KazMunayGas National Company JCS - Water Security 2020

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

JSC National Company KazMunayGas (KMG, the Company) is Kazakhstan's leading vertically integrated oil and gas company, operating assets across the entire production cycle from the exploration and production of hydrocarbons to transportation, refining and services. Established in 2002, the Company represents the interests of the Republic of Kazakhstan in the national oil and gas industry.

Outside of Kazakhstan, KMG has more than a thousand fuel sales points in Romania, Moldova, Bulgaria, and Georgia. KMG International N.V. is a strategic enterprise for oil refining and marketing in Romania and the countries of the Black Sea and Mediterranean basins with the access to the end-user market with a population of more than 300 million people.

The company accounts for 26% of the total oil and gas condensate and 15% of natural and associated gas production in Kazakhstan, 57% of oil transportation via oil pipelines and tankers from the port of Aktau, as well as 79% of natural gas transportation via main gas pipelines and 82% of oil refining in Kazakhstan with a share of oil products retail market amounting to 17%. KMG also contributes to the economic growth of Kazakhstan and Romania by employing over 70 thousand people (in 2019, the Company revised its approach to calculating the actual number of employees (employees of companies with shares exceeding 50 per cent were included in the calculation).

We recognize that our long-term success depends on how effectively, transparently and responsibly we conduct our business. We are committed to support and develop the expertise and knowledge of our human capital as well as to work closely with the communities to ensure operational excellence in regions where we operate. We also understand that the company holds the responsibility to continuously improve its environmental performance by reducing its environmental footprint, improving the products and introducing innovative green technologies.

We have highest regard for sustainable development and more transparent approach to ESG. Over the past four years, we have significantly improved our basic environmental performance. In 2019 in KMG started its work the Board of Directors Health, Safety, Environment and Sustainable development committee (BoD HSE&SD Committee). It demonstrates the Board’s commitment to best practices and improves our performance in these areas. Starting from 2012, we prepare our sustainability report in compliance with the international non-financial reporting standards developed by the Global Reporting Initiative (GRI). This helps us to increase the transparency of our performance as well as to build trust with our stakeholders.

KMG once again confirmed the title of the most ecologically transparent and responsible company in Kazakhstan, leading for the third straight year the environmental rating of oil and gas companies on the results of 2019, granted by the World Wildlife Fund (WWF) Russia and the group of Capital and the National Rating Agency with the support of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan and in partnership with the United Nations Environment Program in Central Asia (UNEP- CA).

W-OG0.1a

(W-OG0.1a) Which business divisions in the oil & gas sector apply to your organization?

Upstream
Midstream/Downstream
Chemicals

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1 2019	December 31 2019

W0.3

(W0.3) Select the countries/areas for which you will be supplying data.

Georgia
Kazakhstan
Romania

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

USD

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

No

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Have not evaluated	Due to the fact that the main activity of the Company is carried out in the Central Asian region, where water is a valuable and scarce natural resource, we are aware of our responsibility to the society and the environment and strive for the rational use of water resources. Water is an integral part of all production processes of the company. In its activities, the Company strives to reduce water consumption volumes, increase the efficiency of water resources use, expand water reuse and recycling, improve the quality of effluents and minimize the impact on natural water bodies.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Have not evaluated	In the process of oil production, large volumes of associated formation water are generated - a water-oil emulsion is recovered to the surface, which is subsequently separated into water and oil by the gravity method. The water settled in this way is sent back for injection into formation to maintain formation pressure. As well as, the process water for production needs, such as hydraulic fracturing, for replenishment of fire-fighting systems, dust suppression, well workover operations, for cooling systems and other production purposes. At the same time, a significant volume of treated sewage water is reused at oil refineries; this water is mainly used to feed the recycling water supply units.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	In accordance with the legislation of Kazakhstan, for the withdrawal of water from natural water sources, the Company has permits regulating the amount of the total volume of withdrawn water in accordance with the goals, conditions and period of water extraction. Monitoring and control of consumed water volumes is carried out. Measurement of water consumption is carried out at each intake structure at a frequency of at least once every ten days. To measure water consumption, standard weirs and flumes are used in open free-flow canals, as well as measuring instruments and installations included in the register of the state system for ensuring the uniformity of measurements. The activities of the KMG Group of Companies in terms of the use of water resources are consolidated in the corporate center. Quantitative data of KMG subsidiaries on water withdrawal is submitted to KMG for consolidation and analysis on a quarterly basis through the corporate information management system.
Water withdrawals – volumes by source	100%	The company keeps records of water intake from various sources. Sources of water abstaction are underground sources (wells, aquifers), surface sources (seas, rivers, lakes, reservoirs, canals), as well as urban water supply systems. At the same time, we note that the Company keeps records of water intake regardless of whether it is a primary or secondary consumer.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	100%	In the process of oil production, large volumes of associated formation waters are generated - an oil-water emulsion is recovered to the surface, which is subsequently separated into water and oil by the gravity method. The water settled in this way is sent for injection into formation. 99% of associated formation water is injected to maintain formation pressure, and 1% - into absorption wells. Significant volumes of associated formation water extracted to the surface, as well as a gradual increase in its volumes, are indicative of an increase in water cut.
Water withdrawals quality	100%	In accordance with the requirements of the legislation in the field of water resources protection and in order to prevent violation of the rights and interests of water users in the affected area of the withdrawn water, KMG maintains records, monitoring and reporting on the quality of water intake. For enterprises, there is a unified classification of water quality, established by the legislative acts of the Republic of Kazakhstan: • Ballast water, bilge water • Drinking water • Process water • Sewage water • Underground drinking water • Underground process water • Collector-drainage water • Sea water • Water from rice systems • Mine water • Transit water
Water discharges – total volumes	100%	In accordance with the legislation of the Republic of Kazakhstan, the KMG group of companies, which discharges water, keeps records and monitors the discharged water in accordance with the obtained permits: permission for emissions (discharge of pollutants) and permission for special water use (discharge). All industrial and domestic sewage water passes through mechanical, biological and chemical treatment. The quality of domestic sewage water, the quality of water in observation and background wells of filtration fields is carried out with the involvement of an accredited laboratory on the basis of the approved Program of Industrial Environmental Control (PIEC) and a plan for monitoring emissions into water resources.
Water discharges – volumes by destination	100%	In accordance with the legal requirements, the design documentation of companies takes into account the entire list of facilities to which sewage water is discharged. The companies keep track of and monitor sewage water volumes. Information on water discharge is consolidated in the corporate center of KMG on a quarterly basis. All information on the volumes of water discharged is disclosed in the corporate reports of KMG. The main receiver (and end point) of sewage water from KMG enterprises are various specialized receivers: storage ponds, evaporation fields and filtration fields. These facilities are technical structures designed for prevention of environmental pollution. Enterprises that do not have their own storage facilities transfer sewage water to specialized companies for treatment and disposal. The standards for the quality of discharged waters established by environmental legislation are achieved through the use of mechanical and biological methods of sewage water treatment.
Water discharges – volumes by treatment method	100%	Careful attitude to water bodies and water facilities and prevention of harm to them is the fundamental principle in relation to water bodies for KMG enterprises. To bring the water parameters up to the safe standards established by law, three main methods of treatment are used: biological, physicochemical and mechanical, in accordance with which accounting and reporting on the parameters and volumes of discharged water is kept.
Water discharge quality – by standard effluent parameters	100%	Water discharge quality – by standard effluent parameters 100% The quality of sewage water is analyzed in accordance with the established standards on a regular basis. Production control over compliance with the maximum permissible discharge (MPD) standards is carried out by an accredited laboratory. During production control, the following are subject to verification: compliance with the requirements of legislative, regulatory documents and other accepted requirements in the company; fulfillment of instructions, orders, directions and acts of inspections of production control for environmental protection; accounting of the volumes of water taken, used water and effluents and their compliance with the established limits; composition and the property of sewage water and its compliance with the established discharge standards (MPD): suspended solids, ammonium nitrogen, nitrates, nitrites, complete BOD, sulfates, chlorides, oil products, phenols, surfactants.
Water discharge quality – temperature	100%	The requirement to control the temperature of the discharged water is fixed at the legislative level: The environmental legislation of the Republic of Kazakhstan prohibits the discharge of water the temperature of which exceeds 30 degrees Celsius to ensure the safe functioning of aquatic flora and fauna within the affected area of sewage water discharge.
Water consumption – total volume	100%	The KMG Group of Companies keeps records of the volumes of water consumption at its production facilities used for process, auxiliary and household and drinking needs. Quantitative data of KMG subsidiaries and affiliates on water withdrawal is submitted to the corporate center for data consolidation and analysis on a quarterly basis through the corporate data management information system. The enterprises installed flow meters (industrial meters) for water metering.
Water recycled/reused	100%	In order to reduce the negative impact on water bodies, KMG is trying to increase the share of re-treated water in its technological and other operations. The re-treated water is reused for vehicle washing, dust suppression and replenishment of fire-fighting systems. At the same time, a significant volume of treated sewage water is re-used only at oil refineries to replenish the recycling water supply units. The percentage of water reuse at KMG plants comprised 19%.
The provision of fully-functioning, safely managed WASH services to all workers	100%	The provision of fully-functioning, safely managed WASH services to all workers 100% KMG realizes the value of each employee and takes measures to improve working conditions, an important part of which is the availability of clean water for drinking needs, as well as ensuring the standards of sanitation and hygiene at the workplace.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	240655.82	About the same	The total level of water withdrawn by KMG enterprises is stable compared to 2018, there is a slight decrease. At the same time, in the context of segments, there is a proportionally insignificant decrease in Upstream and Midstream / Downstream. Total withdrawals includes volumes of produced water - 129,197.59.
Total discharges	21038.94	Lower	The sewage water level volume in 2019 is lower than in 2018. The Romanian assets decided not to discharge sewage water (rain, melt water) into surface water bodies and redirect them to the drainage system of the enterprise
Total consumption	112483.35	About the same	In comparison with 2018, the amount of water consumed has slightly decreased. Re-treated water is used for vehicle washing, dust suppression and replenishment of fire-fighting systems. At the same time, a significant amount of treated sewage water is reused, mainly at refineries.

W-OG1.2c

(W-OG1.2c) In your oil & gas sector operations, what are the total volumes of water withdrawn, discharged, and consumed – by business division – and what are the trends compared to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year %	Please explain
Total withdrawals - upstream	52797	About the same	At about the same level
Total discharges – upstream	782.9	Lower	In comparison with 2018, there is a decrease in water discharge by 16%.
Total consumption – upstream	52056.91	About the same	At about the same level, insignificant decrease by 0.12%
Total withdrawals - midstream/downstream	58661.23	About the same	At about the same level, insignificant decrease by 1.09%
Total discharges – midstream/downstream	20256.03	Lower	The wastewater level volume in 2019 is lower than in 2018 by 35%. The Romanian assets decided not to discharge sewage water (rain, melt water) into surface water bodies and redirect them to the enterprise's drainage system.
Total consumption – midstream/downstream	52783.89	About the same	At about the same level, insignificant decrease by 1.11%
Total withdrawals – chemicals		Please select	
Total discharges – chemicals		Please select	
Total consumption – chemicals		Please select	
Total withdrawals – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total discharges – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total consumption – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	26-50	About the same	WRI Aqueduct	To determine the level of KMG water withdrawal in areas with increased water deficit, we used data from our seven subsidiaries located in the Republic of Kazakhstan and Romania with a water stress indicator according to WRI Aqueduct of more than 50%, that is, High category (overall water stress 40-80 %) Extremely high (overall water stress> 80%). At the same time, 4 out of 7 enterprises belong to the Caspian Sea river basin, 1 to the Syrdarya river basin, 1 to the Danube river basin and 1 oil transporting organization to the Syrdarya and Ural river basins and the Caspian Sea.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	45527.67	About the same	There is a stable level of water intake from surface fresh sources with a slight decrease in the level of fresh surface water intake as a result of upgrading and construction of desalination plants, which make it possible to release the volumes of fresh water used for process purposes at our enterprises
Brackish surface water/Seawater	Relevant	23023.91	About the same	The withdrawal of brackish surface and seawater is stable over two years with a slight decrease. Sea water is used explicitly for waterflooding of oil formations and for own needs.
Groundwater – renewable	Relevant	5959.71	Lower	Water intake level from renewable underground sources decreased by 16% compared to 2018 .
Groundwater – non-renewable	Relevant	22419.26	Higher	Water intake level from underground non-renewable sources for two years of analysis increased by 14%.
Produced/Entrained water	Relevant	129197.59	Higher	Water intake level from associated formation waters increased by 4% due to an increase in the water cut of the fields.
Third party sources	Relevant	41653.25	Lower	There is a decrease in the volume of water intake from third-party organizations by 5%.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	10941.12	Lower	The level of discharges into fresh surface water bodies was reduced by 116% due to the fact that the Romanian assets decided not to discharge sewage water (rain, melt water) into surface water bodies and redirect them to the drainage system of the enterprise.
Brackish surface water/seawater	Relevant	7519.32	Lower	The decrease in withdrawal of brackish surface waters is insignificant and amounts to 13%. A decision was made to reduce the volume of discharge into sea waters and redirect them to the drainage system of the enterprise.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	
Third-party destinations	Relevant	2578.47	Lower	There is a slight increase in the volume of water transferred to third parties (4%).

W-OG1.3

(W-OG1.3) Do you calculate water intensity for your activities associated with the oil & gas sector?

Yes

W-OG1.3a

(W-OG1.3a) Provide water intensity information associated with your activities in the oil & gas sector.

Business division

Upstream

Midstream/Downstream

Water intensity value (m3)

11071710

Numerator: water aspect

Freshwater withdrawals

Denominator

Other, please specify (tons of hydrocarbon produced)

Comparison with previous reporting year

Higher

Please explain

There is a slight increase in the specific consumption of fresh water in 2019 compared to 2018 by 6%.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

Yes

W2.1a

(W2.1a) Describe the water-related detrimental impacts experienced by your organization, your response, and the total financial impact.

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

Yes, enforcement orders or other penalties

W2.2b

(W2.2b) Provide details for all significant fines, enforcement orders and/or other penalties for water-related regulatory violations in the reporting year, and your plans for resolving them.

Type of penalty
Fine

Financial impact
133801.54

Country/Area & River basin

Kazakhstan	Other, please specify (Evaporation pond of the company)

Type of incident
Effluent limit exceedances

Description of penalty, incident, regulatory violation, significance, and resolution
Based on the results of the inspection of the environment control bodies, an order was issued on compensation for damage and on imposition of an administrative penalty for exceeding the established standards for pollutants in wastewater, discharged by the company into its own evaporator pond. One of the major environmental measures aimed at preventing the discharge of pollutants above the limits is the project aimed at the reconstruction of mechanical and biological treatment facilities and the reconstruction of evaporation ponds. It is planned to reclaim the disturbed lands and build an underground pipeline instead of an open channel. The upgrade of treatment facilities will enable to reduce water intake from the Ural River through the use of a multi-stage wastewater treatment system, which will remove up to 99% of pollutants from wastewater and, therefore, significantly increase water reuse, allowing up to 50% of treated wastewater to be reactivated.

W3. Procedures

W-OG3.1

(W-OG3.1) How does your organization identify and classify potential water pollutants associated with its activities in the oil & gas sector that may have a detrimental impact on water ecosystems or human health?

The identification and classification of pollutants during water discharges is carried out on the basis of the approved requirements of the legislation of the Republic of Kazakhstan. The standards for maximum permissible discharges of pollutants with wastewater into surface water bodies, terrain, filtration fields and wastewater storage are calculated for each wastewater outlet.

The list of discharge outlets and their characteristics are determined on the basis of an inventory of outlets, which is accompanied by sampling and analytical studies. The standards are defined as the product of the maximum hourly consumption of wastewater by the concentration of pollutants in them.

Along with the maximum permissible discharges, annual values of permissible discharges (limits) are set in tons per year for each discharge outlet and the enterprise as a whole. The list of pollutants for which emission standards are established, hazard classes of pollutants and their maximum permissible concentration are determined by the authorized state body.

The KMG Group of Companies operates in accordance with the obtained permission for a certain period, in the absence of changes in technological processes that could affect the volume of wastewater discharged.

According to the requirements established in the project and agreed with the state body, KMG enterprises conduct monitoring and, as per the form established by the legislation, the enterprises submit reports to the authorized body on a quarterly basis, which takes into account all sources of impact on water resources (control points), names of pollutants, established standards , the actual result of monitoring, and measures to eliminate violations (if any).

The KMG Group of Companies is guided in its work by a health, industrial safety and environmental management system developed on the basis of the best international practices and recommendations of the Association of Oil and Gas Producers: IOGP, ISO 14000 and ISO 45001.

The Company adopted the Corporate Standard for Water Resources Management in the group of companies of JSC NC KazMunayGas. The standard postulates the main principles of KMG in terms of water resources use - 8 “Water” principles, systematizes the approach to water resources management. The company adheres to strict principles in the use of water resources, builds multi-year plans to reduce consumption throughout the group of companies, and implements new water-saving technologies.

W-OG3.1a

(W-OG3.1a) For each business division of your organization, describe how your organization minimizes the adverse impacts on water ecosystems or human health of potential water pollutants associated with your oil & gas sector activities.

Potential water pollutant	Business division	Description of water pollutant and potential impacts	Management procedures	Please explain
Hydrocarbons	Upstream Midstream/Downstream	Hydrocarbons are an integral part of the oil production, transportation and refining process. Oil spills or wastewater discharges release hydrocarbons into the environment and can affect it. The potential impact of hydrocarbons on the aquatic environment will depend on the scale of oil spills or emergencies. Hydrocarbons can affect marine / river habitats (fish, birds, plankton), microflora, algae, etc. Contamination of the coastline, bottom sediments, soil and groundwater is possible. Potential impacts from oil spills or emergencies are described in the draft assessment of impact by enterprises on the environment.	Compliance with effluent quality standards Measures to prevent spillage, leaching and leakages Other, please specify (Compliance with the Basic Water Principles as reflected in the Corporate Standard on Water Resources Management)	The Company adopted a corporate standard for water resources management, which postulates the main principles of KMG in terms of water resources use, systematizes the approach to water resources management in KMG subsidiaries and affiliates, and also helps to increase the commitment of the Company's managers and employees to the issue of fresh water conservation. Continuous oil spill response (OSR) readiness is an absolute priority for us. We impose high requirements to the environmental safety during oil operations: prior to commencement of any type of work, we conduct environmental studies in contract areas and assess our potential social and environmental impact, as well as monitor the impact, monitor emissions and monitor emergency situations - during and after operations. In order to prevent pollution of sea water, the wells in the coastal zones of the Caspian Sea are constantly monitored. In order to maintain groundwater bodies in the area of influence of enterprises, constant monitoring of the level and chemical composition of groundwater is carried out.
Chemicals	Upstream Midstream/Downstream	The content of various chemicals in wastewater, their volumes and the frequency of penetration into surface and ground water bodies depends on the initial composition of natural water components, on the use of acids for cleaning the bottomhole in oil and gas production, on the operating mode and on the quality of wastewater treatment.	Compliance with effluent quality standards Other, please specify (Compliance with the Basic Water Principles as reflected in the Corporate Standard on Water Resources Management)	Compliance with the limits of pollutants in wastewater is a requirement at the level of legislation that is observed at all KMG enterprises. Among the additional measures to prevent groundwater pollution at KMG enterprises, one can single out regular corrosion monitoring over the state of underground structures of the facilities. At one of the refineries, the works were completed on upgrading of treatment facilities, as a result of which the efficiency of industrial wastewater treatment for oil products and suspended solids was improved from 76% to 98%, which reduces the environmental load by reducing emissions into the environment. Additional stages of wastewater treatment were introduced at ultrafiltration and reverse osmosis units. The purified waste water is used in the recycling water supply system of the enterprise and meets regulatory requirements. Deep purification of wastewater at ultrafiltration and reverse osmosis units allows to save fresh water up to 1.5 million m3 per year, previously taken from city water supply systems. At another oil refinery, the works were started on the design and reconstruction of treatment facilities. The project will help to reduce water intake from the river by applying a multi-stage wastewater treatment system that will remove up to 99% of pollutants from wastewater and, therefore, will greatly increase water reuse, allowing up to 50% of treated wastewater to be recycled. This project will allow to stop the operation of evaporation fields, to eliminate the impact on groundwater.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Direct operations

Coverage
Full

Risk assessment procedure
Water risks are assessed in an environmental risk assessment

Frequency of assessment
More than once a year

How far into the future are risks considered?
1 to 3 years

Type of tools and methods used
Enterprise Risk Management

Tools and methods used
Other, please specify (Internal company methods)

Comment
Based on the regular risk assessment, a list of production, economic, reputational and social risks associated with the consumption of water resources by KMG is compiled and updated on an annual basis. The company's water risks are included in the environmental risk assessment and analyzed on a corporate-wide basis, which allows to track the trend against the background of the overall development pattern of our company. A risk report, including water-related risks, is developed on a quarterly basis and submitted to the Board of Directors. Issues related to water resources management, including risks, are also considered by the Committee of the Board of Directors on Health, Safety, Environment and Sustainable Development.

Supply chain

Coverage
Full

Risk assessment procedure
Water risks are assessed in an environmental risk assessment

Frequency of assessment
More than once a year

How far into the future are risks considered?
1 to 3 years

Type of tools and methods used
Enterprise Risk Management

Tools and methods used
Other, please specify (Internal company methods)

Comment
Being a vertically integrated oil and gas company operating in the segments of production, processing and transportation of oil and gas, KMG is an intra-corporate value chain, which provides for an extensive and detailed analysis of all its enterprises in terms of their interrelationships.

Other stages of the value chain

Coverage
Please select

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Water is an integral part of all KMG's production processes. In its activities, the Company strives to reduce water consumption volumes, increase the efficiency of water resources use, increase water reuse and recycling, improve wastewater quality and minimize impact on natural water bodies The Company's activities have the most significant impact on the water bodies of the western region of Kazakhstan, which are of particular ecological, economic, historical, cultural and recreational value. To prevent negative impacts on sensitive ecosystems, regular monitoring is carried out. While carrying out production activities in the region of presence and realizing its responsibility, the KMG Group of Companies is interested in the progressive social and economic development of the regions. KMG plans to build a desalination plant in the Mangistau region with a capacity of 50 thousand cubic meters of water per day to supply drinking water to the residents of the city, as the city is currently supplied with drinking water at a distance of 2,000 km by transporting the river water. As it is known, the problem of water supply in Mangistau region is especially acute, as the region is located in a semi-desert zone, the water resources of which are limited. The Astrakhan - Mangyshlak water pipeline, in addition to oil and gas production enterprises, also supplies water from the Volga river to the population, industrial facilities, utilities and budgetary organizations, agricultural producers. However, the volume of water consumption is growing following the growth of the population and the emergence of new enterprises, as a result of which the water supply capacity is not enough, despite the improvement of the drinking water supply system. Besides, KMG supplies water to the region not only through a water pipeline, but also with the help of the desalination plants. Currently, a desalination plant is being built at the field, which will enable to release the volume of river water for the region at least 17 thousand m3 / day. The upgrading of the treatment facilities in the Atyrau region will help to reduce water intake from the Ural River by applying a multi-stage wastewater treatment system that will remove up to 99% of pollutants from wastewater and, therefore, multiply the water reuse, allowing up to 50% of treated wastewater to be recycled.
Water quality at a basin/catchment level	Relevant, always included	The company takes various measures to bring the water composition applied in the production process to the required conformity. For example, desalination of sea water is done to generate steam, primary purification of water taken from natural sources, is carried out for use in the production process.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	Being aware of the scale of its production activities and the concerns of the public and stakeholders in climate change issues, KMG strives to disclose information of interest to stakeholders, as well as the impact on water resources. The Company's projects are discussed at public hearings to the state environmental expertise office. The company interacts with stakeholders, analyzes their expectations, including those related to water resources, and does everything necessary to prevent potential conflicts with stakeholders in the areas of operations. At the same time, it is noted that there are no conflicts of stakeholders regarding water resources at the basin / water intake level.
Implications of water on your key commodities/raw materials	Relevant, always included	Water is an integral part of all KMG's production processes. In its activities, the Company strives to reduce water consumption volumes, increase the efficiency of water resources use, increase water reuse and recycling, improve wastewater quality and minimize impact on natural water bodies.
Water-related regulatory frameworks	Relevant, always included	Oil and gas activities in the Republic of Kazakhstan are strictly governed by regulatory requirements in the field of environmental protection, health and safety. In the production cycle from exploration and production of hydrocarbons to transportation, processing and provision of services, there exists an impending regulatory framework that regulates the terms and volumes of water use from national sources, measures to reduce the impact on water sources, licensing of activities. Also, strict requirements are imposed on the quality and safety of the end product. Moreover, KMG conducts its activities outside the Republic of Kazakhstan, that is, in Romania and Georgia, where there are own specifics of legislation, ignoring which is unacceptable in the framework of corporate policy. Thus, KMG is in a constant search of a balance between meeting consumer expectations and complying with strict water legislation, introducing new technologies, participating in a dialogue with the state and the population, and increasing the level of openness in its activities.
Status of ecosystems and habitats	Relevant, always included	In order to define the environmental and other consequences of options taken for management and economic decisions, to develop recommendations for improving the environment, preventing the destruction, degradation, damage and depletion of natural ecological systems and natural resources and in accordance with the requirements of the environmental legislation of the Republic of Kazakhstan, KMG subsidiaries make an assessment and analysis of the condition of ecosystems and habitats on a mandatory basis, where production activities are scheduled, make a breakdown of the program of monitoring the flora and fauna condition, atmospheric air, water environment, etc. KMG enterprises conduct monitoring according to the Program of industrial environmental control of the organization on a regular basis. Within the framework of industrial environmental control, operational monitoring, monitoring of emissions on the environment and monitoring of impact are carried out.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Realizing the importance of the normal human life of each employee, KMG strives to comply with the established standards of water supply, sanitation and hygiene. The Sanitary Epidemiological Service of the Ministry of Health conducts monitoring at the facilities of centralized and non-centralized systems of drinking, domestic and drinking water supply and places of cultural and domestic water use. The epidemiological safety of drinking water is defined for compliance with the microbiological and parasitological indicators of drinking water quality. At each source of water supply, a sanitary and epidemiological assessment is compiled according to microbiological indicators and chemical composition. Suppliers ensure quality control of drinking water intake, supplied water, the safety and health of employees always comes first.
Other contextual issues, please specify	Please select	

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Please select	
Employees	Relevant, always included	The main stakeholder among KMG employees are risk owners, that is, employees of the KMG group of companies not below the level of the deputy head of a division with direct subordination to the chief executive, who, by virtue of his job responsibilities, has competence and must manage production / non-production risk, ensuring the achievement of approved target indicators of their activities and functional tasks. The main function of the risk owner is his involvement in the risk management process, exchange of information between the Board of Directors, the Management Board, the KMG Risk Committee and the Company's employees. Also, the main stakeholder locally is the so-called risk coordinator, who is the responsible employee of the Structural unit appointed by the Owner of the risk / risk factor. His responsibilities include organizing and coordinating risk / risk factors managements works in his structural unit and interaction with the Responsible unit. The corporate standard for water resources management for the KMG group of companies defines the responsibility at the enterprise level for water resources management.
Investors	Please select	
Local communities	Relevant, always included	The Company provides all interested parties with an access to the projects of environmental impact assessment of its subsidiaries for comments and proposals, provides access to the official website of the Company, on the websites of local authorities throughout the entire life cycle of the project. In 2018–2019, 77 meetings were held with the local community and public organizations, of which 27 meetings in 2019 and 50 meetings in 2018. Based on the results of the public hearings, appropriate measures are taken, considering the recommendations and opinions of stakeholders. During public hearing of projects containing information on the quantity and quality of water from sources, public comments are taken into account. In 2019, 2 scientific conferences on environmental problems of the Atyrau region were held with the participation of local executive bodies, scientific institutes and the local community to discuss the project for the reconstruction of the treatment facilities of the oil refinery.
NGOs	Relevant, always included	The National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken" and KMG signed an agreement on cooperation on legal issues. The agreement provides for the interaction of the parties in such important areas of legal activity as improving environmental legislation, developing joint programs and projects. The company is a member of the ALE "KAZENERGY", takes part in the work of several committees and working groups of the Association. Chairmanship in KAZENERGY Coordination Council on ecology, social responsibility and transparency is an opportunity for KMG to promote sustainable development and water management in the oil and gas industry of Kazakhstan.
Other water users at a basin/catchment level	Please select	
Regulators	Relevant, always included	They control the level of pollution of the discharged water based on the approved criteria for assessing the degree of risk and checklists in the field of environmental protection, reproduction and use of natural resources. The Joint order of the acting Minister of National Economy of the Republic of Kazakhstan dated December 30, 2015 No. 835 and the Minister of Energy of the Republic of Kazakhstan dated December 15, 2015 No. 721.
River basin management authorities	Relevant, always included	River basin management bodies perform a supervisory function, provided that the owners comply with the operating regime of water management facilities, as well as the requirements established by regulatory legal acts in the field of dams safety.
Statutory special interest groups at a local level	Please select	
Suppliers	Relevant, always included	Suppliers go through a qualification selection in accordance with the methodology of procurement of goods, works and services of Samruk-Kazyna JSC. It should be noted that the possibility of establishing requirements for potential suppliers in terms of assessing risks associated with water is not provided for by the procurement methodology of Samruk-Kazyna JSC. In this regard, the establishment of social criteria by KMG when selecting a supplier can be assessed by Samruk-Kazyna JSC as a restriction of competition. At the same time, the provisions on observance of human rights and social criteria are reflected in standard contracts for the procurement of goods, works and services of KMG, as well as in the approved Code of Business Ethics. The corporate standard for interaction with contractors in the field of health, industrial safety and environmental protection in the KMG Group of Companies is a structural element of the management system and contains requirements for agreements with contractors, including: HSE agreement for compliance with HSE requirements, and penalties for their violation; pre-mobilization audit of machinery and equipment readiness, contractor personnel; assessment of the contractor based on the results of HSE activities. In addition, the Company regularly holds forums, meetings with potential service providers to discuss future joint partnerships and KMG requirements in HSE.
Water utilities at a local level	Relevant, always included	Interaction with water service companies at the local level takes place on the basis of contractual relations, which enables to bilaterally establish conditions necessary for successful work, adhering to its own interests in the field of water resources protection. Thus, in the cooperation agreement, it is possible to establish the necessary parameters for metering water and wastewater, including the necessary equipment, the frequency of tracking and measures to prevent inconsistencies in the event of their occurrence.
Other stakeholder, please specify	Please select	

W3.3d

(W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

The risks associated with water resources are identified, assessed and controlled within the framework of the corporate risk management system. In accordance with the Corporate Water Standard, the company on an annual basis assesses the realized and new potential risks in terms of the use of water resources. Methods for identifying risk factors include analysis of production / non-production processes, industry and international comparisons, collection and analysis of statistical data, analysis of the existing database of realized risk events, analysis of reporting, individual expert methods (interviewing) and group expert opinions (brainstorming, round tables). Methods for quantitative and qualitative risk assessment include quantitative assessment based on property value, quantitative assessment based on unearned income, quantitative assessment based on comparative analysis, quantitative assessment based on statistical models, quantitative assessment based on historical data of the realized risk events and quantitative assessment based on stochastic models (probabilistic, Monte Carlo method).

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

The corporate risk management system is a key component of the corporate governance system and is aimed at timely identification, assessment, monitoring and mitigation of potential risk events that may negatively affect the achievement of strategic and operational goals. The company takes into account the risks associated with water resources and strives to contribute to a sustainable future while minimizing the impact on the environment and water bodies at all stages of its activities. In accordance with the Policy on the corporate risk management system of JSC NC KazMunayGas and its subsidiaries and affiliates, when determining the impact of risk on business, the Company assesses the identified risk factors and then assesses the production/non-production risk, which is characterized by the identified risk factors in order to determine the degree of its influence on the achievement of production / non-production KPI of the Company. (KPI - indicators reflecting the effectiveness of the Company and allowing to measure the level of achievement of the set goals).

Production/non-production risks and the corresponding risk factors are analyzed according to the likelihood of their occurrence (probability of realisation) and the degree of influence (potential damage). The assessment of risk parameters can be quantitative or qualitative. The company will strive to develop and apply primarily quantitative methods for assessing risks/risk factors, constantly accumulate and improve modern methods of quantitative risk assessment. The choice of methods for responding to production/non-production risks, the development of an Action Plan for managing production/non-production risks in order to ensure an acceptable level of residual risk includes standard methods. For risks/risk factors, the implementation of which may suspend the activities and operations of the Company, the Business Continuity Plans are developed and approved, providing for consistent actions of employees to restore the operating activities of the Company.

The factors for the continuity of the Company's operations are: weather conditions, droughts, floods, water shortages in the region, accounting system at the enterprise, natural disasters, potential damage from industrial accidents, consumer expectations, reliability of information on the state of the environment, decision-making by shareholders, international standard requirements, litigation, information system security, fragile supply chains, regulatory bodies and legislation, etc. Risk management measures are applied in such a way that the aggregate level of risk throughout the Company does not exceed the acceptable level.

The Company's risk appetite characterizes its own level of risk retention, within which the Company can achieve its strategic and operational goals. The risk appetite determines the upper limit of the level of critical risks/risk factors at the consolidated level, which KMG is ready to accept. It also affects the allocation of resources, the organization of processes and the creation of the infrastructure within the organization necessary for effective monitoring and response to risk events.

The risk appetite (statement of risk appetite) of the Company for the planning period on a consolidated basis is approved by the Board of Directors of KMG and has the following characteristics:

1) reflects KMG's Development Strategy;

2) covers all key aspects of activity;

3) takes into account the desire and ability to take risks;

4) determines KMG's attitude to risk;

5) revised regularly subject to industry and market conditions;

6) requires effective monitoring of the risk itself;

7) includes both quantitative and qualitative indicators.

Environmental risk factors are identified and assessed within the corporate structure of KMG using the following methods (including, but not a complete list of methods):
- Process safety assessments;
- Collection and analysis of historical data on realized risks, review of previous reports;
- A method of interviewing experts.

The identified risks and risk factors are assessed based on three indicators: frequency/probability, time frame, and impact. We also differentiate approaches to impact assessment in terms of operational and non-operational risks. More specifically, the assessment of the impact of operational risks based on the definition of damage in absolute physical terms is carried out at the asset/facility level, while the impact assessment of non-operational risks is based on the definition of damage in monetary terms and is implemented at the corporate level.

Financial exposure to risk is rated on a scale from 1 (minor) to 5 (catastrophic) and is based on an assessment of the potential financial loss from risk. In addition, the degree of financial damage is assessed in terms of quantitative parameters of the company's acceptable risk. If it is not possible to assess the financial implications of risks, we use non-financial indicators.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	3	1-25	KMG carries out production activities in the entire territory of the Republic of Kazakhstan, as well as in Romania and Georgia. Facilities subject to water risks that could potentially have a significant financial or strategic impact on our business are located in western Kazakhstan, where there is a risk of water supply deficit.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

Kazakhstan	Ural

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
Less than 1%

% company's total global revenue that could be affected
Less than 1%

Comment
The risk of damage to the environment due to violations of legal and other environmental requirements was identified as highly probable, with an average impact during implementation. Among the planned current measures of preventive action, the following can be outlined: 1. Introduction of a corporate standard for water resources management in the KMG group of companies: submission of the Corporate Standard to subsidiaries, consultations on implementation, taking into account the specifics and scope of application; 2. Analysis of the availability of water use permits in subsidiaries and affiliates in accordance with the Environmental Code and the Water Code of the Republic of Kazakhstan; 3. Environmental expertise for the development of a desalination plant construction project; 4. Signing of a commitment to sustainable water management by the CEOs of subsidiaries within the framework of the HSE Forum; 5. Collection of Action Plans to improve water resources management from subsidiaries in accordance with the requirements of the Corporate Standard. Analysis, preparation of a general plan for water resources management by KMG

Country/Area & River basin

Kazakhstan	Other, please specify (Caspian Sea Coast)

Number of facilities exposed to water risk
2

% company-wide facilities this represents
Less than 1%

Production value for the metals & mining activities associated with these facilities
<Not Applicable>

% company's annual electricity generation that could be affected by these facilities
<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities
26-50

% company's total global revenue that could be affected
21-30

Comment
The risk of oil spills during offshore operations in the corporate system of identification and risk assessment is defined as low probability, but disastrous when implemented. KMG's readiness for oil spills is based on the application of internal procedures and policies developed in accordance with the legislation of the Republic of Kazakhstan and sound international practice for the exploitation of oil and gas fields. KMG possesses an extensive reserve of oil spill response equipment, modern technologies and a specialized division. All equipment and specially trained personnel are in a state of constant readiness. To regularly practice planning, tactics and use of equipment in oil spill response, KMG annually develops a comprehensive training and incident command team exercises plan, approved by the Emergency Department of the Emergency Committee of the Ministry of Internal Affairs of the Republic of Kazakhstan. The plan includes conducting regular training and oil spill response exercises, as well as Republican exercises jointly with the Ministry of Emergency of the Republic of Kazakhstan, in order to test readiness at the regional level and increase the efficiency of resource mobilization. In the unlikely event of an oil spill, international resources will be mobilized, while OSR activities will be coordinated by the Republican authority in accordance with the National Prevention and OSR Plan.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Kazakhstan	Ural

Type of risk & Primary risk driver

Physical	Pollution incident

Primary potential impact
Fines, penalties or enforcement orders

Company-specific description
The risk of oil spills during offshore operations was identified as a low probability risk, but disastrous when implemented

Timeframe
4-6 years

Magnitude of potential impact
High

Likelihood
Very unlikely

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
448522534

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
As an oil spill can occur due to sudden emergencies, the most acceptable response method is environmental insurance against possible environmental pollution.

Primary response to risk
Increase insurance coverage

Description of response
In 2019, there were no realized risks of pollution of the Caspian Sea basin. Risk identification is carried out on the basis of the experience of other companies - a comparative analysis of the processes and indicators typical for the KMG group of companies with other companies by industry specialization or functional activities. Data from the mass media, reports from specialized agencies can be used for the analysis. The North-Caspian Environmental Oil Spill Response Base (NCERB) was set up, which is KMG facility. To date NCERB is the only strategic object of the service infrastructure to support oil operations in the northern part of the Caspian Sea and the one-of-a-kind special facility that ensures responding to oil spills (OSR) The main assignment of NCERB is the following: • an oil spill response center in the North Caspian (primarily the Kashagan field); • an animal rehabilitation center, where in case of an emergency at sea, oil-contaminated animals will be delivered in special containers, and where they will be cleaned and left for rehabilitation with subsequent return to nature; • a training center where emergency personnel will be trained in the use of equipment in the event of a spill at sea; • center for environmental and meteorological monitoring

Cost of response

Explanation of cost of response
On March 26, 2019, the RSE "Kazhydromet" conducted an unscheduled sampling of atmospheric air and soil at the border of the sanitary protection zone of the field, the seawater of the Caspian Sea in the area of the field. No violations were found. The amount of the fine imposed comprised 0 tenge.

Country/Area & River basin

Kazakhstan	Ural

Type of risk & Primary risk driver

Physical	Increased water scarcity

Primary potential impact
Increased operating costs

Company-specific description
The risk of exceeding the consumption of water resources in regions with fresh water deficit

Timeframe
More than 6 years

Magnitude of potential impact
Medium-high

Likelihood
More likely than not

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
Risk assessment and identification was not carried out

Primary response to risk
Increase investment in new technology

Description of response
At one of the refineries, as a result of the modernization of treatment facilities, the efficiency of industrial wastewater treatment for oil products and suspended solids was improved from 76% to 98%, which reduces the environmental load due reducing emissions into the environment. Additional stages of wastewater treatment were introduced at ultrafiltration and reverse osmosis units. The treated waste water is used in the recycling water supply system of the enterprise and meets regulatory requirements. Integrated wastewater treatment at ultrafiltration and reverse osmosis units allows saving fresh water up to 1.5 million m3 per year, previously taken from city water supply systems. Overhaul of the cooling tower was carried out to increase the volume of fresh service water in the amount of 3 thousand m^3; improving the efficiency of cleaning treatment facilities.

Cost of response

Explanation of cost of response

Country/Area & River basin

Kazakhstan	Not known

Type of risk & Primary risk driver

Regulatory	Regulatory uncertainty

Primary potential impact
Fines, penalties or enforcement orders

Company-specific description
The risk of damage to the environment due to violations of legal and other environmental requirements is identified as a high probability risk, with an average impact during implementation.

Timeframe
1-3 years

Magnitude of potential impact
Medium

Likelihood
More likely than not

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
53476.48

Potential financial impact figure - maximum (currency)
106952.32

Explanation of financial impact
Initially, the risk was identified as large, but after taking preventive measures, the risk assessment decreased to noticeable level In 2019, 3 cases of realized risks of damage to the environment were recorded in connection with violations of legal and other environmental requirements for exceeding the discharge of pollutants into water

Primary response to risk
Improve pollution abatement and control measures

Description of response
-Introduction of a corporate standard for water resources management in the KMG group of companies: submission of the Corporate Standard to subsidiaries, consultations on implementation, taking into account the specifics and scope of application; - Analysis of the availability of water use permits in subsidiaries and affiliates in accordance with the Environmental Code and the Water Code of the Republic of Kazakhstan; - Environmental expertise for the development of a desalination plant construction project; - Signing of a commitment to sustainable water management by the CEOs of subsidiaries within the framework of the HSE Forum; - Collection of Action Plans to improve water resources management from subsidiaries in accordance with the requirements of the Corporate Standard

Cost of response
59358111

Explanation of cost of response
KMG started works on the construction of a desalination plant as a preventive measure in order to save water, as well as works on the design and reconstruction of treatment facilities.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	KMG, managing assets throughout the entire production cycle from exploration and production of hydrocarbons (upstream) to transportation (midstream), refining (downstream) and provision of services, is a full-fledged value-added chain within its direct operations. For example, the risk in the “use phase” of an upstream subsidiary is accounted for as the risk of a direct operation for a downstream. Thus, value chain risks are partly included in direct operations risks to avoid double counting.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity
Markets

Primary water-related opportunity
Strengthened social license to operate

Company-specific description & strategy to realize opportunity
While carrying out production activities in the region of presence and being aware of its responsibility, KMG is interested in the progressive social and economic development of the Mangistau region. As it is known, the problem of water supply in Mangistau region is especially acute, as the region is located in a semi-desert zone, the water resources of which are limited. The Astrakhan-Mangyshlak water pipeline supplies the Volga water to oil and gas companies, the population, industrial facilities, public utilities and budgetary organizations, agricultural producers. However, the volume of water consumption is growing following the growth of the population and the emergence of new enterprises, as a result of which the water supply capacity is not enough, despite the improvement of the drinking water supply system. KMG plans to build a desalination plant in the Mangistau region. The estimated capacity will be 50 thousand cubic meters of water per day. At present, the city is supplied with drinking water at a distance of 2,000 km by transporting the Volga water from the Kigach River. In 2019, one of the subsidiaries of KMG reconstructed the power supply system of the water pumping station, completed the reconstruction of the water pumping station. To replace the worn-out section of the main water pipeline from the main water pumping station Kigach up to 56 kilometers, a new pipeline was laid. Commissioning of the facilities will allow to increae the throughput of the main water pipeline from 95 to 125 thousand cubic meters of water per day. That is, the volume of water supply to residents of Atyrau and Mangistau regions, oil-producing, industrial enterprises and agricultural producers will increase, which will improve the situation with water supply in the region.

Estimated timeframe for realization
1 to 3 years

Magnitude of potential financial impact
Unknown

Are you able to provide a potential financial impact figure?
Please select

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact

Type of opportunity
Efficiency

Primary water-related opportunity
Improved field recovery factor

Company-specific description & strategy to realize opportunity
In 2019, the construction and installation works of a desalination plant began in the Caspian Sea basin (Caspian sea, East Coast). The commissioning of the desalination plant is scheduled for December 2020. The formation water desalination plant is designed to process and utilize produced water with an intake of 17 thousand cubic meters per day and supply process water in order to increase oil recovery from the Karazhanbas field by steam injection.

Estimated timeframe for realization
1 to 3 years

Magnitude of potential financial impact
Unknown

Are you able to provide a potential financial impact figure?
Please select

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact

Type of opportunity
Efficiency

Primary water-related opportunity
Improved field recovery factor

Company-specific description & strategy to realize opportunity
The wastewater treatment plant modernization project, to be implemented from 2019 to 2023, will help to reduce water intake from the Ural River by applying a multi-stage wastewater treatment system that will remove up to 99% of pollutants from wastewater and, therefore, multiply the water reuse, allowing up to 50% of treated effluents to be recycled. This project will enable to stop the operation of evaporation fields, eliminate the impact on groundwater, flora, fauna and atmospheric air of the city.

Estimated timeframe for realization
4 to 6 years

Magnitude of potential financial impact
Unknown

Are you able to provide a potential financial impact figure?
Please select

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number
Facility 1

Facility name (optional)

Country/Area & River basin

Kazakhstan	Ural

Latitude
47.077986

Longitude
51.921627

Located in area with water stress
No

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
Midstream/Downstream

Total water withdrawals at this facility (megaliters/year)
7252.34

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
7105.4

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
146.94

Total water discharges at this facility (megaliters/year)
3966.07

Comparison of total discharges with previous reporting year
Higher

Discharges to fresh surface water

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
0

Total water consumption at this facility (megaliters/year)
7252.34

Comparison of total consumption with previous reporting year
Lower

Please explain
There is a slight decrease in the total water intake and water consumption (by 105 megalitres) and a slight increase in the volume of sewage water (by 185 megalitres). Fresh river water is used to feed recycling water supply systems, for production and fire-fighting needs of the plant. For the economical and rational use of water resources at the facilities of the plant, a water recycling system is used. Industrial sewage water generated in the process of oil refining is treated at mechanical treatment facilities, then enters the biological sewage water treatment plant and is discharged through the channel of sewage water treated to standard quality into the evaporator pond.

Facility reference number
Facility 2

Facility name (optional)

Country/Area & River basin

Kazakhstan	Other, please specify (Caspian Sea (east coast))

Latitude
43.639865

Longitude
51.165596

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
Upstream

Total water withdrawals at this facility (megaliters/year)
20809.96

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
208.5

Withdrawals from groundwater - non-renewable
18994.74

Withdrawals from produced/entrained water
45319.64

Withdrawals from third party sources
1606.71

Total water discharges at this facility (megaliters/year)
330.71

Comparison of total discharges with previous reporting year
Lower

Discharges to fresh surface water

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
73.062

Total water consumption at this facility (megaliters/year)
20809.96

Comparison of total consumption with previous reporting year
Lower

Please explain
There is a slight decrease in the level of water consumption and intake and sewage water disposal by 155 and 105 megalitres, respectively. Sewage water from industrial buildings and process structures, generated as a result of production activities, as well as produced water, flushing, melt and rain surface runoff from the territory of the industrial site are diverted to the industrial sewage network. Discharge and accumulation of industrial sewage water is carried out in special buffer tanks or reusable pallets, with the subsequent removal of sewage water to the formation water treatment plant. All production sewage water is reused in the formation pressure maintenance system. Based on the results of 2019, the total volume of associated formation water extracted was 45,338.8, of which 45,338.483 was injected into formation to maintain the associated formation pressure. Household sewage water generated in the process of household activities, are treated at complete biological treatment facilities. The complex of treatment facilities is located at a distance of about 10.0 km from the water line of the Caspian Sea.

Facility reference number
Facility 3

Facility name (optional)

Country/Area & River basin

Kazakhstan	Other, please specify (Caspian Sea (east coast))

Latitude
43.340371

Longitude
52.857114

Located in area with water stress
Yes

Primary power generation source for your electricity generation at this facility
<Not Applicable>

Oil & gas sector business division
Upstream

Total water withdrawals at this facility (megaliters/year)
21732

Comparison of total withdrawals with previous reporting year
Please select

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

Withdrawals from brackish surface water/seawater

Withdrawals from groundwater - renewable

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
42692

Withdrawals from third party sources
21731.77

Total water discharges at this facility (megaliters/year)
25.7

Comparison of total discharges with previous reporting year
Please select

Discharges to fresh surface water

Discharges to brackish surface water/seawater
0

Discharges to groundwater
0

Discharges to third party destinations
25.704

Total water consumption at this facility (megaliters/year)
21732.77

Comparison of total consumption with previous reporting year
Higher

Please explain
The entire volume of household sewage water is transferred to third-party organizations. At the same time, the volume of associated formation water extracted for 2019 is 42.692 megalitres, 100% of which is injected into formation to maintain the associated formation pressure.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

Water withdrawals – total volumes

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water withdrawals – volume by source

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – total volumes

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water consumption – total volume

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

Water recycled/reused

% verified
Not verified

What standard and methodology was used?
<Not Applicable>

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	The corporate standard for water resources management in the KMG group of companies is part of the KMG Group HSE Management System. The standard defines corporate principles for water resources management, regulates the activities of KMG Group, employees and contractors of KMG, as well as design organizations whose activities are related to the withdrawal and / or consumption of water resources, relocation, changes in their quality, aimed at minimizing the negative impact on the environment and ensuring environmental sustainability. The main objectives of the Standard are: - determination of key principles of water resources management, intended for mandatory use throughout the KMG Group; - ensuring continuous improvement in water management; - ensuring a unified process of water resources management in the Companies, as opposed to the established practice of uncoordinated management of water use by different divisions for various needs of the company (drinking, industrial, household and other needs); - ensuring the involvement of stakeholders in the process of water resources management in the Company. Water resources management in KMG is based on the following 8 “water” principles: 1) recognition of the highest value of water for human life and health, for society and industrial activities, as well as the importance of a careful and rational attitude to the country's water resources. 2) compliance with the requirements of the legislation of the Republic of Kazakhstan, as well as compliance with international standards and best practices. 3) taking into account the issues of fresh water conservation and the efficiency of its use in making managerial decisions and in operations control. 4) assessment and accounting of the initial sources of water intake, regardless of whether water is taken directly or purchased through intermediaries. 5) the maximum cancellation of using potable water for production purposes. 6) 100% instrument metering of water intake and water discharge; 7) the maximum reduction of fresh water intake due to the introduction of water circulation and water-saving technologies, reduction of discharge volumes, by improving the quality of water treatment for maximum possible reuse. 8) Building capacity for sustainable water management through participation in industry associations and international water resource initiatives.

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Board Chair	Chief Executive Official of KMG, being the guarantor of adherence to the “8 water principles of KMG”, is responsible for assistance in their implementation. On July 1, 2019, within the framework of the HSE Forum for KMG General Directors, the Chairman of the Management Board signed a personal Statement of Commitment to the rational management of water resources (8 water principles of KMG). This initiative was supported by the chief executives of subsidiaries and affiliates of KMG, signing similar statements of commitment on behalf of their companies. The signed statements of commitment are posted on the official websites of the KMG group of companies. Also, with the adoption of the Corporate Water Standard on December 20, 2018, the Chairman of the KMG Management Board took responsibility for providing the necessary resources (financial, material and human) to fulfill the provisions of the Standard.
Board-level committee	Risk Committee. The aim of the Committee is to assist the KMG management Board in ensuring the effective functioning of the corporate risk management system of the KMG group of companies, prompt and in-depth consideration of issues in the field of risk management that affect the achievement of the strategic and operational goals of the KMG group of companies. The main tasks of the Committee are: 1) preparation of recommendations and proposals for the organization and maintenance of an effective corporate risk management system and internal control system 2) development of processes designed to identify, assess, track and control the risks of the KMG group of companies; 3) coordination of the risk management process for the KMG group of companies; 4) ensuring permanent exchange of information on the risks of the KMG group of companies between the members of the Committee in order to increase the risk culture, transparency and efficiency of the corporate risk management system.
Other, please specify (Board of Director-level committee)	In 2018, the KMG Board of Directors set up a separate committee on health, safety, environment and sustainable development (BoD HSE & SD Committee) in order to improve management efficiency in this area. This demonstrates the Board's commitment to the best practice and contributes to improving our performance in these areas. The main function of the committee is to provide support to the members of the board of directors in implementing the principles of sustainable development in the framework of strategic planning, socio-economic development of KMG, as well as ensuring environmental efficiency throughout the company. The BoD HSE & SD Committee is also responsible for developing recommendations for the board of directors on the following issues: - introduction of new, environmentally friendly and energy efficient technologies; development and monitoring of sustainable development of KPI. -integration of the principles of sustainable development into the key processes of the company, including risk management, planning, human resource management, investments and business strategy. In 2019, the Committee started its work.
Other, please specify (Board of Directors)	The Board of Directors reviews and approves the annual sustainability report and other corporate documents related to health, safety, environment and sustainable development in accordance with the recommendations submitted by the committees of the Board of Directors.

W6.2b

(W6.2b) Provide further details on the board’s oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Sporadic - as important matters arise	Reviewing and guiding business plans Reviewing and guiding risk management policies Reviewing and guiding corporate responsibility strategy	The Board of Directors makes decisions on the distribution of duties related to sustainable development and on the establishment of a sustainable development management system. The functions of the Board of Directors are as follows: - annual approval of the Sustainable Development Report, which discloses information on the use of water resources, the activities carried out in the Company in the field of conservation and protection of water resources and on the risks in the field of water resources management; - approval of risk reports (risk matrix), quarterly review and approval of energy efficiency reports on a biennial basis. In 2019, the Board of Directors approved a roadmap -2020 to improve HSE management at KMG in 2019. In 2019, 3 meetings of the Committee were held, as a result of which decisions and instructions were worked out, including: • Ensuring health, safety, and environment; • Implementation of sustainable development principles in strategic planning and socio-economic development of KMG; • Ensuring environmental efficiency of KMG. The key issues on the climate change agenda of the HSE Committee of the Board of Directors in 2019 were: 1. Recognition of climatic risks, such as risks associated with the use of water resources, risks associated with greenhouse gas emissions and flaring of associated petroleum gas and risks associated with changes in the environmental legislation of the Republic of Kazakhstan, 2. Implementation of the UN Global Sustainable Development Goals, 3. Establishing a balanced KPI system (key performance indicators) for the company as a whole and its individual managers in the areas of sustainable development. 4. Approval of the Committee's Work Plan for 2020, where 6 meetings are scheduled to discuss environmental issues, in particular, devoted to the issue of increasing the beneficial use of associated petroleum gas, rational use of water resources, as well as a separate climate session. Information on climate risk management was presented at 2 meetings of the Committee in April and November 2019.

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)
Safety, Health, Environment and Quality committee

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
As important matters arise

Please explain
In 2018, the KMG Board of Directors set up a separate committee on health, safety, environment and sustainable development (BoD HSE & SD Committee) in order to improve management efficiency. The main function of the committee is to provide support to the members of the Board s in implementing the principles of sustainable development in the framework of strategic planning, socio-economic development of KMG, as well as ensuring environmental efficiency throughout the company. The BoD HSE & SD Committee is also responsible for developing recommendations for the Board on the following issues: - introduction of new, environmentally friendly and energy efficient technologies; development and monitoring of sustainable development of KPI. -integration of the principles of sustainable development into the key processes of the company, including risk management, planning, human resource management, investments and business strategy.

Name of the position(s) and/or committee(s)
Other, please specify (Board Chair)

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
As important matters arise

Please explain
Chief Executive Official of KMG, being the guarantor of adherence to the “8 water principles of KMG”, is responsible for assistance in their implementation. On July 1, 2019, within the framework of the HSE Forum for KMG General Directors, the Chairman of the Management Board signed a personal Statement of Commitment to the rational management of water resources (8 water principles of KMG). This initiative was supported by the chief executives of subsidiaries and affiliates of KMG, signing similar statements of commitment on behalf of their companies. The signed statements of commitment are posted on the official websites of the KMG group of companies. Also, with the adoption of the Corporate Water Standard on December 20, 2018, the Chairman of the KMG Management Board took responsibility for providing the necessary resources (financial, material and human) to fulfill the provisions of the Standard.

Name of the position(s) and/or committee(s)
Environmental health and safety manager

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
More frequently than quarterly

Please explain
The HSE service is responsible for: - the implementation and observance in the Company of the principles of rational management of water resources (8 "water principles"), for the collection of information on the use of water resources by the Company (except for information provided by other structural divisions), for the development of the Plan for the rational management of water resources, its implementation and analysis of the Company's activities in the field of water resources management. - carrying out inspections of facilities for compliance with the requirements of the legislation of the Republic of Kazakhstan and the Corporate Standard for water resources management, KMG's internal regulatory documents; - interaction with the authorized body, with other state regulatory bodies on water resources management, as well as with the responsible structural unit of KMG.

Name of the position(s) and/or committee(s)
Facilities manager

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
Quarterly

Please explain
Chief executive officer of subsidiaries and affiliates is responsible for: - assistance in the implementation of all the principles specified in this Standard; - provision of the necessary resources (financial, material and human) to fulfill the provisions of the Standard. Heads of the production structural divisions of the Companies are responsible for: - regular inventory of water intake and water disposal metering devices, as well as for the completeness, reliability and timeliness of information on production structural divisions, collected / updated in accordance with the requirements of the Corporate Water Management Standard. Also, the Heads of subsidiaries, whose total annual water intake is more than 1 million cubic meters of water and companies that have their own treatment facilities and / or wastewater receivers, are responsible for developing Plans for the rational management of water resources for a 5-year period.

Name of the position(s) and/or committee(s)
Process operation manager

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
Quarterly

Please explain
The structural production units of the Company are responsible for: - for obtaining the necessary permits for special water use when withdrawing and / or using groundwater with withdrawal limits from fifty cubic meters per day and during intake and / or use of surface water applying stationary, mobile and / or floating structures for mechanical and gravity water intake from surface and sea waters; - for interaction with the HSE Service in terms of providing information in accordance with the requirements of the Corporate Standard for Water Resources Management.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	Text field [maximum of 1,000 characters]

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Other, please specify (BoD HSE & SD Committee Chairman)	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Implementation of employee awareness campaign or training program Implementation of water-related community project	In order to stimulate the activity of the Committee on HSE and Sustainable Development of the Board of Directors, the Chairman is paid a remuneration. When setting the amount of remuneration, responsibilities, the scope of the company's activities, long-term goals and objectives are taken into account.
Non-monetary reward	Please select	Please select	

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, direct engagement with policy makers

Yes, trade associations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

The main instrument for integrated water resources management is the Corporate Water Management Standard, which aims to fully understand its impact and to take into account the equitable sharing of water sources with other users in the region of presence.

The responsibility for the implementation and observance of the principles of rational water resources management in the Company, for the collection of information on the use of water resources, for the development of the Plan for the rational management of water resources, its implementation and analysis of the Company's activities in the field of water resources management is laid upon the HSE Service.

One of the goals of the implementation of the Corporate Standard for Water Resources Management is to ensure the involvement of stakeholders in the water resources management process.

Direct interaction with the authorized government body on water resources management is carried out by the HSE Service.

Thus, it is through a single structural unit that the consolidation of the Company's data and interaction with government agencies is ensured, which leads to compliance with the internal policy in the field of water resources management and its compliance with legal requirements. This approach also enables to identify possible ways to improve the water resources management system in the Republic of Kazakhstan and bring them up for discussion with representatives of government bodies.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

No, and we have no plans to do so

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	Water resources management at KMG is an ongoing process that ensures sustainable development. The first and one of the main steps towards business continuity is accepring the value of water for business and society. By signing the Statement of KMG's Commitment to "8 water principles", the Chairman of the Management Board showed his unconditional intention toward conservation and rational use of water resources. One of the performance criteria of the HSE Management System of the KMG Group of Companies is the implementation by subsidiaries of the 5-year Plans for the rational use of water resources. Plans are developed for our subsidiaries, whose total annual water withdrawal is more than 1 million cubic meters of water (from surface and underground sources, sea water and / or water from city water supply systems) and organizations that have their own treatment facilities and / or wastewater receivers. The plans contain: - measures to reduce water intake from natural sources; - measures to improve the quality of effluents and their re-use; - measures to minimize risks; - activities for possible cooperation with stakeholders in the field of water resources management; - training and / or proficiency enhacement in the field of water resources management for employees with knowledge of processes related to the use of water resources; - period for execution of the activities.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	One of the strategic goals of the KMG Development Strategy until 2028 is corporate governance and sustainable development. Among the strategic initiatives of KMG, environmental responsibility stands out, one of the priority areas of which is water resources management.
Financial planning	Yes, water-related issues are integrated	5-10	An important criterion in determining our strategic direction in the field of water resources management through the implementation of the 5-year Plan for the rational use of water resources for each of our enterprises is the correct and reasonable allocation of the budget funds and defining the environmental efficiency of the planned activities. Thus, a mandatory component of the 5-year Plan is the budget for the implementation of its items with the calculation of the economic efficiency from the implementation of the entire Plan or the activities provided for in it, separately. Even if there is no economic efficiency or it is impossible to calculate it for the entire Plan or for individual measures, the criterion for the feasibility of measures to be carried out is the risks of the general corporate system of KMG, the prevention of which is facilitated by one or another measure or the entire Plan as a whole.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

Anticipated forward trend for CAPEX (+/- % change)

Water-related OPEX (+/- % change)

Anticipated forward trend for OPEX (+/- % change)

Please explain

We are working on this direction and will try to consolidate required data in future reports.

W7.3

(W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

	Use of climate-related scenario analysis	Comment
Row 1	Please select	

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Site/facility specific targets and/or goals	None are monitored at corporate level	Water resources management at the level of each enterprise is based on an integrated approach to management, a full understanding of its impact and the equitable sharing of water sources with other users in the region of presence as a binding condition. The main tool for setting and achieving goals in water resources management is the 5-year Plans for Sustainable Water Use. As part of the Plan, each organization sets goals for itself; on the following 1. Reducing water intake from natural sources; 2. Reducing the discharge of water treated to standard quality 3. Improving the quality of effluents and their reuse; 4. Minimizing risks. Plans are developed for each five-year period and agreed with KMG. At the same time, the pyritisation of the measures included in the draft Plan is carried out, as well as taking into account the security and availability of budgetary funds and the economic efficiency of these measures. Each subsidiary of KMG has its own peculiarities of both production processes and performance indicators, as well as water resources management systems. We are currently on track to set corporate-wide targets on water resources that can be commensurate and manageable at the corporate level by consolidating and analyzing existing data and using available tools.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

No, we do not currently verify any other water information reported in our CDP disclosure

W10. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

KMG sincerely thanks the Carbon Disclosure Project for giving an opportunity to participate in the global water management-related disclosure system. The preparatory stage and the process of completion of the Water Security Questionnaire form is a crucial moment in the daily activities of KMG, therefore, from its end, KMG would like to thank the executive employees of CDP who provide the necessary methodological and informational support in preparing for completion of the Questionnaire form.

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Environmental, health and safety Managing Director	EHS manager

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms