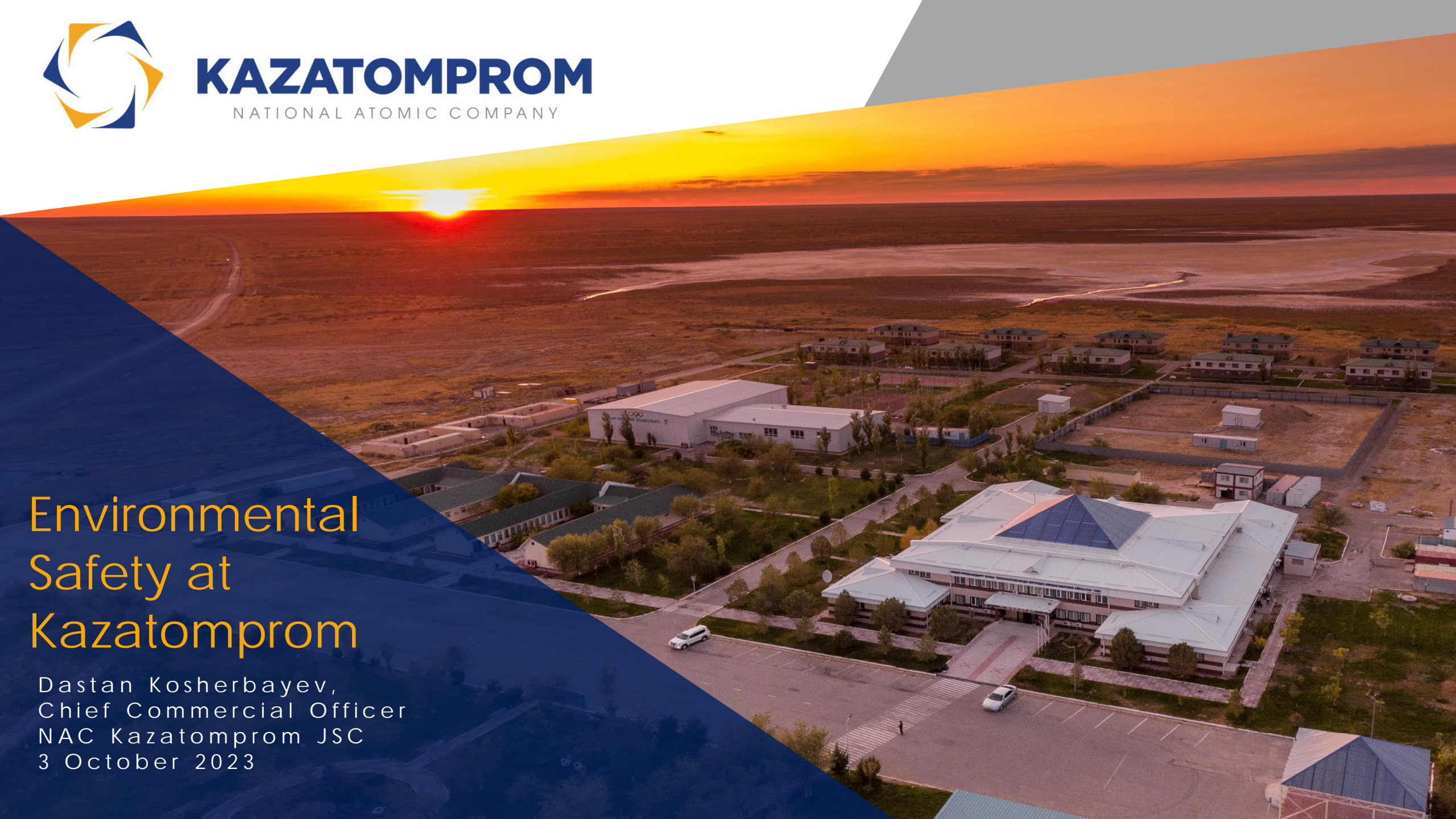




KAZATOMPROM
NATIONAL ATOMIC COMPANY

Environmental Safety at Kazatomprom

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NAC Kazatomprom JSC
3 October 2023



Environmental Protection – main priority

Kazatomprom's Environment Protection politics

- Rational usage of natural resources
- Environmental risks minimization
- Prevention of industrial, environmental, radiation and nuclear accidents
- Compliance with the legal requirements



ISR method benefits

Kazatomprom produces natural uranium using the in-situ leaching (ISR) method.







ISR method advantages

- Absence ore dust
- Reduction of construction time
- Minimum production cost
- Minimal radioactive exposure
- Lesser threat to health and security
- Minimal environmental impact

Environmental impact

Kazatomprom is not among the 50 major polluters in Kazakhstan.
The contribution to national emissions, waste and greenhouse gas emissions is insignificant.

* according to the Decree of the Government of the Republic of Kazakhstan dated April 1, 2022 (No. 187)

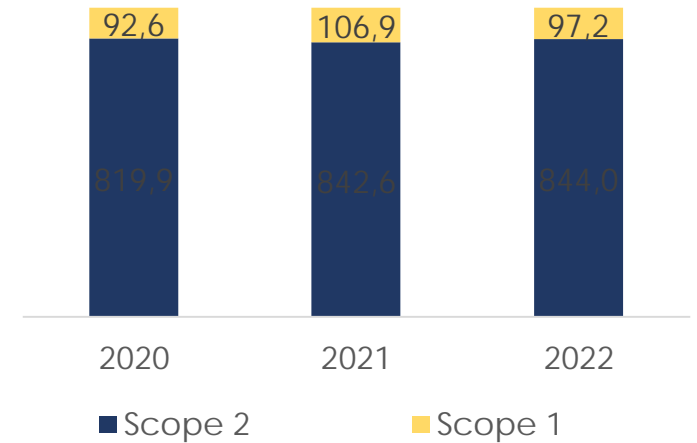
		
 Pollutant emissions	2 400 000 tons	1 845 tons
 Discharges of pollutants	1 000 000 tons	2 206 tons
 Wastes	735 700 000 tons	994 869 tons
 Greenhouse gas emissions	350 000 000 tons	97 200 tons

Decarbonization

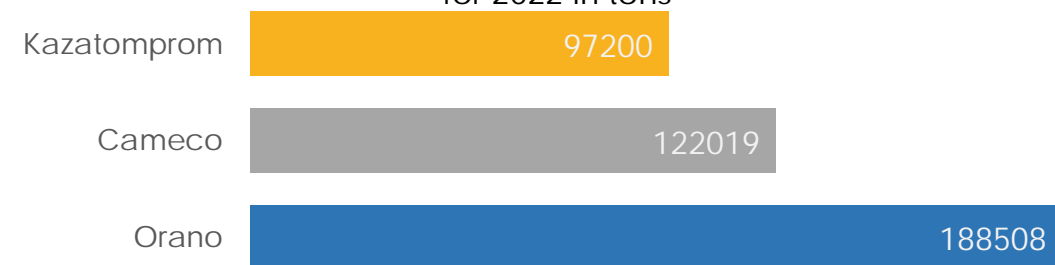
Kazakhstan has committed to achieve carbon neutrality by 2060

- The Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060 has been approved
- The concept of low-carbon development of Samruk-Kazyna JSC was approved
- In November 2022, the Board of Directors approved the Strategy for decarbonization and achieving carbon neutrality of NAC Kazatomprom JSC until 2060.

Total greenhouse gas emissions (Scope 1+2) for 2020-2022 in thousand tons



Greenhouse gas emission benchmark (Scope 1) for 2022 in tons



ESAP Plan implementation

ESAP Roadmap

- › In 2018, the Roadmap for the implementation of the Environmental and Social Action Plan (ESAP) was developed and approved by the KAP Board of Directors;
- › The purpose of this Plan is to bring the existing labor, environmental and social protection system into compliance with international best industry practices, the standards of an international financial corporation and the legislation of OECD countries*;
- › The main thematic areas of the ESAP Plan: corporate sphere, ecology and monitoring, social sphere, planning for the end of the life cycle of enterprises (closing/liquidation), industrial waste management, labor protection.

ESAP implementation steps (2018 -2023):

- › Trained specialists in the best practices;
- › Developed internal procedures and documents that corresponds to the best international practices;
- › Conducted environmental and social studies of the impact of production activities on the environment and local population;
- › These results will allow us to continue work in minimization of negative impact on the environment and will contribute to the implementation of the decarbonization project.

Project costs

- › Estimated costs – 8,5 mln USD;
- › Since the beginning – 2,04 mln USD

Project monitoring

- › The indicators of ESAP execution are in the KPI of subsidiary companies management;
- › Quarterly report on the progress to the HSE Committee of the Board of Directors of the Company.



Corporate Programs

ESAP Environmental and Social Action Plan – Complex program of measures in the environmental and social spheres of Kazatomprom (2018 – 2023)

Completion of work in 2023, audit



Program of comprehensive environmental and social studies of the impact of production activities of NAC Kazatomprom JSC on the environment and the local population
(Environmental and Social Research Program /ESRP)
Stages 1 and 2 have been implemented, completion in 2024.



«Zero Waste» Program

Stages 1 and 2 have been implemented, completion in 2024.



Program to protect birds from exposure to power lines

At the beginning of implementation, 2023



Development of a Standard/Strategy for water resources management

Completion of implementation, end of 2023.

Animal and Bird Protection Program

In 2022, the Program for the protection of birds from the effects of power lines was approved at the enterprises of NAC Kazatomprom JSC, R&D was approved by SK Fund

- The program is aimed at preserving ornithological biodiversity in areas adjacent to Kazatomprom enterprises.
- As part of the implementation of the ESAP Plan, in the territories adjacent to the uranium mining enterprises of NAC Kazatomprom JSC, birds listed in the Red Data Book of Kazakhstan (Eastern Imperial Eagle, Short-toed snake eagle, Dalmatian Pelican, and Glossy Ibis) were identified.
- The sections of overhead power lines served by the subsidiaries and affiliates are not equipped with special bird protection devices (BPD).

Implementation of the Bird Protection Program in 2023

- Carrying out ornithological research at industrial sites of subsidiaries and affiliates that have power transmission lines;
- Development of measures to ensure ornithological safety of power grid facilities and related electrical installations;

Implementation of the Project “MAL JAN AMAN”

In order to ensure the safety of pets and increase their visibility at night, in order to prevent collisions with vehicles, reflective collars were provided to owners of large livestock and farms located near Kazatomprom's technological roads.



Sustainable Development and ESG

1 Assignment of the first independent ESG rating
On December 20, 2022, NAC Kazatomprom JSC was assigned the first independent ESG rating from the leading international rating agency S&P Global Ratings. Kazatomprom has scored 51 points.



2 Kazatomprom joined the UN Global Compact
On March 15, 2022, NAC Kazatomprom JSC officially joined the UN Global Compact. Participation in the UN Global Compact is one of the key indicators of Kazatomprom's commitment to the principles of sustainable development, climate agenda and decarbonization issues.



3 Advances in Non-Financial Disclosure
Kazatomprom integrated annual report for 2021:

- was prepared in accordance with GRI "core option" standards, thus achieving independent certification of 100% of the indicators;
- received the Platinum (highest) MarCom Awards in the category "Annual reporting in the field of corporate social responsibility";
- received the highest rating - 5 stars in the RAEX annual reports rating;
- took 1st place and became the leader in the "Best ESG Information Disclosure" rating according to PriceWaterhouseCoopers.



Investment project

Since 2020, Kazatomprom has been implementing an investment project to create a refining production facility with a capacity of 6,000 tU per year.

"Building 600. Reconstruction. Refining production of uranium oxide-oxide with a capacity of 6000 tons of U per year. JSC "UMP" Northern site."

Project goals

- Creation of uranium refining production using Cameco technology with the final product of nuclear-grade U₃O₈.
- Improving the environmental situation in the region by eliminating the discharge of liquid radioactive waste and reducing the consumption of hazardous chemicals during the processing of natural uranium concentrate.

Project benefits

Environmental impact on UMP and Eastern Kazakhstan:

- Reduction of the consumption of chemical reagents by ~ 270 thousand tons (excluding 7000 tons/year of ammonia water and reducing the consumption of nitric acid from 8000 tons to 1500 tons/year);
- Reduction of liquid radioactive waste by ~ 880 thousand m³ (or 44 thousand m³ per year);
- Reduction of solid radioactive waste by ~ 140 tons (from 27 to 20 tons per year).

New NFC product

The construction of a refining production facility using Cameco technology will allow us to expand our product line - production of both U₃O₈ and UO₃

New NFC step – Conversion

Subject to favorable market conditions, the development of refining production may lay the groundwork for the emergence of a new phase of the nuclear fuel cycle in the Republic of Kazakhstan: conversion production using Cameco technology (UF₆).



Thank You!

