



CORPORATE SOCIAL RESPONSIBILITY REPORT

# DELIVERING ON OUR SUSTAINABILITY AGENDA

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# Contents





# Introduction

Welcome to the Corporate Social Responsibility (CSR) report for KATCO (the Company), a Kazakh uranium miner and the world's largest in situ recovery uranium operator. As a joint venture between France's Orano and Kazakhstan's Kazatomprom, the Company represents the highly successful partnership of two of the world's leading nuclear operators. At the end of 2020, KATCO employed nearly 1,200 people, most of whom come from the Turkistan region where its production operations are located. The Company also provides jobs for numerous local contractors who provide auxiliary services and are helping to implement its investment projects. Since its inception nearly 25 years ago, KATCO has built a business driven by innovation and based on international best practices in health, safety and environment (HSE) stewardship. The Company adheres to the transparency reporting principles of the global Extractive Industries Transparency Initiative

(EITI), of which Kazakhstan is a member. It also complies with the policies and practices of the International Council on Mining and Metals (ICMM).

Since the outbreak of the global pandemic, KATCO has prioritised the safety and well-being of its employees and contractors, while providing aid and healthcare supplies to surrounding communities. In 2020, the Company kept its production sites free of COVID-19 infections and achieved the milestone of zero lost-time injuries. It also remained focused on its safety, environmental and biodiversity commitments, while continuing to make progress on its longterm innovation projects.

KATCO consistently invests in its communities to promote education, health and other social infrastructure. Since 2010, it has provided more than KZT1.7 billion (US\$4.1 million) in funding for local social development projects, including nearly KZT219 million (US\$0.5 million)\* in 2020.

\* Converted using the National Bank of Kazakhstan's average exchange rate for 2020 of KZT412.95/US\$, source: https://nationalbank.kz/en/news/oficialnye-kursy



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OCCUPATIONAL SAFETY

HEALTH AND

RADIATION

PROTECTION

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SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES



of uranium 2020

for further

development of KATCO

2017

KATCO reaches

4.000 tons per

year annual

2013

output

its 40,000<sup>th</sup> ton of uranium

its 30.000<sup>th</sup> ton of uranium

The in situ recovery (ISR) method was created in the early 1960s and became widespread in uranium mining in the 1990s. In recent years, the process has accounted for almost half of uranium extraction worldwide. ISR technology has evolved with tight operational and regulatory controls. It causes little surface disturbance and does not generate tailings or waste rock. It also requires less investment and is less carbon-intensive than conventional mining methods.

However, this technique can only be used when the ore is located between impermeable soil layers such as in Kazakhstan, Uzbekistan and Mongolia.



denosit



COMMITMENT

TO STAKEHOLDERS

# Helping to Power the World

CSR SYSTEM

KATCO is the world's largest in situ recovery uranium miner and an example of successful international cooperation between France and Kazakhstan. The Company produces around 7% of annual global uranium output using this less carbon-intensive mining method.

> KATCO Kazakh-French Joint Venture LLP (KATCO) was established in 1996 to mine the Muyunkum and Tortkuduk deposits in Kazakhstan's Turkistan region. The Company draws on the international experience and expertise of the joint venture participants, Orano and Kazatomprom, to develop its uranium production activities. Orano owns 51% of the joint venture and Kazatomprom 49%. KATCO is headquartered in the capital city of Nur-Sultan.

Kazakhstan accounts for approximately 40% of total worldwide uranium production. In 2009, KATCO became the world's largest in situ recovery (ISR) miner. The Company currently accounts for around 7% of annual global output.

In 2017, Orano and Kazatomprom strengthened their historic cooperation by signing a strategic agreement to develop the South Tortkuduk project. The site is located near KATCO's existing operations and will secure the Company's production for the next decade.

In January 2018, KATCO was granted a mining licence for the South Tortkuduk ore bodies. The Company's geologists discovered the corresponding uranium reserves close to the two mining sites that it already operates. These new reserves were recorded in 2017 and will cover more than 10 years of production for KATCO.

In 2019, KATCO agreed the liquidation (remediation) project for its existing sites and new one - South Tortkuduk - with the authorities. This project will allow to start production of the first ton of uranium from South Tortkuduk in 2023.

### To learn about KATCO's remediation and reforestation projects, see page 42.

KATCO's annual output grew from 3.000 tons in 2009 to 4.000 tons during 2013-16. In 2017, it subsided to roughly 3,500 tons due to pre-licencing work at the South Tortkuduk project. Going forward, the Company projects output of around 3,200 tons a year until South Tortkuduk comes online. It then expects to return to annual production levels of 4,000 tons throughout the project's useful life.

KATCO recruits from the communities where it operates. At the end of 2020. it had a workforce of 1,190 employees and 1,292 contractors. Overall, 54% of employees come from Sozak district, where the Company's mining sites are located, 18% are from the wider Turkistan region and 26% are from other parts of Kazakhstan. Fewer than 2% are expatriates.

KATCO has received recognition for its achievements in CSR. It has been ranked as one of Kazakhstan's top ten employers by the HeadHunter Kazakhstan recruiting website (hh.kz). It was also named one of the top 25 in terms of charitable giving and received a social stability rating of 79% from Samruk-Kazyna National Wealth Fund in 2019. In 2020, the Sozak District Akimat awarded KATCO with the 'Generous Heart' award as the 'Company of the Year' for its contribution to the region's social and economic development.

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ABOUT KATCO

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GENERAL

DIRECTOR'S STATEMENT

# **Our mission**

To be a uranium mining benchmark. in a safe and sustainable manner, for customers worldwide, relying on our people and expertise.



# Our vision

To ensure our future with successful innovation and new production projects.



# Our values

- · Sense of duty
- · Taking care of each other
- · Openness to change
- Eniov and have fun
- · Reliability and integrity









Creation

venture

of KATCO joint

1996

at Muvunkum 2000

transported by pipeline to the plant 4. The uranium is extracted and fixed on ion exchange resins 5. The solutions are enriched with acid and reinjected into the wells

the United States (US), Japan, China, Korea, India, Brazil, France and other countries that +39% rely specifically on nuclear energy. Kazakhstan remains the largest uranium **IAEA FORECAST** producer in the world, accounting for around 40% of global production in 2020. The country has pledged to reduce output by 20% through 2022 to help harmonise the supplydemand balance in response to falling prices on international markets. In terms of uranium reserves, Kazakhstan has an estimated 1 million tons, ranking it second after Australia. According to official statistics, Kazakhstan produced 19,500 tons of uranium in 2020, compared with 22,808 tons in 2019. About ISR

Expansion of processing capacity at Tortkuduk

2010

KATCO becomes world's largest ISR operator 2009

Orano

and Kazatomprom sign agreement to increase KATCO

production 2008

Launch of processing complex at Tortkuduk



processing plant goes into operation 2006

Muyunkum South





KATCO produces

2019 Kazatomprom and Orano sign agreement

KATCO produces

2016

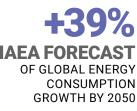


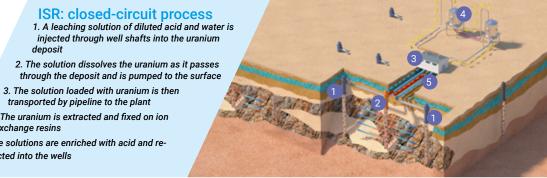
## Uranium industry

Uranium is a commodity that is subject to a cyclical demand cycle. Uranium spot prices rose to multi-year highs in 2020 and are expected to remain above the levels seen in recent years going forward. This is largely due to more clear demand drivers being evident for the next decade, which has led some uranium producers to reduce supply. Key consumers of nuclear material include electric utilities, military submarine fleets and medical users of uranium

The International Atomic Energy Agency (IAEA) forecasts global energy consumption growth of 18% by 2030 and 39% by 2050. The need for various sources of energy will increase, including nuclear power, which uses uranium as a fuel source. The world currently relies heavily on fossil fuels, such as coal, gas and oil. These are finite energy sources, meaning that sooner or later humanity will have to look for other ways to power the world.

Uranium has already become a strategic product of the global economy. In the next 10-20 years, high demand for natural uranium is expected from industrialised countries. The highest demand will come from Russia,





ABOUT KATCO

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GENERAL DIRECTOR'S STATEMENT

COMMITMENT TO STAKEHOLDERS

CSR SYSTEM

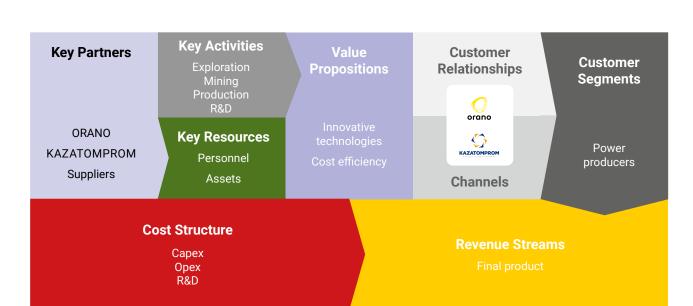
HEALTH AND RADIATION PROTECTION OCCUPATIONAL SAFETY

ENVIRONMENT AND BIODIVERSITY

SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES

Nur-Sultan.

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KATCO's business model is designed to take advantage of its innovative technology and efficient cost structure to deliver on behalf of customers. The Company's highly skilled team helps it to deliver globally competitive production costs.

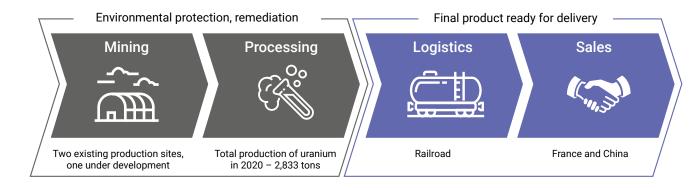
KATCO works with its key partners and customers, Orano and Kazatomprom, as well as its suppliers, to apply both technology and working practices to achieve excellence across all four areas of activity: exploration, mining, production, and research and development.

In addition, KATCO's focus on environmental stewardship, supported by its strong innovation function, is critical for sustaining production in a delicate local ecosystem.

# Supply chain

KATCO's supply chain is the link of entities that move its product from the mines to the customer. For the Company, the security of the supply chain is essential, as its uranium products must be stored and handled safely and properly.

KATCO manages each link of the supply chain from the mine to the railway. Kazatomprom provides essential support in this process.



**Population:** Turkistan region: ~2.7 million people; Sozak district: ~62,000 people

Business model

INNOVATION

REPORTING AND METHODOLOGY





KATCO's uranium exploration and production is focused in the Sozak district of Kazakhstan's Turkistan region. The Company is headquartered in the capital,







# **Committed to Transparency and Reliability**



### Dear Stakeholders,

Welcome to KATCO's third corporate social responsibility (CSR) report, covering 2019 and 2020. The relative normality of preparing this report has stood in contrast to the unusual circumstances in which we all find ourselves. Despite the short-term and still ongoing challenges posed by the pandemic, we remain on course and have set an ambitious CSR agenda for the coming years.

Most importantly, in 2020, KATCO chose to protect its people despite the financial and operational costs of COVID-19 restrictions. Thankfully, we have positive results to report for the year in terms of safety and our overall performance. I believe our actions amid these extraordinary challenges prove our commitment to our employees and our communities. We say what we do, and we do what we say.

Our intention with this report is to first address the extraordinary, hopefully one-off factors caused by the pandemic before commencing with our broader CSR update. Even in these trying times, we have made progress towards achieving our key goals and implementing our investment projects. Our comprehensive CSR approach will help to guide us as we continue to implement our agenda.

## Protecting our people amid COVID-19

With the unwavering support of our shareholders, Orano and Kazatomprom, we have prioritised the safety of our employees and communities since the outbreak of the pandemic. In 2020, we succeeded in protecting our sites and communities by sharing a common vision, from the level of shareholders down to the production sites.

To protect our people, we decided to temporarily stop all non-essential activities on site, including drilling and construction projects. We also moved headquarters staff to remote work. At our mine sites, we introduced strict access controls and required arriving shift workers to guarantine before beginning work.

We fully supported our employees and contractors throughout these difficult times. We offered medical support, conducted comprehensive PCR and ELISA testing, and provided hotel accommodation during quarantine periods. To ensure both job security and financial stability, we provided more support for our employees and contractors including financially – than the legally required minimums.

For more information about KATCO's COVID-19 response, see pages 10-13.

GENERAL DIRECTOR'S STATEMENT

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# "

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### For more details about the Stakeholder Management Plan, see pages 18-20.

In line with the Orano group's social and environmental commitments, in 2020, we established a set of commitments with updated KPI targets for 2025 to deliver in the following key areas: nuclear and occupational safety, the environment and health; customer satisfaction; continuous improvement; respect and develop people; cohesion and team spirit; as well as ethics, transparency and dialogue.

Throughout, we are applying the Orano group's 5C approach, which focuses on Community, Climate, Competencies, Customer growth and Cash.

and training.

We are currently rolling out Orano's new approach to Process Safety Management (PSM), in line with OSHA standards. This includes a dedicated roadmap to be implemented by 2023. The PSM sets out requirements for the management of hazards associated with processes using hazardous substances.

For more about KATCO's health and safety efforts, including the new Process Safety Management approach, see pages 34-35.



## Delivering a respectable performance

From an operational standpoint, the decision to stop non-essential activity left us around 400 tons short of our original uranium output target in 2020. However, we had a good financial year, as an increase of roughly 25% in the uranium spot price helped to offset the lower production level agreed with our shareholders.

While we remain concerned about the volatility of commodity prices, we feel guite fortunate compared with our colleagues in certain other industries. In 2020, uranium prices rose from US\$24-25 per pound to a peak of US\$33 per pound before stabilising near US\$30 per pound. This was driven by several factors, including supply cuts by some global uranium producers amid the pandemic and increased demand on the spot market.

We are cautiously optimistic that this reflects an improved market trend that will continue in 2021 and help to guarantee future uranium supplies. Over the past few years, prices have been too low to support the industry's sustainable development.

We see a clear pathway to recovery for both the broader market and KATCO. We continue to make progress at the new site in South Tortkuduk, a major initiative that will help to sustain our production volumes. This investment project represents the future for our company. We are working closely with stakeholders to advance it from the planning phase to construction.

We also continued to deliver on our Master Plan, including initiatives to clean up soil with low radioactivity, reduce electricity and fuel consumption, and more efficiently navigate at our large well fields. All of these projects increase the sustainability of our business and reduce our environmental footprint. In addition, we are looking at options to switch our production sites to use sustainable energy sources.

## Keeping our CSR commitments

We are improving our CSR system, which is built on best international practices, to address the issues raised during the Stakeholder Mapping exercise in 2018-19. A roadmap for action is set out in our Stakeholder Management Plan.

To learn about KATCO's 2025 commitments and the 5C approach, see pages 24-25.

On the health and safety front, after reporting two accidents in 2019, KATCO had no lost-time injuries in 2020. We will not rest on this achievement and will continue to work to develop our safety culture, focusing on equipment

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GENERAL DIRECTOR'S STATEMENT

COMMITMENT TO STAKEHOLDERS

CSR SYSTFM

Environmental protection remains an area of intensified focus for KATCO. Based on the new mining code that entered into force in June 2018, the Company has developed a comprehensive remediation project for the Tortkuduk and Muyunkum sites.

We take pride in being the first uranium miner in Kazakhstan to develop and receive government approval for a remediation project under these guidelines. In addition, the Company intended to hold open meetings with local communities during 2020 to discuss remediation plans, although this was delayed by the COVID-19 pandemic.

As part of the process of obtaining the South Tortkuduk land permit for around 6,000 hectares, KATCO has developed a reforestation compensation plan for an area twice the size, around 12,000 hectares. This project envisages the planting of saxaul and other trees to compensate for the land used and is by far the largest reforestation project of its type in Southern Kazakhstan. It will make a decisive contribution to the national reforestation programme announced by Kazakhstan's President Kassym-Jomart Tokayev in a national address on 1 September 2020.

We applaud the fact that Kazakhstan is a signatory of the Paris Agreement on climate change. The use of ISR technology allows a smaller carbon footprint than oil and gas companies, as well as miners with more carbon-intensive methods. Nevertheless, we are committed to implement technical solutions to further reduce our carbon footprint and to adopt transparent international reporting standards. We have several projects underway in this area.

In April 2020, KATCO signed an amendment to its Subsoil Use Contract that establishes new spending obligations for training, research and development, as well as the social sphere.

### Looking ahead with confidence

In 2021, as we celebrate the milestone of our company's 25th anniversary, I feel confident that KATCO is here to stay. The challenges of 2020 have strengthened our company, the commitment of our shareholders and our bonds with the community. We will emerge from the pandemic stronger than ever and with a renewed appreciation of the bonds that tie us as a team.

During the reporting period, our Committee of Directors was refreshed with several new members, including our Human Resources Director Aliya Yerbayeva, Chief Engineer Matthieu Davrinche, Executive Director (Finance) Alexandre Szalkiewicz and Supply Chain Director Alinur Mukatayev. This international group brings a wealth of experience in diverse industries and markets to our management team.

We also continue to introduce innovative new technologies that will help us to achieve our goals. One project that is coming to maturity uses HYTEC 3D hydrodynamic modelling software. We are currently implementing pilot projects using new membrane and mobile concentrator technology. In addition, our innovation pipeline has initiatives to improve our approaches to data transmission and sedimentology.

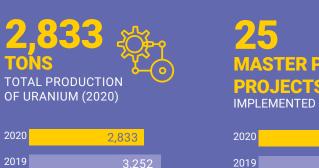
For more details about KATCO's approach to innovation, see pages 56-59.

Our overriding priority for the coming year continues to be our people. We are focused on ensuring that all employees and contractors can work safely on site or remotely amid the ongoing pandemic. We are working diligently to achieve our production and financial targets despite these challenging conditions. We are also committed to maintaining progress at South Tortkuduk according to schedule.

I would like to thank all of our stakeholders for their support over the past two years. Without your help, we would not be in the relatively fortunate position that we currently find ourselves.

> Gerard Fries General Director

# **KATCO'S CSR KEY PERFORMANCE INDICATORS, 2020 RESULTS**





EMPLOYEE HSE TRAINING HOURS

**MLN KZT** TOTAL SOCIAL PAYMENTS TO EMPLOYEES

**48** 

\* external training \*\* internal training

BLN KZI CUMULATIVE SOCIAL SPENDING ON COMMUNITIES

(2010-20)

ALN KZT SOCIAL SPENDING

2019

80 **NEAR MISSES** REGISTERED IN THE WORKPLACE 2020 80 2019

HEALTH AND RADIATION PROTECTION OCCUPATIONAL SAFETY







2020	1,190
2019	1,170

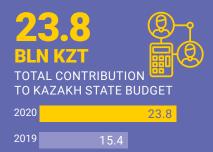














**INJURY FREQUENCY RATE\*** 

\* KATCO includes employees and contractors in its lost-time injury frequency rate (LTIFR) metric, which includes all lost-time injuries.

ENVIRONMENT SOCIAL AND BIODIVERSITY INVOLVEMENT COMMITMENT TO EMPLOYEES

and support.

# **Rising to the Challenge**

**102 KZT MLN** VENTILATORS SUPPLIED TO LOCAL HOSPITALS

KZT MLN PURCHASE OF COMPUTERS FOR SCHOOLCHILDREN

> 69 KZT MLN SPENDING ON PPE

> > **KZT MLN**

SPENDING ON EXPRESS TESTS

Most importantly, KATCO stayed on track on its long-term innovation projects and continued to deliver on safety, environmental and biodiversity commitments.

# Supporting people

In March 2020, the pandemic represented a threat to the health and safety of KATCO's people. The Company's first actions were to secure all of its employees and on-site contractors for their protection. KATCO's safety-focused culture provided an existing moral and practical framework for reacting to a novel threat. At the same time, it worked within Kazakhstan's evolving public health regulations designed to protect the population.

Throughout 2020, despite short-term disruptions to drilling and construction, the Company avoided layoffs and adjusted to the new working environment. From midyear, acquired knowledge and experience allowed KATCO to reduce the quarantine period. The implementation of express tests also helped to better monitor the situation at production sites. Regular medical tests, continuous disinfection routines in common facilities and social distancing became a part of daily life.

KATCO's reaction to the sudden and external challenge of the COVID-19 pandemic in 2020 was to put people first. The results reflect the professionalism of the Company's team and strong ties to its stakeholders, ensuring a response that protected both lives and livelihoods.

CSR SYSTEM

HEALTH AND

RADIATION

PROTECTION

OCCUPATIONAL

SAFETY

COMMITMENT

TO STAKEHOLDERS



DIRECTOR'S STATEMENT RESPONSE



The COVID-19 pandemic presented an unprecedented challenge to KATCO, Kazakhstan and the world in 2020 and remained a singular threat in 2021. Borders closed and economies around the world shut down. The Company was successful in addressing the crisis by learning to adapt to the new environment and treating it with the same methodical and uncompromising approach it takes to any health and safety threat.

In March 2020, KATCO temporarily halted drilling and construction, while continuing extraction and production operations. It enacted strict controls to create sanitary bubbles at its headquarters in Nur-Sultan and production sites and mandated mask wearing, hand washing and other controls. It worked closely with employees, contractors and communities by providing them with PCR and ELISA testing, personal protective equipment (PPE), quarantine hotels and other crucial support during the year. To ensure the safety of all, the Company provided contractors and employees with the same requirements

As a result of the efforts of KATCO and its stakeholders, production sites remained free of COVID-19 infections from March 2020 until the end of the year. More than 15,000 PCR and ELISA tests were administered over this period. The strict measures kept both employees and contractors safe, while the Company was able to deliver on an adjusted production target and outperform its financial plan due to strong conditions on the global uranium market.

Throughout the pandemic, KATCO has been able to call upon the experience and best practices of its participants, Orano and Kazatomprom. Using this collective experience, the rhythm of work changed to minimise the movement of people on and off the sites. Some activities, such as drilling and construction, were briefly halted. Safety was made the absolute priority and business followed. DIRECTOR'S STATEMENT

RESPONSE

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**PCR TESTS** ADMINISTERED FOR KATCO EMPLOYEES

6,068 **PCR TESTS** ADMINISTERED FOR CONTRACTORS

7,530

COVID PPE SUPPLIED

UNITS

286 **KZT MLN** SPENDING ON QUARANTINE OF EMPLOYEES

KATCO kept communications channels open with all employees to address their concerns in a fast-changing situation and prioritise their well-being during the crisis. The general director and members of the management team held virtual online meetings each week to provide updates on the situation at the sites and emergency measures by the authorities. They also answered questions from site and headquarters staff about rotations, PPE, testing and other issues. A special COVID-19 hotline was set up to respond to medical guestions and concerns 24 hours a day. In addition, the Company signed a contract with ISOS to provide a hotline for remote provision of emotional and psychological support services that has remained in place in 2021.

COVID-19 restrictions continue to pose fresh difficulties. Most in-person forms

of employee and contractor training have had to be cancelled. The Company

remains committed to delivering the full scope of its training plan and the HR team has worked to offer virtual solutions. Indeed, many of these challenges are requiring every part of KATCO to seek new approaches to their work, UNITS OUARTZ LAMPS FOR DISINFECTION

creating opportunities for innovation. To boost morale, the Company organised safety contests, as well as video and photography competitions. Working together, the management team, employees and contractors avoided any outbreaks on its sites or headquarters during 2020. It is a testament to their professionalism that in the midst of the pandemic, KATCO also

delivered a full year without lost-time incidents at any of its facilities. Working with communities

50 **KZT MLN** BIRGEMIZ FUND The vast majority of KATCO's employees and their families live and work in the communities around its sites. Throughout the pandemic, the Company has worked to deliver PPE, PCR and ELISA tests, as well as medical equipment to local hospitals and clinics. As part of this effort, KATCO transferred KZT50 million to the Birgemiz Public Fund to support local efforts.





In addition, the Company purchased six lung ventilators (representing a donation of around KZT100 million) for hospitals in the Turkistan region and the city of Shymkent, while distributing masks and other PPE to the Sozak Epidemiological Service and directly to local villages. Regarding local contractors, KATCO reduced payment periods from 30 to 10 days to support local businesses under pressure as the economy paused due to the crisis.

## Reacting to the threat

When an outbreak was detected at the Muyunkum and Tortkuduk sites in January 2021, KATCO reacted quickly to the threat, provided all necessary medical care and continued to support its people financially throughout this time. The sites were placed under a two-week quarantine and KATCO fully complied with the administrative health requirements. Many staff were able to continue working, while a total of 128 people tested positive on site.

After a few weeks, the outbreak was brought under control and the Company was able to undertake a root-cause analysis to understand how the virus reached its sites. As a result, KATCO introduced stricter access control measures. It also reviewed its facilities to ensure people could more easily practice social distancing measures. In addition, it strictly enforced maskwearing and temperature monitoring at every facility. The lessons learned during the pandemic will inform future workplace design to make sites more resilient to potential future threats.

Enhanced safety protocols will stay in place until vaccines are fully deployed in the communities around KATCO's sites and the crisis has passed. The Company will remain vigilant and continue to put people first, whether they are employees, contractors or local residents.

HEALTH AND RADIATION PROTECTION OCCUPATIONAL SAFETY

ENVIRONMENT AND BIODIVERSITY

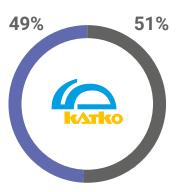
SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES

# **Engaging Meaningfully** with Stakeholders

While KATCO has been established as a private entity, it is owned by two public companies with institutional shareholders. Since the Company's founding in 1996, it has developed its corporate governance system in line with local company legislation, international best practices and the standards of its two participants.

In practice, this means that KATCO's managers and employees have signed onto anti-corruption, conflict of interest, ethical and other guidelines. These policies govern a core part of the Company's day-to-day work and ensure that every employee understands the rules.

# **KATCO** ownership structure



Kazatomprom Orano

# Supervisory Board.

Supervisory Board The Supervisory Board, which is responsible for the Company's overall oversight, consists of four members appointed by Orano and three by Kazatomprom.

# **Technical Committee**

Director.

# Health, Safety, Lega nvironment, Radiatio Directo Protection Directo Supply Chai Director Enair

The acceptability of KATCO's mining activities, the contribution it can make to local development and the consultation of stakeholders are key areas of commitment for the Company, from both a regulatory and voluntary standpoint. Building and maintaining trust is a constant challenge.

CSR SYSTEM

COMMITMENT

TO STAKEHOLDERS



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DIRECTOR'S STATEMENT



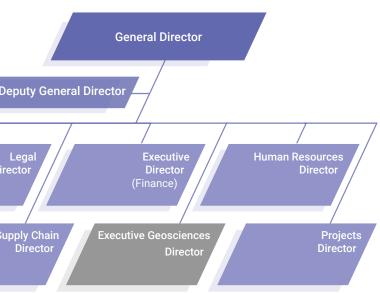
## Governance structure

KATCO's corporate governance reporting structure is set out in its Charter and comprises the following bodies.

### **General Meeting of Participants**

The General Meeting of Participants (GMP) is the Company's highest executive body. Kazakh company law and the KATCO Charter determine the GMP's full range of responsibilities. It elects and delegates management authority to the

This consultative body of KATCO is assigned to prepare technical and economic recommendations for the GMP and the Supervisory Board. It is composed of four members: one appointed by Orano and one by Kazatomprom, as well as KATCO's General Director and Deputy General



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GENERAL DIRECTOR'S STATEMENT COMMITMENT

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### **Financial Committee**

This consultative body is assigned to review the Company's budget and to present its recommendation to the Supervisory Board, which ultimately will approve KATCO's budget. It is composed of four members: two appointed by Orano and two by Kazatomprom.

The Financial Committee was created along with the Budget Policy as part of the strategic agreement that Orano and Kazatomprom signed in April 2017.

### **General Director**

The ultimate responsibility for day-to-day activities lies with the General Director, who provides leadership on KATCO's policies and culture of responsibility.

### **Committee of Directors**

Assisting the General Director is the Committee of Directors (CODIR), KATCO's executive body. Its members include the General Director and Deputy General Director, as well as the directors for human resources, finance, geosciences, HSERP, legal, operations, supply chain and projects. The CODIR meets on a weekly basis.

### Compliance Department

KATCO's Compliance Department is an independent business unit reporting to the General Director. Its primary objectives include: providing compliance support to the Company, ensuring adherence with mandatory regulatory requirements and international best practices in anti-corruption matters, and minimising and mitigating risks arising from any non-compliance with anti-corruption and ethical standards. The department also upholds Company policies and local laws strictly prohibiting sexual harassment or gender-based violence. The department has both specific and wide-ranging powers allowing it to conduct investigations and on the basis of its findings and outside expertise, make specific recommendations to the General Director regarding changes to address any compliance-related issues.

### Integrated environmental and safety management system

The CODIR reviews HSE performance and the committee's recommendations in line with international standards. KATCO has an ISO 14001:2015 Environmental Management System and OHSAS 18001:2007 Occupational Health and Safety Management System certification. In 2021, after the reporting period, the Company was in the process of obtaining ISO 45001:2018 certification and ISO 14001:2015 recertification.

### Employees' representative body

KATCO's human resources (HR) policy is based on the principles of legality and reasonableness. The Company has an employees' representative body to which nine employee representatives (ERs) are elected for four years.

The ERs and KATCO's top managers meet at least twice a year to discuss safety, HR issues and any important matters. Such meetings are convened at the request of both the employer and the ERs. KATCO's collective agreement is discussed with and approved by the ERs with the Company's management every three years.

### Internal control

KATCO's Internal Control Department oversees the risk management function and is responsible for coordinating quarterly and annual risk assessments. It uses these assessments to help risk owners and structural division heads with the development of risk mitigation action plans.

The department also conducts quarterly and annual assessments of the internal control system itself. When improvements are identified, it works with risk owners and structural division heads to revise the design of control procedures.

governing the following areas: · Conflicts of interest

- Insider information
- · Corruption, gifts and unfair advantage
- Political financing
- Competition

- Accounting policy (updated in 2021)
- CSR policy

# KATCO's Compliance Policy was drafted in 2010 and most recently amended in June 2019.

- HSE rules
- compliance



The department conducts planned and unscheduled audits and investigations and provides reports with recommendations for improvement. Among its other responsibilities, it also coordinates corporate audits and monitors the execution of action plans by the Company's divisions.

### Risk management

KATCO's risk management function is designed to meet its stated objectives. It is also tasked with identifying and mitigating risks that the Company, its employees and local communities may face. Its assessments are aimed at preventing risks and identifying opportunities in all fields of operations: production, financial, safety, environmental and legal.

### **Technical Inspector for Labour Protection**

The Technical Inspector for Labour Protection, an employee representative, conducts technical evaluations as an additional internal control check on health and safety standards.

# Corporate policies

KATCO's corporate policies seek to ensure that managers and employees understand what is expected from them. They also contain clear advice for actions to take in the event of an incident, including the duty to report a suspected illegal or unsafe activity.

The Company's primary ethical code is its Compliance Policy, which is described in detail below. KATCO also has corporate policies in place

- Facilitation payments (updated in 2020)
- Philanthropy, donations and humanitarian activities
- Threats against persons and property
- Gifts, business hospitality and business expenses (adopted in 2019)
- Whistleblowing (adopted in 2019)
- Zero drug use policy (updated in 2020)

### **Compliance Policy**

KATCO's Compliance Policy is based on Orano's Code of Ethics and the Code of Ethics and Compliance of NAC Kazatomprom JSC. It is founded on the principles of ethical integrity, professionalism, confidentiality, honesty, respect and responsibility.

As part of the Orano group, the Company acts in strict compliance with the Universal Declaration of Human Rights approved by the United Nations.

The goals of the Compliance Policy are to:

Outline key obligations and responsibilities of stakeholders in terms of compliance, giving special consideration to the practical aspects of fighting against corruption

· Provide guidelines for employees on how to act when faced with non-compliance with corporate ethical standards, Kazakh legislation and/or

Determine the management's course of action in regards to such non-

Minimise the risks associated with non-compliance with these standards

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GENERAL DIRECTOR'S STATEMENT COMMITMENT TO STAKEHOLDERS

MENT CSR SYSTEM EHOLDERS HEALTH AND RADIATION PROTECTION OCCUPATIONAL SAFETY

ENVIRONMENT AND BIODIVERSITY

ENT SOCIAL (ERSITY INVOLVEMENT COMMITMENT TO EMPLOYEES

## Stakeholder mapping



Interviews (February, March and April 2019): Shymkent, Nur-Sultan, Almaty, Turkistan, Sholakkorgan, Tasty, operational sites: Tortkuduk and Muyunkum

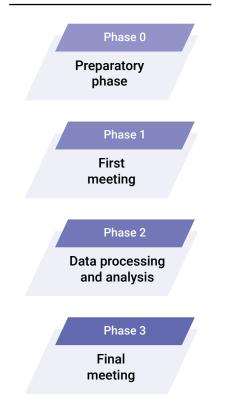
### Stakeholder engagement

	Local	Regional
Personnel	•	
Government	•	٠
Partners and suppliers	•	•
Non-governmental organisations and associations	•	
Media		•
Local residents	•	•

The Compliance Policy applies to any actual or suspected non-compliance with the ethics standards and rules or laws that involve the Company's employees. This includes their relations with contractors, consultants, agents and/or any other natural and legal persons relating to the Company's business. The policy also provides a rigorous and transparent system for recording and addressing employee complaints and grievances.

KATCO's Compliance Policy was drafted in 2010 and most recently amended in June 2019.

# Stakeholder mapping phases



# Understanding stakeholder expectations

Understanding the concerns and aspirations of KATCO's various stakeholders is a crucial aspect of the CSR strategy. In 2019, the Company completed the four-phase stakeholder mapping initiative that it launched in late 2018.

This process helped KATCO to understand the unique expectations and interests of the various stakeholder groups. It was then able to develop actions to improve engagement with each of them as part of the Stakeholder Management Plan.

In February-April 2019, KATCO interviewed stakeholders in Nur-Sultan, Almaty, Shymkent, Turkistan, Sholakkorgan and Tasty, as well as around the Tortkuduk and Muyunkum operational sites. In February 2019, the Company also met with three focus groups consisting of residents of the villages of Tasty, Shu, Sholakkorgan and Taukent.

One aspect of the project was understanding which stakeholder groups are present at the local, regional and strategic levels. This helps KATCO to ensure that it is engaging with all stakeholders directly and consistently, including by breaking down certain groups into smaller sets of constituents.

Using this research, KATCO created a Stakeholder Management Plan aimed at improving mutual engagement between the Company and its various stakeholder groups. Such a plan develops appropriate strategies to effectively engage stakeholders. It is based on the results of a stakeholder mapping exercise and an analysis of stakeholders' needs, interests and potential impact on project success.

For KATCO, a vital component of its Stakeholder Management Plan is regular meetings between the Company and local officials and residents, including open and inclusive discussions on health, safety and environmental issues.

KATCO has also developed a formal procedure for handling community complaints or grievances, which it plans to launch when regular community meetings become possible again. The purpose of this procedure is to process complaints, requests for more information about a specific issue, or comments about one of the Company's activities while keeping the complainant informed throughout the process. The process is overseen by the CSR managers team but may also include input from other departments. The aim is to respond to grievances in a timely manner while keeping the complainant informed throughout the process. Learning from stakeholder feedback allows KATCO to strengthen relationships on the basis of trust.

In addition, the Company is working with local authorities to further improve and elaborate emergency plans. The COVID-19 pandemic has demonstrated the ability of KATCO and local communities to work together in the face of an unexpected and unprecedented situation.



Focus group 1: residents of Tasty and Shu villages Focus group 2: residents of Sholakkorgan village Focus group 3: residents of Taukent village ABOUT KATCO GENERAL DIRECTOR'S STATEMENT COMMITMENT

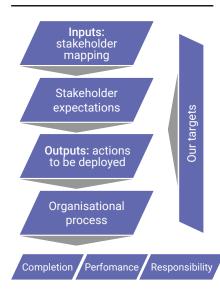
CSR SYSTEM TO STAKEHOLDERS

HEALTH AND RADIATION PROTECTION OCCUPATIONAL SAFETY

ENVIRONMENT AND BIODIVERSITY

COMMITMENT INVOLVEMENT TO EMPLOYEES

## Stakeholder **Management Plan**



This process helped KATCO to understand the unique expectations and interests of the various stakeholder groups. It was then able to develop actions to improve engagement with each of them as part of the Stakeholder Management Plan.

For example, the plan includes actions for participants such as organising CSR events, participating in workshops and benchmarking against other Kazatomprom joint ventures. For local residents, the plan includes meeting at least twice a year to discuss project choices and job opportunities, as well as holding Family days. The Company also intends to maintain a continuing dialogue through regular community meetings about topics related to water, air quality and other environmental and social issues, as well as site remediation plans.

The mapping exercise and management plan will help KATCO to meet the diverse needs of its local, regional and strategic stakeholder groups more confidently. The Company will regularly update the plan to ensure that it remains aware of any changes in stakeholders' interests and expectations.



## Responsible mining worldwide

In addition to the executive oversight provided by internal governance bodies, KATCO is party to numerous international initiatives.

### Extractive Industries Transparency Initiative (EITI)

**GIII** www.eiti.org

### As Kazakhstan is a member of the EITI, KATCO participates in local multilateral processes. It also declares its payment of taxes, mining rights and profits in accordance with EITI requirements.



International Council on Mining and Metals (ICMM) The ICMM is an international organisation committed to a safe, fair and sustainable mining industry. Orano has been a member of the ICMM since 2011. KATCO strives to incorporate the ICMM's 10 principles of sustainable development and position statements. In 2017, the Company was audited by Ernst and Young to verify Orano's alignment with the ICMM principles. KATCO expects to complete an ICMM-determined self-assessment process in 2021.



SOCIAL

The Company seeks to prioritise reporting topics according to stakeholder expectations. Criteria for evaluation are based on the ICMM's 10 principles of sustainable development, as well as GRI reporting standards.

Ethical reporting

Compliance

KATCO strictly complies with Kazakh, French and other international anticorruption acts. The Company's Compliance Policy requires adherence to the following governance codes, among others:





### Materiality and key priority issues

KATCO provides an annual ethics report for Orano. It includes a signed statement from the Committee of Directors attesting to a dedicated review of the previous year's activities.

• The United Nations Convention against Corruption adopted in New York on 31 October 2003 and ratified by Kazakhstan's Law No. 31-IV dated 4 May 2008, with statements and reservations

• France's Law "On Transparency, Combating Corruption and Economic Modernisation" No. 2016-1691 dated 9 December 2016 (SAPIN II)

### Orano's Code of Ethics

Kazatomprom's Code of Ethics and Compliance

Kazatomprom's Corporate Social Responsibility Policy

· Orano's Procedure on Conflicts of Interest

Orano's Procedure on Whistleblowing System

# **A Principled Approach**

# CSR approach

KATCO's CSR approach is based on six pillars and guided by the Company's CSR Policy, which was updated in January 2018. Each pillar represents not only a priority area of CSR, but also a key area of interaction with one or more stakeholder groups. The Company strives to ensure that its actions and strategies in these areas have positive impacts on its stakeholders. In 2020, KATCO also adopted Orano's practice of establishing KPIs related to a set of CSR commitments for 2025 and the 5C approach (Climate, Communities, Customer growth, Cash and Competencies). These commitments are based on the Company's mission and vision, as well as Orano's articulated Purpose - "To develop know-how in the transformation and control of nuclear materials for the climate, for a healthy and a resourceefficient world, now and tomorrow."

As this mission statement makes clear, sustainable development is at the core of KATCO's business, as well as the business of its participants, Orano and Kazatomprom. This position relies on a relationship of transparency and dialogue with all stakeholders. The Company is integrating the 5C approach into all of its action plans, as well as into the ways that it measures its performance across its six CSR pillars.

see pages 24-25.

# CSR pillars

Working with a radioactive substance such as uranium presents unique challenges

includes the ever-present risk of exposure

beyond accepted limits. To mitigate these

and risks for a mining company. This

risks, KATCO has rigorous standards

in place at each point in the chain. from geological works and production

Health

and radiation protection

Social involvement

stakeholders. The Company's employees

around 72%, hail from the communities

where KATCO operates, including Sozak

and other districts in the Turkistan region

while 26% are from other regions. Overall,

1,190 of the Company's employees, 98%

of the total, are from Kazakhstan and fewer

KATCO always seeks to be a trusted

member of the community engaging

live in Kazakhstan. The vast majority,

in a transparent manner with its

than 2% are expatriates.

to processing and shipment.

Occupational safety

Kazakhstan is a highly competitive market for skilled professionals and requires a deep commitment of resources to retain staff recruited from local communities. Therefore, KATCO ha committed to providing employees at all levels with the opportunity to develop their professional skills and grow within the Company. KATCO also seeks to promote from within and, in 2020, promoted 53 locally recruited men and 17 women (63 and 17, respectively, in 2019).

KATCO promotes sustainable development by making firm and specific commitments regarding social, environmental and economic responsibility. These universal human aspirations are set out in the United Nations Sustainable Development Goals and are one of the themes of this report. The Company bases se commitments on guiding principles regarding what should be priorities.

OCCUPATIONAL

SAFETY

HEALTH AND

RADIATION

PROTECTION

COMMITMENT

TO STAKEHOLDERS



ABOUT KATCO

GENERAL

DIRECTOR'S STATEMENT



Solution with the second secon

KATCO has developed six core pillars of CSR over more than 20 years. These are key, if not exclusive, areas of focus for the Company. Each area represents a plan of continuous action, with results measured by KPIs.

Action in each area is guided by international best practices, as well as legislation and the policies of KATCO's shareholders. Progress and priorities for each of the six pillars are covered later in this report.

KATCO's most important safety KPI is to ensure that there are zero fatal accidents at its operations. A key aspect of achieving this goal is learning from near misses and identifying and implementing corrective actions to mitigate risks.

the metrics of its environmental impact are a vital concern. The Company's ISR mining technique is less invasive than most mining techniques. Still, it must invest considerable time and resources to prevent or reduce the impact on the surrounding environment

### Environment and biodiversity

For KATCO and its shareholders.

### Commitment to employees

Innovation

KATCO is a leader in Kazakhstan and globally in the uranium industry in terms of innovation. The Company has the unique ability to draw upon the vast local knowledge of its Kazakh shareholder and the scale and global leadership of its French parent company. At the same time, it has built its own, highly productive research and development function, which has become a source of innovation for its shareholders.

ABOUT KATCO	GENERAL DIRECTOR STATEMEN	'S TO S	MITMENT TAKEHOLDERS	CSR SYSTEM	HEALTH AND RADIATION PROTECTION	OCCUPATIONAL SAFETY	ENVIRONMENT AND BIODIVERSITY	SOCIAL INVOLVEMENT	COMMITMENT TO EMPLOYEES
		50	and CSE	commitme	nto				SR commitr
		50	anu Cor	Commune	1115				
									uclear and occupatio
									Target the highe Aim to maintain the l
				ment is at the core of the cor					Aim to maintain the
/	/			s specific priorities				•	Industrial risks: 0 una
						(range)	/		thics, transparency ar
					Xany	३≡			Enhance access
									takeholders and Implement the confo
	Nuclear and	Customer	Continuous	Respect	Cohesion	Ethics, transparency			•
	cupational safety, vironment, health	satisfaction	improvement	and develop people	and team spirit	and dialogue		5	C approach
								С	ommunity
							8 DECENT WORK	CAND 12 RESPONSIBLE CONTH AND PRODUCTION	Be engaged and
									Maintain a high level Maintain and develop
			CO has also take egic priorities kn	en on commitments own as '5C'.	s based on an exp	anded set of five			Fulfil the local conter
								(	Climate

Competencies

The Company has set specific KPIs that are linked to its UN Sustainable Development Goals (SDGs) vision and action plan, focusing on the following eight SDGs. The United Nations defines these goals as "a blueprint to achieve a better and more sustainable future for all". They represent universal human values and aspirations and a common purpose for KATCO and its stakeholders.

Cash

These commitments drive KATCO's sustainability, employee engagement, community support, climate change and innovation efforts as an integral part of its business and its commitment to all stakeholders. Throughout this report, you will find SDG logos and a short description of the Company's goals and achievements in these areas.

Customer growth



Climate

Community

24



· Contribute to national policies for reducing plastic waste in our areas of operation Maintain KATCO's international certifications Uphold our commitment to operational excellence



## tments for 2025

### tional safety, environment, health

nest standards" ne LTIFR sustainably at or below 0.5 ne TRIFR at or below 3.5 unacceptable scenario by 2024

### and dialogue

ss to information, improve the dialogue with nd be more explicit on sensitive topics" nformity action plan

## h for 2025

## d responsible locally in our environment"

- el of local recruitment (98% minimum)
- lop our collaboration with Kazakh universities
- tent obligation of the subsoil use contract

- Reduce carbon equivalent CO<sub>2</sub> emissions from our operations
- · Support the decarbonisation of electricity in Kazakhstan by purchasing part of our

## "Mobilise proud and committed employees, who embody our mission"

- Achieve a significant rate of employees who recommend Orano (75%)
- Ensure that our employees benefit each year from qualifying or diploma training (5%
- Keep the level of social conflict as low as possible according to GRI criteria
- Increase the proportion of women in our 61 key positions (+50%)
- Promote access to employment for people who are disadvantaged
- Provide Wi-Fi internet access at the site base camps and Nur-Sultan office

## "Innovate to preserve resources and protect health"

- Reduce water consumed per ton of uranium produced (-10%)
- Prepare a water management plan to be shared with local communities
- Develop predictive models on natural attenuation in ISR
- · Roll out heap leaching of low radioactive waste, membrane technology at all plants,

## "Operate efficiently and reduce our footprint"

# **HEALTH, SAFETY, ENVIRONMENT AND RADIATION PROTECTION KPI DASHBOARD**

# EMPLOYEES

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**RECEIVED FIRST AID TRAINING (2020)** 

SAFETY INDICATORS				
	2019 targets	2019 results	2020 targets	2020 results
LTIFR (KATCO + contractors) <sup>1</sup>	≤ 0.25	0.45	≤ 0. <b>5</b>	0
TRIFR (KATCO + contractors) <sup>2</sup>	< 1	0.45		
AIFR (KATCO + contractors) <sup>3</sup>			< 7	2.22
Fatalities	0	0	0	0
Near misses	100	117	100	80
Safety and ERP inspections				
Level IV <sup>4</sup>	2	29	24	17
Level III	96	198	104	207
Level II	1,320	1,597	2,548	2,591
On-site meetings dedicated to HSERP issues <sup>5</sup>	52	48	53	50
CODIR meetings dedicated to HSERP issues	52	52	53	53
Number of planned drills	34	34	34	33
Number of second- and third-level emergency drills <sup>6</sup>	2	2	2	1
Number of complex and targeted inspections 6	2	2	1	1

### **HEALTH AND RADIATION PROTECTION**

Radiation level for employees (2020)	Permissible dose	2020 results
KATCO (mSv)		1.06
Kazakhstan (mSv) <sup>7</sup>	20	
	2019	2020
Maximum annual exposure of Group A personnel (mSv) <sup>8</sup>	2.74	4.92
Spending on PPE (KZT mln)	98	116
Medical consultations	2019	2020
KATCO personnel	3,749	2,447
Contractors	564	537

<sup>1</sup> The lost-time injury frequency rate (LTIFR) includes all lost-time injuries; <sup>2</sup> The total recordable injury frequency rate (TRIFR) includes all incidents with or without lost-time injuries; <sup>3</sup> The all-injuries frequency rate (AIFR), which replaced the TRIFR metric in 2020, includes medical treatment cases and first aid; <sup>4</sup> COVID-19 restrictions prevented senior managers from visiting the sites; <sup>5</sup> Three meetings cancelled due to the pandemic;
<sup>6</sup> Drilling activities limited due to the pandemic; <sup>7</sup> 20 mSv is the permissible level of effective dose regulated by the public health standard "Radiation safety sanitary and epidemiological requirement" approved by Order No. 155 dated 27 February 2017 of the Ministry of National Economy of Kazakhstan;
<sup>8</sup> Group A personnel are directly exposed to ionising radiation and work in places such as plant facilities.



by essential health services as of 2017. members.

clinic and the city of Shymkent. to medical services in these communities.

6	CLEAN WATER And Sanitation	

UN Sustainable Development Goal 6 strives to ensure the availability and sustainable management of water and sanitation for all people. The UN reports that as recently as 2017, 2.2 billion people lacked safely managed drinking water and 4.2 billion people lacked safely managed sanitation.

Given the remote locations and arid climates of its well fields, KATCO has a deep understanding of the importance of ensuring access to clean, sustainable water sources. Since 2019, Orano Mining has assessed the level of water stress at all of its worldwide sites using the "Aqueduct Water Risk Atlas" tool from the World Resources Institute (WRI). Following an update of the WRI tool in 2020, KATCO's sites were assessed as "arid and low water use", the highest level of stress on the scale.

Over the years, the Company has helped to drill water wells in several local villages, where the local population includes many of its employees. KATCO has also supported repairs to the water supply network in Sholakkorgan, where yet more of its staff and their loved ones live. The Company discusses water access, including plans to build wells, as part of its regular meetings with local communities.

KATCO's plans through 2025 related to SDG 6 involve making further infrastructural improvements to villages in the neighbouring community. This includes providing solar boilers for hot water generation, as well as helping to repair or renovate local water supply networks.

\* Source: https://unstats.un.org/sdgs/report/2020/



# SDG 3: GOOD HEALTH AND WELL-BEING

UN Sustainable Development Goal 3 seeks to ensure healthy lives and promote well-being for all people, at all ages. According to the UN, less than half of the global population was covered

KATCO promotes the health and well-being of its employees and the local communities where they live. One way it does this is providing medical insurance for its employees and their family

The Company has worked to protect its facilities and neighbouring communities from COVID-19, including supplying six adaptive lung ventilation machines to the Turkistan regional medical

KATCO has built sport grounds at local villages to provide opportunities for exercise. Other sport-related efforts include the KatcoAthleTour marathon and Astana Marathon, the latter of which helped to purchase hearing equipment for disabled children.

By 2025, the Company plans to organise regular doctor visits to local villages and reinforce its efforts to monitor employees' health. It is also reviewing projects to enhance local access

# **SDG 6: CLEAN WATER AND SANITATION**

CSR SYSTEM

HEALTH AND RADIATION PROTECTION OCCUPATIONAL SAFETY

ENVIRONMENT AND BIODIVERSITY

SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES

# Working to Keep Our People Healthy

# Our approach

Policy KATCO has always prioritised the health and well-being of its employees, contractors and local communities. The Company seeks to continuously improve workplace safety and limit radiation exposure as much as possible. KATCO adheres to three primary radiation protection principles: justification, optimisation and limitation of exposure. It assesses the risk of exposure to ionising radiation before beginning an activity with an aim to maintain exposure 'As Low As Reasonably Achievable', or 'ALARA'.

# Objective

KATCO's approach to sustainability is to build a positive and safe work environment into all of its planning. The Company follows the principle of 'safety first' in the design, construction, commissioning, operation and decommissioning of its facilities.



During the COVID-19 pandemic, KATCO adapted existing site facilities where needed to make it easier for employees and contractors to follow social distancing guidelines. The Company is now incorporating these new requirements into its future workplace designs.

## **Risk assessment**

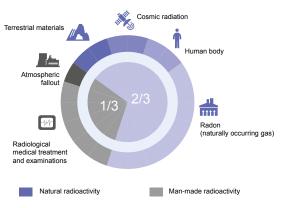
KATCO evaluates the risks of exposure across its operations. This includes measuring and regularly monitoring the gamma and alpha radiation exposure levels for specific areas using established technology and following international standards.

## **Risk mitigation**

for exposure.

# What is radioactivity?

Examples of natural radioactivity



\* A becquerel, abbreviated Bq, is defined as the activity of a quantity of radioactive material in which one nucleus decays per second.

KATCO remains focused on ensuring that its employees, contractors and local communities are healthy and safe from potential exposure to radiation and other hazards. In 2020, the Company upgraded its radiation protection equipment and made its site facilities more conducive to social distancing, among other measures designed to protect its people.





KATCO's approach to minimising and mitigating radiation exposure risk is based on a 'compartmentalisation' mentality. The Company classifies its employees according to categories of exposure. Group A personnel ('exposed employees') are directly exposed to ionising radiation and work in such places as plant facilities. Group B personnel work in areas where there is potential

KATCO has strict zoning and monitoring procedures in place for all work functions. Employees whose work requires them to cross zones must follow sanitary rules for personal protective equipment (PPE). They also must comply with the approved cleaning protocols in the respective areas.



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DIRECTOR'S STATEMENT

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## Achievements in 2020

### Monitoring employees

KATCO closely monitors the radiation exposure levels of Group A personnel to ensure compliance with the regulatory limits. Employees in Group A wear individual dosimeters that certified laboratories check quarterly. If a staff member's exposure were to exceed the regulatory levels, the Company would review their activities and take measures to reduce their exposure. This has not occurred in recent years. In addition, Group A personnel receive quarterly instruction on safe working methods and the use of PPE to limit exposure.

### Monitoring communities

Local communities are understandably concerned about the possible risk of radiation exposure in excess of background levels. Guided by Kazakh regulations, international best practices and longstanding Company policy, KATCO performs annual environmental surveys of the areas around its facilities.

Certified laboratories test all samples collected during these surveys. Public sanitary and epidemiological teams also independently verify the results by testing the water and soil samples. In line with Kazakh legislation, the Company submits quarterly and annual reports on water and soil to Kazakhstan's Department of Ecology each year.

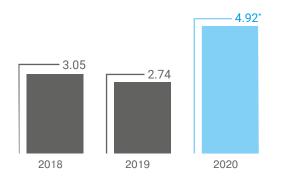
### Investing in protection

KATCO makes targeted investments in training, PPE and facilities to reduce the exposure of its personnel. The Company spent a total of KZT98 million on radiation protection equipment for its employees in 2019 and KZT116 million in 2020. This included upgrading the monitoring and decontamination equipment that it uses to safeguard its employees from potential exposure. The new equipment more thoroughly measures radiation levels and is better at preventing contamination when employees leave exposure zones.

In addition to radiation protection equipment, the Company also spent over KZT300 million on PPE and testing for employees and contractors to prevent the spread of COVID-19. This included 480,000 masks, 32 UV guartz lamps and more than 15.000 PCR tests.

> In 2020, the maximum annual level of radiation exposure for Group A personnel was 4.92 mSv, far below the maximum of 20 mSv set by international standards. Testing by KATCO and local authorities indicated that the radiation levels in the communities around the Company's facilities ranged from 0.09 to 0.13 µSv/h during the year. These figures are consistent with expected levels

### Maximum annual level of exposure for Group A personnel, 2018-20 (mSv)



\* In 2020, the exposure level increased because of repair work at the calcination area of the plant

of natural background radiation. To maintain public safety, ensure transparency and provide reassurance, the Company maintains digital information displays outside of its Tortkuduk and Muyunkum sites to indicate current radiation levels.

### Annual medical examinations

KATCO provides regular medical checks for all categories of personnel, including contractors, and ensures that they have access to adequate medical care. Proactive healthcare maintains a safe workplace, as an ill employee may trigger an incident exposing themselves and others to harm. In 2020, the Company's medical personnel conducted a total of 2,447 consultations for employees and 537 for contractors. Many of KATCO's employees have worked with the Company for 10-15 years. For these people, the annual medical exams are taking on increasing importance. The highest risk groups include employees over the age of 50 and Group A personnel who work in potentially harmful conditions. In 2020, there were 506 people in Group A (42.5% of overall headcount), compared with 462 in 2019 (39.4%). KATCO is looking at ways to reduce the associated risk levels and prevent any negative impacts on these groups.

The Company works to keep both its workforce and local communities healthy, including sponsoring several events each year aimed at promoting healthy lifestyles. This includes KATCO's annual marathon, which runs more than 40 kilometres between the Tortkuduk base camp and Muyunkum site. Employees and contractors participate in this and other races to raise money for charity, chasing an annual target of 15,000 kilometres.

210 place in the mobile games.

KATCO also continued the KatcoAthleTour fundraising programme without holding a marathon in 2020. Despite the pandemic, people continued to send in the individual distances that they had run. This was particularly impressive in a time of crisis when many people had been on site for two or three months due to the lockdown. This shows how much the participants care about doing their part to help children. In 2020, the Company reached the target of 15,000 kilometres.

### 5-year permissible radiation levels in Kazakhstan versus average annual levels recorded (mSv)





### Promoting healthy lifestyles

Due to the restrictions imposed to prevent the spread of COVID-19, KATCO held many events promoting healthy lifestyles online in 2020. KATCO's participant, Kazatomprom,  $\overline{i}$  initiated the online Spartakiad, where all of its subsidiaries competed in cybersports and physical exercise. The Company's cybersports team of four people won second

Kazakhstan

KATCO average

CSR SYSTEM

and employing best practices to reduce the potential for accidents. This includes engaging every employee to promote a safety-based culture. In 2020, the Company achieved the milestone of zero lost-time injuries and began rolling out Orano's Process Safety Management system to further improve its safety culture.

SAFETY

HEALTH AND

RADIATION

KATCO's approach to safety is based on managing risks

PROTECTION

**OCCUPATIONAL** 

**ENVIRONMENT** AND BIODIVERSITY

SOCIAL INVOLVEMENT

# **Dedicated to Safeguarding Our People**

Policy

Objective

COMMITMENT

TO EMPLOYEES

# **5 ANCHORS**



Safety equipment worn



Secured

Protected mechanical handlings working at height



Safe LOTO Pedestrian and vehicle (Lock Out - Tag Out) traffic secured

Pictogram strict

compliance

KATCO reinforces its safety culture using Orano's "5 Anchors and 7 Standards" approach. The anchors are explicitly integrated throughout the daily work of each employee and contractor. The Company requires their application at all levels, with strong involvement from the management.

# **On-site medical assistance**

KATCO employs specialised on-site medical units that are on call 24 hours a day, seven days a week to ensure that the health needs of its employees are met at all times. Three medical units, equipped to provide emergency services in accordance with international standards, are co-located at the Company's sites to allow for complete coverage and prompt incident response.

30% of site personnel.



Alcohol and drug prohibition

Floor free of loose cables

**7 STANDARDS** 



# OCCUPATIONAL SAFETY

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# Our approach

KATCO is committed to safeguarding its employees and contractors, eliminating accidents in the workplace and creating a positive working environment. The Company believes that strong labour relations play an important role in this process. A constant emphasis on risk management and best-practice procedures throughout operations ensures that KATCO remains focused on its 'safety first' approach.

The Company's foremost safety objective is to ensure zero fatal accidents. KATCO requires all employees and contractors to adhere to rigorous labour and safety standards throughout its facilities.

### Safety culture

While the management team bears ultimate accountability for workplace safety, KATCO believes that everyone involved is responsible for safeguarding themselves and those around them. This includes employees, partners, contractors and site visitors.

All workplaces are engaged in a process of "bottom-up, top-down" exchange. The Company uses safety visits, meetings, training and standards to keep procedures relevant and ensure that everyone involved in mining and production processes understands and follows them. For example, the Manager-in-the-Field programme gets managers out of their offices to observe people working, foster open communication on health and safety issues, as well as implement actions where necessary.

To supplement these formal medical units, KATCO also trains its staff in firstaid techniques. In 2020, 608 employees (51% of total personnel) received such training. This exceeds the KPI target of providing first-aid training to at least





Safety induction and training



Hold on handrails



First minutes dedicated to safety

CSR SYSTEM

HEALTH AND RADIATION PROTECTION

## **OCCUPATIONAL** SAFETY

ENVIRONMENT AND BIODIVERSITY

SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES

Applying these standards includes training specialist PSM teams, carrying out an accurate analysis of process safety rotations. intensively.

The purpose of the campaign was to raise awareness of the safety anchors. For office employees working remotely, the Company sent weekly quizzes to reinforce key topics. At the end of the campaign, all site personnel and office employees were invited to take part in a risk hunting game where they had to identify as many dangerous situations in a set of pictures as possible. The winners received recognition and gifts for their achievement. KATCO is considering making it an annual part of Safety Month following positive feedback from employees. The campaign also received an award from Kazatomprom for "Best project with greatest personnel involvement" at the end of 2020, as more than 90% of employees took part.

Safety initiatives KATCO's most important safety KPI is to ensure that there are zero fatal accidents at its operations. A key aspect of achieving this goal is identifying and implementing corrective actions to prevent near misses. To maintain a constant focus on this priority, the Company has established a KPI that targets the number of near misses it believes should be reported each year to ensure zero fatalities: 117 were reported in 2019 and 80 in 2020, while the KPI target was 100 for each year.

for improvement.

hazards, as well as engaging employees and contractors

This approach will help KATCO to combat key risks and primary sources of lost-time incidents, as well as to ensure the protection of the environment around its sites.

# What is Process Safety Management? Process Safety Management (PSM) is a systematic

approach of controlling the unwanted release of hazardous substances, process solutions or fires and explosions that have the potential to significantly impact the health and safety of employees, contractors, the environment or the business. It is a regulation and set of practices established by the US Occupational Safety and Health Administration (OSHA), as well as similar standards included in the Environmental Protection Agency's Risk Management Plan for the safe handling of highly hazardous chemicals (HHCs) and substances.

The OSHA regulation has become a requirement in the US and an international standard of best safety practices for the mining and nuclear industries, among others. It embraces 14 recognised and inter-connected practices all aimed at identifying risks and protecting people and the surrounding environment as part of the employee safety plan.

KATCO's participant, Orano, is committed to establishing and maintaining integrated PSM into all operations worldwide. In 2020, the Company set a target to implement Orano Mining's PSM standard and practices throughout its sites by 2023.

# Achievements in 2020

### Safety performance

KATCO aims to foster a safety culture by continuously improving on its HSE initiatives and implementing measurable KPIs wherever possible. For its employees and contractors alike, it tracks the 12-month rolling lost-time injury frequency rate (LTIFR), one of the most widely used workplace safety benchmarks worldwide. In 2020, the Company replaced the 12-month rolling total recordable injury frequency rate (TRIFR) with the 12-month rolling allinjuries frequency rate (AIFR)\*.

- KATCO's safety targets for 2019 and 2020 were:
- zero fatal accidents
- LTIFR ≤ 0.25 in 2019 and ≤ 0.5 in 2020
- TRIFR ≤ 1.0 in 2019
- AIFR < 7 in 2020

## KATCO's safety results, 2018-20

	2018	2019	2020
LTIFR	0.45	0.45	0.00
TRIFR	0.67	0.45	-
AIFR	-	-	2.22

KATCO has an unswerving focus on reducing these rates to zero, which it proudly achieved for the LTIFR metric in 2020. After two lost-time injuries in 2019, the Company recorded zero lost-time injuries in 2020 despite the difficult situation caused by the pandemic. Near-misses are carefully tracked to identify potential problem areas before an accident occurs.

As another indication of safety performance, in 2021, after the reporting period, KATCO was in the process of recertifying its health and safety management system in compliance with the OHSAS 14001 (2015) and ISO 45001 (2018) international occupational safety standards.

### Safety training

comprehensive training courses to staff throughout its operations. In 2020, its employees and contractors underwent more than 23.000 hours of external training and 2,410 hours of internal training on topics related to health, safety, environment and radiation protection (HSERP).

To measure how this training is translating into safety performance, the Company conducts various levels of safety drills at its assets:

- · Level I: Local exercises such as fire drills at least once per quarter.
- Level II: Local exercises with involvement of the subsidiary's general management, at least once every two years.
- · Level III: Local exercises with involvement of the subsidiary's general management and Orano Mining headquarters. Level III exercises are performed once a year within the Mining Business Unit.

In 2020, KATCO conducted one Level II drill and one Level III drill at its sites, which was one less drill than planned due to COVID-19 related disruptions. Employees and contractors on site are included in these drills. In addition, KATCO held 50 on-site meetings and six CODIR meetings dedicated to HSERP issues. Some 17 of 24 planned Level IV on-site ERP inspections were carried out, with seven postponed due to pandemic restrictions.

\* A lost-time injury is defined as a non-fatal injury that results in the loss of work time. The LTIFR, TRIFR and AIFR metrics are measured as the number of incidents per million man-hours worked. The TRIFR is calculated by adding the lost time injury (LTI) rate to the medical treatment injury (MTI) rate. The AIFR includes medical treatment cases and first aid, resulting in a higher target and result.

As part of its commitment to occupational health and safety, KATCO provides



### Joint commitment to safety

To reinforce the safety culture throughout its operations, Orano has dedicated the month of June as Safety Month since 2012. As part of this initiative, KATCO holds Safety Day events for all employees and contractors that are aimed at providing a forum for sharing information, discussing best practice, evaluating operational successes and shortcomings, and identifying areas

During the Safety Day events, employees and contractors recreate significant accidents to teach lessons learned and the management presents employees with safety awards. In June 2020, KATCO launched the "I make the right choice" safety campaign, bringing workers and managers together on a weekly basis to discuss one of the five safety anchors. Due to the pandemic, the usual safety month was extended to three months to accommodate extended on-site

Applying these standards includes training specialist PSM teams, carrying out an accurate analysis of process safety hazards, as well as engaging employees and contractors intensively. This approach will help KATCO to combat key risks and primary sources of lost-time incidents, as well as to ensure the protection of the environment around its sites.

PSM experts underline that there is no one-size-fits-all approach to implementing the 14 practices at any complex production site. KATCO is designing the initiative to consider the types of HHCs used at its sites to further develop its training programmes

PSM is not a complete solution, rather it is an important component of a broader set of standards and practices aimed to ensure occupational health and safety and protect the environment. Safety on KATCO's sites relies first of all on the continued development of its already robust safety culture at every level of the Company, where each employee and contractor makes the safety of their colleagues, themselves and the local environment the first priority. Nonetheless, PSM provides an important and an internationally recognised standard for identifying potential risks from HHCs and their safe handling throughout the mining process.

AND BIODIVERSITY

COMMITMENT TO EMPLOYEES

# **Caring for Our World**

SOCIAL

INVOLVEMENT

# Our approach

# Policy

Environmental protection is an integral part of KATCO's business strategy. The Company fosters a culture of environmental risk prevention throughout its activities. Employees are required to act responsibly, carry out control measures and seek to improve KATCO's environmental track record wherever and whenever possible. The Company has developed and implemented eight environmental standards to guide its work.

# 8 Standards for the Environment





Waste management

Wate management

Energy Ecological incident management management

Objective

KATCO's objective is to monitor, manage and mitigate the effect of its operations on the surrounding environment to the greatest extent possible. This includes expanding the share of renewable power resources and recycling materials wherever possible. As a mining company engaged in ISR extraction, KATCO's long-term goal is to remediate exhausted mining sites insofar as possible, including cleaning sites, remediating soil and replanting trees.

To learn about the Company's remediation and reforestation projects, see page 42.

# Environmental management process

Throughout its operations, KATCO follows both its internal guidelines and regulatory requirements. The Company seeks to protect the surrounding environment at each step of the chain of ore body geological development, mining and processing of uranium. Based on KATCO's Stakeholder Management Plan, once restrictions related to the COVID-19 pandemic are lifted, the Company plans to maintain a continuing dialogue through regular community meetings about topics related to water, air quality and other environmental and social issues, as well as site remediation plans.

# Initial survey

At this first stage, KATCO's teams study the initial state of the site. This step consists of taking a detailed inventory of its various environmental components - physical, radiological, biological and socioeconomic - before the project is launched.

# Project development

During this phase, the environmental footprint of the future mine (including water, air, soil, flora and fauna) is assessed through an ecological and social impact study. Guidelines for the reclamation stage for the site are drawn up. Specialised environmental teams conduct preliminary studies of the technical infrastructure in accordance with KATCO's standards and international best practices.

ENVIRONMENT AND BIODIVERSITY

KATCO seeks to foster a culture of environmental stewardship throughout its operations. In 2020, the Company started research on the saxaul tree native to Southern Kazakhstan, launched a biodiversity study and started to implement a five-year project to reduce its greenhouse gas emissions.

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RADIATION

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Fmission reduction

Biological conservation



On-site solid waste reduction



Smart paper use

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AND BIODIVERSITY

SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES

### Mining

Environmental monitoring is maintained and reinforced as uranium mining operations proceed. KATCO has received and renewed several international HSE certifications for its facilities. In 2021, the Company plans to complete ISO 45001:2018 certification and ISO 14001:2015 recertification.

### Remediation through innovation

KATCO's research and development function studies sites ahead of their reintegration into the natural environment after mining operations are completed. Technologies and techniques for remediation have been included in the Company's Master Plan of key projects in recent years.

## Environmental stewardship

Throughout the life of the mine, the extraction and processing of uranium ore entail a need for raw materials and resources, especially water and energy. KATCO aims to optimise the consumption of natural resources and discharges, find ways to upcycle waste, and protect the ecosystems in which it operates. The Company believes that environmental stewardship is key to the

acceptability of its activities and its 'social licence to operate'.

### Water

A precious natural resource, water is essential to the well-being of the communities and environment where KATCO operates, as well as to the smooth running of its mining operations.

Mining activities can have a significant impact on water resources, not only in terms of quantity, but also potentially on their quality. To preserve this resource, the question of water is a subject of constant attention at the Company.

### Waste

Mining activities generate waste that needs to be managed effectively, both to comply with relevant environmental regulations and to minimise any adverse impact from KATCO's activities.

The Company's policy is to assume responsibility for its own waste and manage it effectively, always in accordance with all regulations and irrespective of whether it is radioactive or conventional waste.

### KATCO waste output, 2018-20 (in tonnes)



### Climate

Convinced of the role that nuclear energy can play in the energy transition to low-carbon electricity, since 2004, Orano and its member companies have worked systematically to reduce their greenhouse gas (GHG) footprint and contribute to meet the goals of the Paris Agreement. KATCO's GHG emissions fell in 2020, in part attributable to lower production levels. In 2020, the Company began to identify its Scope 1 and Scope 2 GHG emissions as part of an initiative led by its participant, Orano. While KATCO's emissions are low relative to those of other industries in Kazakhstan, it still uses diesel fuel and petrol, including for generators and transport. The Company's Scope 2 emissions are important because of the available energy supply options in Kazakhstan, which are based mostly on coal. Following Orano's decarbonisation strategy, the Company is aiming to reduce its Scope 1 and Scope 2 emissions by 30% through 2025, using 2015 as the reference year.

This will be one of the Company's most important environmental initiatives

### Energy

KATCO ensures that its sites have reliable energy supplies. Its primary consumption of energy is from the Kazakh electricity network, along with diesel and petrol used by vehicles and certain equipment. Whether it originates from fossil fuels or renewable sources, the Company constantly monitors the energy consumed at its sites.

The Company also runs several dedicated programmes, including recycling and water conservation schemes. In the semi-arid environment of many parts of the Turkistan region, water is a particularly critical resource and therefore water management is a top priority. The Company maintains a dialogue with local communities about access to water, water use and the treatment of industrial water. In the unlikely event of air or water contamination, KATCO maintains plans for the prompt notification of local communities.

management.

The ultimate objective is to achieve reductions of 10% in the unit consumption of water as expressed in litres per kilogramme of uranium produced and of 25% in the volume of non-recycled waste by 2030.

The Company promotes the recycling of non-hazardous wastewater for watering trees and plants and has cut overall water consumption by 13% since 2018.



The volume of waste and its treatment varies between sites. It is identified, classified and stored before being recycled when possible.

Site teams work to ensure that waste is traceable through to its definitive disposal or recovery. This is part of their environmental management plan (ISO 14001). KATCO applies the waste management hierarchy (prevent, reuse, recycle and dispose) to minimise the impact of pollution, manage discharges and waste, and respond to any impacts on human health and the environment.

in the coming five years. It will help to move KATCO towards cleaner energy sources and decrease the volume of GHG emissions. In addition, the South Tortkuduk reforestation compensation plan and other tree planting projects help to create new CO<sub>2</sub> capture capacity.

For more information about KATCO's reforestation compensation plan, see page 42.

### Environmental monitoring

KATCO regularly monitors water, air, soil and vegetation in accordance with its internal policies and Kazakh legislation. In 2020, the Company carried out tests on 326 samples of water from observation wells (319 samples in 2019). Some 79 instrumental measurements of air quality were made in 2020 (79 in 2019). An accredited laboratory conducts tests each guarter at 22 sites of potential emissions - ranging from boilers to landfill, to sanitary protection zones to test for emissions of such substances as ammonia, carbon monoxide, nitrogen dioxide, soot and sulphuric acid. From 2016 to 2020, no excess presence of harmful emissions was detected during guarterly monitoring.

As part of its 2025 roadmap, KATCO has launched a working group on waste

ABOUT KATCO

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**Trees** 

**PLANTED AT BASE CAMPS IN 2020** 

**TEST AREA PLANTED** 

WITH SAXAUL SEEDS

**AND SAPLINGS** 

**NO. OF INSTRUMENTAL** 

**QUALITY (2020)** 

**MEASUREMENTS OF AIR** 

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## Biodiversity

The saxaul tree plays a critical role in the environment of the Turkistan region. The tree is resilient but grows slowly. Its extensive root system is critical for preventing soil erosion in a dry environment and is an anchor for the local ecosystem. The trees can take a century to grow and historically have served as a vital resource for local communities.

KATCO organises an annual tree-planting event to mark Earth Day, celebrated around the world on 22 April each year. Employees plant trees on the territory of the base camps of Tortkuduk and Muyunkum. In total, around 600 trees have been planted over the past five years.

# Achievements in 2020

### Gap analysis for upcoming environmental code changes

KATCO has also been conducting a gap analysis for changes in Kazakhstan's environmental code that will be introduced on 1 July 2021. Based on this analysis, the Company plans to proactively address any discrepancies in the final code and its existing practices.

### Low radioactive waste study

KATCO has engaged an independent feasibility study for low radioactive waste deactivation. The study is currently under way and the results should be ready at the end of 2021, after which a final decision will be taken. If successful, this will be a major step forward in reducing the Company's environmental impact at its mining sites by reducing the volume of soil required to be stored in a specialised containment facility.

### Saxaul research

In 2020, KATCO expanded its research on the saxaul tree. Members of the environmental team have identified different zones for the study, where they have started to test whether planting saplings or growing saxaul from seeds is more efficient. In addition, they are researching the optimal mixture of black and white saxaul.

A protected test planting area of 3,200 square metres was created to test these planting and cultivation methods for future use on a large scale. This initiative will help KATCO to implement its future reforestation programmes.

### **Biodiversity study**

In 2020, KATCO launched a biodiversity study covering the scope of its licences. The study will continue in 2021 and will supplement the one completed in 2010, allowing the data to be compared and recommendations to be made for future steps to protect biodiversity.

There are around 20 species of birds and mammals and 50 kinds of plants at the Company's sites, with some listed as threatened or endangered. The table below lists the species present in these areas that are included in the International Union

## IUCN Red List species present at KATCO's sites

Name of species	Туре	IUCN classification
Saiga tatarica	Animal	Critically endangered
Selevinia betpakdalensis	Animal	Deficient of data
Felis manul	Animal	Near threatened
Gazella subgutturosa	Animal	Vulnerable
Mustela (Putorius) eversmanni	Animal	Least concern
Aquila chrysaetos	Bird	Least concern
Circaetus gallicus	Bird	Least concern
Otis tarda	Bird	Vulnerable, observed by employees

# **OUR ENVIRONMENTAL STEWARDSHIP RESULTS**











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for Conservation of Nature (IUCN) Red List. It should be noted that since then, employees have spotted great bustards (Otis tarda), a bird that was not observed during the 2010 inventory but is classified as Vulnerable on the IUCN Red list.

There are no specific areas of high value in terms of biodiversity close to KATCO's licence areas

In 2020, the Company also held a flora and fauna photo contest, "Nature of the mine through the eyes of employees". This project was designed to harness employees' creative talents to contribute to the biodiversity study at its mining sites. Employees submitted hundreds of photos of flora and fauna at the sites. At the end of the contest, KATCO chose 10 winners and awarded them gifts.

# Remediation plan

In line with the new mining code adopted in Kazakhstan in June 2018, KATCO has developed and received government approval for a comprehensive remediation project for the Tortkuduk and Muyunkum sites. The Company was the first uranium miner in Kazakhstan to develop and receive government approval for a remediation project under these guidelines and is proud to be a leader in environmental stewardship in the industry.

Under the plan, when KATCO completes mining activity, it commits to dismantling all existing installations and restoring each site to natural and safe conditions. The Company has undertaken a wide-ranging survey of the sites to identify each source of interaction with the local environment, including land and water resources, and to assess the impact according to key parameters of safety, environmental impact and radiation.

KATCO's commitments to remediate the impact of its mining activities have been developed in line with local regulations, Orano's remediation guidelines, as well as standards set by the International Atomic Energy Agency and other international best practices. The Company's work in this area is aided by continued innovation in technology for measuring such issues as natural attenuation and treating soil with low levels of radiation.

# South Tortkuduk reforestation compensation plan

The South Tortkuduk site covers around 6,000 hectares of land. Following the adoption of a new forestry code in Kazakhstan, KATCO is required to compensate for the loss of existing trees by planting saxauls and other trees over an area twice as large as the project site. As part of the process of obtaining the South Tortkuduk land permit, the Company is undertaking a reforestation plan covering around 12,000 hectares.

The compensation area is about 18 times as big as Gibraltar, which has a territory of around 650 hectares, or 40 times as big as New York City's Central Park, which is roughly 340 hectares. It represents the largest reforestation project to date in Southern Kazakhstan. The project applies KATCO's existing saxaul cultivation research on a large scale to meet its commitments.

The reforestation process requires a survey of the land and analysis of the suitability of soil. The Company will then work to plant and foster the trees. Once established, the land will be transferred to the management of the Ministry of Ecology, Geology and Natural Resources and forestry owners for long-term preservation.

The project is expected to start in 2021 and be completed in five years.

# **SDG CONTRIBUTION**

# **SDG 7: AFFORDABLE AND CLEAN ENERGY**

UN Sustainable Development Goal 7 envisages ensuring access to affordable, reliable, sustainable and modern energy for all people. As an example of the need to step up global efforts in this area, the UN notes that the share of renewables in total energy consumption was only 17% as of 2017.\*

KATCO strives to introduce renewable energy sources at its operations and improve access to sustainable and affordable energy for local communities. One project that is in progress involves installing energy efficient LED lamps at all facilities on site. In addition, the Company has built a lighting network in the village of Syzgan. By 2025, KATCO plans to develop and diversify the sources of electricity that it uses to include solar and wind generation. In addition, it plans to begin using solar water heating systems.

# SDG 8: DECENT WORK AND ECONOMIC GROWTH

UN Sustainable Development Goal 8 entails promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all people. The UN reports that global economic growth was already slowing before the COVID-19 pandemic caused the worst economic recession since the Great Depression. KATCO believes that one of the most sustainable ways it can promote economic growth is by providing decent work to members of local communities. The Company offers its employees regular training opportunities and ensures that local staff can take advantage of internal mobility to develop meaningful careers. It also prioritises gender diversity throughout its mining and managerial positions

To help bring more people from the local community into the global workforce, KATCO offers scholarships for local students to study in France. This also pays off for the Company, which has hired four of these students.

To enhance its impact through 2025, KATCO is defining a policy to govern its social investments. In 2020, the Company started monthly scholarships programme to cover 10 students from local villages.

# **SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE**

UN Sustainable Development Goal 9 aims to build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. The UN estimates that while investment in research and development grew from US\$1.4 trillion in 2010 to US\$2.2 trillion in 2017, it needs to accelerate to ensure sustainable long-term global economic development.\*

KATCO embraces innovation throughout its operations as a vital way of both improving its sustainability and enhancing its competitive advantage. In recent years, the Company has begun using HYTEC 3D modelling technology to improve efficiency at its well fields. It has also installed water treatment units at its sites, as well as nano-filter membranes to increase the productivity and efficiency of its operations. In addition, KATCO has introduced a new technology to recycle drilling mud that was previously disposed of as waste.

The Company's plans through 2025 include developing a systematic environmental programme to design sustainability into all future major projects. KATCO is also working on heap leaching technology to remediate low radioactive waste at its production sites. In addition, it plans to expand the use of its new membrane technology throughout all plants in its operations, including the Tortkuduk site and the new South Tortkuduk project.

South Tortkuduk site









8 DECENT WORK AND ECONOMIC GROWTH

M

**9** INDUSTRY, INNOVATION



ABOUT KATCO GENERAL DIRECTOR'S STATEMENT COMMITMENT TO STAKEHOLDERS

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HEALTH AND RADIATION PROTECTION

KATCO's approach to social involvement focuses on using resources in a way that is transparent and efficient for all stakeholders. Since 2010, it has invested more than

KZT1.7 billion in local communities. In 2020, the Company

local education initiatives and pandemic relief efforts.

supported more than 30 projects in Sozak district, including

OCCUPATIONAL SAFETY

ENVIRONMENT AND BIODIVERSITY

INVOLVEMENT

COMMITMENT TO EMPLOYEES

# **Investing in Our Communities**

# Our approach

## Policy

KATCO is one of the largest employers in the Turkistan region's Sozak district, where its facilities are located. It has agreements in place with local and regional government stakeholders with whom it convenes a working group each year to propose new community projects. The Company approves a plan in line with its own internal obligations and begins implementation in close consultation with local leaders.

KATCO maintains direct contact with its neighbouring communities in Sozak district, including Shu, Tasty, Sholakkorgan (the district centre) and Taukent. In 2020, the Company's senior management met 23 times with local and regional leaders to discuss upcoming initiatives and events.

# Objective

KATCO's objective is to make strategic, long-term investments in the social and economic development of individuals and communities. The Company identifies the needs that these investments should address in consultation with community representatives. They should benefit the entire community and represent the most efficient use of resources available to achieve the most good. The Company is committed to social involvement in a way that is transparent and efficient for all stakeholders.

# Project portfolio

To best meet the needs of local stakeholders and in line with its own values. KATCO has traditionally invested in building education, sporting and healthrelated facilities. Separate from social investment are charitable and sponsorship activities. These focus on meeting children's basic needs (such as clothing or medicine) and sponsoring them to attend educational, sport and other recreational facilities.

# **Buving local**

The Company seeks to make a practical and important contribution to the local economy by buying locally sourced goods and services wherever possible. KATCO's subsoil use contract includes requirements to source Kazakh-made products. In 2020, local purchases amounted to KZT17.2 billion and included a wide range of products (such as acid, ammonia, benzine, cables, cement, chemicals, cleaning materials, diesel fuel, electricity, generators, laboratory equipment, petrol, spare parts for equipment, pipes and protective gear) and services (such as catering, lodging, equipment and vehicle maintenance, support, training, translation, transportation and medical services). KATCO continues to work with suppliers to encourage the further localisation of products, which can reduce costs as well as the carbon footprint of its activities. This also benefits suppliers thanks to Kazakhstan's relatively low-cost, highly skilled labour market and geographic position at the heart of Eurasia.







ABOUT KATCO

**23,800** MLN KZT

TAX PAID TO THE

IN 2020

**REPUBLICAN BUDGET** 

GENERAL DIRECTOR'S STATEMENT

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CSR SYSTEM

of state and national holidays in Sozak district.

In 2020, KATCO financed more than 30 social investment and charitable

The Company also donated KZT7.9 million to sponsor local celebrations

to each of the 10 best students in the district. The Company also spent

KZT75 million on equipment for the biology and chemistry classes at five

children from low-income families and socially vulnerable groups.

In addition, KATCO provides monthly scholarships of KZT50,000

projects in Sozak district. This included investing KZT21.2 million to support

Achievements in 2020

Sponsorship and charity

Education support

local Sozak district schools.

HEALTH AND OCCUPATIONAL RADIATION PROTECTION SAFETY

# KatcoAthleTour

The KatcoAthleTour initiative is an annual sporting campaign, including a marathon, to support disadvantaged children in Sozak district. Each year, the Company sets target distances for its employees to run, walk or bike. The target was 10,000 kilometres in 2019 and 15,000 kilometres in 2020. More than 100 employees of KATCO, contractors and other Kazatomprom subsidiaries took part in the 2019 marathon. In 2020, the annual marathon was not held due to the pandemic, but KATCO's employees still beat the target.

# Arys recovery efforts

In June 2019, an explosion at a military depot caused extensive damage to the town of Arys, which is near KATCO's production sites in Kazakhstan's Turkistan region. The tragedy forced thousands of local residents to fund other restoration efforts in the town. In addition, to evacuate.

Six of the Company's employees live in Arys. While they and their families were thankfully unharmed in the incident, their homes were badly damaged.

KATCO provided KZT1.5 million to each of these employees so that they could repair their homes. The Company also allocated an additional KZT3 million employees organised their own fundraising to support the people of Arys. All of the money raised was transferred to a special state account for the town's recovery.





**SOCIAL SPENDING ON COMMUNITIES** IN 2020



In the six years since KatcoAthleTour's inception, participants have accumulated a total distance of more than 80,000 kilometres. Overall, the programme has made it possible for KATCO to sponsor seven social projects. In 2019, for example, KZT15 million was used to purchase around 100 computers for online study. Other projects include the sponsorship of the construction of 12 sports grounds in local communities, an initiative that continues in 2021.

AYALA





**ENVIRONMENT** AND BIODIVERSITY

13%

5/25

**ON PATERNITY**/

(2020)

**MATERNITY LEAVE** 

(2020)

**SHARE OF EMPLOYEES** 

**MEN / WOMEN** 

**NUMBER OF EMPLOYEES** 

**WORKING REMOTELY** 

SOCIAL INVOLVEMENT COMMITMENT TO EMPLOYEES

# **Adapting to New Realities**

# Our approach

Policy

KATCO's employees are a vital competitive differentiator. The Company offers its people professional development and career opportunities. Its HR policy respects employees' rights, provides equal opportunity without discrimination on the basis of ethnicity and gender, and strictly complies with local labour laws and international best practices. Comfortable and sanitary facilities are provided for male and female workers and contractors at the production sites. It also ensures that employees have regular opportunities to provide confidential feedback on their work and identify any concerns that may arise.

# Objective

KATCO's objective is to be people-oriented and make employees proud to be a part of the Company. To recruit the best talent, it seeks to be perceived as an employer of choice in Kazakhstan. Offering competitive salaries is one way that it attracts and retains talented workers.

KATCO expects all employees to embody its Mission, Vision and Values. In turn, the Company fosters an open, creative and stimulating workplace with open communications.

The principles of discussion and consultation are vital to the success of an organisation. All staff are covered by a collective agreement with the Company that outlines all benefits, which was last signed for three years (2018-21). Employees select representatives to act on their behalf regarding benefits, working conditions, questions of compensation, as well as occupational health and safety issues. In 2020, KATCO's employees worked an average of seven hours per working

day (eight hours in 2019) and a total of 2,078,733 hours (2,158,722 in 2019). Contractors worked a total of 1,940,096 hours during the reporting period (2,261,308 in 2019). The fewer working hours in 2020 was attributable to the suspension of some work activities due to the pandemic.

Before the outbreak of COVID-19, the Company met frequently with the elected employee representatives to resolve issues together with the senior management, as well as to communicate any news or organisational changes to the workforce. However, most people were unable to be present at these meetings. In 2020, HR and Communications departments used various digital channels to improve internal communication, which allows for greater flexibility and engagement.

KATCO is a truly international company that reflects the great diversity of Kazakhstan. In 2020, the Company adapted many of its HR practices to help its people cope with the global challenges posed by the pandemic.

CSR SYSTEM

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TO STAKEHOLDERS

# COMMITMENT TO EMPLOYEES

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### A shared commitment to success

### **Recruiting in local communities**

KATCO's employees are committed to the communities in which they work and live. Many of their families have lived in these villages for generations. Around 54% of staff are recruited from the Sozak district and 18% are from other districts in the Turkistan region. Overall, 98.9% of the Company's workforce and approximately 55% of managers are recruited from local communities.

ABOUT KATCO GENERAL DIRECTOR'S STATEMENT COMMITMENT TO STAKEHOLDERS

CSR SYSTEM

in France and Kazakhstan.

international in both composition and outlook.

HEALTH AND RADIATION PROTECTION

is one of its true competitive advantages and reflects the great diversity

of Kazakhstan. With nearly 20 nationalities represented, the Company is truly

KATCO recruits people of all ages and at every stage of their careers. It values

KATCO strives to achieve greater gender equality in a mining industry that has

professionals. The Company offers young leaders the chance to learn from

the outlook and experience of older employees and their ability to mentor young

a diverse management team and take advantage of unique learning opportunities

traditionally been a predominantly male workplace. It seeks to involve women at all levels of decision-making, while ensuring women's rights are observed and family issues affecting both genders, such as childcare and family leave, are addressed.

To this end, the Company aims to recruit a larger percentage of women than in its

current workforce. In 2020, women accounted for 179 employees, 15% of the total, and 30% of the senior management team. Among contractors, there were 217

women out of 1,292 locally hired contractors. KATCO has committed to increasing

To provide every employee, regardless of position or gender, with the opportunity to maximise their potential, KATCO dedicates significant resources to training

For example, executives attend annual Orano training programmes that teach

the fundamentals of leadership as well as the technical aspects of mining. One such programme is called Change Maker, which Orano holds at the world-class

ESSEC Business School in Paris. This course aims to train key personnel in change

and professional development opportunities in Kazakhstan and France.

the number of women in senior positions by 50% through 2025.

Training and professional development

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### Staff training



In 2020, many of the training centres that the Company uses were unable to support online training. The HR team overcame these challenges by the second half of the year, ensuring that KATCO can meet its training obligations in full during this difficult period. Most training will continue to be provided online throughout this difficult period. Most training will continue to be provided online throughout the remainder of the pandemic.

### Training sessions by type, 2019-20

SHARE

**OF EMPLOYEES FROM KAZAKHSTAN** 

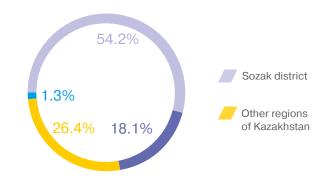
	Sessions held in 2019	Sessions held in 2020	Ducal
Mandatory	528	874	Break paym
Professional	292	336	Birth c
Soft	159	72	Weddi
Language	120	160	Financ
Total	1,099	1,442	Funera

# **Recognising achievement**

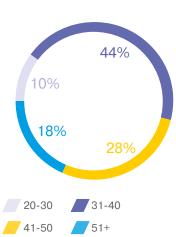
KATCO benefits from the dedication and insights of its employees at every level and recognises outstanding achievement at its annual awards. In 2019, 13 people received "Best employee" award and in 2020, 15 people were recognized as the best ones.

## Additional social assistance





### Promoting diversity KATCO believes that a workplace diverse in gender, age, ethnicity and nationality Age diversity, 2020



management technologies, practices and methodology. In 2020, the restrictions imposed to prevent the spread of COVID-19 meant that most training had to be switched to online formats. This impacted internal training, MBA programmes at universities, and almost everything in between. Despite these challenges, the Company remains committed to executing the full scope of its training plan and in fact exceeded the total number of training sessions held in 2019.

# Gender diversity, 2020

212







## Achievements in 2020

In 2020, KATCO provided 1,442 training hours for mandatory, hardskills, soft-skills and foreign-language training to employees overall, compared with 1,099 hours in 2019. This included 874 mandatory training hours, 336 professional training hours, 72 training hours for 'soft skills' and 160 language training hours. These figures are in line with the regulatory requirements for mandatory training.

## Types of social assistance, 2019-20

	20	19	20	020
kdown of social nents to employees	total KZT mln	Number of employees	total KZT mln	Number of employees
of child	12.65	115	11.66	106
ding	2.31	17	2.32	17
ncial aid	23.27	21	8.36	13
eral of a close relative	17.52	47	25.63	56

KATCO is proud to offer its employees benefits and assistance that exceed its statutory requirements as an employer. The annual budget for these benefits is determined based on the average amount spent in the previous three years. In 2020, the Company allocated nearly KZT26 million for these social benefits, which help staff to cover large, one-off costs that fall outside the scope of the statutory benefits and might otherwise leaving them facing hardship.

Other districts of the Turkistan region and the city of Shymkent

Outside of Kazakhstan

HOURS

(2020)

**AVERAGE LENGTH** 

FOR KATCO EMPLOYEES

**OF WORKING DAY** 

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An internal committee reviews all employee requests for funding under this

In 2020, KATCO launched an initiative to finance university education

To qualify for the scholarship, a student must be studying in a field that

This initiative is in line with KATCO's commitment to higher education

in Kazakhstan. The Company believes that working with leading universities

KATCO launched its first Family Day in October 2019 and plans to make it an

annual event after the pandemic. The event includes tours of the Company's

production sites and information about the mining process. It provides family

members with transparency and reassurance about the safety and quality of the

from a family with four or more children currently living at home.

to foster talent in the nuclear industry benefits all stakeholders.

baby or to help pay for the funeral of a close relative.

Scholarships for employees' children

year and plans to continue this project in 2021.

working conditions for their loved ones.

programme. Most of these grants are provided to employees who have a new

for employees' children. The Company provided scholarships to 18 children last

the government has determined to be in high demand in the energy sector and be

OCCUPATIONAL SAFETY



**13** CLIMATE ACTION

Es.

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

PRODUCTION

of Syzgan.

and recycling project for students at the school in Sholakkorgan.

## SDG 13: CLIMATE ACTION

2 indirect energy emissions by 2025. future



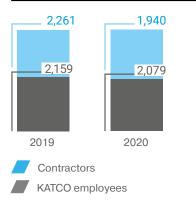
UN Sustainable Development Goal 16 encourages promoting peaceful and inclusive societies for sustainable development, providing access to justice for all and building effective, accountable and inclusive institutions at all levels. The UN notes that while progress is being made in this area throughout much of the world, challenges still exist.

KATCO adheres to the principles of openness, transparency and accountability in its relations with stakeholders. One practical example is holding Family days at its facilities for members of local communities. The Company has also undertaken a stakeholder mapping exercise to better understand stakeholder expectations and interests. In addition, KATCO strictly complies with all applicable Kazakh and French (SAPIN II) anti-corruption and anti-bribery legislation.

To further improve its efforts related to SDG 16, by 2025, the Company plans to put in place a grievance mechanism to better address the concerns of local community members. It will also introduce a policy to ensure the transparency and effectiveness of its investments in the social sphere.

\* Source: https://unstats.un.org/sdgs/report/2020/

Total annual working hours, **KATCO** employees and contractors (000)



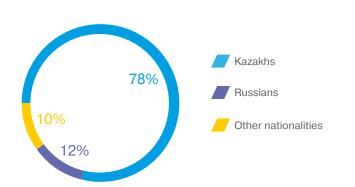
### Talent pipeline

Family Day

To identify and foster the professional development of young leaders, KATCO takes on around 30 interns a year from top technical institutes and universities, including Nazarbayev University, the Kazakh National Technical University and Semey Geological Prospecting College. The Company provides them with invaluable work experience and recruits the best students for full-time work after graduation.

The HR function also maintains an internal management talent pool. These employees undergo training in house and within Orano to prepare them to take over future leadership positions.

### Ethnic diversity, 2020



52



# **SDG CONTRIBUTION**

# SDG 12: RESPONSIBLE CONSUMPTION AND

UN Sustainable Development Goal 12 is focused on ensuring sustainable consumption and production patterns. The UN estimates that while the world continues to use natural resources unsustainably, a total of 79 countries and the EU enacted at least one policy to promote sustainable consumption and production from 2017 to 2019.

KATCO's efforts to promote responsible consumption and production include holding cleanup days for employees on site and recycling waste. In the community, the Company conducts eco weeks at Sozak district schools and supported the repair of a water channel in the village

KATCO's ambition for SDG 12 is to achieve a 25% reduction of non-recyclable wastes by 2025. To reduce plastic waste, it will replace plastic cups and bags with biodegradable options on site and at its Nur-Sultan office, as well as reduce single-use plastic bottles on site.

In addition, the Company will introduce better monitoring of ground water use, as well as switch to green detergents and reuse water on site. It also plans to implement a waste consumption

UN Sustainable Development Goal 13 calls for taking urgent action to combat climate change and its impacts. The UN notes that climate change is exacerbating the frequency and severity of natural disasters, which affected more than 39 million people worldwide in 2018.

Operating in a fragile arid ecosystem gives KATCO a first-hand perspective of climate change. To date, the Company has installed solar panels along the pedestrian pathway on site.

KATCO's SDG 13 ambition is to achieve a 30% reduction in Scope 1 direct emissions and Scope

The installation of a heat pump system will avoid using fuel for the boiler and therefore contributing to KATCO's Scope 1 direct emissions. Among other projects identified to reach this ambitious target, the Company aims to source part of its energy from renewable sources in the

## SDG 16: PEACE, JUSTICE AND STRONG INSTITUTIONS

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# Zhas Orken

Since 2019, KATCO has been participating in Samruk-Kazyna's Zhas Orken programme, which supports the development of young professionals. The initiative provides talented university graduates with the opportunity to undergo five-month rotations at four enterprises in the Samruk-Kazyna system. The graduates earn a salary, have a personal mentor and, if they successfully finish the programme, are offered further employment.



"I am very happy to gain my first professional experience at KATCO. People here are compassionate and friendly. The company is large and significant, so there are many things to learn."

> Dinara Tulebayeva, Zhas Orken participant at KATCO

# Model Zone award

In May 2019, KATCO's Plant Direction received the Model Zone award from Orano Corporate Operational Excellence (OE). This was the first time an organisation from Orano's Mining Business Unit was recognised with this award. In 2020, the Plant success inspired the Company's Maintenance Direction to implement the Tamasha workshop project at Tortkuduk. Entering 2021, work was continuing on the Muyunkum workshop.



"The idea was to implement OE tools to make each plant employee be autonomous within their area of responsibility. We called this project 'Tamasha zavod' ['tamasha' is 'great' in Kazakh, 'zavod' is 'plant' in Russian]. With the support of KATCO's OE team, we had nine months of hard work. In addition to implementing OE tools, we created standards to improve our work and make it safer."



Philippe Dubois, KATCO Plant Director (2014-19)

"This success inspired the Maintenance and Mining directions to launch their own Tamasha projects."

Ahmed Benamane, Head of OE Department (March-December 2019)

# Working remotely to overcome challenges together

KATCO's HR function sought to help employees to adapt to the realities of working during the pandemic by acting as a bridge between them and the Company. Throughout the organisation, people showed their ability to work hard under pressure and cope with significant changes. While most site personnel need to be physically present to ensure continuous operation, KATCO provided headquarters staff with the equipment they needed to work from home. Providing HR services to a remote workforce also required adopting certain new approaches.







# Kazakh labour code changes

In 2020, Kazakhstan made several important changes to its labour code. The most significant of these is that companies in Kazakhstan are now required to upload the terms and conditions of all contracts with employees to a single government database. The Company's HR and IT functions are currently working to integrate its internal systems with the new database.

Another change relates to contractor personnel, who did not previously have the same rights as people directly employed by an organisation. KATCO's goal is to provide contractors with comparable rights and protections to hired employees. The Company remains focused on ensuring strong relationships with its contractors.

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"Working from home can be good because you no longer need to commute to the office; you just log onto your computer and start working. This comes at the cost of fewer opportunities to communicate with colleagues, unfortunately. I dearly miss having real-life conversations with my friends from the office." Dinara Bersalimova, HR Business Partner

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**MASTER PLAN** 

**IMPLEMENTED** 

**Total R&D investment** 

(KZT mln)

2019

**PROJECTS** 

183.5

IN 2020

COMMITMENT TO EMPLOYEES

# **A** Culture of Continuous Improvement

Policy KATCO views innovation as a core part of its business. The technical expertise of its multicultural team helps them to discover unique solutions to production challenges. In recent years, the Company's R&D function has prioritised the development of technology that can make it more efficient and address environmental challenges.

# Objective activities.

**Centres of excellence** 

Orano has provided KATCO with invaluable technical assistance in the R&D process, primarily through access to its global technical centres of excellence in France. They generate leading research on industrial applications in the fields of materials, corrosion and welding; chemistry and radiochemistry; component qualification; and thermal hydraulic testing. In 2020, the Company's own laboratories received updated ISO 17025 (2019) certification.

# Mine remediation

## Orano awards

2020

Each year, Orano recognises innovation by its member companies at an award ceremony in Paris. In 2020, KATCO submitted five projects for consideration at the Orano Awards: its COVID-19 response, membrane installation, second generation mobile concentrator, visual management and the Tamasha maintenance workshop model zone. Each project represents the Company's innovation capacity at its best, responding to challenges on the ground with pioneering solutions that have the capacity to transform the business.

# KATCO has an R&D function that drives its research into new approaches to mining and environmental mitigation. In 2020, the Company began the industrial implementation of several innovation projects that it has been developing in recent years and spent a record of more than KZT180 million on innovation.



FERENCE !



REPORTING AND METHODOLOGY





KATCO's objective is to become more efficient and sustainable by developing innovative projects focusing on health, safety and the environment throughout its

KATCO's mine remediation approach seeks innovative solutions to limit a former mining site's impact on the environment and population to a level that is as low as reasonably achievable. For that purpose, the Company has developed a specific research project on natural attenuation that involves the skills of both Orano and Kazatomprom. It is also in the research and experimental phase of defining a process for the remediation of soil with low levels of radioactive pollution.

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# Soil remediation

In 2020, KATCO continued to research and test soil remediation methods in the laboratory. The project aims to develop a chemical treatment to clean up soil that becomes contaminated with low-level radiation during mining operations.

In 2021, the Company plans to test two types of leaching: heap and vat (tank). If the initial tests are successful, it plans to move to a second phase of industrial testing.

Heap leaching is an industrial mining process used to extract precious metals. copper, uranium and other compounds from ore using a series of chemical reactions that absorb specific minerals and re-separate them after their division from other earth materials. Heap leaching is widely used in modern large-scale mining operations as it produces the desired concentrates at a lower cost compared to conventional processing methods such as flotation, agitation and vat leaching.

Vat (tank) leaching involves placing ore, usually after size reduction and classification, into large tanks or vats at ambient operating conditions and containing a leaching solution and allowing the valuable material to leach from the ore into solution. The solution drains from the tank, and is either recycled back into the vat or is pumped to the next step of the recovery process.

## Natural attenuation

in 2021.

# **Digital Mine**

During the reporting period, KATCO also made progress on two component projects of the Digital Mine solution: LoRa (long-range) data transmission and HYTEC 3D reactive modelling. LoRa is a special radio technology that can wirelessly connect devices, sensors and other technology, even in difficult terrain.

One of the Company's most important current innovation projects is HYTEC 3D reactive modelling, which provides visualisation of the production, including geology, hydrogeology and metallurgy, in one model, using 2D and 3D mapping. This technology has the potential to significantly improve planning and decision-making, which ultimately has a positive impact on the profitability of new projects. In 2020, HYTEC entered a new operational phase following the training of specialists in its use. Both the HYTEC and LoRa technologies remain in advanced development

in 2021.

This project combines fundamental and applied science in cooperation with researchers from Nazarbayev University. It aims at a better understanding of the geological formations hosting KATCO's uranium ore bodies. This applied work will permit improved reserve calculations, as well as potentially streamline the recovery process and improve planning strategies for future mining work.

The project launched in 2021, after the reporting period, and is expected to proceed with data collection including field work and study of core samples from test drilling.

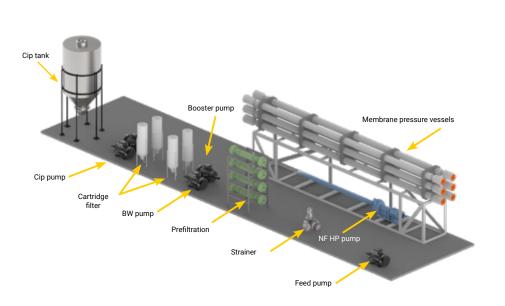


### Membrane project

KATCO's membrane project is aimed at optimising the consumption of chemical reagents during the processing of the uranium-bearing solutions. It makes it possible to increase output from existing production volumes and process lower-concentration uranium, thereby extending the useful production period of existing deposits and the maximum productivity of mines over their lifetime.

In 2020, the membrane unit was installed at the Muyunkum site. It is undergoing acceptance tests ahead of an expected launch later in 2021.

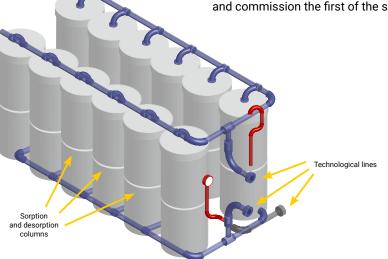
## Membrane technology



### Second-generation mobile concentrator

Another project under development is a second-generation mobile concentrator unit that increases the uranium content in solution at the well field prior to being pumped back for processing. After reviewing lessons learned during the implementation of the first-generation concentrator, KATCO's R&D function made improvements to the process and equipment.

In 2020, the detail design documentation and equipment specification were finalised. In the second half of 2021, the Company plans to construct and commission the first of the second-generation units.





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This project aims to model the natural attenuation of water-bearing horizons after the ISR process. Natural attenuation is the self-recovery of concentration of contaminants in soil or groundwater caused by environmental processes. Modelling this process permits the more efficient planning of recultivation after the completion of mining. Begun in 2019, the final results and report are due

KATCO has developed a Digital Mine Roadmap, which includes several initiatives currently at different stages of progress. These projects use a variety of digital technologies to aid the exploration and mining process.

In 2020, the Company held two training seminars on 3D hydrodynamic modelling and launched its first two studies.

### Stratigraphy and sedimentology of uranium bearing formations

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# **About this CSR Report**

and covered 2017-18.

- and social impact.
- · Step 3. Stakeholders were surveyed to identify their expectations and assess the impact on them of certain aspects of the Company's activities. The survey included stakeholders who are directly involved in the Company's activities, such as employees and shareholders, as well as a wider range of stakeholders, including suppliers, partners, government agencies, local and international NGOs, and representatives of the local communities in the towns of Sholakkorgan, Taukent and Tasty.

## Materiality Matrix\*

1	Occupational health and safety	
2	Community involvement	
3	Environmental impact	
4	Risk management	
5	Transparency	
6	Employee development	
7	Labour relations	
8	Procurement	
9	Business ethics	
10	Research, development and innovation	
/11	Production efficiency	
12	Effluents and waste	
13	Managing long-term impacts	
14	Biodiversity	
15	Uranium transportation	

\*Topics determined to be material are highlighted yellow

# REPORTING AND METHODOLOGY

INNOVATION

REPORTING AND METHODOLOGY



This Corporate Social Responsibility (CSR) Report for KATCO Kazakh-French Joint Venture LLP (KATCO) has been prepared to provide information about the Company's activities to meet the expectations of all stakeholders.

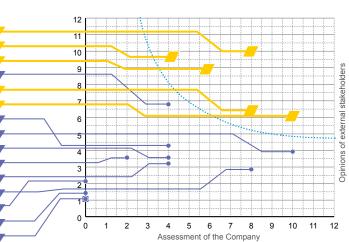
This CSR Report reflects the Company's operational results from 1 January 2019 to 31 December 2020. The previous CSR Report was published in 2019

# Materiality Matrix

KATCO is committed to disclosing information as effectively as possible. To this end, this CSR Report has been structured based on a judgement of the materiality of the disclosed topics. Materiality implies topics that are important for creating value for the Company, as well as for helping key stakeholders to make decisions. The judgement of materiality helps KATCO to consider the impact of various aspects of the sustainable development of the Company's business processes and value creation when organising its work.

- The judgement of materiality included the following main steps:
- · Step 1. A wide range of potentially significant topics relevant to the Company's activities was identified.
- · Step 2. The topics were discussed with managers and employees of structural divisions to assess the Company's economic, environmental

• Step 4. In accordance with the opinions of stakeholders and the Company's assessment, the topics were placed on the Materiality Matrix presented below. The highest priority was given to those located above and to the right of the blue line on the Matrix. Their disclosure has been given the primary importance in the preparation of this CSR Report.



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This CSR Report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards. In doing so, the most relevant indicators from the Standards have been used to best disclose information about material

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GRI Standard	Indicator	Disclosure	Page in CSR Report
General information about the report	102-50	Reporting period	2
	102-51	Date of most recent report	6
	102-52	Reporting cycle	6
	102-53	Contact point for questions regarding the report	Back cove
	102-54	Claims of reporting in accordance with the GRI Standards	61-63
	102-55	GRI content index	62-63
GRI 103 (2016): Management approach	103-1	Explanation of the material topic and its Boundary	6
	103-2	The management approach and its components	15, 61
Economic			
GRI 201 (2016): Economic performance	201-1	Direct economic value generated and distributed	2, 7, 45
GRI 202 (2016): Market presence	202-2	Proportion of senior management hired from the local community	50
GRI 203 (2016): Indirect economic impacts	203-1	Infrastructure investments and services supported	-
GRI 204 (2016): Procurement practices	204-1	Proportion of spending on local suppliers	45
Environmental			
GRI 302 (2016): Energy	302-1	Energy consumption within the organisation	4
GRI 303 (2018): Water and effluents	303-5	Water consumption	4
GRI 305 (2016): Emissions	305-1	Direct (Scope 1) GHG emissions	41
GRI 306 (2016): Effluents and waste	306-2	Total weight of hazardous waste, with a breakdown by disposal method	38
GRI 307 (2016): Environmental compliance	307-1	Significant fines and non- monetary sanctions for non- compliance with environmental laws and/or regulations	n/a
Social			
GRI 401 (2016): Employment	401-1	New employee hires	50
GRI 402 (2016): Labour/management relations	402-1	Minimum notice periods regarding operational changes	n/a
GRI 403 (2018): Occupational health and safety	403-1	Occupational health and safety management system	33-35
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	33-35
	403-9	Work-related injuries	33-3
GRI 404 (2016): Training and education	404-1	Average hours of training per year per employee	9, 26, 33-35
	404-2	Programmes for upgrading employee skills and transition assistance programmes	33-35
GRI 405 (2016): Diversity and equal opportunity	405-1	Diversity of governance bodies	50

	the Standards have been used to best disclose information about material topics regarding sustainability. While this CSR Report does not fully comply with the GRI Standards, the main approaches and principles for disclosure outlined in the Standards have been used to ensure qualitative disclosure. The table below provides the locations in this CSR Report of information about		
	various aspects of sus		
			Page in
GRI Standard	Indicator	Disclosure	CSR Report
GRI 101 (2016): Foundation			
GRI 102 (2016): General disclosures			
Organisational profile	102-1	Name of the organisation	2
	102-2	Activities, brands, products and services	2
	102-3	Location of headquarters	2, 5
	102-4	Location of operations	2, 5
	102-5	Ownership and legal form	2, 15
	102-6	Markets served	2
	102-7	Scale of the organisation	2, 9
	102-8	Information on employees and other workers	9, 49-52
	102-9	Supply chain	4
	102-10	Significant changes to the organisation and its supply chain	n/a
	102-11	Precautionary Principle or approach	27-33
	102-12	External initiatives	15-18, 45-46
	102-13	Membership of associations	20
Strategy	102-14	Statement from senior decision- maker	6-8
Ethics and integrity	102-16	Values, principles, standards and norms of behaviour	17, 22-23
Governance	102-18	Governance structure	15-17
	102-22	Composition of the highest governance body and its committees	15-17
Stakeholder engagement	102-41	Collective bargaining agreements	16, 49
	102-42	Identifying and selecting stakeholders	7, 18-20
	102-43	Approach to stakeholder engagement	18-20
	102-44	Key topics and concerns raised	18-20, 61
Reporting practice	102-46	Defining report content and topic Boundaries	IFC
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List of material topics

Changes in reporting

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n/a

**GRI** Index







# Corporate Social Responsibility Report 2020

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