the Company obliges the Chair of the Board of Directors to build a constructive dialogue between Board members, major shareholders, and the Company's executive body. At the same time, the Chair of the General Meeting of Shareholders should strive to ensure that shareholders receive answers to questions directly at meetings. If a question is too complicated to allow for an immediate answer, the individual (s) to whom the question was addressed should provide a written answer as soon as possible after the conclusion of the General Meeting. In addition, major shareholders may hold meetings with the Chair and Board members to discuss development strategy issues, elect the head of the executive body, and address other elements that impact any growth of the long-term value and the sustainable development of the Company. Such meetings are pre-planned and held in accordance with approved procedures.
- The UK Corporate Governance Code states that non-executive directors have a prime role in appointing and removing executive directors. Non-executive directors should scrutinise and hold to account the performance of management and individual executive directors against agreed performance objectives. The chair should hold meetings with the non-executive directors without the executive directors present.
 - The Company's Corporate Governance Code states that candidates for the Company's head must be approved by the President or the Presidential Administration of the Republic of Kazakhstan (if the Company is on a list approved by a Decree of the President of the Republic of Kazakhstan), the Management Board of Samruk-Kazyna, the Nomination and Remuneration Committee of the Board of Directors of Samruk-Kazyna, and the Chairman of the Board of Samruk-Kazyna.
- The UK Corporate Governance Code sets forth the main responsibilities of the company's nomination and remuneration and audit committees, and also states that a description of the main activities of these committees should be included in the company's annual report.
 - The Company's Corporate Governance Code contains no such requirement.
- The UK Corporate Governance Code prohibits the chair of the board from being a member of the audit committee.
 - The Company's Corporate Governance Code contains no such restriction.
- Under the UK Corporate Governance Code, in annual and half-yearly financial statements, the board should state whether it considers it appropriate to adopt the going concern basis of accounting in preparing them, and identify any material uncertainties to the company's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements.
 - The Company's Corporate Governance Code contains no such requirement.
- The UK Corporate Governance Code stipulates that a majority of members of the nomination committee should be independent non-executive directors. The chair of the board should not chair the committee when it is dealing with the appointment of his/her successor.
 - The Company's Corporate Governance Code contains no such restriction.
- Under the UK Corporate Governance Code, where a remuneration consultant is appointed, this should be the responsibility of the remuneration committee. The consultant should be identified in the annual report alongside a statement about any other connection it has with the company or individual directors. Independent judgement should be exercised when evaluating the advice of external third parties and when receiving views from executive directors and senior management.
 - The Company's Corporate Governance Code contains no such requirement.
- The UK Corporate Governance Code stipulates that remuneration schemes should promote long-term shareholdings by executive directors that support alignment with long-term shareholder interests. In addition, there are clarifications regarding the terms of contracts concluded with the directors of the company.
 - The Company's Corporate Governance Code contains no such requirement.

4.3. General Meetings of Shareholders

Company treats and communicates to all shareholders equally, including minority shareholders, regardless of their shareholdings

The General Meeting of Shareholders is the highest governing body of the Company. On 20 May 2021, Kazatomprom held the annual General Meeting of Shareholders of the Company in absentia and considered the following agenda items:

- Approving Kazatomprom's annual financial statements 2020 (separate and consolidated)
- Approving a restated Kazatomprom Dividend Policy
- Approving procedures for distribution of net income earned by Kazatomprom in 2020 and for decision-making on payment of dividends on ordinary shares and approving the size of dividend per ordinary share of Kazatomprom in 2020
- Information on shareholders' inquiries about actions of Kazatomprom and its officials and the results of consideration of the inquiries
- Information on the size and elements of remuneration of members of the Board of Directors and the Management Board of Kazatomprom JSC
- Introducing amendments and additions to Kazatomprom's Articles of Association.
- Approving the Rules for payment of remuneration and reimbursement of expenses to members of Kazatomprom's Board of Directors
- On some issues related to Kazatomprom's Board of Directors

In addition, on June 22 and 10 November 2021, Kazatomprom held an Extraordinary General Meetings in absentia. The meetings were convened by the Board of Directors of the Company at the initiative of its major shareholder, Samruk-Kazyna JSC. Composition of the Board of Directors of Kazatomprom JSC was the only issue on the agenda.

4.4. Board of Directors

GRI 102-24

Members and the Chairman of the Board of Directors are appointed according to procedures prescribed by the Law of the Republic of Kazakhstan On Joint Stock Companies and the Company's Charter.

Candidates are recruited and selected according to objective criteria and needs for diversity in the composition of the Board of Directors. Only individual can be selected a member of the Board of Directors. The Board members shall be elected from among:

- individual shareholders
- persons nominated (recommended) for election as shareholder representatives
- individuals who are not shareholders of the Company and are not nominated (not recommended) to be elected as representatives of the shareholder

Persons nominated as Board member candidates must have the knowledge, skills, and expertise needed for the Board of Directors to perform its functions effectively and ensure long-term value growth and sustainable development of the Company, as well as an impeccable business and personal reputation.

When selecting Board member candidates, Kazatomprom takes the following criteria into account:

- experience in senior roles
- experience as a member of the Board of Directors
- length of service
- educational background, specialty, including international certificates
- competencies in the focus areas of the Company's operations
- business reputation
- assessment of direct or potential conflicts of interest in case of selection as the Board member

Members of the Management Board, except for the Chairman of the Management Board, may not be elected members of the Board of Directors. Members of the Government of the Republic of Kazakhstan, officials of government authorities may not be appointed to the Board of Directors.

Training and development of members of the Boards of Directors

In accordance with the Policy on advanced training for the members of Kazatomprom's Board of Directors and engagement of external experts by the Board of Directors, the Board decides on advanced training for its members either for all members in general or for its individual members based on:

- the advanced training needs identified in the course of the annual performance evaluation of the Board of Directors, committees of the Board of Directors and each member of the Board of Directors by approving the annual plan for BoD advanced training
- reasonable requests of individual Board members

Recommendations that followed the assessment of Kazatomprom's corporate governance system were given a due consideration when developing training programme for the members of the Board of Directors.

In 2021, Company held training sessions on pressing issues of compliance and risk management.

4.4.1. Members of the Board of Directors

GRI 102-22

As of 31 December 2021, the Board of Directors consisted of eight directors, including four independent directors. The Board of Directors is chaired by an independent director⁷¹. This guarantees the respect for rights of minority shareholders.

Independence of the Board of Directors:

⁷¹The description of criteria for compliance with the standards of independence for members of the Board of Directors is given in the Articles of Association and Regulations in the Board of Directors, which are available at the Company's website.

- Total number of the Board members – 8
- Independent directors – 4

The composition of the Board of Directors of the Company is balanced in terms of members' qualifications, expertise, knowledge, business qualities, and diversity. Board members have an impeccable business reputation, expertise in the nuclear industry, finance and investment, corporate governance, as well as in other areas important for the management of the Company, including extensive experience in senior roles, as partners and members of the governing bodies of big international companies.

The diversity of the composition and the quota of independent directors are in the limelight. The Board is represented by both men and women, as well as citizens of various countries, which ensures gender and socio-cultural diversity.

Age diversity within the Board, %

30-50	37
50+	63

Gender diversity, %

Men	75
Women	25

The Board members do not hold any shares in the Company or equity interests in affiliates, nor do they hold any shares/equity interests in the Company's suppliers and competitors.

Members of the Board of Directors

Neil Longfellow

Position	Chairman of the Board of Directors (independent)
Participation in committees	<ul style="list-style-type: none"> • HSE Committee • Strategic Planning and Investment Committee • Nomination and Remuneration Committee
Date of election	2017 ⁷²
Year of birth	1958
Citizenship	United Kingdom
Educational background	Chartered electrical engineer and Fellow of the Nuclear Institute and the Institute of Measurement and Control.
Professional experience	<p>Since 2015 – Independent consultant to the international nuclear sector.</p> <p>2013 – Director of Major Projects for the nuclear, oil and gas sectors, Costain PLC, the UK.</p> <p>2009 – Managing Director of Springfields Fuels Limited and Vice President of the European Fuel Business, Westinghouse Electric Company.</p> <p>2007 – Deputy Managing Director, British Nuclear Fuels Limited.</p> <p>1991 – Head of Processing, Sellafield nuclear reprocessing plant in West Cumbria, British Nuclear Fuels Limited.</p> <p>He started his career in electrical engineering in the UK.</p>

Russell Banham

Position	Member of the Board of Directors (independent)
Participation in committees	<ul style="list-style-type: none"> • HSE Committee • Audit Committee • Strategic Planning and Investment Committee
Year of election	2018 ⁷³
Year of birth	1954

⁷² Elected as a member of the current Board of Directors by resolution of the General Meeting of Shareholders of the Company on 18 May 2020 for a term of three years.

⁷³ Elected as a member of the current Board of Directors by resolution of the General Meeting of Shareholders of the Company on 18 May 2020 for a term of three years.

Citizenship	Australia
Educational background	Bachelor of Commerce degree from the University of New South Wales, fellow of the Institute of Chartered Accountants Australia and New Zealand, and graduate of the Australian Institute of Company Directors.
Professional experience	2018 – member of the Board of Directors of NAC Kazatomprom JSC. 2011-2014 – Energy and Resources Industry Group Leader of Deloitte CIS, Moscow, Russia. 2007 – Audit Function Leader and Executive Committee member of Deloitte CIS, Almaty, Kazakhstan. 2002-2007 – Advisory Services Practice Leader of Ernst & Young, Brisbane, Australia. 2002 – Audit Partner, Andersen, Australia. 1974 – auditor, Andersen, Australia.
Marc Kasher	
Position	Member of the Board of Directors (independent)
Participation in committees	Audit Committee Nomination and Remuneration Committee
Year of election	2020 ⁷⁴
Year of birth	1970
Citizenship	United States
Educational background	1997 – Master of Business Administration from Georgetown University. 1992 – Bachelor of Science in Soviet Studies, Tufts University.
Professional experience	2022 – Member of the Board of Directors and Chairman of the Audit Committee, Softline Digital Lab. 2018-2021 – Independent director, National Investment Corporation of the National Bank of Kazakhstan. 2013-2019 – Independent director of Luxoft, chairman of three committees: Audit Committee, M&A Committee, and Compensation Committee. 2013 – The founder of Sapiens Advisors. 2010-2015 – Managing Director and Chairman of the Board, PineBridge Investments Russia. 1997 – An associate private equity officer, AIG Capital Partners (later renamed PineBridge Investments).
Assem Mamutova	
Position	Member of the Board of Directors (independent)
Participation in committees	in <ul style="list-style-type: none"> • HSE Committee • Audit Committee • Nomination and Remuneration Committee
Year of election	2021 ⁷⁵
Year of birth	1975
Citizenship	Republic of Kazakhstan
Educational background	1999 – Master's degree in economics from the University of Essex, the UK. 1997 – graduate of Al-Farabi Kazakh National University.
Professional experience	2013-2022 – President, Ust-Kamenogorsk Titanium Magnesium Plant. 2007 – CFO, Ust-Kamenogorsk Titanium Magnesium Plant. 2002-2007 – Executive Director, National Company Kazakhstan Temir Zholy. 1999-2002 – senior economic advisor of the European Union in London.
Bolat Akchulakov	
Position	Member of the Board of Directors

⁷⁴ Elected as a member of the Board of Directors by resolution of the General Meeting of Shareholders of the Company on 18 May 2021 for a term of three years.

⁷⁵ Elected by resolution of the General Meeting of Shareholders of the Company on 20 May 2021 for a tenure of the Board of Directors, i.e. till 18 May 2023.

Participation in committees	in Nomination and Remuneration Committee
Year of election	2021 ⁷⁶
Year of birth	1971
Citizenship	Republic of Kazakhstan
Educational background	1993 – Bachelor's degree in Economics, Alma-Ata Institute of National Economy.
Professional experience	2021 – Managing Director for Asset Management, Samruk-Kazyna JSC. 2019-2021 – CEO of KAZENERGY Association. 2017-2019 – Vice Minister of Energy of the Republic of Kazakhstan. 2016 – General Director of KAZENERGY Association of Oil and Gas and Energy Sector Entities. 2014-2016 – CEO of Almex Petrochemical. 2012 – Vice Minister of Oil & Gas of the Republic of Kazakhstan. 2010-2011 – General Director of PSA LLP and President of KazMunayGas JSC. 2009 – Managing Director for Energy, Oil&Gas Asset Management, Samruk-Kazyna JSC. 2006-2008 – Vice Minister of Energy & Mineral Resources of the Republic of Kazakhstan. 1993-2006 – Work for oil companies and banks: Kazmunaygas, Commonwealth and British Services Ltd., Kazakhoil, and Alem Bank Kazakhstan.

Yernar Zhanadil

Position	Member of the Board of Directors
Participation in committees	Strategic Planning and Investment Committee
Year of election	2021 ⁷⁷
Year of birth	1984
Citizenship	Republic of Kazakhstan
Educational background	2009 – Master's degree from the University of Manchester. 2006 – Bachelor's degree, Accounting and Finance Department, KIMEP University, Almaty.
Professional experience	2022 – Managing Director for Investment, Privatisation, and International Cooperation, Samruk-Kazyna JSC. 2018-2021 – Co-Managing Director for Economics and Finance, Samruk-Kazyna JSC. 2017 – Managing Director for Economics and Finance, Samruk-Kazyna JSC. 2016 – financial controller, Samruk-Kazyna JSC. 2010-2016 – Head of the Internal Audit Service. 2006 – senior consultant, PricewaterhouseCoopers.

Nazira Nurbaeva

Position	Member of the Board of Directors
Participation in committees	–
Year of election	2021 ⁷⁸
Year of birth	1975
Citizenship	Republic of Kazakhstan

⁷⁶ Elected by resolution of the Extraordinary General Meeting of Shareholders of the Company on 22 June 2021 for a tenure of the Board of Directors, i.e. till 18 May 2023.

⁷⁷ Elected by resolution of the Extraordinary General Meeting of Shareholders of the Company on 22 June 2021 for a tenure of the Board of Directors, i.e. till 18 May 2023.

⁷⁸ Elected by resolution of the Extraordinary General Meeting of Shareholders of the Company on 22 June 2021 for a tenure of the Board of Directors, i.e. till 18 May 2023.

Educational background	2000 – graduate of Kazakh State Academy of Management in Almaty, majoring in finance and credit. 1997 – Assistant, Tax Department, PricewaterhouseCoopers Kazakhstan. 1996 – Degree in Business Administration from the University of Wisconsin–Platteville Richland. 1994-1998 – Studies at Kazakh State University of International Relations and World Languages.
Professional experience	2021 – Managing Director for Economics and Finance, Samruk-Kazyna JSC. 2020 – Partner of Deloitte TFC, Tax and Legal Services Department. 2017 – Executive MBA from KIMEP in Almaty. 2014 – Director of Tax and Legal Services Department, PricewaterhouseCoopers. 2004-2014 – Senior manager, Tax and Legal Services Department, PricewaterhouseCoopers. 2003 – Senior tax consultant, LUKOIL Overseas Service. 1998-2003 – Tax and Legal Services Department, PricewaterhouseCoopers.
Mazhit Sharipov	
Position	Member of the Board of Directors, Chairman of the Management Board
Participation in committees	–
Year of election	2021 ⁷⁹
Year of birth	1964
Citizenship	Republic of Kazakhstan
Educational background	A degree in Heat Power Engineering from Nuclear Power Plants and Installations Department, Obninsk Nuclear Power Engineering Institute.
Professional experience	2021 – Chairman of the Management Board, NAC Kazatomprom JSC. 2021 – Chief Director for Nuclear Fuel Cycle, Kazatomprom. 2017 – Managing Director for Nuclear Fuel Cycle, Kazatomprom. 2015 – Director of Nuclear Fuel Cycle Projects, Kazatomprom. 2013-2014 – Chairman of the Atomic Energy Committee of the Ministry of Industry and New Technologies of the Republic of Kazakhstan. 2008-2013 – Director of Nuclear Energy and Industry Department, the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan, the Ministry of Industry and New Technologies of the Republic of Kazakhstan, and the Atomic Energy Agency of the Republic of Kazakhstan. 1992-2008 – Various positions in the Atomic Energy Agency of the Republic of Kazakhstan, later transformed into the Atomic Energy Committee of the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan. 1988 – Engineer, the Operation Service of the Experimental Reactor, the Institute of Nuclear Physics of the Academy of Sciences of the Kazakh SSR.

Members who joined the Board of Directors in 2021

On 22 June 2021, the Extraordinary General Meeting of Shareholders terminated early the powers of the following Board members who represented Samruk-Kazyna JSC: Beybit Karymsakov, Almasadam Satkaliyev, and Kanat Kudaibergen.

On 10 November 2021, the Extraordinary General Meeting of Shareholders terminated early the powers of Galymzhan Pirmatov, a member of the Board of Directors of the Company. There were no refusals or any agreements on the refusal by members of the Board of Directors from remuneration or future remuneration.

Changes in the Board of Directors in 2021

⁷⁹ Elected by resolution of the Extraordinary General Meeting of Shareholders of the Company on 10 November 2021 for a tenure of the Board of Directors, i.e. till 18 May 2023.

On 20 May 2021, the Annual General Meeting of Shareholders decided to appoint Assem Mamutova an independent director and a member of the Board of Directors of the Company. On 22 June 2021, the Extraordinary General Meeting of Shareholders terminated early the powers of the following Board members who represented Samruk-Kazyna JSC: Beybit Karymsakov, Almasadam Satkaliyev, and Kanat Kudaibergen, and appointed Bolat Akchulakov, Ernar Zhanadil, and Nazira Nurbayeva the Board of Directors members. On 10 November 2021, the Extraordinary General Meeting of Shareholders terminated early the powers of Galymzhan Pirmatov, a member of the Board of Directors of the Company and appointed Mazhit Sharipov a member of the Board of Directors of the Company.

4.4.2. Activities of the Board of Directors

In 2021, the Board of Directors met 14 times (13 in-presentia meetings) to consider 234 issues.

The attendance of meetings by Board members was 100% on average in 2021.

Meetings attendance by members of the Board of Directors

Name	18 Feb 2021	15 Mar 2021	01 Apr 2021	07 Apr 2021	05 May 2021	20 May 2021	24 Jun 2021	06 Aug 2021	25 Aug 2021	03 Sept 2021	24 Sept 2021	06 Oct 2021	04 Nov 2021	18 Nov 2021	%
Neil Longfellow	+	+	+	+	+	+	+	+	+	+	+	+	+	+	100
Russell Banham	+	+	+	+	+	+	+	+	+	+	+	+	+	+	100
Marc Kasher	+	+	+	+	+	+	+	+	+	+	+	+	+	+	100
Assem Mamutova	-	-	-	-	-	+	+	+	+	+	+	+	+	+	100
Bolat Akchulakov	-	-	-	-	-	-	+	+	-	+	+	+	+	+	88
Yernar Zhanadil	-	-	-	-	-	-	+	+	+	-	+	+	+	+	88
Nazira Nurbaeva	-	-	-	-	-	-	+	+	+	+	+	+	+	+	100
Mazhit Sharipov	-	-	-	-	-	-	-	-	-	-	-	-	-	+	100

The most pressing issues considered by the Board of Directors in 2021:

Reports

- Quarterly Management Board Report (CEO Report)
- Quarterly Statement of Financial Performance (CFO Report)
- Quarterly Financial Statements (IFRS Overview)
- Semi-annual Financial Statements (IFRS Overview)
- Annual Financial Statements 2020 (IFRS Overview)

Strategic issues

- Approval of the Succession Management at Kazatomprom JSC
- Approval of the Integrated Annual Report
- Approval of Kazatomprom's Consolidated Business Plan 2022-2026
- Approval of key performance indicators for the Chairman and members of the Board
- Approval of the organizational structure of Kazatomprom's headquarter

Corporate governance issues

- Approval of the Board of Directors' Work Plan
- Changes in the composition of the Board committees
- Approval of the corporate governance improvement plan and review of the plan performance report

Transactional issues

- Conclusion of related-party transactions
- Conclusion of transactions interrelated with previously concluded transactions
- Conclusion of transactions or a series of interrelated transactions resulting in the alienation of property worth more than 10% of the total asset value

Subsidiaries and affiliates

- HR issues
- Approval of internal regulations
- Conclusion of material transactions
- Increase in statutory capital
- Election of members of supervisory boards/board of directors
- Approval of annual financial statements of subsidiaries and affiliates, distribution of net profit of subsidiaries and affiliates

Approval of internal regulations

- Approval and recognition of loss effect of internal documents of NAC Kazatomprom JSC and its structural divisions

Other issues

- Overview of capital markets
- Consideration of a investor and stakeholder communication and engagement plan

Issues of Board's subdivisions

- Reports of Compliance Service, Ombudsman, and Internal Audit
- Approval of internal regulations

4.4.3. Evaluation of Board of Directors' performance

GRI 102-28

The performance of the Board of Directors is subject to external independent evaluation every three years. As part of the general assessment of the Company's corporate governance, the Board's performance was evaluated and rated "A" in 2021. Evaluation of the Board of Directors took into account the sustainable development issues, and these recommendations were included in the Corporate Governance Improvement Plan.

The assessment process included:

- Planning, document collection and analysis
- Conducting interviews with members of the Board and Board committees, representatives of the Corporate Secretary Service and Secretariat of the Management Board
- Analysing submitted documents
- Drafting a report on the performance evaluation, practical recommendations for improving the performance of the Board of Directors

4.4.4. Improvement plans for 2022

Quality of documents submitted to the Board

- Reducing the quantity of agenda items to be reviewed by the Board and its committees. When considering related-party transactions, information should be given about conformity of the transaction price with the market price, with a benchmarking review added, except for transactions that involve the sale and purchase of uranium products.
- When the documents and papers are submitted for consideration by the Board/Committees, they should specify the relevance and impact on the implementation of the Company's Development Strategy.

Succession plans for the Board of Directors and the Management Board

- Development of successors in the Company in accordance with the Succession Plan

4.4.5. Committees of the Board of Directors

GRI 102-22, 102-24

The Board of Directors has four committees:

- Production Safety (HSE) Committee
- Audit Committee
- Strategic Planning and Investment Committee
- Nomination and Remuneration Committee

The Committees⁸⁰ are accountable to the Board of Directors in line with their mandate granted by the Board of Directors and the relevant Regulations on the Committees. Members of the Committees are elected by the decision of the Board of Directors in accordance with the Law On Joint Stock Companies, the Code of Corporate Governance of Samruk-Kazyna JSC, and Kazatomprom Charter.

4.4.5.1. Performance of the Board Committees in 2021

Report of the HSE Committee

Composition of the Committee and quantity of meetings

Name	Meeting attendance, %	Reasons for absence
Neil Longfellow, Chairman	100	
Russell Banham	100	
Kanat Kudaibergen	100	Resigned from the Board on 22 June 2021
Assem Mamutova	100	Appointed to the Committee Committee on 24 June 2021

4 in-presentia meetings in 2021
22 issues considered

Issues considered by the Committee in 2021:

- Report on the implementation of the 2020 Action Plan for the social and working conditions of the production staff
- Report on the implementation of the H1 2021 Action Plan for social partnership and enhancement of social stability at Kazatomprom's enterprises
- H1 2021 Overview of sustainable development efforts
- Quarterly Occupational Safety Status Reports and Quarterly ESAP Implementation Status Reports

Report of the Audit Committee

Composition of the Committee and quantity of meetings

Name	Meeting attendance, %	Reasons for absence
Russell Banham, Chairman	100	
Neil Longfellow	100	Resigned from the Committee on 20 May 2021
Marc Kasher	100	
Assem Mamutova	100	Appointed to the Committee on 20 June 2021

10 in-presentia meetings in 2021
105 issues considered

⁸⁰ For more about the role of the Board of Directors, see Kazatomprom Integrated Annual Report 2019.

Issues considered by the Committee in 2021:

Q1:

- Preliminary approval of the 2020 annual financial statements of NAC Kazatomprom JSC
- Preliminary approval of the Report (based on the 2020 results) on compliance with the principles and provisions of the Corporate Governance Code
- Preliminary approval of the Corporate Governance Improvement Plan 2021
- Preliminary approval of the Report on the operational efficiency of the internal control system over the preparation of Kazatomprom's 2020 financial statements

Q2:

- Preliminary approval of Kazatomprom's interim financial statements 3M 2021 (consolidated and separate)
- Preliminary approval of Kazatomprom Integrated Annual Report 2020
- Preliminary approval of amendments to Kazatomprom's Corporate Accounting Policy
- Consideration of cybersecurity matters across the Group

Q3

- Preliminary approval of Kazatomprom's interim financial statements 6M 2021 (consolidated and separate)
- Preliminary approval of Kazatomprom's Whistleblowing Policy

Q4

- Preliminary approval of Kazatomprom's interim financial statements 9M 2021 (consolidated and separate)
- Preliminary approval of Kazatomprom Risk Register and Map 2022
- Preliminary approval of Kazatomprom Auditor Engagement Policy

In 2021, members of the Committee reviewed regular reports of the Internal Audit Service and the Compliance Service, as well as reports on risk management and hotline reports on a quarterly basis.

Report of Strategic Planning and Investment Committee

Composition of the Committee and quantity of meetings

Name	Meeting attendance, %	Reasons for absence
Neil Longfellow, Chairman	100	
Russell Banham	100	
Marc Kasher	100	Resigned from the Committee on 24 May 2021
Almasadam Satkaliyev	25	Resigned from the Board on 22 June 2021
Assem Mamutova	100	Appointed to the Committee on 20 June 2021. Excluded from the Committee on 24 May 2021
Yernar Zhanadil	25	Appointed to the Committee on 22 June 2021

8 in-presentia meetings in 2021
42 issues considered

Issues considered by the Committee in 2021:

Q1:

- Kazatomprom's 2020 Digital Transformation Programme Report
- The 2020 Report of Kazatomprom's Management Board on the implementation of major investment projects
- Global Uranium Demand and Supply Report

Q2:

- Annual Report on implementation of Kazatomprom's 2018-2028 Development Strategy in 2020
- Kazatomprom's Asset Restructuring Plan 2020-2022 and List of Non-Strategic Assets
- Establishment of a uranium resources fund by making a deal with Genchi Global Limited
- The results of Kazatomprom's 2020 benchmarking against other uranium companies
- Kazatomprom's Q1 2021 Digital Transformation Programme Report
- Q1 2021 Report of Kazatomprom's Management Board on the implementation of major investment projects
- Proceeding to the operational stage of Ulba FA LLP investment project
- Establishment of a uranium resources fund

Q3

- Kazatomprom's H1 2021 Digital Transformation Programme Report
- Q2 2021 Report of Kazatomprom's Management Board on the implementation of major investment projects
- TH Kazakatom AG Performance Report 2020

Q4

- Kazatomprom's Q3 2021 Digital Transformation Programme Report
- Q3 2021 Report of Kazatomprom's Management Board on the implementation of major investment projects
- 2020 Report about implementation of Kazatomprom's strategic KPIs
- List of Kazatomprom's strategic, analytical and sectoral KPIs 2022-2026
- Results of Kazatomprom's H1 2021 benchmarking against other uranium companies
- Amendments to Kazatomprom's Articles of Association to reserve corporate transformation matters for the Board of Directors

In 2021, the Committee reviewed Kazatomprom Transformation Programme Reports and reports of the Management Board on the implementation of major investment projects on a quarterly basis.

Report of Nomination and Remuneration Committee Composition of the Committee and quantity of meetings

Name	Meeting attendance	Reasons for absence
Marc Kasher, Chairman	100	
Neil Longfellow	100	
Russell Banham	100	Resigned from the Committee on 20 May 2021
Beybit Karymsakov	33	Resigned from the Board on 22 June 2021
Assem Mamutova	100	Office in the Committee assumed on 20 June 2021
Bolat Akchulakov	100	Office in the Committee assumed on 24 June 2021

11 in-presentia meetings in 2021
53 issues considered

Issues considered by the Committee in 2021

Q1:

- A new candidate for the Board of Directors of the Company
- Bonuses for the Corporate Secretary and the Ombudsman of the Company

Q2:

- Candidates for CEO-1 position

- 2020 Report on implementation of KPIs by the Chairman and members of the Management Board
- Payment of bonuses based on 2020 performance to the Chairman and members of the Management Board
- Board members' individual development plans 2021 (IDPs)

Q3

- Structure of the headquarters and the total headcount of NAC Kazatomprom JSC
- Management Succession Plan
- Election of Kazatomprom's Board Chairperson

Q4

- Appointment of CEOs of subsidiaries and affiliates
- Preliminary approval of 2022 KPIs of Kazatomprom's Board Chairman and members

In 2021, the Committee reviewed regular reports of the Ombudsman and the Corporate Secretary on a quarterly basis.

4.5. Management Board

The Management Board is Kazatomprom's executive body acting in line with the laws of the Republic of Kazakhstan, Articles of Association, Corporate Governance Code, and the Regulations on the Management Board. These documents outline the role and accountability of the Management Board, as well as the rights and responsibilities of the Management Board members.

Matters reserved for the Management Board are:

- Approval of the Company's internal documents
- Adoption of the executive business decisions
- Development and implementation of the Company's business strategy and budget
- Appointment of heads of branches and representative offices
- Implementation of decisions made by the Board of Directors and the General Meeting of Shareholders

4.5.1. Changes in the Management Board

The Management Board saw changes in the reporting period.

From 1 January 2021, the Management Board included six members.

Name	Position	Year of joining
Galymzhan Pirmatov	Chairman of the Management Board	2009
Dauren Kunanbayev	Chief Operations Officer	2011
Birzhan Duisembekov	Chief Strategy and Development Officer	2017
Beksultan Bekmuratov	Chief HR and Transformation Officer	2018
Marat Yelemesov	Managing Director for Legal Support and Risks	2018
Kamila Syzdykova	Chief Economic and Financial Officer	2009

The Management Board included the following members from 25 April 2021.

Name	Position	Year of joining
Galymzhan Pirmatov	Chairman of the Management Board	2009
Mazhit Sharipov	Chief NFC Officer	2015
Kamila Syzdykova	Chief Economic and Financial Officer	2009
Askar Batyrbaev	Chief Commerce Officer	2006
Birzhan Duisembekov	Chief Strategy and Development Officer	2017
Beksultan Bekmuratov	Chief HR and Communications Officer	2018
Marat Yelemesov	Managing Director for Legal Support and Risks	2018

On 20 May 2021 the following members joined the Management Board.

Name	Position	Year of joining
Askar Kasabekov	Chief Operations Officer	1999
Alibek Aldongarov	Chief Transformation Officer	2017

On 24 September 2021, the Board of Directors decided to reconfigure the Management Board with the following members.

Name	Position	Year of joining
Mazhit Sharipov	Chairman of the Management Board	2015
Aslan Bulekbay	Chief Operations Officer	2021
Dosbolat Sarymsakov	Chief NFC Officer	2011
Kamila Syzdykova	Chief Economic and Financial Officer	2009
Askar Batyrbaev	Chief Commerce Officer	2006
Yerlan Tuleugozhin	Chief Strategy and Development Officer	2018

Alibek Aldongarov	Chief HR and Transformation Officer	2017
Marat Yelemesov	Managing Director for Legal Support and Risks	2018

4.5.2. Management Board

(as of 31 December 2021)

Mazhit Sharipov

Chairman of the Management Board

Year of birth	1964
Citizenship	Republic of Kazakhstan
Educational background	A degree in Heat Power Engineering from Nuclear Power Plants and Installations Department, Obninsk Nuclear Power Engineering Institute.
Professional experience	September 2021 – present – Chairman of the Management Board, NAC Kazatomprom JSC. January 2021 – September 2021 – Chief Director for Nuclear Fuel Cycle, Kazatomprom. 2017-2020 – Managing Director for Nuclear Fuel Cycle, Kazatomprom. 2015-2017 – Director of Nuclear Fuel Cycle Projects, Kazatomprom. 2013-2014 – Chairman of the Atomic Energy Committee of the Ministry of Industry and New Technologies of the Republic of Kazakhstan. 2008-2013 – Director of Nuclear Energy and Industry Department, the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan, the Ministry of Industry and New Technologies of the Republic of Kazakhstan, and the Atomic Energy Agency of the Republic of Kazakhstan. 1992-2008 – Various positions in the Atomic Energy Agency of the Republic of Kazakhstan, later transformed into the Atomic Energy Committee of the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan. 1988-1992 – An engineer, the Operation Service of the Experimental Reactor, the Institute of Nuclear Physics of the Academy of Sciences of the Kazakh SSR.

Aslan Bulekbay

Chief Operations Officer

Year of birth	1982
Citizenship	Republic of Kazakhstan
Educational background	A degree in Mining Engineering from Satbayev University, postgraduate programmer of Data Science and Machine Learning at the McComb School of Business, University of Texas. He is currently continuing his studies under the PhD programme (Petroleum Engineering) at Robert Gordon University (Aberdeen, Scotland).
Professional experience	September 2021 – March 2022 – Chief Operations Officer, Kazatomprom 2013-2021 – Various positions in international companies: OMV Exploration & Production (Vienna, Austria), Saudi Aramco (Saudi Arabia), and DNO Exploration and Production (Dubai, UAE). 2009-2013 A senior lecturer, Kazakh-British Technical University, CEO of Bulekbay Consulting, Vice Chairman of the Board, Kazgeology. 2004-2012 – An inflow intensification engineer, Halliburton Energy Services.

Dosbolat Sarymsakov

Chief NFC Officer

Year of birth	1971
Citizenship	Republic of Kazakhstan
Educational background	A degree in Physics from Al-Farabi Kazakh National University, a degree in International Relations from the Diplomatic Academy of the Ministry of Foreign Affairs of the Republic of Kazakhstan.
Professional experience	2021 – present – Chief NFC Officer. 2017-2021 – Director of Nuclear Fuel Cycle Projects, Kazatomprom. 2011-2017 – Manager of Nuclear Fuel Cycle Projects, Kazatomprom. 2008-2011 – Executive Director of Nonproliferation Centre.

1996-2011 – An engineer at the Institute of Atomic Energy of the National Nuclear Centre of the Republic of Kazakhstan; a manager at the Institute for Nonproliferation (later renamed Nonproliferation Centre).
 May 1995 – December 1995 – A Lead Specialist, the Ministry of Industry and New Technologies of the Republic of Kazakhstan.

Kamila Syzdykova Chief Economic and Financial Officer	
Year of birth	1981
Citizenship	Republic of Kazakhstan
Educational background	Bachelor's degree in business administration from KIMEP University, Executive MBA from Nazarbayev University.
Professional experience	2020 – present – Chief Financial Officer. 2018-2020 – Managing Director for Economics and Finance, Kazatomprom. 2012-2018 – Various positions in Kazatomprom's partner companies, Cameco LLP and UrAsia Energy Holding Ltd, a subsidiary of UraniumOne Uranium Holding. Kamila Syzdykova held senior roles in Halyk Bank of Kazakhstan and Kyzylkum, a subsidiary of NAC Kazatomprom JSC. She started her career in 2002 as a business valuation consultant at Rice Group Central Asia.
Yerlan Tuleugozhin Chief Strategy and Development Officer	
Year of birth	1982
Citizenship	Republic of Kazakhstan
Educational background	A degree in Business Administration from Süleyman Demirel University, Executive MBA degree from KIMEP University, Master's degree in Finance from London Business School.
Professional experience	2021 – present – Chief Strategy and Development Officer. 2020 – Chief Strategy and Development Officer (replacement of an absent employee). 2019-2020 – Managing Director for Asset Management, Kazatomprom. 2018-2019 – Deputy Executive Director for Finance, JV Katco LLP. 2006-2018 – Senior roles in JV Kazgermunai LLP and Karazhanbasmunaigas JSC. 2004-2006 – An economist at Embaenergomunai.
Alibek Aldongarov Chief HR and Transformation Officer	
Year of birth	1983
Citizenship	Republic of Kazakhstan
Educational background	A degree in Computer Science, Communication Networks and Switching Systems from Almaty College of Communications, Kazakh-American University; a degree in Multichannel Telecommunication Systems from Satbayev University.
Professional experience	September 2021 – present – Chief Director for HR and Transformation. May 2021 – Chief Director for Transformation, NAC Kazatomprom JSC. Prior to his appointment, he held the position of General Director of KAP Technology LLP. Seven-years' experience in the nuclear industry in senior roles at Bailanys NAK LLP and KAP Technology LLP. Extensive experience in the field of telecommunication systems design in the representative office of Iskratel LLC, as well as in the field of information system support and development as the Director of the Technical Support Department and Vice Chairman of the Board of NBK Banking Service Bureau JSC. 2004 – He started his career as a linear structure electrician at Kazakhtelecom JSC.
Askar Batyrbayev Chief Commerce Officer	
Year of birth	1983

Citizenship	Republic of Kazakhstan
Educational background	Master's degree in Physics from Al-Farabi Kazakh National University. Currently, he is taking an Executive MBA course at Nazarbayev University.
Professional experience	April 2021 – present – Chief Commerce Officer, Kazatomprom. January 2021 – Chief Marketing Officer. 2019-2021 – Managing Director for Marketing and Sales, Kazatomprom. 2017-2019 – Various senior roles at Kazatomprom. 2006-2017 – Various positions in marketing, sales and logistics at APPAK LLP and JV Inkai LLP, subsidiaries of Kazatomprom. 2001-2004 – A laboratory assistant at the Institute of Nuclear Physics of the Republic of Kazakhstan.
Marat Yelemesov	
Managing Director for Legal Support and Risks	
Year of birth	1985
Citizenship	Republic of Kazakhstan
Educational background	A degree in International Law from Al-Farabi Kazakh National University; Department of Public Policy and Administration, New York State University.
Professional experience	2020 – present – Managing Director for Legal Support and Risks. 2019 – Managing Director for Legal Support and Risks, Kazatomprom. 2018 – Legal Department Director, Kazatomprom. 2013-2018 – An expert, Chief Expert, Head of the Arbitration Department, Deputy Director of the Department, Ministry of Justice of the Republic of Kazakhstan. 2012-2013 – Work in the Akimat of West Kazakhstan Region, Uralsk. 2009 – He started his career as a GR specialist, British American Tobacco.

GRI 405-1

Age diversity within the Management Board, %

30-50	75
50+	25

Gender diversity, %

Men	88
Women	12

GRI 202-2

100% of top managers were hired in 2021 from among the local community representatives⁸¹.

4.5.3. Management Board Performance Report

43 in-presentia meetings in 2021

771 issues considered

Key issues considered by the Management Board

- **422 issues** were submitted to the Board of Directors for consideration and approval. They included: approval of the Company's internal and planning documents; conclusion of related-party transactions; decisions on the transfer of subsoil use rights; acquisition/disposal of stakes in the authorised capital of other legal entities; preliminary approval of annual financial statements and preparation of proposals on dividend distribution. The issues also included the Management Board's reports: on risk management; on the occupational safety situation, on the implementation of Kazatomprom's Business Plans, on the implementation of the corporate governance improvement action plans, on the implementation of major investment projects, on the conclusion of related-party transactions considered by Kazatomprom's Management Board, on implementation of Kazatomprom's Asset Restructuring Plan; approval of amendments to current subsoil use contracts; approval of 2022 KPIs

⁸¹ Top management is understood to be members of the Management Board. Local communities are representatives of people who are national of the Republic of Kazakhstan.

of Kazatomprom's Management Board Chairman and members; approval of Kazatomprom's 2022 Risk Register, Map and Appetite; Approval of the organizational structure of Kazatomprom's headquarter and the total headcount; approval of limits of balance-sheet and off-balance sheet liabilities in regard to tier 2 banks for Kazatomprom's enterprises where the limits exceed the internal limits of Kazatomprom; the adoption of decisions and establishment of the Company's position as the Sole Shareholder (Participant) of the subsidiaries and as one of the shareholders/participants of the legal entities in which Kazatomprom is not the Sole Shareholder (Participant) for subsequent voting by the Company's authorised representatives at the general meetings of shareholders (participants) on certain issues of the operations of the subsidiaries and affiliates.

- The Management Board made decisions on the conclusion of **96 related-party transactions** of which the parties were representatives or intermediaries of the Company's affiliates. The decisions on the conclusion of the related-party transactions were taken by the Management Board in accordance with Article 21 of the Law of the Republic of Kazakhstan No. 550 dd. 1 February 2012 IV *On the Sovereign Wealth Fund*, Articles 64, 71 of the Law of the Republic of Kazakhstan No. 415-II dd. 13 May 2003 *On Joint Stock Companies*, and clause 3 of the Rules for concluding transactions between organisations under the umbrella of Samruk-Kazyna, where the Law of the Republic of Kazakhstan *On Joint Stock Companies* sets special conditions for conclusion of such transactions as approved by the decision of the Board of Directors of Samruk-Kazyna on 27 April 2009 (Minutes No. 18).
- **61 transactions** where Kazatomprom alienated and/or acquired property with the value being less than 10% of the total value of Kazatomprom's assets, as well as decisions made by the Company's Management Board in accordance with Article 180. 2 of Law of the Republic of Kazakhstan No. 413-IV dd. 1 March 2011 *On State Property*.
- **39 issues** were decided to establish the Company's position as a shareholder (participant) of legal entities in which NAC Kazatomprom JSC is not the Sole Shareholder (Participant) for the subsequent voting by the Company's authorised representatives at the general meetings of shareholders of such entities (voting on the operations of Baiken-U LLP, JV SKZ Kazatomprom LLP / SSAP LLP, and Uranium Enrichment Centre JSC).
- **33 decisions to approve Kazatomprom's internal regulatory documents.** They included: Regulation on the "I HAVE AN IDEA" Idea Management System at Kazatomprom; Kazatomprom Standard ST NAC 22-2021 "Capital Project Management Procedures"; Restated Regulations on Kazatomprom Scientific and Technical Council; Regulations on Kazatomprom Integrated Annual Reports; Restated rules for managing procurements at Kazatomprom and entities 50+ percent directly or indirectly owned or managed by Kazatomprom under a trust agreement; Regulations on Kazatomprom Development Strategy Update; Regulations on implementation and evaluation of the implementation of Kazatomprom Development Strategy; Regulations on Kazatomprom Integrated Annual Reports, etc.
- **120 decisions on other matters**, including payment of the membership fee to the Nuclear Energy Institute for 2021, changes in the composition of the Risk Management Committee of the Management Board; sending Kazatomprom's employees for training; decisions on matters reserved for the sole participant (shareholder), the 2021 Implementation Plan for Major Objectives, etc.

GRI 102-25

The Management Board members had no conflict of interests in 2021.

Attendance of meetings by Management Board members

Management Board members	Meeting attendance	%	Time of sitting on the Management Board
Galymzhan Pirmatov	15	34.8	1 Jan - 2 Sept 2021
Mazhit Sharipov	30	69.7	3 Sept - 31 Dec 2021
Alibek Aldongarov	27	62.7	20 May - 31 Dec 2021
Askar Batyrbaev	25	58.1	21 Apr - 31 Dec 2021
Beksultan Bekmuratov	26	60.4	1 Jan - 24 Sept 2021
Aslan Bulekbay	12	27.9	24 Sept - 31 Dec 2021

Birzhan Duisembekov	Study leave	00.0	1 Jan - 24 Sept 2021
Askar Kasabekov	10	23.2	20 May - 2 Sept 2021
Dauren Kunanbayev	8	18.6	1 Jan - 4 March 2021
Dosbolat Sarymsakov	10	23.2	24 Sept - 31 Dec 2021
Kamila Syzdykova	41	95.3	1 Jan - 31 Dec 2021
Yerlan Tuleugozhin	10	23.2	24 Sept - 31 Dec 2021
Marat Yelemesov	20	46.5	1 Jan - 19 Jul 2021

4.6. Remuneration

GRI 102-36

According to the Company's Charter, the remuneration of the Board of Directors' members is established by the General Meeting of Shareholders, while the remuneration of the Chairman and members of the Management Board is established by the Board of Directors. Consultants are not involved in remuneration allocation process.

The procedures, terms and conditions of remuneration payment are outlined in the Company's Management Remuneration, Bonus and Social Support Policy adopted on 28 June 2017. The executive pay and bonus system as now in effect has been developed in line with the recommendations of Samruk-Kazyna JSC, which was the sole shareholder of the Company in 2017.

In 2021, members of the Management Board and independent directors of the Board of Directors at Kazatomprom received a total of KZT 1,088 million in pre-tax remuneration.

Total remuneration paid to members of the Management Board and the Board of Directors, KZT billion			
	2019	2020	2021
	1.1	1.2	1.1

4.7. Risk Management and Internal Control

4.7.1. Risk management system

GRI 102-12

Key international standards and practices in risk management and internal control applied by the Company:

- COSO Internal Control – Integrated Model (2013)
- COSO Enterprise Risk Management – An Integrated Model (2004)
- COSO Conceptual Framework for Organisational Risk Management: Integration with Strategy and Performance (2017)
- ISO 31000:2018 Risk management – Principles and guidelines (2018)
- ISO 9001:2015 Quality Management System
- Samruk-Kazyna's regulatory documents on risk management and internal control

Risk management is one of the core responsibilities of Kazatomprom's leadership, and is recognized as central to decision-making processes.

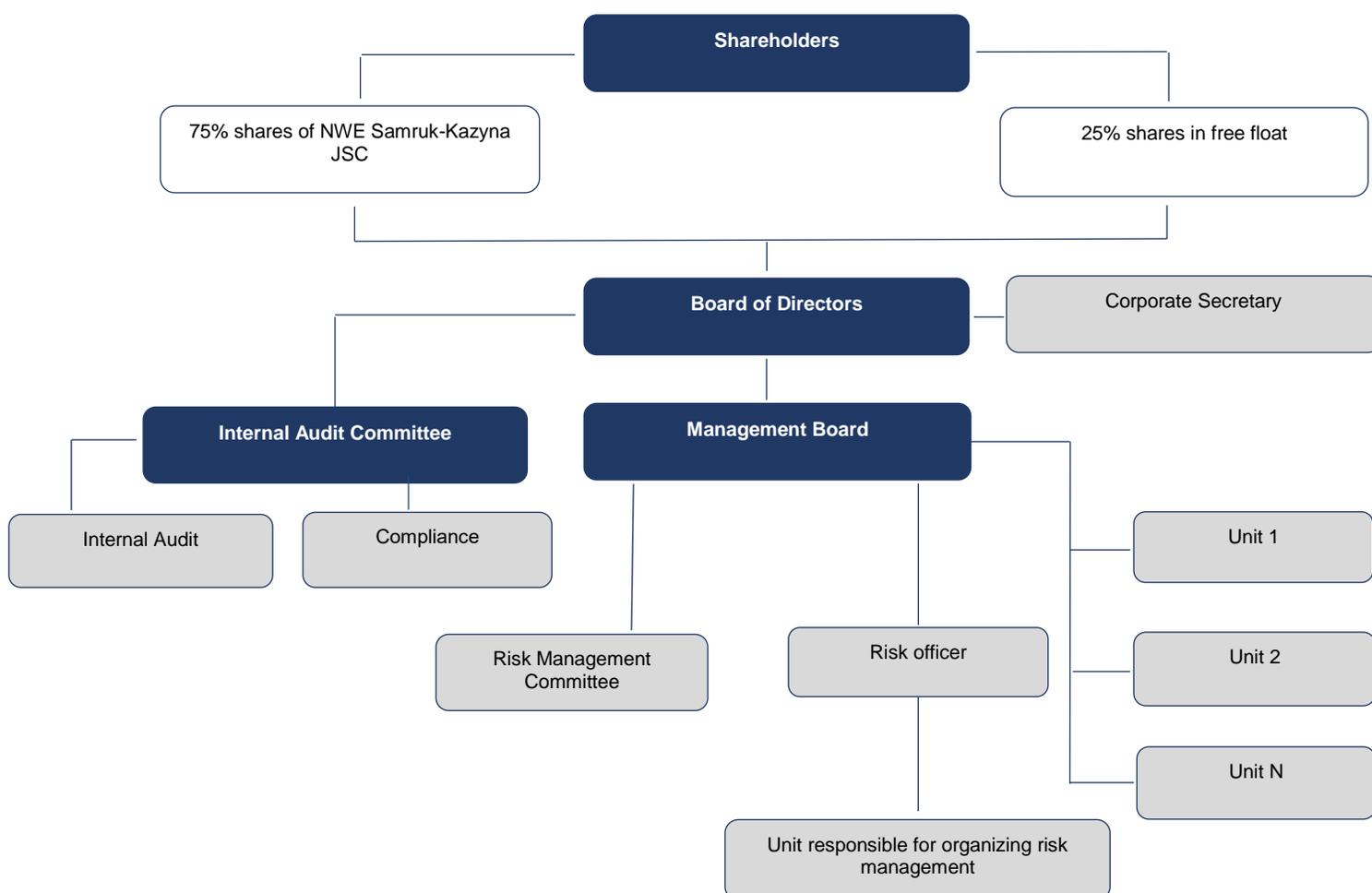
Company focuses on effective risk management given its crucial role in helping the Company to preserve its overall financial strength for the benefit of stakeholders, and ensuring the continuity of business, while generating sustainable, long-term returns

GRI 102-11

The existing risk management system was established in 2010 and since then has lied at the core of the Company's operations and development strategy. The management of the Company believes that accurate and timely risk identification, assessment, monitoring, and response make it possible to effectively make decisions at all levels of management and ensure the achievement of strategic goals and key performance indicators of the Company.

Risk Management Department is the key structural subdivision responsible for methodological guidance and coordination of all risk management efforts. The Risk Management Committee under the Management Board implements the overall management of the system, through reviewing, agreeing and approving key issues. At the level of the Company's subsidiaries and affiliates, there are Risk and Compliance Officers responsible for organizing risk management.

Organizational Structure of the Risk Management Structure

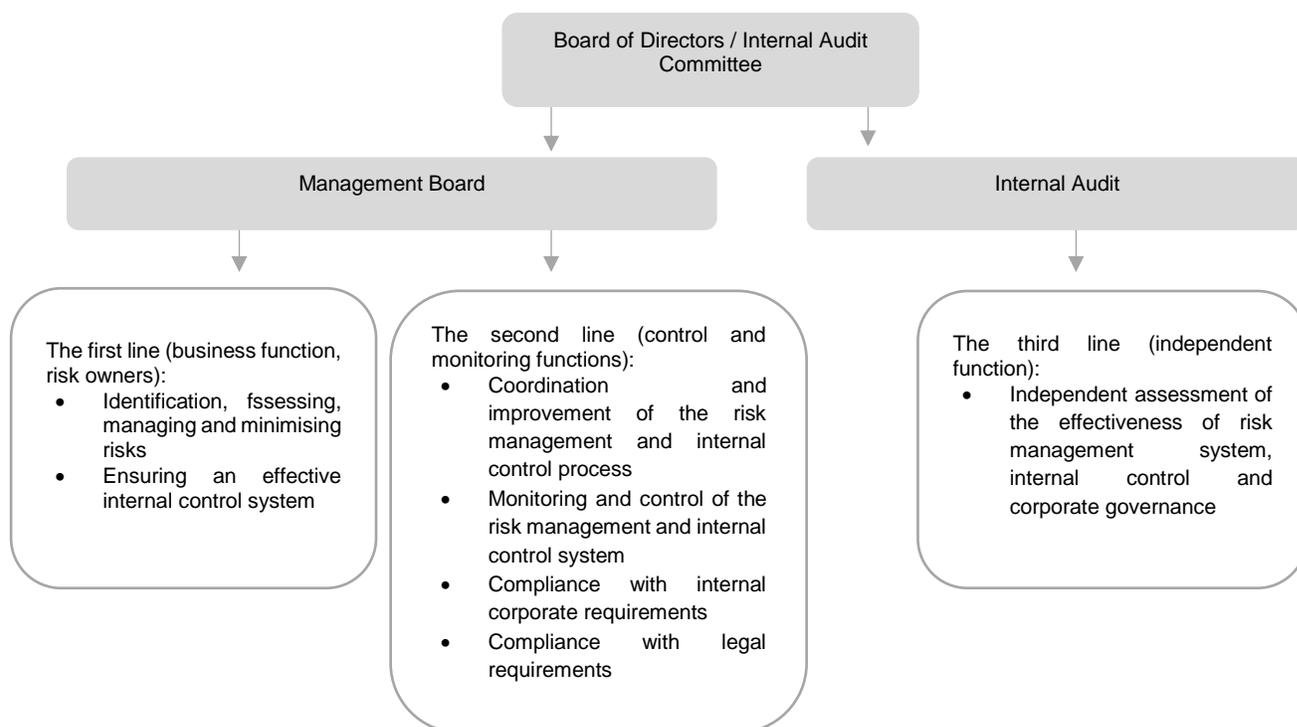


Detailed information about the structure, participants, and powers of participants in the risk management system is outlined in the Risk Management Policy posted on the Company's Internet resource, see *Risk Management Policy*.

The basis of the Company's risk management system is the risk culture fostered through the engagement of all key subdivisions and stakeholders, as well as the effective exchange of information in the risk management process between the Board of Directors, the Management Board, and the Company's divisions.

To improve the quality of the risk management system, Kazatomprom conducts corporate training on risk management and internal control for heads of subdivisions and other employees who are responsible for risk management, and an annual roundtable discussion dedicated to topical issues with employees responsible for risk management at enterprises.

The risk management and internal control system relies on the three lines model.



As part of ongoing insurance activities, the Company added nine mining SDCs and Trade and Transport Company LLP to its corporate property insurance programme launched in February 2021.

According to the guidelines for uranium sale counterparty risk management, the Company's Management Board approved a list of counterparties and limits for counterparties in relation to uranium sale contracts. According to the list and limits, the Sales Department follows procedures for the sale of uranium products of NAC Kazatomprom JSC and quarterly submits reports on counterparties to the Risk Management Department of the Company. The Risk Management Department conducts an independent risk assessment of counterparties and informs the Board of Directors of the Company as part of its quarterly risk management reports.

In addition, the Company and its subsidiaries and affiliates have a business continuity management system in place, and test business continuity plans on an annual basis.

In April 2021, the Business Continuity Rules were updated to introduce a drill and emergency training mechanism. The Company tested its business continuity plans and conducted drills with subsidiaries and affiliates over the year. Meetings of the Emergency and Epidemic Response Centre took place in 2021.

Plans for 2022:

- Continue promoting the risk culture across the Company
- Update internal regulations on risk management and internal control
- Continue digitising technological drilling data and make better use of the potential of GPS sensor data as part of the risk-based planning and management project
- Implement and promote the principles of segregation of duties (SoD) within SAP Governance, Risk and Compliance, Access Control (GRC AC)

4.7.2. Risks of NAC Kazatomprom JSC

GRI 102-15

Under the COSO methodology, all of the Company's identified risks fall into five main categories: strategic, financial, operational, investment, and legal.

Risk registers and maps of subsidiaries and affiliates are developed and approved on an annual basis. Kazatomprom's risk map is divided into zones of impact and likelihood.

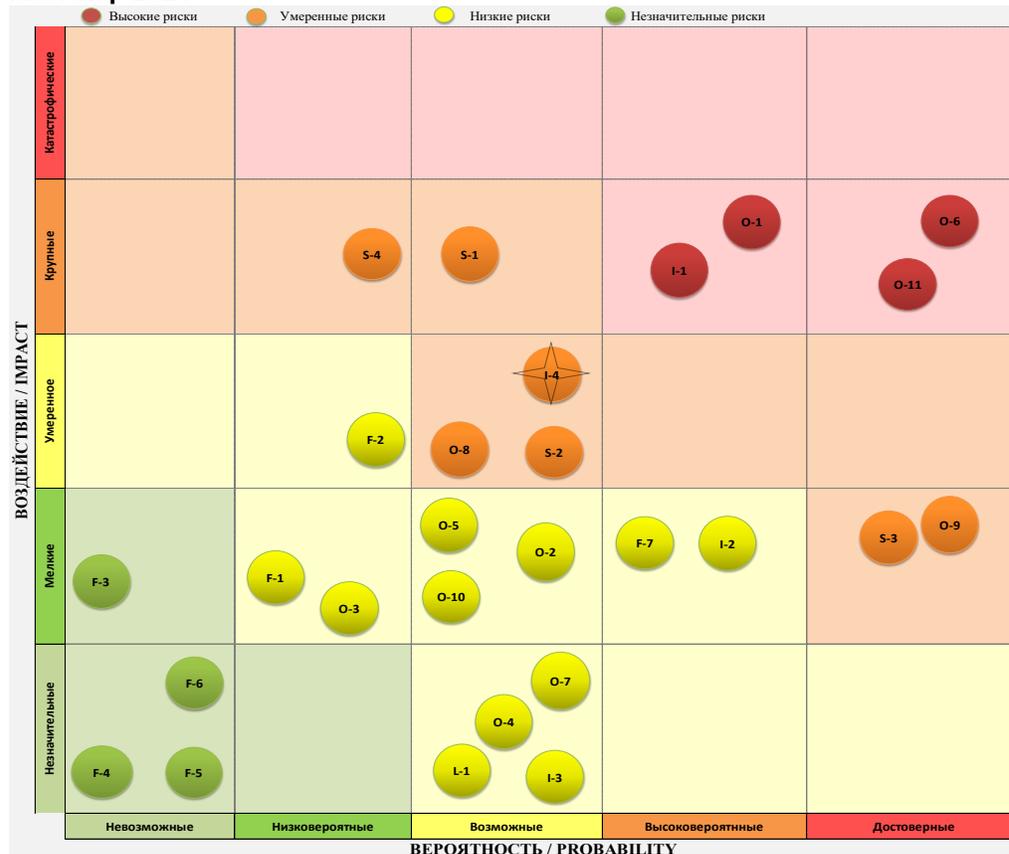
According to the Company's Risk Register, 27 risks were identified for 2021:

- 4 risks in the red zone
- 7 risks in the orange zone
- 12 risks in the yellow zone
- 4 risks in the green

A risk is assessed according to its position on the Risk Map:

- The red zone includes the highest-priority risks. The potential damage from their materialisation is 75%+ of the risk appetite
- The orange zone includes the second-priority risks, The potential damage from their materialisation is 50-75% of the risk appetite
- The yellow zone includes the third-priority risks, The potential damage from their materialisation is 25-50% of the risk appetite
- The green zone includes risks that can result in the potential damage of 25% of the risk appetite if materialised

Risk Map 2021



STRATEGIC RISKS (S)

- S-1** Decrease in uranium sales price below target
- S-2** Increasing social tensions
- S-3** Failure to implement the company's asset restructuring plan
- S-4** Reputation risk

OPERATIONAL RISKS (O)

- O-1** Failure to meet the uranium product sales plan
- O-2** Failure to meet the planned uranium mining and/or uranium product output (UPO)
- O-3** Increase in the cost of products and services above target
- O-4** Shortage of qualified staff or low qualifications
- O-5** Compliance risk
- O-6** Occupational injuries
- O-7** Economic damage to the Company's group of companies, caused by unfair acts of employees or third parties
- O-8** Reduced information security
- O-9** Failure to meet planned production/sales of beryllium, tantalum, niobium and other UMP products
- O-10** Environmental risk
- O-11** Risk of a pandemic

LEGAL RISKS (L)

- L-1** The occurrence of legal consequences of non-compliance/different interpretations of legislation

FINANCIAL RISKS (F)

- F-1** Liquidity deficit
- F-2** Credit risk vis-à-vis counterparty banks
- F-3** Failure to perform on issued guarantees and on obligations that do not have the legal form of a guarantee
- F-4** Currency risk
- F-5** Interest rate risk
- F-6** Non-compliance with covenants under loan and guarantee agreements
- F-7** Counterparty default risk

INVESTMENT RISKS (I)

- I-1** Failure to meet the planned targets for the implementation of the FA project in Kazakhstan
- I-2** Untimely performance / non-performance of Kazatomprom's Digitalisation and Transformation Strategy/Digital Transformation Programme
- I-3** Untimely implementation of DWH project (Stage 1)
- I-4** Failure to achieve targets of the Building 600. Reconstruction. Uranium Refining. Ulba Metallurgical Plant JSC. North Site project

Risks and mitigation measures

Risk	Description	Measures
S-1	Decrease in uranium sales price below target	<ul style="list-style-type: none">• Exploring the opportunity to hedge uranium prices through transactions with TH Kazakatom AG subject to provision of the necessary funding:<ul style="list-style-type: none">– Participating in tenders and conclusion of new medium-term and long-term contracts at fixed and partially indexed prices.• Media monitoring of incidents, accidents and their consequences at nuclear and uranium facilities.• Market analysis.• Fixating quotas of contracts.

S-2	Increasing social tensions	<ul style="list-style-type: none"> • Developing and supervising the implementation of the Action Plan for the social and working conditions of the production staff. • Allocating funds to support the socio-economic development in the regions of operations under subsoil use contracts. • Local government relations and cooperation. • Overseeing compliance with labour laws through the reporting of subsidiaries and affiliates. • Reaching out to the public through the media, press conferences, and public hearings.
S-3	Failure to implement the company's asset restructuring plan	<ul style="list-style-type: none"> • Prompt interaction with shareholders/participants of the companies subject to reorganisation (developing a Roadmap, engaging the consultants for financial, economic, legal analysis, risk identification, development of reorganisation models, development of risk mitigation measures, etc.) • Timely follow-up with government agencies on the pressing issues of asset restructuring.
S-4	Reputation risk	<ul style="list-style-type: none"> • Professional and timely communication and disclosure management. • Building effective internal communications in the central office, subsidiaries and affiliates. • Media and social networks monitoring. • Building and maintaining relations with local and international media.
O-1	Failure to meet the uranium product sales plan	<ul style="list-style-type: none"> • Entering into long-, short- and medium-term contracts for the sales of finished products (including contracts with KazakAtom TH AG). • Monitoring the performance of the contracts by the counterparties. • Exploring the uranium market environment and needs in the current year, using up-to-date information to assess the possibility to sell the output made available in the current year from the Uranium Sales Plan, because existing buyers refused to purchase natural uranium in view of the reduced demand for uranium products. • Estimating potential swap volumes in the event of a ban on uranium exports. • Selecting counterparties carefully, analysing and negotiating contract terms and conditions with the concerned structural units, etc.
O-5	Compliance risk	<ul style="list-style-type: none"> • Monitoring changes in the stock exchange rules. • Informing the management and employees about changes in listing requirements. • Monitoring the compliance with disclosure rules. • Training and regular testing of employees in line with the Code of Ethics and Compliance, awareness-raising about the insider information. • Updating the list of insiders up to date, collecting insider's notices of insider trading liability under applicable laws, including liability in transactions with the Company's securities.

		<ul style="list-style-type: none"> • Notifying employees of the Company in advance about closed/open periods. • Timely informing stock exchanges and regulators about insider transactions.
O-6	Occupational injuries	<ul style="list-style-type: none"> • Monitoring compliance with the HSE laws of the Republic of Kazakhstan and corporate regulatory documents. • Conducting scheduled audits of the Company's operations to ensure the compliance with health and safety regulations. • Monitoring timely training, briefing and checking personnel's knowledge of HSE. • Conducting and analysing behavioural safety audits, identifying near-misses • Controlling the provision of employees of subsidiaries and affiliates with overalls and PPE.
O-8	Reduced information security	<ul style="list-style-type: none"> • Protecting information by means of a confidential data leakage prevention system (DLP), Cryptographic Information Protection System (CIPS), and Comprehensive Information Security System (CISS). • Testing the Business Continuity and Disaster Recovery Plans. • Developing an action plan to eliminate identified IS threats and shortcomings. • Introducing SAP IS tools. • Ongoing monitoring and analysis of changes in the information security laws of the Republic of Kazakhstan.
O-9	Failure to meet planned production/sales of beryllium, tantalum, niobium and other UMP products	<ul style="list-style-type: none"> • Controlling the execution of the Production Plan. • Carrying out preventive maintenance and overhauls to prevent breakdowns. • Conducting ongoing negotiations with suppliers of raw materials (beryllium, tantalum). • Controlling the availability of standard stock (raw materials). • Controlling the sales of beryllium, tantalum and niobium products against targets. • Making contracts with consumers of beryllium, tantalum and niobium products. • Analysing the beryllium, tantalum and niobium market (by segment, region, product, competitor, consumer) on an ongoing basis.
O-10	Environmental risk	<ul style="list-style-type: none"> • Calculating emission standards and obtaining timely emission permissions from government agencies. • Ensuring non-exceedance of permitted emissions. • Implementing waste management system • Complying with sulfuric acid transportation specifications. • Monitoring compliance with sanitary rules and radiation safety standards. • Hedging environmental risks.
O-11	Risk of a pandemic	<ul style="list-style-type: none"> • Implementing a phased quarantine exit plan with due regard to the possible second COVID-19 wave, updating the plan if necessary. • Supporting employees' families affected by coronavirus/pneumonia.

I-1	Failure to meet the planned targets for the implementation of the FA project in Kazakhstan	<ul style="list-style-type: none"> • Exploring procedures to start pre-commissioning works at the FA plant together with equipment manufacturers, taking into account the pandemic situation in Kazakhstan and globally, ensuring the completion of these works before the certification. • Preliminary assessment of the FA plant by Framatome. • Conducting the certification of a production line at by Framatome. • Choosing nuclear fuel refuelling at NPPs in China and receiving relevant orders for the fuel assembly supplies. • Obtaining a license for the design and transportation of a shipping container in Kazakhstan.
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4.7.3. ESG Risk Management

Kazatomprom strives to factor in the risks and opportunities in the area of sustainable development in its operations and make informed and ethical decisions related to sustainable development. The Company works to improve its risk management and internal control system and aligning it with ESG factors and the climate change agenda to meet the expectations of socially responsible investors, sustainability promoting communities, and other stakeholders.

ESG risks

ESG area at risk	Risk	Impact	Probability
Increasing social tensions			
<ul style="list-style-type: none"> • Employee dissatisfaction with working conditions • Employee dissatisfaction with pay • Residents dissatisfaction with the social infrastructure in localities where the Company's subsidiaries and affiliates are based • Ineffective internal communications • Ineffective external communications • Negative media coverage of the Group's operations 	Strategic risks	3	3
Compliance risk (non-compliance with internal or external regulatory requirements/standards)			
<ul style="list-style-type: none"> • Insider trading with the Company's securities • Non-compliance with listing and legal regulations • Internal (corporate) fraud, bribery, corruption (corruption risks associated with procurement, human resource management, government relations, gifts, hospitality, charity, and other activities) • Inadequate implementation of hotline call management procedures 	Operational risks	2	3
Occupational injuries			
<ul style="list-style-type: none"> • Failure to comply with H&S standards • Inadequate qualifications and skills of production personnel • Low occupational safety culture • Poor workplace management by employer 	Operational risks	4	5
Reduced information security			
<ul style="list-style-type: none"> • Failure to comply with information security standards • Poor Information security awareness and/or qualifications of personnel (human factor, negligence, inattention) 	Operational risks	3	3

- Targeted cyberattack
- Lack of systems for accounting, monitoring, responding and managing information security incidents
- Lack of control over Internet access
- Vulnerabilities in IS systems
- Lack of control and analysis of the actions of privileged users
- Lack of a centralized access management and user control system in the Company's IS

Environmental risk

- | | | | |
|--|-------------------|---|---|
| <ul style="list-style-type: none"> • Excess of emission limits (air emissions, discharges, waste) • Authorized/unauthorized disposal of production waste • Sulphuric acid spillover • Increased attention from the public and political parties based on the green politics principle • Exceeding the radiation background limits in buffer zones • Tightening of the environmental laws | Operational risks | 2 | 3 |
|--|-------------------|---|---|

Risk of a pandemic

- | | | | |
|--|-------------------|---|---|
| <ul style="list-style-type: none"> • Spread of COVID-19 | Operational risks | 4 | 5 |
|--|-------------------|---|---|
-

4.7.4. Internal control

Our internal control system focuses on risk prevention in three key areas, including financial and management reporting, compliance with legal and internal regulations, and improving the operational efficiency.

Relying on the COSO Internal Control — Integrated Framework standard, the Company's internal control system consists of five interdependent components:

- Control environment
- Risk assessment
- Control procedures
- Information and its transmission
- Monitoring

In 2021, the Company developed Kazatomprom Internal Control Policy^{82,83}, which outlines key medium-term aspirations and focus areas for the development of the internal control system at Kazatomprom.

As part of the internal control system, the Company regularly implements the following measures:

- Testing the operational efficiency of the business processes controls at the Company's structural units
- Testing controls of the Company's financial reporting processes
- Diagnosing the development of the internal control system in subsidiaries

To implement and promote the principles of segregation of duties (SoD) within SAP Governance, Risk and Compliance, Access Control (GRC AC), the Risk Management Department has been designated as a business owner responsible for the SoD coordination. In 2021, the Company engaged consultants to develop SoD rules

⁸² The internal control system policy is available on the official web resource of the Company.

⁸³ Approved by the decision of the Board of Directors of NAC Kazatomprom JSC on 18 November 2021.

and configure SAP GRC AC solutions for the Procurements at the headquarters and Kazatomprom-SaUran LLP. The efforts will continue in 2022-2023.

To improve the internal control procedures undertaken to assure financial reporting in the Company, we developed a methodology in 2021 to assess the design, test operational efficiency, identify and document significant shortcomings/lack of control procedures in financial reporting of Kazatomprom.

In accordance with the methodology, the structural subdivisions, involved in the preparation of financial statements, updated the risk and process control matrixes. The Risk Management Department of the Company has updated the description of controls in the risk and control matrix and assessed the effectiveness of the design of controls. Evaluation of the effectiveness of the design of controls showed that the control procedures were properly designed and implemented to mitigate risks in the preparation of financial statements, and are sufficient for the corresponding risks.

As part of the internal control system, the Company regularly implements the following measures:

- Testing the operational efficiency of the business processes controls at the Company's structural units
- Testing controls of the Company's financial reporting processes
- Diagnosing the development of the internal control system in subsidiaries

4.8. Internal Audit

Company has an independent Internal Audit Service (the IAS) accountable directly to the Board of Directors. The Board of Directors determines the composition of the Service, the remuneration of its staff, and approves the internal audit policies and procedures, as well as the annual audit plan and budget.

Key outcomes 2021:

- The targets under the annual audit plan were 103% met
- The average degree for the implementation of the IAS recommendations was around 100% across the Group
- No facts were recorded that adversely affected the independence or individual objectivity of the internal auditors
- The management, Audit Committee, and the Board of Directors reviewed the IAS reports on a quarterly basis

4.9. External audit

GRI 102-56

In 2019, the Extraordinary General Meeting of Shareholders decided to engage PricewaterhouseCoopers LLP as an auditor of the Company. The total auditor's fee for audit services under the audit contract for 2020-2022 is KZT 908,005,400 (nine hundred eight million five thousand four hundred, incl. VAT).

The Group paid a total of KZT 120,558,000, excl. VAT, in non-audit service fees in 2021.

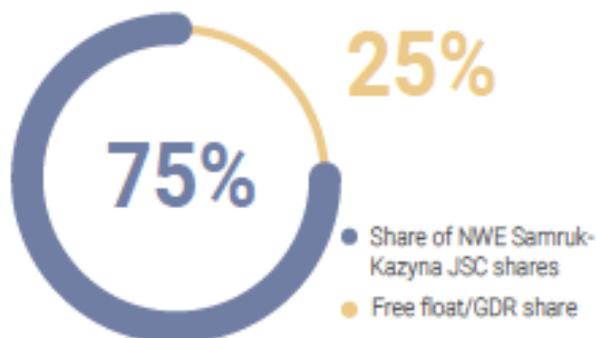
The auditor assured the company's financial statements 2021.

4.10. Shareholder Engagement

4.10.1. Share capital

Kazatomprom's total issued shares, including global depository receipts (GDRs), is 259,356,608, with 64,839,152 shares/GDRs currently on free float, which makes 25%. Samruk-Kazyna JSC holds 75% of the issued capital, or 194,517,456 shares.

Percentage of issued shares issued and free float



4.10.2. Information about listing

As part of Comprehensive Privatisation Plan 2016-2020 approved by the Government of Kazakhstan, Kazatomprom sold 25% of its shares through initial and secondary public offerings on AIX (shares and global depository receipts) and the London Stock Exchange (global depository receipts) in 2018-2020.

As a result, the shareholding of the majority shareholder, Samruk-Kazyna JSC, is 75%.

Instrument	Currency	Listing data			
		ISIN	AIX	LSE	KASE
Ordinary shares	KZT	KZ1C00001619	KAP	–	–
GDRs	USD	US63253R2013	KAP.Y	KAP	–
Bonds	KZT	ISIN KZ2C00006153	–	–	KZAPb2

4.10.3. Outreach policy

Kazatomprom works consistently to build a positive image and business reputation of the Company, as well as to inform stakeholders about the Company's operations through external and internal communications channels.

Kazatomprom has an Information Disclosure Council, the Information Disclosure Policy and Rules, Communications Strategy and other internal regulations in place.

Pursuing the Policy, Kazatomprom follows fundamental principles:

- transparency
- accessibility
- balance
- information protection
- consistency
- document evidence
- efficiency

- equality
- completeness
- impartiality
- protection of information resources
- regularity
- commitment
- reliability
- coherence

In 2021, the Company published/held:

- 50 press releases and information messages were published on the Company's official website
- 61 posts were published in the Company's social media accounts
- 15 interviews in the media and speeches at international conferences, forums, etc.
- 3 press briefings were held for the media with the participation of the Company's management
- 2 conference calls were held with investors and analysts (at the end of 2020 and at the end of the 1st half of 2021)
- 2 educational seminars for media representatives were held
- 5 trainings on communications were held for managers and employees of CC and SDEs
- a short booklet with information about the activities of the Company for external and internal audiences was developed
- 12 issues of QazAtomNews corporate magazine were published
- 50 bulletins with the Company's corporate news were issued
- 88 videos were created for internal and external audiences

4.10.4. Official channels for shareholder engagement

To ensure the exercise of equity rights and the effective shareholder engagement, the Company operates several communication channels:

- the Company's official website, www.kazatomprom.kz, where information about the Company is available, including the description of operations and performance, press releases, annual and interim reports.
- mailbox and hotline where shareholders may file inquiries on absentee voting, dividends, notification of changes in personal data and other similar matters with the registrar/depositary of the Company:
 - For holders of ordinary shares: Central Securities Depository JSC, 28, Samal-1 district, Almaty; phone: +7 (727) 355 47 61
 - For holders of Global Depositary Receipts (GDRs): Citibank, N.A., 388 Greenwich Street, New York, NY 10013, United States, phone: +1-212-816-6622 / +1-917-533-7887

4.11. Corporate Ethics and Compliance

Kazatomprom recognises the role of high professional and ethical business standards and transparency of operations. We have a zero-tolerance policy for corruption. Corruption prevention is among the Company's priorities. Corrupt actions impede the development of business, and therefore Kazatomprom seeks to prevent these violations.

Key regulations underlying the Company's anti-corruption and compliance efforts:

- Code of Ethics and Compliance
- Anti-Corruption and Anti-Fraud Policy
- Regulations on the settlement of corporate conflicts and conflicts of interest.
- Securities Trading Policy
- Rules for internal control over insider information management
- Whistleblowing Policy

The Anti-Corruption and Anti-Fraud Policy is the key document that defines major anti-corruption measures, goals, and principles of NAC Kazatomprom JSC.

Company has approved anti-corruption principles underlying the corresponding strategy. Compliance with these principles is key to effective operations of the Company in the present and to its sustainable development in the future.

Basic principles of combating corruption and fraud:

- Zero tolerance for corporate fraud
- Tone at the Top
- Certainty of punishment
- Separation of duties
- No conflict of interest
- Due diligence
- Engagement of employees and the third parties concerned
- No retaliation or sanctions

GRI 205-2

100% of employees of NAC Kazatomprom JSC have read and familiar with the Anti-Corruption and Anti-Fraud Policy and regularly confirm compliance with the principles and requirements enshrined in it.

4.11.1. Ethics and doing business principles

The general principles of employees' conduct in relations with other team members, business partners, shareholders, government agencies and other stakeholders are enshrined in the Kazatomprom Code of Ethics and Compliance.

GRI 102-16

Corporate values lie at the heart of the Code. As the backbone of the Group's corporate culture and employees' unity of views and actions, the values contribute to the effective achievement of the Company's goals.

Kazatomprom's corporate values:

- Team
- Security and safety
- Professionalism
- Responsibility
- Development

Every employee of the Company must adhere to the Code of Ethics and Compliance, regardless of their position. This Code is binding on the management and third parties related to the Company. All employees of the Company get familiar with the Code of Ethics and Compliance when they are hiring and when the Code is amended.

In 2021, Kazatomprom approved a supplier code of ethics as an annex to procurement contracts. The code obliges suppliers to follow the ethical principles and approaches of the Company.

Suppliers and contractors shall comply with the following principles:

- Prevention of corruption in their operations
- Prohibition to commit commercial bribery and other corrupt actions for their employees, representatives, and contractors/subcontractors under contracts with the Company
- Zero tolerance for any form of illegal forced labour
- Zero tolerance for child labour
- Zero tolerance for any discrimination, including employment discrimination
- Compliance with regulations related to working hours and rest of employees
- Compliance with regulations related to minimum pay
- Compliance with the labour laws of the Republic of Kazakhstan and/or other country of operations

Company thus promotes ethical values and helps instil the ethical standards in daily activities not only at Kazatomprom JSC, but also by suppliers.

4.11.2. Anti-corruption training

To raise employees' awareness about compliance and the latest changes in anti-corruption laws, NAC Kazatomprom JSC conducts regular compliance and anti-corruption training sessions. In 2021, the Company held eight outreach events on compliance and anti-corruption for employees of the central office, subsidiaries and affiliates. In particular, a meeting was held for production staff to discuss fight against corruption, with the participation of the Company's management and CEOs of subsidiaries and affiliates.

In September 2021, each of the companies under Kazatomprom's umbrella conducted annual employee testing on the principles of ethics. The responses analysed to identify areas of poor or insufficient understanding translated into a training schedule for the next year to improve knowledge.

There is a standing column on compliance in the QazatomNews corporate magazine.

4.11.3. Whistleblowing channels

GRI 102-17

Kazatomprom has the Hotline in place that is designed to receive reports from the Company's employees and third parties on corruption and fraud-related issues, violations of the Code of Ethics and Compliance, and other non-compliance with the laws regulating the Group's operations.

Anyone can report violations, using the following channels:

- Telephone: 8 800 080 4747
- An online form on the website: kazatomprom-hotline.kz
- Email: mail@Kazatomprom-hotline.kz

The Hotline received 55 reports in 2021. All the reports were reviewed within the time established by the laws of the Republic of Kazakhstan and internal documents of the Company.

Topics raised in reports, %

Topics	2020	2021
Procurement	49	25
HR issues	38	53
Other	13	22

4.11.4. Ombudsman

Kazatomprom has the Office of the Ombudsman responsible for consulting employees on the Code of Corporate Ethics, initiating procedures to consider disputes over violations of the Code, participating in their settlement, and promoting compliance with business ethics by employees.

Every employee can contact the Ombudsman through special communication channels: the helpline, internal communication channels at subsidiaries and affiliates, and WhatsApp mobile application, e-mail of the Ombudsman.

In 2021, the Ombudsman considered 23 complaints according to the laws of the Republic of Kazakhstan.

Topics raised in reports, q-ty

Topics	2021
Discrimination	3
Pay	4
Employee rights	9
Violations of ethics	2
Poor quality of meals	3
Other	2

GRI 412-1

In H2 2021, the Ombudsman's office conducted its annual anonymous survey among employees of the subsidiaries and affiliates. The anonymous survey was structured into three main blocks, which diagnose knowledge of the Code of Ethics and Compliance, the state of the moral and ethical climate within a team and awareness of the possibility of resolving conflicts at work.

The anonymous survey also provided an opportunity to identify the level of employees' awareness of the possibility to protect their rights and interests, the state of anxiety within a team, the manifestation of discrimination, and the existing problems in communication with managers. In total, 72.34% of respondents at Kazatomprom believe that their relations with colleagues rely on mutual respect and management behaves correctly with employees.

According to the survey, 86.52% believe that the Ombudsman acts in accordance with the principles of independence and neutrality when dealing with complaints. In total, 92.88% of survey participants say they are aware of the possibility to contact hotline in case of unethical behaviour by colleagues or supervisors.

Internal Communications for Ombudsmen

In March 2021, training classes titled "A Negotiator. Negotiations at Production Plants" were organised for the Ombudsmen of the subsidiaries and affiliates to introduce international negotiation practices to trainees. Trainees reviewed various cases regarding conflicts within teams, and learned how to negotiate with protesters and aggressive employees.

In May 2021, Company conducted mediation training that helped the Ombudsmen improve their mediation skills and reinforce their knowledge in conflict resolution at work.

4.11.5. Managing conflicts of interest

GRI 102-25

Kazatomprom's Code of Ethics and Compliance obliges employees report a conflict of interest, if any, according to procedures established by internal documents.

All potential or actual conflicts of interest are carefully analysed, and measures are developed to minimise the risks arising from the conflicts of interest.

Moreover, Kazatomprom has Regulations on the settlement of corporate conflicts and conflicts of interest in place. The document outlines causes of corporate conflicts and conflicts of interest, prevention procedures, as well as regulates conflict settlement actions of the Company's bodies.

4.11.6. Government relations and sponsorship

Company's approach to stakeholder communications excludes any form of bribery or corruption and applies to relations with both private entities and government authorities.

GRI 415-1

As per the Code of Ethics and Compliance, Kazatomprom does not make any payments to political parties, organisations, or their representatives, nor does it participate in political activities. Acting privately, employees may support and make contributions to political parties.

No valuables, products, services, and benefits may be received or provided to influence decision-making, as prescribed by the Regulations on giving and receiving gifts and branded souvenirs, as well as the Law of the Republic of Kazakhstan *On the Civil Service of the Republic of Kazakhstan* and the Law *On Combating Corruption*.

Kazatomprom is engaged in charity work and philanthropic activities though through the Samruk-Kazyna Trust Social Development Fund, which implements socially significant projects through competitive selection.

5. ANNEXES

5.1. About the Report

5.1.1. General information

GRI 102-54

This Kazatomprom Integrated Annual Report 2021 (the Report) is the eleventh report, which discloses information on financial, economic and operational performance, as well as data about the sustainable development achievements of the Company. The Report is intended for a wide range of stakeholders. This report has been prepared in accordance with the GRI Standards: Core option.

The Report discloses Kazatomprom's financial and non-financial operations connected with projects both in the Company's country of residence, the Republic of Kazakhstan, and abroad. Non-financial disclosures relate mainly to the subsidiaries, associates and joint ventures in which the Company holds 50%+. i.e. to the Group.

GRI 102-48, 102-49

Compared to Integrated Annual Report 2020, changes have been made to the Report in individual indicators and the disclosure of additional indicators. Detailed explanations are given in the text of the Report. In 2021, there were no significant changes in the scope and boundaries of the Report compared to the previous year.

Financial indicators are presented in the national currency of the Republic of Kazakhstan, KZT (tenge), and correspond to the IFRS audited consolidated financial statements presented in full in the Annexes to the Report and on the Kazatomprom's website.

The Report comprehensively discloses:

- Implementation of Kazatomprom's Development Strategy
- Business administration approach of the Company's management
- Significant financial, economic, and production plans and performance in core operations
- Performance in occupational health and safety and environmental protection
- Contribution to the regional development, implementation of the social policy, and other sustainable development aspects

To designate Kazatomprom and its subsidiaries, the Report uses the names: "Kazatomprom", "Company", "Group".

Standards and Statutory Requirements

The Report discloses basic data in accordance with the requirements of the laws of the Republic of Kazakhstan, the internal regulations and practices of the Company, and international corporate governance practices. When drawing up the Report, the Company considered the following documents:

- Law No. 415-II of the Republic of Kazakhstan dated 13 May 2003 On Joint Stock Companies;
- The rules for information disclosure by the issuer, Requirements for the content of information to be disclosed by the issuer, and the terms for information disclosure by the issuer on the Internet resource of the Depository of financial statements as approved by the Resolution No. 189 adopted by the Board of the National Bank of the Republic of Kazakhstan on 27 August 2018
- Information Disclosure Rules of NAC Kazatomprom JSC (2019)
- Kazatomprom's Corporate Governance Code approved by the Resolution of the Sole Shareholder dated 27 May 2015 (Decision No. 22/15 of the Management Board of Samruk-Kazyna JSC)
- Regulatory requirements of the London Stock Exchange (LSE), Kazakhstan Stock Exchange (KASE), and Astana International Exchange (AIX)
- International integrated reporting standard (<IR> International Framework)
- International standard for sustainable development reporting, Global Reporting Initiative (GRI Standards (Core))
- AA1000SES Stakeholder Engagement Standard
- Ten principles of UN Global Compact
- Sustainable Development Goals adopted by the UN General Assembly for the period till 2030

- ISO 26000:2010 Social Responsibility Guidance Standard

Since 2019, Kazatomprom has included the information on its contribution to the achievement of the United Nations Sustainable Development Goals in the Report. This approach is also followed in this document. The Company strives to ensure that the development strategy of the Group correlates with the objectives of achieving the UN SDGs in addressing environmental, social and economic issues, as reflected in the Report. In 2019, the Company identified a list of priority SDGs where the Group can make a tangible contribution: SDGs 3, 7, 8, 9, 12 and 13. By prioritising the Sustainable Development Goals, the Company focused on beacons relevant to the sectoral identity and strategy of Kazatomprom, as well as to the interests of its stakeholders.

5.1.2. Information perimeter

GRI 102-50, 102-52

The scope of the Report corresponds to the annual reporting cycle of the Company. The previous Report was published in April 2021. Electronic copies of the reports for the previous years are available on the official [website](#) of the Company. The current Report discloses operations and performance of Kazatomprom for the period from 1 January 2021 to 31 December 2021.

The Report includes important facts that fall beyond the reporting period, but are directly related to it, as well as the medium-term plans of the Group. The Report discloses information on the most significant results of operations of Kazatomprom, its subsidiaries, associates and joint ventures. During data collection, all data of quantitative and qualitative nature across the entire Group, which can have a significant impact on making an informed decision on a significant issue, event or decision, is taken into account and disclosed. Kazatomprom is systematically developing a system of work with sustainable development indicators and aims to align the disclosure perimeter with the financial data disclosure to the full amount in the near future.

Company	Scopes			
	1	2	3	4
NAC Kazatomprom JSC				
KAP-Technology JSC				
Qorgan-Security LLP				
APPAK LLP				
Ulba Metallurgical Plant JSC				
Volkovgeologia JSC				
High Technology Institute LLP				
ME ORTALYK LLP				
RU-6 LLP				
Kazatomprom-SaUran LLP				
Trading and Transportation Company LLP				
Kazakatom TH AG				
JV Inkai LLP				
Baiken-U LLP				
JV Khorassan-U LLP				
Karatau LLP				
JV Akbastau JSC				
Semizbai-U LLP				
Ulba FA LLP				
JV Budenovskoye LLP				
Uranenergo LLP				
SKZ-U LLP				
JV UKR TVS Closed Joint-Stock Company				
JV Katco LLP				
JV ZARECHNOYE JSC				
JV South Mining Chemical Company LLP				

Kyzylkum LLP				
Caustic JSC				
SSAP LLP				
Rusburmash-Kazakhstan LLP				
Zhanakorgan-Transit LLP				
Energy Asia (BVI) Limited				

5.1.3 Principles for Defining Report Quality

The following principles ensure the quality of the Report:

Principles	Description
Materiality	The Report discloses information on aspects where the Company, its subsidiaries, associates and joint ventures have a significant impact on the economy, environment, and society, as well as on issues of importance to stakeholders. The list of material topics and the procedure for defining the material topics are described below.
Comparability	The information in the Report allows stakeholders to evaluate the Company's operations and performance over time.
Transparency	The Report is written in plain language understandable to a wide audience and contains a glossary.
Reliability	All data in the Report are provided by the relevant divisions of the Group and verified for accuracy. The Report text provides links to data sources.
Accuracy	Information on all material topics is detailed and allows stakeholders to evaluate the Group's performance. All data are officially recognised by Kazatomprom and confirmed by internal and public documents.
Timeliness	The Report presents information for 2021 calendar year and will be published in 2022.

5.1.4. Material Topics and Procedure for Defining Material Topics

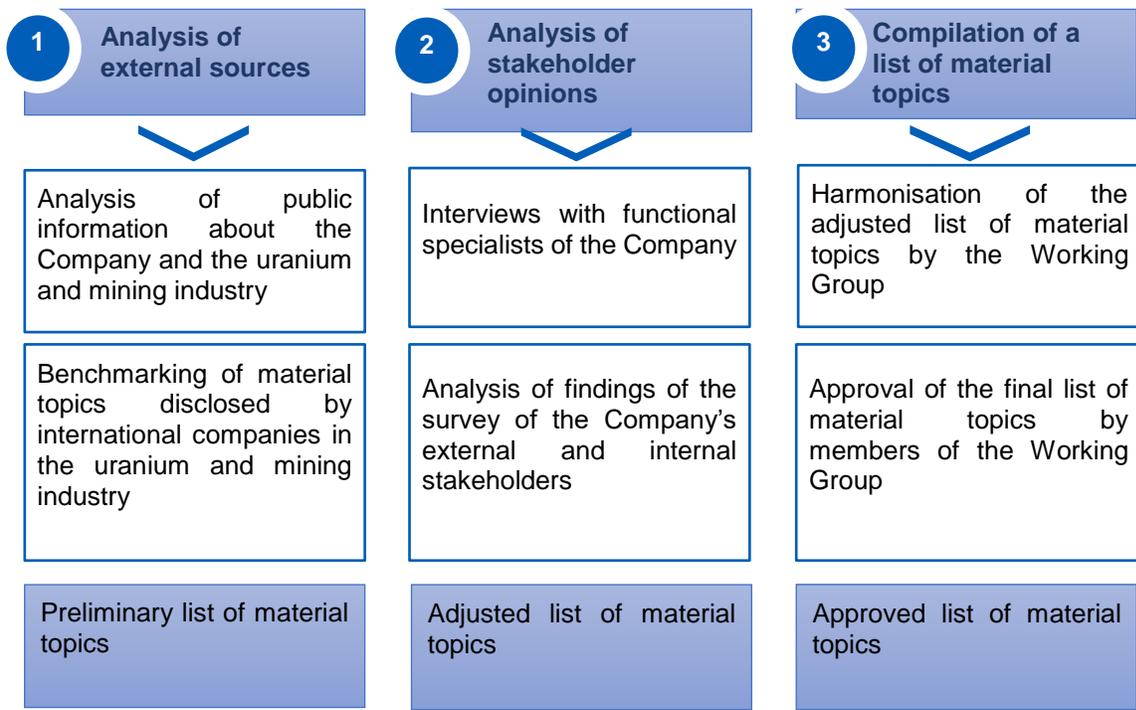
GRI 102-44, 102-46

To determine the topics that are material to be disclosed in the 2021 Report, the Company analyzed all of the topics proposed by the GRI Sustainability Reporting Standards, material topics disclosed by global uranium industry companies, and those raised during the dialogue with stakeholders. The company strives to address all material topics raised by stakeholders and publishes relevant material on the measures taken in the public reporting pages and other information media available to external audiences.

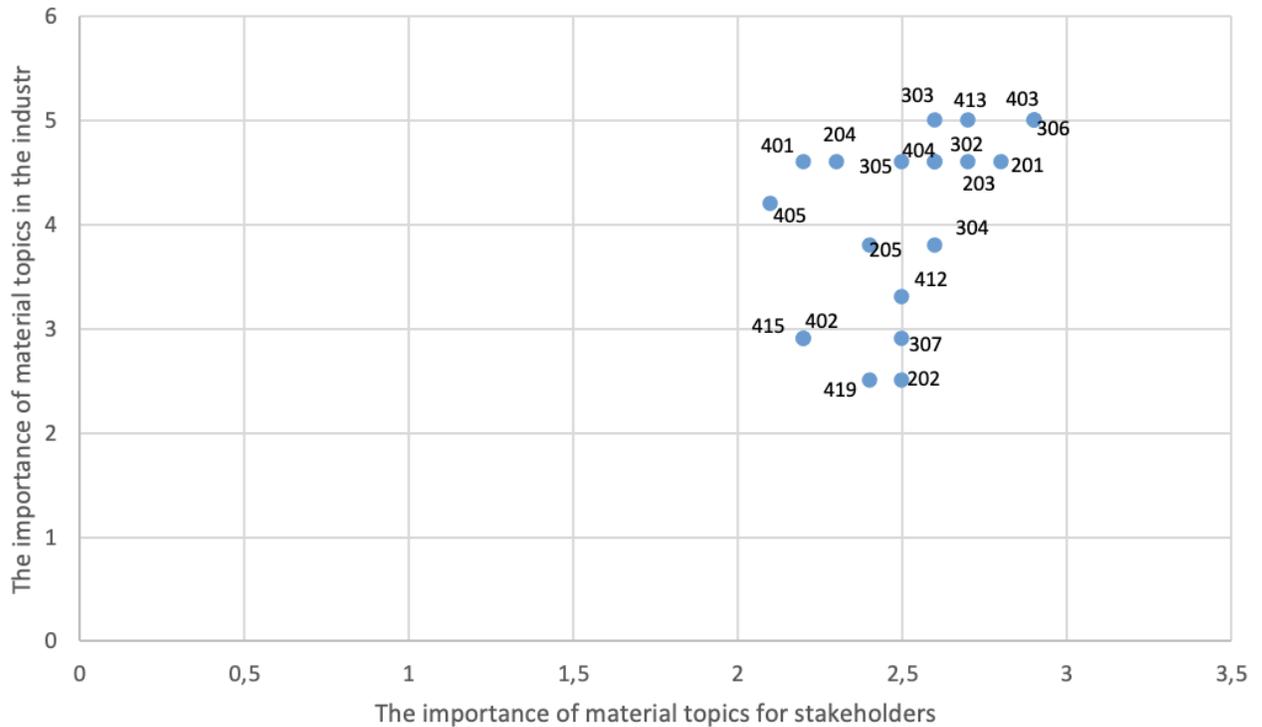
Then, representatives of the Company and its key stakeholders prioritised the topics for disclosure in the Report from the perspective of materiality. Materiality was defined according to the importance of each stakeholder group for the Company.

Based on analysis of material topics for the uranium industry, as well as the stakeholder survey, the Company made a list of material topics to be discussed at the level of the Working Group of Kazatomprom.

The Working Group, including specialists in all areas of sustainable development and representatives of the top management, approved the final list of material topics and the materiality matrix for 2021.



Kazatomprom Material Topics 2021



List of disclosed material topics

GRI 102-47

Economic topics	Environmental topics	Social topics	Topics disclosed additionally
201: Economic Performance	302: Energy	401: Employment	KAP1: Lifecycle of Production Sites
202: Market Presence	303: Water	402: Labour/Management Relations	KAP 2: Readiness for emergencies
203: Indirect Economic Impacts	304: Biodiversity	403: Occupational Health and Safety	KAP 3: Radiation safety
204: Procurement Practices	305: Emissions	404: Training and Education	
205: Anti-corruption	306: Effluents and waste	405: Diversity and Equal Opportunity	
	307: Environmental Compliance	412: Human Rights Assessment	
		413: Local Communities	
		415: Public policy	
		419: Socioeconomic Compliance	

All the identified material aspects are important both for the Company (inside the organisation) and its stakeholders (outside the organisation).

A table containing a complete list of GRI indicators and links to the disclosure of the information in the Report is presented in the Annexes to the Report (GRI Content Index).

5.1.5. Independent assurance

GRI 102-56

The external audit of the financial statements of the Company was performed by PricewaterhouseCoopers LLP. The auditor's report is presented as an Annex to the Report.

The proper disclosure of non-financial information prepared in accordance with the GRI Standards has been assured in accordance with ISAE 3000 (Revised), the International Standard for Assurance Engagements Assurance Engagements Other than Audits and Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. PricewaterhouseCoopers LLP was as an independent auditor. The auditor's report is in the Annexes to the Report.

5.1.6. Forward-looking statements

The statements in the Report are considered to be forward-looking. To describe the future, terminology is used that includes words such as "believes", "evaluates", "expects", "forecasts", "intends", "plans", "assesses", "will" or "may", or in each case, comparable words and terms of a similar or comparable terminology, or references to discussions, plans, goals, objectives, future events or intentions are designed to identify statements regarding the future. All the statements in the Report, other than statements on historical facts, are considered to be forward-looking statements. These forward-looking statements include, without limitation, statements regarding the intentions, opinions and expectations of the Company concerning, among other things, the results of operations, financial state, liquidity, prospects, growth, potential acquisitions, strategies and sectors in which the Company operates.

By their very nature, forward-looking statements involve risks and uncertainties because they relate to future events and circumstances that may or may not occur. Forward-looking statements do not guarantee future or actual performance. The actual results of the activity, the financial situation and liquidity of the Company and the development of the country and industries in which the Company operates can differ significantly from those options that are described in this document or are assumed in accordance with the statements contained in this document.

The Company does not plan and does not assume the obligation to update any information regarding the industry or any forward-looking statements contained herein, whether as a result of the obtaining new information or the occurrence of future events or any other circumstances. The Company makes no representations, provides no assurances and publishes no forecasts as to whether the outcomes described in such forward-looking statements will be achieved.

5.2. ESG Performance Indicators 2019-2021

5.2.1 Corporate Social Responsibility

Kazatomprom headcount and staff composition, employees⁸⁴

GRI 102-8, 405-1

	2019	2020	2021
Headcount at the end of the reporting period, employees	20,592	21,019	20,643
Total number of employees (headcount + independent contract agreements)	21,138	21,788	21,031
Men	16,753	17,228	16,942
Women	3,839	3,791	3,701
Managers and executives	108	119	258
Workers	20,484	20,900	20,385
Under 30	3,632	3,201	2,799
30 to 50	11,707	12,260	12,034
Over 50	5,253	5,558	5,810
Average age of employees, years	40	41	40
Long-term contract⁸⁵	19,794	19,821	19,122
Men	16,188	16,227	15,696
Women	3,606	3,594	3,426
Term contract	798	1,198	1,521
Men	565	1,001	1,246
Women	233	197	275
Full-time employment	20,577	21,011	20,627
Men	16,745	17,222	16,931
Women	3,832	3,789	3,696
Part-time employment	15	8	16
Men	8	6	11
Women	7	2	5
Independent contractor agreements	546	769	388
Men	372	518	263
Women	174	251	125

Kazatomprom headcount broken down by region and gender, employees

GRI 102-8

Region	2019		2020		2021	
	M	W	M	W	M	W
Almaty	330	272	477	326	334	272
Nur-Sultan	510	432	460	389	447	365
Shymkent	270	232	323	216	325	193
North Kazakhstan Region	866	245	811	240	740	227
South Kazakhstan Region	11,876	1,334	12,185	1,280	12,194	1,252
East Kazakhstan Region	2,892	1,317	2,963	1,333	2,878	1,383
China	5	6	5	6	21	8
United States	2	0	2	0	1	0
Switzerland	2	1	2	1	2	1
Total	16,753	3,839	17,228	3,791	16,942	3,701

Structure of governing bodies and employees, %

⁸⁴ Data for 2019 are taken from the previous Annual Reports of NAC Kazatomprom JSC. In 2020, the Report includes data of Ulba FA LLP and Rusburmash-Kazakhstan LLP. In the Sustainable Development section, Social Responsibility subsection, comparative information for 2019 is presented taking into account these enterprises. Therefore, the 2019 headcount was 21,434 people, incl. 3,983 women.

⁸⁵ The data not collected on the total number of employment contracts by region.

GRI 405-1

Indicator	2019		2020		2021	
	Governing bodies	Employees	Governing bodies	Employees	Governing bodies	Employees
Men	93%	81%	92%	82%	91%	86%
Women	7%	19%	8%	18%	9%	14%
Kazaks	80%	69%	74%	70%	75%	68%
Russians	11%	25%	13%	25%	16%	26%
Other	9%	6%	13%	6%	9%	6%
Under 30	0%	18%	1%	15%	2%	13%
30 to 50	71%	57%	64%	58%	68%	58%
Over 50	29%	25%	35%	26%	30%	29%

Number of hired employees, employees
GRI 401-1

Region	2019		2020		2021	
	M	W	M	W	M	W
Almaty	107	11	56	25	51	38
Nur-Sultan	214	35	55	45	99	78
Shymkent	112	8	55	21	58	18
North Kazakhstan Region	340	47	105	39	155	65
South Kazakhstan Region	1,260	337	1,552	68	2,084	136
East Kazakhstan Region	346	209	305	120	314	211
Outside the Republic of Kazakhstan (China, USA, Switzerland)	1	0	20	0	8	1
Total	2,379	648	2,148	318	2,769	547

Kazatomprom's dismissed employees and staff turnover
GRI 401-1

Region	2019 ⁸⁶												Total
	Under 30				30 to 50				Over 50				
	Number of dismissed employees		Share, %		Number of dismissed employees		Share, %		Number of dismissed employees		Share, %		
	M	W	M	W	M	W	M	W	M	W	M	W	
Almaty	20	4	1%	0.1%	42	8	1%	0.3%	19	5	1%	0.2%	196
Nur-Sultan	53	10	2%	0.4%	108	21	4%	0.7%	48	14	2%	0.5%	212
Shymkent	27	5	1%	0.2%	55	11	2%	0.4%	24	7	1%	0.2%	132
North Kazakhstan Region	47	9	2%	0.3%	97	19	3%	0.7%	43	13	1%	0.4%	222
South Kazakhstan Region	367	72	13%	2.5%	754	149	26%	5.1%	335	99	12%	3.4%	1,679
East Kazakhstan Region	85	17	3%	0.6%	175	35	6%	1.2%	78	23	3%	0.8%	458
China	–	–	–	–	–	–	–	–	–	–	–	–	
Total	600	117			1,230	243			547	161			2,899

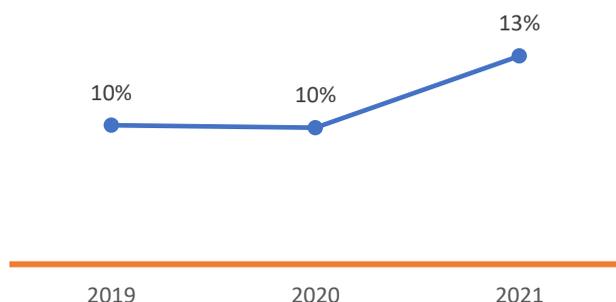
Region	2020												Total
	Under 30				30 to 50				Over 50				
	Number of dismissed employees		Share, %		Number of dismissed employees		Share, %		Number of dismissed employees		Share, %		
	M	W	M	W	M	W	M	W	M	W	M	W	
Almaty	15	3	1%	0.1%	49	8	2%	0.3%	20	2	1%	0.1%	97
Nur-Sultan	38	8	1%	0.3%	127	21	4%	0.7%	51	6	2%	0.2%	251

⁸⁶ Dynamics of data for 2019 presented from the previous Annual Reports of NAC Kazatomprom JSC.

Shymkent	19	4	1%	0.1%	64	11	2%	0.4%	26	3	1%	0.1%	127
North Kazakhstan Region	34	7	1%	0.3%	114	19	4%	0.7%	46	5	2%	0.2%	225
South Kazakhstan Region	266	57	9%	2.0%	886	146	31%	5.1%	355	40	12%	1.4%	1,750
East Kazakhstan Region	62	13	2%	0.5%	206	34	7%	1.2%	82	9	3%	0.3%	406
China	–	–	–	–	–	–	–	–	–	–	–	–	
Total	434	93			1,446	239			580	65			2,857

Region	2021												Total
	Under 30				30 to 50				Over 50				
	Number of dismissed employees		Share, %		Number of dismissed employees		Share, %		Number of dismissed employees		Share, %		
	M	W	M	W	M	W	M	W	M	W	M	W	
Almaty	11	9	0%	0.2%	43	27	1%	0.7%	19	5	1%	0.1%	114
Nur-Sultan	26	20	1%	0.5%	62	55	2%	1.5%	18	5	0%	0.1%	186
Shymkent	17	7	0%	0.2%	63	18	2%	0.5%	16	5	0%	0.1%	126
North Kazakhstan Region	51	9	1%	0.2%	109	43	3%	1.2%	37	16	1%	0.4%	265
South Kazakhstan Region	514	49	14%	1.3%	1209	136	32%	3.6%	546	58	15%	1.6%	2,512
East Kazakhstan Region	79	16	2%	0.4%	158	62	4%	1.7%	134	76	4%	2.0%	525
China\USA	–	–	–	–	6	–	–	–	–	–	–	–	6
Total	698	110			1,650	341			770	165			3,734

Staff turnover across the Group, %



Number of employees who returned to work after parental leave and childcare leave⁸⁷

GRI 401-3

Indicator	2019	2020	2021
Total number of employees who took parental leave	257	210	357
Men	21	20	51
Women	236	190	306
Total number of employees who returned to work after parental leave	102	143	127
Men	7	13	19
Women	95	130	108
Total number of employees who returned to work at the end of paternity leave (in the previous reporting period)	118	102	143
Men	3	7	13
Women	115	95	130
Total number of employees who returned to work at the end of paternity leave and continued to work twelve months after returning to work	–	–	69
Men	–	–	4
Women	–	–	65
Return to work	0.40	0.68	0.36
Men	0.33	0.65	0.37
Women	0.40	0.68	0.35
Retention rate	0.86	1.40	0.48
Men	2.33	1.86	0.31
Women	0.83	1.37	0.50

Kazatomprom payroll fund, KZT

Indicator	2019	2020	2021	Change 2021-2020
Average monthly salary of production staff ⁸⁸	263,997	279,202	314,653	112.7%
Payroll fund, KZT million ⁸⁹	64,884	65,707	71,484	108.8%

Benchmarking Kazatomprom's minimum salary against Kazakhstan's minimum salary, KZT

Indicator	2019	2020	2021
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⁸⁷ Data are not available on the total number of employees who returned to work at the end of maternity/paternity leave and continued to work twelve months after returning to work and the retention rate for 2019 and 2020.

⁸⁸ The indicator is calculated as the ratio of the production staff payroll fund as per the Labour Report (statistical reporting) to the actual number of production staff.

⁸⁹ Accrued salary, including all related taxes and deductions (pension fund deductions and personal income tax).

	M	W	M	W	M	W
Minimum salary in Kazakhstan	42,500	42,500	42,500	42,500	42,500	42,500
Salary of entry-level employee across the Group ⁹⁰	42,500	42,500	42,500	42,500	42,500	42,500
Ratio	1	1	1	1	1	1

Kazatomprom staff training, man-workshops ⁹¹

GRI 404-2

Employee category	2019	2020	2021
Administrative staff and management	5,021	3,854	4,265
Production staff	22,128	29,123	32,979
Total	27,149	32,977	37,244

Average number of hours spent on training of one employee

GRI 404-1

Employee category	2019	2020		2021	
		W	M	W	M
Administrative staff	30.8	43	30	35	44
Production staff	35.7	37	20	35	52
Average across all categories	35.4	40.4			41.6

⁹⁰ Base wage rate of a production worker of Category 1.

⁹¹ Includes expenses for professional development in the Group.

5.2.2 Environmental Protection

Direct (Scope 1) and Indirect (Scope 2) GHG emissions, t CO₂-eq GRI 305-1, 305-2

Indicator	2019	2020	2021	Change 2021–2020
Direct greenhouse gas emissions	107,600	92,590	106,910	15%
Indirect GHG emissions ⁹²	842,122	819,883	842,554	3%

Breakdown and source of air emissions, '000 tonnes⁹³

GRI 305-7

Air emissions	Source	2020	2021 ⁹⁴
NOx	boilers, furnaces, incinerators, stationary diesel power stations (emergency), compressors	0.096	0.123
SOx	boilers, furnaces, incinerators, stationary diesel power stations (emergency), compressors	0.073	0,849
Solid emissions	boilers, furnaces, machine tool operation in the machine shops	0.054	0,111
CO	boilers, vehicles, gas furnaces, stoves	0.190	0,181
Volatile organic compound emissions	vehicles, solvents, gas, wood and biomass burning	0.815	0,056
Substances of Hazard Class 1	boilers, vehicles, lamps containing quicksilver	0.001	0,012
Total		1.229	1,332
Specific air emissions, kg/t		17.50	31,00

Total water withdrawal by source, '000 m³ ⁹⁵

GRI 303-3

Source	2019	2020	2021
Surface water	865.7	781.4	6.5
Ground water	8,992	8,539.8	8,531.3
Municipal and other water supply systems	836.6	1,131.1	1,582.9
Total water withdrawal	10,694.3	10,452.3	10,120.7

Total water recycled and reused, '000 m³

Indicator	2019	2020	2021	Change 2021–2020
Total water recycled and reused	50,443	50,683	50,384	(0.59%)

⁹² These indicators were calculated on the basis of a market method that displays the intensity of GHG emissions from facilities generating electric and thermal power. According to this method, Kazatomprom's total Scope 2 GHG emissions are calculated as the GHG emissions of the electric and thermal power producers from whom it is purchased. The Company also made region-based calculations, reflecting the average intensity of the GHG emissions from energy production within the national borders of the Republic of Kazakhstan. This method uses regional indirect energy emission factors calculated on the basis of statistical data on fuel consumption and electricity supplied from all generating facilities connected to the national grid. Since thermal power is supplied directly from generating assets, the calculation of the Scope 2 GHG emissions from thermal power production is similar to the market method. According to the regional method, the Scope 2 GHG emissions were 592,712 tonnes of CO₂-eq in 2019, 578,723 tonnes of CO₂-eq in 2020, and 598,847 tonnes of CO₂-eq in 2021.

⁹³ The data include air emissions by natural uranium mining and processing companies. This table does not cover ancillary and service enterprises: Volkovgeologia JSC, Caustic JSC, Uranenergo LLP.

⁹⁴ The increase in indicators is down to an increase in natural uranium production in 2021, an active pandemic phase in 2020, as well as a rise in the scope enterprises covered as compared to Integrated Annual Report 2020.

⁹⁵ In 2019 and 2020, the following subsidiaries and affiliates were included in the disclosure perimeter: KAP-Technology LLP, APPAK LLP, Volkovgeologiya JSC, ME ORTALYK LLP, RU-6 LLP, Kazatomprom-SaUran LLP, JV Inkai LLP, Baiken-U LLP, Khorasan-U LLP, Karatau LLP, Akbastau JV JSC, Semizbay-U LLP, Uranenergo LLP, JV Katko LLP, JV ZARECHNOYE JSC, JV Southern Mining and Chemical Company LLP.

Total waste by type, '000 tonnes**GRI 306-3**

Type of waste	2019	2020	2021	Change 2021–2020
Industrial waste	936.4	996.2	893.3	-10.3%
Household waste	3.1	1.8	1.6	- 8.9%
Solid radioactive waste	4.1	3.3	2.6	- 21.2%
Liquid radioactive waste	120.5	128.1	119.2	- 7.1%
Total	1,064.1	1,129.4	1,016.6	-10.0%

Electricity produced by PV plants, MWh

Indicator	2019	2020	2021	Change 2021–2020
Electricity output, MW	4.32	3.52	3.34	-5.11%

5.2.3 Occupational Health and Safety

Kazatomprom's H&S expenses, KZT billion

Indicator	2019	2020	2021
Health and safety expenses	7.23	7.63	8.29

Occupational injuries at Kazatomprom⁹⁶

GRI 403-9

Indicator	2019	2020	2021
For all employees			
Number of fatal occupational accidents	1	1	2
Total number of high-impact occupational injuries (excluding fatalities)	2	2	8
Total occupational accidents ⁹⁷	8	8	9
LTIFR ⁹⁸	0.24	0.25	0.55
Unsafe conditions, unsafe acts, and near-miss reporting	34,546	34,529	44,271
Number of hours worked ⁹⁹	33,510,295	31,812,773	32,909,020
For all employees (other than full-time workers) whose work and/or workplace is controlled by the Company			
Total fatal occupational accidents	0	0	0
Total number of high-impact occupational injuries (excluding fatalities)	0	0	0
Total registered occupational injuries	0	0	0

Radiation safety indicators at Kazatomprom, m3v a year

Indicator	2019	2020	2021
Average radiation exposure dose for employees	1.51	1.45	1.44
Average natural background radiation in areas where the Group operates	0.4 – 1.0	0.85	0.75 – 1.36
Maximum annual effective dose of group-A employees	4.94	4.94	6.19

⁹⁶ In accordance with the requirements of the Labour Code of the Republic of Kazakhstan, Unified Occupational Safety Management System standard (ST NAK 5.0.6-2021).

⁹⁷ It is established as the impact of a harmful and/or dangerous production factor on an employee during his/her work or performance of the employer's assignments, with the impact resulting in an occupational injury, sudden deterioration in employee's health or poisoning that lead to temporary or permanent disability or death.

⁹⁸ The indicator is based on 1,000,000 worked hours.

⁹⁹ All employees of subsidiaries and affiliates.

5.2.4. Socio-Economic Contribution

Direct economic value generated and distributed, KZT billion

GRI 201-1

Expenditure	2019	2020	2021
Direct economic value generated			
Incomes ¹⁰⁰	621.13	667.12	761.53
Distributed economic value, including			
Operating expenses ¹⁰¹	273.42	288.11	373.59
Salary	49.15	50.72	53.05
Interest and dividend expenses	11.96	7.68	6.71
Taxes, except income tax	27.79	24.73	26.14
Income tax expenses	33.51	63.78	61.62
Other expenses	8.51	9.73	15.86
Social expenditures (investment in local communities)	1.07	1.01	4.54
Retained economic value (profit for year)	213.75	221.37	220.03

Contributions to the local budget for socio-economic and infrastructure development of regions of operations, KZT million

Company	2019	2020	2021
Turkistan Region			
NAC Kazatomprom JSC	154.5	165.4	42.8
APPAK LLP	37.9	40.3	43.1
JV Akbastau JSC	194.9	214.7	213.0
JV South Mining Chemical Company LLP	86.5	96.3	71.5
Volkovgeologia JSC	2.5	2.8	2.9
JV ZARECHNOYE JSC	10.1	20.8	21.3
JV Inkai LLP	58.0	59.9	63.9
Kazatomprom-SaUran LLP	387.1	427.8	429.5
Karatau LLP	52.3	52.9	58.8
ME ORTALYK LLP	76.4	83.1	43.3
JV Katco LLP	11.4	3.96	227.7
JV Budenovskoe LLP	-	21.5	-
Kyzylorda Region			
NAC Kazatomprom JSC	-	-	-
Baiken-U LLP	38.6	42.2	43.6
RU-6 LLP	102.8	107.5	113.2
Semizbai-U LLP	26.5	26.7	29.2
Kyzylkum LLP	116.2	126.1	128.8
JV SMCC LLP	-	-	26.7
Almaty Region			
MC KazSilicon LLP	0.3	-	-
East Kazakhstan Region			
Ulba Metallurgical Plant JSC	6.6	7.2	7.4
North Kazakhstan Region			
Semizbai-U LLP	18.9	19.1	20.9
Akmola Region			
Semizbai-U LLP	18.9	19.1	20.9
Mangistau Region			
NAC Kazatomprom JSC	-	-	-
Total	1,400.4	1,537.3	1,608.6

¹⁰⁰ Income is calculated in accordance with the GRI methodology and includes the total revenues and all incomes of the Company.

¹⁰¹ Operating expenses include the following expenditures: cost of sales (excluding salaries and taxes), selling expenses (excluding salaries and taxes), general and administrative expenses (excluding salaries and taxes).

Local content in procurement across regions, 2021, %¹⁰²

GRI 204-1

Region	Goods	Works	Services	Works and services
Akmola Region	97	100	97	97
Aktobe Region	32	94	24	31
Almaty Region	26	100	100	100
Atyrau Region	35	100	100	100
West Kazakhstan Region	41	100	90	100
Zhambyl Region	90	95	94	95
Karagandy Region	87	100	11	13
Kostanay Region	11	30	99	72
Kyzylorda Region	76	96	98	97
Mangystau Region	96	72	54	67
South Kazakhstan Region	76	90	92	91
Pavlodar region	80	75	99	91
North Kazakhstan Region	77	100	-	100
East Kazakhstan Region	72	91	99	93
Nur-Sultan	95	69	95	92
Almaty	55	90	87	89
Total for Kazatomprom	74	89	83	86

¹⁰² According to the Law of the Republic of Kazakhstan On Industrial Policy, the concept of local content was replaced with “internal value”, the percentage of goods produced and works and services performed in the Republic of Kazakhstan in the total volume of goods produced, works performed or services delivered.

5.3. Reports by Chairmen of the Board of Directors Committees for 2021

5.3.1. Production Safety (HSE) Committee Report

Dear shareholders,

Acquiring the status of a public company has created new challenges for the Company. The importance of corporate governance and sustainable development has increased significantly, in accordance with international standards. An important role in the activities of the Board of Directors has been assigned to the Production Safety (HSE) Committee.

The main objective of the Committee is to elaborate and submit recommendations to the Company's Board of Directors on the status of HSE at the Company and its subsidiaries, associates and joint ventures, and on social and sustainable development issues.

In August 2021, the following members were appointed to the Committee: Neil Longfellow, an independent director, Russell Banham, an independent director, and Kanat Kudaibergen, a representative of Samruk-Kazyna. The expansion of the Committee made it possible to improve communications between the Company and its major shareholder. In addition, it improved the decision-making process of the Board of Directors at meetings.

During the year, Committee members held five face-to-face meetings and considered 23 issues. On a quarterly basis, Committee members reviewed and approved reports on the state of HSE and status reports on the implementation of the ESAP Roadmap.

Every six months, the Committee considers progress reports on corporate Social Responsibility and the sustainable development of the Company, as well as a report on the implementation of the Action Plan to guarantee respective social and labour conditions for production staff.

2021 results and outlook for 2022

In its operations, the Company always recognises its responsibilities to stakeholders in relation to production safety, occupational health and safety, and environmental protection. We are confident that concerns over safety at each production stage has a positive impact on staff motivation, as well as employee satisfaction levels, the quality of work, and the economic performance of the Company.

The results of the past year create a solid foundation for further work in the priority areas of the Company. The Board of Directors is confident that positive development trends in global nuclear power are sustainable and that there are opportunities for the Company to leverage its full potential. Committee members plan to assess the extent to which employees are becoming more aware of the need for compliance with respective safety requirements, and also monitor the current level of production safety in occupational health and safety and industrial and radiation safety at the headquarter and at all Company's entities.

Neil Longfellow

**Chairman of the Production Safety (HSE) Committee
Board of Directors of Kazatomprom**

5.3.2. Audit Committee Report

Dear shareholders,

The Audit Committee of the Company was set up to oversee the reliability of financial information provided to shareholders and to assess internal control and risk management systems. The Company's internal audit and compliance functions are accountable to the Audit Committee.

In 2021, the Committee consisted entirely of independent directors with the relevant expertise and competencies to make effective decisions. During the year, 10 Committee meetings were held in presentia and in absentia, and 105 issues were considered. In order to ensure a more effective and comprehensive discussion of issues, relevant members of the Management Board of the Company and other top managers were involved as required.

In addition to the fresh opportunities offered, the Company's new status as a public company resulted in changes that impacted the work of the Audit Committee. In particular, the Committee put in place the practice of reviewing the quarterly financial statements of the Company, with subsequent disclosures being made, in order to maintain equal access to the information for all stakeholders of the Company. The Committee also considered and recommended for approval the financial statements of the Company for 2020, which included assessing the Company's financial ability to pay dividends at the level promised in

the Securities Prospectus of the Company. In 2021, the Company held its third annual General Meeting of Shareholders, where shareholders voted on, and approved, the financial statements, as well as the dividend size per ordinary share.

PricewaterhouseCoopers LLP was recommended by the Committee and was appointed to be the auditor of Kazatomprom from 2020 to 2022 at an extraordinary General Meeting of Shareholders held in December 2019.

Russell Banham
Chairman of the Audit Committee
Board of Directors of Kazatomprom

5.3.3. Strategic Planning and Investment Committee Report

Dear shareholders,

In connection with growing interest in the activities of Kazatomprom, the Strategic Planning and Investment Committee is becoming increasingly important. Committee members now pay greater attention to our Development Strategy, international cooperation, and promoting investment. The Committee is an important part of the Board of Directors, and thanks to the main tasks performed by the Committee, the Board can successfully deal with, and adapt quickly to, continually changing environment and comply with particularly important corporate governance principles.

The main objective of the Strategic Planning and Investment Committee is to elaborate and submit recommendations to the Board of Directors of the Company on the strategic and investment activities of the Company.

In 2021, the Committee saw significant changes. On 18 May 2020, it welcomed a new member, independent director Marc Kasher.

During the year, Committee members held six face-to-face meetings and considered 27 issues. On a quarterly basis, the Committee reviewed and approved reports on the Transformation Programme, as well as reports of the Management Board on the implementation of large investment projects. It also carried out work to implement strategic KPIs based on 2020 performance. In addition, Committee members assessed the results of a benchmarking analysis of the Company against other uranium companies in the reporting period.

2021 results and outlook for 2022

In 2021, the Company once again achieved all set goals and confirmed its status as the global leader in the production and sale of natural uranium.

The Company has set new long-term goals and objectives for 2022. One of the goals is to complete the restructuring programme of Kazatomprom assets, which will facilitate the launch of products with high added value.

Neil Longfellow
Chairman of the Strategic Planning and Investment Committee
Board of Directors of Kazatomprom

5.3.4 Nomination and Remuneration Committee Report

Dear shareholders,

The Nomination and Remuneration Committee of the Company was created to consider matters such as appointing candidates to the Board of Directors, senior management remuneration arrangements (including bonus payments), the composition of the Management Board, and the positions of Corporate Secretary, Ombudsman, and other employees.

In 2021, three of the four Committee members were independent directors. All Committee members have the relevant experience and competencies to make effective decisions. During the year, nine Committee meetings were held in presentia to consider 58 issues.

Last year, the Committee reviewed and approved individual development plans for 2021 for the Management Board members, CEO-1 job descriptions, and the structure of the headquarters and the total headcount of NAC Kazatomprom JSC.

The Committee also considered succession issues, including a pool of successors to be established for the positions of members of the Management Board and Corporate Secretary of the Company.

On 18 May 2021, Independent Director Marc Kasher joined the Committee as the Chairman.

Marc Kasher
Chairman of the Nomination and Remuneration Committee
Board of Directors of Kazatomprom

5.4. Statement of responsibility from members of the Board of Directors and Management Board

Under the Company's Corporate Governance Code, the Board of Directors and Management Board are responsible for the correctness of the annual report, as well as the Company's financial statements.

In accordance with the Disclosure and Transparency Rules of the Handbook of the Financial Conduct Authority, each member of the Board of Directors confirms, based on the information they have, that:

- the financial statements have been prepared in accordance with IFRS, and give a true and reliable reflection of: assets, liabilities, and financial position; the results of the financial and economic activities of the Company; and the consolidated balance sheet of the Company and its subsidiaries;
- the management report contains accurate data on the development and indicators related to financial and economic activities and the financial position of the Company and its subsidiaries, as well as a description of the most significant risks and uncertainties that they face.

As of the date of this Report, no member of the Board of Directors or Management Board has in the past five years:

- had a criminal record for offences related to fraud;
- been a member of the administrative, managerial, or supervisory bodies of any company or partner in any partnership at the time or in anticipation of a bankruptcy, or been engaged in property management due to an insolvency or liquidation;
- been subject to official public charges or sanctions by a government organisation or regulatory body (including a professional body); have never been deprived of the right, upon a court order, to act as a member of the administrative, managerial, or supervisory bodies of a company, or been prohibited from participating in managing a company or in doing business

**Neil Longfellow, Chairman of Kazatomprom Board of Directors,
On behalf of the Board of Directors**

**Mazhit Sharipov, Chairman of Kazatomprom Management Board,
By order of the Board of Directors**

5.5. Group's subsidiaries, joint ventures, joint operations, and associates

GRI 102-45

In all cases the share is equal to the Group's voting rights, with the exception of Ulba Metallurgical Plant JSC and Volkovgeologia JSC, in which the Group has 100% voting rights, and Baiken-U LLP where the direct share is 5%.

Subsidiaries, joint ventures, joint operations, and associates of the Holding, 31 December 2021

Treatment	Name	Share (%)
Uranium Mining and Processing		
Subsidiaries	Kazatomprom-SaUran LLP	100.00%
	RU-6 LLP	100.00%
	APPAK LLP	65.00%
	JV Inkai LLP	60.00%
	Baiken-U LLP ¹⁰³	52.50%
	ME ORTALYK LLP ¹⁰⁴	51.00%
	JV Khorassan-U LLP	50.00%
Joint Ventures	JV Budenovskoye LLP	51.00%
	Semizbai-U LLP	51.00%
Joint Operations	JV Akbastau JSC	50.00%
	Karatau LLP	50.00%
	Energy Asia (BVI) Limited ¹⁰³	50.00%
Associates	JV Katco LLP	49.00%
	JV South Mining Chemical Company LLP	30.00%
	JV ZARECHNOYE JSC	49.98%
	Kyzylkum LLP ¹⁰³	50.00%
	Zhanakorgan-Transit LLP ¹⁰⁵	60.00%
Nuclear Fuel Cycle and Metallurgy		
Subsidiaries ¹⁰⁶	Ulba Metallurgical Plant JSC	94.33%
	ULBA-CHINA Co Ltd ¹⁰⁵	100.00%
	Mashzavod JSC ¹⁰⁵	100.00%
	Ulba FA LLP ¹⁰⁵	51.00%
Nuclear Fuel Cycle		
Investments ¹⁰⁷	International Uranium Enrichment Centre JSC	10.00%
Ancillary Operations		
Subsidiaries ¹⁰⁶	High Technology Institute LLP	100.00%
	KazakAtom TH AG	100.00%
	KAP-Technology JSC	100.00%

¹⁰³ The Company holds 50% (direct ownership) in Energy Asia (BVI) Limited. Energy Asia (BVI)Limited holds 40% (direct ownership) in Kyzylkum LLP and 95% (direct ownership) in Baiken-U LLP.

¹⁰⁴ Under cooperation agreements between Kazatomprom and CGNPC, the parties agreed to build a fuel assembly plant (Ulba-FA) on the site of Ulba Metallurgical Plant. CGNPC guarantees that it will purchase products of Ulba FA LLP in exchange for Kazatomprom's consent to sell a 49% interest in the Company's wholly owned subsidiary, ME ORTALYK LLP, to CGNPC or a subsidiary of CGNPC (the "Transaction"). In April 2021, a sale agreement was signed, and the parties agreed to the company valuation made by one of the four major international advisory and professional services firms, whereby a 49% shareholding was valued at approximately US\$ 435 million. On 22 July 2021, the transaction was completed subject to receipt of government approvals and implementation of all deferred conditions of the agreement by the end of 2021. Following the re-registration of, the entity, CGN Mining UK Limited, a subsidiary of CGNPC, is now a full-fledged participant in ME ORTALYK LLP. Kazatomprom retains a controlling 51% interest while CGN Mining UK Limited holds a 49% interest, with each partner purchasing uranium products in proportion to their shareholding. The actual consideration amounted to US\$ 435 million (equivalent to KZT 185,858 billion).

¹⁰⁵ These companies are 3rd level entities for the Company through the interests in subsidiaries, JVs and associates presented above these companies in the table. The corresponding interests belongs to the 2nd tier entities, not the Company. Kazatomprom holds one share in Operational Management Center through its 25% shareholding a share in Ural Electrochemical Combine

¹⁰⁶ On April 30, 2021, the liquidation procedure of Kazatomprom-Damu LLP was completed.

¹⁰⁷ As at the reporting date, the Group classifies JSC Uranium Enrichment Center (TsOU) with 1 share as other investment.

	Trading and Transportation Company LLP	99.99%
	Volkovgeologia JSC	96.62%
	Rusburmash-Kazakhstan LL ¹⁰⁵	49.00%
	Qorgan-Security LLP ¹⁰⁸	100.00%
Joint Ventures	SKZ-U LLP	49.00%
	Uranenergo LLP	79.17%

Assets currently for sale or subject to restructuring

Treatment	Name	Share (%)
Nuclear Fuel Cycle		
Joint Ventures	JV UKR TVS Closed Joint Stock Company ¹⁰⁹	33,33%
Auxiliary operations		
Associates	Caustic JSC ¹¹⁰	40,00%
	SSAP LLP ¹¹¹	9,89%

¹⁰⁸ On 23 July 2021, Korgan-Kazatomprom LLP was re-registered into Qorgan-Security LLP.

¹⁰⁹ In line with the privatisation plan of non-core assets as presented in the IPO Prospectus, the Company intends to sell its entire stake in JV UKR TVS Closed Joint-Stock Company by the end of 2022.

¹¹⁰ In line with the privatisation plan of non-core assets as presented in the IPO Prospectus, Kazatomprom and United Chemical Technologies Trading House LLP entered into an agreement on 30 December 2021 to sell the Company's 40% share in Caustic JSC. On 31 January 2022, an installment payment was made for 30% of the Company's total interest in Caustic JSC. Therefore, United Chemical Technologies Trading House LLP's interest in Caustic JSC increased by 12% (30% of the Company's 40% stake). The remaining portion of the Company's shares were transferred to a trust of United Chemical Technologies Trading House LLP until full payment for the Company's remaining interest is received, which is expected not later than 2023. As a result, the Company owned a 40% stake in JSC Caustic as of the end of 2021.

¹¹¹ In line with the privatisation plan of non-core assets, the Company intends to sell its entire stake in SSAP LLP by the end of 2022. On July 08, 2020, the procedure for re-registration of SP SKZ Kazatomprom LLP into SSAP LLP (Stepnogorsk Sulfuric Acid Plant).

5.6. GRI Content Index

GRI 102-55

General Disclosures

Standard and indicators	Disclosure	Report page	Disclosure degree	Scope ¹¹²	Report sections	Comments	Focus UN SDGs
GRI 102 (2016): GENERAL DISCLOSURES							
ORGANISATIONAL PROFILE							
102-1	Name of the organisation	13, 244	fully	1	1. Business Profile Annexes 5.12. Contacts		
102-2	Activities, brands, products, and services	14	fully	1	1. Business Profile 1.1. Core Operations and Products		
102-3	Location of headquarters	244	fully	1	Annexes 5.12. Contacts		
102-4	Location of operations	16, 25	fully	1	1. Business Profile 1.3. Geography and Market Presence 1.6. Sales and Distribution		
102-5	Ownership and legal form	244	fully	1	5. Annexes 5.12. Contacts		
102-6	Markets served	17, 21, 25	fully	1	1. Business Profile 1.4. Uranium Products Market Overview 1.5. Analysis of Performance Dynamics 1.6. Sales and Distribution		

¹¹² The detailed disclosure perimeter can be found on page 194 of this report.

102-7	Scale of the organization	19, 21, 25, 92	fully	1	1. Business Profile 1.4. Uranium Products Market Overview 1.5. Analysis of Performance Dynamics 1.6. Sales and Distribution 3. Sustainable Development 3.3. Social Responsibility	
102-8	Information on employees and other workers	92, 199	fully	1	3. Sustainable Development 3.3. Social Responsibility 5. Annexes 5.2. ESG Performance Indicators 2019-2021	
102-9	Supply chain	25, 144	fully	1	1. Business Profile 1.6. Sales and Distribution 3. Sustainable Development 3.8. Procurement Practices	Supply chain information is kept confidential according to internal corporate regulations.
102-10	Significant changes to the organization and its supply chain	28	fully	1	1. Business Profile 1.7. Development Strategy	
102-11	Precautionary Principle or approach	123, 176	fully	1	3. Sustainable Development 3.6. Environmental Protection 4. Corporate Governance and Ethics 4.7. Risk Management and Internal Control	
102-12	External initiatives	36, 77, 109, 176	fully	1	1. Business Profile 1.9. Association Membership and International Compliance 3. Sustainable Development 3.1. Sustainability Management 3.4. Health and Safety 4.7. Risk Management and Internal Control	

102-13	Membership of associations	36	fully	1	1. Business Profile 1.9. Association Membership and International Compliance	
STRATEGY AND ANALYSIS						
102-14	Statement from senior decision-maker	4, 6	fully	1	Message from the Chairman of the Board of Directors Message from the Chairman of the Management Board	
102-15	Key impacts, risks, and opportunities	27, 178	fully	1	1. Business Profile 1.7. Development Strategy 4. Corporate Governance and Ethics 4.7. Risk Management and Internal Control	
ETHICS AND INTEGRITY						
102-16	Values, principles, standards and norms of behaviour	75, 189	fully	1	3. Sustainable Development 3.1. Sustainability Management 4. Corporate Governance and Ethics 4.11. Corporate Ethics and Compliance	SDG 16
102-17	Mechanisms for advice and concerns about ethics	190	fully	1	4. Corporate Governance and Ethics 4.11 Corporate Ethics and Compliance	SDG 16
GOVERNANCE						
102-18	Governance structure	153	fully	1	4. Corporate Governance and Ethics 4.1. Corporate Governance System	
102-21	Consulting stakeholders on economic, environmental, and social topics	142	fully	1	3. Sustainable Development 3.7. Stakeholder Engagement	SDG 16

102-22	Composition of the highest governance body and its committees	158, 165	fully	1	4. Corporate Governance and Ethics 4.4. Board of Directors	SDG 5 SDG 16
102-24	Nominating and selecting the highest governance body	158, 165	fully	1	4. Corporate Governance and Ethics 4.4. Board of Directors	SDG 5 SDG 16
102-25	Conflicts of interest	173, 191	fully	1	4. Corporate Governance and Ethics 4.5. Management Board 4.11. Corporate Ethics and Compliance	<i>Disclosures about the existence of a controlling shareholder and related parties can be found in the Consolidated Financial Report for 2020</i> SDG 16
102-28	Evaluating the highest governance body's performance	164	fully	1	4. Corporate Governance and Ethics 4.4. Board of Directors	
102-36	Process for determining remuneration	175	fully	1	4. Corporate Governance and Ethics 4.6. Remuneration	
STAKEHOLDER ENGAGEMENT						
102-40	List of stakeholder groups	134	fully	1	3. Sustainable Development 3.7. Stakeholder Engagement	
102-41	Collective bargaining agreements	99	fully	1	3. Sustainable Development 3.3. Social Responsibility	SDG 8
102-42	Identifying and selecting stakeholders	134	fully	1	3. Sustainable Development 3.7. Stakeholder Engagement	
102-43	Approach to stakeholder engagement	134	fully	1	3. Sustainable Development 3.7. Stakeholder Engagement	
102-44	Key topics and concerns raised	142, 195	fully	1	3. Sustainable Development 3.7. Stakeholder Engagement 5. Annexes 5.1. About the Report	
REPORTING PRACTICE						

102-45	Entities included in the consolidated financial statements	214	fully	1	5. Annexes 5.5. Group's subsidiaries, joint ventures, joint operations, and associates
102-46	Defining report content and topic Boundaries	195	fully	1	5. Annexes 5.1. About the Report
102-47	List of material topics	197	fully	1	5. Annexes 5.1. About the Report
102-48	Restatements of information	120,128, 193	fully	1	3. Sustainable Development 3.5. Climate Change and Energy Efficiency 3.6. Environmental protection 5. Annexes 5.1. About the Report
102-49	Changes in reporting	193	fully	1	5. Annexes 5.1. About the Report
GENERAL INFORMATION ABOUT THE REPORT					
102-50	Reporting period	194	fully	1	5. Annexes 5.1. About the Report
102-52	Reporting cycle	194	fully	1	5. Annexes 5.1. About the Report
102-53	Contact point for questions regarding the report	244	fully	1	5. Annexes 5.1. About the Report
102-54	Claims of reporting in accordance with the GRI Standards	193	fully	1	5. Annexes 5.1. About the Report
102-55	GRI content index	216	fully	1	5. Annexes 5.6. GRI Content Index
102-56	External assurance	186, 198, 236	fully	1	4. Corporate Governance and Ethics 4.9. External audit 5. Annexes 5.1. About the Report 5.8. Independent auditor's report

ECONOMIC							
GRI 201 (2016): ECONOMIC PERFORMANCE							
103-1	Explanation of the material topic and its Boundary		fully	1	3. Sustainable Development 3.2. Socio-economic contribution		
103-2	The management approach and its components		fully	1	3. Sustainable Development 3.2. Socio-economic contribution		
201-1	Direct economic value generated and distributed	142, 208, 239	fully	1	3. Sustainable Development 3.7. Stakeholder Engagement Annexes 5.2. ESG Performance Indicators 2019-2021 5.9. Consolidated financial statements	GRI 201-1 b. is irrelevant. According to our estimates, the Company makes significant impact only in the territory of the Republic of Kazakhstan.	SDG 8 SDG 9
GRI 202 (2016): MARKET PRESENCE							
202-2	Proportion of senior management hired from the local community	172	fully	1	4. Corporate Governance and Ethics 4.5. Management Board		SDG 8
GRI 203 (2016): INDIRECT ECONOMIC IMPACTS							
203-1	Infrastructure investments and services supported	89	fully	1	3. Sustainable Development 3.2. Socio-economic contribution		SDG 9
GRI 204 (2016): PROCUREMENT PRACTICES							
204-1	Proportion of spending on local suppliers	146, 209	fully	1	3. Sustainable Development 3.8. Procurement Practices 5. Annexes 5.2. ESG Performance Indicators 2019-2021	Key areas of operations are regions of the Republic of Kazakhstan	SDG 8
GRI 205 (2016): ANTI-CORRUPTION							
205-2	Communication and training about anti-corruption policies and procedures	189	fully	1	4. Corporate Governance and Ethics 4.11. Corporate Ethics and Compliance		SDG 16
ENVIRONMENTAL							
GRI 302 (2016): ENERGY							

103-2	The management approach and its components		fully	1	3. Sustainable Development 3.5. Climate Change and Energy Efficiency		
103-3	Evaluation of the management approach		fully	1	3. Sustainable Development 3.5. Climate Change and Energy Efficiency		
302-1	Energy consumption within the organization	120	fully	2 ¹¹³	3. Sustainable Development 3.5. Climate Change and Energy Efficiency	The Company does not resell energy to the third parties. “The coefficients used correspond to the Methodology for the fuel and energy balance and the calculation of individual statistical indicators characterizing the energy sector”.	SDG 7 SDG 8 SDG 12
302-3	Energy intensity	121	fully	2	3. Sustainable Development 3.5. Climate Change and Energy Efficiency		SDG 8 SDG 12 SDG 13
302-4	Reduction of energy consumption	120	fully	2	3. Sustainable Development 3.5. Climate Change and Energy Efficiency	The following regulations apply to the calculations: 1. The methodology for emission rate calculations as approved by Order No. 63 issued by the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan on 10 March 2021. 2. The list of pollutants subject to environmental regulation as approved by Order No. 212 issued by the Minister of Ecology, Geology and	SDG 7 SDG 8 SDG 12 SDG 13

¹¹³ Coal, Fuel, Heat, Electricity.

GRI 303 (2018): WATER AND EFFLUENTS						
303-2	Management of water discharge-related impacts	128	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 6
303-3	Water withdrawal	128, 205	fully	2	3. Sustainable Development 3.6. Environmental Protection Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 6
303-4	Water discharge	128	fully	2	3. Sustainable Development 3.6. Environmental Protection	SDG 6
GRI 304 (2016): BIODIVERSITY						
103-1	Explanation of the material topic and its Boundary		partially	1	3. Sustainable Development 3.6. Environmental Protection	
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	131	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 6 SDG 14 SDG 15
304-2	Significant impacts of activities, products, and services on biodiversity	131	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 6 SDG 14 SDG 15
304-3	Habitats protected or restored	131	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 6 SDG 14 SDG 15
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	131	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 6 SDG 14 SDG 15

GRI 305 (2016): EMISSIONS							
103-1	Explanation of the material topic and its Boundary		fully	1	3. Sustainable Development 3.5. Climate Change and Energy Efficiency		
103-2	The management approach and its components		fully	1	3. Sustainable Development 3.5. Climate Change and Energy Efficiency		
305-1	Direct (Scope 1) greenhouse gas (GHG) emissions	119, 205	fully	3	3. Sustainable Development 3.5. Climate Change and Energy Efficiency 5. Annexes 5.2. ESG Performance Indicators 2019-2021	The coefficients comply with the Guidelines for the calculation of greenhouse gas emissions from thermal power plants and boiler houses and the Guidelines for the calculation of greenhouse gas emissions into the atmosphere from motor transport enterprises issued by the Ministry of Environment and Water Resources of the Republic of Kazakhstan. The Company does not generate any biogenic CO ₂ emissions.	SDG 12 SDG 14 SDG 13 SDG 15
305-2	Direct (Scope 2) greenhouse gas (GHG) emissions	119, 205	fully	4	3. Sustainable Development 3.5. Climate Change and Energy Efficiency 5. Annexes 5.2. ESG Performance Indicators 2019-2021		
305-7	Nitrogen oxides (NOx), sulphur oxides (SOx), and other significant air emissions	205	fully	3	5. Annexes 5.2. ESG Performance Indicators 2019-2021	Coefficients used to calculate emissions comply with Kazakhstani environmental laws, including reporting standards and methodologies.	SDG 12 SDG 14 SDG 15

The Company does not generate persistent organic pollutants.

GRI 306 (2020): WASTE						
103-1	Explanation of the material topic and its Boundary		fully	1	3. Sustainable Development 3.6. Environmental Protection	
103-2	The management approach and its components		fully	1	3. Sustainable Development 3.6. Environmental Protection	
306-1	Waste generation and significant waste-related impacts	129	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 3 SDG 6 SDG 12 SDG 14
306-2	Management of significant waste-related impacts	129	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 3 SDG 6 SDG 12
306-3	Waste by type and disposal method	130, 206	fully	3	3. Sustainable Development 3.6. Environmental Protection 5. Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 3 SDG 6 SDG 12 SDG 14
GRI 307 (2016): ENVIRONMENTAL COMPLIANCE						
307-1	Non-compliance with environmental laws and regulations	126	fully	1	3. Sustainable Development 3.6. Environmental Protection	SDG 16
SOCIAL						
GRI 401 (2016): EMPLOYMENT						
103-2	The management approach and its components		partially	1	3. Sustainable Development 3.3. Social Responsibility	
103-3	Evaluation of the management approach		partially	1	3. Sustainable Development 3.3. Social Responsibility	

401-1	New employee hires and employee turnover	92, 93, 200, 201	fully	1	3. Sustainable Development 3.3. Social Responsibility Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 5 SDG 8 SDG 10
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant region of the organization	98	fully	1	3. Sustainable Development 3.3. Social Responsibility	SDG 5 SDG 8
401-3	Parental leave	203	fully	1	Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 5 SDG 8

GRI 402 (2016): LABOUR/MANAGEMENT RELATIONS

402-1	Минимальный период уведомления сотрудников об изменениях в компании	100	fully	1	3. Sustainable Development 3.3. Social Responsibility	SDG 8
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GRI 403 (2018): OCCUPATIONAL HEALTH AND SAFETY

403-1	Occupational health and safety management system	113	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8
403-2	Hazard identification, risk assessment, and incident investigation	108, 111	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8
403-3	Occupational health services	113	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8
403-4	Worker participation, consultation, and communication on occupational health and safety	112	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8 SDG 16
403-5	Worker training on occupational health and safety	114	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8

403-6	Promotion on worker health	99, 102, 112	fully	1	3. Sustainable Development 3.3. Social Responsibility 3.4. Health and Safety	SDG 3
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	114	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8
403-8	Workers covered by an occupational health and safety management system	109	fully	1	3. Sustainable Development 3.4. Health and Safety	SDG 8
403-9	Work-related injuries	111, 207	fully	1	3. Sustainable Development 3.4. Health and Safety Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 3 SDG 8 SDG 16
GRI 404 (2016): TRAINING AND EDUCATION						
103-1	Explanation of the material topic and its Boundary		fully	1	3. Sustainable Development 3.3. Social Responsibility	
103-2	The management approach and its components		fully	1	3. Sustainable Development 3.3. Social Responsibility	
103-3	Evaluation of the management approach		fully	1	3. Sustainable Development 3.3. Social Responsibility	
404-1	Average hours of training per year per employee	204	fully	1	Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 4 SDG 5 SDG 8 SDG 10
404-2	Programs for upgrading employee skills and transition assistance programs	96, 204	fully	1	3. Sustainable Development 3.3. Social Responsibility Annexes	SDG 8

5.2. ESG Performance
Indicators 2019-2021

GRI 405 (2016): DIVERSITY AND EQUAL OPPORTUNITY						
405-1	Diversity of governance bodies and employees	92, 93, 172, 199, 200	fully	1	3. Sustainable Development 3.3. Social Responsibility 4. Corporate Governance and Ethics 4.5. Management Board Annexes 5.2. ESG Performance Indicators 2019-2021	SDG 5 SDG 8
406-1	Incidents of discrimination and corrective actions taken	92	fully	1	3. Sustainable Development 3.3. Social Responsibility	
GRI 408 (2016): CHILD LABOR						
103-1	Explanation of the material topic and its Boundary		fully	1	3. Sustainable Development 3.3. Social Responsibility	
103-2	The management approach and its components		fully	1	3. Sustainable Development 3.3. Social Responsibility	
408-1	Operations and suppliers at significant risk for incidents of child labor	100	fully	1	3. Sustainable Development 3.3. Social Responsibility	SDG 5 SDG 8
GRI 409 (2016): FORCED OR COMPULSORY LABOR						
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	100	fully	1	3. Sustainable Development 3.3. Social Responsibility	SDG 8
GRI 411 (2016): RIGHTS OF INDIGENOUS PEOPLES						
411-1	Incidents of violations involving rights of indigenous peoples	100	fully	1	3. Sustainable Development 3.3. Social Responsibility	SDG 2
GRI 412 (2016): HUMAN RIGHTS ASSESSMENT						

103-1	Explanation of the material topic and its Boundary		fully		3. Sustainable Development 3.3. Social Responsibility	
103-2	The management approach and its components		fully		3. Sustainable Development 3.3. Social Responsibility	
412-1	Operations that have been subject to human rights reviews or impact assessments	191	fully	1	4. Corporate Governance and Ethics 4.11. Corporate Ethics and Compliance	
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	100	fully	1	3. Sustainable Development 3.3. Social Responsibility	
GRI 413 (2016): LOCAL COMMUNITIES						
413-1	Operations with local community engagement, impact assessment, and development programs	88, 95, 124	fully	1	3. Sustainable Development 3.2. Socio-economic contribution 3.3. Social Responsibility 3.6. Environmental Protection	According to the laws of the Republic of Kazakhstan (Environmental Impact Assessment Guidelines), all new sites/facilities under development are subject to environmental impact assessment (EIA). The results of the EIA shall be fully disclosed and open for review and comments by all stakeholders in line with Order No. 280 issued by the Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan on 30 July 2021.
GRI 415 (2016): PUBLIC POLICY						

415-1	Political contributions	192	fully	1	4. Corporate Governance and Ethics 4.11. Corporate Ethics and Compliance	SDG 16
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Standard and indicators	Disclosure	Report page	Disclosure degree	Report sections
INDICATORS OF KAZATOMPROM				
KAP1	Production Lifecycle	133	fully	3. Sustainable Development 3.6. Environmental Protection
KAP2	Readiness for emergencies	116	fully	3. Sustainable Development 3.4. Health and Safety
KAP3	Radiation safety	115	fully	3. Sustainable Development 3.4. Health and Safety

5.7. UNCTAD Indicators Table

	Area	Indicators	Performance indicators
A	Economic area		
A.1	Revenue and/or (net) value added	A.1.1: Revenue A.1.2: Value added A.1.3: Net value added	KZT 691.0 billion KZT 413.2 billion KZT 346.8 billion
A.2	Payments to the Government	A.2.1: Taxes and other payments to the Government	KZT 171.6 billion
A.3	New investment/expenditures	A.3.1: Green investment A.3.2: Community investment A.3.3: Total expenditures on research and development	KZT 964.6 million in expenditures for environmental protection KZT 4.54 billion KZT 3.24 billion
A.4	Total cost of local supplier/purchasing programmes	A.4.1: Percentage of local procurement	80%
B	Environmental area		
B.1	Sustainable use of water	B.1.1: Water recycling and reuse B.1.2: Water use efficiency B.1.3: Water stress	50,384,000 m ³ of water recycled and reused 10,120,700 m ³ of total water withdrawal In 2021, the total water withdrawal fell by 3.2% year on year Water consumption 2021: <ul style="list-style-type: none"> • Surface water — 6,500 m³ • Ground water — 8,513,300 m³ • Municipal and other water supply systems — 1,582,900 m³
B.2	Waste management	B.2.1: Reduction of waste generation B.2.2: Waste reused, remanufactured and recycled B.2.3: Hazardous waste	In 2021, the waste generated by Kazatomprom made 1,016,600 tonnes, down by 10.0% compared with 2020 The Company does not reuse the waste In connection with the adoption of the new Environmental Code, the subsidiaries and affiliates update the reporting according to the new waste classifier (some items of waste require laboratory research)
B.3	Greenhouse gas emissions	B.3.1: Greenhouse gas emissions (Scope 1) B.3.2: Greenhouse gas emissions (Scope 2)	106,910 t CO ₂ -eq Market method – 842,554 tons of CO ₂ -eq. Regional method - 598,847 tons of CO ₂ -eq.
B.4	Chemicals, including pesticides and ozone-depleting substances	B.4.1: Chemicals, including pesticides and ozone-depleting substances	The Company does not use ozone-depleting substances
B.5	Energy consumption	B.5.1: Renewable energy B.5.2: Energy efficiency	3.34 MWh of annual electricity produced by PV plants installed at production sites Total energy consumption was 4,132,000 GJ
C	Social area		
C.1	Gender equality	C.1.1: Proportion of women in managerial positions	Share of female managers was 9% in 2021
C.2	Human capital	C.2.1: Average hours of training per year per employee	Average number of hours spent on training of one employee was 41.6

		C.2.2: Expenditure on employee training per year per employee	Administrative staff and management – KZT 269,800. Production staff – KZT 52,100
		C.2.3: Employee wages and benefits as a proportion of revenue, with breakdown by employment type and gender	KZT 71,484 million in the total payroll fund
C.3	Employee health and safety	C.3.1: Expenditures on employee health and safety as a proportion of revenue	In 2021, Kazatomprom's health and safety spending made KZT 8.29 billion, equivalent to 1% of the Company's revenue
		C.3.2: Frequency/incident rates of occupational injuries	LTIFR was 0.55
C.4	Coverage by collective agreements	C.4.1: Percentage of employees covered by collective agreements	94%
D Institutional area			
D.1	Corporate governance disclosure	D.1.1: Number of board meetings and attendance rate	In 2021, the Board of Directors met 14 times (13 in-presentia meetings) to consider 234 issues. The attendance of meetings by Board members was 100% on average in 2021
		D.1.2: Number and percentage of women board members	25%
		D.1.3: Board members by age range	Board members by age: <ul style="list-style-type: none"> • Under 30 - 0% • 30-50 – 37% • 50+ - 63%
		D.1.4: Number of meetings of audit committees and attendance rate	The Audit Committee held 10 in-presentia meetings in the reporting year
		D.1.5: Total compensation and compensation per member of the board of directors and management	KZT 1.1 billion in total remuneration paid to the Board of Directors and Management Board
D.2	Anti-corruption practices	D.2.1: Amount of fines paid or payable in accordance with the convictions	No administrative penalties for corruption offences in the reporting period
		D.2.2: Average hours of training on anti-corruption issues per year per employee	Not available

5.8. Independent auditor's report

GRI 102-56



Independent Limited Assurance Report

To the Board of Directors of joint stock company "National atomic company "Kazatomprom":

Introduction

We have been engaged by the Management of joint stock company "National atomic company "Kazatomprom" (hereinafter – the "Company") to provide limited assurance on the selected information described below and included in the Integrated Annual Report of the Company for the year ended 31 December 2021 (hereinafter – the "Annual Report").

Description of the subject matter and applicable criteria

We assessed the qualitative and quantitative information that is disclosed in the Annual Report and referred to or disclosed in the Section 5.6 GRI content index of the Annual Report (hereinafter – the "Selected Information"). The Selected Information has been prepared in accordance with GRI Sustainability Reporting Standards (Core option) published by the Global Reporting Initiative (GRI) (hereinafter – the "GRI Standards").

The Selected information represents information related to the Company and its selected subsidiaries as indicated in the Information perimeter section of the Annual Report.

The scope of our assurance procedures was limited to the Selected Information for the year ended 31 December 2021 only. We have not performed any procedures with respect to earlier periods or any other items included in the Annual Report and, therefore, do not express any conclusion thereon.

We assessed the Selected Information using reporting requirements in the GRI Standards and methodology and guidelines developed by the Company and disclosed in the Annual Report (hereinafter – the "Reporting Criteria"). We believe that the Reporting Criteria are appropriate given the purpose of our limited assurance engagement.

Responsibilities of the management of the Company

The management of the Company is responsible for:

- designing, implementing and maintaining internal control relevant to the preparation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- establishing internal methodology and guidelines for preparing and reporting the Selected Information in accordance with the Reporting Criteria;
- preparing, measuring and reporting of the Selected Information in accordance with the Reporting Criteria; and
- the accuracy, completeness and presentation of the Selected Information.

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Our responsibilities

We are responsible for:

- planning and performing the engagement to obtain limited assurance about whether the Selected Information is free from material misstatement, whether due to fraud or error;
- forming an independent limited assurance conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the Board of Directors of the Company.

We performed the limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements other than Audits and Reviews of Historical Financial Information" issued by the International Auditing and Assurance Standards Board.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Our independence and quality control

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Work done

We are required to plan and perform our work in order to consider the risk of material misstatement of the Selected Information. In doing so, we:

- made enquiries of the management of the Company, including the Strategy and Sustainable Development team and those with responsibility for sustainability reporting management and reporting;
- conducted interviews of personnel responsible for the preparation of the Annual Report and collection of underlying data;
- performed analysis of the relevant internal methodology and guidelines, gaining an understanding of the design of the key structures, systems, processes and controls for managing, recording, preparing and reporting the Selected Information; and
- performed limited substantive testing on a selective basis of the Selected Information to check that data had been appropriately measured, recorded, collated and reported.



Reporting and measurement methodologies

Under the Reporting Criteria there is a range of different, but acceptable, measurement and reporting techniques. The techniques can result in materially different reporting outcomes that may affect comparability with other organisations. The Selected Information should therefore be read in conjunction with the methodology used by management as described in the Annual Report, and for which the Company is solely responsible.

Our conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information for the year ended 31 December 2021 has not been prepared, in all material respects, in accordance with the Reporting Criteria.

Restrictions of use and distribution

This report, including our conclusion, has been prepared solely for the Board of Directors of the Company in accordance with the agreement between us, to assist the management of the Company in reporting on the Company's and its selected subsidiaries' sustainability performance and activities.

We permit this report to be disclosed in the Annual Report, which will be published on the Company's website¹, to assist the management of the Company in responding to their governance responsibilities by obtaining an independent limited assurance report in connection with the Selected Information. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Board of Directors of the Company and the Company for our work or this report except where the respective terms are expressly agreed in writing and our prior consent in writing is obtained.

Pricewaterhouse Coopers LLP

27 April 2022

Almaty, Kazakhstan

¹ The maintenance and integrity of the Company's website is the responsibility of management; the work carried out by us does not involve consideration of these matters and, accordingly, we accept no responsibility for any changes that may have occurred to the reported Selected Information or Reporting Criteria when presented on the Company's website.

5.9. Consolidated financial statements
GRI 201-1

JSC National Atomic Company Kazatomprom

**Consolidated Financial Statements
for the year ended 31 December 2021 and
Independent Auditor's Report**

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INDEPENDENT AUDITOR'S REPORT

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

"NAC "KAZATOMPROM" JSC

STATEMENT OF MANAGEMENT'S RESPONSIBILITIES FOR THE PREPARATION AND APPROVAL OF CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2021, AND OPERATING AND FINANCIAL REVIEW FOR THE YEAR ENDED 31 DECEMBER 2021

The following statement is made with a view to distinguish the respective responsibilities of management and those of the independent auditor's in relation to the consolidated financial statements of JSC National Atomic Company Kazatomprom ("Company") and its subsidiaries (hereinafter the "Group") for the year ended 31 December 2021 and operating and financial review for the year ended 31 December 2021.

Management of the Group is responsible for the preparation of consolidated financial statements of the Group for the year ended 31 December 2021, and operating and financial review for the year ended 31 December 2021, that presents fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2021, and the consolidated results of its operations, cash flows and changes in equity for the year then ended, in compliance with International Financial Reporting Standards ("IFRS").

In preparing the consolidated financial statements, management is responsible for:

- properly selecting and applying accounting policies;
- presenting information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- providing additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, as well as other events and conditions on the Group's consolidated financial position and financial performance; and
- making an assessment of the Group's ability to continue as a going concern.

Management is also responsible for:

- designing, implementing and maintaining an effective and sound system of internal controls throughout the Group;
- maintaining adequate accounting records that are sufficient to show and explain the Group's transactions and disclose with reasonable accuracy at any time the consolidated financial position of the Group, and which enable them to ensure that the consolidated financial statements of the Group comply with IFRS;
- maintaining statutory accounting records in compliance with legislation and accounting standards of the Republic of Kazakhstan;
- taking all reasonably possible measures to safeguard the assets of the Group; and
- preventing and detecting fraud and other irregularities.

The consolidated financial statements for the year ended 31 December 2021 and operating and financial review for the year ended 31 December 2021 were authorised for issue by management of the Group on 15 March 2022.


SYZDYKOVA K.B.
CHIEF FINANCIAL OFFICER


KOZHA-AKHMET D.A.
FINANCIAL CONTROLLER



Independent Auditor's Report

To the Shareholders and the Board of Directors of National Atomic Company Kazatomprom JSC:

Our opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of National Atomic Company Kazatomprom JSC (the "Company") and its subsidiaries (together – the "Group") as at 31 December 2021, and the Group's consolidated financial performance and consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards.

What we have audited

The Group's consolidated financial statements comprise:

- the consolidated statement of profit or loss and other comprehensive income for the year ended 31 December 2021;
- the consolidated statement of financial position as at 31 December 2021;
- the consolidated statement of cash flows for the year then ended;
- the consolidated statement of changes in equity for the year then ended; and
- the notes to the consolidated financial statements, which include significant accounting policies and other explanatory information.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Group in accordance with the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants (IESBA Code) and the ethical requirements that are relevant to our audit of the consolidated financial statements in the Republic of Kazakhstan. We have fulfilled our other ethical responsibilities in accordance with the IESBA Code and the ethical requirements of the Republic of Kazakhstan that are relevant to our audit of the consolidated financial statements.

PricewaterhouseCoopers LLP
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Independent auditor's report (Continued)

Page 2

Our audit approach

Overview



Overall Group materiality: Kazakhstani Tenge ("Tenge") 14,000 million, which represents approximately 5% of profit before tax.

- We conducted audit work at the Company, ten subsidiaries, three joint arrangements, two associates in Kazakhstan and one subsidiary in Switzerland.
- Our audit scope addressed 99% of the Group's revenues and 99% of the Group's absolute value of underlying profit before tax.
- Disposal of a 49% ownership interest in DP Ortalyk LLP

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the consolidated financial statements. In particular, we considered where management made subjective judgements; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls including, among other matters, consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Materiality

The scope of our audit was influenced by our application of materiality. An audit is designed to obtain reasonable assurance whether the consolidated financial statements are free from material misstatement. Misstatements may arise due to fraud or error. They are considered material if individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the consolidated financial statements.

Based on our professional judgement, we determined certain quantitative thresholds for materiality, including the overall Group materiality for the consolidated financial statements as a whole as set out in the table below. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures and to evaluate the effect of misstatements, if any, both individually and in aggregate on the consolidated financial statements as a whole.

Overall Group materiality	Tenge 14,000 million
How we determined it	approximately 5% of profit before tax
Rationale for the materiality benchmark applied	We chose profit before tax as the benchmark because, in our view, it is the benchmark against which the performance of the Group is most commonly measured by users and is a generally accepted benchmark. We chose 5% which is consistent with quantitative materiality thresholds used for profit-oriented companies.



Independent auditor's report (Continued)

Page 3

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
<p>Disposal of 49% ownership interest in DP Ortalyk LLP</p> <p><i>Notes 1 and 4 to the consolidated financial statements</i></p> <p>In July 2021 the Group completed a transaction to dispose 49% ownership interest in its wholly owned mining subsidiary DP Ortalyk LLP to a subsidiary of China General Nuclear Power Corporation ("CGNPC") for the consideration in an amount of Tenge 186,437 million.</p> <p>Following the completion of the transaction the Group retained a 51% ownership interest and concluded that it continued to have control of DP Ortalyk LLP given that it held the majority voting rights in the subsidiary's Supervisory Board and the rights to control its production process which was assessed as the most relevant activity impacting DP Ortalyk LLP's economic performance (as disclosed in Note 4).</p> <p>Accordingly, in the consolidated financial statements for the year ended 31 December 2021 the Group recognised an increase in the non-controlling interest in amount of Tenge 27,078 million, an increase in equity attributable to the Group's shareholders in amount of Tenge 159,361 million with corresponding decrease in equity attributable to the Group's shareholders in amount of Tenge 33,466 million for the tax impact of this disposal.</p> <p>In connection with the disposal the Group entered into complex put and call arrangements that under certain circumstances might cause that the 49% interest disposed to be purchased back by the Group. In connection with that the Group recognised a liability of Tenge 186,437 million and subsequently derecognised it as a result of change in circumstances (as disclosed in Note 1).</p>	<p>Our audit procedures included:</p> <ul style="list-style-type: none">• We analysed the sales and purchase agreement between the Group and CGNPC in relation to the sale of 49% interest in DP Ortalyk LLP and the related documents supporting the completion of this transaction in 2021.• We analysed the Framework and Marketing agreements between the Group and CGNPC governing DP Ortalyk LLP's key business operations including sales and marketing, financing and production following the completion of the sale of DP Ortalyk LLP's 49% interest to CGNPC.• We analysed the revised charter of DP Ortalyk LLP and the related documents describing the subsidiary's corporate governance and key business decisions making process at the level of the shareholders, its Supervisory Board and the General Director.• Based on the analysed documents mentioned above, we obtained an understanding of the most relevant activities in assessment of control over DP Ortalyk LLP and discussed our assessment with the management of the Group.• We involved our accounting technical specialists to assist in the review of the accounting treatment of the disposal of 49% interest in DP Ortalyk LLP and associated put and call arrangements. In addition, we analysed the Group's related disclosures in the Notes 1 and 4 to the consolidated financial statements against the requirements of the relevant accounting standards.



Independent auditor's report (Continued)

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Key audit matter	How our audit addressed the key audit matter
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We focused on this area because assessment of control over DP Ortalyk LLP involved significant judgement.

How we tailored our Group audit scope

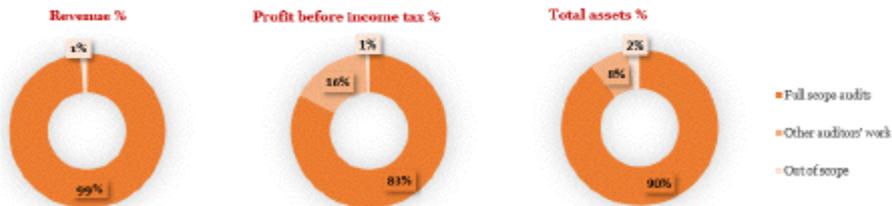
We tailored the scope of our audit in order to perform sufficient work to enable us to provide an opinion on the consolidated financial statements as a whole, taking into account the structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

The Group's major production facilities and uranium sites are located in the Republic of Kazakhstan. The Group's trading activities are carried out primarily out of Kazakhstan, as well as through operations of a trading subsidiary set up in Switzerland. Group operates seven mining subsidiaries (under twelve subsurface contracts), four mining joint arrangements (under six subsurface use contracts) and four mining associates (under four subsurface use contracts). PwC audited all seven subsidiaries, two joint arrangements and one associate. Auditors of two joint arrangements and one associate reported to us on their audits. The audit scope also included three non-mining subsidiaries, audited by PwC network firms.

Based on our continuous assessment, we included in our group audit scope the Company and sixteen entities (components), including four components audited by other auditors.

In order to achieve appropriate audit coverage of the audit risks and of each individually significant component of the Group, including each segment and group function:

- Significant components were subject to either a full scope audit, specified risk-focused audit procedures of specific account balances, or Group level procedures. Our selection was based on the relative significance of the entities within the Group or specific risks identified. The components within the scope of our work accounted for the following percentages of the Group's measures (1):



(1) Presented as a percentage of the Group's consolidated results as at 31 December 2021 or for the period then ended

Audit instructions set out the significant audit areas, materiality thresholds (which ranged from Tenge 817 million to Tenge 6,824 million) and specific reporting requirements. The Group audit team directed the work undertaken by component auditors, through a combination of related network and non-network firm reporting, regular interaction on audit and accounting matters, periodic site visits and review of specific audit work papers.

By performing the procedures above at the components in combination with additional procedures performed at Group level, we have obtained sufficient and appropriate audit evidence regarding the consolidated financial statements as a whole that provides basis for our opinion.



Independent auditor's report (Continued)

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Other information

Management is responsible for the other information. The other information comprises the Annual report (but does not include the consolidated financial statements and our auditor's report thereon), which is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read the Annual report, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.



Independent auditor's report (Continued)

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- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in this independent auditor's report is Almaz Sadykov.

On behalf of PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Approved by:

Dana M. Kabekova
Managing Director
PricewaterhouseCoopers LLP
(General State License of the Ministry of Finance of the Republic of Kazakhstan #0000005 dated 21 October 1999)

Signed by:

Almaz Sadykov
Auditor in charge
(Qualified Auditor's Certificate #0000745 dated 8 February 2019)

15 March 2022
Almaty, Kazakhstan

JSC National Atomic Company Kazatomprom
Consolidated Statement of Profit or Loss and Other Comprehensive Income

<i>In millions of Kazakhstani Tenge</i>	Note	For the year ended 31 December 2021	For the year ended 31 December 2020
Revenue	9	691,011	587,457
Cost of sales	10	(402,967)	(319,624)
Gross profit		288,044	267,833
Distribution expenses	11	(15,706)	(14,352)
General and administrative expenses	12	(34,105)	(29,582)
Reversal of impairment losses on non-financial assets	13	1,198	1,044
Impairment losses on non-financial assets	13	(5,003)	(3,132)
Reversal of impairment/(impairment loss) on financial assets	13	(208)	357
Gain from disposal of joint venture	1	-	22,063
Net foreign exchange gain	15	3,345	3,759
Other income	14	7,525	7,370
Other expenses	15	(15,394)	(7,605)
Finance income	17	7,077	4,983
Finance costs	17	(6,712)	(7,680)
Share of results of associates	25	47,294	39,482
Share of results of joint ventures	26	4,289	604
Profit before tax		281,644	285,144
Income tax expense	18	(61,618)	(63,776)
PROFIT FOR THE YEAR		220,026	221,368
Other comprehensive income			
<i>Items that may be subsequently reclassified to profit or loss:</i>			
Exchange differences arising on translation of entities with foreign functional currency		205	24
<i>Items that will not be reclassified to profit or loss:</i>			
Net loss from investments in equity securities at fair value through other comprehensive income		(3)	-
Remeasurements of post-employment benefit obligations		66	18
Share in other comprehensive loss of equity method investments		-	-
Other comprehensive income for the year		268	42
TOTAL COMPREHENSIVE INCOME FOR THE YEAR		220,294	221,410
Profit for the year attributable to:			
- Owners of the Company		140,773	183,541
- Non-controlling interest	38	79,253	37,827
Profit for the year		220,026	221,368
Total comprehensive income attributable to:			
- Owners of the Company		141,043	183,581
- Non-controlling interest		79,251	37,829
Total comprehensive income for the year		220,294	221,410
Earnings per share attributable to the owners of the Company, basic and diluted (rounded to Tenge)	19	543	708

These consolidated financial statements were approved by management on 15 March 2022:


 Syzdykova K.B.
 Chief Financial Officer




 Kozha-Akhmet D.A.
 Financial Controller


 Jakypbekova S.J.
 Chief Accountant

The accompanying notes are an integral part of these consolidated financial statements.

JSC National Atomic Company Kazatomprom
Consolidated Statement of Financial Position

<i>In millions of Kazakhstani Tenge</i>	Note	31 December 2021	31 December 2020
EQUITY			
Share capital	32	37,051	37,051
Additional paid-in capital		2,539	4,461
Reserves		1,866	1,866
Retained earnings		1,148,387	1,029,477
Equity attributable to shareholders of the Company		1,189,843	1,072,655
Non-controlling interest	38	347,258	267,137
TOTAL EQUITY		1,537,101	1,339,792
LIABILITIES			
Non-current liabilities			
Loans and borrowings	33	77,700	76,300
Provisions	34	32,192	26,393
Deferred tax liabilities	18	121,101	127,483
Employee benefits		1,168	1,258
Other non-current liabilities	36	23,420	6,481
		255,581	237,915
Current liabilities			
Loans and borrowings	33	11,317	21,526
Provisions	34	869	879
Accounts payable	35	66,014	43,948
Other tax and compulsory payments liabilities		17,973	8,713
Employee benefits		215	169
Income tax liabilities		5,096	927
Other current liabilities	36	57,338	34,994
		158,822	111,156
Liabilities of disposal groups classified as held for sale		-	416
TOTAL LIABILITIES		414,403	349,487
TOTAL EQUITY AND LIABILITIES		1,951,504	1,689,279
Carrying value of one share (Tenge)	19	5,699	4,935

These consolidated financial statements were approved by management on 15 March 2022:


 Syzdykova R.B.
 Chief Financial Officer




 Kozha-Akhmet D.A.
 Financial Controller


 Jakypbekova S.J.
 Chief Accountant

The accompanying notes are an integral part of these consolidated financial statements.

JSC National Atomic Company Kazatomprom
Consolidated Statement of Cash Flows

<i>In millions of Kazakhstani Tenge</i>	Note	For the year ended 31 December 2021	For the year ended 31 December 2020
OPERATING ACTIVITIES			
Cash receipts from customers		782,316	685,890
VAT refund		45,204	20,971
Interest received		4,104	4,221
Payments to suppliers		(503,301)	(380,576)
Payments to employees		(51,856)	(48,125)
Income tax paid		(97,747)	(59,155)
Other taxes paid		(55,227)	(57,356)
Interest paid	33	(3,265)	(4,277)
Other payments		(1,499)	-
Cash flow from operating activities		118,729	161,593
INVESTING ACTIVITIES			
Acquisition of property, plant and equipment		(16,252)	(15,613)
Proceeds from disposal of property, plant and equipment		104	61
Advance paid for property, plant and equipment		(373)	(206)
Acquisition of intangible assets		(754)	(395)
Acquisition of mine development assets		(28,233)	(18,102)
Acquisition of exploration and evaluation assets		(1,682)	(1,156)
Proceeds from disposal of subsidiary net of cash and cash equivalents of disposed subsidiary	1	1,339	-
Acquisition of short-term securities		(126,331)	(11,040)
Proceeds from redemption of short-term securities		127,341	6,098
Placement of term deposits and restricted cash		(51,158)	(9,395)
Redemption of term deposits and restricted cash		6,350	8,309
Issuance of loans		(190)	-
Loan repayments received from related parties		3,138	3,124
Acquisition of interest in associates and joint ventures	26	-	(2,499)
Proceeds from sale of investment in joint venture	1	-	43,858
Dividends received from associates, joint ventures and other investments	25,26	17,108	47,886
Other		(1,648)	(2,171)
Cash flow (used in)/from investing activities		(71,241)	48,759
FINANCING ACTIVITIES			
Proceeds from loans and borrowings	33	65,525	119,093
Proceeds from sale of non-controlling interest in subsidiary	1	185,858	-
Repayment of loans and borrowings	33	(76,108)	(191,991)
Dividends paid to the shareholders	32	(150,082)	(99,002)
Dividends paid to non-controlling interest		(26,564)	(29,050)
Payments under lease	33	(452)	(465)
Cash flow used in financing activities		(1,843)	(201,415)
Net increase in cash and cash equivalents		45,645	8,937
Cash and cash equivalents at the beginning of the year		113,347	98,560
Effect of exchange rate fluctuations on cash and cash equivalents		2,201	5,844
Change in impairment provision for cash and cash equivalents		(3)	6
Cash and cash equivalents at the end of the year	31	161,190	113,347

These consolidated financial statements were approved by management on 15 March 2022:

Syzdykova K.B.
Chief Financial Officer



Kozhik-Akhmet D.A.
Financial Controller

Jakypbekova S.J.
Chief Accountant

The accompanying notes are an integral part of these consolidated financial statements.

JSC National Atomic Company Kazatomprom
Consolidated Statement of Changes in Equity

In millions of Kazakhstani Tenge	Attributable to the shareholders of the Company					Total	Non-controlling interest	Total equity
	Share capital	Reserves	Retained earnings	Additional paid-in capital				
Balance at 1 January 2020	37,051	1,647	944,917	4,420	988,035	254,119	1,242,154	
Profit for the year	-	-	183,541	-	183,541	37,827	221,368	
Foreign currency translation difference	-	19	-	-	19	5	24	
Remeasurements of post-employment benefit obligations	-	-	21	-	21	(3)	18	
Total comprehensive income for the year	-	19	183,562	-	183,581	37,829	221,410	
Dividends declared (Note 32)	-	-	(99,002)	-	(99,002)	(24,811)	(123,813)	
Other operations	-	-	-	41	41	-	41	
Balance at 31 December 2020	37,051	1,666	1,029,477	4,461	1,072,655	267,137	1,339,792	
Profit for the year	-	-	140,773	-	140,773	79,253	220,026	
Foreign currency translation difference	-	203	-	-	203	2	205	
Remeasurements of post-employment benefit obligations	-	-	70	-	70	(4)	66	
Other comprehensive income/(loss)	-	(3)	-	-	(3)	-	(3)	
Total comprehensive income for the year	-	200	140,843	-	141,043	79,251	220,294	
Dividends declared (Note 32)	-	-	(150,082)	-	(150,082)	(26,583)	(176,665)	
Other operations (Note 1)	-	-	2,254	(1,922)	332	377	709	
Change in ownership interest in a subsidiary without loss of control (Note 1)	-	-	125,895	-	125,895	27,076	152,971	
Balance at 31 December 2021	37,051	1,866	1,148,387	2,539	1,189,843	347,258	1,537,101	

These consolidated financial statements were approved by management on 15 March 2022:


 Syzdykova K.B.
 Chief Financial Officer




 Kozha-Akhmet D.A.
 Financial Controller


 Jakypbekova S.J.
 Chief Accountant

The accompanying notes are an integral part of these consolidated financial statements.

1 JSC NAC Kazatomprom Group and its Operations

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) for the year ended 31 December 2021 for JSC National Atomic Company Kazatomprom (the “Company”) and its subsidiaries (hereinafter collectively referred to as “the Group” or “JSC NAC Kazatomprom”).

The Company is a joint stock company set up in accordance with regulations of the Republic of Kazakhstan. The Company was established pursuant to the Decree of the President of the Republic of Kazakhstan on the establishment of National Atomic Company Kazatomprom No. 3593, dated 14 July 1997, and the Decree of the Government of the Republic of Kazakhstan on National Atomic Company Kazatomprom Issues No. 1148 dated 22 July 1997, as a closed joint stock company with a 100% government shareholding.

As of 31 December 2021, 75% of the Company’s shares are held by Samruk-Kazyna JSC and 25% are on free float.

The Company’s registered address is Syganak street, house 17/12, Nur-Sultan city, the Republic of Kazakhstan. The principal place of business is the Republic of Kazakhstan.

The Group’s principal activities include production of uranium and sale of uranium products. The Group is one of the leading uranium producing companies of the world. The Group is also involved in processing of rare metals, manufacture and sale of beryllium and tantalum products and scientific support of operational activities.

JSC NAC Kazatomprom is an entity representing interests of the Republic of Kazakhstan at the initial stages of the nuclear fuel cycle and production of fuel assemblies and their components. The Group is a participant in a number of associates and joint ventures which make a significant contribution to its profit (Notes 25 and 26). The Group’s Development Strategy focuses on the core business activities of mining and processing of uranium and related natural resources. The Development Strategy is designed to ensure long term value growth for all stakeholders of the Group in accordance with the principles of Sustainable Development through aligning production volumes to market conditions and adopting a market centric focus to sales capabilities, applying best practices in business activities, and developing a corporate culture consistent with the Group’s position as an industry leader.

As at 31 December 2021, the Group was a party to the following contracts for production and exploration of uranium:

Mine/area	Stage	Contract date	Contract term	Subsurface user
Kanzhugan	Production	27 November 1996*	26 years	Kazatomprom- SaUran LLP
Uvanas	Production	27 November 1996**	26 years	Kazatomprom- SaUran LLP
Mynkuduk, East lot	Production	27 November 1996*	26 years	Kazatomprom- SaUran LLP
Moinkum, lot 1 (South) (south part)	Production	26 September 2000**	20 years	Kazatomprom- SaUran LLP
Mynkuduk, Central lot	Production	08 July 2005	28 years	DP Ortalyk LLP
Mynkuduk, West lot	Production	08 July 2005	30 years	Appak LLP
North and South Karamurun	Production	15 November 1996*	26 years	RU-6 LLP
Moinkum, lot 3 (Central) (north part)	Production	31 May 2010	31 years	Kazatomprom- SaUran LLP
Inkai, block 1	Production	13 July 2000	45 years	JV Inkai LLP
Inkai, block 2	Exploration	25 June 2018*	4 years	Company
Inkai, block 3	Exploration	25 June 2018*	4 years	Company
Zhalpak	Production	14 December 2021	21 years	DP Ortalyk LLP
North Khorasan, block 2	Production	01 March 2006	49 years	Baiken-U LLP
North Khorasan, block 1	Exploration and Production	08 May 2005	53 years	JV Khorassan-U LLP
Budenovskoe, block 2	Production	08 July 2005	35 years	Karatau LLP
Budenovskoe, block 1	Production	20 November 2007	30 years	JV Akbastau JSC
Budenovskoe, blocks 3, 4	Production	20 November 2007	31 years	JV Akbastau JSC

* The Group plans to extend the subsoil use contract in 2022.

** The contracts have expired and mines are depleted and the Group is in the process of mine liquidation.

At 31 December 2021 the Group comprises 33 entities (2020: 37), including associates and joint ventures, located in six regions of the Republic of Kazakhstan: Turkestan region, East Kazakhstan region, Kyzylorda region, Akmola region, Pavlodar region and Almaty region. At 31 December 2021 the aggregate number of employees of the Group is 21 thousand (2020: 21 thousand) people.

Presented below are significant changes in the Group structure during 2021.

1 JSC NAC Kazatomprom Group and Its Operations (Continued)

Sale of a 49% non-controlling share in DP Ortalyk LLP

The Group and China General Nuclear Power Group, CGNPC, agreed to build a plant for the production of fuel assemblies, Ulba-FA LLP (Note 26) located on the territory of Ulba Metallurgical Plant JSC (Note 39). CGNPC guaranteed the purchase of Ulba-FA LLP products, and in return the Group agreed to sell a 49% interest in DP Ortalyk LLP (Note 39) to CGNPC or its affiliate.

In April 2021 the parties signed a sale and purchase agreement, where the selling price of a 49% stake in DP Ortalyk LLP was determined in the amount of 435 million US Dollars (equivalent to Tenge 186,437 million) based on a fair value assessment determined by an independent appraiser.

On 22 July 2021 the sale of the interest in DP Ortalyk LLP was completed after obtaining all state permits and fulfilling all the preliminary conditions of the sale and purchase agreement. The re-registration has been completed and CGNM UK Limited (a subsidiary of CGNPC) became the owner of a 49% interest in DP Ortalyk LLP. The Group retains a 51% ownership interest. The management of the Group has determined that the Group retains control over DP Ortalyk LLP, because the Group has significant rights to manage the enterprise's production activities and influence the profits from them (Note 4).

In millions of Kazakhstani Tenge

Selling price at the exchange rate as of 22 April 2021	186,437
<i>Less foreign exchange loss</i>	(579)
Consideration received	185,858
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<i>Net assets of the subsidiary at the date of disposal of the interest</i>	55,258
Non-controlling interest, 49%	27,076
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Selling price at the exchange rate as of 22 April 2021	186,437
<i>Less Non-controlling interest</i>	(27,076)
<i>Less Corporate income tax</i>	(33,466)
Increase in equity attributable to the owners of the Company	125,895

Mutual cooperation between the Group and CGNM and its related entities involved (CGNM Group) is governed by commercial agreement that contains put and call options.

Call option grants the Group the right to demand CGNM Group to sell their interest in DP Ortalyk LLP and Ulba-FA LLP after occurrence of any of the following events: (1) there is a deadlock situation for a decision made by the Group and CGNM Group as participants of DP Ortalyk LLP and Ulba-FA LLP, (2) CGNM Group ceases to own its interest in Ulba-FA LLP, (3) CGNM Group submits a notice of liquidation, (4) CGNM Group causes a material breach of commercial terms of Ulba-FA LLP that has not been addressed, (5) Ulba-FA LLP does not complete any of its planned activities on the specified date because of unfulfilled liabilities by the CGNM Group, including shipment of fuel tablets within 24 months after the first order placed. CGNM Group has 60 days to eliminate an event occurred before the option is exercised. Call option is exercised at fair value of shares as of the date the notice of option exercise.

Put option grants the CGNM Group the right to demand the Group to buy their interest in DP Ortalyk LLP and Ulba-FA LLP after occurrence of any of the following events: (1) there is a deadlock situation for a decision made by the Group and CGNM Group as participants of DP Ortalyk LLP and Ulba-FA LLP, (2) CGNM Group ceases to own its interest in DP Ortalyk LLP, (3) the Group submits a notice of liquidation, (4) the Group causes a material breach of commercial terms of Ulba-FA LLP that has not been addressed, (5) Ulba-FA LLP does not complete any of its planned activities on the specified date because of unfulfilled liabilities by the Group, including shipment of fuel tablets within 24 months after the first order placed. The Group has 60 days to eliminate an event occurred before the option is exercised. Put option is exercised at fair value of shares as of the date the notice of option exercise. With respect of valuation of derivative instruments relating to above mentioned put and calls options the Group determined that such value is immaterial as the exercise price is set at the fair value of the shares.

The Group considered the impact of above mentioned call and put options on the financial statements, in particular the Group considered whether the existence of put option requires recognition of financial liabilities at the amount equal to net present value of the redemption amount pursuant to requirement of IAS 32. Consequently, as at the date of transaction and as at 30 September 2021 the Group has recognised a liability in the amount of Tenge 185,210 million in accordance with the terms of the sale and purchase agreement of a 49% stake in DP Ortalyk LLP, which provides the right to CGNM to request the Group to buy back that entity's ownership interest in DP Ortalyk LLP at fair value on the date of purchase if DP Ortalyk LLP does not receive a new subsoil use contract on Zhalspak field by 31 December 2021, the Group assessed that obtaining that subsoil use contract was outside of control of the Group. The subsoil use contract was received on 14 December 2021 and then the liability was derecognised in correspondence with equity amount. There was no material change to its fair value between initial recognition date and extinguishment date.

1 JSC NAC Kazatomprom Group and Its Operations (Continued)

As of 31 December 2021 the Group has not recognised financial liability to purchase shares in DP Ortalyk LLP as required by IAS 32 because management believes that other conditions requiring purchase of shares listed above are under the Group's control, i.e. the Group does not have unavoidable obligation to pay cash.

Production contract of JV Budenovskoye LLP

Established in 2016, JV Budenovskoye LLP is owned 51% by the Group and 49% by Stepnogorsk Mining and Chemical Plant LLP. On 21 December 2021 the Ministry of Energy approved the right of JV Budenovskoye LLP (Note 26) to commence commercial uranium production under a subsoil use agreement for Budenovskoye mine blocks 6 and 7. After the completion of its ongoing pilot production program, the agreement provides for a commercial ramp-up of up to 2,500 tonnes beginning no earlier than 2024, and the potential for maximum annual production capacity of up to 6,000 tonnes no earlier than 2026. The timing of commissioning plans and future production rates remain subject to annual review and may be adjusted based upon Kazatomprom's strategy and an ongoing assessment of market conditions.

Under an agreement signed by the JV Budenovskoye LLP partners, the JV Budenovskoye LLP anticipated ramp-up production from 2024 – 2026 is fully committed for supplying the Russian civil nuclear energy industry, under an offtake contract at market-related terms.

Sales of share in Caustic JSC

On 30 December 2021 the Group concluded an agreement for the sale of its 40% stake in Caustic JSC to Trade House "United Chemical Technologies" LLP, one of the major shareholders of Caustic JSC. The selling price is Tenge 1,214 million based upon an independent appraisal of fair market value. According to the terms of the sales contract, payment is made in instalments. The first tranche in the amount of Tenge 364 million was received in January 2022. The act of transfer of ordinary shares equivalent to 12% of the Group's holding in Caustic JSC was signed on February 2022. The remaining consideration must be paid by the buyer within 24 months from the date of signing the contract. As of 31 December 2021 the investment in Caustic JSC is presented as an asset held for sale, net of impairment loss of Tenge 1,084 million (Note 13).

Sales of 100% interests in subsidiaries - KazPV project

On 10 June 2021 the Group signed an agreement for the sale of the Group's entire interest in Kazakhstan Solar Silicon LLP. The sale was completed on 12 July 2021 upon receipt of full payment of Tenge 323 million.

On 16 July 2021 the Group signed an agreement for the sale of the Group's entire interest in Astana Solar LLP and on 23 August 2021 signed the act of acceptance after receiving full payment under the contract. The payment received amounted to Tenge 380 million.

On 26 October 2021, an agreement for the sale of the Group's entire interest in MK Kazsilicon LLP was signed. On 19 November 2021 after receiving full payment under the contract the Group signed an act of acceptance certificate. The payment received amounted to Tenge 652 million.

Total proceeds from sales of KazPV entities was Tenge 1,355 million less Tenge 16 million cash and cash equivalents of disposed entities at the disposal date.

Liquidation of Kazatomprom-Damu LLP

In April 2021, the Group liquidated Kazatomprom-Damu LLP. As a result of the liquidation, the Group wrote off additional paid-in capital of Tenge 2,254 million and the accumulated loss attributable to non-controlling interest of Tenge 377 million.

Sale of JSC Uranium Enrichment Center (TsOU)

In 2019 the Group entered into a conditional contract to sell its 50% interest minus 1 (one) share in JSC Uranium Enrichment Center (TsOU) to its partner in this joint venture - TVEL JSC (TVEL). The Group maintained 1 share of

TsOU, which will retain the Group's right to access uranium enrichment services in accordance with the conditions previously agreed with TVEL. On 17 March 2020, the Group completed this sale. The contract price was Russian rubles 6,253 million or Euro 90 million fixed at an exchange rate as at 31 December 2019. Actual cash consideration received was Euro 90 million (Tenge 43,858 million equivalent).

1 JSC NAC Kazatomprom Group and Its Operations (Continued)

In millions of Kazakhstani Tenge

Contract price in accordance with exchange rate as at 31 December 2019	40,485
Less: carrying value of the investment in joint venture	(18,670)
Transfer of foreign currency translation reserve	248
Gain from disposal of joint venture	22,063

2 Environment of the Group

In general, the economy of the Republic of Kazakhstan continues to display characteristics of an emerging market. Its economy is particularly sensitive to prices on oil and gas and other commodities, which constitute a major part of the country's exports. These characteristics include, but are not limited to, the existence of national currency that is not freely convertible outside of the country and little presence of Kazakhstani debt and equity securities on foreign stock exchanges. Ongoing political tension in the region including significant developments since 1 January 2022 (refer Note 43), has caused and may continue to have a negative impact on the economy of the Republic of Kazakhstan, including decrease in liquidity, difficulties in attracting international financing and volatility of exchange rates.

On 20 August 2015 the National Bank and the Government of the Republic of Kazakhstan made a resolution about discontinuation of supporting the exchange rate of Tenge and implemented a new monetary policy, which is based on an inflation targeting regime, cancellation of exchange rate trading band and start of a free-floating exchange rate. However, the National Bank's exchange rate policy allows it to intervene to prevent dramatic fluctuations of the Tenge exchange rate and to ensure financial stability.

As at the date of this report the official exchange rate of the National Bank of the Republic Kazakhstan was Tenge 511.71 per 1 US Dollar compared to Tenge 431.67 per 1 US Dollar as at 31 December 2021 (31 December 2020: Tenge 420.71 per 1 US Dollar)

In response to the COVID-19 pandemic that arose in 2019, Kazakhstani authorities implemented numerous measures attempting to contain the spreading and impact of the virus, including travel bans and restrictions, quarantines, shelter-in-place orders and limitations on business activity, including closures. Some of the above measures have been relaxed. During 2021, the Group's activities were not suspended, although administrative staff largely continued to work remotely.

In September 2021 S&P Global Ratings, the international rating agency, affirmed the sovereign credit rating of Kazakhstan of "BBB-". This credit rating reflects the government's strong balance sheet, built on past budgetary surpluses accumulated in the National Fund of the Republic of Kazakhstan, low government debt, total volume of which will not exceed the external liquid assets of the state within two years, as well as measures implemented by the Government of the Republic of Kazakhstan aimed at controlling the negative consequences of the COVID-19 pandemic on the economy.

The economic environment has a significant impact on the Group's operations and financial position. Management is taking necessary measures to ensure sustainability of the Group's operations. However, the future effects of the current economic situation are difficult to predict, and management's current expectations and estimates could differ from actual results. Additionally, the energy sector in the Republic of Kazakhstan is still impacted by political, legislative, fiscal and regulatory developments. The prospects for future economic stability in the Republic of Kazakhstan are largely dependent upon the effectiveness of any economic and public policy measures undertaken by the Government which are beyond the Group's control.

3 Significant Accounting Policies

Basis of preparation

These consolidated financial statements have been prepared in accordance with IFRS under the historical cost convention, as modified by financial instruments categorised at fair value through profit or loss ("FVTPL") and at fair value through other comprehensive income ("FVOCI"). The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the periods presented.

The preparation of consolidated financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 4.

3 Significant Accounting Policies (Continued)

Presentation currency

These consolidated financial statements are presented in millions of Kazakhstani Tenge (“Tenge”), unless otherwise stated.

Consolidation

(i) Consolidated financial statements

Subsidiaries are those investees, including structured entities, that the Group controls because the Group (i) has power to direct the relevant activities of the investees that significantly affect their returns, (ii) has exposure, or rights, to variable returns from its involvement with the investees, and (iii) has the ability to use its power over the investees to affect the amount of the investor’s returns. The existence and effect of substantive rights, including substantive potential voting rights, are considered when assessing whether the Group has power over another entity.

For a right to be substantive, the holder must have a practical ability to exercise that right when decisions about the direction of the relevant activities of the investee need to be made. The Group may have power over an investee even when it holds less than the majority of the voting power in an investee. In such a case, the Group assesses the size of its voting rights relative to the size and dispersion of holdings of the other vote holders to determine if it has de-facto power over the investee. Protective rights of other investors, such as those that relate to fundamental changes of the investee’s activities or applied only in exceptional circumstances, do not prevent the Group from controlling an investee.

Subsidiaries are consolidated from the date on which control is transferred to the Group (acquisition date) and are deconsolidated from the date on which control ceases.

The acquisition method of accounting is used to account acquisition of subsidiaries other than those acquired from parties under common control. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured at their fair values at the acquisition date, irrespective of the extent of any non-controlling interest.

The Group measures non-controlling interest that represents present ownership interest and entitles the holder to a proportionate share of net assets in the event of liquidation non-controlling interest’s proportionate share of net assets of the acquiree.

Goodwill is measured by deducting the net assets of the acquiree from the aggregate of the consideration transferred for the acquiree, the amount of non-controlling interest in the acquiree and the fair value of an interest in the acquiree held immediately before the acquisition date. Any negative amount (“negative goodwill” or a “bargain purchase”) is recognised in profit or loss, after management reassesses whether it identified all the assets acquired and all the liabilities and contingent liabilities assumed and reviews the appropriateness of their measurement.

The consideration transferred for the acquiree is measured at the fair value of the assets given up, equity instruments issued and liabilities incurred or assumed, including the fair value of assets or liabilities from contingent consideration arrangements, but excludes acquisition related costs such as advisory, legal, valuation and similar professional services. Transaction costs related to the acquisition of and incurred for issuing equity instruments are deducted from equity; transaction costs incurred for issuing debt as part of the business combination are deducted from the carrying amount of the debt and all other transaction costs associated with the acquisition are expensed.

Intercompany transactions, balances and unrealised gains on transactions between Group companies are eliminated; unrealised losses are also eliminated unless the cost cannot be recovered. The Company and all of its subsidiaries use uniform accounting policies consistent with the Group’s policies. When necessary amounts reported by subsidiaries have been adjusted to conform with the Group’s accounting policies.

Non-controlling interest is that part of the net results and of the equity of a subsidiary attributable to interests which are not owned, directly or indirectly, by the Group. Non-controlling interest forms a separate component of the Group’s equity.

(ii) Purchases and sales of non-controlling interests

(iii) The Group applies the economic entity model to account for transactions with owners of non-controlling interest in transactions that do not result in a loss of control. Any difference between the purchase consideration and the carrying amount of non-controlling interest acquired is recorded as a capital transaction directly in equity. The Group recognises the difference between sales consideration and the carrying amount of non-controlling interest

3 Significant Accounting Policies (Continued)

sold as a capital transaction in the consolidated statements of changes in equity. *Purchases of subsidiaries from parties under common control*

Purchases of subsidiaries from parties under common control are accounted for using the predecessor values method. Under this method the consolidated financial statements of the combined entity are presented as if the businesses had been combined from the beginning of the earliest period presented or, if later, the date when the combining entities were first brought under common control. The assets and liabilities of the subsidiary transferred under common control are at the predecessor entity's carrying amounts.

The predecessor entity is considered to be the highest reporting entity in which the subsidiary's IFRS financial information was consolidated. Related goodwill inherent in the predecessor entity's original acquisitions is also recorded in these consolidated financial statements. Any difference between the carrying amount of net assets, including the predecessor entity's goodwill, and the consideration for the acquisition is accounted for in these consolidated financial statements as an adjustment to retained earnings within equity.

(iv) Associates

Associates are entities over which the Group has significant influence (directly or indirectly), but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting and are initially recognised at cost. Dividends received from associates reduce the carrying value of the investment in associates. Other post-acquisition changes in the Group's share of net assets of an associate are recognised as follows: (i) the Group's share of profits or losses of associates is recorded in

the consolidated profit or loss for the year as the share of results of associates, (ii) the Group's share of other comprehensive income is recognised in other comprehensive income and presented separately, (iii) other changes in the Group's share of the carrying value of net assets of associates are recognised in profit or loss within the share of results of associates.

However, when the Group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate. Unrealised gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates; unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

(v) Joint arrangements

The Group is a party of joint arrangement when it exercises joint control over arrangement by acting collectively with other parties and decisions about the relevant activities require unanimous consent of the parties sharing control. The joint arrangement is either a joint operation or a joint venture depending on the contractual rights and obligations of the parties to the arrangement.

The Group's interests in joint ventures are accounted for using the equity method and are initially recognised at cost. Dividends received from joint ventures reduce the carrying value of the investment in joint ventures. Other post-acquisition changes in the Group's share of net assets of joint ventures are recognised as follows: (i) the Group's share of profits or losses of joint ventures is recorded in the consolidated profit or loss for the year as share of result of joint ventures, (ii) the Group's share of other comprehensive income is recognised in other comprehensive income and presented separately, (iii) other changes in the Group's share of the carrying value of net assets of joint ventures are recognised in profit or loss within the share of result of joint ventures. When the Group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, form part of the Group's net investment in the joint ventures), the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealised gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in the joint ventures. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

If participants of joint arrangements have rights to assets and bear responsibility for obligations under joint arrangements, then the joint arrangement is classified as a joint operation. In relation to interest in joint operations the Group recognises: (i) its share of any assets held jointly, (ii) its share of any liabilities incurred jointly, (iii) revenue from the sale of its share of the output arising from the joint operation, (iv) its share of any expenses incurred jointly. In accordance with requirements of the relevant agreements, participants buy output of joint operations equally in accordance with their 50% ownership interest. If participants of the joint operations do not comply with this requirement during a period, a liability or receivable under joint operations is recognised for an amount equivalent to the corresponding gross margin. The liability/receivable is settled either when participants satisfy the parity requirements

3 Significant Accounting Policies (Continued)

or participants mutually agree to discharge the liabilities/receivables, and a corresponding loss/gain is recognised in profit and loss. Receivables and payables between participants of the joint operations are presented on a gross basis in the financial statements. No revenue from joint operations is recognised in the financial statements until the Group sells the output to third parties.

(vi) Disposals of subsidiaries, associates or joint ventures

When the Group ceases to have control or significant influence, any retained interest in the entity is remeasured to its fair value at the date when control is lost, with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity, are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognised in other comprehensive income are reclassified to profit or loss.

If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to profit or loss where appropriate.

Foreign currency translation

The functional currency of each of the Group's consolidated entities is the currency of the primary economic environment in which the entity operates. The functional currency of the Company and its Kazakhstan subsidiaries, and the Group's presentation currency, is the national currency of Kazakhstan, Kazakhstani Tenge. Exchange restrictions and currency controls exist in relation of converting Tenge into other currencies. Currently, Tenge is not freely convertible outside of the Republic of Kazakhstan.

Monetary assets and liabilities are translated into each entity's functional currency at the official exchange rate at the respective end of the reporting period. Foreign exchange gains and losses resulting from the settlement of the transactions and from the translation of monetary assets and liabilities into each entity's functional currency at year-end official exchange rates are recognised in profit or loss. Translation at year-end does not apply to non-monetary items that are carried at historic costs.

Loans between Group entities and related foreign exchange gains or losses are eliminated upon consolidation. However, where the loan is between Group entities that have different functional currencies, the foreign exchange gain or loss cannot be eliminated in full and is recognised in the consolidated profit or loss, unless the loan is not expected to be settled in the foreseeable future and thus forms part of the net investment in foreign operation. In such a case, the foreign exchange gain or loss is recognised in other comprehensive income.

The results and financial position of Group entities, which have financial statements with different functional currencies, are translated into the presentation currency as follows:

- assets and liabilities for each statements of financial position are translated at the closing rate at the end of the respective reporting period;
- income and expenses are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions);
- components of equity are translated at the historic rate;
- all resulting exchange differences are recognised in other comprehensive income

When control over a foreign operation is lost, the exchange differences recognised previously in other comprehensive income are reclassified to profit or loss for the year as part of the gain or loss on disposal. On partial disposal of a subsidiary without loss of control, the related portion of accumulated currency translation differences is reclassified to non-controlling interest within equity. At 31 December 2021 the principal rate of exchange used for translating foreign currency balances was US Dollar 1 per Tenge 431.80 (31 December 2020: US Dollar 1 per Tenge 420.91).

Revenue recognition

Revenue is income arising in the course of the Group's ordinary activities. Revenue is recognised in the amount of transaction price. Transaction price is the amount of consideration to which the Group expects to be entitled in exchange for transferring control over promised goods or services to a customer, excluding the amounts collected on

behalf of third parties. Revenue is recognised net of discounts, returns and value added taxes, export duties, other similar mandatory payments.

3 Significant Accounting Policies (Continued)

(i) Revenue from sales of goods (uranium, tantalum, beryllium, niobium and other products)

Sales are recognised when control of the good has transferred, being when the goods are delivered to the customer, the customer has full discretion over the goods, and there is no unfulfilled obligation that could affect the customer's acceptance of the goods. Delivery occurs when the goods have been delivered to the specific location, the risks of obsolescence and loss have been transferred to the customer, and either the customer has accepted the goods in accordance with the contract, the acceptance provisions have lapsed, or the Group has objective evidence that all criteria for acceptance have been satisfied.

Revenue from the sales with discounts is recognised based on the price specified in the contract, net of the estimated volume discounts. Accumulated experience is used to estimate and provide for the discounts, using the expected value method, and revenue is only recognised to the extent that it is highly probable that a significant reversal will not occur.

No element of financing is deemed present as the sales are made with an average credit term of 30-90 days, which is consistent with market practice.

A receivable is recognised when the goods are delivered as this is the point in time that the consideration is unconditional because only the passage of time is required before the payment is due.

Delivery of uranium, tantalum and beryllium products vary depending on the individual terms of a sale contract usually in accordance with the Incoterms classification. Delivery of uranium products occurs: at the date of physical delivery in accordance with Incoterms or at the date of book-transfer to account with convertor specified by customer. Book-transfer operation represents a transaction whereby uranium account balance of the transferor is decreased with simultaneous allocation of uranium to the transferee's uranium account with the same specialised conversion / reconversion entity.

(ii) Sales of services (transportation, drilling and other)

The Group may provide services under fixed-price and variable price contracts. Revenue from providing services is recognised in the accounting period in which the services are rendered. For fixed-price contracts, revenue is recognised based on the actual service provided to the end of the reporting period as a proportion of the total services to be provided because the customer receives and uses the benefits simultaneously.

Where the contracts include multiple performance obligations, the transaction price is allocated to each separate performance obligation based on the stand-alone selling prices. Where these are not directly observable, they are estimated based on expected cost plus margin.

Estimates of revenues, costs or extent of progress toward completion are revised if circumstances change. Any resulting increases or decreases in estimated revenues or costs are reflected in profit or loss in the period in which the circumstances that give rise to the revision become known by management.

In case of fixed-price contracts, the customer pays the fixed amount based on a payment schedule. If the services rendered by the Group exceed the payment, a contract asset is recognised. If the payments exceed the services rendered, a contract liability is recognised.

If the contract includes variable consideration, revenue is recognised only to the extent that it is highly probable that there will be no significant reversal of such consideration.

(iii) Financing components

(iv) The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group does not adjust any of the transaction prices for the time value of money. *Barter transactions and mutual cancellations*

A portion of sales and purchases are settled by mutual cancellations, barter or non-cash settlements. These transactions are generally in the form of direct settlements by dissimilar goods and services from the final customer (barter), cancellation of mutual balances or through a chain of non-cash transactions involving several companies.

Sales and purchases that are expected to be settled by mutual settlements, barter or other non-cash settlements are recognised based on the management's estimate of the fair value to be received or given up in non-cash settlements. The fair value is determined with reference to observable market information.

Non-cash transactions have been excluded from the cash flow statement. Investing and financing activities and the total of operating activities represent actual cash flows.

3 Significant Accounting Policies (Continued)

Interest income

Interest income is recorded for all debt instruments, other than those at FVTPL, on an accrual basis using the effective interest method. This method defers, as part of interest income, all fee received between the parties to the contract that are an integral part of the effective interest rate, all other premiums or discounts. Interest income on debt instruments at FVTPL calculated at nominal interest rate is presented within 'finance income' line in profit or loss.

Fees integral to the effective interest rate include origination fees received or paid by the Group relating to the creation or acquisition of a financial asset (for example, fees for evaluating creditworthiness, evaluating and recording guarantees or collateral, negotiating the terms of the instrument and for processing transaction documents).

For financial assets that are originated or purchased credit-impaired, the effective interest rate is the rate that discounts the expected cash flows (including the initial expected credit losses) to the fair value on initial recognition (normally represented by the purchase price). As a result, the effective interest is credit-adjusted.

Interest income is calculated by applying the effective interest rate to the gross carrying amount of financial assets, except for (i) financial assets that have become credit impaired (Stage 3), for which interest revenue is calculated by applying the effective interest rate to their AC, net of the ECL provision, and (ii) financial assets that are purchased or originated credit impaired, for which the original credit-adjusted effective interest rate is applied to the AC.

Income taxes

Income taxes have been provided for in the consolidated financial statements in accordance with legislation enacted by the end of the reporting period. The income tax charge/(credit) comprises current tax and deferred tax and is recognised in profit or loss for the year, except if it is recognised in other comprehensive income or directly in equity because it relates to transactions that are also recognised, in the same or a different period, in other comprehensive income or directly in equity.

Current tax is the amount expected to be paid to, or recovered from, the taxation authorities in respect of taxable profits or losses for the current and prior periods. Taxable profits or losses are based on estimates if consolidated financial statements are authorised prior to filing relevant tax returns. Taxes other than on income are recorded within operating expenses.

Deferred income tax is provided using the balance sheet liability method for tax loss carry forwards and temporary differences arising between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. In accordance with the initial recognition exemption, deferred taxes are not recorded for temporary differences on initial recognition of an asset or a liability in a transaction other than a business combination if the transaction, when initially recorded, affects neither accounting nor taxable profit. Deferred tax liabilities are not recorded for temporary differences on initial recognition of goodwill, and subsequently for goodwill which is not deductible for tax purposes. Deferred tax balances are measured at tax rates enacted at the end of the reporting period, which are expected to apply to the period when the temporary differences will reverse or the tax loss carry forwards will be utilised. Deferred tax assets and liabilities are netted only within the individual companies of the Group. Deferred tax assets for deductible temporary differences and tax loss carry forwards are recorded only to the extent that it is probable that the temporary difference will reverse in the future and there is sufficient future taxable profit available against which the deductions can be utilised. The Group controls the reversal of temporary differences relating to taxes chargeable on dividends from subsidiaries or on gains upon their disposal. The Group does not recognise deferred tax liabilities on such temporary differences except to the extent that management expects the temporary differences to reverse in the foreseeable future.

The Group's uncertain tax positions are reassessed by management at the end of each reporting period. Liabilities are recorded for income tax positions that are determined by management as more likely than not to result in additional taxes being levied if the positions were to be challenged by the tax authorities. The assessment is based on the interpretation of tax laws that have been enacted by the end of the reporting period, and any known court or other rulings on such issues.

Liabilities for penalties, interest and taxes other than on income are recognised based on management's best estimate of the expenditure required to settle the obligations at the end of the reporting period.

Property, plant and equipment

(i) Recognition and measurement of property, plant and equipment

Property, plant and equipment are stated at cost, less accumulated depreciation and provision for impairment, where required.

3 Significant Accounting Policies (Continued)

Cost comprises purchase price, including import duties and non-refundable purchase taxes, after deducting trade discounts and rebates, and any costs directly attributable to bringing the asset to the location and condition necessary for its intended use. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate proportion of production overheads. The individual significant parts of an item of property, plant and equipment (components), whose useful lives are different from the useful life of the given asset as a whole are depreciated individually, applying depreciation rates reflecting their anticipated useful lives.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. Specialised spare parts and servicing equipment with a significant initial value and a useful life of more than one year are recognised as an item of property, plant and equipment. Other spare parts and auxiliary equipment are recognised as inventories and accounted for in profit and loss for the year as retired.

Costs of minor repairs and day-to-day maintenance are expensed when incurred. Cost of replacing major parts or components of property, plant and equipment items are capitalised and the replaced part is disposed. Gains and losses on disposals are determined by comparing the proceeds with the carrying amount and are recognised in profit or loss for the year.

(ii) Depreciation

Land is not depreciated. Depreciation of items within buildings category that are used in extraction of uranium and its preliminary processing is charged on a unit-of-production (UoP) method in respect of items for which this basis best reflects the pattern of consumption. Depreciation on other items of property, plant and equipment is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives:

	<u>Useful lives in years</u>
Buildings	10 to 50
Machinery and equipment	3 to 50
Vehicles	3 to 10
Other	3 to 20

Each item's estimated useful life depends on its own useful life limitations and/or term of a subsurface use contract and the present assessment of economically recoverable reserves of the mine property at which the item is located.

The residual value of an asset is the estimated amount that the Group would currently obtain from the disposal of the asset less the estimated costs of disposal, if the asset was already of the age and in the condition expected at the end of its useful life. The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

Mine development assets

Mine development assets are stated at cost, less accumulated depreciation and provision for impairment, where required. Mine development assets comprise the capitalised costs of pump-in and pump-out well drilling, main external tying of the well with surface piping, equipment, measuring instruments, ion-exchange resin, estimated site restoration, acid costs and other development costs. Mine development assets are amortised at the mine or block level using the unit-of-production method. Unit-of-production rates are based on proved reserves estimated to be recovered from mines (blocks) using existing facilities and operating methods. The estimate of proved reserves is based on reserve reports which are integral part of each subsoil use contract. These reserve reports are incorporated into feasibility models which are approved by the government and detail the total proven reserves and estimated scheduled extraction by year. Since 2017, the Group uses reserve reports prepared by an independent consultant (Note 4).

Intangible assets

(i) Recognition and measurement of intangible assets

The Group's intangible assets other than goodwill have definite useful lives and primarily include capitalised production technology development costs, computer software, patents, and licences. Acquired computer software licences and patents are initially measured at costs incurred to acquire and bring them to use.

3 Significant Accounting Policies (Continued)

(ii) Amortisation of intangible assets

Intangible assets are amortised using the straight-line method over their useful lives:

	<u>Useful lives in years</u>
Licences and patents	3 to 20
Software	1 to 14
Other	2 to 15

If impaired, the carrying amount of intangible assets is written down to the higher of value in use and fair value less costs to sell.

(iii) Goodwill

Goodwill is carried at cost less accumulated impairment losses, if any. The Group tests goodwill for impairment at least annually and whenever there are indications that goodwill may be impaired. Goodwill is allocated to the cash-generating units, or groups of cash-generating units, that are expected to benefit from the synergies of the business combination. Such units or groups of units represent the lowest level at which the Group monitors goodwill and are not larger than an operating segment.

Gains or losses on disposal of an operation within a cash-generating unit to which goodwill has been allocated include the carrying amount of goodwill associated with the disposed operation, generally measured on the basis of the relative values of the disposed operation and the portion of the cash-generating unit which is retained.

(iv) Research and development costs

Research expenditure is recognised as an expense when incurred. Costs incurred on development projects (relating to the design and testing of new or improved products) are recognised as intangible assets when it is probable that the project will be a success considering its commercial and technological feasibility, and costs can be measured reliably. Other development expenditures are recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Development costs with a finite useful life that have been capitalised are amortised from the commencement of the commercial production of the product on a straight-line basis over the period of its expected benefit.

Mineral rights

Mineral rights are stated at cost, less accumulated depreciation and provision for impairment, where required. Mineral rights acquired as part of business combinations are recognised at fair value. The capitalised cost of acquisition of mineral rights comprises subscription bonus, commercial discovery bonus, the cost of subsurface use rights and capitalised historical costs. The Group is obliged to reimburse historical costs incurred by the State in respect of mining rights prior to licence or subsoil use contracts being issued. These historical costs are recognised as part of the acquisition cost with a corresponding liability equal to the present value of payments made during the licence period or subsoil use contract.

Mineral rights are amortised using unit-of-production method based upon proved reserves commencing when uranium first starts to be extracted.

The estimate of proved reserves is based on reserve reports, which are integral part of each subsoil use contract. These reserve reports are incorporated into feasibility models, which are approved by the government and detail the total proven reserves and estimated scheduled extraction by year. Since 2017, the Group uses reserve reports prepared by an independent consultant (Note 4).

Exploration and evaluation assets

Exploration and evaluation assets are measured at cost less provision for impairment, where required. The Group classifies exploration and evaluation assets as tangible or intangible according to the nature of the assets acquired.

Exploration and evaluation assets comprise the capitalised costs incurred by the Group prior to proving that viable production is possible and include geological and geophysical costs, the costs of exploratory wells and directly attributable overheads associated with exploration activities.

3 Significant Accounting Policies (Continued)

The decision to enter into or renew a subsoil use contract after the expiration of the exploration and appraisal period is subject to the success of the exploration and appraisal of mineral resources and the Group's decision to proceed to the production (development) stage.

Tangible exploration and evaluation assets are transferred to mine development assets upon demonstration of commercial viability of uranium production and amortised using unit-of-production method based upon proved reserves. Once commercial reserves (proved or commercial reserves) are found, intangible exploration and evaluation assets are transferred to mineral rights. Accordingly, the Group does not amortise exploration and evaluation assets before commercial reserves (proved or commercial reserves) are found. If no commercial reserves are found, exploration and evaluation assets are expensed.

Exploration and evaluation assets are tested by the Group for impairment whenever facts and circumstances indicate assets' impairment. An impairment loss is recognised for the amount by which exploration and evaluation assets' carrying amount exceeds their recoverable amount. The recoverable amount is higher of the exploration and evaluation assets' fair value less costs to sell and their value in use.

One or more of the following facts and circumstances indicate that the Group should test its exploration and evaluation assets for impairment (the list is not exhaustive):

- the period for which the Group has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- substantive expenditure on further exploration for and evaluation of mineral reserves in the specific area is neither budgeted nor planned;
- exploration for and evaluation of mineral reserves in the specific area have not led to the discovery of commercially viable quantities of mineral reserves and the Group has decided to discontinue such operations in the specific area;
- sufficient data exist to indicate that, although development works in the specific area are likely to proceed, the carrying amount of the exploration and evaluation assets is unlikely to be recovered in full resulting from efficient development or by sale.

Costs associated with activities undertaken prior to exploration such as design, technical and economical assessments are expensed as incurred.

Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets, other than inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, management estimates the recoverable amount, which is determined as the higher of an asset's fair value less costs to sell (the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date) and its value in use (being the net present value of expected future cash flows of the relevant cash-generating unit). In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted.

If it is not possible to estimate the recoverable amount of the individual asset, the Group determines the recoverable amount of the cash-generating unit to which the asset belongs. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Basis for determination of cash-generating units is presented in Note 4.

The estimates used for impairment reviews are based on detailed life of mine plans and operating budgets, modified as appropriate to meet the requirements of IAS 36 "Impairment of Assets". Future cash flows are based on:

- estimates of the volumes of the reserves for which there is a high degree of confidence of economic extraction;
- future production and sales quantities;
- future commodity prices (assuming the current market prices will revert to the Group's assessment of the long term average price, generally over a period of three to five years); and
- future costs of production and other operating and capital expenditures.

3 Significant Accounting Policies (Continued)

If the carrying amount of the asset exceeds its recoverable amount, the asset is impaired and an impairment loss is charged to profit and loss for the year so as to reduce the carrying amount in the consolidated statements of financial position to its recoverable amount. An impairment loss recognised for an asset in prior years is reversed where appropriate if there has been a change in the estimates used to determine the asset's value in use or fair value less costs to sell. This reversal is recognised in profit and loss for the year, and is limited to the carrying amount that would have been determined, net of depreciation, if no impairment loss had been recognised in prior years.

Investment property

Investment property is property held by the Group to earn rental income or for capital appreciation, or both and which is not occupied by the Group.

Investment properties are stated at cost less accumulated depreciation and provision for impairment, where required. If any indication exists that investment properties may be impaired, the Group estimates the recoverable amount as the higher of value in use and fair value less costs of disposal. The carrying amount of an investment property is written down to its recoverable amount through a charge to profit or loss for the year. An impairment loss recognised in prior years is reversed if there has been a subsequent change in the estimates used to determine the asset's recoverable amount.

Subsequent expenditure is capitalised only when it is probable that future economic benefits associated with the item will flow to the Group, and the cost can be measured reliably. All other repairs and maintenance costs are expensed when incurred. If an investment property becomes owner-occupied, it is reclassified to property, plant and equipment.

Earned rental income is recorded in profit or loss for the year within other income. Gains or losses on disposal of investment property are calculated as proceeds less the carrying amount.

If an investment property becomes owner-occupied, it is reclassified as property, plant and equipment, and its carrying amount at the date of reclassification becomes its deemed cost for accounting purposes.

Assets classified as held for sale

Assets and disposal groups (which may include both non-current and current assets) are classified in the consolidated statements of financial position as 'Assets of disposal groups classified as held for sale' if their carrying amount will be recovered principally through a sale transaction (including loss of control of a subsidiary holding the assets) within twelve months after the reporting period. Assets are reclassified when all of the following conditions are met: (a) the assets are available for immediate sale in their present condition; (b) the Group management approved and initiated an active programme to locate a buyer; (c) the assets are actively marketed for sale at a reasonable price; (d) the sale is expected within one year; and (e) it is unlikely that significant changes to the plan to sell will be made or that the plan will be withdrawn.

Non-current assets or disposal groups classified as held for sale in the current period's consolidated statements of financial position are not reclassified or re-presented in the comparative statements of financial position to reflect the classification at the end of the current period.

A disposal group is a group of assets (current or non-current) to be disposed of, by sale or otherwise, together as a group in a single transaction, and liabilities directly associated with those assets that will be transferred in the transaction. Goodwill is included if the disposal group includes an operation within a cash-generating unit to which goodwill has been allocated on acquisition. Non-current assets are assets that include amounts expected to be recovered or collected more than twelve months after the reporting period. If reclassification is required, both the current and non-current portions of an asset are reclassified.

Held for sale disposal groups as a whole are measured at the lower of their carrying amount and fair value less costs to sell. Held for sale property, plant and equipment are not depreciated. Reclassified non-current financial instruments are not subject to write down to the lower of their carrying amount and fair value less costs to sell.

Liabilities directly associated with the disposal group that will be transferred in the disposal transaction are reclassified and presented separately in the consolidated statements of financial position.

Financial instruments

Key measurement terms

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The best evidence of fair value is the price in an active market. An active market is one in which transactions for the asset or liability take place with sufficient frequency and volume

3 Significant Accounting Policies (Continued)

to provide pricing information on an ongoing basis.

Fair value of financial instruments traded in an active market is measured as the product of the quoted price for the individual asset or liability and the number of instruments held by the entity. This is the case even if a market's normal daily trading volume is not sufficient to absorb the quantity held and placing orders to sell the position in a single transaction might affect the quoted price.

Valuation techniques such as discounted cash flow models or models based on recent arm's length transactions or consideration of financial data of the investees are used to measure fair value of certain financial instruments for which external market pricing information is not available. Fair value measurements are analysed by level in the fair value hierarchy as follows: (i) level one are measurements at quoted prices (unadjusted) in active markets for identical assets or liabilities, (ii) level two measurements are valuations techniques with all material inputs observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices), and (iii) level three measurements are valuations not based on solely observable market data (that is, the measurement requires significant unobservable inputs). Transfers between levels of the fair value hierarchy are deemed to have occurred at the end of the reporting period.

(i) Transaction costs

Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial instrument. An incremental cost is one that would not have been incurred if the transaction had not taken place. Transaction costs include fees and commissions paid to agents (including employees acting as selling agents), advisors, brokers and dealers, levies by regulatory agencies and securities exchanges, and transfer taxes and duties.

Transaction costs do not include debt premiums or discounts, financing costs or internal administrative or holding costs.

(ii) Amortised cost

Amortised cost ("AC") is the amount at which the financial instrument was recognised at initial recognition less any principal repayments, plus accrued interest, and for financial assets less any allowance for expected credit losses ("ECL"). Accrued interest includes amortisation of transaction costs deferred at initial recognition and of any premium or discount to the maturity amount using the effective interest method. Accrued interest income and accrued interest expense, including both accrued coupon and amortised discount or premium (including fees deferred at origination, if any), are not presented separately and are included in the carrying values of the related items in the consolidated statement of financial position.

(iii) The effective interest method

The effective interest method is a method of allocating interest income or interest expense over the relevant period, so as to achieve a constant periodic rate of interest (effective interest rate) on the carrying amount. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts (excluding future credit losses) through the expected life of the financial instrument or a shorter period, if appropriate, to the gross carrying amount of the financial instrument. The effective interest rate discounts cash flows of variable interest instruments to the next interest repricing date, except for the premium or discount which reflects the credit spread over the floating rate specified in the instrument, or other variables that are not reset to market rates.

Such premiums or discounts are amortised over the whole expected life of the instrument. The present value calculation includes all fees paid or received between parties to the contract that are an integral part of the effective interest rate. For assets that are purchased or originated credit impaired ("POCI") at initial recognition, the effective interest rate is adjusted for credit risk, i.e. it is calculated based on the expected cash flows on initial recognition instead of contractual payments.

Financial instruments – initial recognition

Financial instruments at FVTPL are initially recorded at fair value. All other financial instruments are initially recorded at fair value adjusted for transaction costs. Fair value at initial recognition is best evidenced by the transaction price. A gain or loss on initial recognition is only recorded if there is a difference between fair value and transaction price which can be evidenced by other observable current market transactions in the same instrument or by a valuation technique whose inputs include only data from observable markets. After the initial recognition, an ECL allowance is recognised for financial assets measured at AC and investments in debt instruments measured at FVOCI, resulting in an immediate accounting loss.

All purchases and sales of financial assets that require delivery within the time frame established by regulation or market convention ("regular way" purchases and sales) are recorded at trade date, which is the date on which the Group commits to deliver a financial asset. All other purchases are recognised when the entity becomes a party to the

3 Significant Accounting Policies (Continued)

contractual provisions of the instrument.

Financial assets – classification and subsequent measurement

(i) Measurement categories

The Group classifies financial assets in the following measurement categories: FVTPL, FVOCI and AC. The classification and subsequent measurement of debt financial assets depends on: (i) the Group's business model for managing the related assets portfolio and (ii) the cash flow characteristics of the asset.

(ii) Business model

The business model reflects how the Group manages the assets in order to generate cash flows – whether the Group's objective is: (i) solely to collect the contractual cash flows from the assets ("hold to collect contractual cash flows"), or (ii) to collect both the contractual cash flows and the cash flows arising from the sale of assets ("hold to collect contractual cash flows and sell") or, if neither of (i) and (ii) is applicable, the financial assets are classified as part of "other" business model and measured at FVTPL.

Business model is determined for a group of assets (on a portfolio level) based on all relevant evidence about the activities that the Group undertakes to achieve the objective set out for the portfolio available at the date of the assessment. Factors considered by the Group in determining the business model include the purpose and composition of a portfolio, past experience on how the cash flows for the respective assets were collected, how risks are assessed and managed, how the assets' performance is assessed and how managers are compensated.

(iii) Cash flow characteristics

Where the business model is to hold assets to collect contractual cash flows or to hold contractual cash flows and sell, the Group assesses whether the cash flows represent solely payments of principal and interest ("SPPI"). Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are consistent with the SPPI feature.

In making this assessment, the Group considers whether the contractual cash flows are consistent with a basic lending arrangement, i.e. interest includes only consideration for credit risk, time value of money, other basic lending risks and profit margin.

Where the contractual terms introduce exposure to risk or volatility that is inconsistent with a basic lending arrangement, the financial asset is classified and measured at FVTPL. The SPPI assessment is performed on initial recognition of an asset and it is not subsequently reassessed.

Financial assets – reclassification

Financial instruments are reclassified only when the business model for managing the portfolio as a whole changes. The reclassification has a prospective effect and takes place from the beginning of the first reporting period that follows after the change in the business model. The entity did not change its business model during the current and comparative period and did not make any reclassifications.

Financial assets impairment – credit loss allowance for ECL

The Group assesses, on a forward-looking basis, the ECL for debt instruments measured at AC and FVOCI and for the exposures arising from loan commitments and financial guarantee contracts, for contract assets. The Group measures ECL and recognises Net impairment losses on financial and contract assets at each reporting date. The measurement of ECL reflects: (i) an unbiased and probability weighted amount that is determined by evaluating a range of possible outcomes, (ii) time value of money and (iii) all reasonable and supportable information that is available without undue cost and effort at the end of each reporting period about past events, current conditions and forecasts of future conditions.

Debt instruments measured at AC and contract assets are presented in the consolidated statement of financial position net of the allowance for ECL. For loan commitments and financial guarantees, a separate provision for ECL is recognised as a liability in the consolidated statement of financial position. For debt instruments at FVOCI, changes in amortised cost, net of allowance for ECL, are recognised in profit or loss and other changes in carrying value are recognised in OCI as gains less losses on debt instruments at FVOCI.

The Group applies a three stage model for impairment, based on changes in credit quality since initial recognition. A financial instrument that is not credit-impaired on initial recognition is classified in Stage 1. Financial assets in Stage 1 have their ECL measured at an amount equal to the portion of lifetime ECL that results from default events possible within the next 12 months

3 Significant Accounting Policies (Continued)

or until contractual maturity, if shorter (“12 Months ECL”). If the Group identifies a significant increase in credit risk (“SICR”) since initial recognition, the asset is transferred to Stage 2 and its ECL is measured based on ECL on a lifetime basis, that is, up until contractual maturity but considering expected prepayments, if any (“Lifetime ECL”). Refer to Note 40 for a description of how the Group determines when a SICR has occurred.

If the Group determines that a financial asset is credit-impaired, the asset is transferred to Stage 3 and its ECL is measured as a Lifetime ECL. The Group’s definition of credit impaired assets and definition of default is explained in Note 40. For financial assets that are purchased or originated credit-impaired (“POCI Assets”), the ECL is always measured as a Lifetime ECL.

Note 40 provides information about inputs, assumptions and estimation techniques used in measuring ECL, including an explanation of how the Group incorporates forward-looking information in the ECL models.

Financial assets – write-off

Financial assets are written-off, in whole or in part, when the Group exhausted all practical recovery efforts and has concluded that there is no reasonable expectation of recovery. The write-off represents a derecognition event. Indicators that there is no reasonable expectation of recovery include (i) court decision, (ii) liquidation of entity from which financial asset was acquired, (iii) overdue period of 3 years and more.

Derivative financial instruments

Derivative financial instruments are carried at their fair value. All derivative instruments are carried as assets when fair value is positive and as liabilities when fair value is negative. Changes in the fair value of derivative instruments are included in profit or loss for the year. The Group does not apply hedge accounting.

Certain derivative instruments embedded in financial liabilities and other non-financial contracts are treated as separate derivative instruments when their risks and characteristics are not closely related to those of the host contract.

Financial assets – derecognition

The Group derecognises financial assets when (a) the assets are redeemed or the rights to cash flows from the assets otherwise expire or (b) the Group has transferred the rights to the cash flows from the financial assets or entered into a qualifying pass-through arrangement whilst (i) also transferring substantially all the risks and rewards of ownership of the assets or (ii) neither transferring nor retaining substantially all the risks and rewards of ownership but not retaining control.

Control is retained if the counterparty does not have the practical ability to sell the asset in its entirety to an unrelated third party without needing to impose additional restrictions on the sale.

Financial assets – modification

The Group sometimes renegotiates or otherwise modifies the contractual terms of the financial assets. The Group assesses whether the modification of contractual cash flows is substantial considering, among other, the following factors: any new contractual terms that substantially affect the risk profile of the asset, significant change in interest rate, change in the currency denomination, new collateral or credit enhancement that significantly affects the credit risk associated with the asset or a significant extension of a loan when the borrower is not in financial difficulties.

If the modified terms are substantially different, the rights to cash flows from the original asset expire and the Group derecognises the original financial asset and recognises a new asset at its fair value. The date of renegotiation is considered to be the date of initial recognition for subsequent impairment calculation purposes, including determining whether a SICR has occurred. The Group also assesses whether the new loan or debt instrument meets the SPPI criterion. Any difference between the carrying amount of the original asset derecognised and fair value of the new substantially modified asset is recognised in profit or loss, unless the substance of the difference is attributed to a capital transaction with owners.

In a situation where the renegotiation was driven by financial difficulties of the counterparty and inability to make the originally agreed payments, the Group compares the original and revised expected cash flows to assets whether the risks and rewards of the asset are substantially different as a result of the contractual modification. If the risks and rewards do not change, the modified asset is not substantially different from the original asset and the modification does not result in derecognition. The Group recalculates the gross carrying amount by discounting the modified contractual cash flows by the original effective interest rate (or credit-adjusted effective interest rate for POCI financial assets), and recognises a modification gain or loss in profit or loss.

3 Significant Accounting Policies (Continued)

Financial liabilities – measurement categories

Financial liabilities are classified as subsequently measured at AC, except for (i) financial liabilities at FVTPL (derivatives, financial liabilities held for trading, e.g. short positions in securities), contingent consideration recognised by an acquirer in a business combination and other financial liabilities designated as such at initial recognition and (ii) financial guarantee contracts and loan commitments.

Financial liabilities – derecognition

Financial liabilities are derecognised when they are extinguished, i.e. when the obligation specified in the contract is discharged, cancelled or expires.

An exchange between the Group and its original lenders of debt instruments with substantially different terms, as well as substantial modifications of the terms and conditions of existing financial liabilities, are accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. The terms are substantially different if the discounted present value of the cash flows under the new terms, including any fees paid net of any fees received and discounted using the original effective interest rate, is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. In addition, other qualitative factors, such as the currency that the instrument is denominated in, changes in the type of interest rate, new conversion features attached to the instrument and change in loan covenants are also considered. If an exchange of debt instruments or modification of terms is accounted for as an extinguishment, any costs or fees incurred are recognised as part of the gain or loss on the extinguishment. If the exchange or modification is not accounted for as an extinguishment, any costs or fees incurred adjust the carrying amount of the liability and are amortised over the remaining term of the modified liability.

Modifications of liabilities that do not result in extinguishment are accounted for as a change in estimate using a cumulative catch up method, with any gain or loss recognised in profit or loss, unless the economic substance of the difference in carrying values is attributed to a capital transaction with owners.

Offsetting financial instruments

Financial assets and liabilities are offset and the net amount reported in the statement of financial position only when there is a legally enforceable right to offset the recognised amounts, and there is an intention to either settle on a net basis, or to realise the asset and settle the liability simultaneously. Such a right of set off (a) must not be contingent on a future event and (b) must be legally enforceable in all of the following circumstances: (i) in the normal course of business, (ii) in the event of default and (iii) in the event of insolvency or bankruptcy.

Cash and cash equivalents

Cash and cash equivalents include cash in hand, deposits held at call with banks, and other short-term highly liquid investments with original maturities of three months or less. Cash and cash equivalents are carried at AC because: (i) they are held for collection of contractual cash flows and those cash flows represent SPPI, and (ii) they are not designated at FVTPL. Restricted balances are excluded from cash and cash equivalents for the purposes of the cash flow statement. Balances restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period are included in other non-current assets.

Trade and other receivables

Trade and other receivables are recognised initially at fair value and are subsequently carried at amortised cost using the effective interest method.

Inventories

Inventories are recorded at the lower of cost and net realisable value. The cost of inventory is determined on the weighted average basis. The cost of finished goods and work in progress comprises raw material, direct labour, other direct costs and related production overheads (based on the normal operating capacity) but excludes borrowing costs. Net realisable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and selling expenses.

Inventory loans

The Group enters into inventory loan agreements, according to which one party (the lender) undertakes to provide the other party (the borrower) with uranium products, and the borrower obliges to return to the lender an identical amount of uranium products. The Group obtains inventory loans to facilitate the performance of its uranium supply obligations. The Group classifies inventory loans as a non-financial liability.

3 Significant Accounting Policies (Continued)

Upon receipt of the inventory loan, the Group accounts for the inventory at the contracted cost. Liability arising from inventory loan are recognised as part of other liabilities at the fair value of the uranium products at the reporting date. Subsequent revaluation of the inventory loan is carried out through profit or loss as part of other income/expenses in accordance with changes in the fair value of uranium products.

Prepayments

Prepayments are carried at cost less provision for impairment. A prepayment is classified as non-current when the goods or services relating to the prepayment are expected to be obtained after one year, or when the prepayment relates to an asset which will itself be classified as non-current upon initial recognition. Prepayments for assets are transferred to the carrying amount of the asset once the Group has obtained control of the asset and it is probable that future economic benefits associated with the asset will flow to the Group.

Other prepayments are written off to profit or loss when the goods or services relating to the prepayments are received. If there is an indication that the assets, goods or services relating to a prepayment will not be received, the carrying value of the prepayment is written down accordingly and a corresponding impairment loss is recognised in profit or loss for the year. Non-current prepayments are not discounted.

Value added tax

Value added tax (VAT) related to sales is payable to the tax authorities when goods are shipped or services are rendered. Purchase VAT can be offset against sales VAT upon the receipt of a tax invoice from a supplier. Tax legislation allows the settlement of VAT on a net basis.

Accordingly, VAT related to sales and purchases unsettled at the reporting date is stated in the consolidated statements of financial position on a net basis separately for each consolidated entity. Recoverable VAT is classified as non-current if its settlement is not expected within one year after the reporting period. Non-current VAT is not discounted.

Share capital

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds. Any excess of the fair value of consideration received over the par value of shares issued is recorded as share premium in equity. Additional paid-in capital primarily represents capital contributions made by non-controlling interests in excess of their ownership.

Dividends

Dividends are recorded as a liability and deducted from equity in the period in which they are declared and approved. Any dividends declared after the reporting period and before the financial statements are authorised for issue are disclosed in the subsequent events note.

Leases

Liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the fixed payments (including in-substance fixed payments) less any lease incentives receivable. The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be readily determined, which is generally the case for leases of the Group, the Group's incremental borrowing rate is used, being the rate that the Group would have to pay to borrow the funds necessary to obtain an asset of similar value to the right-of-use asset in a similar economic environment with similar terms, collateral and conditions.

Lease payments are allocated between principal and finance costs. The finance costs are charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period.

Payments associated with short-term leases of equipment and vehicles and all leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise IT equipment and small items of office furniture with value of Tenge 500 thousand or less.

Operating leases

Where the Group is a lessor in a lease which does not transfers substantially all the risks and rewards incidental to ownership to the lessee (i.e. operating lease), lease payments from operating leases are recognised as other income on a straight-line basis.

3 Significant Accounting Policies (Continued)

Loans and borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred and are subsequently carried at AC using the effective interest method.

Borrowing costs directly attributable to the acquisition, construction or production of assets that necessarily take a substantial time to get ready for intended use or sale (qualifying assets) are capitalised as part of the costs of those assets. The commencement date for capitalisation is when (a) the Group incurs expenditures for the qualifying asset; (b) it incurs borrowing costs; and (c) it undertakes activities that are necessary to prepare the asset for its intended use or sale. Capitalisation of borrowing costs continues up to the date when the assets are substantially ready for their use or sale.

The Group capitalises borrowing costs that could have been avoided if it had not made capital expenditure on qualifying assets. Borrowing costs capitalised are calculated at the Group's average funding cost (the weighted average interest cost is applied to the expenditures on the qualifying assets), except to the extent that funds are borrowed specifically for the purpose of obtaining a qualifying asset.

Where this occurs, actual borrowing costs incurred on the specific borrowings less any investment income on the temporary investment of these borrowings are capitalised.

Preference shares

Preference shares, which are mandatorily redeemable on a specific date, are classified as liabilities. The dividends on these preference shares are recognised in the statement of profit or loss and other comprehensive income as interest expense.

Provisions for liabilities and charges

Provisions for liabilities and charges are non-financial liabilities of uncertain timing or amount. They are accrued when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made. The Group's provisions include site restoration, environment protection and other provisions (Note 34).

Provisions for assets retirement obligations

Assets retirement obligations are recognised when it is probable that the costs would be incurred and those costs can be measured reliably. Asset retirement obligations include the costs of rehabilitation and costs of liquidation (demolition of buildings, constructions and infrastructure, dismantling of machinery and equipment, transportation of the residual materials, environmental clean-up, monitoring of wastes and land restoration). Provision for the estimated costs of liquidation, rehabilitation and restoration are established and charged to the cost of property, plant and equipment or mine development assets in the reporting period when an obligation arises from the respective land disturbance in the course of mine development or environment pollution, based on the discounted value of estimated future costs. Movements in the provisions for assets retirement obligations, resulting from updated cost estimates, changes to the estimated term of operations and revisions to discount rates are capitalised within property, plant and equipment or mine development assets. These amounts are then depreciated over the lives of the assets to which they relate using the depreciation methods applied to those assets.

Provisions for asset retirement obligations do not include any additional obligations which are expected to arise from future disturbances. The costs are estimated on the basis of a closure and restoration plan. The cost estimates are calculated annually during the course of the operations to reflect known developments, including updated cost estimates revised subsoil use terms and estimated lives of operations, and are subject to formal reviews on a regular basis.

Although the final cost to be incurred is uncertain, the Group estimates its costs based on feasibility and engineering studies using current restoration standards and techniques for conducting restoration and retirement works (Note 4).

The amortisation or "unwinding" of the discount applied in establishing the net present value of provisions is charged to profit and loss in each reporting period. The amortisation of the discount is disclosed as finance costs.

Financial guarantees

Financial guarantees require the Group to make specified payments to reimburse the holder of the guarantee for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument. Financial guarantees are initially recognised at their fair value, which is normally evidenced by

3 Significant Accounting Policies (Continued)

the amount of fees received. This amount is amortised on a straight line basis over the life of the guarantee. At the end of each reporting period, the guarantees are measured at the higher of (i) the amount of the loss allowance for the guaranteed exposure determined based on the expected loss model and (ii) the remaining unamortised balance of the amount at initial recognition. In addition, an ECL loss allowance is recognised for fees receivable that are recognised in the consolidated statement of financial position as an asset.

Trade and other payables

Trade payables are accrued when the counterparty performs its obligations under the contract and are recognised initially at fair value and subsequently carried at amortised cost using the effective interest method.

Employee benefits

(i) Long-term employee benefits

The Group entities provide long-term employee benefits to employees in accordance with the provisions of the collective agreement. The agreements provide for financial aid for employees' disability, retirement, funeral aid and other payments to the Group's employees. The entitlement to some benefits is usually conditional on the employee remaining employed until the retirement age and the completion of a minimum service period.

The Group does not have any funded post-employment plans. Liability recognised at each reporting date represents the present value of the plan liabilities.

Actuarial gains and losses on post-employment obligations such as experience adjustments and the effects of changes in actuarial assumptions recognised in other comprehensive income in the period occurred. Other movements in the present value of the plan liabilities are also recognised in the profit or loss for the year, including current service cost.

The most significant assumptions used in accounting for defined benefit obligations are the discount rate, staff turnover and the mortality assumptions. The discount rate is used to determine the net present value of future liabilities and each year the unwinding of the discount on those liabilities is charged to profit or loss for the year. The mortality assumption is used to project the future stream of benefit payments, which is then discounted to arrive at a net present value of liabilities.

Employee benefits, including financial aid for employees' disability and funeral aid to the Group's employees and other payments, are considered as other long-term employee benefits. The expected cost of these benefits is accrued over the period of employment using the same accounting methodology as used for the defined benefit plan. The Group recognises changes in actuarial assumptions for other long-term employee benefits in profit or loss for the year. The Group receives services from an independent qualified actuary to evaluate long-term employee benefits on an annual basis.

(ii) Payroll expense and related contributions

Wages, salaries, contributions to pension and social insurance funds, paid annual leave and sick leave, bonuses, and non-monetary benefits are accrued in the year in which the associated services are rendered by the employees of the Group. In this case, the Group applies the Defined Contribution Plans scheme. In accordance with the legal requirements of the Republic of Kazakhstan, the Group withholds pension contributions from employees' salary and transfers them into the united pension fund.

Upon retirement of employees, all pension payments are administered by the united pension fund. The Group does not have any legal or constructive obligation to pay additional contributions other than pension contributions withheld from the salaries of the Group's employees.

Earnings per share

Earnings per share are determined by dividing the profit or loss attributable to owners of the Company by the weighted average number of participating shares outstanding during the reporting year adjusted for share split.

Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the Group's chief operating decision maker. The chief operating decision-maker is responsible for allocating resources and assessing performance of the operating segments. Reportable segments whose revenue, result or assets are ten percent or more of all the segments are reported separately.

4 Critical Accounting Estimates and Judgements in Applying Accounting Policies

The Group makes estimates and assumptions that affect the amounts recognised in the financial statements including the carrying amounts of assets and liabilities. Estimates and judgements are continually evaluated and are based upon management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Management also makes certain judgements, apart from those involving estimations, in the process of applying the accounting policies. Judgements that have the most significant effect on the amounts recognised in the financial statements and estimates that can cause a significant adjustment to the carrying amount of assets and liabilities include:

Ore reserves (estimates)

Uranium reserves are a critical component of the Group's projected cash flow estimates that are used to assess the recoverable values of relevant assets as well as depreciation and amortisation expense. Estimates of uranium reserves also determine the life of mines, which in turn affect asset retirement obligation calculations.

In 2021 and 2020, the Group engaged an independent consultant to assess the Group's ore reserves and mineral resources in accordance with the Australasian Code for reporting on geological exploration works, mineral resources and ore reserves (hereinafter JORC Code). Independent assessments of reserves and resources was carried out as of 31 December 2021 and 31 December 2020. The consultant reviewed all key information upon which the reported mineral resource and ore reserve statements for the mining assets of NAC Kazatomprom JSC are based.

The consultant's reports contain an assessment of the tons of uranium contained in ore which has the potential to be extracted by the existing and planned mining operations (the mineral resource), and also the tons of uranium contained in ore currently planned to be extracted as envisaged by the respective life-of-mine plans (the ore reserve). The Group used the ore reserves data for calculation of impairment of long-term assets, unit of production depreciation for each of the Group's mines as well as asset retirement obligation calculations.

Impairment of non-financial assets (estimates)

At the end of each reporting period, management assesses whether there is any indication of impairment of individual assets (or cash-generating units). If any such indication exists, management estimates the recoverable amount, which is determined as the higher of an asset's fair value less costs to sell and its value in use. An impairment loss is recognised for the amount by which carrying amount exceeds recoverable amount. The Group tests goodwill for impairment at least annually.

The calculation of value in use requires management to make estimates regarding the Group's future cash flows. The estimation of future cash flows involves significant estimates and assumptions regarding commodity prices (uranium and other products), the level of production and sales, discount rates, growth rates, operating costs and other factors. The impairment review and calculations are based upon assumptions that are consistent with the Group's business plans. Due to its subjective nature, these estimates could differ from future actual results of operations and cash flows; any such difference may result in impairment in future periods which would decrease the carrying value of the respective asset.

Goodwill

Refer to Note 20 for details of the Group's impairment testing for goodwill at 31 December 2021.

Assets related to uranium production

Assets related to uranium mines include property, plant and equipment, mine development assets, mineral rights, exploration and evaluation assets, investments in associates, investments in joint ventures, and other investments.

For the purpose of impairment testing, assets are grouped at the lowest levels for which there are separately identifiable cash inflows that are largely independent of the cash inflows from other assets or groups of assets (termed as 'cash-generating units'). The Group has identified each mine (contract territory) as a separate cash-generating unit unless several mines are technologically connected with single processing plant in which case the Group considers such mines as one cash-generating unit.

As at 31 December 2021, management conducted an analysis and did not find any impairment indicators of assets (generating units) associated with the production of uranium products.

Provision for asset retirement obligations (estimates)

Mining assets

4 Critical Accounting Estimates and Judgements in Applying Accounting Policies (Continued)

In accordance with environmental legislation and the subsurface use contracts, the Group has a legal obligation to remediate damage caused to the environment from its operations and to decommission its mining assets and landfills and restore landfill sites after closure of mining activities. Provision is made based upon the net present values of estimated site restoration and retirement costs as soon as the obligation arises from past mining activities.

The provision for asset retirement obligations is estimated based upon the Group's interpretation of current environmental legislation in the Republic of Kazakhstan and the Group's related programme for liquidation of subsurface use consequences on the contracted territory and other operations supported by the feasibility study and engineering research in accordance with the applicable restoration and retirement standards and techniques.

Provisions for asset retirement obligations are subject to potential changes in environmental regulatory requirements and the interpretation of the legislation. Provisions for mining assets and landfills retirement obligations are recognised when there is a certainty of incurring of such liabilities and when it is possible to measure the amounts reliably.

The calculation of the provision for production assets retirement as at 31 December 2021 was performed by the Group based upon assessments performed by independent and internal consultants. The scope of work stipulated by the legislation and included in the calculations included the dismantling of facilities and infrastructure (pumping, injection and observation wells, technological units for acidification and distribution of solutions, pipelines, access roads, technological sites, landfills, buildings and other facilities) and subsequent restoration of land.

Principal assumptions used in such estimations include the estimate of discount rate and the amount and timing of future cash flows. The discount rate is applied to the nominal costs that management expects to spend on mining site restoration in the future. Management's estimates based on current prices are inflated using the expected long-term inflation rate of 5.12% in 2021 (2020: 5.17%), and subsequently discounted using a rate that reflects the current market estimates of the time value of money and those risks specific to the liability not reflected in the best estimate of the costs. The discount rate is based on a risk-free rate determined as interest rates on government bonds with the maturity as the average of Group subsoil use contracts. The discount rate used by the Group's companies for calculation of the provision as at 31 December 2021 is 9.85% (2020: 9.87%).

At 31 December 2021, the carrying value of the site restoration provision was Tenge 31,431 million (2020: Tenge 23,841 million) (Note 34). The increase is mainly attributable to the estimated cost of reclamation at RU-6 LLP (a wholly owned entity) as its mining allotment includes arable lands, pastures and the Kargaly state nature reserve.

Decommissioning of the Ulba plant facility

Management has assessed whether the Group has an obligation for decommissioning and dismantling of the production facility of Ulba Metallurgical Plant JSC and concluded that the Group has no legal obligation to decommission this facility at the end of its useful life as of 31 December 2021 and 2020.

In addition, management considered the extent to which the Group's policies and statements may have created a constructive obligation to decommission this production facility and concluded that no liability should be recorded as:

- Radiation contamination of the facility is limited and the costs involved in remediation are not significant.
- In the event of discontinuance of production activities, the Group will not have an obligation to liquidate buildings and other infrastructure. In addition, the possibility exists of redeployment of the production facilities to alternative uses.
- Timely inspections, surveys, repair work to reduce physical damage and maintain the normal level of performance of structures and engineering equipment can extend the useful life of the facility for an indefinite period. These factors together with the extended periods over which the Group's uranium reserves are available to be mined mean that it is not practical to estimate a reliable closure date for the UMP production facility.

In the event of future changes in environmental legislation and in the field of the use of atomic energy or its interpretation, as well as the Group's policy, obligations may arise which could require recognition as liabilities in the financial statements.

Tax and transfer pricing legislation (judgements)

Kazakhstan tax and transfer pricing legislation is subject to varying interpretations (Note 37).

Swap transactions (judgements)

The Group sells part of its uranium products under swap transactions with separate agreements with the same counterparty, being for sales and purchase of the same volume of uranium for the same price at different delivery points

4 Critical Accounting Estimates and Judgements in Applying Accounting Policies (Continued)

or different timeframes. Effectively, this results in the exchange of own uranium (produced or purchased from the Group's entities) with purchased uranium.

Normally, under a swap transaction, the Group delivers physical uranium to one destination point, and purchases the same volume of uranium at a third party converter for sale to end customers. Swap transactions are entered into primarily to reduce transportation costs for uranium delivery from Kazakhstan to end customers.

Despite the fact that swap agreements are not formally related to each other, management concluded that these transactions are in substance linked and would not have occurred on an isolated basis, driven by the existing market demand and supply forces. In management's view, supply of the same volume of homogeneous product (uranium) for the same price represents an exchange of products, which should be presented on a net basis in the consolidated financial statements, reflecting the economic substance of the transaction. Interpretation of terms and approach to the accounting for swap transactions requires judgement.

In 2021, the Group did not recognise sales revenue from swap transactions of Tenge 146,910 million and cost of sales of Tenge 135,158 million. In 2020, the Group did not recognise sales revenue from swap transactions of Tenge 71,331 million, cost of sales of Tenge 65,713 million.

Control over DP Ortalyk LLP (judgement)

On 22 July 2021 the Group completed the sale of a 49% interest in DP Ortalyk LLP (Note 1). The Group retains a 51% ownership interest and majority voting rights in the Supervisory Board. Sales activities of DP Ortalyk LLP are governed by the Marketing agreement, any amendments to which would require consent by both owners. The Group governs production activity within the 20% limit permitted by law through its power to approve the entity's budget by simple majority vote. Decisions about financing of DP Ortalyk LLP are made by unanimous consent of both owners. Currently, DP Ortalyk LLP does not rely on shareholders' or external financing. Given that all production volumes are committed to be purchased by the Group and CGNPC based upon market prices, production volumes and costs have the most significant impact on financial results and therefore are considered to be relevant activities for the purpose of the control assessment. Based on these facts, the Group management has concluded that the Group retains control over DP Ortalyk LLP.

5 Adoption of New or Revised Standards and Interpretations

The following amended accounting standards became effective from 1 January 2021, but did not have any material impact on the Group:

- COVID-19-Related Rent Concessions Amendment to IFRS 16 issued on 28 May 2020 and effective for annual periods beginning on or after 1 June 2020.
- Interest rate benchmark (IBOR) reform – phase 2 amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (issued on 27 August 2020 and effective for annual periods beginning on or after 1 January 2021).

6 New Accounting Pronouncements

Certain new standards and interpretations have been issued that are mandatory for annual periods beginning on or after 1 January 2022 or later, and which the Group has not early adopted. These are:

- Sale or Contribution of Assets between an Investor and its Associate or Joint Venture – Amendments to IFRS 10 and IAS 28 (issued on 11 September 2014 and effective for annual periods beginning on or after a date to be determined by the IASB).
- IFRS 17 "Insurance Contracts" (issued on 18 May 2017 and effective for annual periods beginning on or after 1 January 2021, the effective date subsequently modified to 1 January 2023 by the Amendments to IFRS 17 as discussed below).
- Amendments to IFRS 17 and an amendment to IFRS 4 (issued on 25 June 2020 and effective for annual periods beginning on or after 1 January 2023).
- Classification of liabilities as current or non-current – Amendments to IAS 1 (issued on 23 January 2020 and effective for annual periods beginning on or after 1 January 2022).
- Classification of liabilities as current or non-current, deferral of effective date – Amendments to IAS 1 (issued on 15 July 2020 and effective for annual periods beginning on or after 1 January 2023).
- Proceeds before intended use, Onerous contracts – cost of fulfilling a contract, Reference to the Conceptual Framework – narrow scope amendments to IAS 16, IAS 37 and IFRS 3, and Annual Improvements to

6 New Accounting Pronouncements (Continued)

IFRSs 2018-2020 – amendments to IFRS 1, IFRS 9, IFRS 16 and IAS 41 (issued on 14 May 2020 and effective for annual periods beginning on or after 1 January 2022).

- Amendments to IAS 1 and IFRS Practice Statement 2: Disclosure of Accounting policies (issued on 12 February 2021 and effective for annual periods beginning on or after 1 January 2023).
- Amendments to IAS 8: Definition of Accounting Estimates (issued on 12 February 2021 and effective for annual periods beginning on or after 1 January 2023).
- Covid-19-Related Rent Concessions – Amendments to IFRS 16 (issued on 31 March 2021 and effective for annual periods beginning on or after 1 April 2021).
- Deferred tax related to assets and liabilities arising from a single transaction – Amendments to IAS 12 (issued on 7 May 2021 and effective for annual periods beginning on or after 1 January 2023).

The Group is currently assessing the impact of the amendments on its financial statements. The new standards and interpretations are not expected to affect significantly the Group's consolidated financial statements.

7 Segment Information

Operating segments are components that engage in business activities that may earn revenues or incur expenses, whose operating results are regularly reviewed by the chief operating decision maker (CODM) and for which discrete financial information is available. The CODM is the person or group of persons who allocates resources and assesses the performance for the entity. The CODM has been identified as the Management Board of the Group headed by the CEO.

(a) Description of products and services from which each reportable segment derives its revenue

The Group is a vertically integrated business involved in the production chain of end products – from geological exploration, mining of uranium and nuclear fuel production, to marketing and auxiliary services (transportation and logistics, procurement, research and other). The Group is organised on the basis of two main business segments:

- Uranium – uranium mining and processing from the Group's mines, purchases of uranium from joint ventures and associates, external sales and marketing of produced and purchased uranium. This segment includes the Group's share in the net results of joint ventures and associates engaged in uranium production, as well as the Group's head office (JSC NAC Kazatomprom);
- UMP (Ulba Metallurgical Plant JSC) – production and sales of products containing beryllium, tantalum and niobium, hydrofluoric acid and by-products, processing of uranium on tolling basis for the Group's uranium entities and production and marketing of uranium powders and tablets to external markets and production of fuel assemblies and their components

The revenues and expenses of some of the Group's subsidiaries, which primarily provide services to the uranium segment (such as drilling, transportation, security and geological), are not allocated to the results of this operating segment. These Group's businesses are not included within reportable operating segments as their financial results do not meet the quantitative threshold. The results of these and other minor operations are included in the "Other" caption.

(b) Factors that management used to identify the reportable segments

The Group's segments are strategic business units that focus on different customers. They are managed separately because of the differences in the production processes, the nature of products produced and required marketing and investment strategies. Segment financial information reviewed by the CODM includes:

- information about income and expenses by business units (segments) based on IFRS figures on a quarterly basis;
- assets and liabilities as well as capital expenditures by segment on a quarterly basis;
- operating data (such as production and inventory volumes) and revenue data (such as sales volumes per type of product, average sales price) are also reviewed by the CODM on a monthly and quarterly basis.

(c) Measurement of operating segment profit or loss, assets and liabilities

The CODM evaluates performance of each segment based on gross and net profit. Segment financial information is prepared on the basis of IFRS financial information and measured in a manner consistent with that in these consolidated financial statements. Revenues from other segments include transfers of raw materials, goods and services from one segment to another, amount is determined based on market prices for similar goods.

7 Segment Information (Continued)

(d) Information about reportable segment profit or loss, assets and liabilities

Segment information for the reportable segments for the years ended 31 December 2021 and 2020 is set out below:

<i>In millions of Kazakhstani Tenge</i>	Uranium		UMP		Other		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
External revenue	616,860	525,532	55,323	42,625	18,828	19,300	-	-	691,011	587,457
Revenues from other segments	4,846	2,404	4,908	3,712	54,083	53,209	(63,837)	(59,325)	-	-
Cost of sales	(350,052)	(274,968)	(42,534)	(30,066)	(65,175)	(69,868)	54,794	55,278	(402,967)	(319,624)
Gross profit	271,654	252,968	17,697	16,271	7,736	2,641	(9,043)	(4,047)	288,044	267,833
Impairment losses, net of impairment reversals	(4,790)	52	(200)	(114)	1,978	(1,666)	-	(3)	(3,012)	(1,731)
Gain from disposal of joint venture	-	22,063	-	-	-	-	-	-	-	22,063
Share of results of associates and joint ventures	52,341	43,982	(1,932)	(1,745)	1,174	(2,151)	-	-	51,583	40,086
Net foreign exchange gain	2,845	2,339	488	1,379	12	41	-	-	3,345	3,759
Finance income	6,390	4,416	246	170	441	397	-	-	7,077	4,983
Finance expense	(6,237)	(7,010)	(464)	(632)	(195)	(167)	184	129	(6,712)	(7,680)
Income tax expense	(58,759)	(60,029)	(2,606)	(3,315)	(253)	(432)	-	-	(61,618)	(63,776)
Profit/(loss) for the year	212,963	222,889	7,085	6,284	4,222	(5,662)	(4,244)	(2,143)	220,026	221,368
Depreciation and amortisation charge	(63,348)	(56,141)	(1,924)	(1,666)	(4,718)	(4,434)	728	257	(69,262)	(61,984)

7 Segment Information (Continued)

Segment information for the reportable segments for the years ended 31 December 2021 and 2020 is set out below (Continued):

<i>In millions of Kazakhstani Tenge</i>	Uranium		UMP		Other		Eliminations		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Investments in associates and joint ventures	142,920	107,354	2,705	4,636	9,070	7,897	-	-	154,695	119,887
Total reportable segment assets	2,061,161	1,690,120	111,224	83,820	77,142	77,413	(299,236)	(165,318)	1,950,291	1,686,035
Assets of disposal groups classified as held for sale	-	-	-	-	1,213	3,244	-	-	1,213	3,244
Total assets	2,061,161	1,690,120	111,224	83,820	78,355	80,657	(299,236)	(165,318)	1,951,504	1,689,279
Total reportable segment liabilities	657,916	479,272	36,630	14,161	19,057	20,615	(299,200)	(164,977)	414,403	349,071
Liabilities of disposal groups classified as held for sale	-	-	-	-	-	416	-	-	-	416
Total liabilities	657,916	479,272	36,630	14,161	19,057	21,031	(299,200)	(164,977)	414,403	349,487
Capital expenditure	45,096	33,462	3,631	4,146	4,791	3,160	-	-	53,518	40,768

Capital expenditure represents additions to non-current assets other than financial instruments, deferred tax assets, post-employment benefits assets and rights arising under insurance contracts.

7 Segment Information (Continued)

(e) Analysis of revenues by products and services

The Group's revenues are analysed by products and services in Note 9. Information about finance income and costs is disclosed in Note 17.

(f) Geographical information

The Group's main assets are located in the Republic of Kazakhstan. Distribution of the Group's sales between countries on the basis of the customer's country of domicile was as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
China	191,212	195,860
United Kingdom (including Jersey and Cayman Islands)	156,928	33,856
Canada	115,163	65,501
USA	94,114	56,764
France	50,134	65,443
Kazakhstan	25,113	21,758
Russia	10,952	78,548
Brazil	9,914	3,332
Germany	8,283	3,776
Japan	3,167	4,830
India	44	32,695
Belgium	-	5,336
Other countries	25,987	19,758
Total consolidated revenues	691,011	587,457

Major customers

The Group has a group of customers under common control that accounts for more than 10% of the Group's consolidated revenue. This revenue in the amount of Tenge 236,204 million (2020: Tenge 181,695 million) is reported under the Uranium segment.

8 Balances and Transactions with Related Parties

Parties are generally considered to be related if the parties are under common control or if one party has the ability to control the other party or can exercise significant influence or joint control over the other party in making financial and operational decisions. In considering each possible related party relationship, management has regard to the substance of the relationship, not merely the legal form.

Entities under common control include companies under control of Samruk-Kazyna JSC. Transactions with other government owned entities are not disclosed when they are entered into in the ordinary course of business with terms consistently applied to all public and private entities, when they are not individually significant, if the Group's services are provided on standard terms available for all customers, or where there is no choice of supplier of services such as electricity transmission services and telecommunications.

At 31 December 2021, the outstanding balances with related parties were as follows:

<i>In millions of Kazakhstani Tenge</i>	Accounts receivable and other assets	Loans given	Accounts payable and other liabilities	Borrowings
Associates	1,458	8,663	29,961	10,514
Joint ventures	4,270	187	18,508	-
Entities under common control	238	-	606	-
Controlling shareholder	-	-	127	-
Associates of the controlling shareholder	11	-	1,013	-
Total	5,977	8,850	50,215	10,514

8 Balances and Transactions with Related Parties (Continued)

Transactions with related parties for the year ended 31 December 2021 were as follows:

<i>In millions of Kazakhstani Tenge</i>	Sale of goods and services	Dividends received	Purchase of goods and services	Dividends to the Shareholder	Finance and other income	Finance and other costs
Associates	7,833	15,028	90,966	-	912	-
Joint ventures	12,291	2,080	29,051	-	-	-
Entities under common control	79	-	5,867	-	-	-
Controlling shareholder	-	-	-	112,561	-	90
Associates of the controlling shareholder	130	-	5,599	-	-	-
Total	20,333	17,108	131,483	112,561	912	90

In February 2019, following the acquisition of JV Khorasan-U LLP, the Group became a co-borrower and is jointly and severally liable with Kyzylkum LLP for a loan provided by the Company to Kyzylkum LLP in 2010 in the amount of Tenge 8,716 million (2020: Tenge 11,584 million).

In June 2021, the Group provided to Uranenergo LLP the repayable financial aid secured by entity's property in the form of a revolving credit line with a term until 30 June 2023 in the amount of Tenge 187 million (Note 30).

The Group is a guarantor for loans obtained by SKZ-U LLP in the amount of Tenge 5,220 million (2020: Tenge 8,481 million), as well as a loan to Ulba-FA LLP in the amount of Tenge 15,934 million (2020: Tenge 10,909 million) (Note 37).

At 31 December 2020, the outstanding balances with related parties were as follows:

<i>In millions of Kazakhstani Tenge</i>	Accounts receivable and other assets	Dividends receivable	Loans given	Accounts payable and other liabilities	Loans and borrowings
Associates	1,393	310	11,512	15,076	14,004
Joint ventures	1,347	-	-	2,929	-
Entities under common control	73	-	-	933	-
Controlling shareholder	-	-	-	507	-
Associates of the controlling shareholder	10	-	-	18	-
Total	2,823	310	11,512	19,463	14,004

Transactions with related parties for the year ended 31 December 2020 were as follows:

<i>In millions of Kazakhstani Tenge</i>	Sale of goods and services	Dividends received	Purchase of goods and services	Dividends to the Shareholder	Finance and other income	Finance and other costs
Associates	7,585	42,265	89,684	-	1,183	15
Joint ventures	8,767	1,005	13,976	-	5	-
Entities under common control	189	-	5,474	-	-	-
Controlling shareholder	1	-	-	80,466	-	70
Associates of the controlling shareholder	113	-	205	-	-	-
Total	16,655	43,270	109,339	80,466	1,188	85

8 Balances and Transactions with Related Parties (Continued)

Key management personnel is represented by personnel with authority and responsibility in planning, management and control of the Group's activities, directly or indirectly. Key management personnel includes all members of the Management Board and the members of the Board of Directors. The table below represents remuneration of the key management personnel, paid by the Group in exchange for services provided. This remuneration includes salaries, bonuses, as well as associated taxes and payments. No remuneration is paid or payable to representatives of the Controlling shareholder in the Board of Directors.

<i>In millions of Kazakhstani Tenge</i>	2021		2020	
	Expense	Accrued liability	Expense	Accrued liability
Short-term benefits				
Salaries and bonuses	1,088	60	1,205	98
Total	1,088	60	1,205	98

9 Revenue

The Group's revenue arises from contracts with customers where performance obligations are satisfied mostly at a point in time.

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Sales of uranium products	625,048	529,196
Sales of beryllium products	26,119	21,866
Sales of tantalum products	15,777	12,205
Sales of other services	6,459	6,911
Sales of purchased goods	5,860	5,321
Drilling services	4,357	5,972
Sales of materials and other goods	3,713	3,030
Transportation services	3,413	2,798
Research and development	265	153
Sales of photovoltaic cells	-	5
Total revenue	691,011	587,457

10 Cost of Sales

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Materials and supplies	241,695	167,546
Depreciation and amortisation	66,429	60,002
Wages and salaries	33,294	31,874
Taxes other than income tax	25,474	23,775
Processing and other services	17,404	19,738
Transportation expenses	4,982	2,913
Maintenance and repair	4,918	4,751
Utilities	1,703	1,669
Rent expenses	210	422
Research and development	49	115
Other	6,809	6,819
Total cost of sales	402,967	319,624

11 Distribution Expenses

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Shipping, transportation and storage	11,110	10,351
Wages and salaries	1,456	1,139
Commissions	502	456
Materials and supplies	306	212
Rent	105	113
Depreciation and amortisation	65	66
Other	2,162	2,015
Total distribution expenses	15,706	14,352

12 General and Administrative Expenses

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Wages and salaries	18,303	17,709
Consulting and information services	4,697	4,467
Depreciation and amortisation	2,493	1,744
Provision for tax fines and penalties	1,266	-
Insurance	788	519
Taxes other than income tax	661	950
Communication	495	257
Training expenses	401	258
Maintenance and repair	390	441
Rent	352	75
Corporate events	302	161
Tax fines and penalties	261	441
Business trip expenses	251	170
Utilities	187	160
Security	184	178
Materials and supplies	179	197
Bank charges	58	86
Stationery	57	70
Representative expenses	41	45
Other	2,739	1,654
Total general and administrative expenses	34,105	29,582

13 Impairment Losses and Reversal of Impairment Losses

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Reversal of impairment losses of financial assets	239	425
Impairment losses of financial assets	(447)	(68)
(Impairment losses)/reversal of impairment on financial assets	(208)	357

The Group recognised the reversal of previously recognised impairments for the following non-financial assets:

<i>In millions of Kazakhstani Tenge</i>	Note	2021	2020
Inventories	29	623	963
Property, plant and equipment	21	365	42
Mine development assets	22	199	-
Intangible assets	20	-	5
Other assets		11	34
Total reversal of impairment losses		1,198	1,044

13 Impairment Losses and Reversal of Impairment Losses (Continued)

The Group recognised impairment losses for the following non-financial assets :

<i>In millions of Kazakhstani Tenge</i>	Note	2021	2020
Intangible assets	20	2,169	-
Inventories	29	1,238	654
Impairment of assets held for sale	1	1,084	-
Investments in associates	25	-	1,364
Other assets		512	1,114
Total impairment losses		5,003	3,132

An impairment loss of Tenge 2,169 million was recognised during the year for the Digital Mine software developed by the Group following an assessment of its suitability for use within the Group.

14 Other Income

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Gain from joint operations	3,513	4,874
Gain on disposal of subsidiary	915	-
Gain from fines and penalties	138	340
Other	2,959	2,156
Total other income	7,525	7,370

Gain from joint operations represents the effect of exchange rate volatility and spot price quotations on contractual obligations for the purchase of uranium from joint operations.

15 Other Expenses and Net Foreign Exchange Gain

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Social expenses	4,537	1,006
Remeasurement of non-financial liabilities	2,872	1,156
Non-recoverable VAT	2,235	624
Loss on suspension of production	1,626	842
Research expenses	725	505
Loss on disposal of non-current assets	411	19
Depreciation and amortisation	275	172
Loss on disposal of intangible assets	-	347
Other	2,713	2,934
Total other expenses	15,394	7,605

Net foreign exchange gain

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Foreign exchange loss on financing activities, net	(1,696)	(4,396)
Foreign exchange gain on operating activities, net	5,041	8,155
Total foreign exchange gain, net	3,345	3,759

16 Personnel Costs

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Wages and salaries, including 10% mandatory pension contributions	64,580	59,270
Social tax and social payments	6,904	6,437
Total personnel costs	71,484	65,707

17 Finance Income and Costs

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Interest income calculated using the effective interest rate		
Cash and cash equivalents	3,087	2,679
Short-term securities	959	94
Loans at amortised cost	912	1,182
Term deposits	129	-
Other	114	402
Other financial income		
Financial derivative asset	1,732	435
Other	144	191
Total finance income	7,077	4,983
Finance costs		
Interest expense on loans and borrowings	3,546	4,284
Unwinding of discount on provisions	2,259	2,629
Other	907	767
Total finance costs	6,712	7,680

18 Income Tax Expense

(a) Components of income tax expense

Income tax expense recorded in profit or loss comprises the following:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Current income tax	85,345	65,492
Deferred income tax	(23,727)	(1,716)
Total income tax expense	61,618	63,776

(b) Reconciliation between the tax expense and profit or loss multiplied by applicable tax rate

The income tax rate applicable to the majority of the Group's profits in 2021 and 2020 is 20%. Income tax in the amount of Tenge 33,466 that relates to the sales of interest in subsidiary (Note 1) was recognised in equity directly.

18 Income Tax Expense (Continued)

A reconciliation between the expected and the actual taxation charge is provided below:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Profit before tax	281,644	285,144
Theoretical tax charge at statutory tax rate of 20%	56,329	57,029
Prior periods adjustments of income tax	5,401	3,966
Transfer pricing adjustment	5,371	2,561
Profit on income from controlled foreign company	1,383	-
Withholding tax on dividend payments	1,240	2,310
Share of results of joint ventures and associates	(10,317)	(8,017)
Other items	2,211	5,927
Income tax expense	61,618	63,776

(c) Deferred taxes analysed by type of temporary difference

Differences between IFRS and statutory taxation regulations in Kazakhstan give rise to temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and their tax bases. The tax effect of the movements in these temporary differences is detailed below at 20%.

<i>In millions of Kazakhstani Tenge</i>	1 January 2021	Credited/ (charged) to profit or loss	Exchange differences arising on translation of entities with foreign functional currency	Disposal of companies	31 December 2021
Tax effect of deductible/(taxable) temporary differences					
Property, plant and equipment, intangible assets and mineral rights	(129,120)	5,483	6	136	(123,495)
Accounts receivable	(374)	166	-	-	(208)
Loans and borrowings	-	3	-	-	3
Provisions	438	1,134	-	-	1,572
Accrued liabilities on vacation payments and bonuses	1,155	508	-	-	1,663
Taxes	916	593	-	-	1,509
Inventories	12,513	15,563	-	-	28,076
Other assets	(111)	269	-	-	158
Other liabilities	306	8	(4)	-	310
	(114,277)	23,727	2	136	(90,412)
Recognised deferred tax asset	13,206	17,483	-	-	30,689
Recognised deferred tax liabilities	(127,483)	6,244	2	136	(121,101)

18 Income Tax Expense (Continued)

Management estimates that deferred tax assets of Tenge 1,572 million in 2021 (2020: Tenge 438 million) are recoverable after more than twelve months after the end of the reporting period. Investments in subsidiaries, associates and joint ventures will be recovered primarily through dividends. Dividends from subsidiaries, associates and joint ventures are not taxable, accordingly the Group did not recognise deferred tax on undistributed earnings from investments.

The tax effect of the movements in the temporary differences for the year ended 31 December 2020 is:

<i>In millions of Kazakhstani Tenge</i>	1 January 2020	Credited/ (charged) to profit or loss	Business combinations and other	31 December 2020
Tax effect of deductible/(taxable) temporary differences				
Property, plant and equipment, intangible assets and mineral rights	(131,377)	2,225	32	(129,120)
Accounts receivable	83	(457)	-	(374)
Loans and borrowings	(16)	16	-	-
Accounts payable	(1,301)	1,301	-	-
Provisions	1,414	(976)	-	438
Accrued liabilities	1,104	51	-	1,155
Tax losses carried forward	198	(198)	-	-
Taxes	1,262	(346)	-	916
Inventories	11,837	676	-	12,513
Other assets	609	(720)	-	(111)
Other liabilities	163	144	(1)	306
	(116,024)	1,716	31	(114,277)
Recognised deferred tax asset	13,558	(352)	-	13,206
Recognised deferred tax liabilities	(129,582)	2,068	31	(127,483)

In the context of the Group's structure, tax losses of different Group companies may not be offset against current tax liabilities and taxable profits of other Group companies and, accordingly, taxes may accrue even where there is a consolidated tax loss. Therefore, deferred tax assets and liabilities are offset only when they relate to the same taxable entity.

The Group has unrecognised deferred tax assets in respect of unused tax loss carry forwards of Tenge 602 million in 2021 (2020: Tenge 5,435 million) and excluded from the calculation the tax losses for the enterprises sold in 2021 with unrecognized tax losses. The tax loss carry forwards expire as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
2025	-	2,719
2026	-	676
2027	-	188
2028	-	1,120
2029	-	172
2030	368	560
2031	234	-
Total unrecognised deferred tax asset on tax losses	602	5,435

19 Earnings per Share

Basic earnings per share is calculated by dividing the profit or loss attributable to owners of the Company by the number of ordinary shares in issue during the year (Note 32). The Company has no dilutive potential ordinary shares; therefore, the diluted earnings per share equals the basic earnings per share. Earnings per share from continuing operations is calculated as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Profit for the year for the year attributable to owners of the Company (in millions of Kazakhstani Tenge)	140,773	183,541
Number of ordinary shares (in thousands)	259,357	259,357
Earnings per share attributable to the owners of the Company, basic and diluted (rounded to Tenge)	543	708

On 27 September 2019, the Company issued 70 million indexed to US Dollar bonds which were included in the official list of Kazakhstan Stock Exchange JSC (hereinafter - the "KASE"). The Company is required to present information on the book value of one share calculated in accordance with the KASE Listing Rules.

Book value per share is calculated as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Total assets of the Group (in millions Tenge)	1,951,504	1,689,279
Intangible assets (in millions Tenge)	(58,940)	(59,906)
Total liabilities of the Group (in millions Tenge)	(414,403)	(349,487)
	1,478,161	1,279,886
Number of ordinary shares (in thousands)	259,357	259,357
Book value of one share (Tenge per share)	5,699	4,935

20 Intangible Assets

<i>In millions of Kazakhstani Tenge</i>	Licences and patents	Software	Goodwill	Other	Total
At 1 January 2020					
Cost	1,897	6,634	54,953	1,329	64,813
Accumulated amortisation and impairment	(844)	(2,257)	(6,459)	(556)	(10,116)
Carrying value	1,053	4,377	48,494	773	54,697
Additions	425	373	-	14	812
Disposals	(22)	(207)	-	(127)	(356)
Amortisation charge	(243)	(551)	-	(95)	(889)
Amortisation charge on disposals	22	47	-	127	196
Reversal of impairment	-	5	-	-	5
Transfers from property, plant and equipment (Note 21)	22	5,419	-	-	5,441
At 31 December 2020					
Cost	2,322	12,219	54,953	1,216	70,710
Accumulated amortisation and impairment	(1,065)	(2,756)	(6,459)	(524)	(10,804)
Carrying value	1,257	9,463	48,494	692	59,906
Additions	204	631	-	19	854
Disposals	(4)	(218)	-	(13)	(235)
Depreciation charge and impairment losses on disposals/transfers	4	218	-	13	235
Amortisation charge	(284)	(1,163)	-	(96)	(1,543)
Impairment (Note 13)	-	(2,169)	-	-	(2,169)
Transfers from property, plant and equipment (Note 21)	2	834	-	1,833	2,669
Impairment in construction in progress (transfers from property, plant and equipment)	-	-	-	(777)	(777)
At 31 December 2021					
Cost	2,524	13,466	54,953	3,055	73,998
Accumulated amortisation and impairment	(1,345)	(5,870)	(6,459)	(1,384)	(15,058)
Carrying value	1,179	7,596	48,494	1,671	58,940

Goodwill impairment test

DP Ortalyk LLP, JV Akbastau JSC and Karatau LLP

Goodwill relates to business combinations in prior periods being: Tenge 5,166 million relates to subsurface use operations of DP Ortalyk LLP at the area Central on Mynkuduk mine, Tenge 24,808 million relates to Karatau LLP and Tenge 18,520 million relates to JV Akbastau JSC, which independently perform subsurface use operations at the Budenovskoye mine. At least annually, goodwill is tested for impairment. The carrying value of goodwill applicable to each of these entities is allocated to their respective cash generating units and the recoverable amount was determined on a value in use basis from forecast cash flows over the term of subsurface use contracts. Forecast cash flows are based on the approved volume of proven reserves, estimated volumes of production and sales over a life of mine plan approved by management, using a discount rate of 12.97% for 2021 year (2020: 12.35%). Production volumes are consistent with those agreed with the competent authority and independent consultant's report and are based on the production capacity of the cash-generating units. Key assumptions used in calculations include forecast sales prices, production costs and capital expenditures. Sales prices used in developing forecast cash flows were determined using an independent official source Ux Consulting LLC published in the fourth quarter of 2021. Production costs

and capital expenditures are based on approved budgets for 2022-2026 and growth of 5.12% which approximates long-term average inflation rates. The estimated values in use significantly exceed the carrying amounts of the non-current assets of the three cash-generating units, including goodwill, and therefore even reasonably possible changes in key assumptions would not lead to impairment losses being recognised.

21 Property, Plant and Equipment

Movements in the carrying amount of property, plant and equipment were as follows:

<i>In millions of Kazakhstani Tenge</i>	Land	Railway infra- structure	Buildings	Machinery and equipment	Vehicles	Other	Const-ruccion in progress	Total
At 1 January 2020								
Cost	406	2,007	135,023	83,240	20,133	6,011	19,372	266,192
Accumulated depreciation and impairment	-	(860)	(32,800)	(36,984)	(11,406)	(2,938)	(1,751)	(86,739)
Carrying amount	406	1,147	102,223	46,256	8,727	3,073	17,621	179,453
Additions	11	-	414	3,190	1,981	703	10,483	16,782
Transfers	2	28	6,638	5,406	335	119	(12,528)	-
Depreciation charge	-	(86)	(5,228)	(6,470)	(1,534)	(768)	-	(14,086)
Impairment loss (Note 13)	-	-	(28)	(1)	-	-	(223)	(252)
Reversal of impairment losses recognised in prior periods	-	-	8	33	-	-	1	42
Disposals	-	-	(121)	(640)	(444)	(77)	(292)	(1,574)
Transfer from inventories	-	-	13	56	-	18	201	288
Transfers from/(to) intangible assets (Note 20)	-	-	-	19	-	-	(5,460)	(5,441)
Transfers to non-current assets held for sale	-	-	(13)	-	(1)	-	-	(14)
Transfers to investment property	-	-	(2,135)	(68)	-	-	-	(2,203)
Depreciation charge and impairment losses on disposals	-	-	110	566	412	67	214	1,369
Changes in estimates	(6)	-	(503)	(548)	-	-	-	(1,057)
Transfer to mine development assets (Note 22)	-	-	-	-	-	-	(593)	(593)
Translation to presentation currency	-	-	19	-	11	3	-	33
At 31 December 2020								
Cost	413	2,035	139,335	90,655	22,015	6,777	11,183	272,413
Accumulated depreciation and impairment	-	(946)	(37,938)	(42,856)	(12,528)	(3,639)	(1,759)	(99,666)
Carrying amount	413	1,089	101,397	47,799	9,487	3,138	9,424	172,747
Additions	-	-	47	3,997	2,987	414	11,450	18,895
Transfers	-	-	2,004	1,772	94	96	(3,966)	-
Depreciation charge	-	(89)	(5,563)	(6,802)	(1,612)	(799)	-	(14,865)
Impairment loss	-	-	-	-	-	-	(9)	(9)
Reversal of impairment losses recognised in prior periods	-	-	10	41	-	-	314	365
Disposals	(6)	-	(284)	(1,486)	(540)	(220)	(442)	(2,978)
Impairment disposals	-	-	-	-	-	-	2	2
Transfer from inventories	-	-	-	271	-	9	659	939
Transfers to intangible assets (Note 20)	-	-	-	-	-	-	(2,669)	(2,669)
Impairment in construction in progress (transfers to intangible assets)	-	-	-	-	-	-	777	777
Transfer from/(to) investment property	-	-	3	89	-	(29)	-	63
Depreciation charge and impairment losses on disposals/transfers	-	-	191	1,385	521	212	7	2,316
Changes in estimates	-	-	(1,859)	13	-	-	-	(1,846)
Transfer to mine development assets (Note 22)	-	-	-	-	-	-	(2,255)	(2,255)
Translation to presentation currency	-	-	-	-	4	1	-	5
At 31 December 2021								
Cost	407	2,035	139,246	95,311	24,560	7,148	13,960	282,567
Accumulated depreciation and impairment	-	(1,035)	(43,300)	(48,232)	(13,619)	(4,226)	(668)	(111,080)
Carrying amount	407	1,000	95,946	47,079	10,941	2,822	13,292	171,487

21 Property, Plant and Equipment (Continued)

Depreciation expense of Tenge 12,773 million (2020: Tenge 11,773 million) was charged to cost of sales, Tenge 65 million (2020: Tenge 67 million) to distribution expenses, Tenge 1,243 million (2020: Tenge 1,318 million) to general and administrative expenses, Tenge 170 million (2020: 158 million tenge) to other expenses. The remaining depreciation expense is included in finished goods, work-in-process and other inventory.

At 31 December 2021, construction in progress included mainly technical re-equipment of the production of Ulba Metallurgical Plant JSC in the amount of Tenge 1,311 million (2020: Tenge 1,307 million) and construction of a refinery in the amount of Tenge 3,127 million of JV Inkai LLP.

At 31 December 2021, the Group had contractual capital expenditure commitments in respect of property, plant and equipment of Tenge 5,615 million (2020: Tenge 8,304 million).

There are no capitalized borrowing costs in 2021 (2020: nil).

At 31 December 2021, the gross carrying value of fully depreciated property, plant and equipment still in use was Tenge 25,943 million (2020: Tenge 21,093 million).

Depreciation and amortisation charged on long-term assets for the years ended 31 December are as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Mine development assets	34,185	27,308
Mineral rights	27,917	25,531
Property, plant and equipment	14,865	14,086
Intangible assets	1,543	889
Right-of-use assets	148	267
Total accrued depreciation and amortisation	78,658	68,081

Depreciation and amortisation charged to profit or loss for the years ended 31 December are as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Cost of sales	66,764	60,002
General and administrative expenses	2,493	1,744
Distribution expenses	65	66
Other expenses	275	172
Total depreciation and amortisation charged to profit or loss	69,597	61,984

22 Mine Development Assets

<i>In millions of Kazakhstani Tenge</i>	Field preparation	Site restoration costs	Ion exchange resin	Total
At 1 January 2020				
Cost	262,393	18,255	15,931	296,579
Accumulated depreciation and impairment	(147,164)	(3,609)	(5,066)	(155,839)
Carrying amount	115,229	14,646	10,865	140,740
Additions	22,236	-	-	22,236
Transfers from inventory	3,651	-	1,933	5,584
Transfer from property, plant and equipment (Note 21)	593	-	-	593
Transfer from exploration and evaluation assets (Note 24)	-	-	26	26
Depreciation charge	(25,815)	(701)	(792)	(27,308)
Changes in accounting estimates	(3,431)	(10,121)	-	(13,552)
At 31 December 2020				
Cost	285,442	8,134	17,890	311,466
Accumulated depreciation and impairment	(172,979)	(4,310)	(5,858)	(183,147)
Carrying amount	112,463	3,824	12,032	128,319
Additions	27,870	-	-	27,870
Transfers from inventory	6,823	-	867	7,690
Transfer from property, plant and equipment (Note 21)	2,255	-	-	2,255
Transfer from exploration and evaluation assets (Note 24)	649	384	-	1,033
Depreciation charge	(33,260)	(193)	(732)	(34,185)
Reversal of impairment	-	199	-	199
Changes in accounting estimates	631	4,861	-	5,492
At 31 December 2021				
Cost	323,670	13,379	18,757	355,806
Accumulated depreciation and impairment	(206,239)	(4,304)	(6,590)	(217,133)
Carrying amount	117,431	9,075	12,167	138,673

Estimated site restoration costs are capitalised when the Group recognises a provision for site restoration. The carrying value of the provision and site restoration assets is reassessed at each reporting period end (Notes 4 and 34).

23 Mineral Rights

In millions of Kazakhstani Tenge

At 1 January 2020		
Cost		646,153
Accumulated amortisation and impairment		(43,111)
Carrying amount		603,042
Amortisation charge		(25,531)
At 31 December 2020		
Cost		646,153
Accumulated amortisation and impairment		(68,642)
Carrying amount		577,511
Additions		2,466
Transfer from exploration and evaluation assets (Note 24)		897
Amortisation for the period		(27,917)
At 31 December 2021		
Cost		649,516
Accumulated amortisation and impairment		(96,559)
Carrying amount		552,957

24 Exploration and Evaluation Assets

In millions of Kazakhstani Tenge

	Tangible assets	Intangible assets	Total
At 1 January 2020	19,504	3,423	22,927
Additions	938	-	938
Transfer to mine development assets (Note 22)	(26)	-	(26)
Transfer to inventory	(25)	(1)	(26)
Impairment	(23)	-	(23)
Changes in accounting estimates	(845)	-	(845)
At 31 December 2020	19,523	3,422	22,945
Additions	3,425	-	3,425
Transfer to mine development assets (Note 22)	(1,033)	-	(1,033)
Transfer to subsoil use rights (Note 23)	-	(897)	(897)
Changes in accounting estimates	(62)	-	(62)
At 31 December 2021	21,853	2,525	24,378

25 Investments in Associates

The table below summarises the movements in the carrying amount of the Group's investment in associates:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Carrying value at 1 January	84,626	90,943
Share of results of associates	47,294	39,482
Contribution to charter capital	-	163
Transfer to assets held for sale	-	(2,297)
Dividends received from associates	(15,028)	(42,265)
Impairment of investment (Note 1, 13)	-	(1,364)
Other	-	(36)
Carrying value at 31 December	116,892	84,626

The Group's interests in its principal associates were as follows:

	Country of incorporation	Principal activities	2021		2020	
			% ownership interest held / % of voting rights	Carrying value in millions of Tenge	% ownership interest held / % of voting rights	Carrying value in millions of Tenge
JV KATCO LLP	Kazakhstan	Extraction, processing and export of uranium products	49%	85,123	49%	55,845
JV Zarechnoye JSC	Kazakhstan	Extraction, processing and export of uranium products	49.98%	10,968	49.98%	10,983
JV South Mining Chemical Company LLP	Kazakhstan	Extraction, processing and export of uranium products	30%	13,196	30%	11,321
Kyzylkum LLP	Kazakhstan	Extraction, processing and export of uranium products	50%	6,616	50%	5,424
Caustic JSC	Kazakhstan	Supply of caustic soda	40%	-	40%	-
SSAP LLP (former JV SKZ Kazatomprom LLP)	Kazakhstan	Production of sulphuric acid	9.89%	693	9.89%	668
JV Rusburmash Kazakhstan LLP	Kazakhstan	Geological exploration, drilling services	49%	183	49%	240
Zhanakorgan-Transit LLP	Kazakhstan	Transportation	40%	113	40%	145
Total investments in associates				116,892		84,626

On 22 January 2018 JV KATCO LLP (“the Partnership”) received a new mining allotment for site #2 (Tortkuduk) where additional uranium reserves were found. Development of the South Tortkuduk project was approved by the participants during 2017/2018. However, no formal addendum to the Subsoil Use Contract was signed for the extension of the exploration period in 2015-2018. In November 2020 the Ministry of Energy refused application of the Partnership to conclude an addendum to the Subsoil use contract for commercial development of the South Tortkuduk field. In December 2020, the Partnership applied to the Supreme Court to appeal against the actions of the Ministry of Energy. On May 24, 2021, the Supreme Court issued a decision on leaving the Partnership's claim without consideration. On November 19, 2021, the Partnership filed an appeal against this decision. On January 17, 2022, the Supreme Court of the Republic of Kazakhstan rejected the appeal. In 2021, the Partnership and the Government of the Republic of Kazakhstan represented by the Ministry of Energy and Ministry of Justice commenced negotiations to settle the dispute. The Group's management believes that the Partnership will continue as a going concern in the foreseeable future and therefore has not recognised any impairment loss.

25 Investments in Associates (Continued)

Summarised financial information for 2021 in respect of each of the Group's material associates is set out below. The summarised financial information below represents amounts shown in the associates' financial statements prepared in accordance with IFRS, adjusted by the Group for equity accounting purposes.

<i>In millions of Kazakhstani Tenge</i>	Kyzylkum LLP	JV KATCO LLP	JV South Mining Chemical Company LLP	JV Zarechnoye JSC	Other	Total
Current assets	3,897	125,413	57,210	15,224	2,742	204,486
<i>Including cash</i>	<i>2,243</i>	<i>88,359</i>	<i>31,079</i>	<i>5,610</i>	<i>461</i>	<i>127,752</i>
Non-current assets	22,383	85,480	35,287	15,777	11,510	170,437
Total assets	26,280	210,893	92,497	31,001	14,252	374,923
Current liabilities	(4,318)	(10,192)	(29,373)	(4,671)	(5,283)	(53,837)
Including financial liabilities net of trade and other accounts payable and provisions	(3,171)	(329)	(22,143)	(1,595)	(3,266)	(30,504)
<i>Incl. loan from the Company</i>	<i>(3,169)</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>(3,169)</i>
Non-current liabilities	(7,192)	(9,874)	(11,099)	(1,676)	(408)	(30,249)
Including financial liabilities net of trade and other accounts payable and provisions	(6,152)	(64)	(7,645)	(27)	-	(13,888)
<i>Incl. loan from the Company</i>	<i>(6,152)</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>(6,152)</i>
Total liabilities	(11,510)	(20,066)	(40,472)	(6,347)	(5,691)	(84,086)
Net assets	14,770	190,827	52,025	24,654	8,561	290,837
Group's share of net assets of associates	7,384	93,506	15,608	12,321	1,052	129,871
Unrealised profit in the Group	-	(8,451)	(2,412)	(1,396)	-	(12,259)
Other	(768)	-	-	43	(145)	(870)
Goodwill	-	68	-	-	82	150
Carrying value of investments in associates	6,616	85,123	13,196	10,968	989	116,892
Total revenue	12,486	116,791	91,587	23,727	10,166	254,757
Depreciation and amortisation	(672)	(9,571)	(5,904)	(5,781)	(612)	(22,540)
Finance income	66	18	381	-	31	496
Finance costs	(510)	(857)	(1,263)	(166)	(430)	(3,226)
Foreign exchange gain/(loss)	(270)	2,032	(125)	126	-	1,763
(Impairment losses)/reversal of impairment losses	(2)	(1,542)	(16)	(11)	1	(1,570)
Income tax	(536)	(16,130)	(13,410)	(1,818)	(24)	(31,718)
Profit for the year	2,385	61,016	52,477	6,853	101	122,832
Total comprehensive income	2,385	61,016	52,477	6,853	101	122,832
Unrealised profit	-	(620)	(1,408)	(872)	-	(2,900)
Other	-	-	-	-	-	-
Share of result of associates	1,193	29,278	14,334	2,553	(64)	47,294
Dividends received	-	-	12,459	2,569	-	15,028

25 Investments in Associates (continued)

Summarised financial information for 2020 in respect of each of the Group's material associates is set out below. The summarised financial information below represents amounts shown in the associates' financial statements prepared in accordance with IFRS, adjusted by the Group for equity accounting purposes.

<i>In millions of Kazakhstani Tenge</i>	Kyzylkum LLP	JV KATCO LLP	JV South Mining Chemical Company LLP	JV Zarechnoye JSC	Other	Total
Current assets	1,336	73,445	40,574	10,414	3,426	129,195
<i>Including cash</i>	248	54,080	24,619	3,444	224	82,615
Non-current assets	25,811	73,426	34,984	16,311	11,656	162,188
Total assets	27,147	146,871	75,558	26,725	15,082	291,383
Current liabilities	(4,299)	(8,291)	(24,674)	(2,583)	(6,225)	(46,072)
Including financial liabilities net of trade and other accounts payable and provisions	(3,144)	(265)	(19,999)	(32)	(3,642)	(27,082)
<i>Incl. loan from the Company</i>	(3,089)	-	-	-	-	(3,089)
Non-current liabilities	(10,463)	(8,768)	(9,804)	(1,201)	(398)	(30,634)
Including financial liabilities net of trade and other accounts payable and provisions	(9,526)	(201)	(6,719)	-	-	(16,446)
<i>Incl. loan from the Company</i>	(9,509)	-	-	-	-	(9,509)
Total liabilities	(14,762)	(17,059)	(34,478)	(3,784)	(6,623)	(76,706)
Net assets	12,385	129,812	41,080	22,941	8,459	214,677
Group's share of net assets of associates	6,192	63,608	12,324	11,465	1,097	94,686
Unrealised profit in the Group	-	(7,831)	(1,003)	(524)	-	(9,358)
Other movements	(768)	-	-	42	(126)	(852)
Goodwill	-	68	-	-	82	150
Carrying value of investments in associates	5,424	55,845	11,321	10,983	1,053	84,626
Total revenue	11,119	93,923	76,439	20,253	15,505	217,239
Depreciation and amortisation	(628)	(11,830)	(5,252)	(3,431)	(2,050)	(23,191)
Finance income	33	16	192	5	89	335
Finance costs	(2,351)	(824)	(1,384)	(116)	(1,271)	(5,946)
Net foreign exchange gain/(loss)	(11)	6,038	261	(177)	(322)	5,789
(Impairment losses)/reversal of impairment losses	38	(56)	(36)	(7)	3	(58)
Income tax	(201)	(13,178)	(10,775)	(1,750)	(142)	(26,046)
Profit/(loss) for the year	682	52,267	41,531	6,426	(1,194)	99,712
Other comprehensive loss	(47)	-	(41)	-	-	(88)
Total comprehensive income/(loss)	635	52,267	41,490	6,426	(1,194)	99,624
Unrealised profit	-	(538)	(926)	(192)	-	(1,656)
Share of result of associates	341	25,073	11,553	3,020	(485)	39,482
Dividends received	1,568	30,870	7,780	2,047	-	42,265

26 Investments in Joint Ventures

The table below summarises the movements in the carrying amount of the Group's investment in joint ventures:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Carrying value at 1 January	35,261	33,122
Contributions to charter capital	-	2,499
Share of results of joint ventures	4,289	604
Dividends received from joint ventures	(2,080)	(1,005)
Other	333	41
Carrying value at 31 December	37,803	35,261

The Group's interests in its principal joint ventures were as follows:

	Country of incorporation	Principal activity	2021		2020	
			% ownership interest held	Carrying value in millions of Tenge	% ownership interest held	Carrying value in millions of Tenge
Semizbay-U LLP	Kazakhstan	Extraction, processing and export of uranium products	51.00%	20,945	51.00%	17,900
Ulba-FA LLP	Kazakhstan	Production of fuel assemblies and their components	51.00%	2,705	51.00%	4,636
JV Budenovskoe LLP	Kazakhstan	Extraction, processing and export of uranium products	51.00%	6,071	51.00%	5,881
Uranenergo LLP	Kazakhstan	Transfer and distribution of electricity, grid operations	79.23%	3,095	79.23%	3,068
SKZ-U LLP	Kazakhstan	Production of sulphuric acid	49.00%	4,987	49.00%	3,776
JV UKR TVS CJSC	Ukraine	Production of nuclear fuel	33.33%	-	33.33%	-
Total investments in joint ventures				37,803		35,261

26 Investments in Joint Ventures (Continued)

Summarised financial information on respect of the Group's material joint ventures is set out below. The summarised financial information below represents amounts shown in the joint ventures' financial statements prepared in accordance with IFRS, adjusted by the Group for equity accounting purposes.

<i>In millions of Kazakhstani Tenge</i>	Semizbay-U LLP		JV Budenovskoe LLP		Ulba-FA LLP		Other		Total	
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Current assets	30,089	14,186	29	194	51,164	6,464	3,974	5,278	85,256	26,122
Including cash	13,132	2,946	22	193	5,747	39	219	1,012	19,120	4,190
Non-current assets	20,687	20,572	25,791	23,840	21,939	26,980	24,846	25,680	93,263	97,072
Total assets	50,776	34,758	25,820	24,034	73,103	33,444	28,820	30,958	178,519	123,194
Current liabilities	(7,090)	(2,647)	(296)	(495)	(35,769)	(2,231)	(9,735)	(9,424)	(52,890)	(14,797)
Including financial liabilities net of trade and other accounts payable and provisions	(3,183)	(72)	(15)	(13)	(1,680)	(370)	(6,007)	(5,693)	(10,885)	(6,148)
Non-current liabilities	(4,412)	(4,077)	(1,933)	(320)	(32,031)	(22,122)	(4,239)	(9,194)	(42,615)	(35,713)
Including financial liabilities net of trade and other accounts payable and provisions	(66)	-	(1,933)	(320)	(31,241)	(21,729)	(2,877)	(8,463)	(36,117)	(30,512)
Total liabilities	(11,502)	(6,724)	(2,229)	(815)	(67,800)	(24,353)	(13,974)	(18,618)	(95,505)	(50,510)
Net assets	39,274	28,034	23,591	23,219	5,303	9,091	14,846	12,340	83,014	72,684
Group's share of net assets of joint ventures	20,030	14,297	12,031	11,841	2,705	4,636	8,724	7,484	43,490	38,258
Share in accumulated unrecognised losses	-	-	-	-	-	-	-	-	-	-
Goodwill	4,105	4,105	-	-	-	-	(1,374)	(1,374)	2,731	2,731
Impairment losses	-	-	-	-	-	-	(21)	(21)	(21)	(21)
Other	120	(7)	-	-	-	-	753	755	873	748
Unrealised gain	-	-	(5,960)	(5,960)	-	-	-	-	(5,960)	(5,960)
Unrealised profit in the Group	(3,310)	(495)	-	-	-	-	-	-	(3,310)	(495)
Carrying value of investments in joint ventures	20,945	17,900	6,071	5,881	2,705	4,636	8,082	6,844	37,803	35,261
Total revenue	40,913	26,068	-	-	-	2	12,769	12,357	53,682	38,427
Depreciation and amortisation	(4,836)	(3,177)	-	-	(559)	(7)	(1,337)	(1,275)	(6,732)	(4,459)
Finance income	62	85	-	-	4	2	33	34	99	121
Finance costs	(501)	(531)	(1)	(20)	(1,466)	(615)	(107)	(277)	(2,075)	(1,443)
Foreign exchange gain/(loss)	(146)	30	5	486	(592)	(1,273)	(236)	(1,498)	(969)	(2,255)
Impairment losses	-	(255)	(14)	(49)	(11)	-	-	(2,623)	(25)	(2,927)
Income tax	(3,978)	(2,015)	(61)	(9)	(397)	(396)	(642)	(852)	(5,078)	(3,272)
Profit/(loss) for the year	15,569	8,082	(280)	408	(3,788)	(3,422)	2,505	(1,464)	14,006	3,604
Other comprehensive income/(loss)	34	14	-	-	-	-	2	-	36	14
Total comprehensive income/(loss)	15,603	8,096	(280)	408	(3,788)	(3,422)	2,507	(1,464)	14,042	3,618
Other	(2,815)	(314)	-	-	-	-	-	-	(2,815)	(314)
Share of results of joint ventures	5,125	3,807	(142)	208	(1,932)	(1,745)	1,238	(1,666)	4,289	604
Dividends received	2,080	1,005	-	-	-	-	-	-	2,080	1,005

26 Investments in Joint Ventures (Continued)

Together with China General Nuclear Power Corporation (CGNPC), the Group is involved in the construction of a fuel assembly plant in Kazakhstan with a capacity to supply Chinese nuclear power plants with up to 200 tons of enriched uranium per annum. In December 2015, subsidiaries of the Company and CGNPC established a joint venture Ulba-FA LLP with 51% and 49% respective interests, which is responsible for construction and operation of the plant. The fuel assembly plant was commissioned in December 2020. During 2021 the plant was certified by the owner of the technology for the production of fuel assemblies and was also recognised as a certified supplier of nuclear fuel to nuclear power plants in China from the end user of the plant's products (CGNPC Uranium Resources Company Limited (CGNPC-URC)).

A long-term contract for the supply of fuel assemblies between Ulba-FA LLP and CGNPC-URC was entered into in May 2021.

Management regularly evaluates whether the Group exercises control, joint control or significant influence over investees including subsidiaries, associates and joint ventures. Management applies judgement in this evaluation, including: (a) determination of availability of power that gives to the Group ability to direct the relevant activities of the investees that significantly affect their returns, and (b) determination of ability to use its power over the investees to affect the amount of the investor's returns. Management concluded that the Group does not have the ability to use its power to exercise control over Uranenergo LLP. Accordingly, this investment is classified as an investment in a joint venture.

27 Accounts Receivable

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Trade accounts receivable	215,483	115,026
Trade accounts receivable from related parties	4,713	2,398
Total gross trade accounts receivable	220,196	117,424
Provision for impairment of trade receivables	(148)	(90)
Provision for impairment of trade receivables from related parties	(24)	(20)
Total current net trade accounts receivable	220,024	117,314
Other accounts receivable	175	160
Other accounts receivable from related parties	44	22
Total gross other accounts receivable	219	182
Provision for impairment of other receivables	(105)	(78)
Total net other accounts receivable	114	104
Total current accounts receivable	220,138	117,418

Information on the Group's exposure to credit and currency risks and provision for impairment for accounts receivable is disclosed in Note 40.

28 Other Assets

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Non-current		
Restricted cash	17,654	14,846
VAT recoverable	11,315	14,544
Long-term inventories	7,247	7,790
Advances for non-current assets	1,857	972
Prepaid expenses	926	809
Loans to employees	271	454
Other assets	263	1,450
Total other non-current assets	39,533	40,865
Current		
Advances for goods and services	3,026	3,402
Prepaid expenses	1,465	1,758
Advances to related parties for goods and services	1,244	423
Prepaid insurance	1,025	871
Restricted cash	427	354
Prepaid taxes other than income tax	371	767
Due from employees	259	274
Dividends receivable from related parties	-	310
Other assets	6	-
Total other current assets	7,823	8,159

Financial assets within other current and non-current assets include restricted cash, loans to employees and dividends receivable. Other current and non-current assets are non-financial assets.

Non-current inventories include stock of enriched uranium which has been held since Group's inception for future use after commissioning of new facilities for production of uranium pellets. Management does not plan to use these inventories in operational activity during the year after the reporting date.

In accordance with the terms of its subsurface use contracts, the Group transfers cash to long-term bank deposits to finance site restoration activities. As at 31 December 2021 the balance of restricted cash held in long-term bank deposits related to financing of future site restoration activities of Tenge 17,654 million (2020: Tenge 14,751 million).

29 Inventories

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Finished goods and goods for resale	223,750	185,397
Including uranium products	222,195	183,633
Work-in-process	30,409	22,923
Raw materials	14,879	20,179
Other materials	5,709	5,104
Materials in processing	3,091	1,204
Spare parts	789	682
Fuel	479	655
Provision for obsolescence and write-down to net realisable value	(3,250)	(2,755)
Total inventories	275,856	233,389

29 Inventories (Continued)

Movements in the provision for obsolescence are as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Balance at 1 January	(2,755)	(3,152)
Reversal of provision during the year	623	963
Inventory write off during the year	130	108
Accrual of provision during the year	(1,238)	(654)
Translation of foreign currency	(10)	(20)
Balance at 31 December	(3,250)	(2,755)

30 Loans to Related Parties

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Non-current		
Kyzylkum LLP	5,547	8,495
Provision for impairment	(54)	(72)
Total non-current loans	5,493	8,423
Current		
Kyzylkum LLP	3,170	3,089
Uranenergo LLP	189	-
Provision for impairment	(2)	-
Total current loans	3,357	3,089

In 2010, the Group provided an interest-bearing long-term loan to Kyzylkum LLP with maturity to 2024. The loan is collateralised by the property of Kyzylkum LLP. From December 2015, JV Khorasan-U LLP is a co-borrower of the loan to Kyzylkum LLP and is a guarantor of the loan.

In June 2021, the Group provided repayable financial assistance to Uranenergo LLP secured by property in the form of a revolving credit line with a term until June 30, 2023 to replenish working capital. As part of this line, cash tranches for up to 12 months can be provided.

The weighted average annual interest rate on loans to related parties in 2021 was 8.5% (2020: 8.5%). According to internal estimates, the level of credit risk for these loans is at an acceptable level.

31 Cash and Cash Equivalents

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Current bank accounts	138,867	95,257
Demand deposits	22,338	14,987
Cash in hand	8	5
Reverse repo transaction	-	3,118
Provision for impairment	(23)	(20)
Total cash and cash equivalents	161,190	113,347

32 Share Capital

At 31 December 2021 the total number of authorised and paid ordinary shares is 259,356,608 (2020: 259,356,608) of which 75% is owned by Samruk-Kazyna JSC and 25% of the shares/GDRs are freely floated with listing on the Astana International Exchange (AIX) and the London Stock Exchange (LSE). One GDR represents a share in one share. Each ordinary share carries the right to one vote. The nominal value of share is Tenge 142.9.

Dividends declared and paid during the year were as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Dividends payable at 1 January	-	-
Dividends declared during the year	150,082	99,002
Dividends paid during the year	(150,082)	(99,002)
Dividends payable at 31 December	-	-
Dividends declared per share, in Tenge	579	382

33 Loans and Borrowings

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Non-current		
Bonds	77,700	76,300
Total non-current loans and borrowings	77,700	76,300
Current		
Promissory notes issued	10,514	14,004
Bonds	803	788
Bank loans	-	6,734
Total current loans and borrowings	11,317	21,526
Total loans and borrowings	89,017	97,826

Financial liabilities of the Group as of December 31, 2021 are represented by bonds placed on the organized securities market of Kazakhstan Stock Exchange JSC (“KASE”) and promissory notes.

The company placed 70 million US Dollar-indexed bonds on 27 September 2019 with a maturity of 27 October 2024 and a coupon of 4% per annum. The nominal value of one bond is Tenge 1,000.

Promissory notes were issued by a subsidiary of the Group JV Khorasan-U LLP in December 2014 to repay amounts owing for mine development assets. According to the terms, the promissory notes are payable on demand at an interest rate of 0.1%. As of 31 December 2021, the right of claim under these promissory notes belongs to Kyzylkum LLP, an associate of the Group.

33 Loans and Borrowings (Continued)

Information about the Group's loans and borrowings is presented as follows:

<i>In millions of Kazakhstani Tenge</i>	Currency	Maturity	2021	2020
Bank loans				
Sumitomo Mitsui Banking Corporation	US Dollar	2021	-	6,734
Total bank loans			-	6,734
Bonds				
Bonds	US Dollar	2024	78,503	77,088
Total bonds			78,503	77,088
Promissory note issued				
Kyzylkum LLP	Tenge	on demand	10,514	14,004
Total promissory note issued			10,514	14,004

In 2021, the Group's weighted average interest rate on fixed interest rate loans was 3.52% (2020: 3.31%) and floating interest rate loans was 0.97% (2020: 1.99%).

Reconciliation of debt

The table below shows an analysis of the debt amount and changes in the Group's liabilities arising from financing activities for each of the periods presented:

<i>In millions Kazakhstani Tenge</i>	Loans and borrowings	Lease liabilities	Liability of ownership interest in a subsidiary	Total
Debt at 31 December 2019	159,964	1,394	-	161,358
Proceeds from loans and borrowings	119,093	-	-	119,093
Foreign currency translation	11,391	17	-	11,408
Interest accrued	4,174	110	-	4,284
Repayment of loans and borrowings	(191,991)	(465)	-	(192,456)
Interest paid	(4,149)	(128)	-	(4,277)
Other non-cash changes	(656)	(182)	-	(838)
Debt at 31 December 2020	97,826	746	-	98,572
Proceeds from loans and borrowings	65,525	-	-	65,525
Foreign currency translation	1,749	7	-	1,756
Interest accrued	3,168	60	-	3,228
Repayment of loans and borrowings	(76,108)	(452)	-	(76,560)
Interest paid	(3,143)	(122)	-	(3,265)
Recognition of liability related to put option (Note 1)	-	-	185,210	185,210
De-recognition of liability related to put option (Note 1)	-	-	(185,210)	(185,210)

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Other non-cash changes	-	52	-	52
Debt at 31 December 2021	89,017	291	-	89,308

34 Provisions

<i>In millions of Kazakhstani Tenge</i>	Compensation for occupational deceases	Environmental protection	Site restoration	Other	Total
At 1 January 2020					
Non-current	228	3,420	35,799	40	39,487
Current	85	96	706	-	887
Total	313	3,516	36,505	40	40,374
Provision for the year	(27)	(1)	(27)	2	(53)
Unwinding of discount	22	244	2,362	1	2,629
Disposals	-	-	(24)	-	(24)
Reversal of provision	-	(43)	-	-	(43)
Provision used	(77)	(100)	-	-	(177)
Change in estimates	-	(459)	(14,975)	-	(15,434)
At 31 December 2020					
Non-current	154	3,061	23,135	43	26,393
Current	77	96	706	-	879
Total	231	3,157	23,841	43	27,272
Provision for the year	14	(1)	-	32	45
Unwinding of discount	23	241	1,993	2	2,259
Disposals	-	-	(78)	-	(78)
Provision used	(72)	-	272	-	200
Change in estimates	-	(2,040)	5,403	-	3,363
At 31 December 2021					
Non-current	129	1,261	30,725	77	32,192
Current	67	96	706	-	869
Total	196	1,357	31,431	77	33,061

Provision for environmental protection

The Group has a legal obligation to dispose of radioactive waste, eliminate and decommission contaminated items of property, plant and equipment after the closure of the facility. The amount of the provision for landfill restoration and asset remediation is determined using the nominal prices effective at the reporting dates, using the projected rate of long-term average inflation for the expected period of operation of landfills and the discount rate at the end of the reporting period.

Provision for restoration of mine sites

The Group estimates the site restoration costs for each mine operated by the Group. The undiscounted estimated cost of restoration of mine sites in 2021 is Tenge 148,683 million (2020: Tenge 116,533 million). The amount of provision for restoration of mine sites was calculated using current prices (the prices effective at the reporting date) for expenditures to be incurred and then inflated using the forecast inflation rate effective for the period until the settlement of restoration (5.12% for the period 2021-2045). The present value at 31 December 2021 has been estimated using a discount rate of 9.85% (2020: 9.87%), which is a risk free nominal rate as the future cash outflows reflect risk specific to the liability.

In view of the long-term nature of restoration of mine sites, there is uncertainty concerning the actual amount of expenses that will be incurred in performing site restoration activities for each mine (Note 4). Changes in estimates occur due to annual revision of costs for site liquidation including newly drilled wells, sand traps and other facilities subject to subsequent liquidation.

In accordance with the terms of the subsurface use agreements the Group places cash in long-term bank deposits to finance future site restoration activities. As at 31 December 2021, the accumulated transfers to restricted deposits amounted to Tenge 21,963 million (2020: Tenge 19,246 million).

34 Provisions (Continued)

Key assumptions which serve as the basis for determining the carrying value of the provision for restoration of mine sites provision are as follows:

- there is a high probability that the Group will proceed to development and production stages for its fields which are currently under exploration. This creates a constructive obligation for the Group to recognise a site restoration provision for all mining and exploration licenses;
- the expected term for future cash outflows for the mine sites is based on the life of the mines. A substantial part of the expenditures is expected to occur starting from 2045, at the end of the expected life of the mines.

35 Accounts Payable

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Trade accounts payable to related parties	33,620	18,880
Trade accounts payable	29,302	23,227
Total current trade accounts payable	62,922	42,107
Other accounts payable	3,092	1,841
Total current other accounts payable	3,092	1,841
Total current accounts payable	66,014	43,948

The Group's exposure to currency and liquidity risk related to trade and other payables is disclosed in Note 40.

36 Other Liabilities

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Non-current		
Liabilities under inventory loan agreements	13,461	-
Advances received	3,740	3,632
Liabilities under contracts with customers	2,564	-
Deferred income from subsidies received	1,356	1,309
Preferred shares	265	265
Issued financial guarantees	133	250
Historical costs liabilities	76	396
Advances received from related parties	2	7
Other	1,823	622
Total non-current other liabilities	23,420	6,481
Current		
Liabilities under contracts with customers	16,598	85
Amounts due under uranium swap contracts	15,355	11,588
Accrued unused vacation payments and bonuses	8,425	5,775
Joint operations liabilities	4,569	-
Liability for social sphere contributions	3,600	-
Wages and salaries payable	1,561	1,509
Social contributions payable	1,301	1,078
Advances received	1,280	1,460
Historical costs liabilities	361	620
Dividends payable to other participants	263	265
Deferred income	166	203
Liabilities under inventory loan agreements	99	10,522
Issued financial guarantees	90	7
Advances received from related parties	46	69
Other	3,624	1,813
Total current other liabilities	57,338	34,994

36 Other Liabilities (Continued)

In 2020 the Group obtained finished goods under commodity loans totalling 21.9 million US Dollar. A liability was initially recognised to return inventory at a cost of Tenge 8,597 million. This liability is subsequently remeasured in accordance with changes in market prices for these goods. In the current period, additional agreements were concluded to extend the maturity of these commodity loans until May-June 2023, as a result of which the commodity loans were reclassified to noncurrent liabilities at 31 December 2021.

Joint operations liabilities represent obligations of the Group under the terms of the joint operations contractual agreements that require equal volumes of uranium to be purchased during the period by the participants. In 2021 the Group did not purchase the required volume.

The liability for social sphere contributions mainly relates to JV Akbastau JSC. As part of measures taken to amend the subsoil use contract of JV Akbastau JSC, an agreement was reached during the year with the competent authority for JV Akbastau JSC to make expenditures amounting to Tenge 6 billion to the region in which it carries out mining operations.

In accordance with the terms of the subsurface use contracts the Group is required to reimburse the historical costs related to the geological research and other costs incurred by the Republic of Kazakhstan for exploration of the contractual territories before the transfer of subsurface use rights to the Group. In accordance with tax legislation, the historical costs are to be reimbursed to the Government via quarterly payments over a 10 year period, beginning from the date of commercial extraction of uranium. The liability represents the discounted cash flow of estimated future payments. The discount rate applied for historical costs denominated in US Dollar was 3.3% and 7% for historical costs denominated in Tenge.

The Group reports the following liabilities related to contracts with customers:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Non-current contract liability – material right	2,564	-
Current advances received under contract with customer for uranium tablets	16,598	85
	19,162	85

Non-current contract liabilities are options granted to the customers to acquire additional goods. The Group expects that the allocated material right will be recognized as revenue in the 2026 once the associated right is executed or expires.

Current advances mainly include advances for Tenge 16,420 million were received under the contract with Ulba-FA LLP. During 2021 the Group has not recognized revenue, which is planned for 2022 when production at the plant starts (Note 1).

37 Contingencies and Commitments

Compliance with Kazakhstan Tax legislation

The tax environment in the Republic of Kazakhstan is subject to change and inconsistent application and interpretations. In particular, existing subsurface use contracts do not have tax stability from 1 January 2009 and tax liabilities are computed under common regime. This could result in unfavourable changes to subsurface users' tax positions, including those of the Group. Non-compliance with Kazakhstani law and regulations as interpreted by the Kazakhstani authorities may lead to the assessment of additional taxes, penalties and interest. Kazakhstani tax legislation and practice is in a state of continuous development, and therefore is subject to varying interpretations and frequent changes, which may be retroactive. Tax periods remain open to retroactive review by the Kazakhstan tax authorities for five years.

The Group's management believes that its interpretation of the relevant legislation is appropriate and the Group's tax positions will be sustained. In the opinion of the Group's management, no material losses will be incurred in respect of existing and potential tax claims in excess of provision or disclosures that have been made in these consolidated financial statements.

(a) Transfer pricing legislation

In 2021 transfer pricing tax audits were started by the relevant Kazakhstan authorities across all subsoil use entities of the Group, but were not completed at balance date due to the suspension of the audits by the tax authorities. During these audits, the tax authorities enquired into the documentary support for certain transport arrangements included in

37 Contingencies and Commitments (Continued)

sales contracts of subsidiaries and affiliates. The legislation requires, in part, that Kazakhstani companies maintain and, if required, provide supporting evidence for the determination of prices used in international transactions.

To date, other than as described below, no additional transfer pricing tax assessments have been issued. The management of the Group believes that it will be able to sustain its position if the transfer pricing practices of the Group are challenged by the tax authorities.

In JV Khorasan-U LLP (a subsidiary), transfer pricing was included in the results of a comprehensive tax audit conducted by the authorities which resulted in 2021 in an additional assessment of KZT 910 million. The entity has appealed against the results of the audit report and no liability has been recorded by the Group at 31 December 2021 in relation to this matter.

From 1 January 2009 the Group self-assesses additional income tax to reflect market prices. The amount of recognised additional income tax in 2021 was Tenge 5,371 million (2020: Tenge 2,561 million).

As a result of audit conducted by tax authorities, the Company was presented additional corporate income tax in the amount of Tenge 6,282 million on various transfer pricing issues. The most significant issue in the amount of Tenge 4,320 million was announced for short-term concluded under the Framework Agreements. The Group is preparing to discuss controversial issues with the tax authorities and intends to make every effort to resolve the issue positively.

During the audits, the tax authorities raised a general issue of transfer pricing for the Group regarding the documentary confirmation of the transport differential in China for subsidiaries and affiliates, that was previously confirmed in practice by a letter from CNEIC, the maximum estimated amount of risk of which is Tenge 9,135 million. This procedure was included in the Rules (Methodology) for pricing natural uranium concentrate in 2021 to consolidate the existing practice.

(b) Complex tax inspections of Group entities

During 2021, most of the Group's entities, underwent comprehensive tax audits for the years 2016-2019/2020, which resulted in additional tax assessments including penalties and fines for the total amount of Tenge 5,377 million. The results of the tax audits include:

- JV Inkai LLP Tenge 552 million, Kazatomprom-SaUran LLP Tenge 175 million, Ortalyk LLP Tenge 341 million and JV Khorasan-U LLP Tenge 1,070 million. These additional assessments have been paid or recognised as liabilities by these entities at 31 December 2021.

- JV KATCO LLP underwent a comprehensive tax audit during 2021, resulting in additional tax assessments for CIT of Tenge 843 million, mineral extraction tax of amount of Tenge 297 million and penalties of Tenge 251 million. JV KATCO LLP recognized these amounts as liabilities at 31 December 2021 but has appealed the assessments. The result of the appeal is outstanding at the date of these financial statements. In addition, this entity received additional tax assessments relating to withholding tax for the period 2014-2018 on payments of dividends and royalties amounting to Tenge 10,482 million and penalties of Tenge 19,923 million. The entity appealed against these assessments which resulted in a reduction of the amount of penalties to Tenge 5,358 million. JV KATCO LLP has commenced a court action to have these assessments withdrawn and this is unresolved at the date of these financial statements. No liability was recorded by this entity or the Group at 31 December 2021 in relation to these disputed withholding tax assessments.

- several group entities received preliminary tax audit results indicating potential additional accruals of CIT: Appak LLP - Tenge 198 million, JV Inkai LLP - Tenge 654 million, JV South Mining Chemical Company LLP - Tenge 1,270 million. The entities disagree with the tax authorities on the possible additional taxes payable and did not recognize liabilities at 31 December 2021. Appeals will be lodged against any additional tax assessments that may be issued.

Compliance with subsoil use contractual obligations

In accordance with the terms of the subsoil use contracts, the Group mining entities are required to comply with the obligations specified therein. Failure to comply with the conditions stipulated by subsoil use contracts may lead to negative consequences, including termination of contracts, fines and penalties. Under current subsoil use legislation, the payment of penalty does not relieve subsurface user from fulfillment of stated obligations in full.

As of 31 December 2021 some entities underproduced uranium for more than 20% threshold allowed by the legislation. Moreover, mining entities did not fulfill their financial obligations under subsoil use contracts, which could lead to penalties of 1% from the amount of unfulfilled liability, or Tenge 270 million – Tenge 420 million for 2021. The Group did not recognize any liabilities in the financial statements as at 31 December 2021 as it plans to settle financial liabilities in future periods in accordance with the revised minimum work programs.

37 Contingencies and Commitments (Continued)

In 2020 in order to prevent the spread of coronavirus infection, the Company undertook a number of measures during the year including suspension of mining preparation and repair and restoration. In this regard, production plans for 2020 were adjusted. As a result, deviations from the contractual obligations or production of subsidiaries, associates and JV's exceeded the levels acceptable under relevant regulations of the Republic of Kazakhstan. All subsidiaries, associates and joint ventures received certificates of the occurrence of force majeure from appropriate government authorities and sent notifications to the Competent authority about the reduction in production volumes due to the occurrence of force majeure. The Group initiated actions to sign amendments to subsoil use contracts during 2021 and update the minimum working programs to take into account reduced production volumes and financial obligations; as of 31 December 2021 the amendments were not signed by government authorities. Certain Group mining entities received fine notifications from the government authorities and these amounts were expensed as incurred.

Insurance

The Kazakhstani insurance industry is in development stage, and many forms of insurance protection common in other countries are not yet available. In 2021, the implementation of the Corporate Property Insurance Program for the Company against "all risks" of death, loss or damage as a result of accidental and unforeseen direct physical impact (excluding equipment breakdown/failure and interruption in production) was launched.

The Company does not have full insurance coverage for risks related to mining activities and production facilities, including for damages caused by the stoppage of production or obligations incurred to third parties in connection with damages caused to the property or the environment resulting from accidents or operations.

The Company provides Directors' & Officers' Liability insurance (D&O). D&O insurance policies offer liability cover for the Company's managers to protect them from claims which may arise from decisions and actions taken ("alleged wrongful acts") within the scope of their regular duties. The terms of the policy prohibit disclosure of the amount of the insurance coverage.

Environmental obligations

Changes in the Environmental Code

In 2021, a new Environmental Code came into force in the Republic of Kazakhstan. One of the provisions in this Code requires the obtaining of integrated environmental permits associated with the use of the best available techniques (BAT) to be issued by Committee for Environmental Regulation and Control of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan. At the first stage of implementation of the Code, the fifty largest enterprises from the oil and gas, mining and metallurgical, chemical and electric power industries will be required to obtain BAT permits. The uranium mining enterprises of the Group were not included in the list of the fifty largest enterprises, however, the Group owns certain "category I" facilities that are considered to have a significant impact on the environment. The operation of these facilities will require an integrated environmental permit from 2025. According to the new Code, currently uranium mining and processing activities do not require the introduction of BAT. However, this situation may change. Other provisions of this Code relevant to certain Group entities include installation of automated emissions monitoring systems and waste management practices.

Until a full assessment is completed, it is not possible to assess the financial implications of the new requirements of the new Kazakhstani Ecological Code, but the cost of complying with environmental requirements is expected to increase, either in the form of additional investment required for waste management and the development of appropriate monitoring processes, or in the form of higher fees for waste production.

Dismantlement and restoration Ulba facilities

As at the reporting date management concluded that the Group has no legal or constructive obligation to finance dismantlement and restoration of Ulba plant facilities (Note 4).

Guarantees

Guarantees are irrevocable assurances that the Group will make payments in the event that another party cannot meet its obligations. The maximum exposure to credit risk under financial guarantees provided to secure financing of certain related parties at 31 December 2021 is Tenge 21,154 million (2020: Tenge 19,390 million) (Note 8).

Compliance with covenants

The Group is subject to certain covenants related primarily to its liabilities under credit lines and guarantee agreements. The Group complied with all applicable covenants as of 31 December 2021 and 31 December 2020 and during the periods then ended.

37 Contingencies and Commitments (Continued)

Legal proceedings

From time to time and in the normal course of business, claims against the Group may be received. During 2021 and as of 31 December 2021 there were no material claims or litigations against the Group. Management concluded that no material losses are expected to be incurred in respect of any such claims.

38 Non-controlling Interest

The following table provides information about each significant subsidiary that has a non-controlling interest that is material to the Group at 31 December 2021:

<i>In millions of Kazakhstani Tenge</i>	Country of incorporation and principal place of business	Ownership rights held by non-controlling interest	Profit or loss attributable to non-controlling interest	Accumulated non-controlling interest
Name				
Ulba Metallurgical Plant JSC	Kazakhstan	5.67%	568	7,491
Appak LLP	Kazakhstan	35%	4,614	11,113
JV Inkai LLP	Kazakhstan	40%	45,556	123,120
JV Khorasan-U LLP	Kazakhstan	50%	11,839	110,290
Baiken-U LLP	Kazakhstan	47.5%	9,034	60,106
DP Ortalyk LLP	Kazakhstan	49%	7,780	34,857
Volkovgeologiya JSC	Kazakhstan	3.38%	(138)	281
Total			79,253	347,258

The following table provides information about each significant subsidiary that has non-controlling interest that is material to the Group at 31 December 2020:

<i>In millions of Kazakhstani Tenge</i>	Country of incorporation and principal place of business	Ownership rights held by non-controlling interest	Profit or loss attributable to non-controlling interest	Accumulated non-controlling interest
Name				
Ulba Metallurgical Plant JSC	Kazakhstan	9.82%	788	7,284
Appak LLP	Kazakhstan	35%	2,879	9,378
JV Inkai LLP	Kazakhstan	40%	19,292	94,682
JV Khorasan-U LLP	Kazakhstan	50%	8,888	98,450
Baiken-U LLP	Kazakhstan	47.5%	6,236	57,301
Volkovgeologiya JSC	Kazakhstan	10%	(303)	420
Kazatomprom-Damu LLP	Kazakhstan	10%	47	(378)
Total			37,827	267,137

38 Non-controlling Interest (Continued)

The summarised financial information of these subsidiaries is as follows:

<i>In millions of Kazakhstani Tenge</i>	Ulba Metallurgical Plant JSC		Appak LLP		JV Inkai LLP		Baiken-U LLP		JV Khorasan-U LLP		DP Ortalyk LLP		Volkovgeologiya JSC
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021
Current assets	74,957	46,052	17,164	17,428	108,441	54,033	44,227	29,913	89,727	63,461	54,052	-	8,042
Non-current assets	37,032	40,019	20,538	15,578	216,565	221,077	106,269	113,575	182,054	185,335	29,228	-	8,054
Current liabilities	(31,240)	(7,046)	(2,880)	(3,000)	(11,199)	(8,731)	(5,060)	(3,604)	(16,990)	(16,441)	(8,569)	-	(7,820)
Non-current liabilities	(5,390)	(7,116)	(2,910)	(3,052)	(35,022)	(35,470)	(18,733)	(19,086)	(34,049)	(35,291)	(3,573)	-	(91)
Equity, incl.	75,359	71,909	31,912	26,954	278,785	230,909	126,703	129,798	220,742	197,064	71,138	-	8,185
Equity attributable to the Group	67,868	64,625	20,799	17,576	155,665	136,227	66,597	63,497	110,452	98,614	36,281	-	7,904
Non-controlling interest	7,491	7,284	11,113	9,378	123,120	94,682	60,106	57,301	110,290	98,450	34,857	-	281
Revenue	60,254	46,338	30,902	21,970	131,866	78,973	49,981	38,060	63,117	49,290	59,195	-	23,513
Depreciation and amortisation	(1,924)	(1,666)	(3,184)	(1,073)	(10,913)	(10,985)	(12,694)	(10,028)	(13,842)	(11,394)	(4,971)	-	(1,424)
<i>Including depreciation and amortisation at fair value</i>	-	-	-	-	(2,205)	(3,356)	(6,985)	(3,992)	(8,868)	(6,366)	-	-	-
Finance income	360	171	278	244	127	111	340	358	116	187	8,045	-	22
Finance costs	(467)	(636)	(218)	(180)	(359)	(339)	(69)	(123)	(72)	(105)	(8,186)	-	(319)
Income tax expense	(2,606)	(3,314)	(3,932)	(2,918)	(20,547)	(13,597)	(6,219)	(4,395)	(8,584)	(5,699)	(7,218)	-	61
<i>Including tax effect of depreciation and amortisation of adjustments to fair value</i>	-	-	-	-	441	658	1,404	800	1,774	1,273	-	-	-
Net foreign exchange gain (impairment losses)/reversal of impairment losses	488	1,379	12	388	404	285	91	399	613	1,826	56	-	-
	(198)	(112)	9	(78)	(478)	-	(164)	-	-	-	22	-	60
Profit for the year	5,606	5,463	13,183	8,227	76,693	33,315	19,019	13,148	23,679	17,775	27,016	-	(1,511)
Profit attributable to the owners of the Company	5,038	4,675	8,569	5,348	31,137	14,023	9,985	6,912	11,840	8,887	19,236	-	(1,373)
Profit attributable to non-controlling interest	568	788	4,614	2,879	45,556	19,292	9,034	6,236	11,839	8,888	7,780	-	(138)
Profit/(loss) for the year	5,606	5,463	13,183	8,227	76,693	33,315	19,019	13,148	23,679	17,775	27,016	-	(1,511)
Other comprehensive income/(loss)	16	50	1	1	-	(32)	(8)	(20)	-	-	2	-	(9)
Total comprehensive income/(loss) for the year	5,622	5,513	13,184	8,228	76,693	33,283	19,011	13,128	23,679	17,775	27,018	-	(1,520)
Dividends declared to non-controlling interest	360	268	2,879	1,902	17,117	12,189	6,225	10,450	-	-	-	-	1
Net cash inflow/(outflow) from:													
- operating activities	7,561	6,935	13,376	5,807	26,366	46,968	13,777	19,324	12,606	19,052	17,440	-	109
- investing activities	(2,838)	(3,329)	(6,160)	(2,346)	(8,894)	(6,016)	(3,585)	(5,124)	(8,557)	(3,032)	(2,527)	-	(1,057)
- financing activities	(3,812)	(2,958)	(8,278)	(5,481)	(28,832)	(30,749)	(11,869)	(22,038)	(3,504)	(3,367)	(3)	-	750
Net cash inflow/(outflow)	911	648	(1,062)	(2,020)	(11,360)	10,203	(1,677)	(7,838)	545	12,653	14,910	-	(198)

38 Non-controlling Interest (Continued)

Allocation of profit between the non-controlling interest of JV Inkai LLP and the Group is impacted by the allocation of JV Inkai LLP dividends. During 2020 and 2021 dividends declared/to be declared by JV Inkai LLP were allocated according to an amendment to the agreement between Cameco and the Company to be 59.4% and 40.6% respectively, and not by reference to the ownership interests. This amendment was agreed between the parties to compensate losses to Cameco due to a reduction in production by 20% in 2020-2021. Accordingly, Tenge 20,857 mln (2020: Tenge 5,978 mln) was reclassified from profit attributable to the Group to profit attributable to non-controlling interests.

39 Principal Subsidiaries

These consolidated financial statements include the following subsidiaries:

	Principal activity	Ownership	
		2021	2020
Kazatomprom-Damu LLP	Consulting services on the Group's investment activity	-	90%
KAP Technology JSC	Communication services	100%	100%
Qorgan-Security LLP	Security services	100%	100%
Appak LLP	Exploration, production, processing and sale of uranium products	65%	65%
Ulba Metallurgical Plant JSC	Production and processing of uranium materials, production of rare metals and semiconductor materials	94.33%	90.18%
Volkovgeologiya JSC	Exploration and research of uranium reserves, drilling services, monitoring of radiation level and environment conditions	96.62%	90%
High Technology Institute LLP	Research, project, development and engineering consulting services	100%	100%
MK KazSilicon LLP	Production and sale of metallurgical and polycrystalline silicon, recycling of silicon production waste	-	100%
Kazakhstan Solar Silicon LLP	Production of silicon of solar quality, silicon slices and photovoltaic slices	-	100%
Astana Solar LLP	Production of photovoltaic modules	-	100%
DP Ortalyk LLP	Exploration, production, processing and sale of uranium products	51%	100%
RU-6 LLP	Exploration, production, processing and sale of uranium products	100%	100%
Kazatomprom-SaUran LLP	Exploration, production, processing and sale of uranium products	100%	100%
Trade and Transportation Company LLP	Procurement and transportation services	99.9999%	99.9999%
Kazakatom TH AG	Marketing function for sale of uranium, investment and administration of finances, goods and rights	100%	100%
JV Inkai LLP	Exploration, production, processing and sale of uranium products	60%	60%
Baiken-U LLP	Exploration, production, processing and sale of uranium products	52.5%	52.5%
JV Khorasan-U LLP	Exploration, production, processing and sale of uranium products	50%	50%

These consolidated financial statements include the following joint operations:

	Principal activity	Ownership	
		2021	2020
Karatau LLP	Exploration, production, processing and sale of uranium products	50%	50%
JV Akbastau JSC	Exploration, production, processing and sale of uranium products	50%	50%
Energy Asia (BVI) Limited (EAL)	Commercial and investment activities	50%	50%

All entities are incorporated and operate on the territory of the Republic of Kazakhstan, except for Kazakatom TH AG, which is incorporated in Switzerland and EAL that is registered in the British Virgin Islands.

40 Financial Risk Management

Accounting policies and disclosures in respect of financial instruments are applied to the following classes of financial instruments:

<i>In millions of Kazakhstani Tenge</i>	Note	2021	2020
Financial assets			
Trade accounts receivable	27	220,024	117,314
Current bank accounts	31	138,844	95,237
Restricted cash	28	18,081	15,200
Demand deposits	31	22,338	14,987
Loans to related parties	30	8,850	11,512
Other investments		5,224	5,423
Reverse repo transaction	31	-	3,118
Financial derivative asset		-	1,048
Loans to employees	28	271	454
Dividends receivable from related parties	28	-	310
Other accounts receivable	27	114	104
Term deposits	28	43,235	15
Cash in hand	31	8	5
Total financial assets		456,989	264,727
Financial liabilities			
Bonds	33	78,503	77,088
Trade accounts payable	35	62,922	42,107
Promissory note issued	33	10,514	14,004
Liability for social sphere contributions	36	3,600	-
Bank loans	33	-	6,734
Other accounts payable	35	3,092	1,841
Historical costs liabilities	36	437	1,016
Lease liabilities		291	746
Issued financial guarantees	36	133	250
Preferred shares	36	265	265
Dividends payable on non-controlling interest	36	263	265
Total financial liabilities		160,020	144,316

Financial risks are monitored by the Group's risk management function and comprise market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk. The objectives of the Group's financial risk management policy are to establish risk limits, and then ensure that exposure to risks stays within these limits. Risk management policies and systems are regularly analysed for the need of revision due to changes in market conditions and the Group operations. The Group's risk management function monitors compliance with approved policies and procedures.

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's policy for management of capital. Further quantitative disclosures are included throughout these consolidated financial statements.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The Management Board has established a Risk Management Committee, which is responsible for developing and monitoring the Group's risk management policies. The committee reports regularly to the Management Board and the Board of Directors on its activities.

Credit risk

The Group has exposure to credit risk, which is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. Exposure to credit risk arises as a result of the Group's sales of products on credit terms and other transactions with counterparties giving rise to financial assets. Financial assets, which potentially expose the Group to credit risk, consist mainly of trade and other receivables, cash and cash equivalents, term deposits and loans to related parties.

The Group's maximum exposure to credit risk by class of assets is reflected in the carrying amounts of financial assets in the statements of financial position and the nominal amount of financial guarantees (Note 37).

40 Financial Risk Management (Continued)

The credit risk on cash and cash equivalents and term deposits is limited, because the counterparties are banks with highest available credit ratings assigned by international credit rating agencies.

The table below shows credit ratings of banks where the Group had accounts as at 31 December 2021:

<i>In millions of Kazakhstani Tenge</i>	Rated Standard & Poor's AAA to A-	Rated Standard & Poor's BBB+ to BBB-	Rated Standard & Poor's BB+ to B-	Other	Total
Restricted cash	7,449	1,206	8,997	429	18,081
Term deposits	-	-	43,235	-	43,235
Current bank accounts	49,430	27,613	61,801	-	138,844
Demand deposits	3,024	337	18,977	-	22,338
Total	59,903	29,156	133,010	429	222,498

The table below shows credit ratings of banks where the Group had accounts as at 31 December 2020:

<i>In millions of Kazakhstani Tenge</i>	Rated Standard & Poor's AAA to A-	Rated Standard & Poor's BBB+ to BBB-	Rated Standard & Poor's BB+ to B-	Other	Total
Restricted cash	924	1,035	12,812	429	15,200
Term deposits	-	-	15	-	15
Current bank accounts	7,476	33,758	54,001	2	95,237
Demand deposits	651	-	14,336	-	14,987
Total	9,051	34,793	81,164	431	125,439

The Group applies the simplified approach permitted in IFRS 9 to measure expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of sales over a period of 24 month before 31 December 2021 or 31 December 2020 respectively and the corresponding historical credit losses experienced within this period. The historical loss rates are not adjusted to reflect forward-looking information on macroeconomic factors because those factors do not significantly affect the risk profile. The expected environment in the near future (12 months) is identical to the environment reflected in the time series used to estimate the parameters of expected credit losses.

The credit loss allowance for trade receivables is determined according to provision matrix presented in the table below. The provision matrix is based the number of days that an asset is past due.

<i>In millions of Kazakhstani Tenge</i>	Loss rate	Gross carrying amount	Lifetime ECL
2021			
Trade receivables			
- current	0.06%	220,084	(132)
- 30 to 90 days overdue	32.04%	104	(32)
- over 360 days overdue	100%	8	(8)
Total trade receivables (gross carrying amount)		220,196	
Credit loss allowance			(172)

Total trade receivables from contracts with customers (carrying amount)		220,024	
40 Financial Risk Management (Continued)			
<i>In millions of Kazakhstani Tenge</i>	Loss rate	Gross carrying amount	Lifetime ECL
2020			
Trade receivables			
- current	0.07%	114,072	(81)
- less than 30 days overdue	0.15%	3,328	(5)
- over 360 days overdue	100%	23	(23)
Total trade receivables (gross carrying amount)		117,423	
Credit loss allowance			(109)
Total trade receivables from contracts with customers (carrying amount)		117,314	

The following table explains the changes in the credit loss allowance for trade and other receivables between the beginning and the end of 2021 as well as impairment provision for trade and other receivables during 2020:

<i>In millions of Kazakhstani Tenge</i>	Trade accounts receivable	Other accounts receivable
Provision at 1 January 2020	483	764
Provision for the year	47	2
Reversal	(398)	(11)
Amounts written-off	(23)	(681)
Provision at 31 December 2020	109	74
Provision for the year	184	34
Recalculation of foreign currency	1	-
Reversal	(121)	(2)
Amounts written-off	(1)	-
Provision at 31 December 2021	172	106

The Group's exposure to credit risk in respect of trade accounts receivable is influenced mainly by the individual characteristics of each customer. The demographics of the Group's customer base, including the default risk of the industry and country, in which customers operate, has no significant influence on credit risk. The Group is exposed to concentrations of credit risk. Approximately 65% of the Group's revenue for 2020 (53% of trade receivables as of 31 December 2021) is attributable to sales transactions with seven main customers (2020: 66% of Group's revenues; 52% of trade receivables). The Group defines counterparties as having similar characteristics if they are related entities.

The Group applies a credit policy under which each new customer is analysed individually for creditworthiness before the Group's standard payment and delivery terms and conditions are offered.

The Group does not require collateral in respect of trade and other receivables.

40 Financial Risk Management (Continued)

The maximum exposure to credit risk for trade receivables at the reporting date by geographic region was:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
China	68,397	35,639
Canada	60,276	9,089
USA	46,564	6,767
Russia	20,134	18,570
United Kingdom	11,929	13,265
Kazakhstan	5,792	6,932
European Union	5,645	22,709
Japan	1,287	3,063
Argentina	-	1,221
Brazil	-	59
Total	220,024	117,314

The average credit period on sales of goods is 30 days. No interest is charged on receivables for the first 30 days from the date of the invoice.

Credit risk exposure in respect of loans to related parties (Note 30) arises from possibility of non-repayment of loans. For loans to joint ventures and associates, the Group manages the credit risk by requirement to provide collateral in lieu of borrowers' property. Borrowers do not have a credit rating.

Expected Credit Loss (ECL) measurement

Measurement of ECLs is an estimate that involves determination methodology, models and data inputs. The following components have a major impact on credit loss allowance: definition of default, SICR, probability of default ("PD"), exposure at default ("EAD"), and loss given default ("LGD"), as well as models of macro-economic scenarios. The Group regularly reviews and validates the models and inputs to the models to reduce any differences between expected credit loss estimates and actual credit loss experience of issued loans and guarantees.

The Group used supportable forward looking information for measurement of ECL, primarily an outcome of its own macro-economic forecasting model. Several assumptions that are easily interpretable can be selected for analysis: GDP growth rate, inflation rate, exchange rate, crude oil price and current economic indicator. Final macroeconomic scenario includes only historically observed values of the inflation rate and the share of overdue loans. Forward-looking information is included in parameters of PD within the horizon of the next year after the reporting date. In addition, to calculate credit losses, the corporate average cumulative default probabilities are updated annually according to S&P's Annual Global Corporate Default Study and Rating.

Liquidity risk

Liquidity risk is the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Group is exposed to daily calls on its available cash resources. Liquidity risk is managed by the treasury department of the Group. Management monitors monthly rolling forecasts of the Group's cash flows.

The Group seeks to maintain a stable funding base primarily consisting of borrowings, trade and other payables and debt securities. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities as they fall due, under both normal and stressful conditions, without incurring unacceptable losses or risking damage to the Group's reputation. The Group invests available cash funds in diversified portfolios of liquid assets, in order to be able to respond quickly to unforeseen liquidity requirements.

The Group ensures that it has sufficient cash on demand to meet expected operational expense or financial obligations which excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

40 Financial Risk Management (Continued)

Below is a summary of the Group's undrawn borrowing facilities and available cash and cash equivalents, including current term deposits, which are the important instruments in managing the liquidity risk:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Current term deposits	65,558	14,987
Current bank accounts	138,867	95,257
Undrawn borrowing facilities	177,902	241,602
Total	382,327	351,846

The table below shows liabilities at the reporting date by their remaining contractual maturity. The amounts disclosed in the maturity table are the contractual undiscounted cash flows. Such undiscounted cash flows differ from the amount included in the statements of financial position because the statement of financial position amount is based on discounted cash flows.

When the amount payable is not fixed, the amount disclosed is determined by reference to the conditions existing at the end of the reporting period. Foreign currency payments are translated using the spot exchange rate at the end of the reporting period.

The following are the contractual maturities of financial liabilities at 31 December 2021:

<i>In millions of Kazakhstani Tenge</i>	Carrying value	Contractual cash flows	On demand and less than 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years
Bonds	78,503	88,550	-	-	3,080	85,470	-
Trade accounts payable	62,922	62,922	-	62,922	-	-	-
Promissory note issued	10,514	10,514	10,514	-	-	-	-
Liability for social sphere contributions	3,600	3,600	-	-	3,600	-	-
Other accounts payable	3,092	3,092	-	3,092	-	-	-
Historical costs liabilities	437	437	-	90	271	76	-
Lease liabilities	291	350	-	52	156	102	40
Issued financial guarantees	133	21,154	21,154	-	-	-	-
Preferred shares	265	265	-	-	-	265	-
Dividends payable to other participants	263	263	-	263	-	-	-
Total	160,020	191,147	31,668	66,419	7,107	85,913	40

The above table does not include a potential cash outflow that might be required if put option relating to DP Ortalyk LLP and Ulba-FA LLP are exercised pursuant to put option mechanism. This is because the Group assessed it controls the exercise of such put options and therefore has no unavoidable obligation to pay cash (see more in Note 1).

The following are the contractual maturities of financial liabilities at 31 December 2020:

<i>In millions of Kazakhstani Tenge</i>	Carrying value	Contractual cash flows	On demand and less than 1 month	From 1 to 3 months	From 3 months to 1 year	From 1 to 5 years	Over 5 years
Bank loans	6,734	6,763	-	-	6,763	-	-
Non-bank loans	-	-	-	-	-	-	-
Bonds	77,088	88,589	-	-	788	87,801	-
Trade accounts payable	42,107	42,107	-	42,107	-	-	-
Promissory note issued	14,004	14,004	14,004	-	-	-	-
Other accounts payable	1,841	1,841	-	1,841	-	-	-
Historical costs liabilities	1,016	1,055	-	155	465	435	-
Lease liabilities	746	898	-	133	400	262	103
Issued financial guarantees	257	19,390	19,390	-	-	-	-
Preferred shares	265	265	-	-	-	265	-
Dividends payable to other participants	265	265	-	265	-	-	-
Total	144,323	175,177	33,394	44,501	8,416	88,763	103

40 Financial Risk Management (Continued)

Market risk

The Group has exposure to market risks. Market risk is the risk that changes in market prices will have a negative impact on the Group's income or the value of its financial instrument holdings. Market risks arise from open positions in (a) foreign currencies, (b) interest bearing assets and liabilities and (c) equity products, all of which are exposed to general and specific market movements. The objective of market risk management is to monitor and control market risk exposures within acceptable limits, while optimising the return on investments. Management sets limits on the value of risk that may be accepted, which is monitored on a daily basis. However, the use of this approach does not prevent losses outside of these limits in the event of more significant market movements.

Sensitivities to market risks included below are based on a change in a factor while holding all other factors constant. In practice this is unlikely to occur and changes in some of the factors may be correlated – for example, changes in interest rate and changes in foreign currency rates.

Currency risk

The Group is exposed to currency risk on sales, purchases and borrowings which are denominated in currencies other than the functional currency. Borrowings are denominated in currencies that match the cash flows generated by operating entities in the Group. Therefore, in most cases, economic hedging is achieved without derivatives. In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by planning future expenses taking into consideration the currency of payment. The Group is mainly exposed to the risk of US Dollars currency fluctuations.

The Group's exposure to currency risk was as follows:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Denominated in US Dollars		
Trade accounts receivable	207,325	105,945
Current bank accounts	95,630	60,125
Loans to related parties*	8,663	11,512
Demand deposits	-	-
Other accounts receivable	1	-
Term deposits	43,212	-
Other assets	17,252	13,300
Total assets	372,083	190,882
Bonds*	(78,503)	(77,088)
Bank and non-bank loans	-	(6,734)
Trade and other accounts payable	(13,110)	(1,079)
Other financial liabilities	(34,048)	(10,593)
Total liabilities	(125,661)	(95,494)
Net exposure to currency risk	246,422	95,388

* - loan given to Kyzylkum LLP and bonds are nominated in Tenge, but are subject to indexation for changes in US Dollar/Tenge exchange rate.

A 13% weakening and 10% strengthening of Tenge against US Dollar as at 31 December 2021 (2020: 14% weakening and 11% strengthening) would increase/(decrease) equity and profit or loss by the amounts shown below.

<i>In millions of Kazakhstani Tenge</i>	2021	2020
US Dollar strengthening by 13% (2020: 14%)	25,628	10,688
US Dollar weakening by 10% (2020:11%)	(19,714)	(8,394)

Movements of Tenge against US Dollar above represent reasonably possible changes in market risk estimated by analysing annual standard deviations based on the historical market data for 2021.

40 Financial Risk Management (Continued)

Price risk on uranium products

The Group is exposed to the effect of fluctuations in the price of uranium, which is quoted in US Dollar on the international markets. The Group prepares an annual budget based on future uranium prices.

Uranium prices historically fluctuate and are affected by numerous factors outside of the Group's control, including, but not limited to:

- demand for uranium used as fuel by nuclear power stations;
- depleting levels of secondary sources such as recycling and blended down highly enriched stocks available to close the gap of the excess demand over supply;
- impact of regulations by the International Agency on Nuclear Energy;
- other factors related specifically to uranium industry.

At the end of the reporting period there was no significant impact of commodity price risk on the Group's financial assets and financial liabilities.

Interest rate risk

Changes in interest rates impact loans and borrowings by changing either their fair value (fixed rate debt) or their future cash flows (floating rate debt). At the time of raising new loans or borrowings, management uses its judgement to decide whether it believes that a fixed or a floating rate would be more favourable to the Group over the expected period until maturity. As at 31 December 2021 approximately 100% (2020: 93%) of the Groups borrowings have a fixed interest rate.

At the reporting date, the interest rate profile of the Group's interest-bearing financial instruments was:

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Fixed rate instruments		
Term deposits	43,235	15
Restricted cash	18,081	15,200
Demand deposits	22,338	14,987
Loans to related parties	8,850	11,512
Reverse repo transaction	-	3,118
Bonds	(78,503)	(77,088)
Promissory note issued	(10,514)	(14,004)
Net position	3,487	(46,260)
Floating rate instruments		
Bank loans	-	(6,734)
Net position	-	(52,994)

Fair value sensitivity analysis for fixed rate instruments

The Group does not account for any fixed rate financial assets and financial liabilities at fair value through profit or loss. Therefore a change in interest rates at the reporting date would not affect profit or loss. However, fixed rate financial assets and financial liabilities are exposed to fair value risk from change in interest rates. Reasonably possible changes in interest rates do not significantly affect fair values of those financial assets and financial liabilities.

40 Financial Risk Management (Continued)

Future cash flows sensitivity analysis for floating rate instruments

An increase (decrease) in interest rates of 125 (25) basis points in 2021 (2020: increase of 100 and decrease of 25 basis points) at the reporting date would have decreased (increased) equity and profit or loss by the amounts shown below. These amounts represent management's assessment of reasonably possible changes in the interest rates based upon current interest rates and the current economic environment. This analysis assumes that all other variables, in particular foreign currency rates, remain constant and that balances due were outstanding for the year.

<i>In millions of Kazakhstani Tenge</i>	2021	2020
Increase of 125 basis points (2021), 100 basis points (2020)	-	(54)
Decrease of 25 basis points (2021), 25 basis points (2020)	-	13

Fair values versus carrying amounts

With the exception of instruments specified in the following table, the Group believes that the carrying value of financial assets and financial liabilities are recognised in the consolidated financial statements approximate their fair value:

<i>In millions of Kazakhstani Tenge</i>	2021		2020	
	Carrying value	Fair value	Carrying value	Fair value
Financial liabilities				
Historical costs liabilities	437	326	1,016	759
Total	437	326	1,016	759

In assessing fair values, management uses the following major methods and assumptions: (a) for interest free financial liabilities and financial liabilities with fixed interest rate, financial liabilities were discounted at effective interest rate which approximates the market rate; (b) for financial liabilities with floating interest rate, the fair value is not materially different from the carrying amount because the effect of the time value of money is immaterial.

Capital management

The Group's policy is to maintain a strong capital base so as to safeguard the Group's ability to continue as a going concern, to maintain investor, creditor and market confidence, to provide returns for shareholders, to maintain an optimal capital structure to reduce the cost of capital, and to sustain future development of the business. Capital includes all capital and reserves of the Group as recorded in the consolidated statements of financial position.

The Group's loan agreements with banks include covenants, pursuant to which the Group must comply with applicable laws and regulations, cannot create or permit any security over its assets or dispose assets, unless allowed by the loan agreements, and must obtain the lenders' approval for any acquisitions, mergers and disposals. The Group may also sell uranium for non-military purposes and only to customers residing in countries which signed the Nuclear Non-Proliferation Treaty and are members of the International Agency on Nuclear Energy. In addition, the Group must maintain certain key financial covenants based on the Group's consolidated financial information, such as: .

- the debt to equity ratio;
- the debt ratio to earnings before interest, taxes, depreciation and amortisation (Debt/EBITDA).

The Group's internal quantitative capital management targets are similar to externally imposed requirements.

The Group applies the Policy on borrowings and financial sustainability management, which is aimed to manage financial risks by adopting common principles and rules of debt management and financial sustainability for non-financial organisations.

The Group has complied with all externally and internally imposed capital requirements during 2021 and 2020, requirements associated with borrowing facilities.

41 Fair Value Disclosures

Fair value measurements are analysed by level in the fair value hierarchy as follows: (i) level one are measurements at quoted prices (unadjusted) in active markets for identical assets or liabilities, (ii) level two measurements are valuations techniques with all material inputs observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices), and (iii) level three measurements are valuations not based on observable market data (that is, unobservable inputs). Management applies judgement in categorising financial instruments using the fair value hierarchy. If a fair value measurement uses observable inputs that require significant adjustment, that measurement is a Level 3 measurement. The significance of a valuation input is assessed against the fair value measurement in its entirety.

Assets and liabilities not measured at fair value but for which fair value is disclosed

Estimates of all assets and liabilities not measured at fair value but for which fair value is disclosed are level 3 of the fair value hierarchy.

The fair values in level 3 of the fair value hierarchy were estimated using the discounted cash flows valuation technique. The fair value of floating rate instruments that are not quoted in an active market was estimated to be equal to their carrying amount. The fair value of unquoted fixed interest rate instruments was estimated based on estimated future cash flows expected to be received discounted at current interest rates for new instruments with similar credit risks and remaining maturities.

Financial assets carried at amortised cost

The fair value of floating rate instruments is normally their carrying amount. Estimate of all financial assets carried at amortised cost is level 3 measurement. The estimated fair value of fixed interest rate instruments is based on estimated future cash flows expected to be received discounted at current interest rates for new instruments with similar credit risks and remaining maturities. Discount rates used depend on the credit risk of the counterparty.

Liabilities carried at amortised cost

Fair values of other liabilities were determined using valuation techniques. The estimated fair value of fixed interest rate instruments with stated maturities were estimated based on expected cash flows discounted at current interest rates for new instruments with similar credit risks and remaining maturities. The fair value of liabilities repayable on demand or after a notice period (“demandable liabilities”) is estimated as the amount payable on demand, discounted from the first date on which the amount could be required to be paid. The discount rates used ranged from 4.5% p.a. to 11,8% p.a. depending on the length and currency of the liability.

42 Presentation of Financial Instruments by Measurement Category

For the purposes of measurement, IFRS 9 Financial Instruments classifies financial assets into the following categories: (a) financial assets at FVTPL; (b) debt instruments at FVOCI, (c) financial assets at AC. Financial assets at FVTPL have two sub-categories: (i) assets mandatorily measured at FVTPL, and (ii) assets designated as such upon initial recognition or subsequently. All of the Group’s financial assets as of the end of reporting period fell into the category AC, except for the financial derivative asset, classified as FVTPL. All of the Group’s financial liabilities were carried at AC. Fair value is approximate to carrying amount.

43 Events after the Reporting Period

Subsequent to balance date, significant geopolitical events have occurred in Kazakhstan and Russia/Ukraine. These events have not had a material impact to date on the Group’s operations although the resulting market uncertainty has caused a significant decline in the traded price of the Company’s securities. Management is unable to predict the consequences or future impacts of these events, if any, on the Group’s financial position or operating performance. Management will continue to monitor the potential impact of the above events and will take all necessary steps to prevent adverse business impacts.

(a) January events in Kazakhstan

On 2 January 2022 protests triggered by a rise in fuel prices began in the Mangistau region of Kazakhstan which spread to other regions in the country. The protestors demanded a number of social and economic reforms. Although the Government took measures to respond to these demands, including a decrease in fuel prices, the protests escalated into significant civil unrest in Almaty and southern regions of the country.

43 Events after the Reporting Period (Continued)

As a result, on 5 January 2022 a state of emergency was declared until 19 January 2022, and restrictions were imposed on communication and transportation of people and vehicles, including railway and airline carriage. Currently, the situation in all regions of the country has stabilized, and the state of emergency has been cancelled. The functioning of utilities and life support systems have been fully restored, and restrictions on communication and transportation have been relieved.

(b) Events in Ukraine

On February 24, the Russian President announced the recognition of the Luhansk People's Republic and Donetsk People's Republic independence and the Russian military mobilized its troops to territory of Ukraine. As a response to the Russian actions, the United States, the European Union and a number of other states imposed sanctions against Russia including the disconnection of a number of Russian financial institutions from SWIFT.

In connection with the sharp devaluation of the Russian ruble, the Tenge exchange rate began to be adjusted. To date, the National Bank of the Republic of Kazakhstan has taken a number of measures to maintain the stability of the Kazakhstan financial system.

Since American citizens and legal entities are prohibited from conducting settlements and other activities with Sberbank, VTB Bank and other organizations specified in the list of the Kazakhstan Ministry of Finance without the permission of Office of Foreign Assets Control (including subsidiaries with a share of 50 percent or more of these banks), it is inappropriate for the Group to service or interact with these banks and their subsidiaries. The Group has taken measures to redistribute funds to banks that are not under current sanctions.

The Group has a Uranium Processing Agreement with the Uranium Enrichment Center (TsOU) (a resident of the Russia). At the date of these financial statements, the Group anticipates that provision of services under this agreement will continue as the situation should not affect the activities of the TsOU and its ability to enrich uranium for the Group. The contract is denominated in US Dollars and therefore purchases of services might be affected. There may be a risk of difficulty in making mutual settlements in US Dollars with TsOU in the event of restriction and blocking of the TsOU's foreign currency accounts or in the event of the withdrawal of Russian banks from the SWIFT system.

Due to the fact that part of the exported products is transported through Russia, there are risks associated with both transit through the territory of Russia and the delivery of cargo by sea vessels. The Group constantly monitors the situation with sanctions against Russia and the potential impact on the transportation of finished products. At the date of these financial statements, there are no restrictions on the Group's activities related to the supply of the Group's products to end customers.

The Group's financial position is currently unaffected by the events in Ukraine. The majority of Group revenues is received in US Dollars and funding is also raised in US Dollars, creating a natural hedging effect on foreign exchange risk. Accordingly, fluctuations in the exchange rate of the national currency do not have a significant impact on the financial performance of the Group.

(c) Investment in Uranium Fund

On November 22, 2021, the Group signed a Framework Agreement with Genchi Global Limited to participate in ANU Energy OEIC Ltd (hereinafter referred to as "ANU Energy" or the "Fund"), created on the Astana International Financial Center (hereinafter referred to as the AIFC). The purpose of the Fund is to store physical uranium as a long-term investment, the initial acquisition of which will be carried out through a joint investment of the founders of the Fund in the amount of 50 million US Dollars. The Group's required capital contribution to the Fund is 24.5 million US Dollars and this amount was paid in March 2022.

After the start of the Fund's operations, as part of the second stage of its development, it is expected to attract additional investments of up to 500 million US Dollars from institutional and/or private investors through a public or private placement in order to purchase additional volumes of uranium. The parameters and timing of the placement will be determined market conditions.

Also, in accordance with the Framework Agreement, the Group and ANU Energy signed a short-term contract for the sale and purchase of natural uranium concentrates, under which the Group will supply natural uranium concentrates no later than May 2022.

(d) Administrative offense of UMP JSC in terms of environmental requirements

Based on the results of an audit conducted by the Department of Ecology of East Kazakhstan Region (EKR), UMP was presented with a protocol on an administrative offense, on the basis of which a provision for a fine in the amount of Tenge

42 million was accrued in the UMP's financial statements for the year ended 31 December 2021 in accordance with the calculations made by UMP.

43 Events after the Reporting Period (Continued)

On 10 February 2022 UMP received calculations from the Department of Ecology of EKR, according to which administrative fine amounted to Tenge 18,516 million. The Group management does not agree with the calculation and considers the probability of confirming the calculations as unlikely. UMP began to challenge this administrative fine in court.

5.10. Glossary

Term	Definition
AIX	Astana International Exchange
CO2	Carbon dioxide
COSO	Internal Control – Integrated Framework
CRM	Customer Relationship Management
CJSC	Closed Joint-Stock Company
Code	Corporate Governance Code, at entities where over 50 per cent of the shares (equity stakes) are owned directly or indirectly by Sovereign Wealth Fund Samruk-Kazyna JSC
CIS	Commonwealth of Independent States
EBITDA	Profit before interest, taxes and depreciation
ERP	Enterprise resource planning
ESAP	Environmental and Social Action Plan
EVA	Economic Value Added (English EVA, Economic Value Added) – an indicator of the economic profit of the enterprise after the payment of all taxes and fees for all capital invested in the enterprise
EVP	Employer Value Proposition
EPIS	E-Procurement Information System
Fund	Sovereign Wealth Fund Samruk-Kazyna Joint-Stock Company
GHG	Greenhouse Gases
GRI	Global Reporting Initiative
GDP	Global Depository Receipts
Group	Kazatomprom and its consolidated subsidiaries
GMIS	Geological and Mining Information System
Holding	The Group, joint ventures and associated companies
HR	Human Resources
HSE	Production Safety Committee of the Board of Directors of Kazatomprom
ISR	In-situ Leach Recovery
IEC	Industrial Environmental Control
ICMM	International Council on Mining and Metals
IPO	Initial Public Offering
ISO	International Organization for Standardization
ISSA	International Social Security Association
IPS	Integrated Planning System
IT	Information Technologies
IFRS	International Financial Reporting Standards
IAS	Internal Auditor Service
ISO 45001	International Standard of Occupational Health and Safety Management Systems / Occupational Health and Safety Management Systems – Requirements
IAEA	International Atomic Energy Agency
IAEA LEU Bank / IAEA Fuel Bank	International Atomic Energy Agency's Low Enriched Uranium Bank
JV	Joint Venture
KAP / Kazatomprom / Company	NAC Kazatomprom JSC
KPI	Key Performance Indicator
LLP	Limited Liability Partnership

Local content	Percentage of the cost of labour of citizens of the Republic of Kazakhstan engaged in fulfilling a procurement contract in the total payroll budget of the contract, and/or the percentage of the cost of a share (shares) of local origin determined in a product (products) in accordance with the substantial transformation or finished production criteria by residents of the Republic of Kazakhstan in the total cost of the product (products) under the relevant purchase contract.
LSE	London Stock Exchange (London Stock Exchange)
LTIFR	Lost Time Injury Frequency Rate
LEU	Low Enriched Uranium
MNPP	Mangystau Nuclear Power Plant
NEA	Nuclear Energy Agency
NFC	Nuclear Fuel Cycle
NAV	Net Asset Value
NEI	Nuclear Energy Institute
PCR test	Polymerase Chain Reaction test
PQC	Prequalification of candidates
RF	Russian Federation
RK	Republic of Kazakhstan
RMS	Risk Management System
RPC	Reactive Power Compensators
REGSUN	Annual meeting on the safety regulation of uranium production and natural radioactive material
SS of the RK ISO/ IEC 17025	State Standard of the Republic of Kazakhstan General competency requirements for testing and calibration laboratories
Samruk-Kazyna	Samruk-Kazyna Joint-Stock Company
SPO	Secondary Public Offering
SLRW	Solid Low-Level Radioactive Waste
R&D	Research and Development
WNA	World Nuclear Association
WNTI	World Nuclear Transport Institute
U₃O₈	Uranium Oxide Concentrate
UF₆	Uranium hexafluoride
UME	Uranium Metal Content Equivalent
UO₂	Uranium Dioxide
UO₃	Uranium Trioxide
UN	United Nations
UN FC CC	UN Framework Convention on Climate Change
USA	United States of America
UEC	Uranium Enrichment Centre
UN SDGs	UN Sustainable Development Goals

5.11. UK tax information

This review is based on UK law and UK government tax and customs duties at the date of this document each of which is subject to change, possibly retroactively. Unless otherwise indicated this review only addresses some of the effects of UK taxation on individuals who are the absolute beneficial owners of shares or GDRs and who (1) are UK residents for tax purposes; (2) are not residents for tax purposes in any other jurisdiction and (3) do not have a permanent establishment in the Republic of Kazakhstan which is associated with the ownership of shares or GDRs (hereinafter – Holders from the UK).

In addition this review (1) considers only the tax consequences for UK Holders who hold shares and GDRs as equity, and does not consider tax consequences that may be relevant to some other categories of UK Holders such as dealers; (2) it is assumed that the UK Holder does not directly or indirectly control 10 or more percent of the voting shares of the Company; (3) it is assumed that the holder of the GDR has a beneficial ownership of the underlying shares and dividends on such shares; and (4) tax consequences for UK Holders which are insurance companies, investment companies, charities, or pension funds, are not considered.

This review is a general guide and is not intended and should not be construed by specific Holders from the UK as legal or tax advice. Accordingly, investors should consult their tax advisers regarding general tax consequences including the consequences of acquiring, holding and disposing of shares or GDRs in accordance with UK law and UK tax and customs administration practices in their particular case.

Withholding tax

Assuming that income derived from the GDR does not have a source in the UK, such income should not be taxed at the source of payment in the UK. Dividends on shares will not be taxed at the UK source.

Dividends taxation

A UK holder receiving a dividend on shares or GDRs may be required to pay UK income or corporate tax (as the case may be) on the gross amount of the dividend paid before deduction of Kazakhstan taxes at the source of payment, taking into account the presence of any amount set off against Kazakhstan tax at the source of payment. UK holder – an individual who is a resident and resides in the UK will pay UK income tax on dividends paid on shares or GDRs that are subject to the actual tax exemption on the first £5,000 of all dividends (zero dividend rate) received for the relevant tax year, including dividends received from any other equity investments for the same tax year. UK holder – an individual who is a resident but does not reside in the UK and entitled to select UK taxation based on the transfer of funds (and where necessary, paying a transfer fee), will pay UK income tax on dividends paid on shares or GDR, to the extent that the dividend is transferred or considered to be transferred to the UK. A UK holder who is a UK resident company for tax purposes should not be subject to corporate tax on dividends paid on shares or GDRs, unless it is subject to certain rules against tax evasion.

Taxation at exclusion or conditional exclusion

The alienation of the Holder's shares from the UK in stocks or GDRs may result in taxable income or an allowable deduction for tax purposes for UK taxable income depending on the position of the Holder from the UK and subject to tax exemption. A holder from the UK who is a resident individual and resides in the UK will be required to pay UK capital gains tax on taxable income upon alienation of a share in shares or GDRs. A UK holder who is a resident individual who does not reside in the UK and has the right to choose taxation in the UK based on the transfer of funds (and, where necessary, paying a transfer fee), will pay the UK capital gains tax to the extent that in which taxable income derived from the disposal of a share in shares or GDRs is transferred or deemed to be transferred to the UK. In particular, transactions with GDRs on the London Stock Exchange may result in the transfer of profits, which, accordingly, will be subject to UK capital gains tax. In particular transactions with GDRs on the London Stock Exchange may result in the transfer of profits which, accordingly, will be subject to UK capital gains tax. An individual – a holder of shares or GDRs who ceases to be a resident or has not resided in the UK for tax purposes for less than five full years and alienates such shares or GDRs for such a period, may be required to pay UK capital gains tax upon returning to the UK, despite the fact that during the alienation he was not a resident and did not live in the UK. A UK holder who is a legal entity will pay UK corporate tax on any taxable income from the sale of shares or GDRs.

Action of taxes of Kazakhstan at the source of payment

Dividends on shares and GDRs are subject to Kazakhstan tax at the source of payment. A holder from the UK – an individual – resident must have the right to offset the Kazakhstan tax at the source of

payment withheld from such payments against UK income tax on such payments in accordance with the procedure for calculating such a set-off amount in the UK. A UK holder, a UK resident company, usually does not pay corporate tax on dividends paid and, therefore, will usually not be able to claim a deduction from any Kazakhstan taxes at the source of payment.

Stamp and equivalent of stamp tax (SEST)

Assuming that a document executing a transaction or containing an agreement to transfer one or more shares or GDRs, (i) is not signed in the UK or (ii) does not relate to any property located in the UK, or an act committed or performed in UK (which may include participation in payments to bank accounts in the UK) such a document should not be subject to stamp duty on declared value. Even if the document completing the transaction or containing an agreement to transfer one or more shares or GDRs, (i) is signed in the UK and/or (ii) concerns any property located in the UK, or an act committed or performed in the UK, in practice, there should be no need to pay stamp duty on declared value for such a document in the UK, if such a document is not required for any purpose in the UK. If there is a need to pay stamp duty on declared value in the UK, then it may be necessary to pay interest and fines. Since GDRs are securities whose value is not expressed in pounds sterling, the stamp duty on a “bearer document” should not be paid either for the issue of GDRs or for the transfer of securities that are transferred through the GDRs. Assuming that shares (i) are not registered in a registry located in the UK, or (ii) are not combined with shares issued by a UK-registered company, the transfer of shares or GDRs should not be subject to SEST.

5.12. Contacts

GRI 102-1, 102-3, 102-5

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