



**КазМұнайГаз**  
NATIONAL COMPANY ҰЛТТЫҚ КОМПАНИЯСЫ

#ESG  
#SUSTAINABILITY  
#HUMAN RIGHTS

# HUMANIZING ENERGY

SUSTAINABLE DEVELOPMENT REPORT

# ENERGY 2022

# TABLE OF CONTENTS

About Report .....14

Statement from the Chairman of the Board  
of Directors .....16

Statement from the Chairman of the Management  
Board .....18

About the company .....20

## CORPORATE GOVERNANCE

Corporate governance system .....33	Stakeholder Engagement .....53
Company strategy and key results .....45	Initiatives and memberships .....56
Sustainable development management .....49	Company's contribution to the SDGs .....61
Our approach to sustainable development management .....49	ESG Risk Management .....66
Material topics of the report .....52	Digital development .....70

## OUR PEOPLE AND DEVELOPMENT OF THE REGIONS OF PRESENCE

Our approach to management .....73	Respect for human rights and social support .....83
Employment .....75	Ethics and integrity ..... 84
Personnel development .....78	Social stability ..... 88
Equal opportunities and staff motivation .....82	Our Communities .....92

## HEALTH, SAFETY AND ENVIRONMENT

Our approach to management .....99	Abandonment and reclamation of work sites .....122
Occupational health and safety .....104	Offshore well management .....123
Interaction with contractors .....107	Oil spill prevention and response .....123
Industrial sanitation and hygiene .....109	Conservation of biodiversity and support of specially protected natural areas .....126
Environmental protection .....111	Training of staff in environmental management issues .....131
Air protection .....112	Environmental assessment of the planned economic activity .....132
Rational use of crude gas .....114	Interaction with public organizations .....133
Water management .....115	Green office concept in KMG .....134
Waste management and land reclamation .....118	

## LOW-CARBON DEVELOPMENT

Low-carbon policy in the company .....139
Greenhouse gas emissions .....142
Enhancing energy efficiency and energy saving .....144
Renewable energy sources .....148
Additional decarbonization measures .....148

## ECONOMIC PERFORMANCE

Created and distributed economic value .....152
Tax accounting policy of KMG .....153
Implementation of investment projects .....156
Procurement practices .....162
Compliance with requirements of the legislation .....164

## ANNEXES

Independent verification report .....168
Annex 1. Reporting boundaries, changes, notes .....170
Annex 2. Environmental indicators .....173
Annex 3. Social indicators .....176
Annex 4. GRI Content Index .....177
Annex 5. Abbreviations and acronyms .....187
Contact information .....191



### THE CONCEPT OF THE REPORT

# HUMANIZING ENERGY

SUSTAINABLE DEVELOPMENT REPORT **2022**

*Our business thrives on the dedication and commitment of our employees, who tirelessly work to develop our Company. They are the driving force behind our success and our most valuable asset.*

*Our report demonstrates the profound impact of our people's energy on the development of the Company, society, and the nation. Our employees' unwavering enthusiasm enables us to achieve remarkable economic prosperity, foster social stability, and fulfil our responsibility to preserve the environment.*

*KMG Sustainability Reports are available in electronic and interactive format in the State, Russian and English languages on the KMG website*



# OIL AND GAS PRODUCTION

## KEY INDICATORS

2-1, 2-6, 2-7



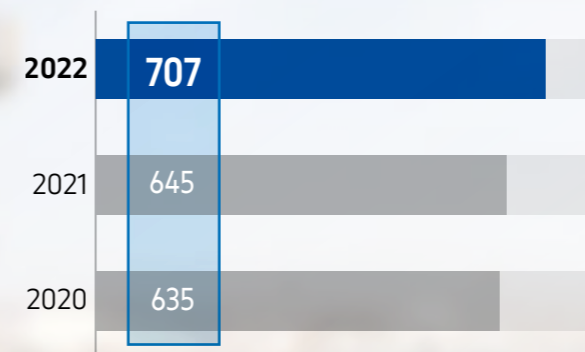
**Abylaykhan  
ZHUMAGAZIYEV**

Best Well Surveying Operator  
JSC "Embamunaigas"

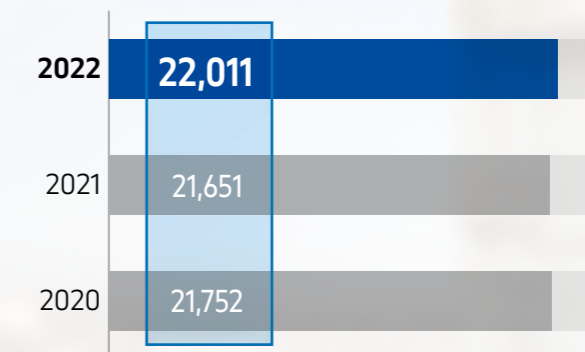
First place in the "Uzdik Maman – 2022"  
professional contest



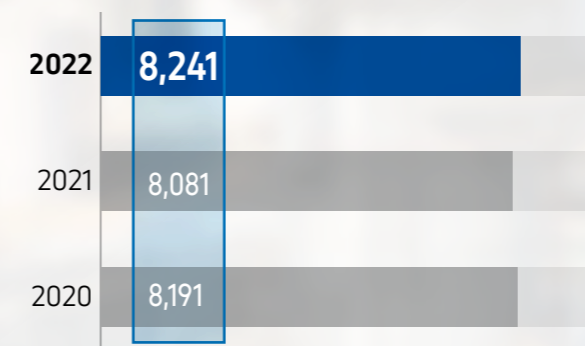
**PRMS INVENTORY  
CATEGORY 2P**  
million tons o.e.



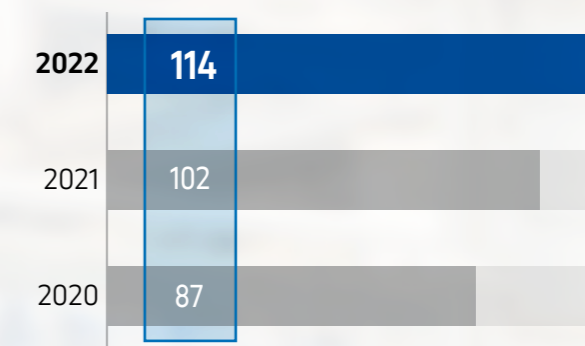

**OIL  
AND CONDENSATE**  
thousand tons




**NATURAL AND  
ASSOCIATED GAS**  
million m<sup>3</sup>




**INTENSITY OF CO<sub>2</sub>  
EMISSIONS**  
ton per 1,000 tons of HCs



# OIL TRANSPORTATION

## KEY INDICATORS

2-1, 2-6, 2-7



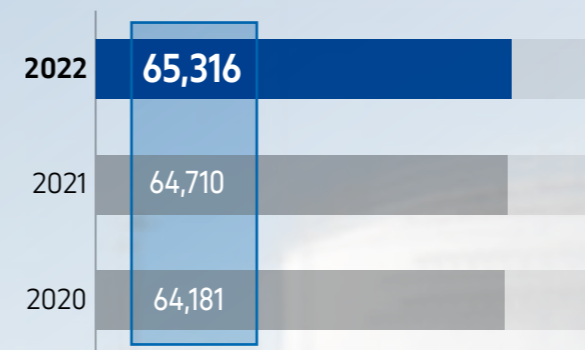
**Rysbek SARSENGALIYEV**

Best Technician for Repair and Maintenance of Technological Equipment "KazTransOil" JSC

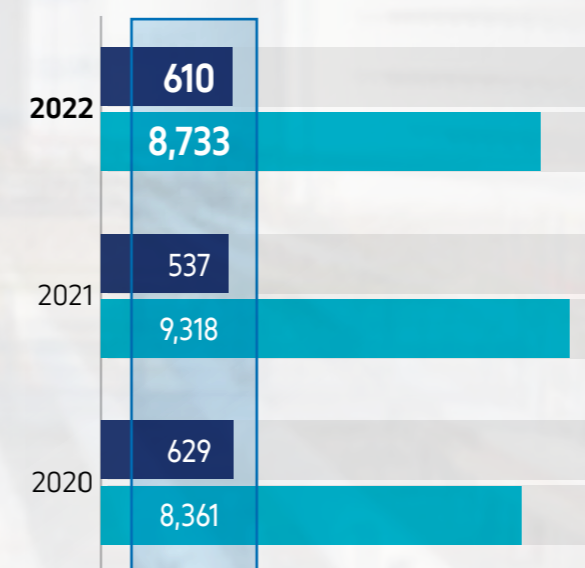
First place in the "Uzdik Maman – 2022" professional contest



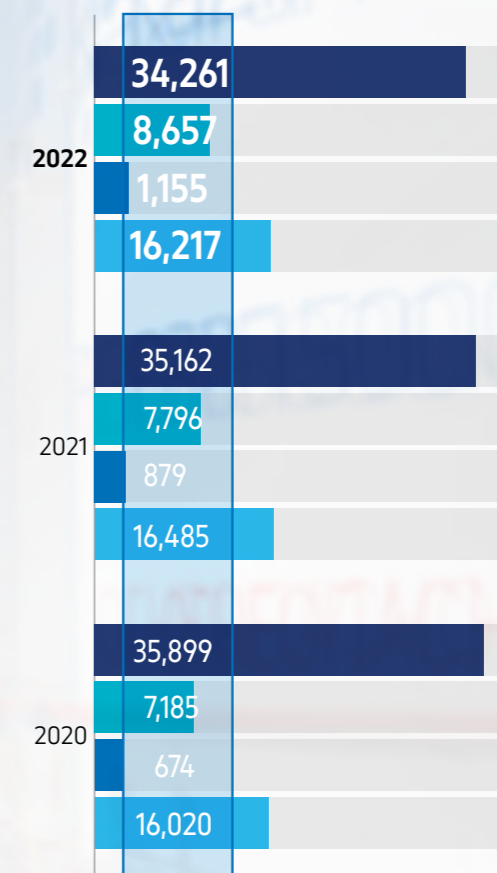
### OIL TRANSPORTATION VOLUME PER KMG SHARE<sup>1</sup>, thousand tons



### SEA OIL TRANSPORTATION VOLUME, thousand tons



### OIL CARGO<sup>2</sup>, million tons \*km



■ KazTransOil (100%)  
■ Kazakh-Chinese Pipeline (50%)  
■ MunaiTas (51%)  
■ Caspian Pipeline Consortium (20,75%)

■ Volume of oil transportation in the Caspian region  
■ Volume of oil transportation in the Black

<sup>1</sup> The consolidated oil transportation volume takes into account the transportation volume of each individual pipeline company, taking into account KMG's operating share (excluding KTO). Some oil volumes may be transported by two or three pipeline companies and accordingly these volumes are counted more than once in the consolidated oil transportation volume.

<sup>2</sup> The freight turnover of each individual pipeline company is calculated taking into account the operational share of KazMunayGas (excluding KTO).

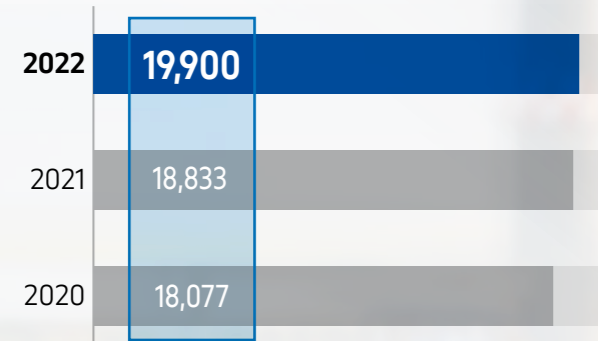
# REFINING AND MARKETING

## KEY INDICATORS

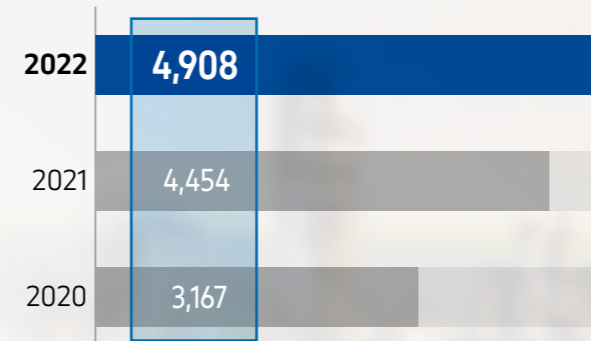
2-1, 2-6, 2-7



**OIL REFINING,**  
thousand tons



**WHOLESALE SALE OF KMG PETROLEUM PRODUCTS PRODUCED IN THE REPUBLIC OF KAZAKHSTAN,**  
thousand tons



## SERVICE



- GROUND TRANSPORTATION, INCLUDING TRANSPORTATION OF GOODS AND PASSENGERS, TRANSPORTATION AND TECHNOLOGICAL MAINTENANCE OF DEPOSITS;
- SUPPORT FOR MARITIME OPERATIONS;
- DRILLING AND DEVELOPMENT OF OIL AND GAS WELLS;
- UNDERGROUND AND MAJOR WELL REPAIRS;
- PRODUCTION OF OIL AND GAS EQUIPMENT;
- AUTOMATION OF TECHNOLOGICAL PROCESSES;
- MAINTENANCE OF MEASURING INSTRUMENTS, AUTOMATION AND TELEMCHANICS SYSTEMS, PROVISION OF TELECOMMUNICATION, RADIO COMMUNICATION AND CABLE AND SATELLITE TELEVISION SERVICES IN THE OIL FIELDS; INSPECTION AND REPAIR OF MEASURING INSTRUMENTS; MAINTENANCE OF SECURITY ALARMS;
- OIL SPILL RESPONSE SERVICE;
- EXTRACTION AND TRANSPORTATION OF DRINKING WATER, PROVISION OF TRANSPORTATION OF SEAWATER;
- CATERING AND MAINTENANCE OF SOCIAL FACILITIES, ETC.



**Rinat BEKKAIROV**

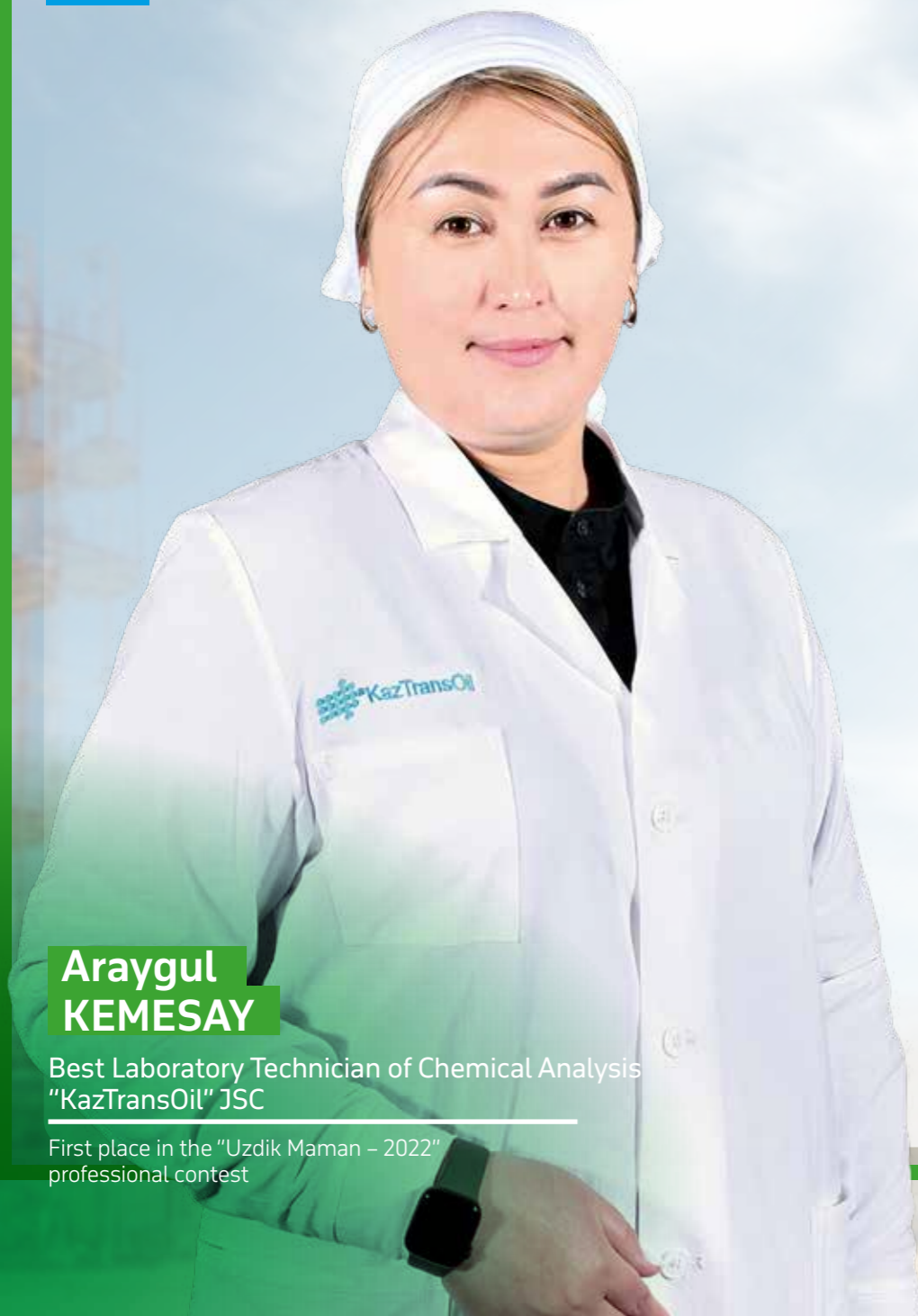
Best Compressor Unit Operator  
"Atyrau Refinery" LLP

Second place in the "Uzdik Maman – 2022"  
professional contest

# E – ENVIRONMENTAL RESPONSIBILITY

## KEY INDICATORS

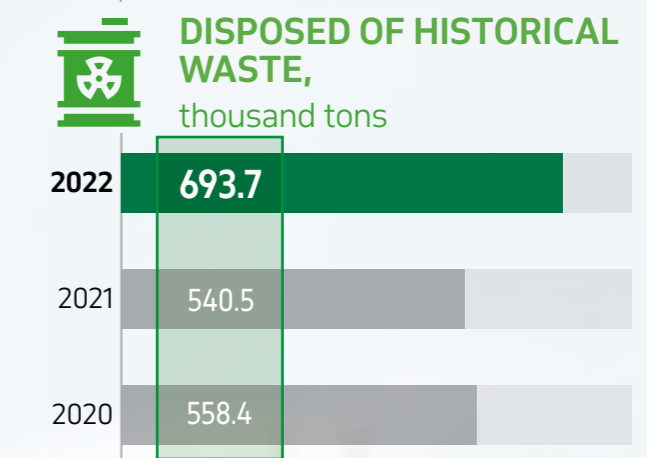
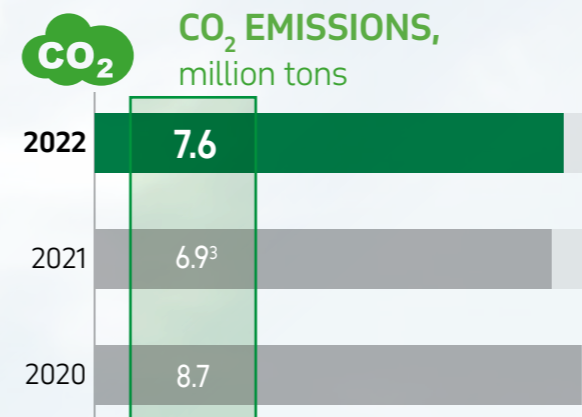
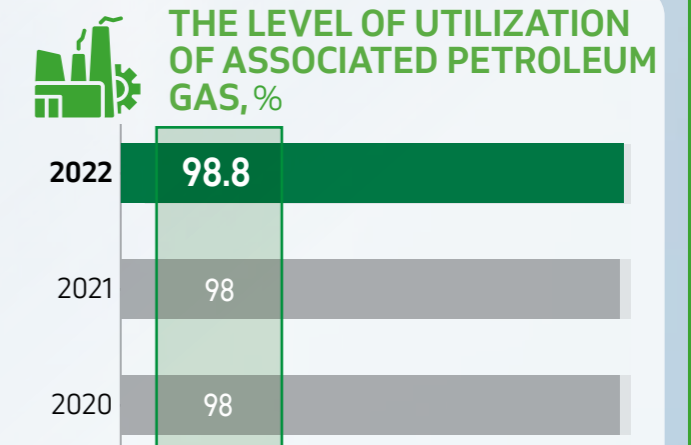
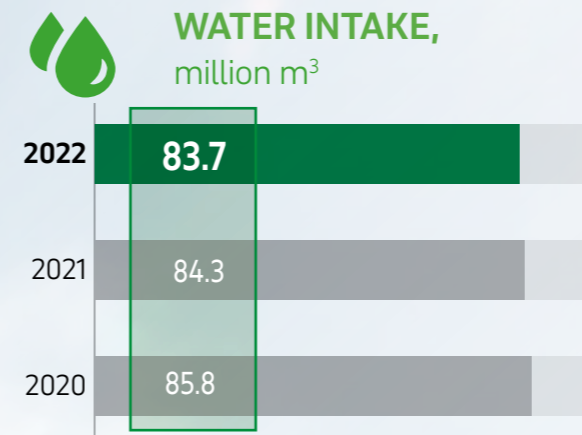
2-1, 2-6, 2-7



**Araygul  
KEMESAY**

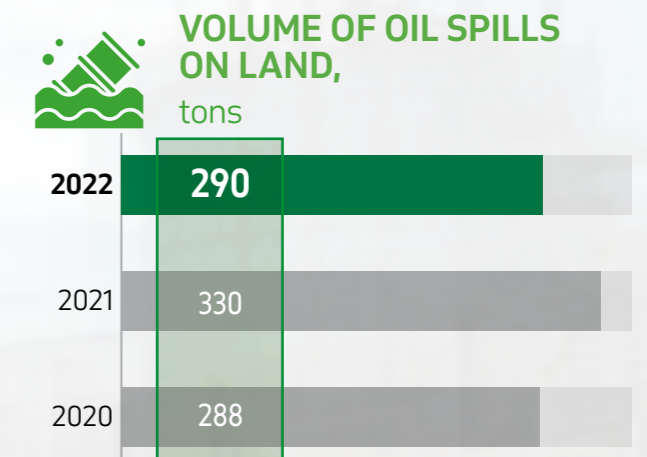
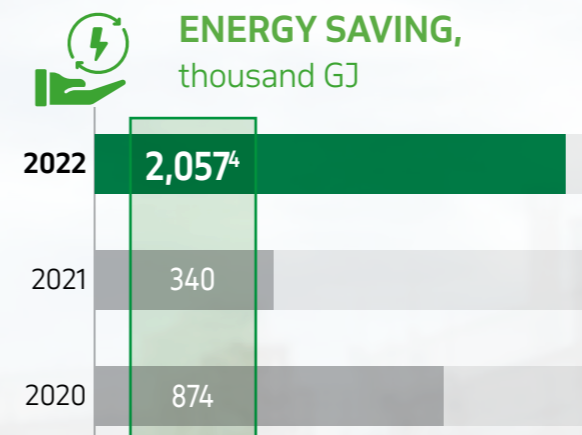
Best Laboratory Technician of Chemical Analysis  
"KazTransOil" JSC

First place in the "Uzdik Maman – 2022"  
professional contest



<sup>3</sup> 6.7 million tons of CO<sub>2</sub> have been verified, 0.2 thousand tons of CO<sub>2</sub> from non-quota installations are calculated by the company independently

Under the Memorandum of Cooperation between the Ministry of Ecology, Geology and Natural Resources and KMG, work is ongoing on waste management and the clean-up of oil-contaminated land in the contract areas of MMG, OMG and KBM



<sup>4</sup> The increase in energy savings in 2022 is related to the realization of the Energy Conservation and Energy Efficiency Action Plan for 2022-2027, as recommended by the energy audit conducted in 2020-2021.

# S – SOCIAL RESPONSIBILITY AND OSH INDICATORS

## KEY INDICATORS

2-1, 2-6, 2-7

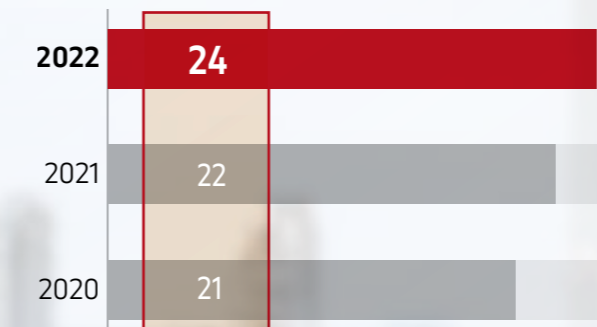


**Laura MURATKYZY**

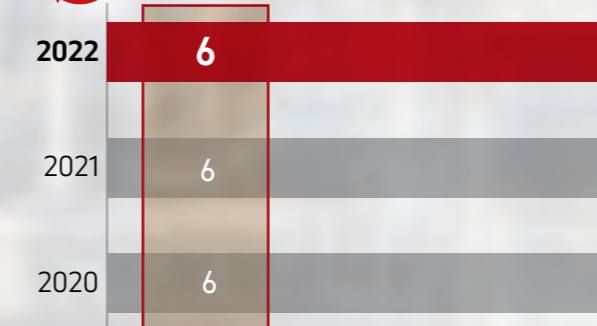
Best Laboratory Technician of Chemical Analysis JV "Kazgermunai" LLP

Third place in the "Uzdik Maman – 2022" professional contest

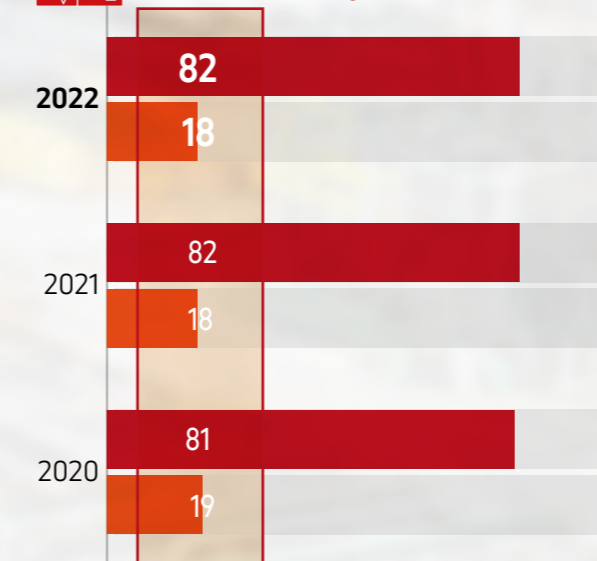
### SOCIAL SUPPORT OF EMPLOYEES, billion tenge



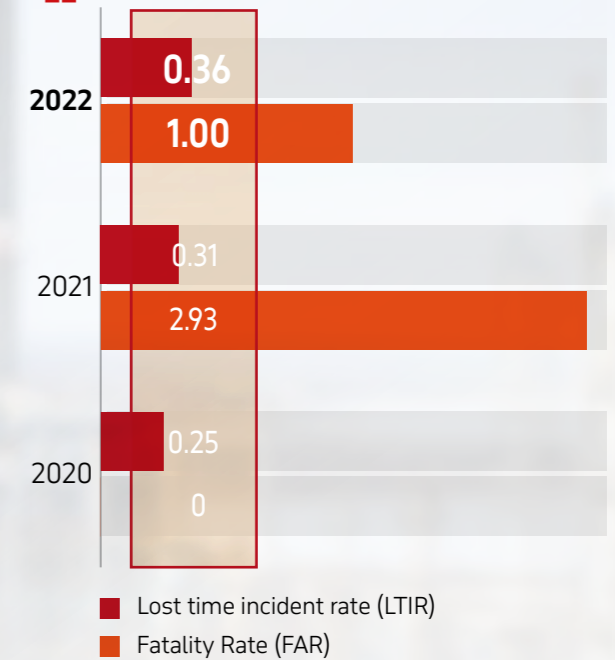
### EMPLOYEE TURNOVER, %



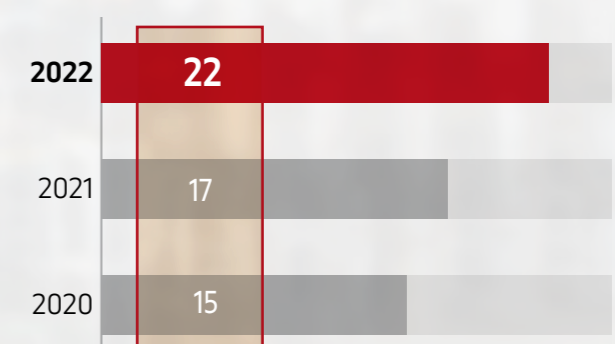
### EMPLOYEES BY GENDER, %



### RATIO LTIR AND FAR AMONG EMPLOYEES



### AVERAGE ANNUAL NUMBER OF ACADEMIC HOURS PER EMPLOYEE



# G – GOVERNANCE

## KEY INDICATORS

2-1, 2-6, 2-7

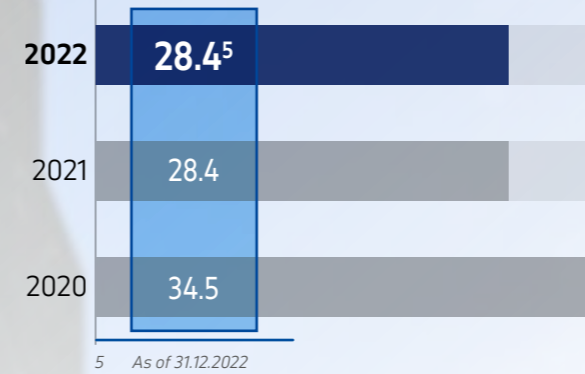


**Syrym  
IZGALIYEV**

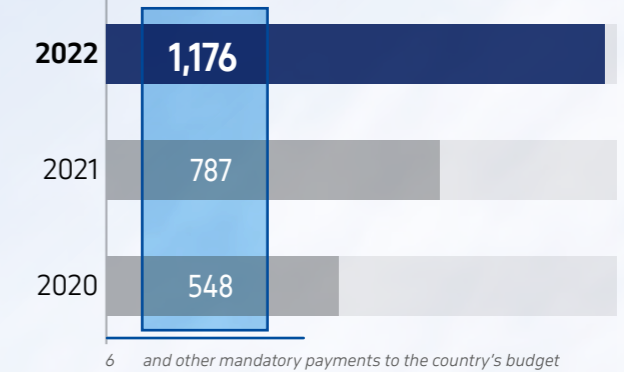
Best electrician for repair and maintenance of electrical equipment "Karazhanbasmunai" JSC

First place in the "Uzdik Maman – 2022" professional contest

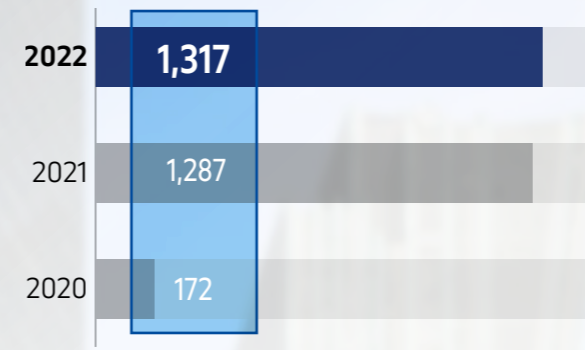
Rated  **ESG RISK RATING**



 **TAXES<sup>6</sup>,**  
billion tenge

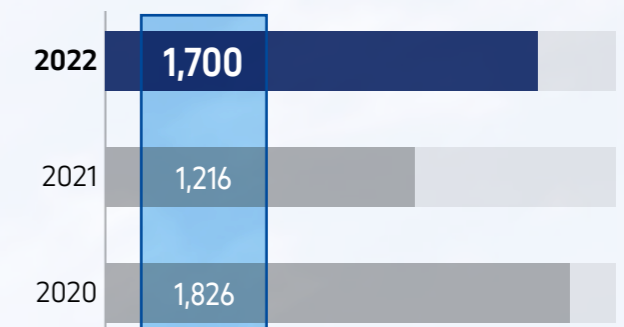


 **PROFIT<sup>7</sup>,**  
billion tenge

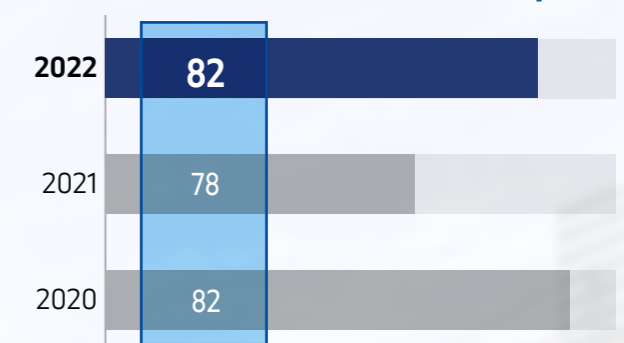


7 According to IFRS standards, KMG's indicators for 2021 were recalculated taking into account the inclusion of 100% of the share of KMG Kashagan B.V.

 **PROCUREMENT,**  
billion tenge



 **THE SHARE OF LOCAL CONTENT IN PROCUREMENT, %**





# ABOUT REPORT

2-14,2-3,2-5,3-1

JSC NC KazMunayGas (hereinafter – KMG) has been preparing reports on its sustainable development activities on an annual basis since 2008, and since 2012 has been publishing reports in accordance with the Global Reporting Initiative (GRI).

In order to provide clarity and transparency to its stakeholders, KMG annually highlights its approach to sustainable development and social, economic and environmental responsibility.

**This Report has been prepared in accordance** with Global Reporting Initiative Sustainability Reporting Standards, as well as GRI 11: Oil and Gas Sector 2021.

Selection of the external verifier of KMG Report is made on the basis of the Procedure for Procurement by Joint Stock Company “Sovereign Wealth Fund “Samruk-Kazyna ([https://online.zakon.kz/Document/?doc\\_id=39101813](https://online.zakon.kz/Document/?doc_id=39101813)), and on the basis of the Tender Procurement Decision by means of competitive negotiations. As a result of the selection procedure for procurement of services for 2021–2025, held on May 12, 2021, KMG and Ernst & Young Advisory LLP entered into a contract for the procurement of services for verification of the Report, prepared in accordance with GRI international standards. Auditor’s Report is presented on page 168 of this Report.

The Report provides consolidated information on KMG and its subsidiaries and affiliates for the calendar year 2022 (referred to in the Report as KMG, Company, Group of Companies).

The Report boundary covers KMG’s subsidiaries and affiliates in which fifty or more percent of the voting shares (participatory interests) are directly or indirectly owned by KMG on the right of ownership or trust management, as well as legal entities, whose activities KMG is entitled to control (a detailed description of the reporting boundary by sections is provided in Annex 1 to the Report).

The Company’s financial and operational results are presented using consolidated Company data with organisational support from the respective Company

units. In preparing this Report, the management and audited financial statements of KMG were used, which were prepared in accordance with International Financial Reporting standards and are published annually, along with non-financial information.

For more information about the process of preparing the Report, identifying material topics and interacting with stakeholders, see the section “Sustainable Development Management”.

Information about the positive and negative impact of the Company is disclosed in more detail in the relevant sections of the Report.

To enable comparison and comparability of indicator data, information is presented over several years.

KMG Sustainability Report is endorsed by the resolution of the KMG Board of Directors and communicated to stakeholders through publication on the corporate website and distribution of a printed version.

KMG sustainability reports are available in electronic format in the State, Russian and English languages

on KMG website: <https://www.kmg.kz/en/investors/>



Guided by international sustainable development initiatives, KMG adheres to the principles of the UN Global Compact (hereinafter the UNGC) and integrates the Sustainable Development Goals (hereinafter the SDGs) into its operations.



## PRINCIPLES OF THE UN GLOBAL COMPACT

Human rights	Principle 1	The business community should support and respect the protection of internationally proclaimed human rights.
	Principle 2	The business community should not be involved in human rights violations.
Labor relations	Principle 3	The business community should support freedom of association and the real recognition of the right to conclude collective agreements.
	Principle 4	The business community should advocate for the elimination of all forms of forced and compulsory labor.
	Principle 5	The business community should advocate for the complete eradication of child labor.
	Principle 6	The business community should advocate for the elimination of discrimination in labor and employment.
Environment	Principle 7	The business community should support a precautionary approach to environmental issues.
	Principle 8	The business community should take initiatives aimed at increasing responsibility for the state of the environment.
	Principle 9	The business community should promote the development and dissemination of environmentally sound technologies.
Anti-corruption	Principle 10	The business community should resist all forms of corruption, including extortion and bribery.

Since 2006, KMG has been a member and an active participant in the UN GC and supports the commitment to the ten principles of the UN GC and the 17 SDGs.



The Company’s annual Sustainability Report is our report on progress under the UN Global Compact

<https://unglobalcompact.org/what-is-gc/participants/6810>



# MAINTAINING THE BALANCE OF SUSTAINABLE BUSINESS

2-22



## Dear stakeholders,

I am honored to present the 2022 Sustainability Report of NC KazMunayGas JSC. As we reflect on the challenges and successes of the past year, we recognize the importance of responsible decision-making and the wellbeing of our employees and of the communities within which we work.

Despite facing various domestic and geopolitical challenges, our commitment to sustainability remains unwavering. We continue to work on our strategic initiatives and reaffirm our dedication to the ten principles of the UN Global Compact, the Sustainable Development Goals, and the UN Guiding Principles on Business and Human Rights.

To reinforce this commitment, our Board of Directors has adopted relevant policies and commitments applying to all levels of management, including the Sustainable Development Policy and Human Rights and Public Relations Policy, Energy Policy, and Corporate Health and Safety Standard "Life-Saving Rules" for KMG Group employees.

Throughout the reporting year, our Health, Safety, Environment, and Sustainability Committee held five meetings to discuss forty issues related to sustainable development. Additionally, we hosted a special meeting of KMG's Board of Directors on sustainable development to discuss global trends and further ESG development within our company, as well as the status of our low-carbon development program.

We are proud to have undergone an independent assessment by Sustainalytics, an international rating agency, and to have maintained a stable average level of risk management at 28.4 points. We are ranked 19<sup>th</sup> out of 266 oil and gas producers in the year 2022. However, we recognize that there is always room for advancement, and we remain committed to mitigating the impact of potential ESG risks throughout every key business processes across the KMG Group of Companies.

As part of our commitment to the climate agenda, we are implementing a Low-Carbon Development Program for 2022–2031, with the goal of reducing our carbon footprint by 15% by 2031 compared to 2019. Together with partners, we are implementing renewable energy projects with a total capacity of at least 1 GW with an energy storage system of 300/600 MW.

The company endeavors to enhance its ESG performance and to integrate ESG goals into the strategic and medium-term KPIs of managers. KMG is committed to standards of high social responsibility based on the principles of partnership with employees and trade unions. We have an action plan for the systematic implementation of measures for decarbonization. Based on this, we are developing annual KPIs related to the reduction of carbon intensity of production and decarbonization.

At KMG, we value openness and transparency in our operations and strive to maintain an active dialogue with our stakeholders. We disclose information about all material aspects of our operations in our reports, through

the media, and on our corporate website. We are grateful to our stakeholders who help us maintain a balance of sustainable business practices across all areas of our operations.

Sincerely,

**Chris Walton**

6 / 0 / m

**Chris WALTON**

*Chairman of the Board of Directors  
of JSC NC KazMunayGas*

# INSPIRED, ACHIEVED, PROUD

2-22



**Magzum MIRZAGALIYEV**

*Chairman of the Management Board  
of JSC NC KazMunayGas*



## Dear shareholders, investors, colleagues, and partners!

The year 2022 was a jubilee year for us – we celebrated the centennial anniversary of the first-born of domestic oil production Embamunaigas, twenty-five years of the national main pipeline operator KazTransOil and twenty years of KazMunayGas. And we have much to be proud of – over its 20-year history, KazMunayGas has become the national leader of Kazakhstan's oil and gas industry, a technologically advanced and promptly responding to global challenges.

The past year has undeniably brought about significant adjustments to the global energy landscape. The increase in geopolitical and geo-economic tensions, polarization of international relations, and sanction confrontations have made it impossible for market players to continue developing according to the previous patterns. The timing and logic of historical development dictate the need for change.

In response to new challenges, KazMunayGas has initiated new ambitious projects, intensified international cooperation, become a public company, and implemented a series of changes aimed at fostering social stability.

In this context, the ESG agenda, whose importance is developing, naturally holds a prominent position. Today, the Company's strategic objectives are implemented with sustainable development priorities in mind. Sustainalytics, an international rating agency, emphasizes KMG's strong position in the management of significant ESG risks in the international oil and gas market. KMG is among the top 20 global energy and gas companies according to the rating agency.

The company is aimed at ensuring efficiency of the current production, development of new process stages, introduction of modern energy-saving technologies, and reduction of the carbon footprint to contribute to the global fight against climate change. Our company was one of the first in Kazakhstan to approve a Low-Carbon Development Program. Given the long-term trends in the energy transition, we are building our portfolio of low-carbon projects. We are currently working on reducing greenhouse gas emissions and implementing joint projects in the field of renewable energy sources.

In addition, the Company has launched a large-scale integrated gas chemical complex LLP Kazakhstan Petrochemical Industries Inc. with a design capacity of up to 500,000 tons of finished products per year. The raw material used is propane from the Tengiz field, purified from harmful impurities, which minimizes the impact on the environment.

The Company employs more than 47,000 people. Our approach to staff motivation is based on the principles of decent wages, transparency, and respect for the rights of all employees. In the reporting period, KMG Group retained all social benefits in accordance with the collective bargaining agreements. In all production enterprises of KMG, the possibility for each employee to ask questions to the management of the enterprise and receive a timely response is regulated. Reporting meetings of top managers with labor collectives are systematically held. The KMG Group has 36 trade union organizations that protect the interests of employees.

We adhere to the principle where the health and safety of employees take precedence over operating results. By the end of 2022, the number of fatal accidents decreased by 67% compared to the previous year.

The Company also managed to achieve a positive trend in its financial and operating performance. The Company's net profit in the reporting period amounted to 1,317 billion tenge.

Being one of the major taxpayers in the regions of its presence, the Company paid 1,176 billion tenge in taxes and other obligatory payments to the budget in 2022; 12 billion tenge was allocated to support social projects in the regions of presence under subsoil use contracts; charitable support is also provided annually.

Supporting domestic producers and increasing the local content in procurement is a priority for KMG. By the end of 2022, the total volume of procurement of goods works, and services by KMG Group of Companies from Kazakh companies amounted to 1700 billion tenge. The share of local content in procurements increased by 4% as compared to the previous year and amounted to 82%.

In December of the reporting year, the Company went public and listed its shares on the Kazakhstan Stock

Exchange and Astana International Exchange. KMG's IPO will allow the development of local stock markets, and the presence of a diversified investor base in the form of minority shareholders always encourages the company to develop, be more transparent, and adapted to modern realities.

In conclusion, I would like to note that I am proud of our Company's results for the reporting period and for the entire journey of the Company's formation, our best employees, and the daily contribution of each employee of the Company to the common cause. The oil and gas industry does not stand still and there is still a lot of hard work ahead. Inspired by the energy and results of our employees, together we achieve our goals.

Regards,

**Magzum Mirzagaliyev**

# 2022



## JUBILEE YEAR

### THE SHAREHOLDERS OF KMG



# 87.42%

Sovereign Wealth Fund Samruk-Kazyna Joint Stock Company (hereinafter, Samruk-Kazyna JSC)



# 9.58%

Republican State Institution National Bank of Kazakhstan



# 3%

free float on the KASE and AIX exchanges



## ABOUT THE COMPANY

2-1, 2-6, 201-4



Joint Stock Company National Company KazMunayGas is a vertically-integrated oil and gas company engaged in the full production cycle from hydrocarbon exploration and production, transportation and processing to the provision of specialised services.



KMG was established in accordance with Decree No. 811 of the President of the Republic of Kazakhstan (RoK) dated 20 February 2002 "On measures to further ensure the interests of the state in the oil and gas sector of the country's economy" and Decree No. 248 of the Government of the Republic of Kazakhstan dated 25 February 2002 "On measures to implement Decree No. 811 of the President of the Republic of Kazakhstan dated 20 February 2002." KMG is the successor to the closed joint-stock companies National Oil and Gas Company "Kazakhoil", National Company "Oil and Gas Transportation" and Joint-Stock Company "KazMunayGas Refining & Marketing." The founder of KMG is the Government of the Republic of Kazakhstan represented by the State Property and Privatization Committee of the Ministry of Finance of the Republic of Kazakhstan.

KMG Group consists of 107 companies in which fifty percent or more of the voting shares (participatory interests) are directly or indirectly owned by KMG, of which 55 companies are located in Kazakhstan. The remaining assets are located in such countries as Romania, Georgia, Switzerland, the Netherlands, Canada, Bulgaria, Moldova, Russia, Turkey, the United Kingdom, the United Arab Emirates, Canada, Gibraltar, the British Virgin Islands, the Marshall Islands, the Bahamas, Bermuda, the Isle of Man.

The central office is based in Astana. On June 23, 2022, KMG opened a Representative Office in Aktau.

The reduction of legal entities in the Group, also through the liquidation/reorganisation of sub-holdings, is carried out as part of the privatisation and divestment programs.

Decree No. 523 of the Government of the Republic of Kazakhstan dated 2 August 2022 amended and supplemented the Comprehensive Privatization Plan for 2021-2025.

The updated Comprehensive KMG Privatization Plan for 2021-2025 includes:

- 53 companies to realise;
- 94 companies are included in the KMG IPO perimeter;
- 6 companies in the KMG Group, the procedure and conditions for the realization and reorganization of which are established by the Management Board of Samruk-Kazyna JSC.

On November 11, 2022, the Board of Directors of KMG approved an updated List of Non-Strategic Assets of KMG (hereinafter referred to as the List of NSA), which provides for the withdrawal of 9 companies from 2022 to 2025.

For 2023, within the framework of the List of NSAs, it is planned to withdraw 4 companies, three of which by liquidation and one company for sale.

In 2022, the following changes were made in the structure of KMG's assets:

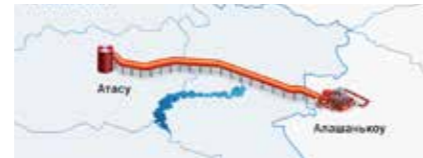
- 3 companies liquidated;
- 1 company has been implemented;
- 4 companies acquired;
- 1 company has been transferred within the Fund group.

JSC NC "KazMunayGas" was established in 2002 through the merger of the National Oil and Gas Company "Kazakhoil" and the National Company "Oil and Gas Transport".



Commissioning of the Kenkiyak - Atyrau main pipeline

2003



Start of construction of the Atasu-Alashankou oil pipeline and creation of KazMunayGas Exploration Production JSC by merging Ozenmunaigas JSC and Embamunaigas JSC

2004

KMG's entry into the North Caspian project and the creation of a tanker fleet in Kazakhstan (the first oil tanker "Astana" in Aktau was adopted)

2005



IPO of KazMunayGas EP JSC on the London Stock Exchange and the Kazakhstan Stock Exchange. KMG EP raised about \$2 billion (the largest IPO among Kazakhstani companies at that time)

2006



KMG acquired 75% of the shares of The Rompetrol Group (bought out the remaining 25% in 2009)

2007



Procurement of 100% in Batumi Industrial Holdings Limited, which owns the Batumi Oil Terminal and seaport in Batumi (Georgia)

2008

Completion of project to expand the capacity of the Caspian Pipeline Consortium to 67 million tons of oil per year; start of export of Kazakh gas to China

2017



Tengizchevroil LLP announced the start of the Project of Future Expansion and the Wellhead Pressure Management Project

2016

Transportation of oil and gas via the Beineu-Bozoi-Shymkent main gas pipeline

2013



KMG received 10% in the Karachaganak project; placement of common shares of JSC "KazTransOil" on the Kazakhstan Stock Exchange as part of the "People's IPO"

2012

The first line (A) of the Kazakhstan-China main gas pipeline was launched, the second line (B) - in 2010, the third line (C) - in 2015. The gas pipeline connects Turkmenistan, Uzbekistan, Kazakhstan and China.

2009

Procurement of 100% in Refinery Company RT LLP, owner of 58% of shares of Pavlodar Petrochemical Plant JSC (another 42% were owned by the State Property and Privatization Committee of the Ministry of Finance of the Republic of Kazakhstan).

2009



The large-scale modernization of the three largest oil refineries in Kazakhstan is completed

2018



The construction of the Saryarka main gas pipeline connecting Central Kazakhstan and the capital with the unified gas transportation network of the Republic of Kazakhstan has been completed

2019



Kazakhstan's first self-lifting floating drilling rig Satti went to sea; KMG transferred 100% of the shares of KazTransGas JSC in favor of Samruk-Kazyna JSC

2021



On September 15, 2022, the Company used its right under the call option agreement concluded in 2015 and acquired from Samruk-Kazyna JSC a 50% stake in KMG Kashagan BV for \$3.8 billion, which owns 16.88% in the Production Sharing Agreement for the North Caspian Project (Kashagan project).

2022



The large-scale integrated gas chemical complex of Kazakhstan Petrochemical Industries Inc. with an annual production capacity of up to 500,000 tons of polypropylene is launched.

2022



Since December 8, secondary trading in KMG shares has started on the AIX and KASE exchanges. KMG IPO is not only the largest IPO in the history of Kazakhstan's stock market by the number of orders received (129.9 thousand), the volume of the offering (153.9 billion tenge) and the participation of individuals in the offering (52.1%), but also the first 'digital' IPO (99% of orders were submitted online).

2022

# 2022



## **EMBAMUNAIGAS** **CENTURY OF EXCELLENCE**



The centenary of the first-born of domestic oil production is a momentous occasion for all Kazakhstanis. The era of Kazakhstani oil began in 1899, when the first fountain of oil gushed from well No. 7 in the Karashungyl area of Zhylyoi district, Atyrau region.

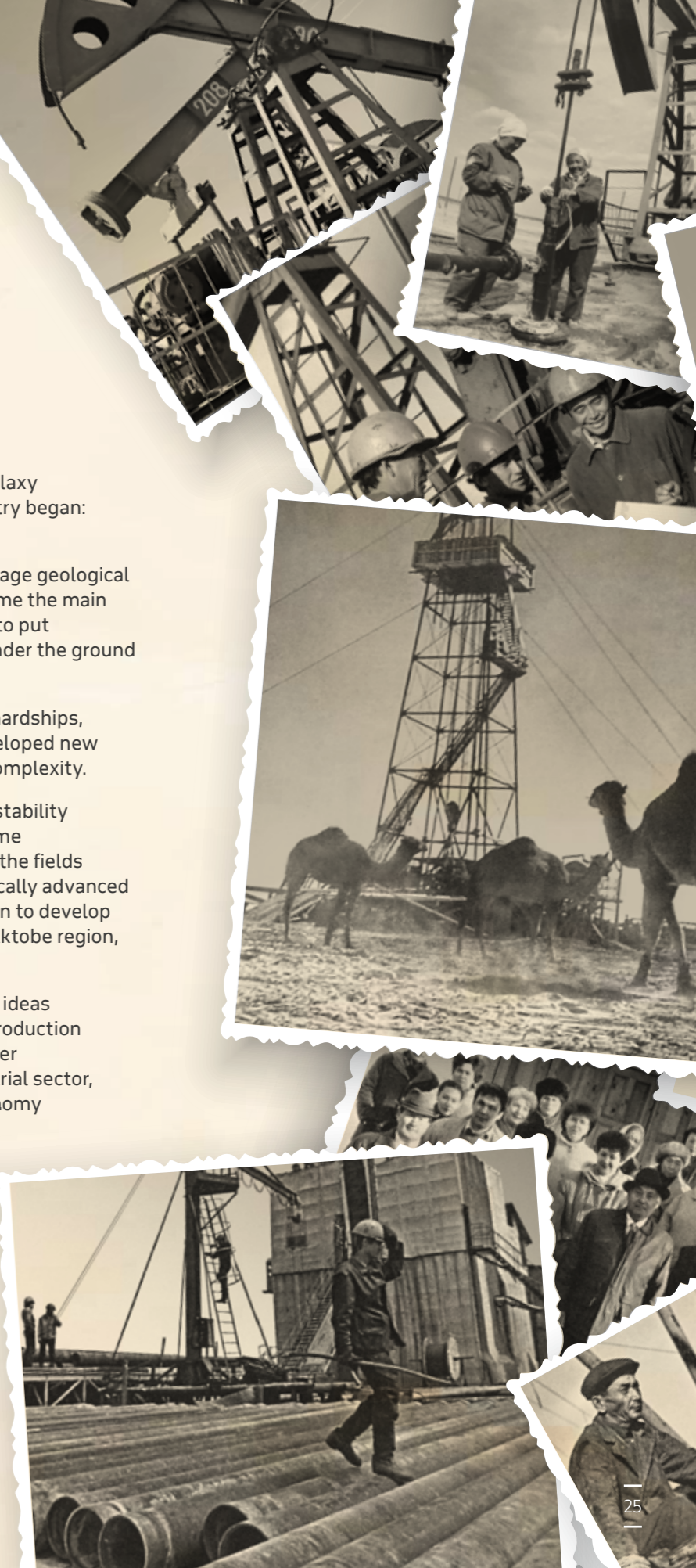
The company dates back to 1922, when the development of Dossor and Makat fields coincided with the birth of Kazakhstan's oil industry. It was then that the training of a galaxy of national personnel for the fledgling industry began: workers, engineers, managers.

The Embaneft Trust was established to manage geological surveys, exploration and production. It became the main centre of productive forces whose task was to put the inexhaustible natural resource hidden under the ground at the service of society and the state.

The oil workers of that time, despite all the hardships, endured all difficulties and successfully developed new fields and fulfilled production tasks of any complexity.

In the second half of the twentieth century, stability and scientific and technological progress came to the industry. While continuing to develop the fields in the Ural-Emba basin at a more technologically advanced level, the Emba oilmen simultaneously began to develop black gold deposits in Mangyshlak and the Aktobe region, and the Tengiz field was discovered.

Embamunaigas today represents innovative ideas and new technologies aimed at increasing production efficiency and reducing costs. The oil producer continues to be at the forefront of the industrial sector, making a significant contribution to the economy of independent Kazakhstan. Between 2012 and 2022, Embamunaigas JSC allocated more than 1 trillion and 472 billion tenge to pay taxes to the National Fund, national and local budgets, for the development of regional infrastructure about 5 billion 640 million tenge.



# 2022



KazTransOil (KTO) JSC is a national oil transportation operator, which plays an important role in ensuring stable supplies of energy resources to the domestic market and strengthening the country's export potential. The Company owns an extensive network of main oil pipelines with a total length of about 5.4 thousand km. Implementation of KTO projects is of strategic importance for energy security, serves as a reliable base for socio-economic development of the regions, and contributes to improving the quality of people's lives. The Company was the first in the Republic of Kazakhstan to float its shares under the "People's IPO" Program. In December 2012 the company's common shares began trading on the secondary market on KASE.



KTO provides transportation of around 36% of all oil produced in the country and more than 90% of deliveries to domestic refineries. Over the years of the company existence the volume of oil transportation via the pipeline system has more than doubled.

For a quarter of century, the new Kenkiyak – Atyrau, Alibekmola – Kenkiyak, North Buzachi – Karazhanbas, Atasu – Alashankou oil pipelines were put into operation, Kenkiyak – Kumkol pipeline was built, the capacity of Atyrau – Samara oil pipeline was expanded, capacities of Aktau sea port and a number of railway discharge and loading terminals were expanded. The commissioning of the heating furnace at the Aman OPS made it possible to transport West Kazakhstan oil through the Kenkiyak-Atyrau oil pipeline in reverse mode in the volume of up to 6 million tons per year.

Since 2006 KTO has managed oil freight flows in 11 regions of Kazakhstan, having implemented the project on implementation of SCADA system of supervisory control and management of freight flows.

In 2008, KTO completed a deal to acquire a full stake in Batumi Industrial Holdings Limited. Thanks to this deal foreign oil transportation assets in the Black Sea were acquired for the first time.

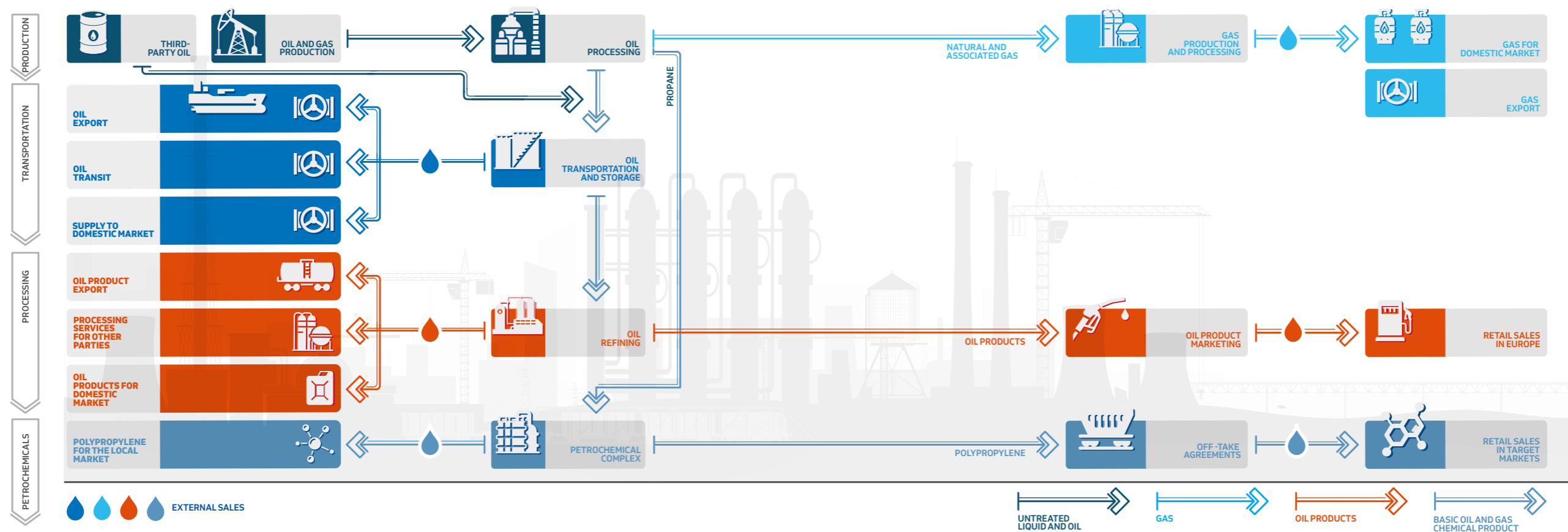
Aware of its responsibility to its employees, KTO pursues weighted and balanced social policy aimed at business sustainability, social stability in the regions where it operates and employee satisfaction with working conditions. In order to improve social well-being and maintain a healthy lifestyle, as well as to organize leisure activities for rotational workers at the company's production facilities, in 2022 KTO began implementing a project to build 12 multi-purpose sports grounds.

For over two decades, the company has been providing services of fresh water supply to consumers in Mangystau and Atyrau regions through one of the longest in the world main water pipeline Astrakhan – Mangyshlak.

In the context of constantly changing market conditions, the company's priorities invariably remain occupational safety and health, environmental friendliness and business efficiency, based on the use of innovation and new technologies.



## PRODUCTION VALUE CHAIN



### EXPORT OF PETROLEUM PRODUCTS PRODUCED FROM KMG RESOURCES, BROKEN DOWN BY SHARE AND DIRECTIONS OF SUPPLY

Ser. No.	Petroleum products	Actual for 12 months of 2022		
		Volume, t	Countries	Share, %
1	Fuel oil	585,152	Europe	100%
2	VGO	105,467	Europe	100%
3	High Purity Paraxylene	33,763	China	100%
4	Benzene	1,684	Russia	53%
		1,498	Africa	47%
5	Total coke	18,066	China	30%
		42,978	Russia	70%
6	Calcined coke	780	China	20%
		3,170	Russia	80%
7	Sulfur	8,041	Europe	59%
		5,577	Africa	41%
8	Gasoline Ai-92 K4	7,454	Europe	100%
9	Heavy oil raw materials for the production of carbon black	2,630	Russia	100%
<b>Total:</b>		<b>816,259</b>		

KMG carries out the shipment of diesel fuel for field agricultural work, and also provides fuel oil to social and industrial facilities and institutions during the heating period.

Also, KMG, through KMG-Aero LLP and through exchange trading in 2022, carried out the sale of aviation fuel for local airports and airlines, as well as for commercial companies. The remaining volumes of petroleum products are sold to third-party buyers on the domestic market and for export.

In April 2022, KMG exported AI-92 gasoline (7 thousand tons). The 85% decrease in exports of light petroleum products compared to 2021 is due to increased consumption in the domestic market of the Republic of Kazakhstan. In the structure of export supplies of petroleum products in 2022, the shipment of dark petroleum products to Europe prevailed. Volumes of diesel fuel, petrochemicals, coke, sulfur and butane were supplied to Europe, China, Nigeria, Russia, Uzbekistan and Tajikistan.

In 2022, KMG purchased oil from four 100% subsidiaries of oil producing companies and from Kazakhoil Aktobe LLP (50%) located in Western Kazakhstan for further processing at three refineries.

The total cost of oil and services for its processing amounted to 594 billion tenge.

In accordance with oil supply schedules endorsed by the Ministry of Energy of the Republic of Kazakhstan ("ME"), KMG began purchasing oil from Kazakhoil Aktobe LLP in November-December 2022 for processing at Pavlodar Petrochemical Plant LLP in Pavlodar ("PPCP") and selling the oil products produced. In total, 58.5 thousand tons of Kazakhoil Aktobe LLP oil were processed at the PPCP by the end of 2022 by KMG.

Also, in the Republic of Kazakhstan, since May 2022, exchange trading in light petroleum products and bitumen has been resumed in the amount of 10% of the total sales according to the plans for the supply of petroleum products endorsed by the Ministry of Energy.



## WHOLESALE SALE OF KMG OIL PRODUCTS PRODUCED IN THE REPUBLIC OF KAZAKHSTAN, THOUSAND TONS

Product	2020			2021			2022		
	local market	export	total	local market	export	total	local market	export	total
Gasoline	647	163	810	1,195	0	1,195	1,333	7	1,340
Diesel fuel	930	115	1,045	1,291	57	1,348	1,513	-	1,513
Aviation fuel	65	0	65	120	0	120	161	-	161
Fuel oil	211	402	613	241	542	783	265	588	853
Vacuum gas oil	0	155	155	0	166	166	-	105	105
Bitumen	87	0	87	83	0	83	125	-	125
Coke	61	57	118	79	66	145	56	65	121
Sulfur	6	5	11	3	17	20	5	14	19
Benzene	0	19	19	0	4	4	-	3	3
Paraxylene	0	90	90	0	25	25	-	34	34
Liquefied gas	133	1	134	162	1	163	204	-	204
Furnace fuel	6	0	6	4	0	4	-	-	-
Technological fuel	0	0	0	382	0	382	408	-	408
Other	15	0	15	18	0	18	22	-	22
<b>Total</b>	<b>2,161</b>	<b>1,007</b>	<b>3,167</b>	<b>3,577</b>	<b>877</b>	<b>4,454</b>	<b>4,091</b>	<b>816</b>	<b>4,908</b>

3-3, 416-1, 417-1

In accordance with the Technical Regulation of the Customs Union 013/2011 "On requirements for motor and aviation gasoline, diesel and marine fuels, jet fuel and heating oil" (hereinafter – TR CU), the quality of produced fuel corresponds to environmental classes.

### K4 AND K5 (SIMILAR TO EURO-4 AND EURO-5)

In accordance with the TR CU, the use of metal-containing additives (containing manganese, lead and iron) is not allowed in automobile gasoline and diesel fuel, the sulfur content is not more than 50 mg/kg, benzene is not more than 1%.

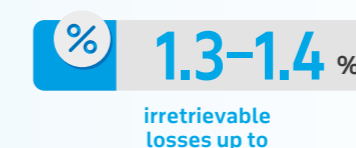
The purpose of the modernization of the Refinery of the Republic of Kazakhstan is to improve the quality of manufactured motor fuels to the level of class K5 (an analogue of the Euro-5 standard).

At the same time, motor fuels, the main source of anthropogenic health impacts from vehicle exhaust, have decreased in the content of harmful substances:

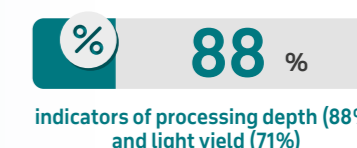
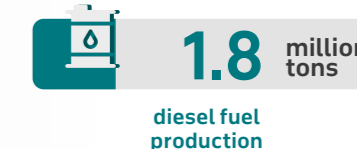
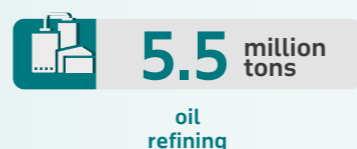
- for sulfur by 10 times (the source of the formation of sulfur oxides);
- by aromatic substances by 1.5 times (the source of soot formation);
- for benzene by 5 times (the source of benzoperene formation is a carcinogen, belongs to the 1<sup>st</sup> hazard class).

## ACHIEVEMENTS OF OIL REFINING IN 2022

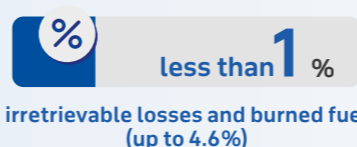
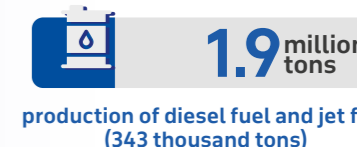
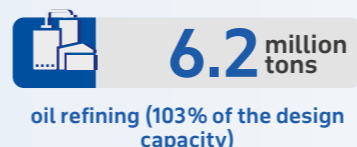
### AR



### PPCP



### PKOP



Information about the quality of products produced at Kazakhstan refineries is available on the official websites of the refinery:



[https://www.pnhz.kz/en/product/quality\\_of\\_product/](https://www.pnhz.kz/en/product/quality_of_product/)



<https://www.anpz.kz/en/product/>



[https://www.petrokazakhstan.kz/eng/pages/processing\\_subdivision.html](https://www.petrokazakhstan.kz/eng/pages/processing_subdivision.html)

More details about the Company's production activities and financial results are set out in the Annual Report for 2022



<https://www.kmg.kz/en/investors/>

# CORPORATE GOVERNANCE



**Muratzhn  
TANIZBAYEV**

Best oil and gas production operator  
"Karazhanbasmunai" JSC

First place in the "Uzdik Maman – 2022"  
professional contest



- Principle 1.** The business community should support and respect the protection of internationally proclaimed human rights.
- Principle 2.** The business community should not be involved in human rights violations.
- Principle 6.** The business community should advocate for the elimination of discrimination in labor and employment.
- Principle 10.** The business community should resist all forms of corruption, including extortion and bribery.

## CORPORATE GOVERNANCE SYSTEM

2-9, 2-11

In accordance with the legislation of the Republic of Kazakhstan and the Charter of KMG, the corporate governance structure of KMG is as follows:

- supreme body – General Meeting of Shareholders;
- management body – the Board of Directors, accountable to the General Meeting of Shareholders;
- executive body – the Management Board, accountable to the Board of Directors;
- The Internal Audit Service is a centralised body directly subordinate and accountable to the Board of Directors, exercising control over the financial and economic activities of the Company and other organisations of the KMG Group of Companies, which are part of the Fund according to the Law of the Republic of Kazakhstan No 550-IV LRK "On Sovereign Wealth Fund" dated 1 February 2012 (hereinafter – KMG Group), assessment in the field of internal control and risk management, execution of corporate governance documents and consulting for improvement;
- The Corporate Secretary shall perform his/her functions on a permanent and independent basis, shall not be a member of the Board of Directors and/or executive body of the Company, shall be appointed by the Board of Directors of KMG and shall report to the Board of Directors of KMG, shall exercise, within his/her competence, realization and control and oversight functions in KMG's corporate governance system;
- Compliance Service, which reports to the Board of Directors, whose activities are aimed at ensuring compliance with mandatory regulatory requirements and international best practices on anti-corruption and building the internal corporate culture of KMG Group, ensuring transparency, honesty among employees, and creating conditions for doing business in accordance with best international standards, internal policies and legislation of the Republic of Kazakhstan;
- The Ombudsman is a person appointed by the KMG Board of Directors whose role is to advise and assist KMG employees in resolving labour disputes, conflicts,

social and labour issues, and to ensure that KMG employees observe the principles of business ethics.

KMG's corporate governance system is based on respect for the rights and legitimate interests of shareholders and key stakeholders: the state, strategic partners and counterparties (suppliers and customers), investors, KMG employees, municipalities, local communities and residents of the regions where the Company operates.

The Company's corporate governance system is constantly being improved to meet the requirements and standards of Kazakhstan and international corporate governance practices.

KMG establishes committees of the Board of Directors to consider the most important issues and prepare recommendations to the Board of Directors. As of December 31, 2022, the following committees operated under the Board of Directors:

- 1. The Nomination and Remuneration Committee** was created for a range of tasks related to succession planning of the Board of Directors and the Management Board, evaluation of the activities of KMG bodies, ensuring effective personnel policy, remuneration and remuneration systems, as well as social support, professional development and training of KMG officials and employees.
- 2. The Strategy and Portfolio Management Committee** was established on the issues of development strategy and investment policy, priority areas of KMG's activities, increasing the investment attractiveness of KMG, planning financial and economic activities and monitoring the transformation of KMG.

**3. The Audit Committee** was established to establish effective control over financial and economic activities, including the completeness and reliability of financial statements, the effectiveness of internal control systems, risk management and corporate governance, as well as control over the independence of external and internal audits.

**4. The Health, Safety, Environment, and Sustainability Committee** was established to consider a range of issues related to safety, labor and environmental protection, implementation of the principles of sustainable development and socio-economic development, social obligations and programs, ensuring business continuity and environmental efficiency. This committee is responsible for initiating, in-depth consideration and decision-making on the economic, environmental and social aspects of the impact of the organization.

## COMPOSITION OF THE MANAGEMENT BODY AND ITS COMMITTEES

As of December 31, 2022, the composition of the Board of Directors of KMG is as follows<sup>8</sup>:

1. **Walton Christopher John** – Chairman of the Board of Directors, Independent Non-Executive Director;
2. **Mirzagaliyev Magzum Maratovich** – Chairman of the Management Board of KMG;
3. **Miller Timothy Glen** – Independent Non-Executive Director;
4. **Holland Philip Malcolm** – Independent Non-Executive Director;
5. **Karabalin Uzakbai Suleimenovich** – Non-Executive Director, representative of the interests of Samruk-Kazyna JSC;
6. **Zhanadil Yernar Beisenuly** – representative of the interests of Samruk-Kazyna JSC;
7. **Auganov Gibrat Kairatovich** – representative of the interests of Samruk-Kazyna JSC;
8. **Assel Khairova** – Independent Non-Executive Director.

At the time of reporting, the composition of the committees of the Board of Directors of KMG is presented as follows (decision of the Board of Directors of KMG dated February 2, 2022, Minutes No. 1/2022):

### AUDIT COMMITTEE

1. **Assel Khairova** – Chairman of the Committee
2. **Miller Timothy Glen**
3. **Holland Philip Malcolm**

### STRATEGY AND PORTFOLIO MANAGEMENT COMMITTEE

1. **Walton Christopher John** – Chairman of the Committee
2. **Uzakbai Karabalin**
3. **Holland Philip Malcolm**
4. **Yernar Zhanadil**
5. **Miller Timothy Glen**

### NOMINATION AND REMUNERATION COMMITTEE

1. **Holland Philip Malcolm** – Chairman of the Committee
2. **Gibrat Auganov**
3. **Walton Christopher John**
4. **Assel Khairova**

### HEALTH, SAFETY, ENVIRONMENT, AND SUSTAINABILITY COMMITTEE

1. **Miller Timothy Glen** – Chairman of the Committee
2. **Assel Khairova**
3. **Uzakbai Karabalin**
4. **Walton Christopher John**
5. **Holland Philip Malcolm**

The Company complies with the requirements of the Corporate Governance Code regarding the number of independent directors on the Board of Directors,

### TERM OF OFFICE

The term of office of the Board of Directors is three years. Members of the Board of Directors may be re-elected for more than six consecutive years with special consideration given to the need for qualitative renewal of the Board of Directors. In exceptional circumstances, election for a term of more than nine years is permitted (for independent directors, a detailed and convincing justification for such a need will be prepared and disclosed by the Company to all stakeholders).

At the same time, based on the results of an independent corporate governance diagnostic carried out at KMG, the Company has received a recommendation to consider discussing with the Shareholder an approach to retain shareholder representatives and independent directors on the Company's Board of Directors for a longer period of time. It was also recommended that consideration should be given to aligning the term of representatives with the period of the chosen Company Strategy. This, according to the independent consultant, can give the following advantages: the term of office of individual directors lasting five to six years and their rotation in different years will ensure continuity of knowledge about the Company's activities and its corporate governance processes. Longer tenure on the Board contributes to the quality of the work done

according to which the number of independent directors is up to 50% of the total number of members of the Board of Directors.

The Chairman of the Board of Directors is an independent director and all KMG Board Committees are chaired by independent directors.

### THE TOTAL NUMBER OF MEMBERS OF THE BOARD OF DIRECTORS AS OF 31.12.2022 IS 8, INCLUDING:

1. independent directors – 4,
2. representatives of Samruk-Kazyna JSC – 3;
3. Executive Director (Chairman of the Management Board) – 1.

Of the eight members of the Board of Directors, five are Kazakh nationals, two are from the United Kingdom and one from the United States of America.

and the responsibility for the successful realization of the Company's strategy.

The Board of Directors and its Committees maintain a balance of skills, experience and knowledge that ensure the adoption of independent, objective and effective decisions in the interests of KMG and taking into account fair treatment of all shareholders and the principles of sustainable development. In accordance with paragraph 4 of Article 54 of the Law of the Republic of Kazakhstan dated May 13, 2003 No. 415-II LRK "On Joint Stock Companies" and paragraph 9 of Chapter 5 of the Corporate Governance Code of KMG, members of the Management Board, except for the Chairman of the Management Board, cannot be elected to the Board of Directors, while the Chairman of the Management Board cannot be elected Chairman of the Board directors.

More detailed information about the members of the Board of Directors is provided on the KMG website: [https://www.kmg.kz/en/sustainable-development/corporate-governance/directors\\_board/](https://www.kmg.kz/en/sustainable-development/corporate-governance/directors_board/)

8 By the resolution of the Management Board of Samruk-Kazyna JSC dated February 18, 2022 (Minutes №12/22) authorities of the Board of Directors – representatives of interests of Samruk-Kazyna JSC Bolat Akchulakov and Mukhtar Mankayev were prematurely terminated, and Gibrat Auganov and Yernar Zhanadil were elected as the Board of Directors – representatives of interests of Samruk-Kazyna JSC. At the same time, B.U. Akchulakov notified the Board of Directors of JSC NC KazMunayGas of his early termination of powers as a member of the Board of Directors of JSC NC KazMunayGas on his own initiative from 11.01.2022.

By the resolution of the Board of Samruk-Kazyna JSC dated April 7, 2022 (Minutes No. 21/22), the powers of the Chairman of the Board of JSC NC "KazMunayGas" Alik Aidarbayev were prematurely terminated.

By the resolution of the Board of Samruk-Kazyna JSC dated April 14, 2022 (Minutes No. 22/22) Magzum Mirzagaliyev was appointed Chairman of the Board of JSC NC "KazMunayGas" and elected a member of the Board of Directors of JSC NC "KazMunayGas" from April 15, 2022.

By the resolution of the Board of Samruk-Kazyna JSC dated May 27, 2022 (Minutes No. 29/22), Assel Khairova was elected a member of the Board of Directors of JSC NC "KazMunayGas" – an independent director.

The Board of KMG as of December 31, 2022 consists of 8 people.

## THE MANAGEMENT BOARD CONSISTS OF:

<b>Magzum Mirzagaliyev</b>	Chairman of the Management Board
<b>Kurmangazy Iskaziyeu</b>	Deputy Chairman of the Board for Exploration and Production
<b>Murat Munbayev</b>	Deputy Chairman of the Management Board for Major Oil and Gas Projects
<b>Arman Kairdenov</b>	Deputy Chairman of the Board for Oil Refining and Petrochemistry
<b>Bulat Zakirov</b>	Deputy Chairman of the Board for Oil Transportation, International Projects and Construction of the Sary-Arka gas pipeline
<b>Dastan Abdulgafarov</b>	Deputy Chairman of the Management Board for Strategy, Investment and Business Development
<b>Dauren Karabayev</b>	Deputy Chairman of the Management Board for Economics and Finance
<b>Vasiliy Lavrenov</b>	Deputy Chairman of the Management Board

The Management Board carried out its activities in accordance with the Work Plan of the Management Board of JSC NC "KazMunayGas" for 2022, endorsed by the decision of the Board of KMG dated 06.12.2021 (Minutes No. 44).

According to the rules of work, in-person meetings of the Management Board were held weekly.

These quantitative data indicate the regularity of in-person meetings of the Management Board, which fully complies with the provisions of the KMG Corporate Governance Code.

During **2022**, the Board of KMG made **654 decisions (100%)** at face-to-face meetings. **68 minutes** of meetings of the Executive Body have been drawn up.

Out of the total number of full-time decisions of the Management Board adopted following the results of 12 months of 2022, **153 issues** were submitted to the Board of Directors of KMG in accordance with the established procedure.

During January – December 2022, the following Board decisions were also endorsed:

- Quality policy of JSC NC "KazMunayGas";
- Energy policy of JSC NC "KazMunayGas";
- Sustainable development policy;
- Human rights and Public relations policy;
- Personnel health management program in the Group of Companies of JSC NC "KazMunayGas";
- Internal carbon pricing program of JSC NC "KazMunayGas";
- Staffing table of JSC NC "KazMunayGas";
- The norm rate for 2023 of some organizations of the Group of Companies of JSC NC "KazMunayGas";
- Regulations on crisis management of JSC NC "KazMunayGas";
- Scheme of official salaries of managerial and administrative employees of JSC NC "KazMunayGas";
- Adjusted Budget of JSC NC "KazMunayGas" for 2022;
- The budget of JSC NC "KazMunayGas" for 2023.

In addition, **41 decisions** endorsed amendments and additions **to certain internal documents of KMG.**

## RESPONSIBILITY FOR ECONOMIC, ENVIRONMENTAL AND SOCIAL ISSUES

2-13

In accordance with the Corporate Governance Code, the Board of Directors and the Management Board ensure, within their respective competencies, that an appropriate sustainability system is in place and implemented, with officers and all employees at all levels contributing to sustainable development.

As of December 31, 2022, at the level of the management body, **responsibility for addressing issues of sustainable development** is distributed as follows:

- 1. The Compliance Service** is responsible for compliance with mandatory regulatory requirements and best international practices on anti-corruption issues and the formation of the internal corporate culture of the KMG Group of Companies to ensure transparency, honesty among employees, as well as creating conditions for conducting business in accordance with the best international standards, internal policies and legislation of the Republic of Kazakhstan.
- 2. The Ombudsman Service** is responsible for observing the fairness and interests of all employees of the Company through early warning and settlement of disputes and conflicts; submission of problematic issues of a systemic nature to the relevant authorities and officials and requiring solutions to proposals for the stabilization of conflict situations.

At the level of the executive body, **responsibility for addressing sustainable development issues** was distributed as follows:

- 1. Deputy Chairman of the Management Board for Strategy, Investment and Business Development:** issues of establishing and implementing a sustainability management system to ensure compliance with sustainability principles, as well as integrating sustainability into key processes, Company strategy, decision-making processes, Company low-carbon development issues and ESG rating;
- 2. Deputy Chairman of the Management Board for Economics and Finance** is responsible for solving a complex of issues of the economic component of sustainable development, including issues of promoting the economic development of the regions of presence;

- 3. Director of the HSE Department:** issues of formation and ensuring the realization of KMG's strategy and policies in the field of labor protection, industrial safety and environmental protection, as well as, in general, for issues of ensuring industrial safety, health, labor protection, environment and environmental safety;
- 4. Director of the Department of Human Resources Management:** issues of realization of processes and management of labor, human resources and social aspects of sustainable development.

The above-mentioned persons are accountable to the Chairman of the Management Board of KMG. The accountability of those responsible for economic, environmental and social issues is regulated in detail by the Company's internal regulations, internal control and business continuity procedures. Thus, on a regular basis, in accordance with development plans, issues are submitted for consideration by the Management Board, which, in turn, is accountable to the Board of Directors. At the same time, before considering the relevant issues at the meetings of the Board of Directors, the Committees of the Board of Directors develop recommendations for the Board of Directors according to the following distribution: comprehensive control over the performance of functions and measures to improve corporate governance is assigned to the Audit Committee of the Board of Directors of KMG, initiation, in-depth consideration and decision-making on the economic, environmental and social aspects of the impact of the organization, as well as control over the implementation of sustainable development in KMG are assigned to the Health, Safety, Environment and Sustainability Committee of the Board of Directors of KMG (hereinafter referred to as HSESC).

## ADVISING STAKEHOLDERS ON ECONOMIC, ENVIRONMENTAL AND SOCIAL ISSUES

2-12, 2-14, 2-16, 2-25

Consultation on economic, environmental and social issues between stakeholders and the Company's highest corporate governance body takes place in various ways on an ongoing basis.

For example, HSESC provides general guidance over the activities of the above-mentioned officials.

In 2022, **5 meetings of the Committee** were held, at which **40 issues** were considered.

**HSESC** of the KMG Board of Directors reviews and organizes issues of sustainable development, prepares recommendations for the endorsement of the sustainable development policy, the annual Report on the sustainable development of KMG, action plans and other internal documents in the field of sustainable development, the endorsement of which falls within the competence of the Board of Directors, the introduction of social, economic and environmental components of sustainable development, the formation of a system management in the field of sustainable development, definition of goals and efficiency in the field of sustainable development, control over the implementation of sustainable development in KMG, integration of sustainable development into key processes of KMG.

The main focus of the HSESC in 2022 was the issues of occupational safety, industrial safety and environmental protection, strategic management of ESG (Environmental – Social – Governance) aspects, as well as the implementation of a sustainable development system.

The key issues on the Committee's agenda in 2022 include the following:

- Reports on occupational safety, industrial safety and environmental protection;
- About crisis and emergency management in the KMG Group of companies – about fire safety in the KMG Group of companies;
- On waste management, the status of the implementation of the Memorandum on the Disposal of Historical Waste;
- About automation and digitalization projects in the field of HSE;
- On measures to improve fire safety in the KMG Group of companies;

- On KMG's environmental projects;
- On the management system for Occupational Health and Hygiene;
- On the management of KMG contractors;
- Reports on the situation in KMG on COVID-19;
- On the ESG (environmental, social, governance) rating of KMG;
- On the implementation of the sustainable development system in KMG and its business units and the inclusion of the principles of sustainable development in key business processes;
- On KMG's contribution to achieving the Sustainable Development Goals;
- On material topics to be disclosed in the Sustainability Report for 2022;
- On the realization of the Low-carbon Development Program for the period 2022–2031.

In addition, the Committee in 2022, among other things, reviewed and approved the following main documents:

- On endorsement of the Report on the Sustainable Development of JSC NC "KazMunayGas" for 2021;
- On the endorsement of the Policy in the field of Sustainable Development;
- On endorsement of the Policy in the field of Human rights and public relations;
- On the endorsement of the Corporate Standard in the field of occupational safety and health "Life-Saving rules" for employees of the KMG Group of Companies.

To participate in the work of the Committee, KMG officials and employees were regularly invited to the meetings of the Committee without the right to vote. The Board of Directors of KMG adopted each of the recommendations developed by the Committee.

An extensive list of stakeholders is advised on economic, environmental and social issues through the Company's website, the Public Relations Service (Press Service), and through the production of the annual Sustainability Report, which is KMG's central channel of communication with external and internal stakeholders on sustainability disclosure issues. At the same time, KMG has various communication methods that allow for proper dialogue with stakeholders and the Company. For example, information for the investment community is posted on a special portal <https://www.kmg.kz/en/investors/>, employment issues are posted on the portal

<http://work.kmg.kz>, for violations of legislation and internal regulatory documents of KMG, you can contact the line of the [doverie@kmg.kz](mailto:doverie@kmg.kz) trust system, the confidential information system is available through the internet portal <http://www.sk-hotline.kz/>,

as well as functional interaction is carried out on the activities of the Ombudsman [ombudsman@kmg.kz](mailto:ombudsman@kmg.kz), labor protection and the environment [hse@kmg.kz](mailto:hse@kmg.kz) and sustainable development [sustainability@kmg.kz](mailto:sustainability@kmg.kz).

## INFORMING ABOUT CRITICAL ISSUES

2-16

Informing the Board of Directors of KMG about critical issues is carried out through regular reports on the Company's activities, including, but not limited to the following: the report of the Chairman of the Board of KMG on key changes in activities, information on labor and environmental protection, a report on preliminary results of financial and economic activities, information on the impact of sanctions against the Russian Federation on the activities of KMG, a report on interested party transactions, resolutions on which were made by the Management Board, a review of the status of strategy realization, key performance indicators and investment projects, a report on the realization of the consolidated Development Plan of KMG, a risk report, a report on the realization of resolutions of the Board of Directors, as well as reports of the chairmen of the committees of the Board of Directors.

In addition to the aforementioned reports, the Board of Directors from time to time identifies matters that require immediate reporting, such as information on the current situation in the KMG Group, operational performance, etc., on financial performance, on significant health and environmental incidents in KMG Group companies, including reports on fires (even if such events occurred after the reporting period). The Committee of the Board of Directors of KMG on Safety, Labor Protection, Environment and Sustainable Development regularly reviews and discusses reports on the implementation of the sustainable development system in KMG and its business units and the inclusion of the principles of sustainable development in key business processes, as well as information on the status of work to improve the ESG rating (Environmental – Social – Governance).

*For reference: The Company monitors existing sanctions to minimise adverse effects and consequences, taking into account the potential expansion of sanctions, which could have a point-to-point impact on the Company's promising projects. In order to mitigate risks, the Company foresees mechanisms for exiting projects or implementing them independently in the event of a tightening of the sanctions regime. A working group has been formed to analyse*

*the impact of sanctions on KMG's activities and to develop necessary measures. Consolidated information on the impact of sanctions on the activities of KMG is provided on a periodic basis to the KMG Board of Directors, the Fund, the Ministry of Economic Affairs of the Republic of Kazakhstan and interested KMG units.*

## THE NATURE AND NUMBER OF CRITICAL ISSUES

According to the Corporate Governance Code of KMG HSESC approves its work plan, which is coordinated with the work plan of the Board of Directors, indicating the list of issues under consideration and the dates of meetings. As part of the review of KMG's occupational and environmental protection information, which is considered at each in-person meeting of the Board of Directors, an instruction was given to promptly inform the members of the Board of Directors of any incidents in the field of occupational and environmental protection in KMG Group companies, regardless of the reporting period.

The Committee has introduced the practice of detailed consideration of key issues on HSE (deep dive questions) at the meetings. In 2022, as such, the Committee considered 5 issues: on crisis and emergency management in the KMG Group of companies, on waste management and the implementation of the Memorandum on the Disposal of Historical Waste, on automation and digitalization projects in the field of HSE, on measures to improve fire safety in the KMG Group of Companies on environmental projects of KMG.

The Committee also regularly heard reports on the situation in KMG on COVID-19 and measures taken in the KMG Group of Companies to prevent the spread of COVID-19 coronavirus infection. In addition, the Committee hears a status report on the implementation of the sustainability framework in KMG and its business units and the incorporation of sustainability principles into key business processes.

The KMG Group occupational health and safety policy is based on the commitment of senior management

to health and safety and aims to involve every employee in the development of a safety culture.

## NOMINATION AND SELECTION OF THE MANAGEMENT BODY

2-10

### Procedure for nomination and selection of candidates to the Board of Directors

The procedure for nominating and selecting candidates to the Board of Directors is determined by KMG's Charter and other regulatory documents, is carried out by the General Meeting of Shareholders together with the Chairman of the Board of Directors and the Chairman of the Nomination and Remuneration Committee and is guided by the principles of transparency, fairness and professionalism in the search for and recruitment of candidates.

Members of the Board of Directors are elected from among those proposed for election as representatives of shareholders and other persons. Candidates for members

of the Board of Directors must have the knowledge, skills and experience necessary to perform their official functions and ensure the growth of long-term value and sustainable development of the Company, as well as have an impeccable business reputation.

The Chairman of the Board of Directors is elected by the General Meeting of Shareholders.

Independent directors are selected in accordance with the Rules on the Formation of the Board of Directors of Samruk-Kazyna JSC, endorsed by the resolution of the Board of Samruk-Kazyna JSC dated September 26, 2016, Minutes No. 35/16.

## CONFLICT OF INTEREST

2-15

The main processes for managing conflicts of interest in the company are reflected in the Policy on Conflict of Interest for Employees and Officers of KMG and its subsidiaries and affiliates endorsed by the Board of Directors of KMG, as well as in the Code of Business Ethics.

It is the responsibility of every Employee, regardless of position, and every Officer of the company to ensure compliance with the requirements of this Policy.

Currently, the company has implemented a procedure for Initial disclosure of information about a possible conflict of interests among employees and/or officials when hiring/appointing/appointing and assuming a new position. This Disclosure includes the following information: 1) information about beneficial ownership/equity participation and management in the Counterparty companies / Competitors of KMG and its subsidiaries; 2) information about participation in the sole and collegial bodies of Counterparties or Competitors of KMG and its Subsidiaries;

3) information about interaction with Counterparties of KMG and its subsidiaries; 4) information about the intention to acquire assets and/or securities owned by KMG and/or its subsidiaries, etc. It is planned to conduct a check for the presence of a conflict of interest and compliance with the requirements and procedures of KMG's policies and/or other documents in the field of compliance, including the presence of signs of affiliation among officials of the Samruk-Kazyna Group of Companies with persons considered as candidates for employment, appointment to senior positions, as well as when conclusion of transactions in which there is an interest. Additionally, Consent is being collected for the adoption of anti-corruption restrictions in accordance with the Law of the Republic of Kazakhstan dated November 18, 2015 No. 410-V of the LRK "On Anti-corruption" from the above-mentioned persons.

## THE ROLE OF THE MANAGEMENT BODY IN DEFINING GOALS, VALUES, MISSION AND STRATEGY

2-12

The Board of Directors of KMG actively participates in the strategic planning and realization of the KMG Development Strategy.

In order to monitor KMG's strategic initiatives and take timely corrective measures, the Board of Directors regularly hears the report of the Chairman of the Management Board of KMG on key changes in activities, information on labor and environmental protection, a report on preliminary results of financial and economic activities, a report on interested-party transactions, decisions on which were made by the Management Board, review of the status of realization of the Development Strategy, efficiency and investment projects, report on the realization of the consolidated Development Plan of KMG, reports of the chairmen of the committees of the Board of Directors, report on the realization of decisions of the Board of Directors, as well as reports on the activities of services accountable to the Board of Directors.

The Board of Directors is responsible for determining the priority areas of KMG's activities and endorsing the KMG Development Strategy, as well as monitoring its realization.

A scheduled meeting was held on 15 June 2022 to review the Development Strategy and external factors and their impact on KMG's Development Strategy 2022-2031, approved by the Board of Directors on 3 November 2021 (Minutes 17/2021). The issue of the relevance of the current KMG Development Strategy, including its compliance with the ongoing reform of Samruk-Kazyna JSC and external factors, was considered.

### THE BOARD OF DIRECTORS CONSIDERED A NUMBER OF STRATEGIC ISSUES IN 2022:

- Alternative routes of oil delivery to foreign markets;
- Endorsement of the Consolidated KMG Development Plan for 2023-2027;
- On the consolidated Business Plan of JSC NC "KazMunayGas" for 2023-2027;
- Endorsement of KMG's corporate key performance indicators and their target values;
- Endorsement of the structure of the central office of KMG;

- On the KMG Development Strategy;
- On the Report on the realization of the KMG Development Strategy until 2028 for 2021;
- Issues of realization of investment projects;
- Endorsement of maps of motivational key performance indicators of managers and their target values;
- Conclusion of contracts by KMG for the procurement of oil, procurement and sale of petroleum products;
- On the issue of KMG bonds and on determining the terms of the issue;
- About the implementation of the Coöperatieve KazMunaiGaz U.A. repurchase of 50% of the shares of KMG Kashagan BV from Samruk-Kazyna JSC;
- Cyber security issues.

On September 7, 2022, the annual meeting of the Board of Directors of KMG on sustainable development was held, during which discussions were held on the following topical issues:

- Global trends in the field of sustainable development, approaches to the construction of the strategy of JSC NC "KazMunayGas" in the field of sustainable development;
- Critical assessment and in-depth discussion of ESG development options of JSC NC "KazMunayGas";
- Status of realization of the low-carbon development program of JSC NC "KazMunayGas".

The Board of Directors is aware of the high priority of environmental issues and environmental protection, the life and health of the Company's employees and its contractors at all its production facilities, the development of human resources and commitment to universally recognized global goals in the field of sustainable development, therefore defines sustainable development and progressive reduction of carbon intensity of production as one of the main strategic goals of KMG, which is consistent with the vision of Samruk-Kazyna JSC, the Development Strategy of the Republic of Kazakhstan and the agenda of the global investment community.

## THE ROLE OF THE SUPREME CORPORATE GOVERNANCE BODY IN THE PREPARATION OF A SUSTAINABLE DEVELOPMENT REPORT

2-14

In accordance with the Company's Charter, the endorsement of the Sustainable Development Report falls within the competence of the Board of Directors of KMG.

Health, Safety, Environment and Sustainability Committee of KMG's Board of Directors is the body that reviews and makes a recommendation to the KMG Board of Directors on the approval of the Sustainability Report.

In accordance with the new GRI standards, the disclosure of material topics in the Sustainable Development Report (GRI 3: Material Topics 2021) is determined in each reporting period and with the direct participation of the members of the Board of Directors.

In October 2022 KMG Board of Directors at the HSESC meeting was provided with information on material topics to be disclosed in the KMG Sustainable Development Report for 2022. Material topics are defined according to GRI Standards 2021 and the industry standard (GRI 11: Oil and Gas Sector 2021).

In order to confirm the data presented in the Sustainable Development Report, an independent party verifies it, which in turn contributes to increasing the reliability of the information disclosed in the Report and the confidence of investors and, as a result, improving the investment attractiveness of KMG.

## COMPETENCE AND EVALUATION OF THE MANAGEMENT BODY'S ACTIVITIES

2-17

### Collective knowledge of the members of the management body

Members of the Board of Directors strive to regularly improve their skills and professionalism, including in terms of managing economic, environmental and social aspects. The Nominating and Remuneration Committee regularly reviews the current balance of skills and knowledge of the members of the Board of Directors. Information about the training of members of the Board of Directors is regularly updated on the Company's website and is available at the following link: [https://www.kmg.kz/en/sustainable-development/corporate-governance/directors\\_board/](https://www.kmg.kz/en/sustainable-development/corporate-governance/directors_board/).

[www.kmg.kz/en/sustainable-development/corporate-governance/directors\\_board/](https://www.kmg.kz/en/sustainable-development/corporate-governance/directors_board/).

At the meetings of the Board of Directors, including a separate annual meeting of the Board of Directors on sustainable development, as well as the Committee of the Board of Directors on Safety, Occupational health and Environment and Sustainable Development, the most relevant topics within the scope of ESG (environmental, social, governance) aspects are regularly discussed as part of the consideration of issues, in particular including information about international trends and domestic initiatives.

## ASSESSMENT OF THE ACTIVITIES OF THE MANAGEMENT BODY

2-18

In accordance with the Code, the Board of Directors, Committees and members of the Board of Directors must be evaluated on an annual basis as part of a structured process endorsed by the Board of Directors. This process should comply with the methodology of Samruk-Kazyna JSC. At the same time, at least once every three years, the assessment is carried out with the involvement of an independent professional organization.

In 2021, in 11 portfolio companies of Samruk-Kazyna JSC, including KMG, the team of PricewaterhouseCoopers LLP conducted an independent diagnosis of corporate governance for the period from January 1, 2020 to May 31, 2021. Within the framework of this diagnosis, activities were evaluated in the following five areas: the effectiveness of the Board of Directors and the executive body; risk management, internal control

and audit; sustainable development; shareholders' rights; transparency.

Based on the results of an independent diagnosis, KMG has approved the Action Plan for improving the corporate governance of JSC NC "KazMunayGas" for 2022-2023.

*In this regard, a separate independent assessment of the activities of the Board of Directors in 2022 was not carried out.*

At the same time, in 2022, in accordance with the requirements of the Code, a self-assessment of the members of the Board of Directors was conducted by means of a questionnaire based on the results of 2021. The self-assessment questionnaire was developed jointly by the Chairmen of the Nomination and Remuneration Committee and the Board of Directors. The questionnaire consisted of two sections – "Composition and processes", "Behavior and actions" – and 30 questions. The results of the self-assessment were previously reviewed by the Nomination and Remuneration Committee, during which a recommendation was made to the Chairman of the Board of Directors, together with the Chairman of the Nomination and Remuneration Committee, to discuss the following aspects during the meeting of the Board of Directors when discussing the results of the self-assessment of the activities of the Board of Directors for the results of 2021:

- 1) appointment of the Chairman of the Audit Committee of the Board of Directors of KMG;
- 2) diversity in all aspects;
- 3) succession plan and the process of electing members of the Board of Directors;
- 4) KMG strategy;
- 5) professional development and training.

At the meeting of the Board of Directors in December 2022, the issue of evaluating the activities of the KMG Board of Directors based on the results of 2022 was considered. The purpose of conducting self-assessment on an annual basis is to identify dynamics based on the results of filling out questionnaires by members of the Board of Directors. The Board of Directors of KMG decided to evaluate the activities of the Board of Directors of KMG by the results of 2022 through self-assessment, in order to identify provisions that require attention, as well as to compare the results with those obtained earlier.

In the Q1 of 2023, it is planned to complete the process of evaluating the Board of Directors, Committees of the Board of Directors, members of the Board of Directors and the Corporate Secretary based on the results of 2022 by self-assessment. With this in mind, the Board of Directors will continue to discuss improvements in its activities.

## REMUNERATION POLICIES AND PROCESS OF DETERMINING REMUNERATION

2-19, 2-20

The remuneration level of the members of the Board of Directors of KMG is established by the Decision of the General Meeting of Shareholders, in accordance with the agreements with the members of the Board of Directors of KMG.

Remuneration of members of the Board of Directors of KMG is fixed. In addition to the fixed remuneration for the Chairman of the Board of Directors, there is an additional remuneration for chairing the Board of Directors.

According to the Corporate Governance Code, "the level of compensation for members of the Board of Directors must be sufficient to attract, retain and motivate each member of the Board of Directors to the level required to successfully manage the organization. At the same time, remuneration to a member of the Board of Directors of the organisation is determined in accordance with the methodology developed by Samruk-Kazyna JSC

and the expected positive effect for the organisation from the participation of this person in the Board of Directors should be taken into account". Also, according to the Corporate Governance Code, no person should participate in decisions related to his or her own remuneration.

The procedure for determining the amount of remuneration is determined by the General Meeting of Shareholders. The resolution of the Board of Samruk-Kazyna JSC dated September 26, 2016 (Minutes No. 35/16) endorsed the Rules for the formation of the Board of Directors of the companies of Samruk-Kazyna JSC, providing, among other things, the procedure for determining remuneration to members of the Board of Directors. In accordance with Section 3 of the Rules, 'Remuneration and reimbursement of expenses', the remuneration takes into account the responsibilities of the Directors, the scope of the company's activities and the long-term goals and objectives set out

in the development strategy and business plan. Remuneration is paid to independent directors. Remuneration to representatives of Samruk-Kazyna JSC as part of the Board of Directors of companies belonging to the group of Samruk-Kazyna JSC is determined on the basis of the resolution of the Board of Samruk-Kazyna JSC. In order to form a competitive remuneration in order to attract and retain professional directors, the decision of the Management Board

of the Fund establishes the maximum annual remuneration for individual sectors of the Fund's assets. The establishment of maximum annual remuneration (limits) is carried out in comparison with the remuneration amounts adopted in similar companies.

In 2022, KMG did not involve consultants to determine the amount of remuneration to members of the Board of Directors.

## PARTICIPATION OF STAKEHOLDERS IN RELATION TO REMUNERATION

2-20

The procedure for determining the amount of remuneration is determined by the General Meeting of Shareholders of KMG – Samruk-Kazyna JSC. In accordance with Samruk-Kazyna's Rules for Composition of the Board of Directors, which stipulate, among other things, the procedure for setting remuneration for members of the Board of Directors, when setting the amount of remuneration, the responsibilities of a member of the Board of Directors, the scale of the company's operations, and long-term goals and objectives are taken into account. Remuneration is paid to independent directors. Remuneration to representatives of Samruk-Kazyna JSC in the composition of the Board of Directors of Organizations is determined on the basis of the resolution of the Board of Samruk-Kazyna JSC. In accordance with the Corporate Governance Code, the Nomination and Remuneration Committee of the Board of Directors makes proposals on the amount of remuneration of candidates for independent directors.

At the meetings of the Nomination and Remuneration Committee of KMG's Board of Directors, issues related to the remuneration of members of KMG's Board of Directors shall be discussed as necessary.

In the reporting period, the Committee of the Board of Directors on Appointments and Remuneration reviewed the results of the self-assessment of the activities of the Board of Directors of KMG based on the results of work for 2021, which assessed the level of remuneration of members of the Board of Directors of KMG.

More detailed information on GRI indicators 2-12, 2-20, 2-21 (risk management, remuneration of the Board of Directors) is reflected in KMG's Annual Report for 2022 on the KMG <https://www.kmg.kz/en/investors/reporting/>.

## COMPANY STRATEGY AND KEY RESULTS

2-19, 2-22, 2-23, 2-24

### KMG DEVELOPMENT STRATEGY FOR 2022–2031

Our main task is to expand the value chain, stability of cash flows from the core business within the framework of the sustainable development agenda.

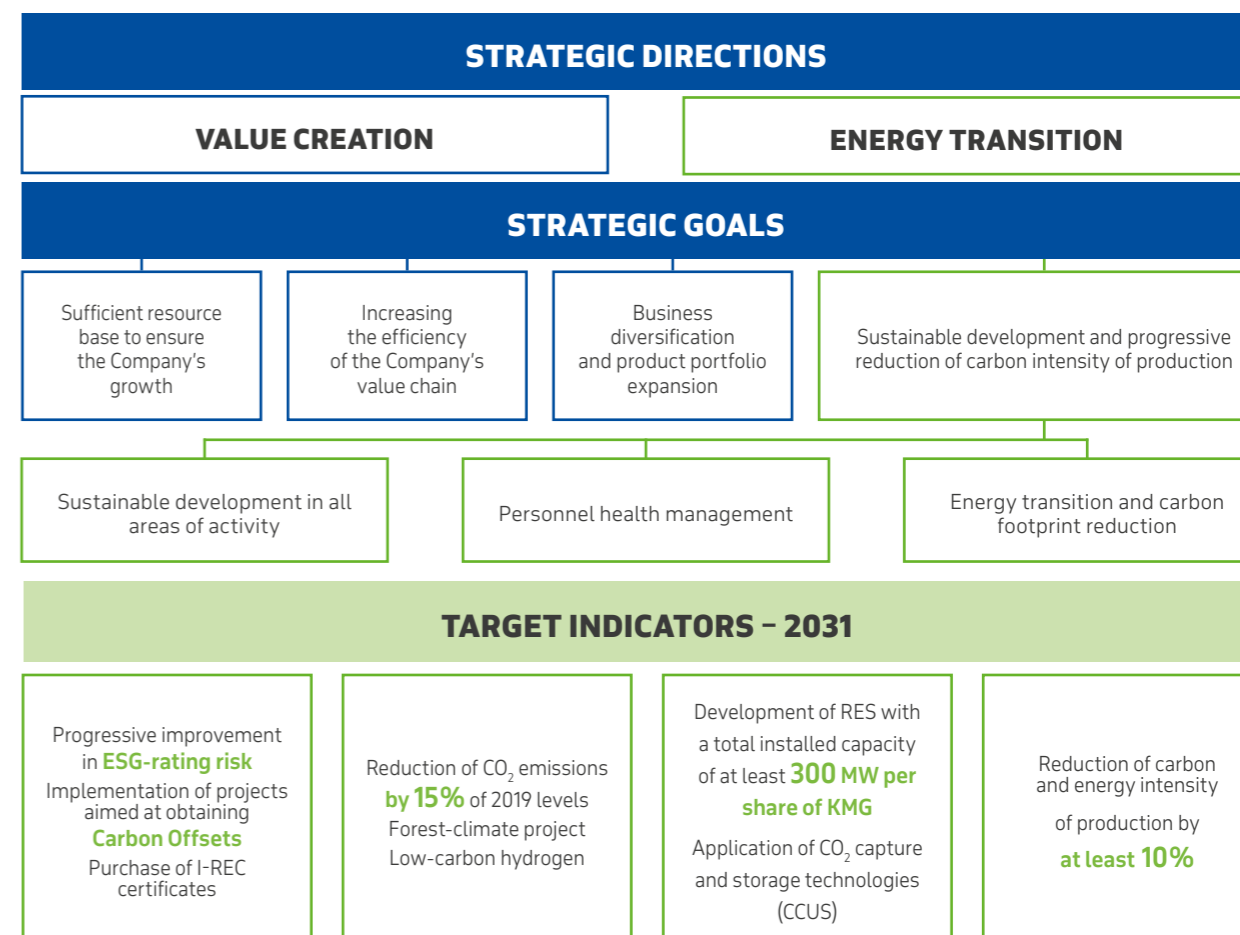
 **VISION**

A national vertically integrated oil and gas company that meets high safety standards and principles of sustainable development, focused on maximizing financial results.

 **MISSION**

We efficiently and rationally develop natural resources to ensure energy security, development and prosperity of Kazakhstan with care for future generations.

TAKING INTO ACCOUNT EXTERNAL AND INTERNAL CHALLENGES, KMG IMPLEMENTS A BALANCED STRATEGY BETWEEN OIL, PETROCHEMICAL AND GREEN PROJECTS.





## 2018

- Development strategy until 2028
- Ensuring a high level of industrial safety in accordance with international standards and best practices
- Increasing environmental responsibility
- Implementation of the compliance program

## 2019

- Priority goals remain Leadership and commitment to occupational health and safety, greenhouse gas emissions management and gas flaring reduction, water management, land reclamation and energy efficiency, production waste management
- A sustainable development management system has been developed in KMG
- A Project Office for Sustainable Development has been established

## 2020

- Transition to production conditions with a low level of carbon-containing emissions
- Integrated the UN SDGs into the Company's business processes
- A new corporate key performance indicator has been introduced, which makes it possible to increase the level of 28 corporate indicators that together determine the overall ESG rating of the Company
- In 2022 The company passed the ESG rating of the international rating agency Sustainalytics for the first time and received 69 points out of 100 possible.

## 2021

- On November 3, 2021, the Board of Directors of KMG approved the Company's Development Strategy for 2022–2031.
- Sustainable development in all areas of activity
- Realization of strategic goals through the prism of ESG principles
- A Project Office for Low-carbon development has been established
- The Low-carbon Development Program for 2022–2031 has been endorsed
- Long-term vision of decarbonization of activity and energy transfer

## 2022

- Realization of renewable energy projects
- In order to reduce indirect greenhouse gas emissions, KMG acquired international renewable energy certificates I-REC (International Renewable Energy Certificate) and extinguished them for 8.5 million kWh
- The Action Plan for the realization of the Low-carbon Development Program until 2031 has been endorsed

### STRATEGIC GOAL NO. 1 SUFFICIENT RESOURCE BASE TO ENSURE THE GROWTH OF THE COMPANY

To ensure a stable level of production in the next decade, KMG is implementing geological exploration projects both onshore and offshore of the Caspian Sea.

As part of this strategic goal, KMG plans to provide an increase in reserves sufficient for both traditional activities and promising areas through organic and inorganic growth.

Exploration and development of new reserves in the Republic of Kazakhstan is implemented by KMG, including through strategic partnership with international oil and gas companies.

In 2023, we are moving into the active phase of the offshore projects "Zhenis", "Abai", projects on land "Turgai Paleozoic", "Karaton Podsolevoy", "Taysogan". We are starting to develop FEED for the development of the Kalamkas-Sea of Khazar field, one of the largest on the sea after Kashagan. It is important to decide in 2023 on the further expansion of the Kashagan field.

The search and acquisition of additional new assets, KMG will carry out in the presence of proposals for M&A transactions, their value and general market conditions.

### STRATEGIC GOAL NO. 2 IMPROVING THE EFFICIENCY OF THE COMPANY'S VALUE CHAIN

KMG focuses on core business in order to maximize the benefits of oil production, refining, transportation and marketing activities and improve operational performance in all key segments.

In order to compensate for the natural production decline at the operating assets, the Company continues to work on increasing the oil recovery factor and time between overhauls, as well as on implementing other measures to improve production efficiency to achieve maximum well productivity. The company plans to launch new fields Karaton Podsolevoy and Turgay Poleozoy.

For the major projects of Tengiz, Karachaganak and Kashagan, the Company focuses on the successful realization of projects to expand, extend and maintain production shelves.

The company aims to make efficient use of the established oil transport infrastructure to increase the export and transit component. Taking into account external factors and geopolitical challenges, KMG is

working to create additional export routes for Kazakh oil. We are negotiating with our partners about opening the Southern Corridor and increasing volumes to China. An agreement has been signed with Socar on the transit of 1.5 million tons of oil per year on the Baku-Tbilisi-Ceyhan (BTC) route.

An important task of KMG is to ensure the smooth operation of the refinery and the needs of the domestic market for petroleum products. To date, due to the modernization of the refinery in the country, the Company fulfills this strategic goal for the country and, moreover, supplies part of the petroleum products for export. In particular, exports of dark petroleum products amounted to 694 thousand tons, petrochemicals (benzene, paraxylene) – 35 thousand tons, light petroleum products (gasoline Ai-92) – 7 thousand tons, coke and sulfur – 85 thousand tons.

The company is constantly working to optimize operating costs and improve the efficiency of the supply chain.

### STRATEGIC GOAL NO. 3 BUSINESS DIVERSIFICATION AND PRODUCT PORTFOLIO EXPANSION

KMG will be actively involved in the development of the domestic oil and gas chemical industry, given the support of the Government of Kazakhstan to develop the oil and gas chemical industry, which should be another powerful stimulus for the growth of the national economy, as oil and gas chemistry has a multiplier effect for the entire country.

Petrochemistry is becoming the largest driver of global oil demand. The company will use existing and additional hydrocarbon resources to support petrochemical projects and new downstream products in the context of a reallocation of global oil demand in the long term and is pursuing the following two strategic initiatives.

*For more information about oil and gas chemistry projects, see the section "Realization of investment projects".*

### STRATEGIC GOAL NO. 4 SUSTAINABLE DEVELOPMENT AND PROGRESSIVE REDUCTION OF CARBON INTENSITY OF PRODUCTION

KMG recognises the importance of its economic, environmental and social impacts and will continue to integrate sustainability principles into the Company's key business processes to ensure alignment of economic, environmental and social priorities and corporate governance objectives.

The company strives to improve its ESG indicators and integrate ESG goals into the system of strategic and medium-term KPI of managers. KMG strives for standards of high social responsibility based on the principles of partnership with employees and trade unions.

The company also strives to improve the level of effective management of staff health and the quality of life of employees, which will focus on three main areas:

- Dealing with the pandemic and its aftermath;
- Prevention of occupational diseases;
- Increase awareness and motivation of employees to a healthy lifestyle.

The KMG Group Health Management Program has been developed to introduce a unified approach and improve employee health performance.

Taking into account the strategic importance of the climate agenda, the Company is implementing a Low-carbon Development Program for 2022–2031, which defines KMG’s climate ambitions, main approaches and measures to reduce the carbon footprint.

KMG chooses a balanced approach to reducing the Company’s carbon footprint, setting a goal to reduce greenhouse gas emissions by 15% by 2031 compared to 2019. Also, along with this, the Company plans to implement renewable energy projects with a total capacity of at least 300 MW.

*For more information about the Low-carbon Development Program, see the section “Low-carbon policy”.*

**As a result of the realization of these four strategic objectives, KMG will contribute to the diversification of the national economy and reduce the carbon footprint of the Republic of Kazakhstan, thereby contributing to the growth of the Company and the well-being of Kazakhstanis, as well as preserving the environment for future generations.**

KMG’s development strategy, strategic goals and objectives are highlighted to all stakeholders by publishing on the corporate website (<https://www.kmg.kz/en/company/strategy/>), strategic sessions are held annually for the KMG Group to solve systemic and long-term tasks affecting the company’s activities.

## CORPORATE KEY PERFORMANCE INDICATORS OF JSC NC “KAZMUNAYGAS” FOR 2022

- Oil and gas condensate production volume
- IPO Preparation: Execution of key IPO preparation activities provided for in the Roadmap
- Realization of investment projects
- Free Cash Flow (FCF)
- Labor-related accident Rate (LTIR)
- ESG risk rating

For 2022, functional and corporate KPIs related to the development of KMG’s Low Carbon Development Program Action Plans 2022–2031 have been developed and set for the company’s top management (4 members of the KMG Management Board), as well as for companies in the Low Carbon Development Program scope.

Based on projections of greenhouse gas emissions for the KMG Group of Companies, the following KPIs related to carbon intensity reduction and decarbonisation will be set annually, starting in 2022, for systematic realization of decarbonisation measures:

- corporate KPI of JSC NC “KazMunayGas”, established by the parent company of JSC Fund “Samruk-Kazyna” in terms of total greenhouse gas emissions (Scope 1 + Scope 2);
- functional KPIs of 4 Deputy Chairmen of KMG’s Management Board (members of the Management Board) in relation to the realization of the KMG Low Carbon Development Program Action Plan and Action Plans of supervised subsidiaries and affiliates;
- corporate efficiencies of 11 subsidiaries and dependent enterprises included in the scope of the LCDP, setting targets for total GHG emissions in Scope 1 + Scope 2 coverage.



## SUSTAINABLE DEVELOPMENT MANAGEMENT



- Principle 1.** The business community should support and respect the protection of internationally proclaimed human rights.
- Principle 2.** The business community should not be involved in human rights violations.
- Principle 4.** The business community should advocate for the elimination of all forms of forced and compulsory labor.
- Principle 6.** The business community should advocate for the elimination of discrimination in work and employment.
- Principle 8.** The business community should take initiatives aimed at increasing responsibility for the state of the environment.
- Principle 10.** The business community must resist all forms of corruption, including extortion and bribery.

## OUR APPROACH TO SUSTAINABLE DEVELOPMENT MANAGEMENT

3-3, 201-2

Our approach to managing aspects of sustainable development is based on the implementation of the following principles of sustainable development:

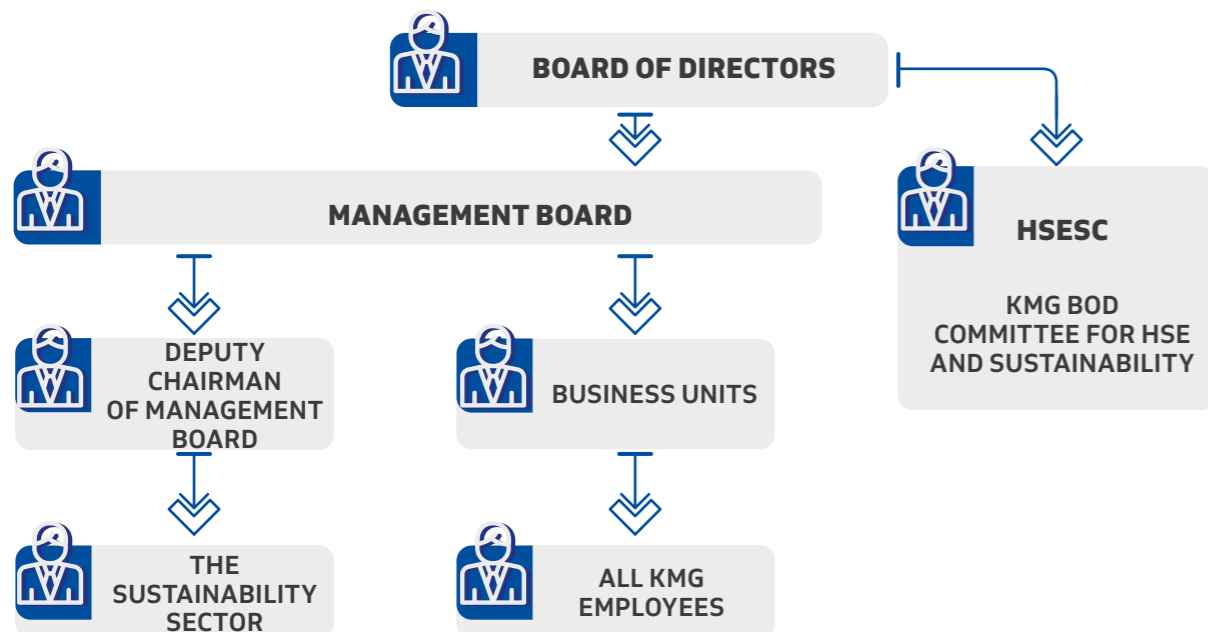
**openness, accountability, transparency, ethical behavior, respect for the interests of stakeholders, legality, respect for human rights, intolerance to corruption, inadmissibility of conflicts of interest, personal example.**

KMG strives to build an effective management system in the field of sustainable development, which includes the following elements:

- the Company’s commitment to the principles of sustainable development at all levels of management;
- analysis of the external and internal situation on three aspects of sustainable development: economic, environmental and social;

- identification of risks in the field of sustainable development in the social, economic and environmental spheres;
- interaction with stakeholders and building a stakeholder map;
- definition of goals and efficiency in the field of sustainable development;
- realization of priority areas (initiatives) in the field of sustainable development;
- integration of sustainable development into key business processes;
- professional development of the Company’s employees in the field of sustainable development;
- organization of the annual sustainability reporting process;
- measurement of performance in the field of sustainable development;
- improving the process of sustainable development.

## SUSTAINABLE DEVELOPMENT MANAGEMENT IN KMG



The Board of Directors of KMG provides strategic guidance and control over the implementation of the principles of sustainable development and the achievement of the SDGs. Endorses the consolidated annual Report on the sustainable development of the Company.

KMG BoD Committee for HSE and Sustainability reviews and organizes issues of sustainable development, the status of achievement of the SDGs, preparation of recommendations for the endorsement of the sustainable development policy, the annual Report on the sustainable development of KMG, action plans and other internal documents in the field of sustainable development, the endorsement of which falls within the competence of the BoD, the introduction of social, economic and environmental components of sustainable development, formation of a management system in the field of sustainable development, definition of goals and efficiency in the field of sustainable development, monitoring the implementation of sustainable development in KMG, integration of sustainable development into key processes of KMG.

The Management Board of KMG carries out the proper realization and realization of the principles, policies, standards in the field of sustainable development and the action plan in the Company. Monitors activities in the field of sustainable development, assesses the implementation of goals and KPIs in the field of sustainable development and the achievement of the SDGs.

The Deputy Chairman of KMG's Management Board, who oversees sustainable development issues, coordinates approaches to achieving goals and KPIs for sustainable development initiatives and supervises the realization of corporate standards in the field of sustainable development, supervises the preparation of a report on sustainable development and the achievement of the SDGs.

The Sustainability Sector of KMG's Strategy and Portfolio Management Department is responsible for initiating, coordinating and implementing the sustainable development management system and achieving the SDGs, assisting in its integration into the Company's business activities, methodological support on sustainable development issues, annual preparation and endorsement of the Sustainable Development Report, assists responsible structural units in identifying and risk management in the field of sustainable development, in the development of a stakeholder map and interaction mechanisms, as well as training in the field of sustainable development.

KMG's Business Units implement a system in the field of sustainable development, implement initiatives to achieve the SDGs, analyze the internal and external situation, identify risks in the field of sustainable development, develop a map of stakeholders/stakeholders and interaction mechanisms, implement initiatives in the field of sustainable development, prepare information

for a Sustainable Development Report according to international standards.

All KMG employees, each at their own level, implement principles and measures in the field of sustainable development and achieving the SDGs through personal behavior and compliance with relevant policies and standards.

Progress on an integrated system approach to the implementation of ESG principles in the Company's activities in 2022 was achieved through the following activities:

- KMG has been independently evaluated by the international rating agency "Sustainalytics". The Company maintained the average risk management level at 28.4 points.
- In order to improve the efficiency of the Company's activities in terms of sustainable development indicators for 2022, the corporate efficiency – ESG rating was endorsed by the decision of the Board of Directors of KMG. The targets of the endorsed KPI have been achieved.
- In 2022, KMG Board members were assigned corporate KPIs related to the implementation of the activities of the KMG Low-Carbon Development Program for 2022–2031. For subsidiaries that are part of the perimeter of the realization of the Low-carbon Development Program, the efficiency of reducing the carbon footprint in the established volumes has been established.

- In September 2022, the annual Meeting of the Sustainable Development of the Board of Directors of KMG was held. Priority issues in the field of sustainable development were discussed: plans and objectives of the Low-Carbon Development Program of JSC NC KazMunayGas, status of implementation of priority Sustainable Development Goals in JSC NC KazMunayGas, annual reporting in the field of sustainable development.
- The implementation of sustainability system is regularly reviewed by the Health, Safety, Environment and Sustainability Committee of the Board of Directors. In total, 5 meetings of the Committee were held in 2022, at which 40 issues were considered. The main focus of the Committee's attention in 2022 was the issues of occupational safety, industrial safety and environmental protection, strategic management of ESG (Environmental – Social – Governance) aspects, as well as the implementation of a sustainable development system.
- Reaffirming its commitment to the realization of the principles of sustainable development:
  - the Policy in the field of sustainable development has been endorsed;
  - The Policy on Human Rights and Public Relations has been endorsed;
  - the realization of the Action Plan to improve the ESG rating of KMG is underway;

### CASE STUDY

#### KAZMUNAYGAS ENHANCES ESG CULTURE AMONG EMPLOYEES OF SUBSIDIARIES

In September 2022, in Aktau, PWC Kazakhstan experts, together with employees from KMG's Corporate Centre, conducted a practical training session on sustainable development disclosure for employees of subsidiaries and affiliates who oversee health and safety, environmental, economic and human resource management issues.

During the training, more than a hundred employees of subsidiaries and affiliates got acquainted with global trends in the field of sustainable development, the UN Sustainable Development Goals and the impact of ESG ratings on the activities of KMG. In addition to theory, the training participants also mastered the practical application of international standards in the field of sustainable development.





- The Department for Low-Carbon Development has been established in order to develop KMG's own approaches in the field of decarbonization;
- The Action Plan of JSC NC "KazMunayGas" for the realization of the Low-Carbon Development Program for the period 2022-2031 has been developed and endorsed;
- The Program on personnel health management in the KMG Group of Companies has been endorsed.

Much attention is paid to improving the culture of sustainable development. On a regular basis, training courses on sustainable development are held for employees of the corporate center and subsidiaries.

## MATERIAL TOPICS OF THE REPORT

2-3, 2-14, 3-1, 3-2, 3-3

The material topics of the Report reveal the Company's most significant impact on the economy, environment and people, including human rights impacts, as well as ways to manage these impacts. The process of identifying material topics is based on continuous identification and impact assessment involving relevant stakeholders, with HSESC members being informed on material topics to be disclosed in the Report.

To assess and disclose material topics in the Report, data from both external and internal stakeholders (stakeholders) were analyzed. The online survey was prepared on the basis

of the Google Forms platform. More than 100 respondents took part in the survey. Based on the procedures' results, a table of materiality was constructed from 27 topics of the list of potential topics.

In total, 22 sector-specific topics of GRI 11: Oil and Gas Sector 2021 have been identified for consideration, of which 13 topics have been identified as material. The Sustainability Report for 2022 discloses 27 GRI standards as material. In 2021, the Report revealed 24 topics. <https://www.kmg.kz/en/sustainable-development/>

## LIST OF MATERIAL TOPICS

№	Material topics	SDG Indicators																
		3	7	8	9	11	12	13	15	17	1	2	4	5	6	10	16	
1	11.1 Greenhouse gas emissions		●					●										
2	11.3 Air emissions					●		●										
3	11.4 Biodiversity																	
4	11.5 Waste	●	●					●										
5	11.6 Water and wastewater																	
6	11.7 Closure and rehabilitation																	
7	11.9 Occupational health and safety	●																
8	11.10 Employment practice																	
9	11.11 Non-discrimination and equal opportunities																	
10	11.13 Freedom of association and collective bargaining																	
11	11.14 Economic impacts																	
12	11.15 Local communities	●																
13	11.21 Payments to governments																	

## STAKEHOLDER ENGAGEMENT

2-29

We seek to ensure high openness and transparency of our activities by implementing the principle of active dialogue with stakeholders. We annually disclose information about all existing aspects of the Company's performance. This helps us to maintain the balance between economic, social and ecological aspects of our activities.

KMG has an approved Stakeholder Map, which takes into account the risks and rankings based on dependence (direct or indirect), obligations, the situation (with a particular focus on high-risk areas), influence, and various prospects. To ensure effective achievement of the goals, Stakeholder Engagement Plans are developed.

KMG implements the full operating cycle from exploration and production of hydrocarbons, their transportation and refining to sale of oil and oil products both in Kazakhstan and abroad, and represents the state interests in the oil and gas sector. Having a complicated structure and various activities, KMG is interacting with a wide range of stakeholders.

When defining stakeholders and stakeholder engagement, KMG applies the best stakeholder engagement practices, including international standards, such as AA1000SES Stakeholder Engagement Standard.

KMG is constantly making efforts to build up a dialogue and long-term cooperation, and manage relations with its stakeholders.

## METHODS OF INTERACTION WITH STAKEHOLDERS

KEY STAKEHOLDER GROUPS	INFORMATION NEEDS DURING INTERACTION	INFORMATION DISCLOSURE METHODS AND COMMUNICATION CHANNELS
 <b>SHAREHOLDERS</b>	<ul style="list-style-type: none"> <li>Information about the Company's activities, corporate events affecting the interests of securities holders.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Representation of shareholders' interests in Board of Directors of KMG</li> <li>Publication on the corporate website</li> <li>Publication on the website of the Kazakhstan Stock Exchange</li> <li>Disclosure of information on the Internet resource of the depository of financial statements</li> </ul>
 <b>INVESTMENT COMMUNITY</b>	<ul style="list-style-type: none"> <li>Information about the company's activities, corporate events affecting the interests of investors and the investment community as a whole.</li> <li>Interest in ensuring the profitability of investments, investment opportunities in KMG.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Publication on the corporate website, including "Investors" section (<a href="http://www.kmg.kz">www.kmg.kz</a>)</li> <li>Publication on the website of the Kazakhstan Stock Exchange</li> <li>Organization of roadshows and other public events for investors</li> <li>Conducting meetings, conference calls</li> <li>Providing work with requests via e-mail (<a href="mailto:ir@kmg.kz">ir@kmg.kz</a>), telephone consultations</li> <li>Press releases</li> <li>Publication on the Internet resource of the depository of financial statements</li> </ul>
 <b>ASSOCIATIONS, LOCAL COMMUNITIES, PUBLIC ORGANIZATIONS</b>	<ul style="list-style-type: none"> <li>Any information, except confidential in accordance with the legislation of the Republic of Kazakhstan and internal documents of KMG. Information about employment, corporate social responsibility, environmental safety and environmental protection measures.</li> <li>Increase of information transparency of KMG, information about the company's activity in solving social problems of local communities, development of social infrastructure and improvement of environment.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Publication on the corporate website</li> <li>Public meetings</li> <li>Public hearings</li> <li>Publication in the media</li> <li>Reception of citizens</li> <li>Organization of work with complaints and appeals</li> <li>Participation in the work of local authorities and projects of local communities</li> <li>Conducting public events with the participation of representatives of local communities</li> <li>Membership in associations</li> <li>International initiatives</li> <li>Participation in industry forums, conferences</li> <li>Membership in working groups on social and environmental issues</li> <li>Surveys and research</li> <li>Working with queries</li> </ul>
 <b>MASS MEDIA</b>	<ul style="list-style-type: none"> <li>Any information, except confidential in accordance with the legislation of the Republic of Kazakhstan and internal documents of KMG.</li> <li>Information about the company's activities.</li> </ul>	<ul style="list-style-type: none"> <li>Publication on the corporate website</li> <li>Publication in the media and providing answers to media inquiries</li> <li>Press releases</li> <li>Press conferences, briefings, press tours, forums, infessions and other media events</li> <li>Working with queries</li> </ul>
 <b>GOVERNMENT, LOCAL STATE AUTHORITIES</b>	<ul style="list-style-type: none"> <li>Socio-economic, environmental and sectoral information affecting public and government interests.</li> <li>Legislative requirements, tax revenues, economic growth and social objectives in compliance with KMG's activities.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Publication on the corporate website</li> <li>Meetings, conference calls</li> <li>Publication in the media</li> <li>Entering data into the electronic system</li> <li>Notification by means of communication</li> <li>Working groups on improving the legislation of the Republic of Kazakhstan</li> </ul>
 <b>SUBSIDIARIES AND AFFILIATES OF KMG</b>	<ul style="list-style-type: none"> <li>Information on the Company's activities, strategic development plans, corporate governance mechanisms, methods of interaction, corporate events affecting the interests of subsidiaries.</li> <li>Information about sustainable development, financial stability, assistance in cooperation with State institutions.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Publication on the corporate website</li> <li>Representation of shareholder interests at general meetings of shareholders/participants, as well as in Boards of Directors/supervisory Boards</li> <li>Meetings, consultation panels, conference calls</li> <li>Participation in committees, working groups</li> <li>Organization of trainings, seminars</li> </ul>
 <b>CUSTOMERS, SUPPLIERS, PARTNERS, OTHER ORGANIZATIONS</b>	<ul style="list-style-type: none"> <li>Information about management decisions that may affect the terms of mutually beneficial cooperation, corporate events affecting the interests of partners, suppliers, and customers.</li> <li>Information about respect for the rights of the parties to cooperate, in ensuring compliance with their obligations.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Publication on the corporate website</li> <li>Meetings, conference calls</li> <li>Ensuring work with complaints and appeals</li> <li>Organization of partner/supplier days</li> <li>Sending notifications</li> <li>Audits</li> </ul>
 <b>TRADE UNIONS, KMG EMPLOYEES</b>	<ul style="list-style-type: none"> <li>Information about the company's development plans, working conditions, career development, observance of social and labor rights, corporate events affecting the interests of KMG employees.</li> <li>Information on ensuring harmonious and safe working conditions, observance of rights and obligations in accordance with labour legislation of the Republic of Kazakhstan.</li> </ul>	<ul style="list-style-type: none"> <li>Providing access to information</li> <li>Publication on the corporate website</li> <li>Holding meetings</li> <li>Reporting meetings of the management with workforce</li> <li>Councils and committees on occupational safety and health</li> <li>Organization of trainings, seminars</li> <li>Internal messages</li> <li>Distribution of materials through internal communication channels</li> <li>Surveys, questionnaires</li> <li>Contests</li> </ul>

## INITIATIVES AND MEMBERSHIPS

2-28, 2-29, 304-3

### INITIATIVES



#### The World Bank Initiative "Complete cessation of regular flaring of APG by 2030"

Initiative unites governments, oil companies and development organisations that are ready to cooperate to stop the practice of regular associated petroleum gas (APG) flaring by 2030. KMG supported this initiative in 2015 with a aim of increasing the beneficial use and disposal level of APG and reducing to zero regular flaring.



#### Global Methane Initiative

KMG supports the Global Methane Initiative (GMI) and regularly discloses its environmental activities to all stakeholders in the Sustainability Report. In 2017, as part of its methane emission reduction activities, KMG joined the GMI Project Network, which is a growing community of private sector entities, financial institutions, and other governmental and non-governmental organisations interested in methane emission reduction projects, and in methane recovery and use.



#### CDP Climate Program

In 2022, KMG published a 2021 Greenhouse Gas Emissions Report as part of the CDP (Carbon Disclosure Project) Climate Program. The Report contains data on direct and indirect greenhouse gas emissions for all KMG assets, including subsidiaries in Romania and Georgia. The CDP Water Security Questionnaire for 2021 was also published.

#### The Caspian Environmental Protection Initiative (CEPI)

In September 2020, the Memorandum of Understanding was signed in Baku between JSC NC "KazMunayGas", the state oil company of the Azerbaijan Republic, BP Exploration (Caspian Sea) Limited, Equinor Apsheron AS and TOTAL E&P Absheron B.V. The Memorandum involves creation of Caspian Environmental Protection Initiative. The main goals of the Initiative will be creating the first platform for environmental protection and joint research of international oil companies operating in the region. Activities of the participating companies will be aimed at active joint efforts in order to resolve climate change problems threatening the Caspian Region's ecological stability and prevent environmental emissions of greenhouse gases and harmful substances.



#### Environmental Responsibility Rating of Oil and Gas Companies in Kazakhstan

The Company continues to pursue the path of environmentally responsible business, developing its environmental management system and engaging in dialogue with all stakeholders on this issue, thereby fulfilling its obligations reflected in the Company's Environmental Policy.



As a result of its efforts to improve environmental performance, and to achieve openness and transparency in this area, for the sixth consecutive year, KMG has been ranked first in the Environmental Data Transparency Rating among oil and gas companies in the Republic of Kazakhstan based on the assessment of independent experts of the World Wildlife Fund (WWF), Creon Group and Analytical Credit Rating Agency (ACRA) rating agency.

On 1 December 2022, in Moscow, at the UN information centre, the World Wildlife Fund (WWF), Creon Group and ACRA rating agency presented the results of the Eurasian Environmental Transparency Rating of Oil and Gas Companies 2022. In total, the 2022 rating included 14 oil and gas companies of Kazakhstan. The rating list is based on oil, gas condensate and oil products output data according to the Ministry of Energy of the Republic of Kazakhstan.

The rating also includes 21 oil and gas companies of the Russian Federation and 2 companies from Azerbaijan. Tatneft has been ranked first among Russian oil and gas companies.



### VISION ZERO

#### Vision Zero Global Initiative

On March 1, 2022, KMG officially joined the global initiative to promote the concept of Vision Zero.

Vision Zero is a transformational approach to prevention that integrates the three dimensions of safety, health and well-being at all levels of work. The ISSA's Vision Zero concept is flexible and can be adjusted to the specific safety, health or well-being priorities for prevention in any given context. This concept implies a sequence of actions by the employer in order to protect the employees as much as possible, to create optimum working conditions. On behalf of the employee – working safely, growing responsibility not only for themselves, but also for colleagues.

### CASE STUDY

#### KMG IN TOP 50 OF THE PWC KAZAKHSTAN'S ESG DISCLOSURE RATING

For the third consecutive year, JSC NC "KazMunayGas" is among the top 50 companies in disclosure of non-financial information in corporate reports. The rating was prepared by PwC Kazakhstan and included 98 companies. The survey assessed the quality and availability of ESG information in annual reports and sustainability reports of Kazakh companies published in 2021. To see the rating, please visit <https://www.pwc.com/kz/en/assets/top-50-report-eng-2.pdf>



### Initiative of Engagement with Republican Public Association "Oil & Gas Industry Veterans" (OGIV)

The mission of RPA "Oil & Gas Industry Veterans" is creating the conditions for interactive communication of industry veterans, meeting their professional and amateur interests aimed at development of the oil and gas industry, using their potential and experience in operations, active participation in the life of society, transferring their life and professional experience to the younger generation of oil workers.

In 2021, a Memorandum of Understanding and Cooperation was signed between JSC NC "KazMunayGas" and RPA "Oil & Gas Industry Veterans". It was agreed in the Memorandum to utilise the practical experience, scientific, technical and intellectual potential of oil & gas industry veterans of JSC NC "KazMunayGas" has been established. The key objectives of the Council are developing the recommendations for implementation of KMG's strategic programs in the field of technological and digital development of the oil and gas industry,

## MEMBERSHIP

discussing public initiatives related to oil and gas industry development, participating in developing expert recommendations for the regulatory framework of the oil and gas industry, preparing expert opinions on issues significantly affecting the operations of KMG, providing analytical, expert, informational and advisory support in the operations of KMG.



### Oil Spill Preparedness Regional Initiative (OSPRI)

The Initiative is aimed at assistance and support of oil industry and the regional government in joint work contributing to making the accepted, reliable, integrated and sustainable national, regional and international decisions regarding oil spill response. The initiative is implemented through IPIECA, the global oil and gas industry association for ecological and social issues ([www.ipieca.org](http://www.ipieca.org)). For IPIECA, OSPRI is the regional means of implementing the international efforts on assistance to Oil Spill Preparedness, in close cooperation with International Marine Organisation (IMO – [www.imo.org](http://www.imo.org)) and other international organisations.



### National Chamber of Entrepreneurs of the RoK "Atameken"

KMG and the National Chamber of Entrepreneurs of the RoK "Atameken" entered into an agreement on cooperation in legal matters. The agreement provides for interaction of the parties in such important legal areas as improvement of legislation, development of joint programs and projects aimed at raising legal culture, expanding the role of arbitration in resolution of commercial disputes, etc.



### Kazakhstan Association of Oil, Gas and Energy Sector Organisations "KAZENERGY"

The KMG management is involved in the activities of several committees and working groups of the Association.

The chairmanship in the Coordination Council of KAZENERGY for ecology, social responsibility and transparency is an opportunity for KMG to promote sustainable development in the oil and gas sector of Kazakhstan.

KMG and Kazakhstan Association of Oil, Gas and Energy Sector Organisations "KAZENERGY" have entered into a Memorandum of Cooperation.

The Memorandum provides for joint activities in such key legal areas as improvement of the RoK legislation; development of joint programs and projects aimed at raising legal culture; cooperation in holding round tables, seminars, conferences on topical issues in the legal field, etc.



### The UN Global Compact

Our membership in the UN Global Compact and the annual posting of the Sustainability Report on the UNGC website to show KMG's progress in promoting the principles of the Global Compact and 17 Global Sustainable Development Goals clearly demonstrate our commitment to the principles of sustainable development.



### International Association of Oil and Gas Producers (IOGP)

Since 2018, KMG has been a full member of the International Association of Oil and Gas Producers (IOGP).

During the years of IOGP membership, KMG studied and used international best practices and recommendations of IOGP, which helped to improve the performance and overall management system of KMG in the field of HSE, as well as increased the capabilities and rating of KMG at the international level.

Since 2022, KMG has moved to the common for all members of the IOGP Life-Saving Rules, which replaces the KMG's former "Golden Rules".

IOGP has analyzed two thousand fatal accidents in about one hundred IOGP member enterprises from 1991 to the present. As a result of the analysis, the association identified the most frequent safety violations.

To prevent these violations, 9 Life-Saving Rules were developed. These rules inform employees about actions they can take to protect themselves and their colleagues from fatalities.



## CASE STUDY

### KASE AWARDED ORGANIZATIONS BASED ON THE RESULTS OF THE ANNUAL REPORTS COMPETITION FOR 2021

On February 17, 2023, the Kazakhstan Stock Exchange (KASE) held an award ceremony for organizations based on the results of the annual reports competition for 2021. In the nomination "The Best Sustainable Development Report for 2021", the winner was "KazMunayGas" National Company

<https://kase.kz/ru/news/show/1497148/>



## ESG

### National ESG Club

In 2022, KMG joined the National ESG Club, the priority objectives of which are to develop recommendations and expert assessments in the following areas: reduction of environmental impact in the Republic of Kazakhstan, development of sustainable financing at a new level, attraction of investments in decarbonization of economy and social projects, creation of favorable conditions for Kazakhstan business in ESG transformation.



### “Qazaq Green” RES Association

As part of the Low Carbon Development Program, KMG intends to implement its own renewable energy projects. For this purpose, KMG develops its competence in the field of renewable energy and actively participates in the improvement of legislation.

In the beginning of 2022, KMG joined “Qazaq Green” RES Association, created to promote the principles of “green economy” and the achievement of carbon neutrality of the Republic of Kazakhstan.

The key tasks of the Association include representing and protecting the interests of the members of the Association in state bodies, participating in the legislative process, making specific proposals to state bodies to create favourable conditions for the implementation of renewable energy projects in Kazakhstan.



### Kazakhstan Association of Regional Environmental Initiatives “Ecojer”

KMG joined the Kazakhstan Association of Regional Environmental Initiatives “Ecojer” in 2021. The goal of the Association is to consolidate the business community and civil society to represent and defend common interests and promote environmental protection activities based on a balanced approach between public policy areas, the concerned public and the need to develop economic potential.



### International Association for Emergency Oil Spill Response (OSRL)

Oil Spill Response Limited (OSRL) is a British company established in 1985 and specializing in oil spill response and offering its services worldwide. More than a hundred world companies are members of the OSRL. The Company pays primary attention to prevention and removal of oil contaminations not only offshore but also in coastal areas.

## COMPANY'S CONTRIBUTION TO THE SDGS

The approach of KMG to the issues of sustainable development is based on the consistency of the Company's interests and plans with the basic principles of the UN, human values, global trends and priorities of Kazakhstan's development. The company adheres to all 17 UN Sustainable Development Goals.

Based on KMG's strategic goals, the Company has identified 6 UN Sustainable Development Goals and 14 objectives as priorities. The goals and objectives align with strategic and business initiatives implemented in KMG.



Their implementation determines the Company's contribution to achievement of the UN's global Sustainable Development Goals.

## REALIZATION OF THE SUSTAINABLE DEVELOPMENT GOALS IN KMG

Priority tasks	Contribution of KMG
<p><b>3.6.</b> Reduce the number of deaths and injuries as a result of road accidents</p>	<p><b>ENSURING A HEALTHY LIFESTYLE AND PROMOTING WELL-BEING AT ANY AGE</b></p> <p><b>The project “Trip Management”</b> In order to increase the level of transport security and create a culture of safe driving, it is planned to gradually replicate the project “Trip Management” to other subsidiaries of dependent organizations of KMG.</p> <p><b>Result</b> Embamunaigas JSC has completed the realization of a pilot project for the introduction of an automated vehicle monitoring system “Trip Management”: the number of speed violations has been reduced by 62%, 591 speed limit signs have been installed/updated on the roads of EMG production structural units, a driver rating based on a point rating on driving style and fixed violations, an up-to-date electronic map of field and dirt roads and the coordinates of EMG field objects have been drawn, new functionality has been introduced (waybills, deviations from the route, online notifications).</p>
<p><b>3.8.</b> Ensure health coverage, including access to quality basic health services and access to safe, effective, high-quality and affordable essential medicines and vaccines</p>	<p><b>Personnel health management</b> KMG has endorsed a program for personnel health management. The main directions of the program: Prevention of occupational diseases. Development of minimum standards of medical care and medical care for employees of production facilities. Systematic monitoring of the health of KMG Group employees. Improving the quality of medical care and motivation of employees to a healthy lifestyle. Medical health insurance. Medical examinations and vaccination of employees are carried out on a regular basis.</p> <p><b>Initiative “10 steps to recovery”</b> The health and well-being of the employees of JSC NC “KazMunayGas” are priorities that are of paramount importance when it comes to labor productivity, competitiveness and stability of enterprises. The “10 Steps to Wellness” are primarily aimed at increasing physical activity and eliminating unhealthy eating habits, and are effective in improving employee health outcomes.</p> <p><b>Result</b> 100% of KMG employees are covered by the health insurance program.</p>
<p><b>3.9.</b> Significantly reduce the number of deaths and diseases as a result of exposure to hazardous chemicals and pollution, and poisoning of air, water and soil</p>	<p><b>Leadership Initiatives</b> The Code of Leadership and Commitment of Employees to Comply with the Requirements of Industrial Safety, Labor Protection and the Environment is being implemented and realized.</p> <p><b>Korgau Map</b> A program is being implemented aimed at identifying and informing about an unsafe condition/ unsafe behavior/ unsafe action/ dangerous factor.</p>



Priority tasks	Contribution of KMG
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### ENSURING ACCESS TO INEXPENSIVE, RELIABLE, SUSTAINABLE AND MODERN ENERGY SOURCES IMPROVING THE ENERGY EFFICIENCY OF PRODUCTION INCREASING THE SHARE OF AFFORDABLE CLEAN ENERGY

<p><b>7.1.</b> Provide access to affordable, reliable and modern energy supply</p>	<p>The main strategic directions of the Group's energy saving and energy efficiency development are modernization of technological equipment, introduction of energy-saving technologies, optimization of thermal energy generation and consumption, as well as the development of its own generation sources, including using renewable energy sources. The Program of Low-carbon Development until 2031 has been endorsed, priority areas of activity have been identified.</p>
<p><b>7.b.</b> Expand infrastructure and modernize technologies for modern and sustainable energy supply</p>	<p><b>Development of renewable energy projects:</b>                      1 GW wind farm jointly with Total Eren,                      120 MW hybrid power plant jointly with Eni,                      50 MW wind power plant in Astana jointly with Eni,                      Low-power SES at subsidiaries with a total capacity of 6.9 MW,                      purchase of "green" electricity by at least 15% by 2031,                      procurement of green certificates of the international standard I-REC to confirm electricity consumption from renewable energy generation sources.</p> <p><b>Result</b>                      2031:                      15% – the share of renewable energy in the balance of electricity consumption of KMG;                      realization of renewable energy projects of at least 300MW;                      100% coverage of subsidiaries by energy management services;                      More detailed information is provided in the section "Low-carbon Development Program".</p>



### PROMOTING SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK

<p><b>8.5.</b> Ensure full and productive employment and decent work for women and men, including young people and people with disabilities, and equal pay for work of equal value</p>	<p>Programs for the development and involvement of young specialists in production</p> <p><b>Zhas maman</b> is a program for attracting and developing young specialists in AR and PPCP. From 2019 to 2021, 23 people study and work at AR, 9 of them are employed, and at PPCP – 14 people, 10 of them are employ.</p> <p><b>Result</b>                      KMG provides employment for over 44 thousand people, including 82% of men and 18% of women.</p>
<p><b>8.6.</b> Significantly reduce the proportion of young people who do not work, do not study and do not acquire professional skills</p>	<p><b>Dual training</b> is a program that includes training, internship and further employment in the KMG Group of Companies. So, in the period from 2019 to 2021, 2 people out of 114 people studying under this program were employed in EMG; 7 out of 56 people were employed in AR, 41 out of 57 were employed in PPCP.</p> <p><b>Result</b>                      Programs for attracting and developing young specialists in production: Zhas Maman, Dual training.</p>
<p><b>8.8.</b> Protect labor rights and promote safe and secure working conditions for all workers</p>	<p><b>Standard rules for the provision of social support</b></p> <p>Social support for employees of KMG subsidiaries and affiliates is defined in their collective agreements and rules for providing social support. In order to unify the types and norms of social support for all enterprises of the KMG Group of Companies, the Model Rules for Social Support of Employees of KMG subsidiaries and affiliates were adopted.</p>

Priority tasks	Contribution of KMG
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### BUILDING RESILIENT INFRASTRUCTURE, PROMOTING SUSTAINABLE INDUSTRIALIZATION AND INNOVATION

<p><b>9.1.</b> Develop high-quality, reliable, sustainable and resilient infrastructure, including regional and cross-border infrastructure, in order to support economic development and human well-being</p>	<p>KMG's digital transformation program promotes the expansion of scientific research, improving the technological capabilities of industrial sectors. KMG invests heavily in research and local capacity building in this area. The development of domestic technological capacities to ensure industrial diversification will also have a positive impact on the climate situation in the country.</p> <p><b>ABAI IS development project</b>                      provides for the centralization of all production information of the KMG Group in a single database on the Big Data platform, as well as its processing and analysis using artificial intelligence and machine learning.</p> <p>The ABAI information System consists of 17 autonomous modules, each of which is aimed at solving specific production problems.</p> <p><b>Result</b>                      5 ABAI modules have been implemented ("Database", "Visualization Center", "Monitoring of complications", "Technological mode", "Selection of down hole pumping equipment"). Achieved effects:                      Additional production was obtained due to a more efficient technological regime in Kazgermunai;                      The number of underground well workovers was reduced due to the reduction of failures of downhole pumping equipment at Mangistaumunaigas;                      The accuracy of chemical reagents dosage has been improved, taking into account the actual corrosion rate in Ozenmunaigas;                      Automated 12 types of reporting (measurements of oil production, dynamics of production indicators for wells, etc.).</p>
<p><b>9.4.</b> Modernize infrastructure and re-equip industrial enterprises, making them sustainable by increasing the efficiency of resource use and wider use of clean and environmentally friendly technologies and industrial processes</p>	<p>The Program of low-carbon development until 2031 was approved, and priority areas of energy efficiency activities were identified:</p> <ul style="list-style-type: none"> <li>optimization of energy management and creation of energy management services;</li> <li>introduction of automated fuel and energy accounting and management systems, determination of the applicability of breakthrough projects on the assets of specific subsidiaries and affiliates, introduction of the best available technologies (BAT);</li> <li>implementation of modernization of the mechanical fund;</li> <li>optimization and modernization of the composition of transport equipment.</li> </ul> <p><b>Result</b>                      2031:                      100% coverage of subsidiaries by energy management services;                      reduction of energy intensity by 10% from the level of 2019.</p>

**Priority tasks** **Contribution of KMG**



**TAKING URGENT MEASURES TO COMBAT CLIMATE CHANGE AND ITS CONSEQUENCES**

**13.2.** Integrate climate change responses into policies, strategies and planning

**Corporate methodology for quantifying greenhouse gas emissions**

In order to standardize approaches to inventory, monitoring and reporting on greenhouse gas emissions and to provide a unified methodological basis for calculating greenhouse gas emissions, a corporate methodology for quantifying greenhouse gas emissions is currently being developed.

**The concept of internal carbon pricing**

In order to create an additional incentive to reduce greenhouse gas emissions of subsidiaries and affiliates, as well as to fully consider the impact of carbon regulation on financial and economic performance, the concept of internal carbon pricing of JSC NC "KazMunayGas" Group of Companies is being developed.

**Green Office**

The corporate "green" direction is actively developing and the principles of the "green office" are being gradually introduced, such as the introduction of separate waste collection, water and energy conservation in office premises, etc.

**Result**

The Action Plan for the realization of the Low-carbon Development Program for the period 2022–2031 has been developed and endorsed.

The greenhouse gas reduction potential of KMG is 2,893,460 tons of CO<sub>2</sub>, including direct emissions of 2,189,483 tons of CO<sub>2</sub> and indirect emissions of 703,977 tons of CO<sub>2</sub>-eq., which is 27% of the emissions level of 2019.

**13.3.** To improve education, dissemination of information and the capacity of people and institutions in mitigating the severity and reducing the consequences of climate change, adapting to them, and providing early warning.

**Carbon Disclosure Project**

The company calculates the carbon footprint and places a Climate Questionnaire on the Carbon Disclosure Project site.

**Task Force on Climate-related Financial Disclosures (TCFD)**

Disclosure of climate risks in accordance with the recommendations of TCFD, the working group on the disclosure of financial information related to climate change.

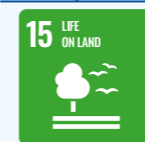
**Result**

The Department of Low-Carbon Development has been established;

A Competence Center for Hydrogen energy has been established on the basis of KMG Engineering LLP;

As part of a pilot project to capture and store carbon dioxide (CCUS) and determine the potential of CO<sub>2</sub> injection to increase the oil recovery of depleted oil reservoirs, CO<sub>2</sub> emission sources have been screened and fields are being screened to select a suitable reservoir for CO<sub>2</sub> injection.

**Priority tasks** **Contribution of KMG**



**PROTECTING AND RESTORING TERRESTRIAL ECOSYSTEMS AND PROMOTING THEIR SUSTAINABLE USE, SUSTAINABLE FOREST MANAGEMENT, COMBATING DESERTIFICATION, HALTING AND REVERSING LAND DEGRADATION, AND HALTING BIODIVERSITY LOSS**

**15.3.** Control desertification, restore degraded lands and soils, including those affected by desertification, droughts and floods, and strive to ensure that land conditions do not deteriorate

KMG implements projects and activities aimed at reducing the discharge of pollutants and reducing water intake from natural sources:

**Carbon Disclosure Project**

The company calculates the water footprint and places a questionnaire on water safety at the Carbon Disclosure Project site.

**TAZALYQ**

AR is actively implementing a large-scale environmental project TAZALYQ, designed to improve the state of the environment of the city of Atyrau.

**Construction of desalination plants**

The reservoir water desalination plant is a unique project in solving the issue of water supply in the Mangystau region. The plant will release the volume of Volga water for the development of the region in the amount of at least 6.2 million m<sup>3</sup>/year. Desalination plant in the area of the Kenderli recreation area of the Mangystau region. The estimated capacity will be 50 thousand m<sup>3</sup> of water per day.

**Land restoration**

The Company is carrying out work on the restoration of "historical" oil waste and cleaning of oil-contaminated lands.

**Result**

TAZALYQ: reduction of water intake from the Ural River by 10%, reuse of treated factory wastewater at the plant – 15%. In 2021, the areas of evaporation fields occupied by wastewater of sections 1 and 2 were drained.

2024: Complete elimination of the Company's historical waste, 2.1 million tons of oil waste were cleaned in 2019–2022.

**15.5.** Take significant measures to curb the degradation of natural habitats, stop the loss of biodiversity, and ensure the conservation and prevention of extinction of endangered species

**Forest-climatic projects**

Within the framework of the KMG Low-Carbon Development Program, it is planned to implement forest-climatic projects until 2031, which will have a beneficial effect on the preservation of terrestrial ecosystems.

**Hierarchy of measures to mitigate impacts on biodiversity**

The Company applies a hierarchy of mitigation measures for impacts on biodiversity when planning and implementing its operations, taking into account four key actions: preventing, minimizing, restoring, and compensating for potential significant direct impacts.

**Result**

2031: realization of forest-climatic projects on an area of 2,000 hectares.

## ESG RISK MANAGEMENT

Risk management in the Company allows you to prevent the occurrence of risk events that affect the achievement of strategic and operational goals, and limit their impact when they occur. Risk management is an integral part of the Company's strategic planning and corporate governance process and maintaining financial stability.

KMG has integrated the corporate risk management system (CRMS) into the Company's key business

and management processes. CRMS is a key component of the corporate governance system aimed at timely identification, assessment and monitoring of all significant risks, as well as taking timely and adequate measures to reduce the level of risks.

The KMG CRMS policy and its subsidiaries and affiliates apply to all activities of the Company.

### KEY ESG RISKS AND MEASURES TAKEN TO MANAGE AND MITIGATE RISKS:

TREND (PER YEAR)	DESCRIPTION OF THE RISK AND POSSIBLE CONSEQUENCES	MEASURES TAKEN TO REDUCE RISK AND MANAGE RISK
↔	<p><b>Risk of occupational injuries</b></p> <p>Non-compliance by employees with the established rules in the field of labor protection, violation of production discipline are sources of threat to life and damage to the health of employees.</p> <p><b>Impact:</b></p> <p>Violations of health and safety regulations can lead to injury, as well as production disruption, financial loss and damage to the company's business reputation.</p> <p>During 2022, 35 accidents with disability were recorded, 36 people were injured, including one fatal accident.</p>	<p>In order to prevent accidents at work, the Company carries out organizational and technical measures to ensure:</p> <ul style="list-style-type: none"> <li>• safe conduct of work, prevention of occupational injuries and diseases;</li> <li>• timely training and knowledge testing;</li> <li>• internal control in the field of occupational safety and health;</li> <li>• introduction of new technologies and means of labor mechanization;</li> <li>• improving the level of industrial safety of production facilities.</li> </ul> <p>The realization of the Near Miss incident reporting program continues through the use of the Korgau card and maps on behavioral observations of work and driving.</p> <p>Work continues on implementing the Behavioral Observation Program for Job Safety and the Behavioral Observation Program for Driving Safety in subsidiaries.</p>
↔	<p><b>Risk of negative impact on the environment</b></p> <p>The Company is exposed to the risk of adverse environmental impact on the environment and the risk of tightening obligations for non-compliance with environmental legislation.</p> <p><b>Impact:</b></p> <p>The realization of environmental risk may entail financial costs in the form of fines, excess payments, environmental remediation costs, as well as legal liability and increased socio-environmental tension.</p>	<p>In the field of environmental protection, the priority areas for the Company are:</p> <ul style="list-style-type: none"> <li>• control of atmospheric emissions and reduction of raw gas flaring;</li> <li>• water resources management;</li> <li>• production waste management;</li> <li>• land reclamation;</li> <li>• improving energy efficiency.</li> </ul> <p>To minimize the risk of adverse environmental impact on the environment, the Company carries out:</p> <ul style="list-style-type: none"> <li>• quarterly calculations and analysis of the intensity of combustion of associated petroleum gas (APG) in the extractive sector in the framework of international reporting IOGP;</li> <li>• interaction with stakeholders on environmental issues;</li> <li>• realization of the memorandum of cooperation in the field of environmental protection;</li> <li>• and other measures to minimize the risk of adverse environmental impacts.</li> </ul> <p>The Company continues to take an active part in working groups with authorized bodies to develop bylaws to the Environmental Code.</p>

TREND (PER YEAR)	DESCRIPTION OF THE RISK AND POSSIBLE CONSEQUENCES	MEASURES TAKEN TO REDUCE RISK AND MANAGE RISK
↔	<p><b>The risk of accidents, man-made disasters at production facilities</b></p> <p>The Company's production activities are potentially dangerous. There is a risk of damage to property, third parties and the environment as a result of accidents and emergencies, man-made disasters at production facilities.</p> <p>No major emergencies were registered in the reporting period.</p>	<p>In order to minimize production risks, the Company carries out:</p> <ul style="list-style-type: none"> <li>• conducting briefings on the safe operation of equipment (technical devices);</li> <li>• training and testing of knowledge of the requirements of technical regulations of safe operation with the issuance of qualification certificates ("permit") to personnel;</li> <li>• ensuring timely maintenance and repairs of equipment in accordance with the requirements of regulatory documents;</li> <li>• and other measures to control the implementation of measures for the examination of industrial safety of equipment.</li> </ul> <p>Voluntary property insurance contracts are concluded annually against damage (from the risk of accidental death, loss or damage) as a result of the occurrence of an insured event.</p>
↔	<p><b>Climate risks and low-carbon development</b></p> <p>In its activities, the Company faces risks associated with energy transition and climate change, which include the following risk factors:</p> <ol style="list-style-type: none"> <li>1. Risks associated with energy transfer.</li> <li>2. Physical impact (change) of climate on the company:</li> </ol> <p><b>Impact:</b></p> <p>These risks may have a negative impact on the Company's operations as a major producer of fossil fuels and an emitter of greenhouse gases in the form of increased costs, reduced profitability and limited opportunities for further development.</p> <p>In some counterparty countries, increase in the production of energy from renewable sources can be expected, which may lead to a decrease in the consumption of products supplied by the Company.</p>	<p>As part of minimizing the risk associated with climate change and its consequences, the Company's group implements measures:</p> <ol style="list-style-type: none"> <li>1) The Low-Carbon Development Program for 2022-2031 has been adopted and is being implemented;</li> <li>2) Memorandums of cooperation were concluded with Chevron and EBRD on the implementation of CCUS (Carbon capture, utilization and storage), projects based on natural solutions, low-carbon hydrogen production, development of corporate carbon price, energy efficiency;</li> <li>3) working groups have been formed with Chevron specialists to exchange experience;</li> <li>4) the realization of the hybrid station project in cooperation with ENI in the Mangystau region continues;</li> <li>5) The technical specifications of the forest-climatic offset project have been developed;</li> <li>6) interaction on issues of carbon regulation, development of a low-carbon economy, as well as low-emission energy;</li> <li>7) a memorandum of cooperation was signed between the Company and the EBRD;</li> <li>8) Information has been prepared on the energy saving potential of the KMG Group based on the results of the energy audit and on the LCPD;</li> <li>9) Work is underway to develop the concept of internal carbon pricing;</li> <li>10) Methodology for monitoring and reporting on greenhouse gas (GHG) emissions in KMG has been approved;</li> <li>11) An energy analysis was carried out as part of the development of the Fund's Energy Efficiency Program for 2022-2027;</li> <li>12) Working groups have been formed with Chevron specialists to exchange experience in the direction of low-carbon development and the formation of joint practical projects to reduce the carbon footprint;</li> <li>13) Repayment of 8.5 million kWh of electricity consumed by the central office of KMG in 2022 through international renewable energy certificates I-REC (International Renewable Energy Certificate);</li> <li>14) Internal regulatory documents were developed and adopted during the year;</li> <li>15) Calculations of specific energy consumption targets have been carried out;</li> <li>16) Work is underway on the CCUS pilot scientific project;</li> <li>17) An NDA has been concluded with the Nature First Fund, China Energy on potential cooperation in the field of renewable energy;</li> <li>18) Work is underway on the development of business cases for the development of own RES for EMG, AR, KLPI.</li> </ol>

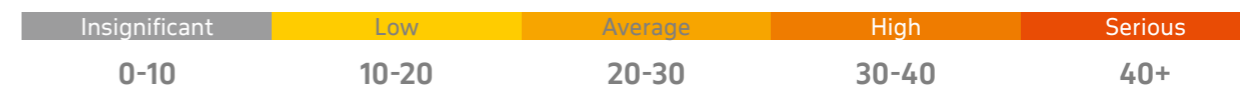
TREND (PER YEAR)	DESCRIPTION OF THE RISK AND POSSIBLE CONSEQUENCES	MEASURES TAKEN TO REDUCE RISK AND MANAGE RISK
↑	<p><b>Social situation in the regions of presence</b></p> <p>The Company is at risk of unauthorized strikes.</p> <p><b>Impact:</b></p> <p>Negative impact on the Company's reputation, leading to disruption of production activities and increased operating costs, as well as impact on capital expenditures and project schedule. An increase in commodity prices, a higher level of inflation within the country or the continued weakening of the tenge may have an impact on negotiations on changes in wages.</p> <p>At the beginning of the reporting period, there was a wave of unauthorized strikes among employees of contracting organizations and some employees of subsidiaries. The situation worsened against the backdrop of the January events (the main requirements to increase the salary and recruitment). Negotiations were held with the leaders of trade union committees and meetings with labor collectives, as well as measures to reduce the gap between the Company's employees and contractors. The situation has stabilized.</p>	<p>To reduce social risks, the following activities are carried out in the Company:</p> <ol style="list-style-type: none"> <li>1. For the timely settlement of social and labor conflicts in the Mangystau region, KMG opened a Representative Office in Aktau on June 23, 2022.</li> <li>2. KMG actively contributes to the reduction of unemployment in the Mangystau region. In 2022, 1,742 people were employed in KMG subsidiaries and their contracting organizations, including 1,273 people in Ozenmunaigas JSC, 439 people in Mangistaumunaigas JSC, and 30 people in Karazhanbasmunai JSC.</li> <li>3. KMG participates in the work of the Interdepartmental Headquarters for solving problematic issues in Zhanaozen. All decisions taken by KMG are coordinated with the Headquarters.</li> <li>4. Subsidiaries and affiliates have developed roadmaps for 5 years to improve working conditions and recreation of employees, it is planned to build social infrastructure facilities (canteens, administrative and industrial buildings, residential towns, etc.), to carry out current and major repairs of social infrastructure facilities.</li> </ol> <p>In order to maintain feedback with employees, the management of KMG Group enterprises conducts mandatory reporting meetings with labor collectives.</p> <p>Plans to maintain social stability have been developed and implemented at each enterprise.</p>
↑	<p><b>Compliance risks</b></p> <p>Intentional actions of a corrupt nature aimed at obtaining personal benefits and property interests, including for third parties. Any facts of corruption are completely unacceptable in the Company's activities, regardless of the amount of financial damage.</p> <p><b>Impact:</b></p> <p>More detailed information is provided in the section "Ethics and integrity"</p>	<p>The Company carries out consistent work on the implementation and strengthening of internal control systems, the establishment of a unified policy to prevent illegal and unfair actions on the part of both third parties and employees of the Company, to establish the procedure for conducting internal investigations into the facts of illegal and unfair actions on the part of employees.</p> <p>The Company operates policies and standards taking into account the world's leading practices, as well as commitments to improve and strengthen internal and compliance control systems.</p>
↓	<p><b>Pandemic risk (COVID)</b></p> <p>The epidemiological situation in the Republic of Kazakhstan in terms of the incidence of CVI is relatively safe, there is a decrease in the incidence. However, due to the beginning of a new epidemiological season of influenza and acute respiratory viral infections, layering of CVI into quite severe forms of combined viral diseases cannot be ruled out.</p> <p><b>Impact:</b></p> <p>More detailed information is provided in the section "Industrial safety and labor protection".</p> <p>In February 2022, one fatal case from pneumonia was recorded in the Group of Companies.</p>	<p>The ongoing monitoring of the epidemiological situation in the KMG Group of companies continues, subsidiaries and affiliates provide reports on the the CVI situation in the SCC of KMG on a weekly basis.</p> <p>As of December 31, 2022: more than 53.8 thousand employees of the KMG Group of companies (82% of the total number) received the vaccine as the first component. Of these, more than 52.9 thousand workers (81%) received a full course of vaccination (both components). Revaccinated 18.9 thousand employees (29%) for the KMG Group.</p>

## KMG's ESG Risk Rating

(as of 31.12.2022)

# 28.4

Average risk



The international agency Sustainalytics rated KMG's ESG risk management at 28.4 points. In the comparative rating, KMG entered the top 20 among the 270 global oil and gas companies evaluated by Sustainalytics, while maintaining a stable rating level. According to the rating agency's conclusion, the key ESG challenges for the Company are: carbon intensity trend, accident and fatality rate, water intensity trend.

of programs on water management and biodiversity conservation in the regions of operation.

Sustainalytics assigns an ESG rating to companies, assessing their risks in the field of ecology, social responsibility and management, as well as the ability to manage these risks compared to competitors. Detailed information about the Sustainalytics rating is available at the link:

<https://www.sustainalytics.com/esg-rating/kazmunaygas-nc-jsc/1028382256>

To minimize the consequences caused by ESG risks, KMG will focus its efforts on the prevention and avoidance of accidents at work, systematic reduction of greenhouse gas emissions, development and approval of internal documents on land reclamation, as well as development



**International rating agency Sustainalytics (Amsterdam, Netherlands)**

*Sustainalytics is a leading independent environmental, social and corporate governance research, rating and analytics company that helps investors around the world develop and implement responsible investment strategies.*

### FOR REFERENCE

ESG-rating (Environmental, Social and Governance) – assessment of environmental and social risks of business, as well as risks of corporate governance in the company.

ESG rating is a strategic tool for investors when making investment resolutions, and helps to identify risks and opportunities of the company to determine its sustainability in the long term.

## DIGITAL DEVELOPMENT

2-6

In the reporting period, KMG continued to implement digital projects aimed at achieving Sustainable Development Goals for industrialization, innovation and infrastructure, as well as progressive reduction of carbon intensity of production.

On October 22, 2022, a new Dispatch and Analytical Center (DAC) was opened in the KMG building. The difference of the new DAC is the construction of a single digital platform of the full cycle "extraction, transportation, processing, marketing of oil and its refined products". Thus, DAC allows monitoring, control, analysis, storage, collection and processing of data in all areas of KMG's activities. In addition, the analytical system of the DAC is integrated with the production management information system at the Pavlodar and Atyrau refineries, which allows for technological monitoring of the equipment condition online, operational dispatch management and the material balance of products.

In the digitalization of oil production, we are talking about a large-scale project ABAI information system development. This system consists of 17 independent modules, each of which is aimed at optimizing business processes in exploration, drilling, field operation, economic impact assessment and others. At the initial stage, in 2021, 5 pilot modules of the system were put into operation – "ABAI Database", "Visualization Center", "Technological mode", "Monitoring of complications", "Selection of deep pumping equipment" (SDPE), which



proved their productivity. For example, the "Selection of deep pumping equipment" module provides on-line assessment of new and existing well potential, economic analysis of operating method efficiency, automated equipment selection, unloading of reports, electronic work order and work plan for running in. Thanks to the introduction of the module, the time for these operations has been reduced from 30 to 5 minutes, and the inter-repair period for DPE has increased from 88 to 144 days.

Two new modules of the system were launched in 2022 – "Formation fluids" in KazakhOil Aktobe LLP and "Economics" in KMG Corporate Center. The first module is designed to automate the process of collecting, interpreting and substantiating the properties of fluids contained in oil reservoirs.

The "Economics" module allows to estimate the value of oil companies' assets in general and in terms of existing fields, forecast operating activities using different scenarios.

10 more ABAI IS modules are scheduled to be launched by the end of 2024.

In 2022, the project on the introduction of computer simulator complexes (CSC) at the technological installations of enterprises continued at oil refineries. With the help of CSCs, plant operators in virtual mode work out production management in emergency and routine situations. Such an automated personnel training system (APTS) minimizes failures associated with the human factor, and also increases the level of security.

According to the project plans, simulators will be implemented in total at 13 technological installations of the Atyrau Refinery, 9 of the Pavlodar Petrochemical Plant, and 1 installation of PetroKazakhstan Oil Products. During the year, CSC were implemented on the equipment of the ELU-AT, oil desalting, catalytic reforming, and LK-6U complex units at the Pavlodar Petrochemical Plant. In 2023, it is planned to cover installations for vacuum distillation of oil, hydrotreating of VGO, catalytic cracking, absorption and gas fractionation units of the KT-1 complex.

According to the plans, the implementation of CSC is expected to be completed at the ELU-AT-2 and ELU-AVT-3



units at the Atyrau Refinery. The possibility of joining CDHTU and CGDHTU gasoline hydrotreating units to the APTS is being clarified.

and data management as the basis for the subsequent digital development of the company, as well as the search for advanced industry solutions in the areas of production, transportation and processing of KMG.

To ensure more systematic and centralized work to promote digitalization, structural changes have been implemented in the corporate center of KMG – the departments of information technology and transformation and digitalization have been merged into one department of digital development (DDD). The new unit will develop or update the IT architecture



# OUR PEOPLE AND DEVELOPMENT OF THE REGIONS OF PRESENCE



**Rustam  
ASILOV**

Best Process Plant Operator  
JV "Kazgermunai" LLP

First place in the "Uzdik Maman - 2022"  
professional contest



- Principle 1.** Business community shall provide support and respect for protection of the internationally declared human rights.
- Principle 2.** Business community shall not be implicated in violation of human rights.
- Principle 3.** Business community shall support the freedom of association and real recognition of a right to enter into collective agreements.
- Principle 4.** Business community shall be in favour of liquidation of all forms of forced and compulsory labour.
- Principle 5.** Business community shall be in favour of complete extirpation of child labour.
- Principle 6.** Business community shall be in favour of liquidation of discrimination in the sphere of labour and employment.

## OUR APPROACH TO MANAGEMENT

2-7, 2-8, 3-3, 401-1, 401-2, 401-3, 404-3

### CONCEPT OF PERSONNEL POLICY IS BASED ON THE FOLLOWING KEY PRINCIPLES:

- 1) **Balance of interests of employees and KMG** – when laying down the Personnel Policy of KMG and other regulating documents in the field of personnel management, it is required to take into consideration equally the interests of both employees and KMG;
- 2) **Uniform personnel policy for the entire KMG Group** – areas of activities and development in the field of personnel management shall be unified for all companies of KMG Group;
- 3) **Displacing the role of HR from administrative and supportive to strategic for business** – HR function shall become a strategic partner for the business and not just an administrative and supportive function;
- 4) **Creating added value for business** – the HR employees are required, in their everyday work, to consider to which extent their performance create added value for an in-house customer and prioritize their work based thereon;
- 5) **Optimal organization structure and number of employees** – HR function shall build the most optimal organization structure in the Company on the basis of the best practices in the industry and contribute to continuous improvement of KMG in order to improve working efficiency;
- 6) **Planning the number based on the needs of the business and conditions of the labour market** – planning the number and costs for personnel shall be based on plans and needs of the business directions subject to conditions of the labour market;
- 7) **Continuous improvement of training and career enhancement programs** – HR function shall create all necessary conditions to continuously improve knowledge, abilities, skills and competencies of employees and managers by studying the up-to-date training programs and introducing the same into the education and development process;
- 8) **Building the self-training organization based on 70-20-10 model** – the employees shall bear personal liability for their continuous development by way of: (1) on-job training by solving complex tasks, participation in projects, remote training (70% of total training), (2) communication with colleagues and managers through feedback, coaching, mentoring (20% of total training), and (3) participation in workshops, trainings, conferences, lectures and other educational events (10% of total training);
- 9) **Liability of managers for personnel management** – the managers of all levels shall bear liability for personnel management and HR function shall provide necessary support and tools;
- 10) **Creation of culture of employees' involvement in joint achievement of strategic goals** – HR function promotes modelling of culture of comprehension, concernment and support of employees at all levels of KMG of strategic, operating and production objectives;

**11) Creation of conditions to motivate the employees** – HR function shall generate the processes and systems and provide necessary tools to ensure effective motivation of employees by means of various forms and methods;

**12) Prevention of law violation** – HR function shall ensure the compliance with the laws when formalizing, changing and terminating labour relations, developing and using the internal documents, rules and procedures used by KMG.

**CONCEPT OF OUR PERSONNEL POLICY IS AIMED AT CREATING CONDITIONS TO INCREASE THE VALUE OF HUMAN CAPITAL IN KMG GROUP. ACHIEVEMENT OF THIS GOAL PROVIDES FOR IMPLEMENTATION OF THE FOLLOWING HR OBJECTIVES:**

**development of corporate culture and enhancement of skills of the managers** – development of corporate culture based on the principles of meritocracy and "commercial" thinking focused on succession, result orientation and willingness to assume responsibility. Development of leadership competencies;

**achievement of positive level of involvement and social stability** – reinforce an emphasis on systematized approach to manage the involvement and social stability through regular measurements, development and implementation of plans. Achieving and retaining positive involvement values (60% or more) and social stability (61% of more);

**unification and enhancement of efficiency of HR function** – structuring the customer-centered HR function, which provides adequate support for implementing the strategy of KMG. Unification of HR processes and standards considering the best world and in-house practices of KMG subsidiaries. Creating a unified information space through unified automation solutions. Transfer of routine operations not generating added value to the Common Service Centre;

**introduction of a complex talent management system from attraction to succession and compensation administration** – introduction of a talent management system ensuring transparency, conditions and motivation of personnel in order to retain, promote and designate to key positions of effective and potential employees of KMG Group. The key elements of a complex talent management system will be:

- transparency and objectivity when hiring;
- dependence of compensation levels on the results of assessment of activities and the market;
- succession of key positions;
- detecting talents and developing personnel reserve;
- availability of development plans of employees, which are based on the results of assessment of efficiency and needs of business; and
- priority of in-company candidates when selecting to fill the key positions in KMG Group.

**improvement of qualitative composition of the personnel subject to the needs of business** – determination of present-day qualification requirements for positions, ensuring employees' conformance to those requirements through system processes (recruitment, development, assessment, etc.), as well as particular projects (such as test for conformance to requirements for the position). Strengthening the key competencies of the personnel, which are necessary to achieve strategic goals (for instance, 'Human Capital Development in Upstream' program, project and investment management competence development programs, competencies for effective Company's approach to IPO, etc.);

**effective management of a number to increase in performance** – effective planning and prediction of human resources subject to current and target needs of KMG. Development of unified rates and standards of quantity, implementation of the programs on optimization of quantity (for instance, withdrawal of non-core functions) through economically feasible tools and reallocation of personnel between labour redundant and deficient organizations.

## EMPLOYMENT

404-3, 405-1

In 2022, KMG employed more than 44 thousand people in the country in the regions of presence.

44,650 people, 2020: 57,073 people), including outstaffing of 2,838 people (2021: 2,787 people, 2020: 3,100 people). Taking into consideration the fact that the Company's areas of activities are associated with heavy, dangerous and hazardous labour conditions, the percentage of men is equal to 82%, women – 18%.

At the end of 2022, the actual number of employees (actually working permanent and temporarily substituting employees of the Company at the end of a reporting period) in KMG Group of Companies made up 44,688 people (2021:

### EMPLOYEES BROKEN DOWN BY GENDER, 2020-2022, %

years	2020	2021	2022
men	81	82	82
women	19	18	18

### EMPLOYEES BROKEN DOWN BY GENDER AND CATEGORIES FOR THE REPORTING PERIOD, %

Employee category	Men	Women	Percentage of employees of each category of total number, %
Managers	82	18	10
Experts	61	39	22
Workers	88	12	67

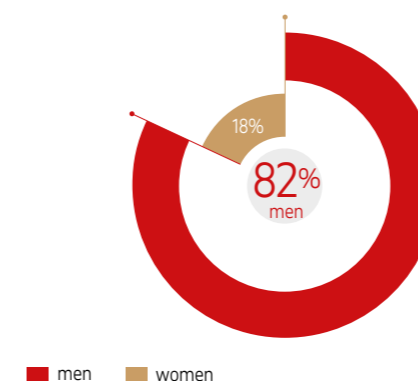
In 2022, the percentage of female managers in KMG Group of Companies was equal to 18% of the total number of the managers in KMG Group of Companies, experts – 39% of women of the total number of experts, workers – 12% of women of the total number of workers. As compared to the previous year, the percentage of women changed less than by 1%.

The number of employees over 50 is equal to 30% of the total number of personnel, and the percentage of men makes up 81%, women – 19%.

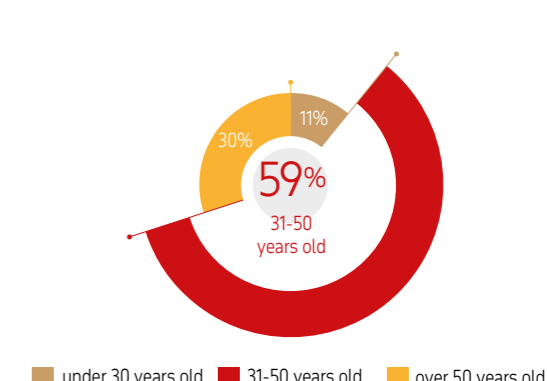
The percentage of young people under 30 years old is equal to 11% of the total number of personnel, and the percentage of men makes up 86%, women – 14%.

As for the age category, the major portion of employees is presented in the group of 31-50 years old – 59%, and the percentage of men makes up 81%, women – 19%.

### EMPLOYEES BROKEN DOWN BY GENDER FOR THE REPORTING PERIOD, %



### EMPLOYEES BY AGE CATEGORIES FOR THE REPORTING PERIOD, %



### EMPLOYEES OF KMG BY THE AGE GROUPS FOR 2020-2022, %

age	2020	2021	2022
under 30 years old	12	12	11
31-50 years old	60	59	59
over 50 years old	28	29	30

The quantity of employees hired in 2022 amounts to 5,860 people or 10% of the average staffing number.

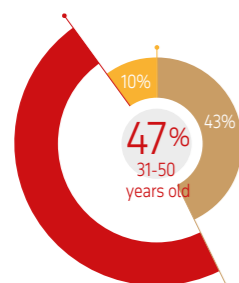
### EMPLOYEES HIRED IN 2020-2022, %

years	2020	2021	2022
% of hired employees	8	9	10

The quantity of employees with whom the labour relations were terminated in the reporting period made up 3,697 people or 6% of the average staffing number, including the age categories: under 30 years old – 27%

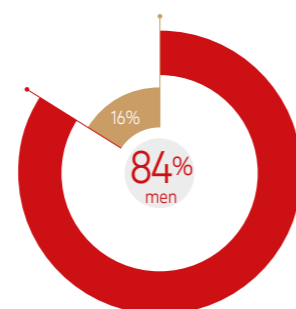
(29% in 2021, 24% in 2020), 31-50 years old – 45% (44% in 2021, 48% in 2020), over 50 years old – 28% (27% in 2021, 28% in 2020).

### HIRED EMPLOYEES BY AGE GROUPS IN THE REPORTING PERIOD, %



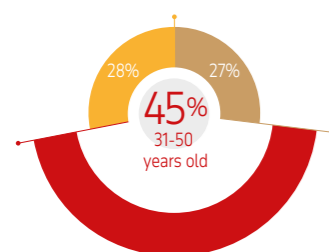
under 30 years old 31-50 years old over 50 years old

### HIRED EMPLOYEES BROKEN DOWN BY GENDER IN THE REPORTING PERIOD, %



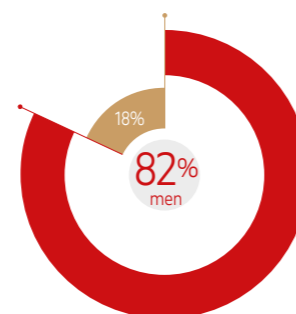
men women

### EMPLOYEES WITH WHOM THE LABOUR RELATIONS WERE TERMINATED IN THE REPORTING PERIOD BROKEN DOWN BY AGE CATEGORIES, %



under 30 years old 31-50 years old over 50 years old

### EMPLOYEES WITH WHOM THE LABOUR RELATIONS WERE TERMINATED IN THE REPORTING PERIOD BROKEN DOWN BY GENDER, %



men women

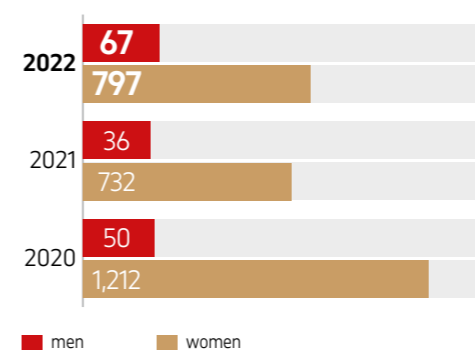


years	2020	2021	2022
Turnover ratio in KMG Group of Companies <sup>9</sup>	6%	6%	6%

The performance of 46% of all employees of the Company in the reporting period was assessed (2021: 43%, 2020: 54%), including women – 19.5%, men – 80.5%. Break-down by categories of employees: managers – 10%, experts – 29%, workers – 61%.

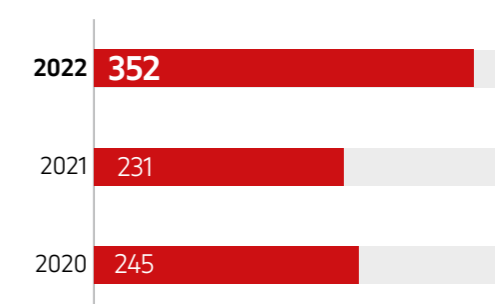
At the end of the reporting period, there were 864 employees on child care leave without pay, and the percentage of women made up 92%, men – 8%.

### EMPLOYEES ON CHILD CARE LEAVE, PERSONS



men women

### WOMEN ON MATERNITY LEAVE, 2020-2022



During the reporting period, 352 women were on maternity leave.

<sup>9</sup> Employee turnover ratio = A/B\*100, where A means a number of employees retired on their own initiative, by agreement between the parties or through fault of an employee, at the end of the reporting period; B means the average staffing number over the reporting period.



# PERSONNEL DEVELOPMENT

2-24, 3-3, 404-1, 404-2

KMG Group has implemented the unified personnel training and development process in accordance with the approved Personnel Policy. The needs for training the manager employees, administrative and managerial staff and engineering and technical personnel are based on Individual Plan of Development and Needs submitted by immediate supervisors of employees based on the objectives of a structural subdivision.

The manufacturing personnel is trained based on assessment of professional knowledge, skills and needs of business. Thus, the planning of employee training is clearly regulated and interrelated to particular goals and tasks of the business.

KMG annually provides training and development for the personnel, models new approaches and programs of employee development of KMG Group of Companies.

The employees are trained on continuing basis under compulsory programs – industrial safety, occupational health and safety, basics of fire safety.

At the moment, these programs for KMG's employees are provided on the platform of remote training system of KMG's subsidiary – KMG Engineering LLP. The competence development centre of KMG Engineering LLP holds a license to provide such training and issue certificates of a standard form. Training of employees of our Company on in-company resource allows adapting the programs in accordance with the internal requirements of the Company and provide trouble-free access to training courses.

The average annual number of academic hours per one employee makes up 22 hours (16.7 hour in 2021, 15 hours in 2020), including one man – 20 hours (16.4 hour in 2021, 14.6 hour in 2020), one woman – 31 hours (18.6 hour in 2021, 16.0 hours in 2020).

At the same time, we point out that the training and development of employees are provided irrespective of gender and position held.

## AVERAGE ANNUAL QUANTITY OF HOURS PER ONE EMPLOYEE BY CATEGORIES, HOURS



■ managers ■ experts ■ workers

Also, for the purpose of prevention of road traffic incidents at work, the training of the drivers of KMG Group of Companies was started under the 'Defensive Driving' program in accordance with the international standard of the ROSPA (United Kingdom). In 2022, more than 350 drivers, who deliver/transport the employees and transport dangerous cargoes of Karazhanbasmunay JSC, Oil Transport Corporation LLP, and KMG-Security LLP, were trained. It is planned to implement the 'Defensive Driving' program for the drivers of all categories of KMG Group of Companies during subsequent years.

The issues of sustainable development, including energy transition, greenhouse gas emission, decarbonisation and other aspects, are also important and urgent for the Company in general and for achievement of its strategic goals. The employees annually improve their knowledge and skills in this direction in accordance with the world standards and trends.

In 2022, the employees were trained under the 'Sustainable Project Management' program (Green Project Management) within the framework of which the best practices of applying the concept of sustainable development in the projects were studied, and under the 'Energy Transition' program, with involving the experts and the management of the corporate centre and subsidiaries.

The key employees engaged in the implementation of the strategically significant projects according to the international standard of project management of the IPMA are certified on an annual basis.







In 2022, 9 employees were certified for conformance to IPMA Level C, IPMA Level D – 12 employees. Also, 5 employees of SDEs were certified for Green Project Management.

Furthermore, the project management experts of KMG and external providers conducted training courses for the project personnel of KMG and SDEs in planning the projects using Primavera, MS Project and Mind Manager, generating the structure of work in the projects, organizing construction operations, using FIDIC contracts.

At the year-end, the total quantity of employees received training in various domain-specific fields of project management made up 588 people.

In the context of development of the transparency policy, special attention is paid to the issues of procurement activities; thus, to increase the level of competence of the experts in the field of procurement activities, the program was launched for the experts in the field of procurement of the Corporate Centre and subsidiaries of KMG Group – 'New procedure for procurement and management of procurement activities of Samruk-Kazyna JSC' and IEPS 2.0. More than 450 employees of 37 companies of KMG Group participate in the program.

## BASIC TOPICS OF IMPLEMENTED EMPLOYEE TRAINING AND CAREER ENHANCEMENT PROGRAMS

 Personal and business training	 Economy and finance	 Training under the mediation and negotiation programs
 Personnel management	 Corporate governance. Project management	 Training in manufacturing directions
 Internal control and audit	 Document support	 Training in non-professional occupations
 Environment, OHS, CD&ES	 Information technologies	 Master's programs, mini MBA
 Procurement activities	 Language learning	 Probation

### CASE STUDY

In October 2022, industry-specific training was conducted for the project managers of 7 major SDEs in sustainable project management based on Green Project Management Global methods. The participants in the training studied the best practices of using the concept of sustainable development in the projects, programs and portfolios and mastered the practical tools to assess, minimize risks and enhance the success of the projects. Following the test, five project managers in SDEs obtained international certificates of sustainable project management – GPM-b.



The work continues on the project of working out and developing the Plan of succession of the key positions of KMG Group of Companies – MANSAP.

The program is implemented to develop the successors of A pool – Leaders' Education Program – together with SKOLKOVO MMS. The members of A pool have successfully mastered the program modules dealing with working through the skills of strategy implementation and change management.

The program is worked out and launched to develop the successors of B pool – On the Way Toward Improvement – Kemeldik Zholyndy. The program is based on the strategic goals of the Company, competence and value model, studying and working through the skills which will promote the leading middle managers to successfully implement the Company's strategy.

The program includes the following basic directions:

- Leadership and Communication;
- Managing the Sustainability Culture;
- Managing the Safety Culture;
- Leadership in the Strategy; and
- Project Management.

The leadership programs are relevant for both the top management and the engineering and technical personnel of our Company and for the purposes of review of the basic challenges and trends of development of production relations, as well as development of the skills of production leadership and role model of a manager on-site. Ozenmunaigas JSC is implementing the program of the Comprehensive Training for the top and middle managers.

Ozenmunaigas JSC. This program started in Autumn 2022 from the 1<sup>st</sup> module titled "Production Relations School" and today, it is also a communication and discussion platform for the managers of SDEs and KMG in order to improve the corporate culture and communication. More than 400 employees of Ozenmunaigas JSC received training.

## WORK WITH STUDENTS AND YOUNG EXPERTS

KMG Group of Companies also focuses on working with students and young experts. Considering the trend in the development of the industry and the present-day technological requirements, the work is actively performed with the educational institutions within the regions where production facilities are present.

In 2022, in the context of the official instruction of the President of the Republic of Kazakhstan on the phased increase of the percentage of women to 30%, SWF Samruk-Kazyna in cooperation with LEA Women's Strength Alliance of Kazakhstan initiated the program in the governing bodies of the publicly owned companies in order to develop the management competencies of women of the portfolio companies – Gender Equality.

The purpose of the program is to train women in using the PC to increase the percentage of women in the boards of directors, supervisory boards and executive bodies of the portfolio companies of Samruk-Kazyna JSC in 2023 – not less than 20%; 2030 – not less than 30%.

6 women being the managers of KMG Group of Companies participate in this program. The program is intended to last during 2022–2023.

At the same time, for the purposes of development of the line managers of production companies and professional associations, the programs are conducted on communication development, time management, and financial literacy.

Much attention is given to building a communication and developing in-company culture in KMG Group of Companies, building a dialogue between management and personnel.

Thus, in order to build a constructive dialogue between the management and representatives of employees, the Chairman of the Management Board of KMG M.M. Mirzagaliyev and the managers of the Company met the management and leaders of trade unions of the subsidiaries – Ozenmunaigas JSC, Mangistaumunaigas JSC and Karazhanbasmunay JSC.

The meeting was attended by the managers of subsidiaries and representatives of the trade unions. The meetings were held in the form of a training session with the elements of team building and using the facilitation tools and team coaching.

Thus, a dual training program is being implemented on an ongoing basis on the basis of the companies – Embamunaigas JSC, Pavlodar Petrochemical Plant LLP and Atyrau Refinery LLP, as well as in Karazhanbasmunay JSC in Aktau City. In 2022, 26 graduates of this program are employed at KMG production facilities.

At the same time, KMG Engineering LLP, which is engaged in scientific and research activities, is actively implementing the program for training young experts in narrow specialties to be further employed on its base, together with Atyrau University of Oil and Gas named after Safi Utebayev; under this program, 10 students of this university are currently studying and undergoing an in-depth training program, as well as practical training on the basis of KMG Engineering LLP.

In addition, in 2022, KMG and Mangistaumunaigas JSC implemented a unique project to train young experts from among the unemployed citizens of Mangystau Oblast on the basis of the State Engineering and Technology University named after Sh. Yessenov, due to the need to take measures to ensure the stability of social, labour and economic relations, as well as to achieve the strategic goals and objectives in the field

of Sustainable Development, specifically to reduce the rate of unemployment in Mangystau Oblast.

In order to prepare unemployed citizens for further employment, the 'Educational Intensive' program was prepared on the basis of Mangistaumunaigas JSC, which helped them to acquire necessary knowledge and skills for further employment and adaptation at work. Following the program implementation, 223 citizens were employed by Mangistaumunaigas JSC and this was the first job for most of them.

In addition, KMG Group of Companies is working on an ongoing basis to communicate with the institutions of higher education and technical-and-professional education of Kazakhstan to organize and conduct practical training and pre-graduation practice for the students.

## ZHARKYN BOLASHAK PROJECT

Starting from September 2022, for the purposes of development of the schoolchildren in Zhanaozen City, Zharkyn Bolashak Project has been implemented with the support of Samruk-Kazyna Trust Social Project Development Fund.

The goal of Zharkyn Bolashak Project is to enable talented children from Zhanaozen City to get the right to free quality education in the best colleges and schools in the country.

In the context of this project, in 2022, 227 children entered the educational institutions throughout Kazakhstan, including:

- 50 children who have been selected to study in IQanat High School of Burabay on the basis of 10 classes for 2022–2023 academic year;
- 149 schoolchildren who have entered 44 colleges in 11 cities of Kazakhstan specializing in professions not related to the oil and gas industry;
- 12 schoolchildren who have entered the art colleges;
- 6 schoolchildren who have entered the sports boarding schools; and
- 10 schoolchildren who have been selected to RPMS in Almaty City.



In addition to access to free education in the best educational institutions of the country, schoolchildren received access to additional scholarships, coverage of expenses to travel to a place of study from their places of residence twice a year, coverage of costs for meal. The project participants are regularly consulted by professional educational psychologists and project coordinators who monitor the adaptation of schoolchildren in a new place and help them to cope with difficult life situations as and where required.

## EQUAL OPPORTUNITIES AND STAFF MOTIVATION

202-1, 202-2, 405-2

Our approach to motivate the personnel is based on the principles of ensuring a decent level of remuneration, transparency and respect for the rights of all employees. All changes to the remuneration system are made taking into account the opinions and suggestions of the parties concerned.

KMG Group of Companies does not distinguish between the base official salary and the remuneration system depending on gender differences. The level of salary in the organizations of KMG Group of Companies is linked to a position, i.e. men and women working in the same position receive the same salary and other benefits provided for by the remuneration rules in effect in the organization.

The payroll system for the supreme management body and management personnel focuses on performance, motivation, productivity and performance improvement, and includes the elements of short-term rewards based on the KPIs achieved. In accordance with the best global practices, the performance of executives represents the economic, environmental and social objectives of the Group.

The companies in the Exploration and Production business area have introduced the Unified Remuneration System (URS) aimed at ensuring a unified procedure for remuneration in all subdivisions and increasing the interest of employees in job performance. This system provides for a number of conditions under which compensation payments, increments and additional payments are provided to employees; one of these criteria is the Regional Coefficient – an indicator of the relative increase in wages in order to compensate for additional

expenses and increased labour costs associated with work performance in the regions with severe climatic conditions. The highest value of this coefficient is in Mangystau and Atyrau Oblasts.

The ratio of entry-level wages in the Group to the statutory national minimum wage for 2022 ranges from 5.8:1 (in 2021: 5:1, in 2020: 6:1).

In 2022, due to increased inflation in the Republic of Kazakhstan, wages for the production personnel of SDEs of KMG Group were increased by 30% compared to 2021, and wages for the Corporate Centre of KMG and other employees of KMG Group were increased by 10%.

The percentage of top managers (top manager means a chief executive officer and deputies) in the regions of presence (a region of presence means a region (oblast, district) of operations), who are hired from among the representatives of the local population (citizens of the Republic of Kazakhstan), is 78% (2021: 87%, 2020: 87%).

The percentage of employees being members of the management personnel is 10% of the total number of employees, including women – 18% (18% in 2021, 18% in 2020) and men – 82% (82% in 2021, 82% in 2020).



### CASE STUDY

#### 'Due Diligence Procedure in the Field of the Human Rights in Entrepreneurial Activities' Training

By keeping raising the ESG culture among the employees, KMG and its subsidiaries have taken part in instructional trainings concerning due diligence of business in the field of the human rights. More than 25 employees of SDEs of KMG improved their potential in the field of the human rights during the training.

## RESPECT FOR HUMAN RIGHTS AND SOCIAL SUPPORT

2-23

The Company is committed to internationally recognized human rights as enshrined in the International Human Rights Bill, ILO Standards at Work and strives to implement the UN Guiding Principles on Business and Human Rights.

KMG strictly complies with the requirements of the labour laws of the Republic of Kazakhstan and does not violate their rules in accordance with which no one can be subjected to any discrimination in the exercise of labour rights based on origin, social, official and property status, gender, race, nationality, language, attitude to religion, beliefs, residence, age or physical disability, as well as membership of public associations.

We do not use child labour, do not practice forced labour, and we recognize the equal rights of all employees, regardless of their race, religion and gender.

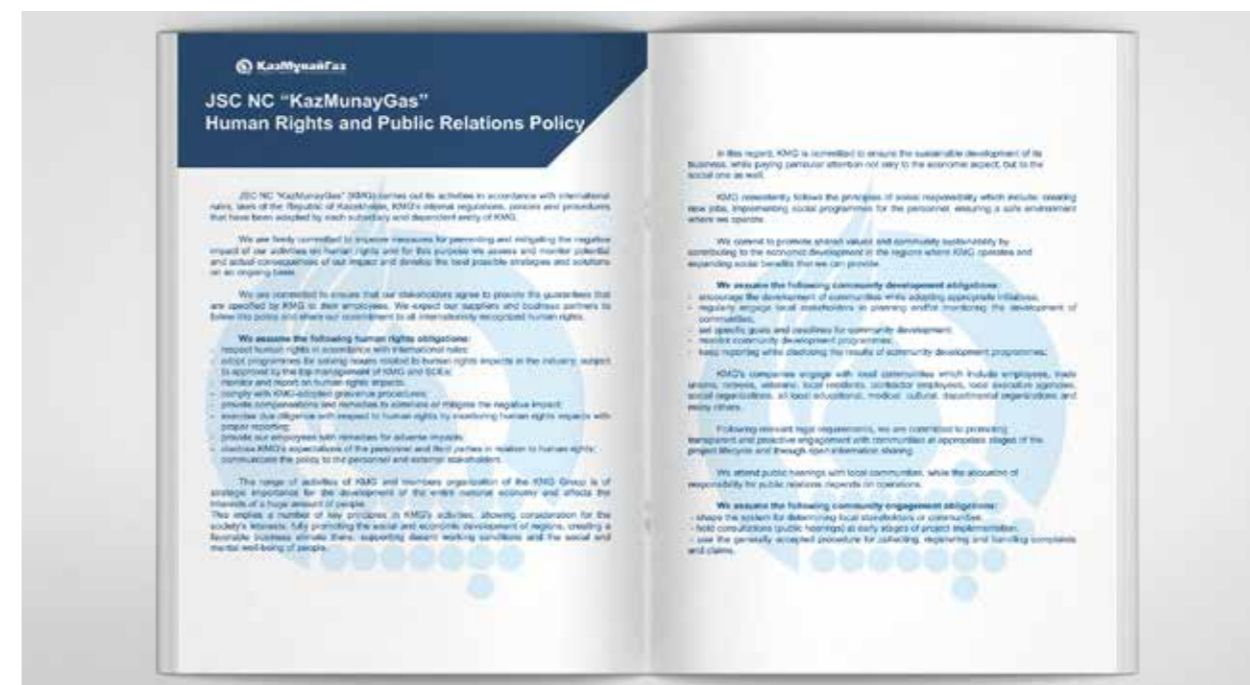
No facts of discrimination were recorded in the reporting period.

In 2022, the Board of Directors of KMG approved the Human Rights and Public Relations Policy. More information about

the Policy is provided on the website of KMG: <https://www.kmg.kz/en/sustainable-development/corporate-governance/corporate-documents/>.

In the field of human rights, we make the following commitments:

- respect human rights in accordance with international standards;
- adopt programs to address the impacts on human rights in the industry, with the approval of the top management of KMG and SDEs;
- monitor the impacts on human rights and report thereof;
- comply with the mechanisms adopted by KMG for handling complaints and claims;
- provide indemnities and remedies to eliminate or mitigate negative impacts;
- exercise due diligence in relation to human rights by monitoring the impacts on human rights and reporting thereof;
- provide its employees with remedies to eliminate negative impacts; and
- disclose KMG's expectations of personnel and third parties with respect to human rights.



## ETHICS AND INTEGRITY

### VALUES, PRINCIPLES, STANDARDS AND RULES OF CONDUCT

2-23

Ensuring a high level of corporate responsibility is the most important principle of the Company's work. Corporate responsibility involves transparent and ethical behaviour that contributes to sustainable development and is consistent with the law and international standards of conduct. The Company's activities in this area are system-based, in which regard in 2022, the amendments have been made to the Anti-Corruption Policy and the Privacy Policy.

KMG's activities are based on the following corporate values:

- Fairness
- Loyalty
- Development
- Safety
- Responsibility

Since the business relationships between KMG and shareholders, employees, subsidiaries and dependent entities, government agencies, partners, and other stakeholders, both in making business decisions and in everyday situations, are based on a harmonious combination of interests, mutual respect, trust, responsibility and respect for rights and observance of obligations of each of the parties, the Company strictly follows the provisions of the Code of Corporate Social Responsibility (hereinafter – the Code).

The Code is a public document and freely distributed among business partners of KMG and any other stakeholders. It is also posted on the Company's web-site and in the Corporate Documents section: <https://www.kmg.kz/en/sustainable-development/corporate-governance/corporate-documents/>.

### MECHANISMS TO APPLY FOR CONSULTATIONS ON IMPROPER CONDUCT

2-25, 2-26





To control the respect for the rights of employees, confidential and accessible means have been organized to provide online the information about all the facts of wrongful acts by both employees and third parties.

In case of doubts about the legality of the actions of other employees, counterparties or other persons who communicate with KMG and its SDEs, any employee of the Group of Companies or any other person may

report this to the management, their direct manager and the Compliance Service.

These reports may be transmitted through the following channels and means of communication that ensure confidentiality:



**Any violations of the Code of Conduct, including facts of corruption, discrimination, improper conduct and other violations shall be reported to the Compliance Service through a single centralized Hot Line service administered by an independent operator – KPMG Company:**

-  **free telephone call:** 8 (800) 080-47-47
-  **WhatsApp:** 8 (771) 191-88-16
-  **E-mail:** [mail@sk-hotline.kz](mailto:mail@sk-hotline.kz)
-  **Internet portal:** [www.sk-hotline.kz](http://www.sk-hotline.kz)





The hotline contacts are posted on the corporate website of KMG in the state, Russian and English languages. Similar information is available on the websites of SDEs.

**Concerning the issues of violation of the rights and legitimate interests of employees and assistance in resolving labour disputes and conflict situations:**

#### OMBUDSMAN:

-  **Telephone:** 8 (7172) 78-65-60
-  **E-mail:** [ombudsman@kmg.kz](mailto:ombudsman@kmg.kz)

#### NYSANA SINGLE CENTRALIZED HOT LINE:

-  **free telephone call:** 8 (800) 080-30-30
-  **WhatsApp:** 8 (702) 075-30-30
-  **Internet portal:** [nysana.cscck.kz](http://nysana.cscck.kz)
-  **E-mail:** [nysana@cscck.kz](mailto:nysana@cscck.kz)



All employees of the Company, officials and other persons concerned have the right to apply to the Ombudsman. One of the main functions of the Ombudsman is to improve the rating and image of KMG through early warning, settlement of disputes and conflicts, submission of the issues of concern that are of a systemic nature and require appropriate decisions for consideration by the relevant bodies and officials, as well as making proposals concerning solution thereof. When preparing an annual report on the activities of the Ombudsman for the Board of Directors, the Ombudsman Service of KMG makes proposals for resolving systemic issues in the form of proposals/recommendations. The Ombudsman organized work, the objectives of which are:

- collection and analysis of information about social situation on the site, development of systemic preventive and operational measures to prevent the possible emergence of hotbeds of social tension; and
- evaluation of the development of operational situation in the regions of KMG's presence and development of specific solutions and recommendations on problematic issues on the basis thereof.

In 2022, in order to get acquainted with the requirements of the Code of Business Ethics, the responsibilities and tasks of the Ombudsman, the Ombudsman Service of KMG held meetings with the management, managers of structural subdivisions and representatives

**To enhance the effectiveness of the control and prevention of offenses, improve communication and provide feedback with employees of the Company and third parties (legal entities and individuals), and protect the legitimate rights and interests of KMG and SDEs:**

#### KMG INFORMATION CONFIDENCE SYSTEM (HEREINAFTER – ICS):

-  **Telephone:** 8 (7172) 78-65-65
-  **E-mail:** [doverie@kmg.kz](mailto:doverie@kmg.kz) (functioned until 1 July 2022)



**Single information system for all requests of the citizens – e-Otinish** (hereinafter – e-Otinish) functioning since 1 July 2022.

of trade unions of KMG's SDEs – Ozenmunaigas JSC, Karazhanbasmunay JSC, and Kazakhoil Aktobe LLP.

In accordance with the Regulations on the Ombudsman Service approved by the resolution of the Board of Directors of KMG dated 19 September 2019, the Ombudsman Service organized the work to consider and record the requests, including through the hotline.

In 2022, the Ombudsman considered 5 requests.

As for oral requests (made by telephone, personal consultations), the Ombudsman / Ombudsman Service provided consultations and gave recommendations. All received requests were considered by the Service with taking measures as much as possible to resolve arisen problematic issues at an early stage with taking advisory measures, including those aimed at restoring violated rights and legitimate interests. In addition, unrest in the teams and social tension in Karazhanbasmunay JSC, KMG-Kumkol LLP were prevented.

In 2022, KMG received **332 requests** via the initiative informing Hotline of Nysana call centre regarding safety, violation of the rights and legitimate interests of employees, and social and labour conflicts. The Ombudsman Service of KMG and the Corporate Security Department control timely consideration thereof by the relevant structural subdivisions.

All communications, including anonymous ones, are received and processed by the operators and then they are transmitted to the Compliance Service of KMG, which ensures their professional and confidential consideration. The Compliance Service provides, on a quarterly basis, the information on the results of consideration of received requests to the Audit Committee and the Board of Directors of KMG.

In 2022, the hotline received **109 requests**. A 43.4% increase in complaints is observed in the Company as compared to 2021. The dynamics of incoming messages to the hotline demonstrates the growing confidence in this tool on the part of the persons concerned.

Thanks to the requests received through the hotline, it was possible to resolve issues not directly related to combating corruption and fraud. So, for instance, the hotline received requests related to violation of business conduct, abuse of office. All received requests were considered in accordance with the established procedure and within set time limits, with taking appropriate measures to reduce the likelihood of a recurrence of similar situations in the future and notifying the requesters of the results of consideration.

In 2022, 39 applications and requests were received through the ICS of KMG Group of Companies (2021 – 65, 2020 – 210); during the period from 1 July to 31 December 2022, 8 requests were sent to e-Otinish (4 applications, 2 complaints, 1 inquiry, 1 suggestion). The received requests are related to the issues concerning labour rights of employees, the salary level, labour safety conditions, the conditions for granting leaves (considering also harmful working conditions), violations during tenders and other procurement procedures, abuse of office and improper conduct of the enterprises' managers.

Applications and requests, including anonymous ones, are considered in accordance with the established procedure and within set time limits, with taking measures and subsequently notifying the requesters.

Currently, the requests are received through e-Otinish (since July 2022, it was decided to stop the functioning of the ICS), which made it possible to minimize anonymous requests containing unconfirmed information that are often aimed at discrediting a particular person due to personal unfriendliness or conflict.

In 2022, as in previous years, there were no complaints regarding the facts of discrimination based on nationality, gender, religious convictions and political views. There are no registered cases of the use of forced and compulsory labour, as well as litigation and criminal prosecutions related to such violations.

Within KMG Group of Companies, the corporate security subdivisions perform comprehensive work to ensure the respect for the rights of employees and other persons. At the same time, they are strictly guided by the legislation of the Republic of Kazakhstan and international regulations, as well as general corporate and internal documents of the Fund, KMG and SDEs.

**In general, the managements of KMG and SDEs pay serious attention to the issues of respect for the human rights and is constantly working to improve this area of activity.**

## ANTI-CORRUPTION

2-15, 3-3, 205-1, 205-2, 205-3

KMG builds its business on the principles of legality, fair practices and ethics. The Company strictly respects the human rights, takes all possible actions to prevent corruption, takes care of an impeccable reputation and strives to implement high international standards in the field of ethics.

The Compliance Service is functioning in KMG (hereinafter – the Service). The area of responsibility of the Service includes the elimination of existing risks associated with the possibility of corruption offenses committed by employees while performing their work. Remaining an independent direction of the Company, the Service is integrated with all business subdivisions of the Company.

To comply with the standards of ethical conduct and bona fide business conduct, KMG has performed the work to update existing and develop new internal documents concerning the compliance issues. In 2022, the Anti-Corruption Policy and the Privacy Policy were amended. The amendments concerned the personal responsibility of the Chairman and Vice-Chairmen of the Management Board for corruption offenses committed by their immediate subordinates and for sending the verification materials to competent law enforcement agencies relating to received requests indicating a criminal or administrative offense.

Following the best global corporate governance practices, the Company constantly strives to improve existing corporate standards. Thus, the Policy on transactions with KMG securities was approved.

As part of the creation of an effective system for managing conflicts of interest, as well as determining the requirements for the conduct of employees the compliance with which allows minimizing the risks of making decisions under the influence of personal interests and relationships, since 2020, the Company has been conducting a general declaration of conflicts of interest in relation to all employees of KMG Group of Companies.

In 2022, a survey regarding intolerance to corruption was conducted among 21 companies of KMG with the result that significant risks of corruption were identified and appropriate measures were planned. During the reporting period, one case of corruption was confirmed with a corresponding court decision made.

Commitment to high ethical standards is the basis of good corporate governance and a guarantee in asserting and ensuring the priority of the Company's interests over personal ones. As part of the promotion of high ethical standards of doing business and non-admission of corruption in any of manifestations thereof and within the framework of communication with the competent authority (Anti-Corruption Agency of the Republic of Kazakhstan), participation was taken in the conferences "State standards and measures to prevent corruption" and "Improving business honesty in the business sector of Kazakhstan". Similar activities have been carried out in the regions. Thus, in July and October, a meeting was held between the Department of the Anti-Corruption Agency of the Republic of Kazakhstan in Aktobe Oblast and the Prevention Service of the Anti-Corruption Agency of the Republic of Kazakhstan with the personnel of Kazakhturkmunay LLP. In November, a meeting with the manager of the Prevention and Honesty Division of the Department of the Anti-Corruption Agency of Pavlodar Oblast was organized for the employees of PPCP LLP. In October, KPI and AR took part in a forum dedicated to the role of compliance services in protecting the business reputation of the government agencies and big companies, which was organized by the Anti-Corruption Service of Atyrau Oblast; at the end of the forum, the managers of AR, AUO&G named after S. Utebayev and the Anti-Corruption Service in Atyrau Oblast signed a tripartite agreement for cooperation to improve the compliance services in Atyrau Oblast.

In order to improve the efficiency of the Compliance Service of KMG and its SDEs, as well as to strengthen the Company's control and combat corruption and fraud, in 2022, the webinars were held for the compliance experts of KMG Group of Companies, with the support of the Compliance and Business Ethics Association, on the topic of "Anti-Corruption Compliance", "Sanction Compliance", and the Compliance and Security Forum was held.

To differentiate the rights of access to insider information and prevent the possibility of misuse of such information by insiders, a workshop was held for KMG's employees on the topic of "Insider information: issues of legal regulation and responsibility of the company and its employees-insiders".

The Compliance Service supports the development of professional competencies and skill improvement of the compliance experts of KMG Group of Companies. To date, the compliance teams comprise the experts holding field-specific international prestigious certificates from the Association of Certified Fraud Examiners (ACFE) and the International Compliance Association (Association of Certified Fraud Examiners, ICA) and their number is constantly growing.

In 2023, the Company will continue to work on further improving the compliance system. The key areas of work will include:

- verification of counterparties taking into account the risk-based approach;
- due diligence of candidates pretending to fill vacant positions before they are hired;
- development of a compliance system at enterprises;
- automation of the compliance procedure for declaring a conflict of interest based on own IT solutions; and
- development of training and communication materials for the compliance program.

In addition, we note that in 2022 the team of the Compliance Service of KMG picked up a special award from the manager of the Compliance Service of Samruk-Kazyna JSC.

## SOCIAL STABILITY

2-30, 3-3, 402-1, 406-1, 407-1, 408-1, 409-1

Each employee of the Company has equal opportunities to exercise his/her rights and freedoms in the labour sphere. In addition, the Company actively participates in negotiations with employees on the conclusion, amendment, alteration of collective agreement, strictly observes the timing of negotiations and ensures the work of the relevant joint commissions, provides the information necessary for negotiations, strictly complies with the terms and condition set forth in provisions of the collective agreement.

Under the labour laws, any employee has the right to participate through his/her representatives in collective negotiations and development of a draft collective agreement, as well as to review the signed collective agreement.

The activities of the Company do not restrict the rights to freedom of association and collective bargaining by type of activity or territory. Being a socially responsible company, we fully support this right and create a favourable environment for the exercise of the employees' right to freedom of association.

To maintain social stability in the labour collectives of enterprises being members of KMG Group of Companies, the Company is implementing a set of measures aimed at preventing the emergence of discontent and tension among employees of SDEs. The measures taken make it possible to control the situation at the enterprises and ensure the continuity of the production process.

Thus, social support for employees significantly contributes to maintaining the social stability of labour collectives.

Today, collective agreements have been concluded in 24 production enterprises of KMG Group. In 2022, the number of employees of KMG Group of Companies covered by collective agreements was about 44,200 people.

All collective agreements of KMG's enterprises provide for more than thirty-five basic types of social support for employees and their family members, as well as non-working pensioners.

KMG provides its employees with guaranteed employment benefits, which include various types of social benefits, guarantees and compensations: financial assistance for health improvement in addition to a leave, payments in connection with pregnancy and childbirth, monthly payments to employees who are on a child care leave until a child reaches 1.5 years old, compensation for termination of an employment contract in case of impossibility of transfer to another job due to general disablement, disability, lump sum payment in connection with the death of an employee to organize the funeral, lump sum payment to the family of the deceased employee as a result of an on-the-job accident. The Company also provides social guarantees for voluntary medical insurance in case of illness and for organization of recreation for employees' children in children's health improvement camps in Kazakhstan.



In addition, employees may be provided with additional types of social support. These types of social assistance are enshrined in collective agreements or provided for by internal regulatory documents of the entity. Such payments include benefits in connection with reaching the anniversary, retirement age, in connection with marriage, short-term leave on the occasion of a marriage, in connection with a childbirth, in connection with the death of relatives with preserving the salary, for treatment and payment for medical procedures if medical expenses exceed the limit set by the insurance program, payments to disabled employees, employee's disabled children, employees in desperate need, to purchase school supplies by the first of September, assistance to employees in desperate need, etc.

In 2022, KMG Group retained all social benefits and guarantees and paid them in accordance with collective agreements. In general, in 2022, social support for employees and non-working pensioners was provided in the amount exceeding 24 billion tenge. In 2022, a new of the Collective Agreements of Karazhanbasmunay JSC, Water Production and Transportation Department LLP, KenKurylysService LLP, Kazakhturkmunay LLP, AR LLP, PetroKazakhstan Oil Products LLP, Mangistauenergomunay LLP, Munaitelcom LLP was signed, while the amounts of many social benefits have

been increased subject to the current standards in effect within KMG Group.

The implementation of internal socially oriented programs is something special for KMG. In promoting the same, first of all, the emphasis is on creating favourable conditions for the Company's employees. These are measures of remunerative incentives, consolidation and enhancement of professional growth, ensuring labour safety. The issues of preventing social tension, the emergence of labour disputes and conflicts are within the area of special attention.

A constant constructive relationship has been established with employees and their representatives. A unified system of internal communications is designed to enhance the effectiveness of 'feedback'. Mandatory scheduled meetings of management with labour collectives are held at all enterprises to discuss social, every-day, and production issues.

The main task of the internal communication system is to timely inform the employees about the goals and objectives of the activity, bring the current situation in the organization to the attention of the employees, as well as the opportunity to 'hear' the questions raised by employees.

When working conditions change, the Company shall notify in writing an employee no later than fifteen calendar days in advance. The minimum period to notify of significant changes in the Company's activities is 4 weeks.

At all production enterprises of KMG, the opportunity for each employee to address questions to the management of the enterprise and receive an answer in a timely manner is regulated by introducing internal communication tools whereby the reporting meetings of the chief executive officers with labour collectives are systematically held twice a year. In 2022, 148 reporting meetings were held. 26,000 people attended the meetings. Approximately 400 questions were received from employees to which appropriate answers were given or which were taken into consideration to be executed and controlled.

Also, in order to create and maintain effective mechanisms for direct communication between employers and employees in SDEs, to inform employees in a timely manner about the goals and objectives of activities in SDEs, to bring the current situation in the organization to the attention of the employees, to form a positive image of the enterprise among employees, to monitor the parameters of the social and psychological climate in labour collectives in SDEs, the employees are received by the chief executive officers of SDEs in charge of personal matters; a blog of the Chief Executive Officer and a corporate information website have been created in each SDE; monitors for video announcements have been installed to bring internal corporate information to the attention of labour collectives. Information stands are used to inform the employees using prompt announcements and messages.

Quarterly meetings of the management with the SDE trade union are held with respect to the most urgent issues regarding the compliance with a collective agreement, the labour discipline, consideration of requests from the personnel, safety and labour protection issues, provision of social benefits and compensations and other socially significant issues at the enterprise.

In order to maintain social stability, the enterprises implemented the Action Plan for 2022 to increase the level of social stability in SDEs of KMG.

When developing this plan, the results of the study of Samruk Research Services<sup>10</sup> conducted by the Centre for Social Interaction and Communication of Samruk-Kazyna JSC in all major SDEs of KMG, were used.

**The integral indicator of Samruk Research Services in KMG in the first half of the year, for 9 months of 2022 and at the end of 2022 was equivalent to the same indicator without changes – 74%.**

In general, the level of social stability in KMG's enterprises is satisfactory. As for social well-being, there is a decrease in personnel satisfaction with the salary level. This is directly related to the last year's rise in prices for essential foodstuffs and commodities.

Based on the results of the study, for all identified worrisome zones, each enterprise will develop the Action Plan to minimize and eliminate worrisome zones identified while determining the indicators of social stability, which cover the identified problems in the field of activity of enterprises that affect the social well-being of employees (internal communications, food quality, living conditions, provision of personal protective equipment, training, career progress, etc.).

During quarter I in 2022, there were 11 facts of dissatisfaction on the part of employees of SDEs of KMG. To stabilize the situation, negotiations were held with the leaders of trade union committees and meetings with labour collectives. As a result of negotiations, in order to stabilize the situation, ensure the smooth operation of enterprises, as well as prevent further escalation of the labour conflict, it was decided to increase salaries by 30 percent and the situation stabilized as against 2021.

KMG has taken measures to reduce the salary gap between our employees and employees of the contracting companies, a bonus system similar to that of the customers and a guaranteed social benefits have been introduced. As a result, the salaries of employees of contracting organizations were increased by 30-35% on average. For these purposes, 156 additional agreements have already been concluded with 90 contracting organizations, which required additional costs approximating 35 billion tenge.

In addition to remuneration and social support, one of the important factors in the social well-being of employees implies working conditions, including social and every-day issues. At the fields, especially

where the rotational method of work is used, decent board and lodging conditions, sanitary and hygienic facilities, canteens, places for recreation and leisure, and sports are provided.

## TRADE UNIONS

The Company communicates with the trade unions within the framework of social partnership established by labour laws at the sectoral and regional levels. At the industry level, the basic parameters of communication (social guarantees, labour organization, principles of remuneration, employment, gender and youth policy, safety and labour protection, prevention and resolution of labour conflicts, etc.) are determined in the Industry Agreement in the oil and gas, oil refining and petrochemical industries of the Republic of Kazakhstan in the development of which the representatives of KMG and its enterprises took active part.

The KMG Group has 36 trade union organizations that protect the interests of more than 37 thousand employees.

At the regional level, the regional commissions for social partnership are functioning within which, in addition to regional issues of employment and labour protection, specific collective labour disputes are considered, as well. Conciliation commissions have been formed and are functioning in all companies of KMG.

### CASE STUDY

In October, in Zerenda Village of Akmola Oblast, the meeting of trade union leaders of Zhanaozen with the management of KMG was held. At the training, the prospects for the development of KMG and ways to improve the social well-being of the region were discussed. Such meetings of trade unions with the management of KMG are planned to be held on an annual basis.



<sup>10</sup> Samruk Research Services is a sociological study that allows identifying the mood of employees, their social tranquillity and the level of protest moods. Also, for specific enterprises, the index allows identifying problems that concern employees.

## OUR COMMUNITIES

3-3, 413-1, 413-2, 203-1

KMG contributes to the social and economic development of the regions of its presence. The Company actively communicates with the local governments and maintains a constant dialogue with key stakeholders, actively works on developing and training young qualified experts, provides social support to the employees of KMG Group of Companies, strives to support domestic manufacturers by signing the off-take contracts. Under the contracts for subsoil use and the Comprehensive Development Plan, KMG's enterprises finance socially significant facilities, the construction of sports complexes, the social and economic development of the region, etc.



The subsoil use contracts of KMG's subsidiaries provide for the allocation of significant amounts of money to develop the regions of production presence and provide social assistance to the social groups living in need, as well as on the basis of agreements and memoranda entered into with the regional Akimats, SDEs of KMG transfer funds to the local executive authorities, which distribute the funds based on the needs of local communities. In addition, KMG fulfils its obligations in a timely manner in accordance with the Comprehensive Development Plan of Zhanaozen City. For these purposes, in 2022, the amount exceeding 12 billion tenge has been allocated within KMG Group, including the major portion of the contribution to the development of Atyrau and Mangystau Oblasts, which falls on Kashagan BV, which is a 100% subsidiary of KMG since 2022, including:

- Ozenmunaigas JSC allocated 1,700 million tenge for the development of social infrastructure in Zhanaozen City and Karakiya District;
- Embamunaigas JSC allocated 831 million tenge for the construction of schools in Kulsary Town of Zhyllyoy District and in Atyrau City;
- Kazgermunai JV LLP made allocations in the amount of 149 million tenge for the social and economic development of Kyzylorda Oblast and its infrastructure.
- On the basis of the agreement signed with the Akimat of Mangystau Oblast, Karazhanbasmunay JSC transferred 480 million tenge for the social and economic development of the region and its infrastructure.

- Kazakhoil Aktobe LLP allocated 169 million tenge for the social and economic development of Aktobe Oblast and its infrastructure, Kazakhturkmunay LLP allocated 46 million tenge and, in addition, in pursuance of the Contract, Kazakhturkmunay LLP transferred 44 million tenge to the Akimat of Mangystau Oblast.
- Funded by Kashagan B.V., social projects in the amount exceeding 8 billion tenge were completed in the reporting period – improvement of microdistricts, construction of a student dormitory for 500 people in Aktau City, construction of a 3-storey 60-apartment residential building in Kulsary Town (Atyrau Oblast). Also, in 2022, the projects were launched such as the construction of a family medical outpatient clinic for 50 visitors in Bereke Microdistrict, construction of an additional building for 80 children of the regional children's rehabilitation centre, construction of a kindergarten for 160 children in Orleu Housing Estate (Taskala-2 Village) of Atyrau City, construction of 3-storey 60-apartment residential buildings in Miyaly Village of Kyzylkogy District, construction of 3-storey 60-apartment residential buildings in Makhambet Village of Makhambet District, construction of 3-storey 60-apartment residential buildings in Akkystau Village of Atyrau Oblast; the construction of the Schoolchildren Palace for children and teenagers in Aktau City, which has begun in 2021, is continuing.

## SPONSORSHIP AND CHARITY

The Company's charitable and sponsorship activities are carried out through 'Samruk-Kazyna Trust' Social Project Development Fund, which is the Single Charitable Operator of the Group of Companies of Samruk-Kazyna JSC.

The charitable activities of Samruk-Kazyna Trust are aimed at helping people, communities in the social and medical sectors, developing the media and cultural community, developing human potential, strengthening labour relations, interethnic relations, investing in a sustainable development of society, and supporting regional business initiatives.

The portfolio of projects comprises 43 projects out of the budget of 2022 for the total amount of 10.4 billion tenge of which 4 projects have been implemented / are being implemented taking into account the needs of KMG:

1. Zharylkau PF – the project "Strengthening the material and technical base of secondary schools in Zhanaozen City" in the amount of 168.9 million tenge;
2. IQanat Educational Fund Public Fund – the project "IQanat-Zharkyn bolashak" in the amount of 253 million tenge;
3. Bilim Foundation PF – the project "Zharkyn bolashak" in the amount of 292.5 million tenge; and
4. Facilities Construction Company CF – the project "Construction of sports grounds in Zhanaozen City and Zhetybay Village" in the amount of 1.01 billion tenge.

In 2022, the Management Board of the Fund approved the Rules for planning, considering and preliminarily approving charitable assistance (charitable project) by the organizations being members of the Group of Companies of Samruk-Kazyna JSC, on the basis of which a certain limit on charity is provided for KMG and its subsidiaries, whereby in 2023, KMG develops the Rules for providing charitable assistance to KMG and its subsidiaries and dependent entities.

In 2022, by the resolutions of the Board of Directors of the Fund, the social projects were included in the Charitable Program of Samruk-Kazyna JSC at the expense of:



### OZENMUNAIGAS JSC:

- for the construction of the Schoolchildren Palace in Zhanaozen City of Mangystau Oblast with an estimated capacity of 500 children per shift, in the amount of 8,224,545 thousand tenge; and
- for the construction of universal sports complexes in Zhanaozen City (with a capacity of 400 visitors per day). The construction of the complexes has begun in 2021 and is in progress. The cost of facilities is 1 billion tenge. The funds are disbursed during 2022 in the amount of 895 million tenge.

### EMBAMUNAIGAS JSC:

- for the construction of a correctional office building for 150 disabled children in Zhyllyoy District of Atyrau Oblast in the amount of 591,832,863 tenge; and
- for the construction of 4 multifunctional sports grounds in Dossor and Makat Villages of Makat District, Mukur Village of Kyzylkogy District, Akkystau Village of Issatay District of Atyrau Oblast, in the total amount not exceeding 706,228,840 tenge.

Also, KMG's subsidiaries – Embamunaigas JSC, Mangistaumunaigas JSC, Ozenmunaigas JSC, Karazhanbasmunay JSC, Kazakhoil Aktobe LLP, Kazgermunai LLP, Pavlodar Petrochemical Plant LLP, PetroKazakhstan Oil Products LLP, and Ural Oil and Gas LLP – provided charitable assistance to the local communities in Atyrau, Mangystau, Aktobe, Kyzylorda, Turkestan, and Pavlodar Oblasts and West Kazakhstan region and the city of Astana, in the amount of about 2.5 billion tenge.



## COMMUNICATION WITH CONTRACTING ORGANIZATIONS AND ENSURING SOCIAL AND LABOUR RIGHTS OF EMPLOYEES OF CONTRACTING ORGANIZATIONS

3-3, 202-1, 414-1, 414-2

KMG has approved the Regulations on communication with contracting organizations to ensure labour guarantees for their employees (hereinafter – the Regulations).

For the purpose of fulfilment of obligations by the Contracting Organizations in the field of labour relations, 21 SDEs of KMG have introduced the requirements of the Model Regulations into contractual obligations.

100% of contracting organizations in 21 SDEs are screened for social requirements at the conclusion of a contract. While performing works (rendering services) under the contract, the Contractor undertakes to strictly comply with the requirements of the labour laws of the Republic of Kazakhstan, including those regarding the procedure for concluding employment contracts, requirements for their content and form, admission to work only after the conclusion of an employment contract, the duration of work and working hours, shift work and rotation system of work organization, night work and overtime work, rest of employees, minimum amount of salary and guarantees with regard to remuneration, the procedure and timing of salary payment, as well as providing its employees with appropriate social and living conditions.

Corresponding structural subdivisions (Industrial Relations Groups – IR Services) have been formed in SDEs of KMG. The activities of these subdivisions are aimed at monitoring and control in the field of compliance with labour laws, providing social and living conditions.

In 2022, the IR Services of KMG’s SDEs conducted 179 inspections for compliance with the Regulations by contracting companies. In order to ensure social stability in Mangystau, Atyrau, and Pavlodar Oblasts, since the beginning of 2022, KMG has been working

to reduce the salary gap between our SDEs and their contracting organizations. To this end, the following measures have been taken:

- salary of employees of contracting organizations is increased;
- it is decided to annually index the contractors’ salaries by the inflation rate, by analogy with the salaries of a customer; and
- guaranteed social benefits for employees of contracting organizations have been introduced.

The works performed are agreed upon with the Interdepartmental Headquarters in charge of solving problems in Zhanaozen City, Atyrau and Pavlodar Oblasts.

SDEs of KMG in Mangystau Oblast signed 158 additional agreements with contracting organizations providing for these changes and, accordingly, an increase in rates of services. The measures taken to increase salaries cover more than 19 thousand employees. The salaries are increased by about 35-40% on average. In money equivalent, the value of additional agreements signed amounts to 37.2 billion tenge.

12 additional agreements were signed for Atyrau Oblast (AR). The measures taken to increase salaries cover more than 1.3 thousand employees. The salaries will be increased by 13-76% on average. In money equivalent, the value of additional agreements signed will amount to 3.5 billion tenge.

29 additional agreements were signed for Pavlodar Oblast (PPCP). The measures taken to increase salaries cover more than 2.4 thousand employees. The salaries are increased by 14-56% on average. In money equivalent, the value of additional agreements signed amounts to 5.9 billion tenge.

## GENERAL CORPORATE EVENTS

Within KMG Group of Companies, the corporate events are held on an annual basis to consolidate the workforce of KMG Group. In order to promote a healthy lifestyle and improve professional skills, events such as Sports and Athletic Contest and Uzdik maman are held.



### IN 2022, THE SUMMER SPORTS AND ATHLETIC CONTEST OF KMG WAS HELD IN ATYRAU CITY WITH THE PARTICIPATION OF SDES OF KMG

More than 1,600 people from 33 enterprises participated in the Sports and Athletic Contest, who were divided into groups. The Sports and Athletic Contest was held in two stages: the first qualifying stage in eight groups distributed by SDEs location was held until 18 July 2022. The final part was held in Atyrau City during the period from 8<sup>th</sup> to 12<sup>th</sup> of August 2022.

About 400 representatives of subsidiaries and dependent entities participated in the final part.

The competitions were held in the following sports: mini-football, volleyball, basketball, table tennis, tennis, chess, swimming, togyzkumalak, lasso-tartu, and track-and-field athletics.

In the finals of the Sports and Athletic Contest of Samruk-Kazyna JSC, KMG won the super cup of the Contest.





# ҮЗДІК МАМАН - 2022

"ҚАЗМҮНАЙГАЗ" ҰК АҚ КӘСІБИ ШЕБЕРЛІК БАЙҚАУЫ  
 КОНКУРС ПРОФЕССИОНАЛЬНОГО МАСТЕРСТВА

## UZDIK MAMAN PROFESSIONAL SKILL CONTEST

In 2022, during the period from the 3<sup>rd</sup> to 7<sup>th</sup> of October, the Contest was held at Akshabulak and Nuraly fields of Kazgermunai JV LLP with the participation of the representatives of 17 SDEs of KMG in 13 non-professional occupations: operators of oil and gas production, well survey, formation pressure maintenance, oil treatment, processing plants, workover and well service crews, wrench turners, electric and gas welders, electricians, chemical analysis laboratory assistants, compressor unit operators and lathe operators.

The winners of the internal contests of KMG's subsidiaries, who won the first-place prize, participated in the KMG's Corporate Contest.

The theoretical part of the Contest was held in the form of online electronic testing. For practical tasks, the Regulations were drawn up, the equipment, tools,

and workplaces used were examined and agreed upon by the KMG's Contest Commission. The practice was evaluated by the jury members, who were selected from among the production personnel being employees of KMG's enterprises.

The winners were awarded solemnly in the Drama Theatre named after Bekezhanov with the performance of the musical performers of Kyzylorda Oblast.

The winners of the Contest, who took the first places, were awarded with Uzdik maman medals and diplomas. The winners of the first place were invited to the solemn meeting of KMG with the participation of the Chairman of the Management Board of KMG devoted to the Day of the Republic of Kazakhstan. In total, there were more than 230 participants in the event, including 120 contestants.



## THE WINNERS OF THE "UZDIK MAMAN – 2022" PROFESSIONAL SKILL CONTEST



# HEALTH, SAFETY AND ENVIRONMENT



**Nurbek ZHEKSENBAYEV**

Best electric and gas welder  
"KazTransOil" JSC

First place in the "Uzdik Maman – 2022"  
professional contest



- Principle 7.** Businesses should support a precautionary approach to environmental issues.
- Principle 8.** Businesses should undertake initiatives to increase environmental responsibility.
- Principle 9.** Businesses should promote the development and diffusion of environmentally sound technologies.

## OUR APPROACH TO MANAGEMENT

3-2, 3-3, 306-2, 403-1, 403-7, 11.9.1, 11.9.2

We recognize the nature and scale of the impact of our activities and relate them to the importance of sustainable use of natural resources, protecting the health of our employees in all business areas and the communities in which we operate, and preserving a healthy environment.

The Company has made significant progress in making its operations more environmentally friendly. This is due to the implementation of effective internal standards, an environmental culture and continuous improvement of the management system. The Company has a "zero result" target aimed at avoiding negative environmental impacts.

Health, Safety and Environment (HSE) management objectives are directly linked to the KMG Group's 2031 Development Strategy (hereinafter referred to as the Strategy). The Strategy includes strategic initiatives to increase environmental responsibility. Priority areas for KMG Group in terms of environmental protection include management of air emissions, reduction of flaring of crude gas, water management, production waste and land reclamation, and biodiversity conservation.

The management of KMG and its subsidiaries and affiliates follows the principle of zero tolerance for losses and damages related to environmental pollution. In accordance with the requirements of the new Environmental Code, the Company is guided by KMG's Environmental Policy to ensure the collection, storage, analysis and dissemination of environmental information in its operations.

The Company has adopted an Emissions Management Policy consisting of eight key principles, six of which are directly related to climate change issues, aimed at completely eliminating regular gas flaring.

In an effort to minimize the regular flaring of crude gas, in 2015 the Company supported the World Bank's "Zero Routine Flaring by 2030" initiative. One of our most important tasks in reducing atmospheric emissions is to increase the beneficial use and utilization of associated petroleum gas and to minimize gas flaring. Crude gas flaring volumes under this initiative are reported on an annual basis to the World Bank office in Kazakhstan.

In 2018, the Corporate Water Management Standard was adopted, which postulates KMG's core principles in terms of water use – the 8 Water Principles – and systematizes the approach to water management. We adhere to strict principles in the use of water resources. We have now embarked on several large-scale projects to treat wastewater and saline water for production purposes in order to free up volumes of freshwater for the benefit of the population. The KMG Group's Water Management Program is planned to be developed in 2023.

## HEALTH, SAFETY AND ENVIRONMENT (HSE) MANAGEMENT SYSTEM

3-3, 403-1, 403-4, 403-7, 11.9.2

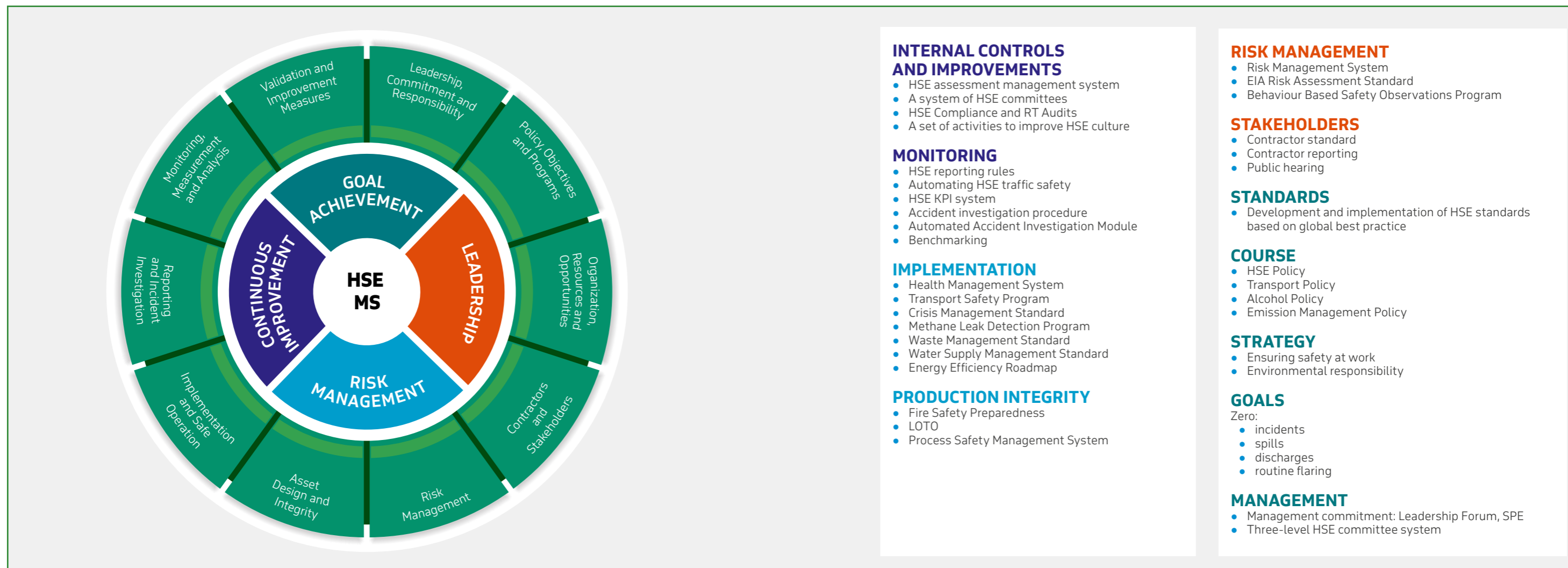
The Health, Safety and Environment Management System (MS) has been developed in accordance with the requirements of laws of the Republic of Kazakhstan, industry and international ISO standards, using global best practices and approaches, and the recommendations of the International Association of Oil and Gas Producers (IOGP), and includes 10 key elements that are based on such fundamental principles as leadership, goal achievement, risk management, and continuous improvement.

Since 2006, KMG has implemented an integrated quality, environment, health and safety management system (IMS) in accordance with ISO 9001, ISO 14001 and ISO 45001. Subsidiaries and Dependent Entities (SDEs) with significant energy consumption are certified to the ISO 50001 standard. The effectiveness of the IMS is regularly confirmed by independent auditors. To improve its management system, KMG is certified for Occupational Health and Safety Management System for compliance with the international standard ISO 45001.

Taking into account best and emerging practices in health, safety and environment (HSE) management, a three-level committee system has been introduced and implemented to increase the commitment and involvement of managers at all levels and employees in HSE management processes:

- First Level – the Health, Safety, Environment and Sustainability Committee of KMG’s Board of Directors (HSESC);
- Second Level – the HSE Committee at KMG level;
- Third Level – the HSE Committees of SDEs.

Since 2019, the Health, Safety and Environment Committee has been functioning at the level of Samruk-Kazyna JSC. In 2022, KMG took an active part in the work of this Committee and of the Committee’s Expert Group. As part of the work of the Committee and the Expert Group, Samruk-Kazyna JSC’s portfolio companies actively exchange experience, develop common approaches to HSE and participate in cross-audits of other portfolio companies. Many of KMG’s approaches and guidance documents on HSE have been adopted by other portfolio companies as best practices.





HSE reports are reviewed by the KMG Board of Directors on a monthly basis, with detailed informative reports reviewed by the HSESC. The following key topics were discussed in detail at the 2022 HSESC meetings:

- Crisis and Emergency Management in KMG Group;
- Waste Management, Status of Implementation of the Historic Waste Management Memorandum;
- Automation and Digitalization of HSE Projects;
- Measures to Improve Fire Safety in KMG Group;
- KMG's Environmental Projects.

To meet the key objectives of KMG's business continuity and environmental performance, the Committee was also briefed on the following HSE issues in 2022:

- Report on health, safety and environmental issues (at each Committee meeting);
- Approval of the Corporate Occupational Health and Safety Standard "Vital Regulations" for employees of KMG Group;
- Occupational health and safety management system;
- Management of KMG's contractors;
- Report on COVID-19 situation in KMG (at each Committee meeting).

HSE risks, including environmental, climate change and water scarcity risks are monitored on a quarterly basis. KMG regularly analyses environmental performance and benchmarks against leading international oil and gas associations (IOGP, CDP). The Company pays particular attention to environmental aspects and environmental risk assessment.

KMG's Health, Safety and Environment Department holds an annual Group Health, Safety and Environment (HSE) CEO Forum.

## CASE STUDY

On 8 September 2022, the Seventh Annual Forum "Occupational Health and Safety Leadership. New Challenges and Approaches" was held. Members of the Board of Directors and management of Samruk-Kazyna and KMG, CEOs of more than 30 subsidiaries and dependent entities (SDEs), representatives of government authorities and a number of KMG's foreign partners were invited to the forum.



**Welcoming the forum participants, Mr. Magzum Mirzagaliyev, Chairman of KMG's Management Board, stressed, "people are the company's highest value and our main goal is to preserve the lives and health of all employees.**

For all KMG employees, strict adherence to the requirements of labour and production discipline and ensuring a culture of safe production must become the highest priority".

**Christopher John Walton, Chairman of KMG's Board of Directors, also noted in his speech the crucial importance of personal example and the management's attitude towards the goal of zero injuries and accidents at work.**

The report by Kairat Saktaganov, Director of KMG's HSE Department, summarized the year's result, named the Group's successful and underperforming companies, and showed KMG's corporate HSE Performance Wheel model, which compactly and visually presented 12 areas that SDEs should work on systematically to achieve zero incidents.

The forum also included a discussion session, where CEOs of a number of companies shared their experiences and cases of occupational safety culture and talked about various HSE projects.

At the HSE awards ceremony, it was stated that all forum participants were united by the common goal of creating a systematic corporate safety culture. Awardees: Atyrau Refinery LLP (for effective implementation of corporate safety and health initiatives), Embamunaigas JSC (for successful implementation of the road safety project), Karazhanbasmunai JSC (for contribution to environmental protection), KazTransOil JSC (for effective implementation of best practices in emergency and crisis management), JV CASPI BITUM LLP (for HSE leadership and commitment) and Mangistauenergomunai LLP (for effective implementation of industrial safety tools).

# OCCUPATIONAL HEALTH AND SAFETY

3-3, 403-1, 403-2, 403-3, 403-9, 11.9.2, 11.9.9

KMG and its subsidiaries adhere to the principle that the health and safety of employees takes precedence over operational performance. The Company's health and safety policy is based on the commitment of top management in this area and aims to involve every employee in creating a safety culture. The Company's management is committed to zero tolerance for accidents and for the use of alcohol, drugs and psychotropic substances and traffic accidents. The Company is committed to complying with both national laws and the requirements of international and national standards. KMG pays particular attention to ensuring a high level of occupational safety according to global standards and best practices.

By the end of 2022, the number of fatalities decreased by 67% compared to the previous year (from 3 in 2021 to 1

in 2022). The number of people injured in occupational accidents has increased by 12.5% compared to the previous year (from 32 in 2021 to 36 in 2022). The hours worked for 2022 were 99.97 million man-hours (for 2021, 102.31 million man-hours). The most common types of accidents were: exposure to moving objects, falling objects and road accidents.

In 2022, there was one occupational accident amongst the Company's employees where one employee died (as a result of a rupture of the Aktau-Zhetybai water pipeline of Water Production and Transportation Administration LLP, Mangystau Oblast).

The number of road accidents increased by 9% (from 22 in 2021 to 24 in 2022), the number of fires decreased by 83% (from 6 in 2021 to 1 in 2022).

Key HSE performance indicators	UoM	2019	2020	2021	2022	Deviation 2022/2021	%
Accidents	Case	41	30	28	35	+7	+25
Injured in accidents	Person	48	32	32	36	+4	+12.5
Including fatalities	Person	2	0	3	1	-2	-67
Road accidents	Case	44	15	22	24	+2	+9
Fires	Case	10	6	6	1	-5	-83

## LOST TIME INJURY AND FATALITY ACCIDENT RATES

KPI	2019	2020	2021	2022	IOGP 1
Lost time injury rate, per million man-hours (LTIR)	0.31	0.25	0.31	0.36	0.19
Fatality accident rate, per 100 million man-hours (FAR)	1.28	0.0	2.93	1.00	0.29

The Company keeps records within KMG Group and for contractors, contractor data is not included in accident and fatality figures.

# PROCESS SAFETY MANAGEMENT

306-3

As part of the implementation of the Corporate Process Safety Management Standard at KMG Group and improvement of the industrial safety culture at KMG SDEs, KMG held workshops at the Corporate Centre and at the premises of major KMG SDEs (Ozenmunaigas JSC, Mangistaumunaigas JSC, Embamunaigas JSC) for CEOs and engineering and technical employees of KMG SDEs responsible for industrial safety issues (128 employees participated in total).

These workshops included awareness-raising on process safety/barrier management based on international oil and gas industry best practice (TCO) and International Association of Oil & Gas Producers (IOGP) recommendations.

In addition, practical examples of preventive barriers to operational safety for each of KMG's business areas (tailored to their specific operations) were discussed.

In the final part of the workshops, the main tools (ways) to check and assess barriers in KMG SDEs (based on existing methods, programs and practices) were discussed and the roles and responsibilities of KMG and SDEs' staff in process safety/barrier management were identified.

In 2023, it is planned to continue working in this direction and to start implementing the IOGP Process Safety Fundamentals Recommendations in KMG SDEs.

# TRANSPORT SAFETY

3-3, 403-1, 403-2, 403-3, 403-9, 11.9.2, 11.9.9

Today, the Company has over **5,000** vehicles and special machines, most of which are operated in major cities and towns in heavy urban traffic, which increases the risk of accidents caused by third parties. For example, of 24 accidents occurred in 2022, 15 accidents were caused by other road users.

As part of ensuring transport safety, preserving human life and health in the operation and maintenance of vehicles, preventing accidents and reducing the potential risks of injury to Company employees, work is being carried out on a continuous basis to improve transport safety:

- Car front collision simulators (Convincer) have been purchased to raise awareness among the Company's employees on the need to use seat belts and to reduce injuries in accidents. A practical demonstration of the Convincer enables employees to become aware of the need to use seat-belts.
- In 2022, 1,345 Company employees were trained in defensive driving according to the international standards of RoSPA (The Royal Society for the Prevention of Accidents, a British non-profit organisation founded in 1916 with the aim of saving lives and preventing serious injury).

- Embamunaigas JSC introduced an automated vehicle monitoring system as part of its Travel Management Project. Monitoring is carried out by collecting and processing data from GPS terminals and includes functionality for monitoring geolocation, deviation from route, speed, sudden acceleration and braking, seat belt use, daytime running lights and other indicators.
- Based on the results of the accident analysis, an "Action Plan to Improve Transport Safety" was developed, containing a set of preventive measures aimed at improving the safe operation of vehicles and promoting a safe driving culture within the Company.
- As part of preparations for the autumn-winter period in September 2022, measures for safe traffic during the autumn-winter period have been developed and sent to the SDEs for implementation.
- Transport safety workshops attended by managers and responsible engineers and technicians of the Company's SDEs were held. The workshops presented an analysis of the immediate and systemic causes of road accidents that have occurred in the Company and contractors, and information on the results of internal and external controls to ensure transport safety at facilities.

## FIRE SAFETY

3-3, 403-1, 403-2, 403-3, 403-9, 11.9.2, 11.9.10

In 2022, there was 1 fire without casualties in KMG Group (in 2021, there were 6 fires, of which 2 were major fires with casualties (3 dead and 1 injured) and significant material damage). The damage caused by the fire amounted to KZT 195,000.

The following main systemic causes have been identified as a result of the investigation into the circumstances and causes of fires:

- The fire has been caused by a violation of the rules for the installation and technical operation of electrical equipment.

**To prevent and avoid fires and ignitions in KMG Group, the following preventive fire safety measures have been taken:**

In 2022, short-term and organisational and technical measures (of continuous implementation) of the Comprehensive Fire Safety Action Plan for 2022–2024 for KMG Group were implemented in SDEs, funds

were provided for the implementation of medium- and long-term measures to ensure fire safety.

Guidelines have been sent to SDEs to improve the level of fire protection of facilities.

During the year, fire drills, exercises and training sessions were held in all SDEs, with the participation of representatives of the Ministry of Emergency Situations, the Ministry of Energy, Samruk-Kazyna JSC and other stakeholders. Also, drills were held at the KMG Corporate Centre.

In May 2022, fire safety inspections were carried out at the facilities of 15 SDEs, and recommendations were made to improve the fire safety of production facilities.

In December 2022, regional (*Astana, Zhanaozen, Aktau, Atyrau*) fire safety workshops attended by 203 employees, including management and engineering personnel were held in SDEs.



## INTERACTION WITH CONTRACTORS

The Company seeks to improve its HSE processes with contractors, which are based on identifying, assessing and mitigating risks at all stages of work and service delivery by contractors and subcontractors at KMG Group production facilities.

In 2022, as part of improving processes in SDEs, systematic work was carried out to assess HSE performance of contractors, enabling each SDE to identify potential gaps in its contractor management systems to set targets for improvement.

Based on the results of the work carried out in 2022, 455 contractors provided services and performed works for SDEs in all business areas of the Company. The most significant shares of the total volume of services and works are Transport and Logistics (22.02%), Equipment Manufacturing and Maintenance (15.73%), Construction and Installation (9.89%) and Fire and Industrial Safety (9.44%), while the total volume of Oilfield Services is 31.71%.

### VOLUME STRUCTURE BY TYPE OF SERVICE PROVIDED

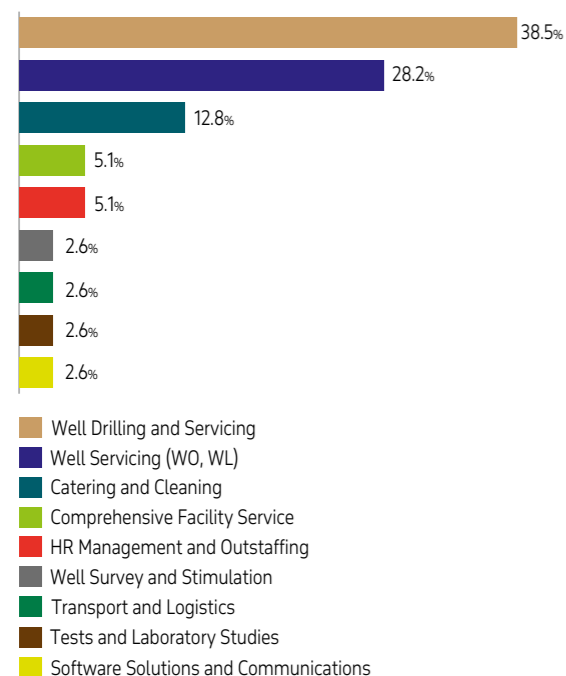


The assessment of contractors' HSE performance for 2022 showed that the highest number of occupational accidents occurred in the areas of Drilling and Well Servicing – 38.5%, Well Servicing (WO, WL) – 28.2% and Catering and Cleaning – 12.8%.

To prevent similar accidents involving contractors, in December 2022, KMG's HSE Department held regional (*Astana, Aktau, Zhanaozen, Atyrau*) workshops

on ensuring industrial, fire and transport safety at hazardous production facilities of SDEs, including in cooperation with contractors. In particular, an analysis of the systemic causes of accidents (injuries, fires, road accidents) that occurred in contractors, an analysis of contractors' contractual HSE obligations, and recommendations for improvement were made.

## PERCENTAGE OF ACCIDENTS BY TYPE OF SERVICE PROVIDED



The Company requires contractors to strictly observe and comply with RoK statutory requirements

## RATES OF LOST TIME INJURY, FATALITY ACCIDENT AND MOTOR VEHICLE CRASH INVOLVING CONTRACTORS

KPI	2020 <sup>11</sup>	2021 <sup>12</sup>	2022	IOGP <sup>13</sup>
Lost time injury rate, per million man-hours (LTIR)	0.00	0.27	0.52	0.24
Fatality accident rate, per 100 million man-hours (FAR)	0.00	0.00	1.28	0.90
Motor vehicle crash rate, per million kilometres travelled	0.00	0.24	0.17	0.058

To confirm the GAP analysis data performed by SDEs and their verification, audits are planned for 2023 to verify the compliance of processes for interaction with contractors in SDEs, compliance with corporate HSE policies and standards, including control and monitoring of implementation of policies and standards, expert review, risk analysis and assessment, recommendations

and the requirements of the Company's HSE policies and standards, which are taken into account when contracting for services and works.

The Company's key HSE requirements are the audit and compliance of contractor's plant and equipment and personnel prior to commencement of works, development and implementation of contractor's HSE Plan during works and assessment of contractor's performance upon completion of works.

The LTIR (LOST TIME INJURY RATE) per million man-hours involving contractors was 0.52 in 2022.

The FAR (FATALITY ACCIDENT RATE) per 100 million man-hours involving contractors was 1.28 in 2022 due to the death of one contractor worker resulting from a fire.

A total of 41 accidents occurred among contractors in 2022. The most common traumas were fractures and injuries to the lower and upper extremities. The hours worked by contractors were 78.26 million man-hours in 2022 (77.1 million man-hours in 2021), man-hours were calculated.

The MVCr (MOTOR VEHICLE CRASH RATE) per million kilometres travelled involving contractors was 0.17 in 2022.

to eliminate constraints (system causes) for SDEs' interaction with contractors in HSE area.

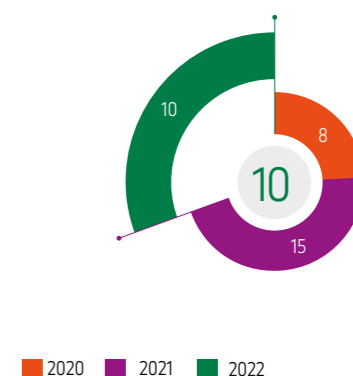
## INDUSTRIAL SANITATION AND HYGIENE

3-3, 403-1, 403-3, 403-4, 403-5, 403-6, 403-7, 403-8, 403-9, 403-10, 11.9.4, 11.9.5, 11.9.6, 11.9.7, 11.9.8, 11.9.9

The Company manages occupational health and safety issues in accordance with the laws of the Republic of Kazakhstan and international standards for occupational health, safety, and hygiene. KMG has a proactive policy to protect its employees' health and wellness, irrespective of the production process.

The number of non-injury-related deaths among employees of SDEs decreased by 5 cases, or 33%, compared to 2021. The increase in these figures was mainly due to the presence of cardiovascular disease among employees.

## NUMBER OF NON-INJURY-RELATED DEATHS



## KMG PERSONNEL HEALTH MANAGEMENT PROGRAM

As part of the implementation of Strategic Initiative 24 "Personnel Health Management", the **KMG Group Personnel Health Management Program** was approved by the KMG Management Board on 23 December 2022 (Minutes No. 68). The aim of the Program is to improve the quality of medical care and medical services at production facilities, and to introduce and implement measures to improve the health of employees within KMG Group.

The main objectives of KMG Personnel Health Management Program are:

- Improving the quality of medical care and medical services to employees of KMG Group's production facilities;
- Developing the mechanisms to strengthen personnel engagement and motivation for healthy lifestyle;
- Improving working, leisure and living conditions for employees of KMG Group's production facilities.

Approval of the KMG Group Personnel Health Management Action Plan 2023-2025 is planned for 2023.

## ELECTRONIC HEALTH CHECKUP SYSTEM

Starting from 2021, the Electronic Health Checkup System (EHCS) has been implemented in SDEs. The system simplifies and automates the process of examining the health of employees during health checkups. Within 5 minutes, the EHCS hardware system can analyze 10 key health parameters of an employee and issue a report or a travel voucher. If the EHCS hardware system detects any abnormalities in the employee's health, he or she will be referred to a doctor for examination.

Currently, EHCS hardware systems have been implemented at EMG, KTO, AR and PPCP.

The automation of health checkups avoids shortcomings and speeds up the procedure of health checkups and the impartiality of the results of health checkups.

One important problem is the study of the combined effect of industrial health hazards in production conditions and joint exposure (e.g., microclimate, noise, vibration, aerosols, work stress, etc.), the prediction of the effects of their action, as well as the study of the development of occupational pathology.

<sup>11</sup> No data available.

<sup>12</sup> Data exclude KTG and its subdivisions.

<sup>13</sup> Available IOGP figures for 2021 (<https://www.iogp.org/>).





Along with this, prolonged consumption of unbalanced nutrition in conditions of exposure to environmental factors in the workplace is an additional cause of the development of the pathological process. Therefore, in the general complex of measures to prevent the adverse effects on the body of harmful factors of the production environment, an important role should belong to the organization of quality nutrition.

It should be noted that the energy requirements for employees of subsidiaries engaged in heavy physical labor should be at least 3,700-3,850 kcal.

Based on the analysis of data submitted by SDEs on the diet and range of food products at the catering facilities for organizations providing catering services to SDEs' employees, the following measures for improvement are being implemented:

- 1) appropriate diet in terms of protein, fat, carbohydrate, calories and vitamin content;
- 2) correct indication of the energy value (calorie content) of food products;
- 3) avoiding the repetition of the menu with the same meals both in the next 2 calendar days and over a period of 5 days;
- 4) inclusion of such foods as fish, animal liver, fruit and berries, herbs, nuts and seeds, bran, vegetable oils and fibre in the diet;
- 5) providing a nutritionally balanced diet;
- 6) providing preventive nutrition in the menu for workers with chronic diseases.

### MEDICAL EMERGENCY DRILLS

In accordance with the KMG Group Emergency Medical Care Regulations and the Medical Emergency Response Plan, SDEs are tested annually and on a regular basis at each production facility by holding medical emergency drills. For example, at Atyrau Refinery LLP's process facilities, 12 medical emergency drills were held in 2022, six of which were held with the participation of contractors located at the refinery site. Medical emergency drills were held on the following topics: first aid in case of a fall from a height, unconsciousness, poisoning, cardiac arrest, etc. Reports were drawn up for each medical emergency drill held, taking into account the non-compliances identified.

**No cases of non-compliance in the area of impact of products and services on employees' health and consumer safety have been reported in KMG Group in 2022.**

**No occupational diseases have been reported in KMG Group.**

## ENVIRONMENTAL PROTECTION

3-3, 2-27, 201-2, 11.1, 11.2, 11.3

KMG Group is focused on reducing the impact on the environment and preserving biodiversity, as well as on the sustainable use of natural resources.

We understand the degree of responsibility to society for correct use of natural resources and for maintaining a favourable environmental situation in the regions where we are present. We are committed to using natural resources sustainably, reducing our impact on the environment and introducing technologies, equipment and materials that promote energy and resource conservation, create minimal waste and do not harm the environment. We are taking measures to adapt to climate change and to compensate for possible environmental damage.

To this end, a number of activities aimed at ensuring environmental safety have been implemented, such as work on disposal of historical oil waste and treatment of oil-contaminated land, strengthening environmental awareness among employees, participation in tree planting campaigns, development of action plans to reduce atmospheric emissions, implementation of environmental protection programs and other activities.

A number of the Company's subsidiaries and affiliates have implemented the automated air quality monitoring systems at the sanitary protection zone, as well as directly at emission sources, which display information on the state of the environment.

### AUTOMATED ENVIRONMENTAL MONITORING INFORMATION SYSTEM PROJECT

The aim of the project is: to create a unified environmental information space; to increase transparency, efficiency and minimize human error in order to avoid potential environmental fines.

The main objectives of the AEMIS are:

- Automation of processes of environmental reporting to public authorities;
- Maintenance of a database of regulatory permits and calculation of payments for environmental emissions;
- Prompt response to potential excess emissions by promptly correcting faults in the process by the production units;
- Operational environmental monitoring based on the results of industrial environmental control;
- Generation of corporate reports via synchronization with HSE system of KMG.

### KEY PERFORMANCE INDICATORS FOR 2022

- SO<sub>x</sub> emission rate – SO<sub>x</sub> – 0.21 (IOGP – 0.20)
- NO<sub>x</sub> emission rate – 0.31 (IOGP – 0.33)
- Associated petroleum gas (APG) combustion rate – 1.5 (IOGP – 9.4)
- APG utilization rate – 98.8%
- Rehabilitation of historical waste and oil-contaminated land: 693.7 thousand tons (2021: 540.5 thousand tons)
- CDP climate rating: C
- CDP water safety rating: C

### ENVIRONMENTAL PERFORMANCE, T/1,000 TOE OF HC PRODUCTION

Year	SO <sub>x</sub> emission rate	NO <sub>x</sub> emission rate	APG combustion rate	Crude gas utilisation rate, %
2020	0.23	0.22	2.20	98
2021	0.22	0.24	2.09	98
2022	0.21	0.31	1.5	98.8

## AIR PROTECTION

305-7, 11.3.3

KMG pays special attention to environmental issues, as they are directly linked to the health and well-being of the population. One of KMG Group's environmental policy objectives is to continuously improve its environmental processes through digitalization.

KMG's priority areas in terms of environmental protection include management of air emissions, reduction of crude gas flaring, management of water resources, production waste and land reclamation, and biodiversity conservation.

By reducing gas flaring, we have also managed to reduce air pollutant emissions at all of the KMG Group's facilities.

One of the key areas for minimizing the environmental impact is the reduction of air pollutant emissions from the Company's production activities. The following works are being carried out as part of the activities to reduce air pollutant emissions:

- Technically obsolete burners on oil heating furnaces are being replaced in stages.
- Integrated gas treatment and processing facilities are under construction.
- Work is underway to install pontoons for vertical oil tanks to prevent evaporation of hydrocarbons.
- Catalytic converters for pollutant emissions are being installed on oil heating furnaces, etc.
- The condition of the furnace burners is being monitored systematically, according to the schedule of maintenance and adjustment work.
- The water injection system is being expanded by transferring wells from production to injection.
- The wellhead equipment of production oil wells has been updated.
- New steam generation and well sites have been commissioned.
- A medium-pressure inter-flare injection burner has been installed, designed to burn oil and associated gases in the furnaces of boilers and oil and water reheating furnaces.

KMG Group pays special attention to monitoring environmental and natural resource emissions from its production facilities, primarily those located near or within the boundaries of populated areas. KMG works continuously to monitor environmental components (air, water resources, soil cover, etc.) and to effectively reduce the adverse environmental impact of its operations.

Environmental monitoring is an integrated system of observations, measurements, collection, accumulation, storage, recording, systematization, compilation, processing and analysis of data obtained on environmental quality, as well as generation of environmental information on the basis thereof, provided by the state.

To ensure air quality in populated areas, KMG Group is implementing projects to reduce the level of air pollutants, and is also taking measures to organize air quality control systems and install stationary air quality observation posts at the boundaries of sanitary protection zones.

In accordance with Article 418 (16) of the Environmental Code of the Republic of Kazakhstan, from 1 January 2023, the requirement for a mandatory automated emission monitoring system (hereinafter referred to as AMS) applies. "The real-time AMS monitors nitrogen oxide, nitrogen dioxide, carbon monoxide in waste gases and measures flow rate, temperature, pressure and relative humidity."

Two oil and gas SDEs were the first among the Group's companies to launch AMS. For example, the integrated AMS equipment was installed at the gas turbine power plant (GTPP) of the Kalamkasmunaigas Production Department and was successfully tested. Commissioning of such unique systems is not only an important step in the modernization of plants, but also increases environmental efficiency and transparency.



The permitted volume of air pollutant emissions for KMG Group was 120.6 thousand tons in 2022 (110.2 thousand tons in 2021).

KMG Group Operators are responsible under the new Environmental Code for emissions from contractors which are technologically directly related to the operations of the facility Operator and which work on their premises. Emission data from contractors has been accounted for in the unified environmental permit and included

in the Operators' reporting, therefore there is an 8.6% increase in air pollutant emissions compared to 2021.

As a result of the refinery modernization projects, the environmental performance of the refineries has been improved by producing oil products of European quality standards corresponding to classes K4-K5, in accordance with the requirements of the Technical Regulations of the Customs Union.

### GROSS AIR POLLUTANT EMISSIONS IN KMG GROUP, THOUSAND TONS

	2020	2021 <sup>14</sup>	2022
Air pollutant emissions, total, including:	247.2	110.2	120.6
NOx emissions	17.6	12.7	16.0
SOx emissions	12.7	12.2	10.5
other pollutant emissions	216.9	85.3	94.1

### SPECIFIC POLLUTANT EMISSIONS IN KMG GROUP

	2020	2021	2022
HC production, t/1,000 toe of HCs produced	1.9	1.9	2.1
Oil refining, t/1,000 t of oil refined	2.9	2.8	3.1
Oil transportation, t/1,000 t of oil transported	0.5	0.5	0.5

<sup>14</sup> Note: From 2021 onwards, data exclude KTG.

In 2022, the average rate of NOx emissions to total hydrocarbon production in oil equivalent in KMG Group was 0.31 tons per thousand tons of hydrocarbon production and the average IOGP was 0.33. Compared to 2021, specific NOx emissions have increased by 29% due, as noted earlier, to the addition of new sources

from contractors. The average rate of SOx emissions to total hydrocarbon production in oil equivalent in KMG Group was 0.21 tons per thousand tons of hydrocarbon production and the average IOGP was 0.20. Compared to 2021, there is a 4.5% decrease in specific SOx emissions.

305-7

The Company does not emit any persistent organic pollutants in its operations.

## RATIONAL USE OF CRUDE GAS

3-3

One of the priority objectives for KMG and its subsidiaries is to manage emissions of harmful substances and greenhouse gases into the atmosphere and to reduce gas flaring. According to the Environmental Policy, our Company aims to achieve zero flaring and reduced emissions from flares. We aim to increase the use and utilization of crude gas and minimize flaring. Through our crude gas development and processing programs, we have increased the use of gas for heat and power generation, resulting in lower emissions of harmful substances and greenhouse gases from the combustion and emission of crude gas.

In 2022, crude gas utilization was 98.8%. Flaring of raw gas decreased by 89% compared to 2017 (2017 volume: 315.8 million m<sup>3</sup>). The gas flaring rate is 1.5 tons per thousand tons of hydrocarbon production (2021: 2.1, 2020: 2.2), which is 29% below the 2021 figure and 84% below the IOGP industry average.

In 2015, KMG supported the World Bank's "Zero Routine Flaring by 2030" initiative. The Company aims to minimize the crude gas flaring. Crude gas flaring volumes under this initiative are reported on an annual basis to the World Bank office in Kazakhstan.

## CRUDE GAS FLARING VOLUME

KPI	2020	2021	2022
Total crude gas flaring volume, million m <sup>3</sup>	57.6	52.5	35.7
Crude gas utilization rate, %	98	98	98.8
Crude gas flaring rate, t/1,000 t of hydrocarbon production	2.2	2.1	1,5

This Section reflects information on KMG companies in the upstream sector in which processes related to the production and beneficial use of crude gas take place.

## WATER MANAGEMENT



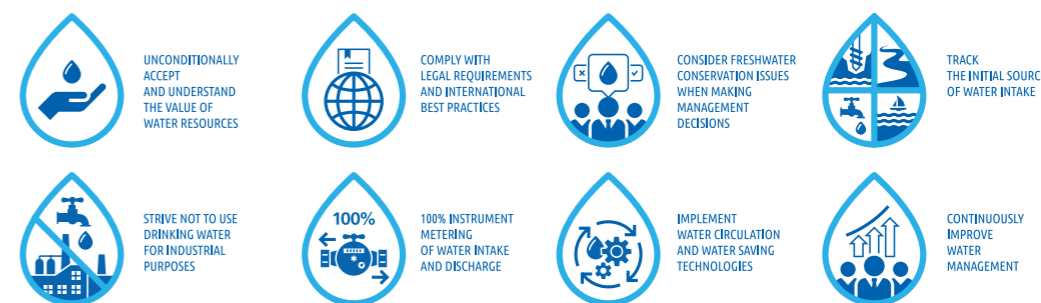
# KMG BLUE PRINCIPLES

Water is the basis of life, the source of all things existing.

The stability and security of the state is determined by the abundance of clean fresh water, and the success and sustainability of business – by responsible, caring attitude to it. These principles express the Company's commitment and demonstrate its intention to conserve water resources for people, nature and well-being of current and future generations of our country.

We constantly use water - from daily needs to the extraction and processing of oil. And at the same time, within the daily routine, we must not forget how much water is priceless. Every employee of the Company can and should contribute to its preservation.

KazMunayGas NC JSC CEO



3-3, 11.6.1

The responsible use of water is an integral part of the Company's values. The Company explores and produces hydrocarbons in regions with high water scarcity and is committed to the sustainable use of water resources. KMG also uses alternatives to fresh water in its operations: reused and recycled water, treated wastewater and desalinated water. In regions with high water scarcity, KMG is developing water management measures to use less fresh water, increase recycled water and closely monitor water use.

KMG's main water use principles are the "Eight Water Principles", which systematize the approach to water management in KMG SDEs. These principles are described in the Corporate Water Resources Management Standard: <https://www.kmg.kz/en/sustainable-development/corporate-governance/corporate-documents/>.

The Company is implementing projects aimed at reducing discharges and water withdrawals from natural sources. To improve the efficiency of water resources conservation and management and to identify measures and targets to reduce water withdrawal, increase recycling of water supply, a long-term Water Resources Management Program is planned to be developed in 2023 in KMG Group.

The Company operates in full compliance with international requirements and environmental and water legislation. The Company develops draft standards for pollutant discharges, conducts calculations in accordance with methodologies approved by the authorized body, obtains environmental permits and special water use permits.

Since 2020, the Company has been calculating its water footprint and posting water management information on the Carbon Disclosure Project site as part of the Water Security Questionnaire.

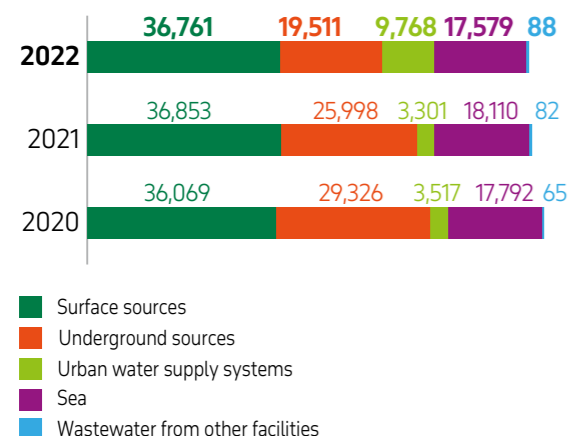
More detailed information can be found in the published KMG reports, which are publicly available at: CDP Water Security Questionnaire. <https://www.cdp.net/en/responses?utf8=%E2%9C%93&queries%5Bname%5D=Kazmunaygas>

Information on Water Supply Projects can be found in the Section 'Implementation of Investment Projects'.

## WATER FOOTPRINT

3-3, 303-1, 303-2, 303-3, 303-4, 303-5, 306-1

### WATER WITHDRAWAL BY KMG GROUP BY SOURCE, 83,707 THOUSAND M<sup>3</sup>



Water withdrawal by KMG Group in 2022 was 83.71 million m<sup>3</sup>, including: surface sources – 36.76 million m<sup>3</sup>, underground sources – 19.51 million m<sup>3</sup>, urban water supply systems – 9.77<sup>15</sup> million m<sup>3</sup>, sea – 17.58 million m<sup>3</sup>, wastewater from other facilities – 0.09 million m<sup>3</sup>. Production water consumption by category with salinity up to 1,000 mg/l was 38.02 million m<sup>3</sup> and by category with salinity of 1,000 mg/l or more was 45.69 million m<sup>3</sup>.

The Company also analyses and records the facilities of KMG SDEs located in regions with increased water scarcity according to the WRI Aqueduct<sup>16</sup>, relating to the basins of the Caspian Sea, the Syrdarya and the Ural Rivers. The total water withdrawal of these facilities was 29.81 million m<sup>3</sup> (36% of KMG Group's water withdrawal).

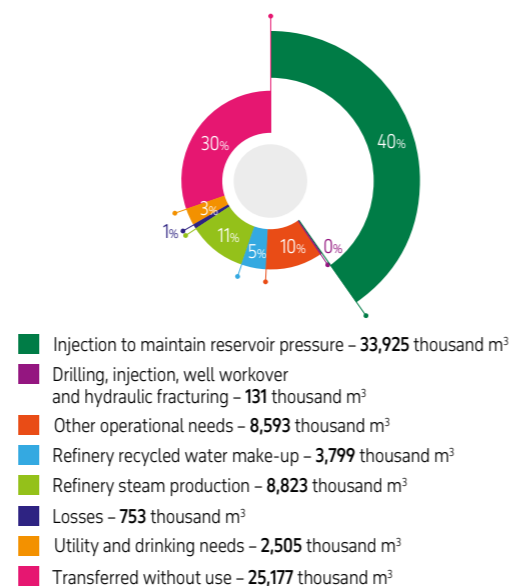
In 2022, 10.69 million m<sup>3</sup> of wastewater was diverted by KMG Group. Wastewater treatment plants treat the following high-priority pollutants: suspended solids, COD, BOD, petroleum products, chlorides, sulphates, iron, nitrites, nitrates, ammonia nitrogen, synthetic surfactants, etc. Pollutant discharge standards are calculated according to the Methodology for Determining Environmental Emission Standards approved by Order No. 63 of the Minister of Ecology, Geology and Natural

Resources of the Republic of Kazakhstan dated 10 March 2021. After wastewater treatment in wastewater treatment plants, the effluent treated to standard quality is discharged to specialized receivers: storage ponds, evaporation fields and filtration fields. There is no discharge to surface water bodies or terrain. Facilities that do not have their own storage ponds transfer wastewater to specialized companies for treatment and discharge, according to the contracts signed. The total volume of wastewater transferred was 0.38 million m<sup>3</sup> (with salinity above 1,000 mg/l). There is no discharge of wastewater with salinity up to 1,000 mg/l.

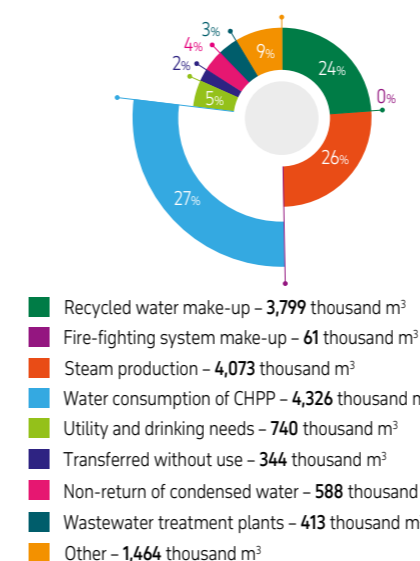
At the same time, the discharge of wastewater from facilities in regions with water scarcity was 2.65 million m<sup>3</sup>, of which 2.54 million m<sup>3</sup> were discharged to their own receivers and 0.11 million m<sup>3</sup> were transferred to specialized companies (receiving facilities).

Our wastewater treatment plants are designed to treat wastewater contaminated with petroleum products and suspended solids. At refineries, for example, wastewater is treated separately in parallel mechanically and physicochemically in sand traps, oil traps, radial sedimentation tanks and flotators. The treated industrial effluents after the flotators are fed to biological treatment.

### WATER USE BY TYPE OF OPERATION IN KMG GROUP IN 2022, %<sup>17</sup>

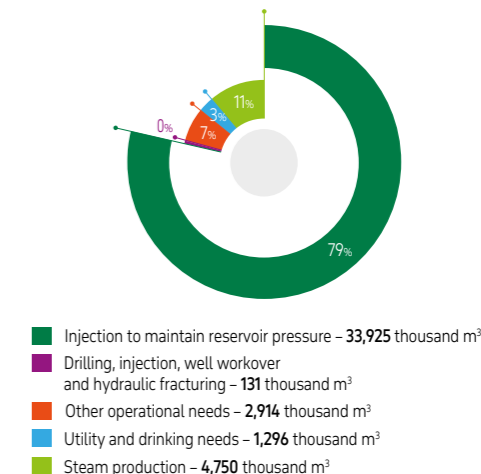


### WATER USE BY TYPE OF OPERATION IN THE DOWNSTREAM SECTOR IN 2022, 15.81 MILLION M<sup>3</sup>, %



Part of the wastewater after treatment is reused for vehicle washing, dust suppression and fire-fighting systems. However, a significant volume of treated wastewater is only reused at refineries, where 4.33 million m<sup>3</sup> of treated wastewater was reused in 2022, mainly to feed water recycling units. The percentage of water

### WATER USE BY TYPE OF OPERATION IN THE UPSTREAM SECTOR IN 2022, 43.02 MILLION M<sup>3</sup>, %



reuse at KMG's refineries was 27% (of the volume of water withdrawal in the Downstream segment).

In 2022, a total of 451.27 million m<sup>3</sup> was used (circulated) in the KMG refineries' water recycling systems.

### KMG REFINERIES' WATER RECYCLING SYSTEMS CIRCULATED

	2020	2021	2022
Recycled water volume, million m <sup>3</sup>	430.62	389.99	451.27

The oil production process generates large volumes of so-called associated reservoir water – an oil-water emulsion is brought to the surface, which is subsequently separated into water and oil by gravity. Water settled in this way is fed for reinjection into the reservoir.

In total, of 136.52 million m<sup>3</sup> of associated reservoir water produced in 2022, 99% was re-injected to maintain reservoir pressure.

### REINJECTED TO MAINTAIN RESERVOIR PRESSURE

	2020	2021	2022
Associated reservoir water produced, million m <sup>3</sup>	125.37	131.05	136.52

The Company's activities have the most significant impact on water bodies in the western region of Kazakhstan (the Ural and the Kigach rivers, and Kokzhide sands), which are of special environmental, economic, historical, cultural and recreational value.

To prevent negative impacts on sensitive ecosystems, regular environmental monitoring is carried out by the regulatory authorities.

<sup>15</sup> The increase of water withdrawals from urban water supply systems and the corresponding decrease of water withdrawals from underground sources are related to the reclassification between water withdrawal sources: thus, in 2022, water from underground sources withdrawn by urban water supply systems was classified as water withdrawal from urban water supply systems, as opposed to 2021, where it was classified as water withdrawal from underground sources.

<sup>16</sup> According to WRI Aqueduct: high category – total water load 40-80%, extremely high category – > 80%.

<sup>17</sup> The direct method was used to collect data on water consumption for KMG Group.

## WASTE MANAGEMENT AND LAND RECLAMATION

2-25, 3-3, 306-2, 306-3, 306-4, 11.5

KMG's production activities generate production and consumption waste: drilling waste (drilling mud and sludge), oily waste (bottom sediments, oil-contaminated soil, oil sludge, well backwash waste), waste catalysts and chemicals.

All facilities also generate waste from ancillary activities such as construction waste, oily rags, waste lubricating oil, etc.

KMG strives to strictly comply with the principles of the state environmental policy in the field of waste management, as well as the implementation and enforcement of the principles of KMG's Environmental Policy in relation to waste management:

- Ensure that waste generation is reduced and handled safely.
- Apply a set of waste recovery technologies that prevent secondary contamination of soil, air or water resources.
- Introduce resource-efficient, low-waste, environmentally friendly technologies.

Waste generated at the facilities is collected separately at the initial stage of generation, generated waste is weighed on weighing equipment, for liquid waste the volume of waste is measured in standardized or graduated containers.

All KMG facilities maintain records of waste by type, quantity and properties, develop hazardous waste data sheets, and maintain records of production and consumption waste in an appropriate waste log as waste is generated and transferred for recovery or removal. Responsible persons for waste management have been appointed at all production facilities.

The results of waste recording are submitted to the authorized environmental authority in the form of the following documents: industrial environmental control reports (quarterly), waste inventory reports (annually), register of emissions and transfer of pollutants (annually), and to KMG via the KMG HSE information system.

From the moment waste is generated, KMG SDEs accumulate waste, bury it or transfer it for recovery and/or disposal by their own efforts or by engaging specialized waste recovery or removal companies

in accordance with the approved Waste Management Program.

KMG SDEs apply the following hierarchy of waste management measures in descending order of preference for environmental protection and sustainable development of the Republic of Kazakhstan:

- 1) prevention of waste generation;
- 2) waste recovery (recycling or disposal);
- 3) waste removal.

Specialized companies involved in waste recovery or removal must have all the necessary permits:

- License for the treatment, neutralization, recycling and/or disposal of relevant hazardous waste.
- Notification of the commencement of collection, sorting and (or) transportation of waste, recovery and (or) disposal of relevant non-hazardous waste.
- Environmental permit.

To reduce the impact of waste during transportation, KMG SDEs have established requirements for specialized companies to minimize the movement of waste or its recovery within KMG SDEs.

Engaged specialized companies carry out waste recovery operations at KMG SDEs using methods stipulated by their environmental permits; it is important to note that when selecting waste recovery methods at KMG SDEs, priority is given to modern waste recovery technologies, including those without secondary contamination of the environment.

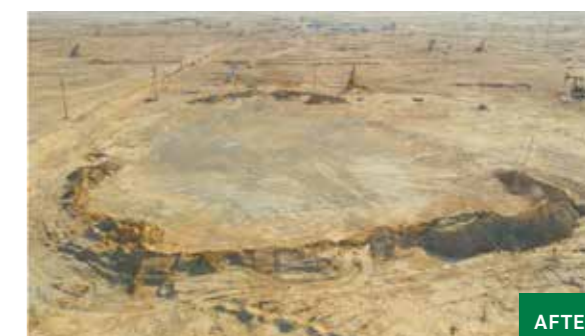
Work on the recovery of newly generated and previously accumulated waste by specialized companies is controlled by KMG SDEs for compliance with the technical specifications of the contract signed and the design solutions for waste recovery and removal, including visits to waste recovery facilities, if necessary control laboratory analyses of the recovered waste are carried out.

In 2022, KMG spent KZT 14.37 billion on recovery of generated and accumulated waste.

Work also continues on the disposal of historical oil waste and the clean-up of oil-contaminated land at MMG, OMG and KBM facilities under the Memorandum of Cooperation between the Ministry of Ecology, Geology



BEFORE



AFTER

OMG sludge storage pit before and after cleaning

and Natural Resources of Kazakhstan and KMG dated 6 August 2019.

As part of the implementation of the Memorandum, inventories of MMG, OMG and KBM contract areas have been made since September 2019 to identify waste characteristics, oil product content of the waste and volumes of waste. On the basis of the inventories

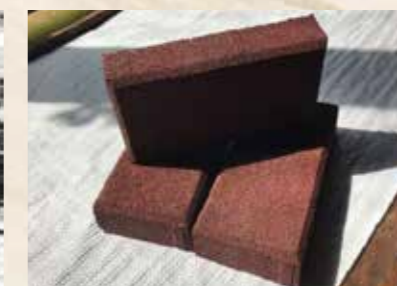
made, relevant oil-contaminated land reclamation projects have been developed and agreed upon with the state authorities, safe and efficient oil-contaminated waste disposal technologies have been selected and recommended within the projects, oil waste disposal facilities have been built, and relevant permits and licenses have been obtained.

### CASE STUDY

Embamunaigas JSC has an ATR-300 tyre recycling facility that can recycle used tyres from trucks and cars, as well as some types of tyres from special machines. The output is three types of rubber crumb fraction. The facility is a process line with a series of units, passing through which the raw material takes on the form of a finished product.

#### The process is zero-waste:

- when recycling tyres, the output of the end product is 60% crumb rubber;
- 30% of metal waste from cord and bead ring are subsequently used in the manufacture of reinforced concrete products;
- 10% textile cord waste is used as insulation material.





**Oil waste disposal facility built on MMG's site**

In addition, although EMG and KBM are not included in the extent of obligations under the Memorandum, there is also work to remediate historical contamination, these companies have completed work in 2022 to clean up historical oil contaminated land within the contract areas.

In 2022, 693.7 thousand tons of historical waste were disposed of at the facilities of KMG SDEs and the places of their disposal were reclaimed.

### WASTE TRANSFERRED FOR RECOVERY AND REMOVAL (TONS)

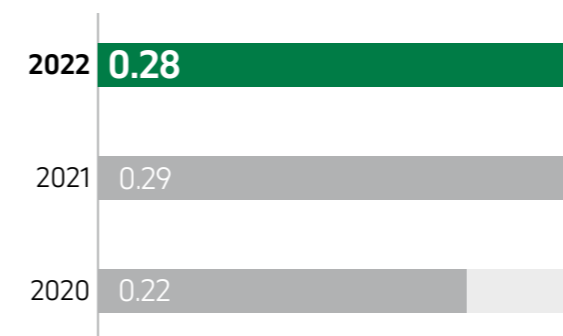
	On SDEs' site	On Contractor's site	Total
<b>Hazardous waste</b>			
Waste recovery (recycling/disposal)	727,469	362,315	1,089,784
including drilling waste (drilling mud and sludge)	--	220,380	220,380
Waste removal (burial/placement)	7,615	--	7,615
including drilling waste (drilling mud and sludge)	--	--	--
<b>Non-hazardous waste</b>			
Waste recovery (recycling/disposal)	1,604	17,899	19,503
Waste removal (burial/placement)	1,015	14,430	15,445
<b>Total</b>			<b>1,132,347</b>

### WASTE COMPOSITION (TONS)

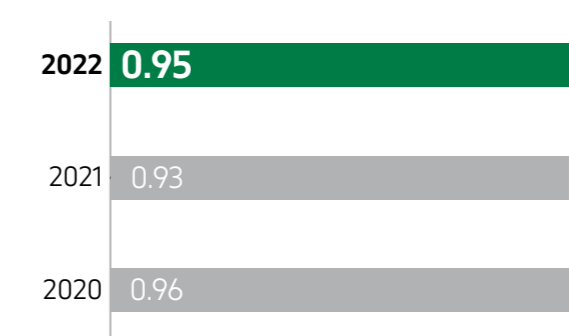
	Waste generated	Waste sent for recovery	Waste sent for removal
Hazardous waste	382,377 <sup>18</sup>	1,089,784 <sup>19</sup>	7,615
including drilling waste (drilling mud and sludge)	222,191	220,380	--
Non-hazardous waste	37,170	19,503	15,445
<b>Total waste</b>	<b>419,547</b>	<b>1,109,287</b>	<b>23,060</b>

In 2022, the total area of disturbed land reclamation was 109 hectares.

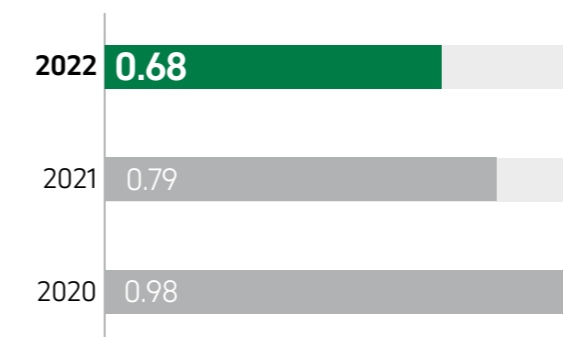
### RATIO OF RECYCLED WASTE TO ACCUMULATED AND NEWLY GENERATED WASTE, T/T



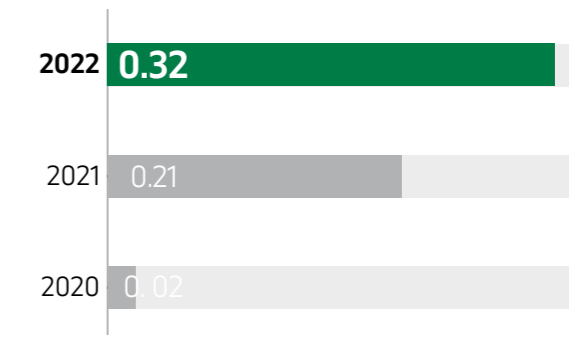
### RATIO OF RECYCLED WASTE TO NEWLY GENERATED WASTE, T/T



### RATIO OF CONTAMINATED LAND AREA AT THE END OF THE YEAR TO THE BEGINNING OF THE YEAR, HA/HA



### RATIO OF RECLAIMED LAND AREA TO CONTAMINATED LAND AREA DURING THE YEAR, HA/HA



<sup>18</sup> The amount of generated waste is presented taking into account the waste generation volume by contractors performing the works in KMG Subsidiaries and Dependent Entities territory.

<sup>19</sup> Taking into account the volume of historical waste disposal, as well as the volume carried over from the previous year.

## ABANDONMENT AND RECLAMATION OF WORK SITES

Under the terms of specific contracts, in accordance with applicable law and regulatory acts, KMG is under legal obligation for decommissioning and disposal of main assets and land reclamation in each of the fields. In particular, KMG obligations include the gradual abandonment of all unproductive wells and actions for the termination of operations, such as the dismantling of pipelines, buildings and reclamation of the contract area, as well as decommissioning and obligations for environmental pollution in the production site.

The Company calculates obligations for disposal of assets separately for each contract. As of December 31, 2022, the inventory value of the Group reserve upon liabilities for the removal of oil and gas assets amounted to 88,163 million tenge. The processes of reclamation and abandonment the contract areas are regulated by the Code of the Republic of Kazakhstan dated December 27, 2017 No. 125-VI ZRK 'On Subsoil and Subsoil Use'.

According to the Code of the Republic of Kazakhstan 'On Subsoil and Subsoil Use':

- The remediation of the consequences of subsoil use shall be performed in accordance with the project of remediation of the consequences of subsoil use approved by the subsoil user and received positive conclusion of examinations provided for by this Code and other laws of the Republic of Kazakhstan.
- The conservation of the subsoil area shall be performed in accordance with the project of the conservation of the subsoil area approved by the subsoil user and received positive conclusion of examinations

provided for by this Code and other laws of the Republic of Kazakhstan.

- Production facilities shall be liquidated or closed in accordance with the project of liquidation or conservation of production facilities approved by the subsoil user and received positive conclusion of examinations provided for by this Code and other laws of the Republic of Kazakhstan, with the exception of certain categories of wells provided for in the rules for conservation and liquidation when hydrocarbons prospecting and production, approved by the authorized body in the field of hydrocarbons, which liquidation or conservation shall be subject to the liquidation and conservation plan.

The requirements for the works on the liquidation of wells are established in the rules for conservation and liquidation when hydrocarbons prospecting and production and uranium mining, approved by Order from the Minister of Energy of the Republic of Kazakhstan dated May 22, 2018 No. 200. It is registered with the Ministry of Justice of the Republic of Kazakhstan on June 19, 2018 No. (Chapter 4. Liquidation of oil, gas and injection wells of different purpose when hydrocarbons prospecting and production).

### OIL TRUNK LINES

In accordance with the Law of the Republic of Kazakhstan 'On trunk pipeline', with effect from July 4, 2012, KazTransOil JSC (hereinafter referred to as KTO) is lawfully bound to decommission the trunk pipeline when completion of operation and carry out subsequent

measures to remediate the environment, including land reclamation. The liability reserve for pipelines decommissioning and land reclamation is estimated based on the cost of dismantling and reclamation work calculated by the Group. As of December 31 2022,

the book value of the Group liability reserve for pipelines decommissioning and reclamation of Group lands amounted to 40.6 million tenge (as of December 31, 2021: 34.5 million tenge).

## OFFSHORE WELL MANAGEMENT

In the Kazakhstani Sector of the Caspian Sea, KMG, together with strategic partners, are conducting the geological exploration works at Zhenis, Abai, Al-Farabi and other subsoil use sites. In accordance with Contracts for subsoil use and Joint venture agreements, geological exploration works on offshore projects are carried out by specially established joint ventures with international partners (Eni, LOKOIL, etc.). With this, management decisions on the processes of offshore

drilling wells at sea and marine seismic works in joint ventures are made by KMG and Partners within the framework of Operations Committees and their subcommittees (financial, technical, HSE, procurement) in full accordance with international standards and the RoK legislation requirements. All responsibilities related to the management of offshore wells are set out in the Regulations on the Operations Committee and in the Joint venture agreements.

## OIL SPILL PREVENTION AND RESPONSE

The Caspian Sea is an unique natural object, which fragile ecosystem is particularly sensitive to oil pollution due to its confinement. We impose high requirements on environmental security when offshore oil operations: prior to the start of any type of work, we conduct baseline environmental studies in contract territories and assess our potential social and environmental impact, as well as we monitor the impact, emissions and emergency situations: during and after operations.

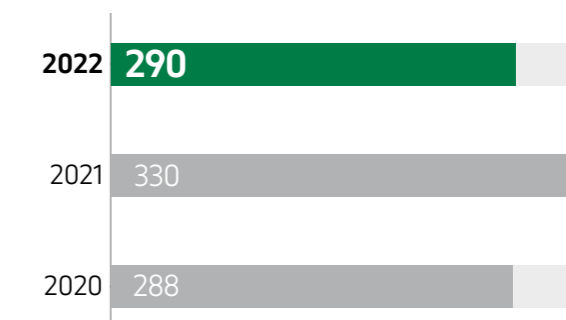
Before starting offshore drilling operations, we ensure permanent readiness for the elimination of all possible emergency oil spills. Upon completion of works, we conduct continuous environmental monitoring of the abandoned wells. Monitoring of abandoned wells in the contract territories includes monitoring of: atmospheric air quality, pollution of seawater and bottom sediments, the state of biodiversity, as well as laboratory-and-analytical activities, photo and video recording of the abandoned wells heads.

During offshore operations, we unfailingly follow next principles:

- Strict adherence to design decisions
- 'Zero liquid discharges' principle: all waste and wastewater are removed to the shore
- Provision of all floating crafts with fish protection devices and the absence of bilge waters

- Prohibition on carrying out production operations during the spawning period: from April 1 to July 15
- Prohibition of fishing from production vessels
- Prohibition on well testing and flaring of hydrocarbons at night
- Compliance with a special mode of use.

### VOLUME OF OIL SPILL (TONS)



The main cause of oil spills in the Company is ruptures of field oil pipelines under the influence of corrosion processes. Spills occur due to a collector rupture and a rupture due to wear of the steel part of the pipeline, followed by a spill.

### CASE STUDY

In 2022, preparatory works were carried out jointly with LUKOIL PJSC and the exploration well drilling in Zhenis site began in December. The Zhenis Block is located in the Kazakhstani Sector of the Caspian Sea at a depth of 75-100 m. The distance from the block to the port of Aktau is 180 km, the license area is 6,848 sq. km. In accordance with the signed contract, the drilling of one exploration well and conducting 3D seismic surveying are the main minimum obligations. The operator of this project is Zhenis Operating Joint Venture in which each company owns 50%.

The projects in the Caspian Sea is an important step in expanding the resource base in the region which has a strategic importance for the Company and where it has accumulated considerable expertise. In 2023 it is planned to complete the drilling of an exploration well in the Zhenis site, carry out preparatory works for drilling at the Abai site, and conduct seismic exploration at the Al-Farabi site.

The companies are carrying out operational activities on area cleanup from the oil contaminated ground with the transportation of water-oil to drainage tanks for further transfer to third-party organizations for treatment. Perennial grasses that correspond to the species composition in the process of biological reclamation have been planted.

With this, all cases in onshore facilities were recorded during the hydrocarbon production. There are no oil spills in offshore.

The Company carries on with work to reduce the number of failures and ruptures of field oil pipelines by timely and high-quality implementation of actions on diagnostics, reconstruction, replacement, inhibition and cleaning of pipelines aimed at improving their integrity and reliability.

In close cooperation with law-enforcement agencies, KazTransOil JSC reversed the situation with criminal illegal tie-ins into the Company pipelines. Over the past 3 years, the facts of tapping into trunk pipelines have been reduced to zero marker (in 2019, were identified 2 tie-ins, the damage amounted to 6.4 million tenge; in 2020 and 2021-2022 no facts of criminal tie-ins were recorded).

These indicators have been achieved largely due in no small part to the implementation of the following activities:

- strengthening the control over the monitoring of the work of mobile groups using GPS-systems and the timely implementation of detours and inspections of oil pipelines by mobile teams;
- protection of oil pipelines through the Optosense monitoring system.

Permanent readiness to oil spill response operations (OSR) is an absolute priority for us.



## INITIATIVE TO PROMOTE THE VOLUNTEER MOVEMENT IN OIL SPILL RESPONSE OPERATIONS

The KMG Group of Companies continues to pay attention to volunteering when OSR. The company KMG Systems&Service LLP implements the 'Program for the volunteering development when OSR in Atyrau and Mangystau regions' (hereinafter referred to as the Program), within which KMGSS LLP in 2022 conducted 4 trainings on the measures on mitigation of potential emergency oil spills for the volunteer movement 'With the care of the Caspian' on the Offshore Support Base (OSB) in Bautino village of Mangystau region. 67 volunteers and 4 employees of the Emergency Situations Department of Mangystau region were trained. A workshop was also held for post-secondary students in Atyrau.

The training included the core theory and practice of remediation activities of environmental pollution by oil. In particular, volunteers learn how to use special equipment to eliminate spills, and specifically, they participate in the deployment of booms – special bars to absorb oil spills. The main goal of the project is to transfer knowledge and train volunteers in the OSR basics and wildlife rescue.





## CONSERVATION OF BIODIVERSITY AND SUPPORT OF SPECIALLY PROTECTED NATURAL AREAS

### PROTECTED NATURE AREAS IN THE REGIONS OF OUR PRESENCE AND AFFECTED SPECIES OF FLORA AND FAUNA

3-3, 304-1, 304-4, 306-5, 11.4

The Northern Caspian Sea is the most productive part of the Caspian Sea. The biological resources of this part of the sea are very large. The main fishing grounds of the ichthyofauna are 25 species, of which the most valuable are sturgeons, which make up in the basin more than 70-80% of their world resources.

The water area of the eastern part of the Northern Caspian Sea with the deltas of the Volga (within the RoK) and Ural rivers is included in the state conservation area in the northern part of the Caspian Sea. The wetlands of the northern part of the Caspian Sea, and especially deltas of the Volga, Ural and Emba rivers, as well as the adjacent coast and the water area of the sea itself are the most important farmland on the Eurasian continent, which provide support for millions of waterfowl and semiaquatic birds during nesting, molting, seasonal migrations and overwintering. The Siberian-Black Sea-Mediterranean Flyway, one of the largest in Eurasia, lies through the Northern Caspian Sea.

According to baseline studies, more than 70 bird species migrate through open areas of the North-eastern Caspian Sea, 20-60 km away from the shore (5 of them are rare species listed in the Red Book of Kazakhstan). In the littoral zones, the little heron, the spoonbill, pelicans, the whooper swan, the Ferruginous Duck and the great black-headed gull nest. The purple gallinule, white-tailed eagle and osprey are also observed on the fly.

5 species from the RoK Red Book nest in terrestrial cenoses. The steppe eagle is the most numerous. What's about the rare birds, it is possible to meet the avocet, oystercatchers, little heron.

The only large marine mammal (order pinnipeds) inhabiting the Caspian Sea is the Caspian seal (*Phoca caspica*). It is an endemic mammal species. Seals are prevalent throughout the Caspian Sea, but their number in the Northern part varies with the season. The pattern of the seasonal distribution of animals in the sea area is determined by three main phases of the annual cycle: reproduction, molting and fattening period. Breeding grounds are located in the North Caspian Sea, which freezes in winter. Seals spend the fattening period from April to September mainly in the Middle and Southern Caspian Sea. In summer, a small number of animals (about 30,000 specimens) inhabit the Northern Caspian Sea, the major stratum is located in the deeper and colder waters of the Southern Caspian. In late autumn, they migrate to the area of the Northern Shallow Water, where the water begins to freeze. Most of the stratum gathers in the Northern Caspian Sea in October-November.

Such an important territory for the conservation of the biodiversity of Kazakhstan and the entire Eurasian continent needs ongoing monitoring and timely implementation of conservation measures. From the beginning of its activity in the Northern Caspian Sea, KMG has been paying attention to the issues of nature protection in this region.



**Isatai site** is located in the northern part of the Caspian Sea, 45 km north of the coast of Bozashi peninsula, in Mangystau region.

**Dead Kultuk (Ustyurt)** is the inhabitation of the most specific representative of the Caspian Sea – flamingos, formerly prevailing in the northeast and still using this part of the sea, molting and non-breeding locally occurring birds in the area of Komsomolets Bay and Dead Kultuk and Kaidak sors. Flamingo (*Phoenicopterus roseus*) are a locally nestling decreasing specie. It is the only representative of the genus in the fauna of Kazakhstan. The main breeding sites in Kazakhstan to date are Tengiz lake, Chelkarteniz lake and the northeastern coast of the Caspian Sea.

The Komsomolets Bay area, Dead Kultuk and Kaidak sors are still regularly used by thousands of birds spending the summer and molting here. Birds from the colony of Central Kazakhstan fly through these areas, increasing the local non-nestling livestock in April and August-



September. Up to 35 thousand specimens migrate through Komsomolets Bay annually.

**Abai site** is located in the north-western part of the Kazakhstani Sector of the Caspian Sea in the area of a water body of the Caspian Sea 60-70 km north of the coast of Buzachi peninsula and geographically belongs to Atyrau region. The site is located in the preserved area of the Caspian Sea.

**Al-Farabi site** is located in the southern part of the Kazakhstani Sector of the Caspian Sea and geographically belongs to Mangystau region of the RoK. The western border of the Al-Farabi site is adjacent to the state border between the Republic of Kazakhstan and the Russian Federation in the area of a water body of the Middle Caspian Sea.

**Mangystau region.** There is a massive network of specially protected natural sites on the territory of Mangystau region, including the Ustyurt State Nature Reserve and the Kenderli-Kayasan Preserved



Area of republican significance, as well as 8 reserved forests and 1 nature park of regional subordination. Among the reptile species inhabiting the territory of Mangystau region, the *Elaphe sauromates* wood snake is listed in the Red Book of the Republic of Kazakhstan (2010). The Central Asian tortoise, which is a common, widespread and in some places quite numerous species on the territory of Mangystau, nevertheless it has the status of a vulnerable species upon criterion of the Red List of the International Union for Conservation of Nature (IUCN).

**Kenderli-Kayasan preserved area** of republican significance was created in order to preserve the habitat and natural reproduction of the houbara bustard and the saker falcon. The established regimes: reserve status, protection regime, controlled regimes.

**Karazhanbas deposit** is located in the north-western part of Buzachi peninsula, within the Caspian depression, on the territory adjacent to the Caspian Sea from the west. The State conservation area of the northern part of the Caspian Sea borders on the western side of the deposit. As part of industrial environmental control, flora and fauna are monitored twice a year.

**Aktobe region. The State integrated nature reserve of local significance 'Kokzhide- Kumzhargan'.** On the territory of this reserve there are two facilities of the state nature reserve fund of republican significance: Kokzhide sands and Kokzhide groundwater, which are included in the List of geological facilities of the state Nature Reserve Fund of republican and international significance.

**Urikhtau, Alibekmola and Kozhasai deposits** are located in Mugalzhar district of Aktobe region of the RoK. The north-western part of the contract area of the Urikhtau deposit is located in the Kokzhide sands, the deposits also border the state integrated nature reserve of local significance "Kozhide-Kumzhargan". For the purposes of preventing ground-water contamination, regular environmental monitoring is carried out both in the area of operations of the Group companies and in the area of the Kokzhide sand massif adjacent to the Contract area. Consultations are also ongoing with the authorized bodies in the field of environmental protection and subsoil use to develop the necessary measures for the management of this subsurface area and further safe work practices.



## PRODUCTION SITES LOCATED WITHIN BOUNDARIES AND NEAR SPECIALLY PROTECTED NATURAL AREAS (SPNA)

Type of SPNA	Within the boundaries	Adjacent boundaries (part of territory penetrates through)	Outside the boundaries (located near 1-10 km)
IUCN I-IV category	-	-	-
IUCN V-VI category	Isatai Dead Kultuk (Ustyurt) Abay	Urikhtau	Alibekmola Kozhasai Karazhambas Rozhkovskoe
World heritage lands	-	-	-
Ramsar lands	-	-	-

## OUR CONTRIBUTION TO THE CONSERVATION OF BIODIVERSITY IN 2022:

304-2, 11.4

In line with Environmental Policy, we commit:

- not to carry out activities in specially protected natural areas, being of great value as a habitat for rare animal species and those in danger of passing away and the valuable ones, to make risk assessment when carrying out works in ecologically-sensitive areas;
- when planning and implementing production activities, apply a hierarchy of measures to mitigate impacts on biodiversity, taking into account four key actions: prevention, minimization, restoration and compensation of potential significant direct impacts:
  - participate in research programs and industry partnerships to further accumulate knowledge and develop innovative solutions in the field of environmental protection and biodiversity protection;
  - to prevent illegal hunting, fishing and other use of objects of flora and fauna resources by their employees, as well as employees of contracting and subcontracting organizations in the contract areas.

### CASE STUDY

In 2022, Zhenis Operating LLP, together with Republican state budget-supported enterprise 'Atyrau sturgeon fish-breeding farm', carried out work on the production of juvenile sturgeon linkage 1.5 g in the quantity of 28,123 pcs in the amount of 1.4 mln tenge, followed by their release into the Ural river. This work was carried out in order to indemnify against the inevitable damage caused to fish resources and replenish the biodiversity of the Caspian Sea. The place, term, method and technique of fish stocking were carried out in accordance with the scientific recommendations of the research-and-production center of the fisheries of the Republic of Kazakhstan.



The baseline environmental studies, drilling and well testing were carried out at the sites located in the state conservation area in the Northern part of the Caspian Sea. At the present time of activity in these areas, the man-made impact is insignificant and does not prevent the free movement of wild animals and birds in their habitats. During drilling, the following types of work have an impact on the environment: rigging-up, drilling and well testing, navigation. The influencing factors are: increase of concentrations of suspended matter in water during offshore construction, violation of the native structure of bottom sediments, including under the influence of heavy shipping traffic, physical impact of noise.

The operational environmental monitoring of the environment, abandoned wells and scientific research (R&D) on hydrology, hydrochemistry, hydrobiology and ichthyology are carried out within the context of indemnification for the inevitable damage caused to fish resources during production operations.

One of the negative consequences of industrial activity, which also has effect on biodiversity, are electric power transmission lines, which represent a major risk to ornithofauna. The death of birds as a result of wirestrikes and electric shock is becoming one of the most acute problems of wildlife protection, especially in the steppe and semi-desert zones of the country, where the lack of woody vegetation makes power transmission line supports the most attractive for nesting and rest of many species of birds of prey.

Identification and investigation of areas of increased risk of electric installations for birds are carried out in the course of special studies or within the framework of industrial environmental control.

	Onshore operations			Offshore operations		
	2020	2021	2022	2020	2021	2022
Sites for which biodiversity is covered by an EIA or similar document (%)	100	100	100	100	100	100
Sites where environmental monitoring is regularly carried out (%)	100	100	100	100	100	100
Sites with abandoned wells where abandoned wells are regularly monitored (%)	100	100	100	100	100	100

Reducing the negative impact of the activities of the KMG Group of Companies on biodiversity is carried out both within and outside the boundaries of natural areas of protection. The policy in the field of biodiversity conservation provides for the preservation of habitats, migratory routes of animals, minimization and indemnification of possible damage to the environment, reduction of the areas of disrupted

areas. Measures to minimize the negative impact include reducing the duration, intensity, as well as direct and indirect levels of impact of works in mining and transportation facilities.

*The Company would consider any initiatives, ideas and measures for the conservation of biodiversity and invites to send them to the address [hse@kmg.kz](mailto:hse@kmg.kz).*

## TRAINING OF STAFF IN ENVIRONMENTAL MANAGEMENT ISSUES

404-2

Training in HSE, Industrial and Fire Safety remains relevant in the KMG Group of Companies. In this regard, the priority orientation is mandatory education, training and staff qualification raising in these areas.

Since 2022, the mandatory training of KMG Headquarters employees in HSE and Fire safety basics takes place on the platform of KMG Engineering LLP.

The training in Industrial Safety and HSE is conducted according to the '70/20/10' learning model 'in the workplace/internal/external' on the basis of own Education-and-Training complexes/centers. Mentorship and internal coaching programs are implemented among experienced employees, master classes and trainings are held, various competitions are held among leading employees, which makes it possible to improve internal communications and motivate staff to aspire to be the best in their profession.

Such companies as Ozenmunaigas JSC (Zhanaozen), KazTransOil JSC (Aktau city), Pavlodar Petrochemical Plant LLP (Pavlodar city) and Oil Services Company LLP (Aktau city) have their own Education-and-Training complexes/centers.

NEBOSH (National Examination Board in Occupational Safety and Health) is an internationally recognized organization offering occupational safety and health qualifications and training of employees. NEBOSH courses

are known for their high qualifications and demand in various industries, including the oil and gas industry. NEBOSH training courses help employees of KMG and its subsidiaries to gain practical skills in risk assessment, safety management in the workplace, which, in turn, increases work efficiency and reduces the risks of industrial accidents.

Training sessions and workshops for employees on environmental issues are held on a periodic basis. Thus, in connection with the enactment of the new Environmental Code RoK from 01.07.2021 to clarify the introduced innovations, including on the EIA procedure, environmental design, State Environmental Expertise and its deadlines, the Company employees participated in workshops where the speakers were the drafters of the new Environmental Code and employees of the relevant structural units of the Ministry of Environment and Natural Resources. Based on the workshop results, the participants received certificates.

The level of the employees of the KMG Group of Companies who were trained in 2022 on HSE, by category was the following: Administrative-and-Managerial staff – 2,894, Technical-and- Engineering Employees – 14,236 and Production staff – 61,941 people. In 2022, 7,222 women and 71,849 men were trained, and at a ratio to the overall indicator 79,071 people – 9.1% of women and 90.9% of men.

### CASE STUDY

In order to exclude the death of birds from electric shock on overhead power lines at the facilities of the trunk lines of KazTransOil JSC in 2022, the works were carried out on the installation of bird protection devices (BPD) in the amount of 12,581.930 thous. tenge, which significantly reduced the probability of bird death when landing on line disconnectors (line isolating switch outdoor two-column). In general, upon the Company 242 sets have been installed in the Zhezkazgan, Shymkent, Atyrau oil pipeline departments.

In KazakhOil Aktobe LLP on the 6 kV overhead line of the Alibekmola and Kozhasai fields in order to prevent electric shock to birds were installed the standoff insulators, excluding touches of the second potential ('phase', 'earth'). On the 35 kV overhead line, the birds electrocution is excluded by the fact that the wires are fixed on suspended insulators, which do not allow touching the second potential.

In December 2022, KMG experts took part in a round table on the topic: 'Birds and energetics: in search of sustainable development', organized by the Association of Legal Entities 'Association of Environmental Organizations of Kazakhstan'. Topical subjects on the implementation of Renewable Energy Sources projects in Kazakhstan, legislation in the field of ornithofauna development, review of information transparency of companies, causes of bird deaths, bird protection devices of overhead power transmission lines and substations were discussed.



## ENVIRONMENTAL ASSESSMENT OF THE PLANNED ECONOMIC ACTIVITY

The Company implements the policy for environmental protection by conducting an environmental assessment of planned and ongoing activities on environment components. Both direct and indirect and cumulative negative impacts are taken into account in the planning and design process. Every intention to develop the production process or create a new project is accompanied by consultations with the public in the form of collecting proposals or open meetings, where every opinion is taken into account in further work. Each project is submitted to public hearings with the participation of non-governmental organizations, government agencies, the public and other interested parties. Public hearings are also open to anyone who wants to take part in them, independently of their place of residence. The results of the hearings are recorded and published available to the public for acquaintance.

Since 2021 the Company has been guided by the Corporate Standard for Environmental Impact Assessment. The standard defines the corporate

principles of the assessment process of the projected activity impact for environment, regulates the activities of the KMG Group of Companies, employees and contractors of the KMG Group of Companies, including design organizations whose activities are related to the technical documentation development and Environmental Impact Assessment materials, the organization and accounting of public opinion on environmental impact assessment materials, as well as obtaining a permit for emissions.

### CASE STUDY

In 2022, 17 meetings with the local community and public organizations and 100 public hearings were held, press tours to production facilities were carried out. The increase in the number of public hearings is due to the fact that, according to the new environmental legislation, the role of the public in decision-making has been expanded and public discussions are now held at every stage of design. Moreover, with the adoption of the new Environmental Code RoK, emissions from the activities of contracting organizations are included in environmental permits for impact issued to Subsidiaries and Dependent Entities, thus, projects of contracting organizations are discussed within the framework of public hearings of the Operator.



## INTERACTION WITH PUBLIC ORGANIZATIONS



413-2

In 2022, the Public Ecological Council (PEC) of Atyrau Refinery LLP (AR) began its work. The panel of experts includes the plant management, professional ecologists and eco-activists of the region, candidates of technical sciences, Doctor of Economics, deputies, media representatives and city residents. The purpose of the PEC creation is to give possibility to the civil community to participate in the decision-making process of AR production activities, to express the opinion of civil society about the activities of AR in the field of environmental protection, the implementation of environmental projects and the development of effective recommendations in environmental problems solving.

On September 15, 2022, the first PEC meeting was held, a Q-and-A session was held, the PEC members visited the sulfur regeneration plant, the site of mechanical treatment facilities. The AR Management familiarized those present with the progress of the plant's implementation of the Environmental Protective Measures Plan and told about the status of the Tazalyq project, the progress of its implementation and all construction stages of the Modernization of Treatment Facility on the territory of the plant. The PEC members received detailed information on all their questions of interest, as well as on the improvements and innovations being implemented at the plant.

On November 15, 2022, a regular meeting of the AR Public Ecological Council was held. At the meeting, the plant specialists familiarized the PEC members with the progress of maintenance-and- repair works, the current status of the implementation of the Tazalyq environmental program, and also presented a Roadmap for abatement of emissions into the atmospheric air.

The Roadmap includes such measures as the transfer of filling operations for light petroleum products to a sealed filling overpass, the construction of a vapor recovery unit at the Delayed Coker Unit (DCU) and the installation of pontoons at tank batteries.

The meeting also summed up the results of the implementation of the stages of work under the Tazalyq program: the 1<sup>st</sup> and 2<sup>nd</sup> sectors of evaporation fields with a total area of 465 hectares were recultivated, the channel of regulatory cleaned discharged was reconstructed. Recultivation of 3<sup>rd</sup> and 4<sup>th</sup> sectors is planned for next year. The works continue on the project 'Modernization of treatment facilities (MTF)': next year, oil separators, a sand trap, a flotation unit and PDO-3 (pond of additional sludge) will be dismantled. Currently, the construction of oil slime dehydration and prepurification units has been completed by 98%.

All announced environmental activities are aimed at environmental impact reduction. After the MTF reconstruction, part of the treated water will be re-used for the needs of the plant – to reduce the fresh water intake for production purposes from the Ural river.



## GREEN OFFICE CONCEPT IN KMG

KMG adheres to the Green Office principles which are aimed at the economical use of all resources and caring for the environment. We are actively engaged on the implementation of measures that will help us to constantly improve working conditions, enhance comfort and efficiency of labour, improve the design and architecture of our offices, increase green spaces and provide with recreation opportunities for our employees. We aim to cut down resource consumption, create a favorable environmental setting and achieve economical effectiveness of our activities, comply with Green Office principles.

Work is underway on environmental education of employees, resources saving (energy saving, heat economy, separate collection, paper save, etc.), and 'green events' are also being held.

To date, the following initiatives have been implemented:

- installation of eco-friendly dustbins in offices, corridors, lounges, parking for separate waste collection: paper, plastic, glass and metal;
- installation of special containers for collecting run-down batteries;
- notification to employees – a 'pop-up window' on the need to turn off computers and facilities by the end of the working day;
- memo to office employees on the need to preserve trees and minimize printing volume;



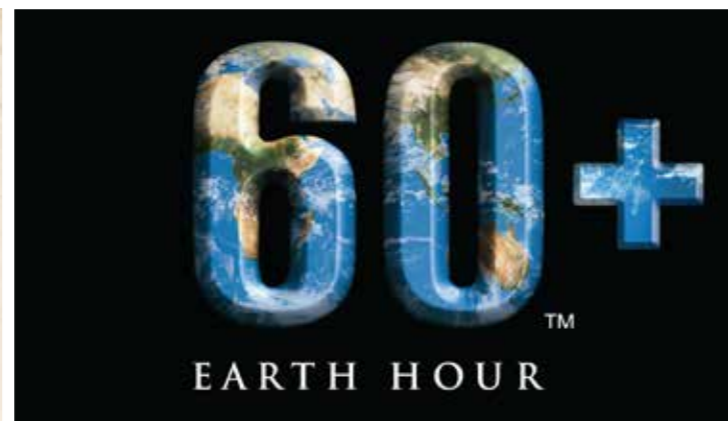
- electronic document flow was introduced. The KMG corporate center has set a goal of 'Reducing the consumption of writing paper by 3% compared to the level of 2019'. At the end of the year, 2,593 packs of paper were used, which is lower by 54.5% than the planned figure of 5,710 packs, and also lower by 78.7% lower than the specified goal (12,228 packs were used in 2019);
- using projectors for presentations;

- information updating on eco-friendly dustbins in the adaptation training course for newly hired employees;
- negotiations are underway to install a recycling kiosk terminal for collection of plastic bottles and glass containers in the building of the KMG corporate center.

### CASE STUDY

#### Participation in the international event 'Earth Hour'

The international event 'Earth Hour' is held annually all over the world. This is a symbolic action of careful attitude to nature, a public call-up for taking measures to preserve the planet climate and its limited resources. In 2022, KMG joined this campaign to energy saving.



CASE STUDY

Commitment to environmental liability is also reflected in the greening work in KMG SDEs. As part of the execution of Instruction of the President of the Republic of Kazakhstan K. Tokayev, regarding the planting of more than 2 billion trees in the forest area and 15 million in settlements, announced in the Address to the people of Kazakhstan, also as part of the implementation of the Comprehensive Plan, the implementation of the action 'Carrying out greening works by major oil companies' for 2021-2024 in KMG SDEs located in Atyrau region.



In all KMG SDEs, work has been carried out on planting of vegetation on the territory of sanitary protection zones and in the regions of presence. For example, employees of Karazhanbasmunai JSC replenished the green resources with a total area of 0.2529 ha with 562 units: willow fruits, apple trees, ailantho, maple and ash. By good tradition, the planting of trees is followed by regular care and watering. Pavlodar Petrochemical Plant (PPCP) LLP planted 3,369 trees in the area of 11.2 hectares on the territory of the sanitary protection zone. KazakhOil Aktobe LLP planted 1,126 green spaces on the territory of the fields. This is part of a large and continuous effort to improve the air quality and an essential component of environmental projects.

CASE STUDY

Embamunaigas (EMG) JSC in honor of the 100-th anniversary has arranged the Alley of Fame of petroleum producers in Atyrau city. The EMG management and staff, oil veterans, representatives of the Akimat of Atyrau city took part in the opening of a new location for recreation and communication of citizens.



The alley with an area of 6,300 m<sup>2</sup> is located on the Zhaiyk river embankment, near the Embamunaigas JSC office. Historically, this territory is associated with the Embaneft production association, where famous oilmen Safi Utebayev, Bolekбай Sagingaliev, Zholdaskali Dosmukhambetov, Oryngazy Iskaziev and many other discoverers of mineral deposits began their labour path not only in the basin Ural-Embinskiy, but also in Mangystau and Aktobe regions.

The alley represents an urban space, in the center of which there is an architectural-and-sculptural composition: a drop personifying oil and the natural gas flame. The bas-relief of several thematic compositions revealing the history and distinct identity of the region is complemented by a commemorative plaque with the names of Emba oil men – Heroes of Socialist Labour and Laureates of the State Prize. The number of Emba deposits is marked by 47 colonnades. 100 fountains will create a special atmosphere on the territory of the alley. On the territory of the Alley there is a children's playground, fountains, benches for recreation. In order to create recreational open space for citizens, additional 100 seedlings were planted and the watering was organized.

CASE STUDY

In June 2022, KMG took part in a conference on the topic of 'Responsible business for sustainable development' with the participation of ecologists from more than 180 industrial enterprises of the country and international organizations. This event was aimed at strengthening of cooperation and sharing experiences of enterprises, international organizations, on topical issues of environmental protection, climate change and legislative regulation. The conference was timed to coincide with the celebration of June 5 – World Environment Day.



On the initiative of KMG, Badges and Diplomas were awarded to distinguished employees of the Group of Companies on behalf of the Chairman of the Board of KMG. Similar awards were also initiated by the authorized body in the field of environmental protection.



# LOW-CARBON DEVELOPMENT



**Turlan MELEKEYEV**

The Best Underground Well Repair Team  
"Embamunaigas" JSC

First place in the "Uzdik Maman – 2022" professional contest



- Principle 7.** The business community should support an approach to environmental matters based on the precautionary principle.
- Principle 8.** The business community should undertake initiatives aimed at increasing responsibility for the state of the environment.
- Principle 9.** The business community should promote the development and dissemination of environmentally-friendly technologies.

## LOW CARBON POLICY IN THE COMPANY

3-3, 11.2

*In order to achieve the targets of the KMG Low-Carbon Development Program (LCDP) for the period 2022–2031 expressed in reducing the carbon footprint by 1.6 mln tons CO<sub>2</sub> and construction of renewable energy sources (RES) facilities with a total capacity of at least 300 MW, in 2022 the KMG Board approved the Action Plan for the implementation of the Program.*

The action plan contains a set of actions both having organizational nature and in the areas of energy efficiency and energy conservation increase, the development of renewable energy sources, monitoring of methane leakages, as well as additional decarbonization actions, which corresponds to the key areas of the LCDP. Moreover,

the Plan includes organizational actions concerning assurance of the implementation and monitoring of the achievement of cumulative targets for key business areas based on the developed individual Plans of SDEs, included in the LCDP perimeter.

**EXTERNAL CONTEXT ON CARBON REGULATION:**

In 2022, the National Allocation Plan of Greenhouse Gas Emissions Quotas, which provides for an annual reduction of the carbon budget and the amount of free-issued greenhouse gas emissions quotas by 1.5%, was approved for the period 2022–2025. This annual reduction in the volume of quotas is intended to ensure that the Republic of Kazakhstan achieves the goals of Nationally Determined Contributions (NDC): 15% by 2030, and a more radical annual reduction in the volume of quotas is expected in the new National Allocation Plan of Greenhouse Gas Emissions quotas from 2026.

With the aim of effective implementation of the Program, as well as coordination of decarbonization processes on a systematic basis, in 2022, the Department of Low-Carbon Development was created in the structure of the KMG Central Body, which includes the Administration of Energy Efficiency and Renewable Energy and the Administration of Low-carbon Policy.

- achievement of target indicators in the field of energy intensity, energy management and RES;
- coordination and organizational-and-methodological support for the implementation of RES projects;
- participates in the improvement of the regulatory framework in the field of energy efficiency and energy conservation, RES and alternative energy, taking into account the KMG corporate interests.

The Administration of Energy Efficiency and Renewable Energy oversees the issues:

- control over the execution of the Action Plans of SDEs for the implementation of the KMG LCDP and their



The Administration of Low-carbon Policy coordinates the matters on:

- improvement of the greenhouse gas emissions management system in the KMG Group of Companies;
- reporting generation of carbon footprint;
- preparation of project documentation in framework of implementation of offset projects;
- Improving KMG internal policy with a view to achieve target indicators on carbon footprint.

### METHODOLOGY OF MONITORING AND REPORTING ON KMG GREENHOUSE GAS EMISSIONS

In order to standardize approaches to monitoring and reporting on greenhouse gas emissions among SDEs, a **Methodology of monitoring and reporting on KMG greenhouse gas emissions** has been developed and approved by the Board decision. The methodology defines the basic approaches to inventory and monitoring of direct and indirect greenhouse gas emissions; it includes emission sources, levels of assessment, formulas of calculation for greenhouse gas emissions, procedures for collection and processing initial data, as well as forms of reporting on greenhouse gas emissions for KMG SDEs. The methodology was developed in accordance with the Environmental Code of the Republic of Kazakhstan, as well as with international standards for accounting for greenhouse gas emissions used in the framework of ESG reporting.

At the moment, KMG SDEs are developing and approving similar documents, or bringing internal documents into line with the Methodology, which will allow KMG to systematize its activities and approve unified approaches for inventory and monitoring greenhouse gas emissions, as well as ensure timely forecasting of the size of KMG carbon footprint and taking proactive measures to reduce risks of non-fulfillment of the goals of the KMG Low-Carbon Development Program.

### INTERNAL CARBON PRICING PROGRAM

With the view of assessment and minimizing the financial risks of the Company due to the toughening of carbon regulation in the Republic of Kazakhstan, as well as for creation of additional stimulation for SDEs to implement low-carbon projects, the **KMG Internal Carbon Pricing Program** was developed and approved by the KMG Board decision. The internal carbon pricing program describes the main approaches and directions for the implementation of internal carbon pricing mechanisms, general proposals for the functioning of internal carbon pricing in KMG in order to form the direction of further development of the greenhouse gas emissions management system. The detailed development of the mechanisms and their implementation into the KMG internal regulations will be carried out in 2023 by the working group, established for the development of internal carbon pricing mechanisms. The main areas of functioning

of the mechanisms under consideration are the application of:

- shadow price upon the evaluation of investment projects and projects purchase;
- implicit price for estimating the cost of a reduced ton of CO<sub>2</sub>-equiv., as part of the costs for reducing greenhouse gas emissions and/or the costs for complying with government orders;
- collection of internal carbon charge fee for additional stimulation of SDEs to implement decarbonization measures and their financial support.

In addition, we have launched a number of initiatives aimed at improving reporting, increasing the investment attractiveness of the Company and improving international ratings.



So, for example, with support of the European Bank for Reconstruction and Development, within the framework of the memorandum of cooperation signed in June 2022, it is planned to set up a project in 2023 to introduce **Climate Change Reporting Framework in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)**. It is planned that the work will focus on stress testing practices of the Company supply chains in various climate change scenarios, determination of appropriate priorities

of actions in the field of climate change, including assessment of financial essentiality, determination of appropriate scientifically grounded indicators and goals that lead to improved results of corporate actions in the field of climate change.

### SCOPE 3

At the moment, KMG discloses information on Scope 3 emissions in category No. 11 'Use of sold products'. In framework of implementation of the Action Plan for the realization of the Low-Carbon Development Program for the period 2022–2031 the work has begun to expand the coverage of the Scope 3 emissions inventory up to 12 categories that are of highest relevance to the Company. This initiative will provide a basis for interaction strategy formulation with our suppliers and consumers in order to systematically reduce indirect emissions of products manufactured by KMG.

### LIST OF CATEGORIES FOR INDIRECT EMISSIONS CALCULATION SCOPE 3

Goods and services purchased	Emissions generated while waste treatment process by a third Party	Processing of goods sold by a third party
Means of production	Business and official trips of employees	Use of finished products
Other indirect emissions from energy consumption	Trips of employee to work	End of product service life
Transportation of raw materials and goods purchased	Transportation and delivery of finished products	Leased assets



# GREENHOUSE GAS EMISSIONS

305-1, 305-3, 305-4, 305-5, 305-6



In July 2022, within the framework of the Carbon Disclosure Project was published a Climate Questionnaire for 2021 which includes data on the volumes of direct and indirect greenhouse gas emissions for all KMG assets, including subsidiaries in Romania and Georgia.

According to the report, based on the results of 2021 the volume of direct carbon dioxide emissions in the KMG Group of Companies amounted to 6.9 mln tons of CO<sub>2</sub> (10.6 mln tons of CO<sub>2</sub>-equiv.). The CO<sub>2</sub>-equiv. data are presented using potential coefficients of the global warming IPCC Fifth Assessment Report (methane – 28, nitrous oxide – 265). The calculation includes carbon dioxide (CO<sub>2</sub>), methane

(CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O). The data on direct greenhouse gas emissions are confirmed by the conclusions of independent certified organizations for each SDE.

The information for 2022 will be disclosed in the CDP report in III-d quarter 2023. When disclosure of information we adhere to the principle of consistency and comparability. We continuously work to improve the completeness of disclosure of information.

CDP questionnaires can be found at the following link: [https://www.kmg.kz/en/investors/reporting/?TYPE=report\\_development](https://www.kmg.kz/en/investors/reporting/?TYPE=report_development)

The volume of direct GHG emissions (CO<sub>2</sub>) emissions for 2022 by the KMG Group of Companies amounted to 7.6 mln tons CO<sub>2</sub> (8.1 mln tons of CO<sub>2</sub>-equiv.)<sup>20</sup>.

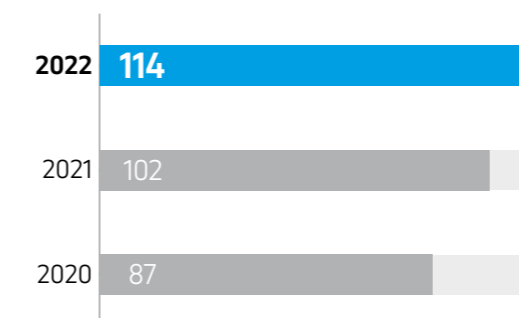
Coverage 1. Direct emissions		2020	2021	2022
<b>Breakdown by areas of activity</b>				
Production	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	2.0/4.1	2.2/4.3	2.4/2.8
Refining	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	4.6/6.2	4.5/6.1	5.1/5.2
Transportation	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	2.1/5.5	0.2/0.2	0.1/0.1
<b>Breakdown by country</b>				
Kazakhstan	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	7.8/14.9	6.2/9.9	6.6/7.1
Romania	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	0.9/0.9	0.7/0.7	0.9/0.9
Georgia	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	0.01/0.01	0.01/0.01	0.02/0.02
<b>Breakdown of emissions by type of greenhouse gases</b>				
CO <sub>2</sub>	mln tons CO <sub>2</sub>	8.7	6.9	7.6
CH <sub>4</sub>	mln tons CO <sub>2</sub> -equiv.	6.6	3.2	0.4
N <sub>2</sub> O	mln tons CO <sub>2</sub> -equiv.	0.5	0.5	0.1
<b>Coverage 2. Indirect emissions (market method)</b>				
Level 2.				The information will be disclosed in III-d quarter 2023 in the Climate Questionnaire.
Indirect emissions (geographical method)	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	3.5/3.5	3.3/3.3	
<b>Coverage 3. Emissions from the use of sold products</b>				
	mln tons CO <sub>2</sub> / mln tons CO <sub>2</sub> -equiv.	61.1/61.3	61.9/62.1	

<sup>20</sup> Information for 2021 and 2022 in the Report on this indicator represent only KMG Group, except for KTG. Data for 2020 are given taking into account KTG.

The indicator of the intensity of CO<sub>2</sub> emissions was 114 tons CO<sub>2</sub> per 1,000 tons of extracted crude hydrocarbons, which is 4% lower than the industry average

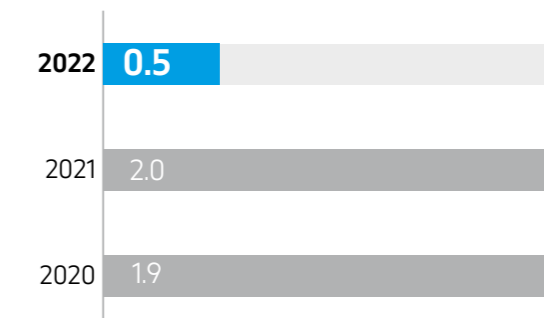
of the International Association of Oil and Gas Producers (IOGP), which is 119.

## INTENSITY OF CO<sub>2</sub> EMISSIONS (TONS/1,000 TONS OF PRODUCED HCS)



The increase in the intensity of CO<sub>2</sub> emissions is associated with the exit to full capacity of power generation sources. For information, the industry average indicator of the intensity of CO<sub>2</sub> emissions presented by the IOGP also increased from 113 to 119 tons CO<sub>2</sub> per 1,000 tons of produced HCs over the year.

## INTENSITY OF CH<sub>4</sub> EMISSIONS (TONS/1,000 TONS OF PRODUCED HCS)



A significant decrease in the intensity of CH<sub>4</sub> emissions is associated with a change in the methodology for methane emissions calculation at the national level.

In its activities, the Company does not emit ozone-damaging substances that affect climate change. Periodic inspection control and monitoring are carried out.

## ECOLOGICAL INDICATORS

	Production			Transportation			Refining		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
Greenhouse gas (GHG) emissions									
Direct GHG emissions (CO <sub>2</sub> , mln tons)	2.0	2.2	2.4	2.1	0.2	0.1	4.6	4.5	5.1
GHG emission intensity (tons CO <sub>2</sub> per 1,000 tons HCs)	87	102	114				248	226	236
APG combustion				-	-	-	-	-	-
Flaring (mln tons CO <sub>2</sub> )	0.13	0.11	0.09	-	-	-	-	-	-
Intensity of associated gas combustion (tons per 1,000 tons of produced HCs)	2.2	2.1	1.5	-	-	-	-	-	-
Flaring (mln m <sup>3</sup> )	57.6	52.5	35.7	-	-	-	-	-	-

# ENHANCING ENERGY EFFICIENCY AND ENERGY SAVING

302-4, 302-5, 305-1, 305-2, 11.1

The main decarbonization measures are aimed at reducing direct emissions (Scope 1) through measures to enhance the energy efficiency of fixed combustion sources, reduce gas flaring and strengthen work to methane leak monitoring and a group of measures aimed at reducing emissions from means of transport.

The reduction of indirect emissions (Scope 2) will be carried out through an increase in energy efficiency, an increase in energy consumption from 'clean' sources of energy.

## USE OF ENERGY RESOURCES AND ENHANCING ENERGY EFFICIENCY

The Company activities in the field of energy saving and enhancing energy efficiency are based on the methodology of the international standard 'Energy Management Systems' ISO 50001, which is the best generally recognized international practice for system management in this activity.

## ENERGY POLICY OF KMG

2-23

KMG within execution of the KMG Low-Carbon Development Program for the period 2022-2031, the KMG corporate Energy Policy (hereinafter referred to as the Policy) was developed and approved in December 2022, it applies to all subsidiaries of KMG, as well as contractors. The Policy can be viewed at: <https://www.kmg.kz/en/sustainable-development/corporategovernance/corporate-documents/>

The policy supports procurement and project activities that are effective from the viewpoint of energy consumption, defines responsibility with regard to energy management and, focusing on economic feasibility, practices the introduction of the best available techniques, international practices, standards

and administrative decisions aimed at energy saving and enhancing energy efficiency and is an integral part of the KMG Low-Carbon Development Program for the period 2022-2031 and creates the basis for the establishment and analysis of goals and energy objectives.

## ENERGY CONSUMPTION

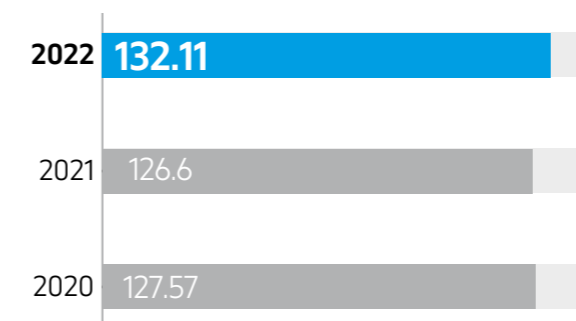
302-1, 302-3, 11.1

The KMG Corporate Center collects and analyzes data on energy consumption and energy efficiency indicators, keeps a close watch on progress and identifies opportunities for improvement, performs benchmarking with the previous period and with the indicators of similar companies in the industry (IOGP).

In total, in 2022 were consumed 132.11 mln GJ (4,341.5 thous. ref. fuel) of fuel-and-energy resources (4% more than in 2021 the increase in energy consumption is associated with the exit into the nominal mode of Kalamkas GTPP after overhaul, as well as an increase in the volume of oil refining by 20% for PetroKazakhstan Oil Product (PKOP)), including electric energy – 13.23 mln GJ, thermal energy – 3.54 mln GJ, motor fuel – 1.56 mln GJ and boiler-and-furnace fuel – 113.78 mln GJ (at the same time, refinery gas is 34%, natural gas is 22%, stripping gas is 14% and associated petroleum gas (APG) is 11% of total energy consumption). The volume of energy consumption is distributed among three business areas: 'Oil and gas production', 'Oil transportation' and 'Oil and gas processing'.

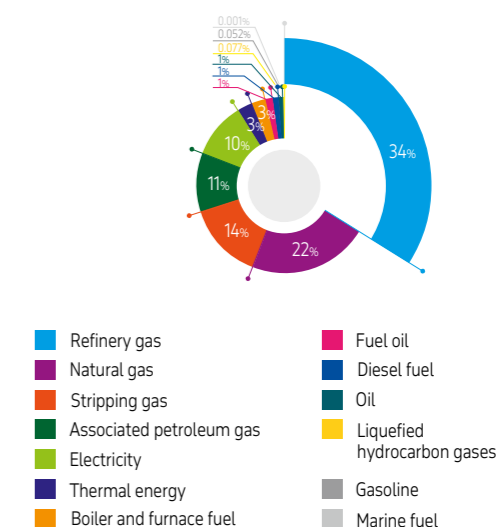
In 2022, the volume of own generated energy for the KMG Group of Companies amounted to 702,646 thous. kW of electric energy and 4,841 thous. Gcal of thermal energy.

## CONSUMPTION OF FUEL-AND-ENERGY RESOURCES (FER), MLN GJ

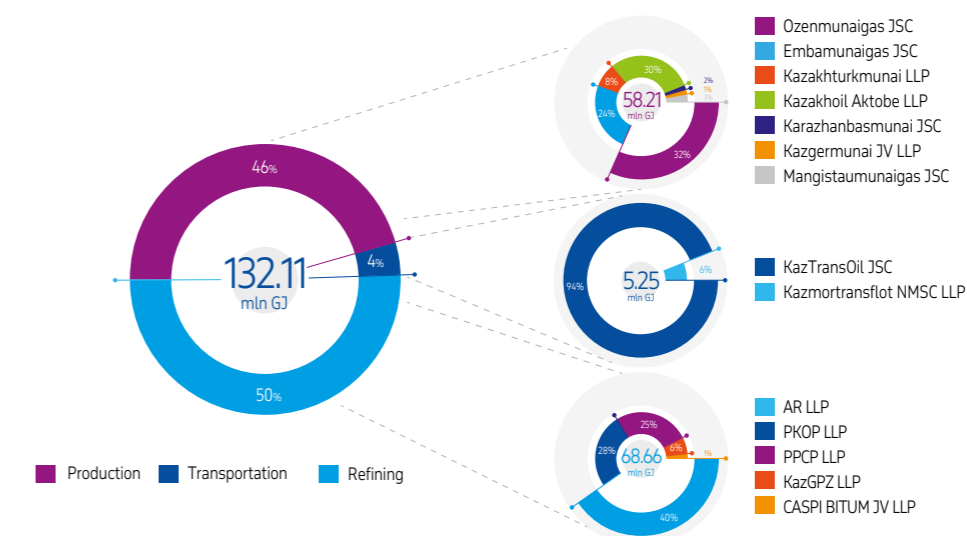


In 2022, in accordance with the Rules of determination of rate for support of renewable energy resources, the AR and MMG purchased electric energy in the amount of 11,929 thous. kW for own needs, produced by facilities for renewable energy use from 'Accounting and Finance Center for Support of Renewable Energy Sources' LLP. The electric energy generation by PKOP solar panels for street lighting of the territory in 2022 amounted to 75 thous. kWh.

## ENERGY CONSUMPTION BY TYPE OF FUEL, %



## ENERGY CONSUMPTION BY BUSINESS-AREAS, %



## ENERGY CONSUMPTION OUTSIDE THE ORGANIZATION

302-2, 11.1

Currently, we keep records of energy consumption only within the organization, therefore, energy consumption outside the organization is not reflected in this Report.

## REDUCTION OF ENERGY CONSUMPTION

302-4

Within the execution of the Action Plan for Energy Saving and Energy Efficiency of KazMunayGas JSC NC from 2017 to 2021, 265 measures were implemented, the cumulative effect on saving fuel and energy resources from which amounted to 101,478 tons of reference fuel (about 3 mln GJ), which is equivalent to reducing emissions by 229,490 tons CO<sub>2</sub>. The total costs for the implementation of the Action Plan for Energy Saving and Energy Efficiency of KazMunayGas JSC NC from 2017 to 2021 amounted to 10,801 mln tenge.

The main strategic directions of the development of energy saving and energy efficiency of the KMG Group of Companies are the modernization of process equipment, the adoption of energy-efficient technologies, optimization of generation and consumption of thermal energy, as well as the development of own generation sources, including using APG.

This year, there were implemented 49 actions under the Low-Carbon Development Plan, the calculated annual savings of fuel-and-energy resources amounted to 2,057 mln GJ, in natural units – 33,448 thous. kW of electricity, 1,531 Gcal of thermal energy, 25,292 tons of boiler and furnace fuel and 21,732 thous. m<sup>3</sup> of natural gas, which is equivalent to reducing emissions by 136,703 tons CO<sub>2</sub>. The total costs for the implementation of energy saving and energy efficiency measures amounted to 10,355 mln tenge.

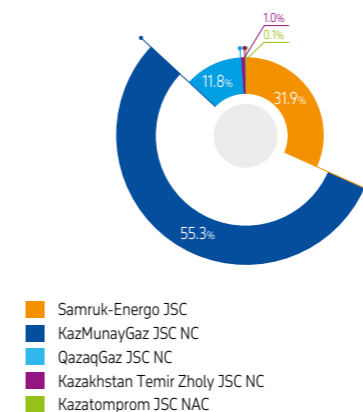
In 2022, the following main measures to enhance energy efficiency were performed:

- 1) replacement of pumping units in KTO in number of 8 units in Main Petroleum Products Pumping Station (MPPPS) 'Pavlodar', in Petroleum Products Pumping Station (PPPS) 'Ekibastuz', PPPS 'Stepnoye' and MPPPS named after B. Dzhumagaliev against pumping units with a higher efficiency. These measures made it possible to reduce the specific consumption of electricity for oil pumping in technological sites 'Pavlodar – Atasu' and 'Dzhumagaliev – Atasu'. The total calculated savings in terms of volume amounted to 6,694 thous. kWh per year;
- 2) introduction of a variable speed drive in the KTO at Uzen MPPPS, with this the specific electricity consumption for oil pumping in technological site 'Uzen – Atyrau' decreased by 11%. The calculated savings in terms of volume amounted to 2,071 thous. kWh per year;

- 3) optimization of the operating temperature of Atyrau – Samara 'hot' oil pipeline by improving the oil mixture rheology in summer time (redistribution of Mangyshlak oil) made it possible to turn off the heater treaters from June to September 2022 in this oil pipeline. The calculated savings in terms of volume amounted to 4,896 thous. m<sup>3</sup> per year;
- 4) replacement of control units on the switch desk with variable speed drives on sucker-rod pumps in number of 545 pcs. per KBM. The calculated savings in terms of volume amounted to 1,774 thous. kWh per year;
- 5) introduction of a field control station with variable speed drives for controlling and protecting the electric motors of sucker-rod pumps in MMG. The calculated savings in terms of volume amounted to 4,893 thous. kWh per year;
- 6) replacement of oil heater treaters with life-expired period 'Modular tube furnace' PTB –5/40 (6 pcs.) against heater treaters 'Emulsion heating furnace' PNE-2.7 in OMG. The calculated savings in terms of volume amounted to 1,577 thous. kWh per year and 15,738 thous. m<sup>3</sup> gas;
- 7) optimization of heat flows of the unit CDU/VDU-3 in AR based on the results of PINCH analysis with the installation of additional equipment. The calculated savings in terms of volume amounted to 10,200 tons of fuel gas per year;
- 8) change of the fuel gas supply scheme to the K-8 CDU/VDU-3 column in the AR. The calculated savings in terms of volume amounted to 9,900 tons of process fuel per year;
- 9) modernization of the water heating system of the unit CDU for the sections S-100 of the unit LK-6U in the PPCP. The calculated savings in terms of volume amounted to 1,060 tons of fuel oil per year.

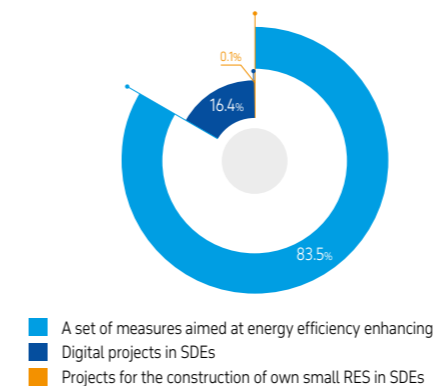
On December 29, 2022, Samruk-Kazyna JSC approved the Program of energy saving and energy efficiency enhancing until 2027. The actions of the KMG Group of Companies, provided for in the framework of the implementation of the LCDP, provide a contribution of more than 55% into the energy saving potential of this Program. The KMG Department of Low-Carbon Development has defined annual target indicators of energy efficiency for all SDEs for the period up to 2027.

## STRUCTURE OF ENERGY SAVING POTENTIAL UPON THE ENERGY-AND-RESOURCE SAVING PROGRAM OF SAMRUK-KAZYNA JSC UP TO 2027, TONS REF.F.



In particular, the KMG energy saving potential provided by LCDP for 2027 amounts to 400 thous. tons reference fuel (near 117 mln GJ) or 10.2% of the KMG total energy consumption based on the results of 2021. With this, 83.5% of this potential represent energy-saving measures implemented directly in SDEs, and 16.4% of the energy-saving potential is associated with the implementation of digital projects.

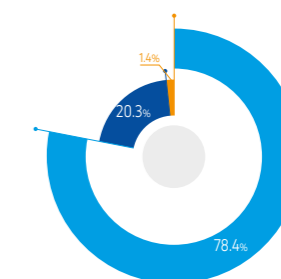
## KMG ENERGY SAVING POTENTIAL, PROVIDED BY LCDP FOR 2027 (2022–2027)



21 The specific cost of energy resources for producing one ton of hydrocarbons in KBM is 5.3 times higher than the worldwide average, according to IOGP data, due to the fact that production from the field Karazhanbas is possible only by oil displacement from underground formation with steam and hot water. The value of specific cost of energy for producing one ton of hydrocarbons in OMG is more than 2.2 times higher than the worldwide average, according to IOGP data. This is due to the high content of dissolved paraffins and the rheological properties of the produced oil, as a result of which, during oil production and transportation, its heating is required not only in winter, but also in summer season.

With this, in the KMG Plan for the LCDP implementation about 300 measures are planned to be carried out directly in SDEs, for the period up to 2031, the total energy saving potential from the implementation of which amounts to 541 thous. tons ref.f. (15.85 mln GJ) by 2031 or 13.7% of the total KMG energy consumption by the end of 2021.

## KMG ENERGY SAVING POTENTIAL, PROVIDED FOR IN LCDP ACTION PLAN FOR 2031 (2022–2031)

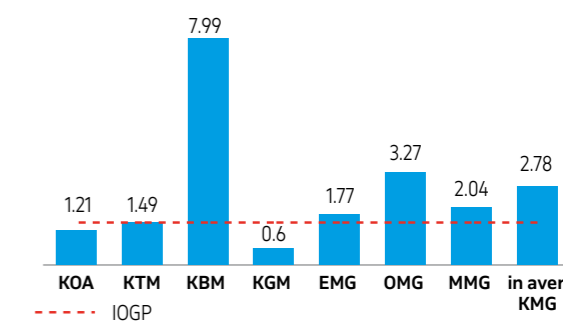


■ A set of measures aimed at energy efficiency enhancing  
■ Digital projects in SDEs  
■ Projects for the construction of own small RES in SDEs

## ENERGY INTENSITY

302-3,11.1

In 2022, the energy density in the area of hydrocarbon production on average for the KMG Group of Companies amounted to 2.78 GJ per ton of produced CH, which remains 85% higher than the indicator of the International Association of Oil and Gas Producers (IOGP), which in 2021 amounted to 1.5 GJ per ton of produced hydrocarbons<sup>21</sup>.



## RENEWABLE ENERGY RESOURCES

In the LCDP Plan of implementation the considerable attention is paid to projects in the field of renewable energy sources and the implementation of offset policy, which should reduce the carbon footprint by 550 thousand tons CO<sub>2</sub>.

KMG, together with Total Eren S.A. and Samruk-Kazyna JSC, began to develop the feasibility study and to research the wind potential in Zhambyl region for planning the construction of a wind plant with 1 GW capacity. The unit capacity of the future Wind-power plant (WPS) is equal to half of the total volume of all existing RES facilities in the country.

KMG is carrying out similar works on the construction of a 120 MW hybrid station (sun+wind) in Mangystau region together with Eni. With this, we plan to build our own small SPP directly on our mining SDEs.



The signing of an intergovernmental agreement between the Republic of Kazakhstan and the Republic of France regarding the construction project of a wind plant with a capacity of 1 GW.

## ADDITIONAL DECARBONIZATION MEASURES

KMG is working on the implementation of additional decarbonization measures, including the launch of pilot projects for electric charging stations, the introduction of Carbon capture, utilization and storage (CCUS) technologies, the implementation of forest/climate projects, etc.

The aim of the project is to reduce emissions in the KMG industrial facility by means of capture and injection CO<sub>2</sub> into worked-out oil formations (ORF increase) or water-bearing horizons (burial) with the possibility of further scaling of the CCUS technology application.

Based on the approved Roadmap for the implementation of the first stage (research) of the KMG Project, are carried out the works on screening of CO<sub>2</sub> emission sources and deposits for CO<sub>2</sub> injection in order to determine a suitable location for the project.

### CARBON CAPTURE, UTILIZATION AND STORAGE (CCUS) PROJECT

In 2022, KMG initiated consideration of the possibility of implementing a pilot project for carbon dioxide capture and storage (CCUS) and determining the potential for CO<sub>2</sub> injection to increase the recovery coefficient of the worked-out oil formations (hereinafter referred to as the Project).

The project includes the execution of research and development works with the subsequent design, construction and commissioning of a pilot facility for carbon capture and injection into worked-out oil formations (increase of Oil recovery factor (ORF)) or water-bearing horizons.

### FOREST/CLIMATE OFFSET PROJECTS

One of the ways to compensate for emissions and obtain offset units is the implementation of forest/climate projects. Within the framework of the memorandum with Chevron, the joint implementation of a forest/climate project in an area of 2,000 ha in Pavlodar region was identified as one of the areas of cooperation. In 2022, the technical specification for this project was developed, within the framework of which it is planned to develop a working draft, calculate the volume of CO<sub>2</sub> absorption by planted forest, as well as develop a Concept for a forest carbon offset project.

## METHANE LEAK MANAGEMENT

To control and further prevent methane leaks, the Program provides for the widespread introduction of a leak detection and repair – LDAR. Since 2022, KMG has been negotiating with USAID and Carbon Limits regarding the possibility of implementing projects to detect and eliminate methane leaks at KMG's SDE sites, as well as to conduct training for employees of subsidiaries.

### CASE STUDY

#### RENEWABLES ENERGY CERTIFICATES

In order to reduce indirect greenhouse gas emissions, KMG acquired International Renewable Energy Certificate (I-REC) and settled them by 8.5 million kWh, which corresponds to the electricity consumption of the KMG Corporate Center in 2022.

Voluntary I-REC certificates confirm information the fact of electricity generation due to renewable energy source (RES) and are recognized by international organizations such as GHGP, CDP, RE100, ISO, etc.



### CASE STUDY

#### Improvement staff potential

In order to improve the potential of KMG Group employees, trainings and workshops on various aspects of low-carbon development are held for specialists.

In October 2022 a 3-day workshop on the subject 'Carbon capture and storage technology' was held for KMG subsidiaries employees with the expert support of Chevron New Energies employees,

In November 2022, a 2-day seminar 'Energy transition and greenhouse gas emissions management at the enterprise' was organized for 45 employees of subsidiaries and the corporate center who are involved in the processes of energy efficiency management and control of greenhouse gas emissions.



# ECONOMIC PERFORMANCE



**Murat BAGLANOV**

The best operator on reservoir pressure maintenance JV "Kazgermunai" LLP

First place in the "Uzdik Maman - 2022" professional contest



**Principle 10.** Business community shall stand against all forms of corruption, including blackmail and bribery.

3-3

The Company is committed to ensuring sustainable economic activity. Achieving financial and operational performance, strategic and business planning of the Company consider the principles of sustainable development. KMG annually makes a significant contribution to increasing the social and economic potential of the country and to the development of the regions of the Company's presence.

The formation and approval of the consolidated and separate Development Plan and the Budget of KMG are regulated by the Rules for the formation, approval, adjustment and monitoring of the Development Plan of KazMunayGas NC JSC. The consolidated Business Plan includes the plans of SDEs for a 5-year period and is regulated by the Rules for the development, harmonization, approval and monitoring of the business plans and budgets of SDEs of KazMunayGas NC JSC. The Development Plan and the Budget of KMG are generated in an automated planning system in accordance with the requirements of the approved corporate accounting policy of KMG and the International Financial Reporting Standards (IFRS).

To analyse the achievement of strategic goals, KMG monitors the implementation of the Business Plans based on monthly, quarterly and annual management reports.

KMG managed to achieve positive dynamics of financial and operational performance in all its business areas from exploration and production to transportation and processing of hydrocarbons. The Company's net profit in the reporting period amounted to **1,317 billion tenge**.

As one of the largest taxpayers in the regions of presence, KMG contributes to the country's budget for taxes and other payments. In 2022, **1,176 billion tenge** of taxes and other obligatory payments to the budget were paid.

The Company also provides employment to more than **44 thousand people** in the country by providing not only stable salaries, but also social support to employees and their families. The funds allocated by the Company for social withholdings and pension contributions for employees in 2022 amounted to **66 billion tenge**.

Participation in the programs to support domestic manufacturers and increase in local content in procurement is a priority for KMG. At the end of 2022, the total volume of supplied goods, works and services, including long-term procurement contracts, within KMG Group amounted to **1,700 billion tenge**. The percentage of local content in procurement was equal to **82%**.

The Company's economic performance presented below make it possible to assess this contribution to the country's economy.

## CASE STUDY

The year of 2022 has become really fully of significant and positive events for the Company. The Company has made a historic initial public offering of its shares, and this is the largest IPO on the KASE and AIX stock exchanges.



## CREATED AND DISTRIBUTED ECONOMIC VALUE

201-1, 201-4, 415-1

Item	Unit	2020	2021 <sup>22</sup>	2022
Created economic value				
Total income	billion tenge	5,202	7,628	9,821
Distributed economic value				
Total expenses	billion tenge	5,030	6,341	8,503
Undistributed economic value				
Profit	billion tenge	172	1,287	1,317

Total income means total profit and other income in the Statement of Comprehensive Income.

Total expenses mean total expenses and costs in the Statement of Comprehensive Income.

Item	Unit	2020	2021	2022
Other taxes and payments (excl. CIT)	billion tenge	1,068	1,453	1,764
Other taxes and payments (incl. CIT)	billion tenge	1,156	1,565	1,908
Paid income tax	billion tenge	88	111	144
Distributions to capital providers	billion tenge	331	309	701

The data is derived from the consolidated Statement of Cash Flows (direct method) of KMG for 2022.

Item	Unit	2020	2021	2022
Capital investment (accrual method)	billion tenge	454	472	535

KMG has not received financial assistance in monetary terms from the state during the reporting period and does not make donations for state/political needs.

201-3

### PENSION SCHEMES OF EMPLOYEES

In accordance with the national legislation, pension savings of citizens are in the Unified Accumulative Pension Fund, as well as in voluntary accumulative pension funds. In accordance with the Collective Agreements of organizations, the Company fulfils, for its part, additional obligations related to social support for non-working pensioners whereby the employees, who retire in connection with achievement of pension age and after retirement, receive social support in the form of material assistance on the occasion of the national and public holidays of the Republic of Kazakhstan, in connection with reaching the anniversary age,

vouchers for sanatorium and health resort treatment with partial compensation of their cost, etc. In 2022, material assistance was provided to non-working pensioners of the Company for the total amount exceeding **2.7 billion tenge**.

KMG's enterprises are implementing a project to provide employees of pre-retirement age with the possibility of early retirement with payment of compensation upon termination of employment relations by agreement between the parties, with employees who have reached retirement age, with payment of compensation upon termination of employment relations.

<sup>22</sup> KMG's financial performance for 2021 have been restated to include a 100% interest in KMG Kashagan B.V. in the method of full consolidation. On 15 September 2022, the Company increased its interest in KMG Kashagan B.V. from 50% to 100%.

Item	UoM	2020	2021	2022
Social withholdings and obligatory pension contributions	billion tenge	53	54	66

## TAX ACCOUNTING POLICY OF KMG

207-1, 207- 2, 207-4

In order to standardize the tax accounting in the companies of KMG Group, KMG developed and implemented the **Corporate Tax Accounting Policy** (hereinafter – the Corporate TAP).

The Corporate TAP was developed in accordance with the requirements of the tax legislation of the Republic of Kazakhstan in conjunction with the International Financial Reporting Standards (IFRS), Law of the Republic of Kazakhstan No. 234-III 3PK *On Accounting and Financial Reporting* dated 28 February 2007, other legislative acts of the Republic of Kazakhstan and international treaties ratified by the Republic of Kazakhstan, as well as internal documents regulating the activities of KMG/subsidiary. The provisions of the Corporate TAP are trade and tax secrets of KMG Group of Companies.

If there are discrepancies between the provisions of the Corporate TAP and the rules of the tax legislation of the Republic of Kazakhstan or provisions of the international treaties ratified by the Republic of Kazakhstan, the rules of the tax legislation or the relevant international treaty shall apply.

KMG and all of its subsidiaries shall follow the Corporate TAP, except for the following subsidiaries:

- those carrying out subsoil use operations under a production sharing agreement providing for a special stable tax treatment;
- those in which KMG holds less than 50% of controlling shares (interests); or
- those registered outside the Republic of Kazakhstan, as well as branches of KMG and branches of its subsidiaries registered outside the Republic of Kazakhstan.

The *purpose* of the Corporate TAP is to achieve uniformity of tax accounting in order to generate *the most complete, objective and reliable information* in reporting, subject to the organizational and industry specifics of KMG and its subsidiaries.

The *objective* of the Corporate TAP is to reflect the specifics of the tax accounting in KMG Group of Companies in cases where the tax legislation:

- contains the rules that require or allow making a choice from several options or methods provided for by the Tax Code of the Republic of Kazakhstan;
- establishes only general rules and does not provide certainty and specifics in the methods of tax accounting, the procedure for determining the taxable and tax-related items; and
- requires separate terms and conditions to be reflected in the TAP.

The Corporate TAP is based on the following principles of the Tax Code of the Republic of Kazakhstan:

- the principle of mandatory taxation – KMG and its subsidiaries are obliged to timely and correctly assess, withhold and pay taxes in full to the budget of the Republic of Kazakhstan;
- the principle of tax equity – operations of KMG and its subsidiaries cannot be subject to double taxation by the same type of tax and payment on the same taxable item in the same period; and
- the principle of good faith of KMG and its subsidiaries – it is not allowed benefiting from their illegal actions in order to obtain tax savings and reduce tax payments.

On the basis of the Corporate TAP, KMG, like all subsidiaries of KMG, has been developed and implemented the Tax Accounting Policy of KMG (hereinafter – the KMG TAP).

Approval of the Corporate TAP and the KMG TAP, as well as amendments and alterations thereto, is referred to the competence of the Management Board of KMG.

*Amendments and alterations are made to the Corporate TAP and the KMG TAP in the following cases:*

- changes are made in the rules of the Tax Code of the Republic of Kazakhstan, which affect the tax accounting procedure established by the provisions of the Corporate TAP;
- changes are made in the rules of Law of the Republic of Kazakhstan No. 234-III 3PK *On Accounting and Financial Reporting* dated 28 February 2007 or IFRS, which affect the tax accounting procedure established by the provisions of the Corporate TAP;
- decisions are made by KMG/subsidiary that change the accounting methods and principles of KMG

Group of Companies, which affect the procedure for maintaining tax records, determining taxable and (or) tax-related items; or

- decisions are made by KMG/subsidiary that result in changes in the procedure and principles for keeping separate tax records of KMG Group of Companies and other provisions in respect of which the Tax Code of the Republic of Kazakhstan contains dispositive provisions.

In other cases, amendments are made to the Corporate TAP and the KMG TAP as and where required, but not more than twice a year.

KMG takes into account in its approach to taxation, at the time of tax planning, the peculiarities of KMG's commercial activities and the social impacts of such an approach, which are fully consistent with the Development Strategy of KMG for 2022–2031.

Strategic goals of KMG for 2022–2031	Association of the approach to taxation with strategic goals
Sufficient resource base to ensure the growth of KMG	Fiscal incentives from the government authorities
Improving the efficiency of value chain of KMG	Negotiating with the state on further optimization of the tax burden on mature fields in order to increase production on such fields
Business diversification and product portfolio expansion	Changes in the tax environment and the possibility of obtaining/ extending tax benefits and preferences
Sustainable development and progressive reduction of the carbon intensity of production	Regulation of the taxation procedure by obtaining clarifications from the tax authorities and, if necessary, amending the tax legislation

More details on the Company's taxes (207-4) are set out in the Report on payments in favour of the state for 2022: <https://www.kmg.kz/en/investors/reporting/>

## CASE STUDY

The Public Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan (hereinafter referred to as the PRC) is currently implementing a pilot project to introduce horizontal monitoring of taxpayers. The main advantages of implementation of the pilot project are the reduction of the number of tax control measures, simplified procedure for VAT refunds, improvement of internal control systems, creation of a single IT space between taxpayers and the PRC, etc. Embamunaigas JSC and Kaztransoil JSC are included in the list of enterprises participating in the pilot project. Currently, Embamunaigas JSC and Kaztransoil JSC have provided the PRC with access to their accounting systems to study business processes, as well as to study historical data. All activities of the PRC are carried out in accordance with the approved Roadmaps to the Cooperation Agreement. About 25 countries of the world successfully apply the concept of horizontal monitoring based on the principles of confidence, transparency and mutually beneficial cooperation.



## TAX ADMINISTRATION AND CONTROL, RISK MANAGEMENT

207-2

The approach to manage the risks, including tax risk, is set by the corporate risk management system (CRMS).

*For more information about the risk management process, see the ESG Risk Management section.*

*For more information on the mechanism to make complaints, see the Mechanisms for Seeking Advice on Improper Conduct section.*

Information on tax reporting is available on: <https://www.kmg.kz/en/investors/>

## COMMUNICATION WITH STAKEHOLDERS AND MANAGEMENT OF TAX RELATED PROBLEMS

207-3

KMG is included in the list of major taxpayers that are subject to tax monitoring in accordance with the tax legislation.

KMG is constantly working to analyse the problematic issues of applying the tax laws, which issues arise in the companies of KMG Group, followed by the development of proposals for amendments to legislative acts, as well as the initiation of amendments to the legislation of the Republic of Kazakhstan in order to create favourable conditions for taxation of activities of the companies of KMG Group, systematic improvement of the tax legislation, customs legislation of the Customs

Union and the Republic of Kazakhstan, legislation of the Republic of Kazakhstan on transfer pricing, as well as improvement of operational efficiency and increase in the value of KMG as a whole.

Relations and communication with the government authorities are built within the framework of the rules of the Tax Code of the Republic of Kazakhstan, through business correspondence in order to determine the correctness of the tax policy, participation in meetings, discussions organized by both the government authorities and the shareholder, industry associations.

Protection of the interests of KMG Group of Companies by improving the legislation includes:

- development of proposals (including substantiations, presentations and calculations) to improve the legislation in terms of taxation;
- consideration and submission of conclusions to draft regulatory legal acts developed by the relevant government authorities in terms of the implementation of tax legislation and legislation on subsoil and subsoil use; and
- support of legislative initiatives of KMG Group of Companies through direct participation in the work of consultative and advisory bodies operating under industry associations (Kazakhstan Taxpayer Association (KTA), KAZENERGY Association, Atameken National Chamber of Entrepreneurs of the Republic of Kazakhstan (NCE)), in working groups with participation competent government authorities of the Republic of Kazakhstan and the Parliament of the Republic of Kazakhstan.

# IMPLEMENTATION OF INVESTMENT PROJECTS

203-1, 203-2, 11.14

The investment portfolio is represented by a number of projects in the areas of oil exploration, transportation and refining that are traditional for KMG. The Company is also working on evaluating new projects in alternative energy and reducing the carbon footprint of KMG's existing operating assets.

The total value of the investment portfolio for 2022 amounts to 51,311.6 billion tenge, including 18,516.1 billion tenge<sup>23</sup> falling to share of KMG.

Areas of activities	Distribution of the value of investment portfolio in 2022, billion tenge	Distribution of the value of investment portfolio in 2022 falling to share of KMG, billion tenge
Exploration and oil and gas production	44,448.2	14,608.6
Infrastructure projects	405.1	387
Oil transportation	424.2	163.1
Oil refining and oil products marketing	271	215.7
Petroleum and gas chemistry	5,581	2,959.6
Other	182.1	182.1
Total	51,311.6	18,516.1

## TENGIZ, KASHAGAN, KARACHAGANAK MEGAPROJECTS

KMG participates in projects on large fields: Tengiz (20%), Kashagan (16.87%) and Karachaganak (10%), together with the strategic investors.

- The Wellhead Pressure Management / Future Growth Project is being implemented at Tengiz. Completion of the main construction works and start of commissioning are planned for 2023. The commissioning of the WPMP facilities is scheduled for December 2023. The project will allow increasing the oil production by 12 million tons per year.
- On Karachaganak field, the projects are being actively implemented to maintain the production plateau. In 2021, the Gas Debottlenecking Project (KGDBN) at Karachaganak Processing Complex and the 4<sup>th</sup> Injection Compressor (4IC) Installation Project were successfully completed. Currently, the "5<sup>th</sup> Injection Compressor Installation Project" is under active construction, according to which it is planned to reach 85% in the overall progress of work by the end of 2023.
- Also, in 2022, an investment decision (FID) was made on the implementation of the "6<sup>th</sup> Injection Compressor Installation Project".
- At Kashagan field, in September 2022, the "Project for upgrading the existing sour gas injection (SGI)

compressors" was put into operation. The expected additional oil production from upgrading the SGI compressors by 2041 will be about 8.5 million tons.

- The field is currently being produced as part of Stage 1 of the development. Stage 2 is considered within three separate projects, the most studied of which are Stage 2 'A' and Stage 2 'B' that are aimed at increasing the level of oil and condensate production over the next 10 years to ~710 thousand barrel per day (~89.5 thousand tons / day). The final decision on investment in these projects is expected to be made in 2023-2024.

## EXPLORATION AND OIL AND GAS PRODUCTION

In 2022, in order to improve the investment attractiveness of the oil and gas industry in the Republic of Kazakhstan, the Government, with the participation of foreign investors and KMG, developed a mechanism of Improved Model Contract (hereinafter – the IMC), which provides a number of regulatory and fiscal preferences for complex projects that require additional incentives (new complex onshore projects, offshore projects and gas projects). In December 2022, the relevant Package of Amendments to the Code of Subsoil and Subsoil Use and the Tax Code was signed by the Head of the State of the Republic of Kazakhstan. These amendments affect

a number of KMG's projects and will make it possible to intensify work both on the shelf of the Caspian Sea and on a number of complex and gas onshore projects.

At the beginning of December 2022, mobilization and prospecting drilling of a well with a depth of 3,300 m were launched at Zhenis site in the Kazakhstan sector of the Caspian Sea. It is planned to complete drilling of the exploration well in 2023.

In 2023, it is planned to sign a Subsoil Use Contract for Kalamkas More – Khazar section. The reserves for this field have been confirmed, the next step is to select a development concept together with the strategic partner – LUKOIL PJSC.

KMG also actively carries out onshore exploration. In 2022, preparatory work was performed for drilling exploration wells in Turgay Paleozoic and Karaton Podsolevoy sections. In 2023, it is planned to drill wells with a depth of 5.5 thousand meters in these sections.

In December 2022, the Contracts for exploration and production on Taisoigan-1 and 2 sections in Atyrau Oblast were signed. Earlier in 2019, a large-scale high-resolution 3D seismic survey, which was unique for Kazakhstan, was conducted in these sections, which made it possible to identify more than 300 million tons of geological resources.

In 2022, licenses were obtained for Geological Study of Subsoil (GSS) for 5 sections (Mugodzhary, Berezovsky, Zharkyn, Bolashak and Northern Ozen). As part of the analytical work on modelling the main sedimentary basins, 5 most promising areas have been identified that require further study. Thus, in 2023, it is planned to conduct a "outrunning" seismic survey as part of the program for the geological survey of the subsoil.

The work continues to increase reserves through additional exploration of existing onshore fields. In particular, in 2022, the fields S. Nurzhanov, Northern Uaz and South-Eastern Novobogat of Embamunaigas JSC, after completion of additional exploration, were transferred to the production stage. At another field – Western Karasar – the work continues and it is expected to be transferred to the production stage in 2024. Under Eastern Urikhtau and Development of Rozhkovskoye field projects, the work continues on pilot production, it is planned to start the production in 2023-2024.

## OIL TRANSPORTATION

In 2021, the "First stage of the reverse of a section of Kenkiyak-Atyrau oil pipeline" project was completed with the possibility of transporting oil in reverse mode up to 6 million tons per year. In 2022, 4.3 million tons of oil were transported in the reverse direction.

Work is performed to increase the capacity of the CPC pipeline to 80 million tons per year. In addition, the issue of increasing the export potential along an alternative route through the Caspian Sea from Aktau port is being worked out.

## OIL REFINING AND OIL PRODUCTS MARKETING

One of the main tasks for KMG in the coming years is to address the issue of supplying the domestic market of Kazakhstan with domestic oil products due to the predicted growth in consumption.

In order to ensure the security of energy supply to the northern and eastern regions of the Republic of Kazakhstan, the PPCP is already implementing the projects for the purification of LHGG and the production of winter diesel fuel. The launch of the units is planned for 2024-2025, respectively.

In addition, the issues are currently being studied to expand the capacities of domestic refineries – PKOP LLP and CASPI BITUM JV LLP. In 2023, the results of the pre-feasibility study are expected, following which further decisions will be made.

Within the framework of the Kazakh-Romanian investment fund, in 2021, KMG International N.V. completed the implementation of the first stage of expanding the retail network for the sale of oil products in Romania: the construction of 25 filling stations. In 2023, it is planned to continue the construction of filling stations as part of the next stage of expanding the retail network of filling stations in Romania through the phased construction of 44 filling stations.

23 The Annual Report for 2022 provides updated information on investment portfolio of KMG



# PETROLEUM AND GAS CHEMISTRY

203-1, 203-2, 11.14

*"Petroleum and gas chemistry is a new priority direction of our Company. We intend to actively develop production in the field of oil and gas processing to create a wide range of value-added products."*

Chairman of the Management Board  
of KMG NC JSC Magzum Mirzagaliyev



## POLYPROPENE

On 8 November 2022, a large-scale integrated gas chemical complex of [Kazakhstan Petrochemical Industries Inc](#) (hereinafter – KPI) was launched with a capacity of up to 500 thousand tons of polypropylene per year. The work of the enterprise was started by the Head of the State Kassym-Zhomart Tokayev during his visit to Atyrau Oblast.

Production at the enterprise fully complies with all environmental requirements. The raw material for the complex is propane purified from harmful impurities, which is converted into propylene through the production chain, and then into polypropylene. The process eliminates the formation of dangerous harmful substances such as hydrogen sulphide, sulphur dioxide, aromatic hydrocarbons, etc.

The complex is also environmentally friendly in terms of external water consumption – a closed cycle of circulating water supply for the needs of technological processes allows solving the problem of minimizing

water consumption due to almost one hundred percent disposal of wastewater and reuse thereof in the form of greywater (integration with the complex of treatment facilities of Karabatan Utility Solutions LLP (hereinafter – KUS)). The effluent treatment process at KUS includes a Zero Liquid Discharge (ZLD) facility. This process makes it possible to avoid the discharge of liquid waste into the environment.

The production uses a waste heat boiler manufactured by Hamon Deltak to recover the heat generated during the combustion of gases and combustion products. The waste heat boiler is equipped with a catalytic system that allows reducing NOx emissions by supplying ammonia. The system is controlled by an in-line flue gas analyser that measures the level of NOx, CO, HC, NH<sub>3</sub> and O<sub>2</sub> emissions on a real time basis. The principle of operation of the waste heat boiler is environmentally friendly: when burning, no dangerous emissions into the atmosphere are formed.



The furnaces for regeneration air and raw materials heating are equipped with an online flue gas analyser that determines the content of O<sub>2</sub>, CO, HC, NOx, CO<sub>2</sub>, which allows controlling the composition of the gases emitted.

The main raw material for the propane dehydrogenation plant is propane, which is separated from the associated gas of the oil field of Tengizchevroil LLP. Propane is supplied by rail from Tengiz field. Each propane storage tank is sealed and equipped with monitoring and blocking systems.

This project offered a great opportunity for the Kazakhstan companies: 43 Kazakhstan companies took part in the project implementation, over **4,300 jobs** were created for the construction period.

Currently, KPI has 628 employees in the staff who are provided with social support from the company. Also, a housing program is being implemented for employees. 98 employees have already received apartments under the program. The housing program was launched to attract and motivate promising employees from among the production staff.

The KPI project uses the state-of-the-art technologies, which will enable the enterprise to become completely digital, specialized IT solutions and corporate accounting systems will allow keeping high-precision record of all data

from operations planning to the sale of finished products to an end consumer.

KPI will be the first completely digital plant in the country. An important step towards digitalization of the enterprise is the comprehensive implementation of the SAP S/4HANA system. The experience of integrated implementation of SAP S/4HANA at KPI can be considered for replication in other companies of KazMunayGas Group.

## EFFECT OF THE PROJECT IMPLEMENTATION:

- Covering the internal needs of Kazakhstan (import substitution) for polypropylene (the capacity of Kazakhstan market is about 50 thousand tons per year).
- Ability to manufacture products used in various industries (construction, medicine, automotive, food and textile industries, etc.).
- Creation of additional jobs in related industries.
- **Contribution to the country's GDP will be up to 1%.**



## POLYETHYLENE

The second important project is the project of construction of a plant of KMG PetroChem LLP for the production of polyethylene with a capacity of 1.25 million tons per year (hereinafter – the Polyethylene Project); in 2023, the FEED stage begins.

The polyethylene project is being implemented as part of the National Project “Sustainable economic growth to improve the welfare of the Kazakhstan people” and is in line with KMG’s long-term strategic goals, which, among other things, include improving the efficiency of the added-value chain, diversifying business and expanding the portfolio of products produced of raw hydrocarbons. Finished products are planned to be sold both in the domestic market and for export. The capacity of Kazakhstan domestic market is estimated at about 180 thousand tons of polyethylene per year, with an expected annual growth of 4% on average. The target export markets include the CIS countries, China, Turkey and the European countries, where polyethylene consumption is also expected to grow, including through

## TEREPHTHALIC ACID

In addition, a decision was made to study the possibility of constructing a plant for the production of polyethylene terephthalate.

The project will be implemented using private investments. It is expected that the capacity of the enterprise will be 600 thousand tons of terephthalic acid per year and 430 thousand tons of polyethylene

imports. The license agreements have been signed with the world leaders in this field – Chevron Phillips Chemical and Univation Technologies – for the use of MarTECH® ADL and UNIPOL™ PE Process technologies. The implementation of the Polyethylene Project brings significant social and economic benefits to the country.

Polyethylene in a stable state does not pose a danger to the environment, since it does not have the ability to form toxic substances in the air and wastewater in the presence of other substances or factors at ambient temperature. Polyethylene and its additives are not ozone depleting substances.

The plant will promote the maintenance of social stability in the region and creation of new jobs. In particular, about 8,000 jobs will be created during the construction phase, and **875** permanent jobs will be created during the operation period. **The contribution to the country’s GDP is estimated at 1.2%.**

terephthalate per year. The construction of the plant is planned to start in 2023–2024. It is expected that the plant will start to operate in 2026–2027.

It is planned to create 812 permanent jobs during the operation period and about **1,300 jobs** – at the construction stage.

## PROJECTS AIMED AT DEVELOPMENT OF THE REGIONS OF PRESENCE

Solving water supply issues in the regions of presence: “Reconstruction of the water pipeline Astrakhan – Mangyshlak”, “Construction of a sea water desalination plant in Kenderly with a capacity of 50,000 m<sup>3</sup>/day”.

Under the project “Reconstruction of the water pipeline Astrakhan – Mangyshlak”, construction and installation work began, and also, an agreement was concluded with a second-tier bank to finance the project. It is planned to complete the project by the end of 2023.

The project feasibility study was adjusted for the project “Construction of a sea water desalination plant in Kenderly with a capacity of 50,000 m<sup>3</sup>/day” (according to the recommendations of the PMC consultant), work is currently performed to select an EPC contractor. It is planned to complete the project by the end of 2024.

Ensuring uninterrupted gas processing, including to cover the gas needs of the population of the region, a project is being implemented to construct a new GPP in Zhanaozen City.

Pre-FEED and feasibility study have been developed for the project of construction of a new GPP in Zhanaozen City, there is an agreement with the second-tier banks to finance the project. Currently, the procedure for the preliminary qualification selection of suppliers for the construction of facilities is being performed. Commissioning is planned for 2025.

To improve the environment by eliminating the impact on the atmospheric air of Atyrau City from the treatment facilities and evaporation fields of Atyrau Refinery, Tazalyq project is being implemented.

In 2022, the 1<sup>st</sup> stage of the reconstruction of mechanical treatment facilities (MTF) was completed, 2 sectors from 4 evaporation fields were dried. Full completion of work on the 2<sup>nd</sup> stage of the MTF and the reclamation of evaporation fields is scheduled for the end of 2023.



## PROCUREMENT PRACTICE

2-6, 3-3, 204-1, 11.14

The basic principles of the procurement activities of KMG Group of Companies are the optimal and efficient spending of money used for procurement; openness and transparency of the procurement process with respect for the rights and (or) legitimate interests of suppliers to trade secrets (before summing up the tender results); fair competition among potential suppliers, prevention of collusion between procurement participants; responsibility of procurement participants; prevention of corrupt practices; providing support to domestic producers of goods, as well as domestic

providers of works and services, to the extent that this does not contradict the international treaties ratified by the Republic of Kazakhstan; acquisition of innovative and high-technology goods, works, services; providing potential suppliers with equal opportunities to participate in the procurement procedure; respect for the intellectual property rights contained in the purchased goods. At the same time, KMG is pursuing a number of procurement initiatives to support domestic manufacturers.

### COMMITMENT TO SUSTAINABLE PROCUREMENT

KMG follows the principles of sustainable development when communicating with counterparties, which are based on legality and transparency, compliance with contractual terms, absence of corruption and zero tolerance to any manifestations of dishonesty, as well as when selecting counterparties based on a combination of factors: the best price, quality and conditions, business reputation of the counterparty.

These conditions are included in the terms of contracts concluded by KMG with counterparties in order to respect for the labour rights and create favourable working conditions for citizens of the Republic of Kazakhstan, protect the rights of children and maintain environmental safety. In opinion of the Company, these measures will help to reduce the number of cases of illegal activities of the companies cooperating with KMG.

At the same time, KMG offers, in turn, reciprocal obligations to counterparties to comply with the requirements of applicable legislation, treat employees fairly, avoid the use of child labour, ensure safe working conditions, protect the environment and adhere to other principles of ethical conduct.

When purchasing goods, KMG also establishes requirements for potential suppliers to provide certificates of conformance to the quality management system.

### TOTAL VOLUME OF PURCHASES

The total volume of purchases for 2022 amounted to 1,085,234 million tenge, excluding VAT.

One of the important aspects of KMG's procurement activities is to reduce single-source purchasing and increase a percentage of competitive purchases. Competitive purchases are carried out through an open tender, a request for quotations, an electronic store and competitive negotiations. At the end of 2022, the amount of competitive purchases under the concluded contracts of the annual procurement plan

for KMG Group of Companies amounted to 512 billion tenge. At the same time, over the past three years, the percentage of competitive purchases makes up 49%, which indicates the commitment of KMG to ensure fair competition and sustainable development goals.

Despite the aspiration to develop a competitive market, the percentage of non-competitive purchases carried out within the framework of intercompany cooperation and (or) through a single source, significantly prevails.

### COMPETITIVE PURCHASES: BILLION TENGE, EXCLUDING VAT<sup>24</sup>

Year	Goods		Works and services		Total	
	Amount	Percentage, %	Amount	Percentage, %	Amount	Percentage, %
2020	168	15	252	23	420	38
2021	162	15	285	27	447	42
2022	237	23	275	26	512	49

### TOTAL AMOUNT OF GOODS, WORKS AND SERVICES AND PERCENTAGE OF LOCAL CONTENT<sup>25</sup> (BILLION TENGE)

Year	Goods		Works and services		Total	
	Total amount (KZT billion)	Percentage of local content, %	Total amount (KZT billion)	Percentage of local content, %	Total amount (KZT billion)	Percentage of local content, %
2020	472	71	1,354	86	1,826	82
2021	273	57	943	85	1,216	78
2022	410	58	1,290	90	1,700	82

### PREQUALIFICATION OF POTENTIAL SUPPLIERS/PROVIDERS

Improving procurement activities, taking into account the requirements and standards of the Kazakhstan and international practice, is one of the priority tasks for KMG.

An effective tool for solving this task is the implementation of a mechanism for prequalification of potential suppliers/providers.

Prequalification is the process of assessing potential suppliers/providers for compliance with the qualification requirements prescribed in accordance with the Procurement Procedure to be carried out through questionnaires and audits.

The primary objectives of prequalification are to identify qualified, properly selected suppliers/providers, increase the efficiency of GWS procurement for the needs of the Portfolio Companies of the Fund.

The Fund's Pre-qualification Commission approved 24 categories of goods, works and services for procurement by KMG's subsidiary and dependent entities, through an open tender among potential suppliers/providers that have passed the prequalification procedure.

### CATEGORY PROCUREMENT

Procurement category management is the process of developing a comprehensive approach to reducing costs associated with procurement activities and the use of goods, works and services included in priority categories.

Categorization is carried out by combining goods, works and services in the procurement category based on the general characteristics of a subject of procurement and (or) a single market of potential suppliers/providers. Categories can include both one and several goods, works and services. Categories with a high level of costs, criticality, savings potential and controllability are determined as priorities.

Category management allows increasing the savings potential through a more detailed analysis by developing and approving a procurement category strategy. This strategy determines the optimal approach to the procurement of goods, works and services, based on maximizing benefits in the long or short term. The procurement category strategies should contain goals and objectives, an analysis of the internal and external environment, approaches to managing procurement categories, requirements for supplier/provider development, a benefit calculation and an implementation plan.

<sup>24</sup> Competitive purchases include purchases through an open tender, a request for quotations, electronic store and competitive negotiations.

<sup>25</sup> Local content means a percentage of the total cost of goods, works and services (GWS) of the supplier/provider of the cost of GWS of local origin (including subcontracts), as well as the percentage of the wage fund of Kazakhstan personnel involved in performance of the contract (works and services), of the total amount thereof.

Category management allows significantly reducing the cost of purchasing and using goods, works and services through the use of strategic planning, a detailed analysis of purchased goods and services and calculation of the total cost of ownership, as well as through cross-functional interaction with various structural subdivisions of the business. This method of procurement is effective in that it allows ensuring both quality and transparent price by working with reliable manufacturers and suppliers/providers.

Procurement category management includes:

- categorizing purchased goods, works and services and determining priority procurement categories;
- developing (updating) and approving procurement category strategies for priority categories;
- implementing procurement category strategies;
- monitoring the implementation of procurement category strategies; and
- developing suppliers/providers.

In 2022, the targets were not set in connection with the ongoing activities to optimize the procurement category strategies of the Fund and Portfolio companies on the basis of the order of the Fund's Competence Centre represented by Samruk-Kazyna Contract LLP, but, in accordance with paragraphs 65 and 66 of section 7 of the Regulations on interaction to manage the procurement categories between the Competence Centre of Samruk-Kazyna JSC for the management of procurement categories and organizations in which fifty or more percent of voting shares (interests) are directly or indirectly held by Samruk-Kazyna JSC on the right of ownership or trust management, it is planned to direct the annual report of KMG for 2022 to the Competence Centre of the Fund no later than 15 February 2023.

### AMOUNT AND BENEFITS OF CATEGORY PROCUREMENT IN 2020-2022

Item	2020	2021 <sup>26</sup>	2022
Amount of category procurement, million tenge	49,716.04	109,447.54	93,618.92
Benefits of category procurement management, million tenge	7,011.23	13,109.53	8,435.32

## COMPLIANCE WITH REQUIREMENTS OF THE LEGISLATION

206-1, 2-27

### ANTI-COMPETITIVE BEHAVIOUR

During the reporting period, 34 administrative cases were initiated against organizations from KMG Group of Companies in connection with violations of antimonopoly legislation (all in relation to SDEs).

Out of them: 2 administrative cases were considered in favour of SDEs, 1 administrative case was considered partially in favour of SDE, 31 administrative cases were considered not in favour of SDEs.

Also, the courts considered 2 civil cases related to antimonopoly legislation (court decisions were made in favour of SDEs).

There are no civil cases related to anti-competitive behaviour, violations of antitrust legislation.

### SOCIAL AND ECONOMIC COMPLIANCE

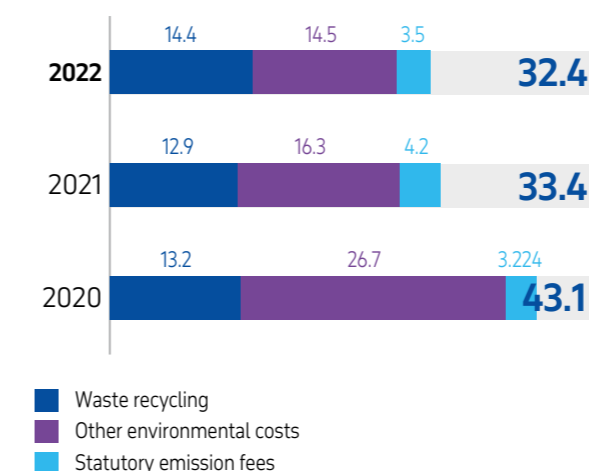
There are no civil and administrative cases where the subject of litigation/violations were inconsistencies with legislative and regulatory acts in the field of social and economic regulation, as well as disputes with local communities.

<sup>26</sup> The data for 2021 are different from the data presented in the Report for 2021 due to the approval of the amount and benefits of category procurement after the approval of the Report by the Board of Directors.

## ENVIRONMENTAL PAYMENTS AND COSTS

Environmental costs include payment of taxes for statutory emissions, costs for environmental protection measures, insurance, compensatory measures in the field of environmental protection, investments in the prevention of environmental impact, etc. Investments in the processing of oil waste, starting from the year 2015, increased by 3 times and exceed one third of all expenses on environmental protection. The cost of environmental protection in 2022 amounted to 32.4 billion tenge. The major part of the costs was incurred on the processing of oil waste, the introduction of cleaner technologies and the modernization of treatment facilities.

### DYNAMICS OF ENVIRONMENTAL PAYMENTS AND COSTS IN KMG GROUP OF COMPANIES, BILLION TENGE



Note: The data of 2020 is provided subject to KazakhGas JSC.

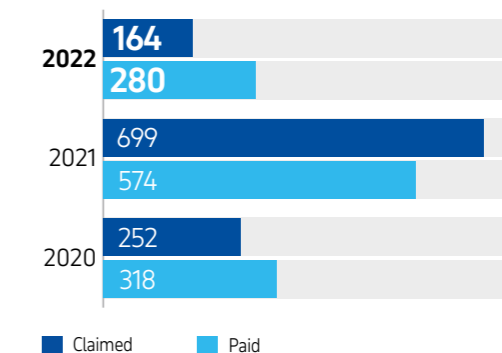
## COMPLIANCE WITH THE REQUIREMENTS OF ENVIRONMENTAL LEGISLATION

3-3, 307-1

The Company is working to identify inconsistencies with the environmental legislation of the Republic of Kazakhstan at production facilities, identify problematic issues and manage risks to take measures to prevent any inconsistencies with the requirements of the legislation.

This chart shows the amount of penalties claimed and paid.

### ENVIRONMENTAL PENALTIES, MILLION TENGE



In December 2021, Kazakhoil Aktobe LLP had the penalty imposed for damages in the amount of 5.9 billion tenge, in 2022 the work on making appeals was performed.

# APPENDICES



**Nazar  
BALGABAYEV**

Best Turner  
 "Karazhanbasmunai" JSC

First place in the "Uzdik Maman – 2022"  
 professional contest

## ANNEXES

Independent verification report .....	168
Annex 1. Reporting boundaries, changes, notes.....	170
Annex 2. Environmental indicators.....	173
Annex 3. Social indicators.....	176
Annex 4. GRI Content Index.....	177
Annex 5. Abbreviations and acronyms.....	187
Contact information .....	191

# INDEPENDENT VERIFICATION REPORT



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### Independent practitioner's assurance report

To the Shareholders, Management and Stakeholders of National Company "KazMunayGas" JSC

**Subject matter**

We have been engaged by National Company "KazMunayGas" JSC (hereinafter "the Company") to perform a limited assurance engagement, as defined by International Standards on Assurance Engagements, (hereinafter "the Engagement"), to report on the Company's Sustainability Report 2022 (hereinafter "the Report") for 2022 (hereinafter "the reporting period"). Under this engagement, we did not perform any procedures with regard to the following:

- ▶ Forward-looking statements on performance, events or planned activities of the Company;
- ▶ Quantitative and qualitative data for contractors for the following indicators: Lost Time Injury Rate (LTIR), Fatal Accident Rate (FAR), and Road Accident Per Million Kilometer Rate (MVCR); and
- ▶ Information about Report compliance with the Sustainable Development Goals and with the principles of the UN Global Compact.

**Applicable criteria**

In preparing the Report the Company applied Global Reporting Initiative Sustainability Reporting Standards 2021 (hereinafter "GRI Standards"), GRI 11: Oil and Gas Sector 2021 and the sustainability reporting principles of the Company as set forth in paragraphs "About Report", in Annex 1 of the Report, also in the notes to the indicators in the Report text (hereinafter "the Criteria").

**The Company's responsibilities**

The Company's management is responsible for selecting the Criteria, and for presenting the Report in accordance with the Criteria, in all material respects. This responsibility includes establishing and maintaining internal controls, maintaining adequate records and making estimates that are relevant to the preparation of the Report, such that it is free from material misstatement, whether due to fraud or error.

**Practitioner's responsibilities**

Our responsibility is to express a conclusion on the presentation of the Report based on the evidence we have obtained.

We conducted our assurance engagement in accordance with International Standard for Assurance Engagements (revised) "International Standard for Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000"). ISAE 3000 requires that we plan and perform our Engagement to obtain limited assurance about whether, in all material respects, the Report is presented in accordance with the Criteria, and to issue a report. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risk of material misstatement, whether due to fraud or error.

We believe that the evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusions.

**Our Independence and Quality Control**


Our firm applies International Standard on Quality Management 1 which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We comply with the independence and other ethical requirements of the IESBA Code of Ethics for Professional Accountants, which establishes the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

**Summary of work performed**

The assurance engagement performed represents a limited assurance engagement. The nature, timing and extent of procedures performed in a limited assurance engagement are less than in a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is lower.

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Although we considered the effectiveness of management's internal controls when determining the nature and extent of our procedures, our assurance engagement was not designed to provide assurance on internal controls. Our procedures did not include testing controls or performing procedures related to checking aggregation or calculation of data within information technology systems.

A limited assurance engagement consists of making inquiries, primarily of people responsible for preparing the Report and related information, applying analytical and other appropriate procedures.

Our procedures included:

- ▶ Inquiries of the representatives of the Company management and specialists responsible for its sustainability policies, activities, performance, and relevant reporting.
- ▶ Analysis of key documents related to the Company sustainability policies, activities, performance, and relevant reporting.
- ▶ Obtaining understanding of the process used to prepare the information on sustainability performance indicators of the Company.
- ▶ Benchmarking of the Report against sustainability reports of selected international and Kazakhstani peers of the Company and lists of sector-specific sustainability issues raised by stakeholders.
- ▶ Review of a selection of corporate and external media publications with respect to the Company sustainability policies, activities, events, and performance of reporting period.
- ▶ Analysis of material sustainability issues identified by the Company.
- ▶ Identification of sustainability issues material for the Company based on the procedures described above and analysis of their reflection in the Report.
- ▶ Review of data samples regarding to key production, transportation and refining of oil and gas, economics and finance, personnel management, use of energy resources, environmental protection, industrial safety, labor safety and social and charitable activities indicators for the reporting period, to assess whether these data have been collected, prepared, collated and reported appropriately.
- ▶ Collection on a sample basis of evidence substantiating other qualitative and quantitative information included in the Report at the headquarters level.
- ▶ Visited the Company's production facilities of "Embamunaygas" JSC and "Pavlodar Oil Chemistry Refinery" LLP to interview executives responsible for production and finance, human resources, environmental protection, health and safety, charitable and social activities, and gather evidence supporting the Sustainability information in the Report regarding sustainability policies, activities, and events of reporting period.
- ▶ Assessment of compliance of the Report and its preparation process with Company's sustainability reporting principles.
- ▶ Assessment of compliance of information and disclosures in the Report with the GRI Standards "in accordance" requirements.

We also performed other procedures as we considered necessary in the circumstances.

**Conclusion**

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Report is not represented fairly, in all material respects, according to the Criteria.

*Ernst & Young Advisory LLP*

Almaty  
May 18, 2023

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# ANNEX 1.

## REPORTING BOUNDARIES, CHANGES, NOTES

2-2, 2-4, 3-1, 3-2

The boundaries of the Report cover subsidiaries and affiliates of KMG, in which fifty percent or more of the voting shares (participation interests) are directly or indirectly owned by KMG on the right of ownership or trust management, as well as legal entities whose activities KMG has the right to control.

**As of December 31, 2022, the following significant direct subsidiaries were included in the consolidated financial statements:** KazMunayGas Exploration Production JSC, KazMunayTeniz IOC JSC, KMG Karachaganak LLP, Kazakhturkmunai LLP, KMG Kashagan B.V, JSC "KazTransOil", NMSC Kazmorttransflot JSC, Cooperative KazMunayGas PKI U.A., Atyrau Refinery LLP, Pavlodar Petrochemical Plant LLP, KMG International N.V., KMG Drilling&Services LLP.

**The boundaries of the section "Use of energy resources and improvement of energy efficiency":** Atyrau Refinery LLP, PetroKazakhstan Oil Products LLP, Pavlodar Petrochemical Plant LLP, Kazakh Gas Processing Plant LLP, JV CASPI BITUM LLP, JSC "KazTransOil", Karazhanbasmunai JSC, Mangistaumunaigas JSC, Embamunaigas JSC, Kazgermunai Joint Venture LLP, Kazakhoil Aktobe LLP, Ozenmunaigas JSC, NMSC Kazmorttransflot JSC, Kazakhturkmunai LLP<sup>27</sup>.

**Boundaries of the section "Use of water resources":** Karazhanbasmunai JSC, Mangistaumunaigas JSC, JV Kazgermunai LLP, Kazakhturkmunai LLP, Ozenmunaigas JSC, Embamunaigas JSC, KazakhOil Aktobe LLP, Kazakh Gas Processing Plant LLP, JV CASPI BITUM LLP, Pavlodar Petrochemical Plant LLP, PetroKazakhstan Oil Products LLP, Atyrau Refinery LLP, JSC "KazTransOil", NMSC Kazmorttransflot JSC, Magistralny Vodovod LLP, UDTV LLP – these subsidiaries and affiliates are the main operating assets of KMG and have a significant impact on the use of water resources in Kazakhstan.

**The boundaries of the section "Emissions to atmospheric air"** cover the following subsidiaries and affiliates of KMG: Karazhanbasmunai JSC, Mangistaumunaigas JSC, JV Kazgermunai LLP, Kazakhturkmunai LLP, Ozenmunaigas JSC, Embamunaigas JSC, Kazakhoil Aktobe LLP, Kazakh Gas Processing Plant LLP, JV CASPI BITUM LLP, Pavlodar Petrochemical Plant LLP, PetroKazakhstan Oil Products LLP, Atyrau Refinery LLP, JSC "KazTransOil", NMSC Kazmorttransflot LLP, Urikhtau Operating LLP, Oil Construction Company LLP, OzenMunaiService LLP (OMS), Vega Refinery, Rompetrol Petrochemicals SRL, Batumi Oil Terminal LLC<sup>28</sup>.

**The boundaries of the section "Rational use of raw gas"** cover the following subsidiaries and dependent organizations of KMG: Kazakhoil Aktobe LLP, Kazakhturkmunai LLP, Mangistaumunaigas JSC, Embamunaigas JSC, Ozenmunaigas JSC, JV Kazgermunai LLP, Karazhanbasmunai JSC.

**Boundaries of the "Waste Management" section:** Ozenmunaigas JSC, Embamunaigas JSC Karazhanbasmunai JSC, JV Kazgermunai LLP, Kazakh Gas Processing Plant LLP, Ural Oil and Gas LLP, Kazakhturkmunai LLP, Kazakhoil Aktobe LLP, Mangistaumunaigas JSC, Urikhtau Operating LLP, JSC "KazTransOil", NMSC Kazmorttransflot LLP, Atyrau Refinery LLP, Pavlodar Petrochemical Plant LLP, PetroKazakhstan Oil Products LLP, JV CASPI BITUM LLP, Oil Services Company LLP, OzenMunaiService LLP, Oil Construction Company LLP, Ken-Kurylys-Service LLP, KMG EP-Catering LLP, UDTV LLP, Mangistauenergomunai LLP, Munaitelcom LLP, Oil Transport Corporation LLP, KMG Systems & Services LLP, Zhambyl Petroleum LLP, Magistralny Vodovod LLP.

27 NMSC Kazmorttransflot JSC, Kazakhturkmunai LLP, are included in the boundaries of energy resource use, but are not included in the boundaries of energy resources saving.

28 Vega Refinery, Rompetrol Petrochemicals SRL, Batumi Oil Terminal LLC, are included in the boundaries of greenhouse gas emissions, but are not within the boundaries of pollutant emissions. NMSC Kazmorttransflot LLP, Urikhtau Operating LLP are included in the boundaries for pollutant emissions, but are not included in the boundaries for greenhouse gas emissions.

**The reporting boundaries of the section "Expenses for environmental protection" include:** Kazakhoil Aktobe LLP, Ozenmunaigas JSC, Embamunaigas JSC, Kazakhturkmunai LLP, Karazhanbasmunai JSC, JV Kazgermunai LLP, Ural Oil and Gas LLP, Mangistaumunaigas JSC, JSC "KazTransOil", NMSC Kazmorttransflot JSC, KMG Systems & Services LLP, Pavlodar Petrochemical Plant LLP, Atyrau Refinery LLP, JV CASPI BITUM LLP, PetroKazakhstan Oil Products LLP, Ken-Kurylys-Service LLP, KMG EP-Catering LLP, Kazakh Gas Refinery LLP, OzenMunaiService LLP, Oil Services Company LLP, Mangistauenergomunai LLP, Oil Transport Corporation LLP, Oil Construction Company LLP, Urikhtau Operating LLP, Kazakhstan Petrochemical Industries Inc LLP, Munaitelcom LLP, Water Production and Transportation Department LLP.

**The reporting boundaries of the "Compliance" section include:** Ozenmunaigas JSC, Embamunaigas JSC, Karazhanbasmunai JSC, JV Kazgermunai LLP, Kazakh GPP LLP, OzenMunaiService LLP, Kazakhturkmunai LLP, Kazakhoil Aktobe LLP, Mangistaumunaigas JSC, JSC "KazTransOil", NCSC Kazmorttransflot LLP, Oil Construction Company LLP, Oil Services Company LLP, Urikhtau Operating LLP, KMG Systems & Services LLP, Atyrau Refinery LLP, Pavlodar Petrochemical Plant LLP, PetroKazakhstan Oil Products LLP, JV CASPI BITUM LLP.

**The reporting boundaries of the "Social Responsibility" section cover the following subsidiaries and affiliates of KMG:** Ozenmunaigas JSC, Embamunaigas JSC, KazMunaiGas EP JSC, Cooperative KazMunaiGaz U. A, UDTV LLP, Ken-Kurylys-Service LLP, KMG EP-Catering LLP, KazGPZ LLP, OzenMunaiService LLP, Kazakhturkmunai LLP, Kazakhoil Aktobe LLP, Urikhtau Operating LLP, JSC "KazTransOil", NMSC Kazmorttransflot LLP, KMG Systems & Services LLP, JV CASPI BITUM LLP, Pavlodar Petrochemical Plant LLP, Atyrau Refinery LLP, KMG Drilling & Services LLP, KMG-Security LLP, Oil Construction Company LLP, Oil Services Company LLP, Mangystauenergomunai LLP, Munaitelcom LLP, Oil Transport Corporation LLP, KazMunayGas NC JSC, KMG International N.V., KMG Finance Sub B.V., Al-Farabi Operating LLP, KMG Engineering LLP, KMG Karachaganak LLP, KMG-Kumkol LLP, KazMunaiGaz-Service LLP, KMT LLP, AK SU KMG LLP (Satpayev Operating LLP), PSA LLP, Batumi Sea Port LLC, KazMunaiGaz-Onimderi LLP, Batumi Oil Terminal LLC, Karpovsky Severny LLP, Petrotrans Limited, Magistralny Vodovod LLP, KMG-Aero LLP, including reporting boundaries for the following social indicators:

**"Personnel turnover":** CC KMG, JV CASPI BITUM LLP, KMG EP-Catering LLP, KMGSecurity LLP, KPI Inc. Company, Professional Geo Solutions Kazakhstan LLP, Ak Su KMG LLP, AlFarabi Operating LLP, Atyrau Refinery LLP, Batumi Oil Terminal, Batumi Sea Port LLC, KMG Drilling & Services, Zhambyl Petroleum LLP, Zhenis Operating LLP, Isatai Operating Company LLP, JV Kazgermunai LLP, KazGPZ LLP, FSCO KMG Kashagan B.V., Karazhanbasmunai JSC, KKS LLP, KMG Engineering LLP, KMG International, KMG Karachaganak LLP, KMG Systems & Services LLP, MNC KazMunaiTeniz LLP (under liquidation), NMSC Kazmorttransflot JSC, Kazakhoil Aktobe, Kazakhstan-China Pipeline LLP, Kazakhturkmunai LLP, Magistralny Vodovod, JSC "KazTransOil", KMG Kumkol, Kurmangazy Petroleum LLP, Mangistaumunaigas JSC, Munaitelcom LLP, Mangistauenergomunai LLP, NGKC LLC, Ozenmunaigas JSC, OzenMunaiService LLP, KNGC LLC, Oil Construction Company LLP, Oil Transport Corporation LLP, PetroKazakhstan Oil Products LLP, NWTC MunaiTas LLP, UDTV LLP, Urikhtau Operating LLP, Embamunaigas JSC, KMG Barlau LLP, Ural Oil & Gas LLP, Pavlodar Petrochemical Plant LLP, KazMunaiGaz EP JSC, TH KazMunaiGaz N.V., Cooperative KazMunaiGaz U.A., KMG Finance Sub B.V.

**"Actual number of employees":** CC KMG, KLPE LLP, KTO JSC, Ozenmunaigas JSC, Pavlodar Petrochemical Plant, EMG JSC, KMG International JSC, JSC KMG EP, TH KazMunaiGaz N.V., Cooperative KazMunaiGaz U.A., KMG Finance Sub B.V, Zhenis Operating LLP, KazGPZ LLP, JV CASPI BITUM LLP, KATERING LLP, FSCO KMG Kashagan B.V., Ken-Kurylys-Service LLP, KMG Drilling & Services LLP, Al-Farabi LLP (KMG-Eurasia LLP), KMG Engineering LLP, KMG Karachaganak LLP, KMGcumkol LLP, KMG-Security LLP, KMG Systems & Services LLP, KMT LLP, NMSC Kazmorttransflot JSC, Kazakhturkmunai LLP, MTK LLP, Mangistauenergomunai LLP, KMG-Barlau, Oil Construction Company LLP, Oil Services Company LLP, Oil Transport Corporation LLP, AK SU KMG LLP, Satpayev Operating LLP, UDTV LLP, Urikhtau Operating LLP, Atyrau Refinery LLP, Batumi Sea Port LLC, Batumi Oil Terminal LLC, Petrotrans Limited, Magistralny Vodovod LLP, OzenMunaiService LLP, KMG Aero LLP, KCP LLP, Kurmangazy Petroleum LLP.

**“Ratio of entry-level wages in the Group to the national statutory established by national legislation**

**minimum wage”:** KMG NC, KLPE LLP, KTO JSC, Ozenmunaigas JSC, Pavlodar Petrochemical Plant LLP, EMG JSC, KMG International JSC, KazGPZ LLP, FSCO KMG Kashagan B.V, KMG Drilling & Services LLP, Al-Farabi LLP, KMG-Eurasia LLP, KMG Engineering LLP, KMG Karachaganak LLP, KMGCumkol LLP, KMG-Security LLP, KMG Systems & Services LLP, KMT LLP, NMSC Kazmortransflot JSC, Kazakhturkmunai LLP, MTK LLP, Mangistauenergomunai LLP, KMG-Barlau LLP, Oil Construction Company LLP, Oil Services Company LLP, Oil Transport Corporation, UDTV LLP, Urikhtau Operating LLP, Atyrau Refinery LLP, Batumi Sea Port LLC, Batumi Oil Terminal LLC, Magistralny Vodovod LLP, OzenMunayService LLP, KMG Aero LLP, KCP LLP, Kurmangazy Petroleum LLP.

**“Average annual number of academic hours per employee”:** JSC NC KMG, Ozenmunaigas JSC, Embamunaigas JSC, Kazakhturkmunai LLP, Urikhtau Operating LLP, KMG Karachaganak LLP, KazMunayTeniz IOC JSC, Kurmangazy Petroleum LLP, Kazakhoil Aktobe LLP, Professional Geo Solutions Kazakhstan LLP, Karazhanbasmunai JSC, JV Kazgermunai LLP, Ural Oil and Gas LLP, Mangistaumunaigas LLP, Isatai Operating Company LLP, KMG Drilling & Services LLP, KPI Inc. LLP, Oil Services Company LLP, PSA LLP, Ak SU LLP, Al Farabi Operating LLP, Atyrau Refinery LLP, KazGPZ LLP, KKS LLP, KLPE LLP, KMG International LLP, KazMunayGas-Aero LLP, KMG-Kumkol LLP, Munaytelekom LLP, SZTK LLP, MunaiTas LLP, Mangistauenergomunai LLP, Oil Transport Corporation LLP, OzenMunaiService LLP, NMSK Kazmortransflot LLP, KNGK LLC, Management of water extraction and transportation LLP, Oil Construction Company LLP, Pavlodar Petrochemical Plant LLP, JSC “KazTransOil”, KMG Systems & Services LLP, KMG EP Catering LLP, KMG Kashagan B.V., Zhenis Operating LLP, JV CASPI BITUM LLP, KMG Engineering LLP, PetroKazakhstan Oil Products LLP, KMG Security LLP.

**“Social support of employees and non-working pensioners”:** Ozenmunaigas JSC, Embamunaigas JSC, Karazhanbasmunai JSC, JV Kazgermunai LLP, Ural Oil and Gas LLP, Kazakhturkmunai LLP, Kazakhoil Aktobe LLP, KMG Karachaganak LLP, Urikhtau Operating LLP.

**“Contributions to socio-economic development of the regions of presence:** Ozenmunaigas JSC, Embamunaigas JSC, Karazhanbasmunai JSC, Mangistaumunaigas JSC, JV KazGerMunai LLP, Kazakhoil Aktobe LLP, Pavlodar Petrochemical Plant LLP, PetroKazakhstan Oil Products LLP, Ural Oil and Gas LLP, Kazakhturkmunai LLP, KMG Kashagan B.V.

**“The number of employees on unpaid leave for child care”:** NC KazMunayGas JSC, JV CASPI BITUM LLP, KLPE LLP, KMG EP-Catering LLP, KMG-Security LLP, KPI Inc. Services Company, Professional Geo Solutions Kazakhstan LLP, Ak Su KMG LLP, Al-Farabi Operating LLP, Atyrau Refinery LLP, KazMunaiGaz-Aero LLP, Batumi Oil Terminal LLC, Batumi Sea Port LLC, KMG Drilling & Services LLP, Zhambyl Petroleum LLP, Zhenis Operating LLP, Isatai Operating Company LLP, JV Kazgermunai LLP, KazGPZ LLP, FSCO NC KMG Kashagan B.V., Karazhanbasmunai JSC, KKS LLP, KMG Engineering LLP, KMG International, KMG Karachaganak LLP, KMG Systems & Services LLP, KazMunaiGazService LLP, KazMunayTeniz IOC JSC, NMSC Kazmortransflot LLP, Kazakhoil Aktobe LLP, Kazakhstan-China Pipeline LLP, Kazakhturkmunai LLP, Magistralny Vodovod LLP, KazTransOil JSC, KMGKumkol LLP, Kurmangazy Petroleum LLP, Mangistaumunaigas JSC, Munaitelcom LLP, Mangistauenergomunai LLP, NGCC LLC, Ozenmunaigas JSC, OzenMunaiService LLP, KNGC LLC, Oil Construction Company LLP, OTK LLP, PetroKazakhstan Oil Products LLP, NWTK MunaiTas LLP, UDTV LLP, Urikhtau Operating LLP, Embamunaigas JSC, Pavlodar Petrochemical Plant LLP, UOG LLP, KMG Barlau LLP, KMG EP LLP, Petrotrans Limited TH KazMunaiGaz, N.V. Cooperative KazMunaiGaz U.A., KMG Finance Sub B.V.

## ANNEX 2. ENVIRONMENTAL INDICATORS

	Production			Transportation			Processing		
	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Greenhouse gas (GHG) emissions</b>									
Direct GHG emissions (CO <sub>2</sub> , million tons)	2.0	2.2	2.4	2.1	0.2	0.1	4.6	4.5	5.1
GHG emission intensity (tons of CO <sub>2</sub> per 1,000 tons of HCs)	87	102	114	-	-	-	248	226	236
<b>APG flaring</b>									
Flaring (million tons of CO <sub>2</sub> )	0.13	0.11	0.09	-	-	-	-	-	-
The amount of flared gas per unit of produced HCs (tons per 1,000 tons of produced HCs)	2.2	2.1	1.5	-	-	-	-	-	-
Flaring (million m <sup>3</sup> )	57.6	52.5	35.7	-	-	-	-	-	-
<b>Energy output</b>									
Energy consumption (million GJ)	48.2	53.9	58.2	44.6	5.4	5.3	63.8	55.5	68.7
<b>Emissions of pollutants</b>									
Sulfur oxides (SO <sub>x</sub> ) (thousand tons SO <sub>2</sub> )	5.6	7.4	6.0	0.3	0.1	0.09	6.9	4.7	4.5
Nitrogen oxides (NO <sub>x</sub> ) (thousand tons NO <sub>2</sub> )	5.4	5.6	7.5	5.6	0.6	1.2	6.7	6.5	7.3
<b>Spills</b>									
Unauthorized tie-ins – volume (thousand tons)	-	-	-	-	-	-	-	-	-
Unauthorized tie-ins – number	-	-	-	-	-	-	-	-	-
Oil spills – volume (land) (thousand tons)	0.29	0.33	0.29	-	-	-	-	-	-
<b>Water</b>									
Total volume of water intake of KMG (million m <sup>3</sup> )	47.7	45.1	43.0	22.7	23.1	24.9	15.4	16.1	15.8
Drainage – volume (million m <sup>3</sup> )	0.7	0.4	0.5	0.8	0.2	0.3	9.2	12.9	10.0
<b>Waste (recovery and disposal)</b>									
Hazardous (thousand tons)	824.9	788.4	1,026.5	40.3	69.1	15.4	128.5	106.7	55.3
Non-hazardous (thousand tons)	28.8	34.7	18.0	6.8	11.1	4.1	1.9	22.0	3.1
Total waste (thousand tons)	853.7	823.1	1,044.4	47.1	80.2	19.5	130.4	128.7	58.3
*of these, drilling waste, dry land (thousand tons)	178.7	158.6	220.4	-	-	-	-	-	-
*of these, drilling waste, sea (thousand tons)	0	0	0	-	-	-	-	-	-



## ENVIRONMENTAL COSTS

Expenditures	2020		2021			2022		
	million tenge	million USD	KMG million tenge	million USD	KTG (10 months) million tenge	million USD	million tenge	million USD
1 Costs associated with waste management, emissions, and pollutants discharges, total	18,312.1	43.0	23,468.9	55	328.7	0.77	28,229.6	61.01
1.1 Waste processing and disposal	13,190.3	30.9	12,750.86	299	80.3	0.18	14,370.8	31.06
1.2 Purification of emissions and pollutant discharges	4,787.9	11.2	10,104.56	23.7	197.7	0.46	13,032.5	28.17
1.3 Costs of development and verification of document packages on greenhouse gas emissions	149.3	0.4	229.29	0.5	22.5	0.05	702.0	1.51
1.4 Environmental liability insurance	125.1	0.3	370.35	0.9	28.2	0.06	37.9	0.08
1.5 Costs of environmental compensatory measures	0.3	0.001	4.4	0.01	0	0	86.2	0.18
1.6 Costs of compensatory measures in the field of environmental protection	59.2	0.1	9.42	0.02	0	0	0	0
2 Investments in environmental impact prevention and environmental management, total	21,535.3	50.5	5,607.5 <sup>29</sup>	13	23.8	0.05	667.7	1.44
2.1 Personnel for education and training of employees	9.3	0.02	68.2	0.16	0	0	22.4	0.04
2.2 External certification and development of environmental management system	24.1	0.06	39.21	0.09	2.7	0.006	56.8	0.12
2.3 Personnel for general activities in the field of environmental management	2.0	0.005	3.4	0.008	4.1	0.009	1.02	0.002
2.4 Research and development	820.5	1.93	520.98	1.2	0	0	470.5	1.01
2.5 Additional costs for the introduction of cleaner technologies	20,665.4	48.49	4,489.8	10.5	0	0	0	0
2.6 Additional costs for "green procurement"	7.2	0.02	38.1	0.08	6.2	0.01	115.5	0.24
2.7 Other costs related to environmental management	6.8	0.02	447.7	1	10.8	0.02	1.5	0.003

<sup>29</sup> The increase in investments is associated with the construction of a gas pipeline for Urikhtau Operating LLP for the utilization of APG.

## ENVIRONMENTAL PAYMENTS (REGULATORY)

	2020		2021			2022		
	million tenge	million USD	KMG million tenge	million USD	KTG 10 months million tenge	million USD	million tenge	million USD
Emissions into the atmosphere from APG flaring	1,170	2.7	2,329	5.5	2.8	0.006	1,462	3.2
Emissions into the atmosphere (without APG flaring)	1,843	4.3	1,546	3.6	623	1.5	1,697	3.7
Discharges of pollutants	102	0.2	100	0.2	0.9	0.002	122	0.3
Waste disposal	109	0.3	228	0.5	0.3	0.001	202	0.4

## LOCATION AND SCOPE OF PRODUCTION ACTIVITIES IN RELATION TO KEY BIODIVERSITY AREAS

Site	Location	Key biodiversity areas (KBA)	Location in relation to the KBA	Contract territory area (sq.km)	Impact mitigation plan
Urikhtau	Mugalzhar District of Aktobe region	Kokzhide-Kumzhargan State Integrated Nature Reserve of local status	Includes part of the territory	239.9	Hydrogeological monitoring
Alibekmola and Kozhasay	Mugalzhar District of Aktobe Region	Kokzhide Sands Kokzhide Underground waters	Located nearby	156.5	Hydrogeological monitoring
Isatai	The central part of KSCS, Northern Mangystau region	Special environmentally sensitive area of KSCS	Located in the nature conservation area	1,343.0	Seasonal baseline environmental studies, Regular environmental monitoring
Abay	North-western part of KSCS Atyrau district	Special environmentally sensitive area of KSCS	Located in the nature conservation area	1,233.8	Seasonal background environmental studies, Regular environmental monitoring
Al-Farabi	The southern part of KSCS, Mangystau region	Environmentally sensitive area of KSCS	Does not affect the KBA	6,046.6	Seasonal background environmental studies, Regular environmental monitoring

## ANNEX 3. SOCIAL INDICATORS

Social indicators	2020	2021	2022
Actual number, people	57,073	44,650	44,688
Outstaffing, people	3,100	2,787	2,838
Employees by gender and age, including			
Women, %	19	18	18
Men, %	81	82	82
up to 30 years	12	12	11
from 31 to 50 years	60	59	59
Over 50 years	28	29	30
Heads	11	11	10
Specialists	24	20	22
Employees	65	69	67
Fatality Rate (FAR)	0.0	2.93	1.00
Social support of employees, billion tenge	21	22	24
The average annual number of hours per employee training, hours	15	17	22
Development costs of the regions of presence and social assistance under the contract for subsoil use, billion tenge	4.5	5	12

## ANNEX 4. GRI CONTENT INDEX

For the Content Index – Essentials Service, GRI Services reviewed that the GRI content index is clearly presented, in a manner consistent with the Standards, and that the references for disclosures 2-1 to 2-5, 3-1 and 3-2 are aligned with the appropriate sections in the body of the report.

 **CONTENT INDEX  
ESSENTIAL SERVICE**  
+ SECTOR STANDARDS ADD-ON

2023

Statement of use	JSC NC "KazMunayGas" has prepared a Report in accordance with GRI standards for the reporting period 01.01.2022 – 31.12.2022				
GRI 1 used	GRI 1: Foundation 2021				
Industry Standard	GRI 11: Oil and Gas Industry 2021				
Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
<b>GENERAL DISCLOSURES</b>					
<b>GRI 2: General Disclosures 2021</b>					
2-1 Organizational details	2, 4, 6, 8, 10, 12, 21				
2-2 Entities included in the organization's sustainability reporting	169				
2-3 Reporting period, frequency and contact point	187				
2-4 Restatements of information	169				
2-5 External assurance	168				
2-6 Activities, value chain and other business relationships	2, 4, 6, 8, 10, 12, 21, 162				
2-7 Employees	2, 4, 6, 8, 10, 12, 73	The share of full-time employees is disclosed without a breakdown by region due to the specifics of collecting information in the Company.			

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
2-8 Workers who are not employees	73	The information is partially disclosed. 2-8a. The Company does not collect data on the total number of employees who are not employees and whose work is controlled by the Company. Data collection on the types and categories of work performed by such employees was also not carried out in the current reporting period. 2-8b,2-8c. Not applicable, see 2-8a			
2-9 Governance structure and composition	33				
2-10 Nomination and selection of the highest governance body	40				
2-11 Chair of the highest governance body	33				
2-12 Role of the highest governance body in overseeing the management of impacts	41				
2-13 Delegation of responsibility for managing impacts	37				
2-14 Role of the highest governance body in sustainability reporting	38				
2-15 Conflicts of interest	40				
2-16 Communication of critical concerns	38, 39				
2-17 Collective knowledge of the highest governance body	42				
2-18 Evaluation of the performance of the highest governance body	42				
2-19 Remuneration policies	43				
2-20 Process to determine remuneration	43				
2-21 Annual total compensation ratio		The information is not disclosed due to data privacy restrictions			
2-22 Statement on sustainable development strategy	45				

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
2-23 Policy commitments	45, 83, 84, 144				
2-24 Embedding policy commitments	45, 78				
2-25 Processes to remediate negative impact	38, 84, 118				
2-26 Mechanisms for seeking advice and raising concerns	84				
2-27 Compliance with laws and regulations	111, 164				
2-28 Membership associations	56				
2-29 Approach to stakeholder engagement	53, 56				
2-30 Collective bargaining agreements	88				
<b>MATERIAL TOPICS</b>					
<b>GRI 3: Material Topics 2021</b>					
3-1 Process to determine material topics	52				
3-2 List of material topics	52				
<b>Greenhouse gas emissions</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	139		Principle 7, 8, 9	SDG 13, 14	11.1.1
<b>GRI 302: Energy 2016</b>					
302-1 Energy consumption within the organization	144		Principle 7, 8, 9	SDG 13, 14	11.1.2
302-2 Energy consumption outside of the organization	145		Principle 7, 8, 9	SDG 13, 14	11.1.3
302-3 Energy intensity	144, 147		Principle 7, 8, 9	SDG 13, 14	11.1.4
302-4 Reduction of energy consumption	144, 146		Principle 7, 8, 9	SDG 13, 14	
302-5 Reductions in energy requirements of products and services	144		Principle 7, 8, 9	SDG 13, 14	
<b>GRI 305: Emissions 2016</b>					
305-1 Direct (Scope 1) GHG emissions	142, 144		Principle 7, 8, 9	SDG 13, 14	11.1.5
305-2 Energy indirect (Scope 2) GHG emissions	144		Principle 7, 8, 9	SDG 13, 14	11.1.6

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
305-3 Other indirect (Scope 3) GHG emissions	142		Principle 7, 8, 9	SDG 13, 14	11.1.7
305-4 GHG emissions intensity	142		Principle 7, 8, 9	SDG 13, 14	11.1.8
305-5 Reduction of GHG emissions	142		Principle 7, 8, 9	SDG 1, 7, 8, 9, 12, 13	
<b>Air emissions</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	30, 139, 142		Principle 7, 8, 9	SDG 1, 3, 7, 8, 9, 11, 12, 14, 15	11.3.1
<b>GRI 305: Emissions 2016</b>					
305-6 Emissions of ozone-depleting substances (ODS)	142		Principle 7, 8, 9	SDG 1, 7, 8, 9, 12, 14	
305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	112, 114		Principle 7, 8, 9	SDG 3, 11, 15	11.3.2
<b>GRI 416: Customer Health and Safety 2016</b>					
416-1 Assessment of the health and safety impacts of product and service categories	30		Principle 7, 8, 9	SDG 3, 11, 15	11.3.3
<b>GRI 417: Marketing and labeling 2016</b>					
417-1 Requirements for product and service information and labeling	30		Principle 7, 8, 9	SDG 3, 11, 15	
<b>Biodiversity</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	126		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.4.1
<b>GRI 304: Biodiversity 2016</b>					
304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	126		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.4.2
304-2 Significant impacts of activities, products and services on biodiversity	129		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.4.3
304-3 Habitats protected or restored	56		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.4.4
304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	126		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.4.5

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
<b>Waste</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	117		Principle 7, 8, 9	SDG 3, 6, 12, 14, 15	11.5.1
<b>GRI 306: Waste 2020</b>					
306-1 Waste generation and significant waste-related impacts	116		Principle 7, 8, 9	SDG 3, 6, 12, 14, 15	11.5.2
306-2 Management of significant waste-related impacts	99, 118		Principle 7, 8, 9	SDG 3, 6, 12, 14, 15	11.5.3
306-3 Waste generated	105, 118		Principle 7, 8, 9	SDG 3, 6, 11, 12, 14, 15	11.5.4
306-4 Waste diverted from disposal	118		Principle 7, 8, 9	SDG 3, 6, 12, 14, 15	11.5.5
306-5 Waste directed to disposal	126		Principle 7, 8, 9	SDG 3, 6, 12, 14, 15	11.5.6
<b>Water and Effluents</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	116		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.6.1
<b>GRI 303: Water and Effluents 2018</b>					
303-1 Interactions with water as a shared resource	116		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.6.2
303-2 Management of water discharge-related impacts	116		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.6.3
303-3 Water withdrawal	116		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.6.4
303-4 Water discharge	116		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.6.5
303-5 Water consumption	116		Principle 7, 8, 9	SDG 6, 12, 14, 15	11.6.6
<b>Closure and rehabilitation</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	73, 88		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10	11.7.1
<b>GRI 402: Labor/management relations 2016</b>					
402-1 Minimum notice periods regarding operational changes	88		Principle 1,2,3,4,5,6	SDG 1, 4, 5, 8, 10	11.7.2

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
<b>GRI 404: Training and education 2016</b>					
404-2 Programs for upgrading employee skills and transition assistance programs	78, 131		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 11, 14	11.7.3
<b>Occupational health and safety</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	104, 105, 106, 109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.1
<b>GRI 403: Occupational health and safety 2018</b>					
403-1 Occupational health and safety management system	99, 100, 104, 105, 106, 109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.2
403-2 Hazard identification, risk assessment, and incident investigation	104, 105, 106, 109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.3
403-3 Occupational health services	104, 105, 106, 109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.4
403-4 Worker participation, consultation, and communication on occupational health and safety	109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.5
403-5 Worker training on occupational health and safety	109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.6
403-6 Promotion of worker health	109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.7
403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	99, 100, 109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.8
403-8 Workers covered by an occupational health and safety management system	109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.9
403-9 Work-related injuries	104, 105, 106, 109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.10
403-10 Work-related ill health	109		Principle 1, 2, 3, 4, 5, 6	SDG 3, 8	11.9.11
<b>Employment</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	73, 78, 88, 94		Principle 1,2,3,4,5,6	SDG 1, 4, 5, 8, 10, 11, 14, 16	11.10.1

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
<b>GRI 401: Employment 2016</b>					
401-1 New employee hires and employee turnover	73		Principle 1, 2, 3, 4, 5, 6	SDG 4, 5, 8, 10, 16	11.10.2
401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	73		Principle 1, 2, 3, 4, 5, 6	SDG 4, 5, 8, 10, 16	11.10.3
401-3 Parental leave	73		Principle 1, 2, 3, 4, 5, 6	SDG 4, 5, 8, 10, 16	11.10.4
<b>GRI 402: Labor/management relations 2016</b>					
402-1 Minimum notice periods regarding operational changes	88		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10	11.10.5
<b>GRI 404: Training and education 2016</b>					
404-1 Average hours of training per year per employee	78		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	11.10.6
404-2 Programs for upgrading employee skills and transition assistance programs	78, 131		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 11, 14	11.10.7
404-3 Percentage of employees receiving regular performance and career development reviews	73,75		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 11, 14	
<b>GRI 414: Supplier social assessment 2016</b>					
414-1 New suppliers that were screened using social criteria	94		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	11.10.8
414-2 Negative social impacts in the supply chain and actions taken	94		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10	11.10.9
<b>Non-discrimination and equal opportunities</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	73, 87, 88		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	11.11.1
<b>GRI 202: Market presence 2016</b>					
202-1 Ratios of standard entry level wage by gender compared to local minimum wage	82, 94		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	
202-2 Proportion of senior management hired from the local community	82		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	11.11.2
<b>GRI 205: Anti-corruption 2016</b>					
205-1 Operations assessed for risks related to corruption	87		Principle 1, 2, 3, 4, 5, 6, 10	SDG 12, 16	

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
205-2 Communication and training about anti-corruption policies and procedures	87		Principle 1, 2, 3, 4, 5, 6, 10	SDG 12, 16	
205-3 Confirmed incidents of corruption and actions taken	87		Principle 1, 2, 3, 4, 5, 6, 10	SDG 12,16	
<b>GRI 401: Employment 2016</b>					
401-3 Parental leave	73		Principle 1, 2, 3, 4, 5, 6	SDG 4, 5, 8, 10, 16	11.11.3
<b>GRI 404: Training and education 2016</b>					
404-1 Average hours of training per year per employee	78		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	11.11.4
<b>GRI 405: Diversity and equal opportunity 2016</b>					
405-1 Diversity of governance bodies and employees	75		Principle 1, 2, 3, 4, 5, 6	SDG 4, 5, 8, 10, 16	11.11.5
405-2 Ratio of basic salary and remuneration of women to men	82		Principle 1, 2, 3, 4, 5, 6	SDG 4, 5, 8, 10, 16	11.11.6
<b>GRI 406: Non-discrimination 2016</b>					
406-1 Incidents of discrimination and corrective actions taken	88		Principle 1,2,3,4,5,6	SDG 4, 5, 8, 10, 16	11.11.7
<b>GRI 408: Child labor 2016</b>					
408-1 Operations and suppliers at significant risk for incidents of child labor	88		Principle 1, 2, 3, 4, 5, 6	SDG 8, 16	
<b>GRI 409: Forced or compulsory labor 2016</b>					
409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	88		Principle 1, 2, 3, 4, 5, 6	SDG 8, 16	
<b>Freedom of association and collective bargaining</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	88		Principle 1, 2, 3, 4, 5, 6	SDG 8, 16	11.13.1
<b>GRI 407: Freedom of association and collective bargaining 2016</b>					
407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	88		Principle 1, 2, 3, 4, 5, 6	SDG 8, 16	11.13.2

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
<b>Economic impacts</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	73, 92, 151, 162		Principle 10	SDG 1, 5, 8, 9, 10	11.14.1
<b>GRI 201: Economic performance 2016</b>					
201-1 Direct economic value generated and distributed	152		Principle 10	SDG 1, 5, 8, 9, 10	11.14.2
201-3 Defined benefit plan obligations and other retirement plans	152		Principle 1, 2, 3, 6	SDG 1, 5, 8, 9, 10	
<b>GRI 202: Market Presence 2016</b>					
202-2 Proportion of senior management hired from the local community	82		Principle 1, 2, 3, 4, 5, 6	SDG 1, 4, 5, 8, 10, 16	11.14.3
<b>GRI 203: Indirect Economic Impacts 2016</b>					
203-1 Infrastructure investments and services supported	92, 156, 158		Principle 1, 2, 3, 4, 5, 6, 10	SDG 1, 5, 8, 9, 10	11.14.4
203-2 Significant indirect economic impacts	156, 158		Principle 1, 10	SDG 1, 5, 8, 9, 10	11.14.5
<b>GRI 204: Procurement Practices 2016</b>					
204-1 Proportion of spending on local suppliers	162		Principle 10	SDG 8, 9	11.14.6
<b>GRI 206: Anti-competitive Behavior 2016</b>					
206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	164		Principle 1, 2, 3, 4, 5, 6	SDG 16	
<b>Local communities</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	92		Principle 1, 2, 3, 4, 5, 6	SDG 1, 3, 5, 6, 16	11.15.1
<b>GRI 413: Local communities 2016</b>					
413-1 Operations with local community engagement, impact assessments, and development programs	92		Principle 1, 2, 3, 4, 5, 6	SDG 1, 3, 5, 6, 16	11.15.2
413-2 Operations with significant actual and potential negative impacts on local communities	92, 133		Principle 1, 2, 3, 4, 5, 6	SDG 1, 3, 5, 6, 16	11.15.3

Disclosure	Location	Exception/ reason for exclusion	Relationship with the principles of the UN Global Compact	Communication with 17 Sustainable Development Goals	GRI Sector Standard
<b>Payments to governments</b>					
<b>GRI 3: Material Topics 2021</b>					
3-3 Management of material topics	151, 152		Principle 1, 10	SDG 1, 5, 8, 9, 10, 16, 17	11.21.1
<b>GRI 201: Economic Performance 2016</b>					
201-1 Created and distributed direct economic value	152		Principle 10	SDG 1, 5, 8, 9, 10	11.21.2
201-4 Financial assistance received from the Government	152		Principle 10	SDG 1, 5, 8, 9, 10	11.21.3
<b>GRI 207: Tax 2019</b>					
207-1 Approach to tax	153		Principle 10	SDG 1, 16, 17	11.21.4
207-2 Tax governance, control, and risk management	153, 155		Principle 10	SDG 1, 16, 17	11.21.5
207-3 Stakeholder engagement and management of concerns related to tax	155		Principle 10	SDG 1, 16, 17	11.21.6
207-4 Country-by-country reporting	153, 155		Principle 10	SDG 1, 16, 17	11.21.7
<b>GRI 415: Public Policy 2016</b>					
415-1 Political contributions	152		Principle 10	SDG 16	

**TOPICS IN THE APPLICABLE GRI SECTOR STANDARDS ARE DEFINED AS NON-MATERIAL**

Topic	Explanation
<b>GRI 11: Oil and Gas Industry 2021</b>	
Topic 11.2 Climate adaptation, sustainability and transition	These topics are not material, because the Company and stakeholders have not identified a significant impact of the organization on the economy, environment and society.
Topic 11.8 Asset integrity and critical incident management	
Topic 11.12 Forced labor and modern slavery	
Topic 11.16 Rights to land and resources	
Topic 11.17 Rights of indigenous peoples	
Topic 11.18 Conflict and security	
Topic 11.19 Anti-competitive behavior	
Topic 11.20 Anti-corruption	
Topic 11.22 Public policy	

## ANNEX 5. ABBREVIATIONS AND ACRONYMS

<b>AMS</b>	Automated emission monitoring system
<b>APG</b>	Associated Petroleum Gas
<b>AR</b>	Annual Report
<b>AR</b>	Atyrau Refinery Limited Liability Partnership
<b>bln</b>	Billion(s)
<b>BoD</b>	Board of Directors
<b>BP</b>	British Petroleum
<b>CC</b>	Corporate Centre
<b>CDP</b>	Carbon Disclosure Project
<b>COVID-19</b>	Coronavirus Disease 2019
<b>CPC</b>	Caspian Pipeline Consortium Limited Liability Partnership
<b>CRMS</b>	Corporate Risk Management System
<b>EIA</b>	Environmental Impact Assessment
<b>EMG</b>	Embamunaigas Joint Stock Company
<b>EOSR</b>	Emergency Oil Spill Response
<b>ESG</b>	Environmental, Social, and Governance
<b>FAR</b>	Fatal Accident Rate per 100 million man-hours
<b>FER</b>	Fuel and Energy Resources
<b>GHG</b>	Greenhouse gas
<b>GMI</b>	Global Methane Initiative
<b>GPP</b>	Gas Processing Plant
<b>GRI</b>	Global Reporting Initiative
<b>GWS</b>	Goods, Works and Services
<b>HCS</b>	Raw Hydrocarbons
<b>HIS</b>	Helpline Information System
<b>HSE</b>	Health, Safety and Environment
<b>HSESC</b>	Health, Safety, Environment and Sustainability Committee of KMG's Board of Directors
<b>IFRS</b>	International Financial Reporting Standards

<b>IMS</b>	Integrated quality, environment, health and safety management system
<b>IOGP</b>	International Association of Oil & Gas Producers
<b>IPIECA</b>	International Petroleum Industry Environmental Conservation Association
<b>ISSA</b>	International Social Security Association
<b>IUCN</b>	International Union for Conservation of Nature
<b>KBA</b>	Key biodiversity areas
<b>KBM</b>	Karazhanbasmunay Joint Stock Company
<b>KCP</b>	Kazakhstan-China Pipeline Limited Liability Partnership
<b>KGM</b>	Kazgermunai Joint Venture Limited Liability Partnership
<b>KMG</b>	Joint-Stock Company National Company "KazMunayGas"
<b>KMG EP</b>	KazMunayGas Exploration & Production Joint Stock Company
<b>KMTF</b>	National Maritime Shipping Company "Kazmortransflot" LLP
<b>KPI</b>	Key Performance Indicator
<b>KPI</b>	Kazakhstan Petrochemical Industries Inc.
<b>KSCS</b>	Kazakhstan Sector of the Caspian Sea
<b>KTG</b>	QazaqGaz JSC (former Joint Stock Company "KazTransGas")
<b>KTM</b>	Kazakhturkmunay Limited Liability Partnership
<b>KTO</b>	Joint Stock Company "KazTransOil"
<b>LCDP</b>	The KMG Low-Carbon Development Program
<b>LLP</b>	Limited Liability Partnership
<b>LTIR</b>	Lost Time Injury Rate per 1 million man-hours
<b>MBA</b>	Master of Business Administration
<b>mIn</b>	Million(s)
<b>MMG</b>	Mangistaumunaigas Joint Stock Company
<b>MOPS</b>	Main Oil Pumping Station
<b>MS</b>	Management System
<b>MTF</b>	Modernization of treatment facilities
<b>MTF</b>	Mechanical treatment facilities
<b>NC</b>	National Company
<b>NMSC</b>	National Maritime Shipping Company

<b>OMG</b>	Ozenmunaigas Joint Stock Company
<b>OPS</b>	Oil Pumping Station
<b>OSC</b>	Oil Service Company Limited Liability Partnership
<b>OSRL</b>	Oil Spill Response Limited
<b>PJSC</b>	Public Joint Stock Company
<b>PKOP</b>	PetroKazakhstan Oil Products Limited Liability Partnership (Shymkent Oil Refinery)
<b>PPCP</b>	Pavlodar Petrochemical Plant Limited Liability Partnership
<b>PwC</b>	PricewaterhouseCoopers
<b>RES</b>	Renewable Energy Sources
<b>RoK</b>	Republic of Kazakhstan
<b>SDE</b>	Subsidiaries and Dependent Entities
<b>SDG</b>	United Nations Sustainable Development Goals
<b>SPNA</b>	Specially Protected Natural Area
<b>STB</b>	Second-tier bank
<b>TAP</b>	Tax Accounting Policy
<b>TCO</b>	Tengizchevroil LLP
<b>UN</b>	United Nations
<b>UNESCO</b>	United Nations Educational Scientific and Cultural Organisation
<b>UNGC</b>	United Nations Global Compact
<b>UDTV</b>	Water Production and Transportation Department Limited Liability Partnership
<b>WWF</b>	World Wildlife Fund
<b>ZLD</b>	Zero liquid discharges



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