

ESG RISK RATING

An ESG risk rating was approved by KMG's Board of Directors as a corporate KPI for 2022, reflecting the Company's intent to manage material ESG risks and commitment to sustainability principles in the international oil and gas market. Achievement of the corporate KPI includes addressing the key ESG matters within KMG Group.

Sustainalytics assessed KMG's ESG risk management at 28.4. The Company's risk of exposure to ESG factors is medium. KMG maintained the rating despite materialised occupational health risks. The Company got high praise from experts for its engagement with local communities in the regions of operation, tax transparency, and commitment to preserving the environment and biodiversity. Moreover, the expert report recognised KMG Group's corporate governance and adherence to high standards of business ethics.

KMG will keep streamlining its activities to meet the highest sustainability standards. We will take steps to prevent and eliminate workplace accidents, consistently reduce GHG emissions, and work more to improve social and environmental conditions across our footprint. KMG has developed and approved an action plan to improve its ESG rating, which includes 65 measures that cover and factor in environmental and social risks for the business, as well as corporate governance risks for the Company. In 2023, KMG intends to update the plan based on measures already implemented.

Particular attention is paid to enhancing the sustainability culture. Sustainability training courses are held on a regular basis for employees of the Corporate centre and subsidiaries and associates.

In 2022, KMG did the following to improve its ESG rating:

- approved an Action Plan to implement the Low-Carbon Development Programme for 2022–2031;
- approved KMG's Sustainable Development Policy;
- approved KMG's Human Rights and Public Relations Policy;
- put in place and run an accessible complaint review mechanism;
- conducted tax reporting under GRI 207 and BEPS Action 13;
- disclosed the Report on Payments to Government Bodies for public access on the corporate website;
- improved gender balance in the Board of Directors by adding an independent director Assel Khairova;
- disclosed information on fatalities involving contractors in the 2021 Sustainability Report.

Action plan to improve KMG's ESG rating for 2023:

- develop and approve a strategic document on sustainable development;
- approve KMG's Water Resources Management Programme;
- complete the Tazalyq project;
- finish the upgrade and expansion of the Astrakhan–Mangyshlak water pipeline;
- take measures to eliminate historical oil waste and remediate oil-contaminated lands;



28.4

ESG risk rating from Sustainalytics

- conduct tax reporting under GRI 207 and BEPS Action 13;
- disclose the Report on Payments to Government Bodies for public access on the corporate website;
- disclose the accomplishments under the Comprehensive Plan of Socio-economic Development of Mangistau Region for 2021–2025 in the Sustainability Report;
- develop and approve an internal document on area closure and remediation;
- prepare for initial TCFD disclosure;
- develop and approve a Charity Policy for KMG and its subsidiaries and associates;
- keep disclosing information in the Sustainability Report under GRI 2021.

COMMITMENT TO UN GLOBAL COMPACT PRINCIPLES AND 17 SUSTAINABLE DEVELOPMENT GOALS



KMG's approach to sustainable development is based on aligning the Company's interests and plans with the basic principles of the UN, universal human values, global trends, and development priorities in Kazakhstan.

KMG reiterates its commitment to all the ten principles of the UN Global Compact.

- **Principle 1.** Businesses should support and respect the protection of the internationally proclaimed human rights.
- **Principle 2.** Businesses should make sure that they are not complicit in human rights abuses.
- **Principle 3.** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

- **Principle 4.** Businesses should uphold the elimination of all forms of forced and compulsory labour.
- **Principle 5.** Businesses should uphold the effective abolition of child labour.
- **Principle 6.** Businesses should uphold the elimination of discrimination in respect of employment and occupation.
- **Principle 7.** Businesses should support a precautionary approach to environmental challenges.

- **Principle 8.** Businesses should undertake initiatives to promote greater environmental responsibility.
- **Principle 9.** Businesses should encourage the development and diffusion of environmentally friendly technologies.
- **Principle 10.** Businesses should work against corruption in all its forms, including extortion and bribery.



KMG is committed to all the **17 Sustainable Development Goals of the United Nations (UN SDGs)**.

We prioritise six SDGs and fourteen targets in line with our strategic goals and priorities and report on our contribution to their achievement.

They are aligned with strategic and business initiatives implemented by KMG.

Implementation of sustainable development goals at KMG

SDGs

Ensure healthy lives and promote well-being for all at all ages



Priority targets

3.6. By 2020, halve the number of global deaths and injuries from road traffic accidents

KMG's contribution

Travel Management project

In order to improve transport safety and foster a safe driving culture, the Travel Management project is planned to be rolled out across KMG's subsidiaries and associates.

Next steps:

- analysing the maturity of processes in subsidiaries and associates with account of the level of automation and availability of GPS trackers;
- preparing individual programmes to develop transport management processes in each subsidiary and associate;
- introducing the transport management system in phases with a focus on road safety.

Outcome

The Travel Management pilot project run at Embamunaigas (EMG) was successfully completed with the following results:

- speed limit violations reduced by 62%;
- 591 speed limit signs installed/updated on roads of EMG production units;
- a rating on the basis of scores for the driving style and recorded violations introduced;
- an up-to-date electronic map of field and unpaved roads and coordinates of EMG field facilities drawn;
- a new functionality implemented (trip tickets, deviations from the route, online notifications).

3.8. Achieve health coverage, including access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines.

Employee health management

KMG will develop an Employee Health Management Programme that will focus on:

- prevention of occupational diseases;
- development of minimum standards for healthcare and provision of medical assistance to employees of production facilities;
- regular health monitoring on KMG Group's employees;
- improving the quality of healthcare and promoting a healthy lifestyle among employees.

Health insurance

Medical examinations and vaccination of employees are carried out on a regular basis.

10 Steps to Better Health initiative

Caring for the health and well-being of our employees is a priority for KMG and is critical to our productivity, competitiveness and business continuity. Primarily aimed at increasing physical activity and removing unhealthy eating habits, the initiative has proved effective in delivering strong health outcomes for the Company's employees.

Outcome

100% of KMG's employees are covered by health insurance.

3.9. Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

Korgau Card

The Korgau Card programme is aimed at identifying and reporting unsafe conditions / unsafe behaviour / unsafe actions / hazardous factors.

SDGs

Ensure access to affordable, reliable, sustainable and modern energy, improve energy efficiency and increase the share of renewable energy



Priority targets

7.1. Ensure access to affordable, reliable and modern energy services

KMG's contribution

KMG Group's key strategic energy saving and energy efficiency initiatives include process equipment upgrades, deployment of energy saving technologies, optimisation of heat generation and consumption, and the development of the Group's own generation assets, including RES-based ones. The 2031 Low-Carbon Development Programme was approved and its priority focus areas defined.

Improved energy efficiency:

- introducing the best available technologies (BAT);
- upgrading boiler and furnace equipment;
- upgrading process units consuming thermal energy;
- upgrading machinery;
- implementing management programmes to streamline the operation of machinery and pumping equipment by introducing variable speed drives (VSD);
- installing thermal insulation on core and auxiliary equipment;
- optimising the transport fleet;
- introducing automated fuel and energy accounting and management systems;
- establishing energy management services.

7.b. Expand infrastructure and upgrade technology for supplying modern and sustainable energy services

Renewable energy projects:

- 1 GW wind power plant jointly with Total Eren;
- 120 MW hybrid power plant jointly with Eni;
- 50 MW wind power plant in Astana jointly with Eni;
- small solar power plants with a total capacity of 6.9 MW at subsidiaries and associates;
- purchase of International Renewable Energy Certificates (I-REC) to certify the consumption of power generated from renewable energy sources.

Outcome

On 31 May 2022, KMG approved an Action Plan to implement its 2031 Low-Carbon Development Programme.

Achieving energy efficiency gains of 541,029 tonnes of reference fuel by:

- saving 426,421 thous. kWh of electricity, saving 292,541 Gcal of heat, saving 439,246 tonnes of fuel resources measured in tonnes of reference fuel;
- generating at least 60,978 thous. kWh of green electricity by the Group's own small-capacity renewable energy power plants operated by its subsidiaries and associates.
 - Achieving a 15% share of renewable energy in KMG's energy consumption.
 - Implementing renewable energy projects with a total capacity of at least 300 MW.
 - Having 100% of subsidiaries and associates covered by energy management services.



For more details, see the Low-Carbon Development Programme section.

SDGs

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work



Priority targets

KMG's contribution

8.5. Achieve full and productive employment and decent work for women and men, including for young people and persons with disabilities, and equal pay for work of equal value

Outcome

KMG employs more than 44,000 people across its regions of operation, including 82% of men and 18% of women

8.6. Substantially reduce the proportion of youth not in employment, education or training

Zhas Maman programme run by Atyrau Refinery and Pavlodar Refinery to attract and develop young talent.
Dual training: a programme offering training, internship and further employment with KMG Group.

Outcome

As part of the recruitment and development programme for young professionals skilled in production occupations, in 2019–2021, Atyrau Refinery hired 9 out of 23 people enrolled in the programme, and Pavlodar Refinery hired 10 people out of 14 people enrolled.

As part of the dual training programme, in 2019–2021, EMG hired 2 out of 114 people enrolled in the programme, Atyrau Refinery hired 7 out of 56 people enrolled, and Pavlodar Refinery employed 41 out of 57 people enrolled.

8.8. Protect labour rights and promote safe and secure working environments for all workers

Standard Rules for Rendering Social Support

Social support for employees of KMG subsidiaries and associates is set out in their collective bargaining agreements and the Rules for Rendering Social Support. To unify the types and standards of social support across all KMG Group enterprises, the Standard Rules for Rendering Social Support to Employees of KMG Subsidiaries and Associates were adopted.

For more details, see the Personnel Development section.

SDGs

Build resilient infrastructure, promote sustainable industrialisation and foster innovation



Priority targets

KMG's contribution

9.1. Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being

KMG's Digital Transformation Programme promotes the expansion of scientific research and development of technological capabilities across industrial sectors. KMG invests heavily in relevant scientific research and local capacity building. The development of domestic technological capacities to ensure industrial diversification will also have a positive impact on the climate situation in the country.

Development of the ABAI Information System

Under the project, all production data of KMG Group will be centralised in a single Big Data database and will be processed and analysed using AI and machine learning.

The ABAI information system will comprise 17 standalone modules, each designed to tackle specific operating issues.

Outcome

Five pilot modules of ABAI developed and tested:

- ABAI Database,
- Visualisation Centre,
- Complications Monitoring,
- Technological Mode,
- Selection of Downhole Pumping Equipment.

Effects achieved:

- production increased thanks to more efficient process operations at Kazgermunaï;
- number of well services reduced owing to reduced number failures of downhole pumping equipment at Mangistaumunaigaz;
- accuracy of chemical dosing improved based on the actual corrosion rate at fields of Ozenmunaigaz;
- 12 types of reporting formats automated (oil production measurements, production profile by well, etc.).

For more details, see the Digitalisation and Transformation section.

9.4. Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes

The 2031 Low-Carbon Development Programme was approved, with the following priority areas in energy efficiency defined:

- streamlining energy management and establishing energy management services;
- introducing automated fuel and energy accounting and management systems;
- exploring possibilities to implement breakthrough innovations across the assets of specific subsidiaries and associates;
- introducing the best available technologies (BAT);
- upgrading machinery; optimising and upgrading the transport fleet.

Outcome

Targets set for 2031:

- 100% of subsidiaries and associates covered by energy management services;
- 10% energy intensity reduction from the 2019 level;

For more details, see the Low-Carbon Development Programme section.



SDGs

Take urgent action to combat climate change and its impacts



Priority targets

13.2. Integrate climate change measures into policies, strategies and planning.

KMG's contribution

Corporate methodology for measuring GHG emissions

In order to standardise approaches to the recording, monitoring and reporting of GHG emissions and to provide uniform guidelines for their calculations, KMG developed and approved a corporate methodology for monitoring and recording GHG emissions.

Low-Carbon Development

A department for low-carbon development has been set up.

Green Office

Company-wide green initiatives are being actively promoted, and the Green Office principles, including the introduction of separate waste collection, water and energy saving in the office, etc., are being gradually implemented.

Outcome

KMG approved an Action Plan to implement the 2022–2031 Low-Carbon Development Programme.

KMG's GHG emissions reduction potential is 2,893,460 tonnes of CO₂, including direct emissions of 2,189,483 tonnes of CO₂ and indirect emissions of 703,977 tonnes of CO₂e, which is 27% of the 2019 emissions.

A Competence Centre for Hydrogen Energy was set up at KMG Engineering.

As part of a pilot project to deploy carbon capture, utilisation and storage (CCUS) and explore the potential for CO₂ injection to enhance oil recovery from depleted oil reservoirs, we have screened the CO₂ emission sources and are now screening fields to select a reservoir suitable for CO₂ injection.

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

Internal carbon pricing framework

KMG developed and implemented an Internal Carbon Pricing Programme with a view to providing additional incentives for subsidiaries and associates to reduce their emissions as well as fully assessing the impact of carbon-related regulations on its financial and economic performance.

CDP

The Company calculates its carbon footprint and posts its Climate Questionnaire on the website of the CDP (formerly Carbon Disclosure Project).

Task Force on Climate-related Financial Disclosures (TCFD)

KMG signed an agreement with the EBRD to review the Company's resilience to climate-related risks and prepare for making disclosures consistent with the TCFD recommendations.

SDGs

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.



Priority targets

15.3. Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.

KMG's contribution

KMG implements projects and initiatives aimed at curbing discharges and reducing fresh water withdrawal from natural sources:

CDP

The Company calculates its water footprint and posts its Water Security Questionnaire on the website of the CDP.

TAZALYQ

Atyrau Refinery is heavily focused on Tazalyq, a large-scale project designed to improve the environment in the city of Atyrau.

Construction of desalination plants

A formation water desalination plant is a unique project to address the water supply issue in the Mangistau Region. The plant will free up at least 6.2 mln m³ of the Volga River water annually to help develop the region.

A desalination plant near the Kenderly recreational zone, Mangistau Region. Its planned capacity is 50,000 m³ per day.

Land remediation

The Company works to ensure recovery of historical oil wastes and oil-contaminated soil treatment.

Outcome

TAZALYQ: 10% reduction in water intake from the Ural River, reuse of 15% of the factory's treated plant effluents. In 2022, areas of evaporation fields previously used to store the sewage from sectors 1 and 2 were drained.

2024 target: complete elimination of historical oil waste; in 2019–2022, the Company treated 2.1 mln tonnes of oil waste.

15.5. Take significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and protect and prevent the extinction of threatened species.

Forest-climate projects

As part of KMG's Low-Carbon Development Programme until 2031, forest-climate projects are expected to be implemented, delivering benefits for terrestrial ecosystems.

Mitigation hierarchy to manage biodiversity risks

In its planning and operations, the Company relies on mitigation hierarchy to manage biodiversity risks, with four key steps in place: avoidance, minimisation, rehabilitation/restoration, and offset.

Outcome

Target set for 2031: forest-climate projects to be implemented across 2,000 ha.



KMG prepares an annual Sustainability Report in line with GRI standards. KMG's 2022 Sustainability Report is available on the Company's website



The Company's annual Sustainability Report also serves as Communication on Progress for the UN Global Compact