Kia Motors Corp - Water Security 2023



W0. Introduction

W0.1

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

KIA has grown as a global automobile brand for the past 78 years since 1944 its establishment. It changed its Company name and logo from 'KIA Motors' to 'KIA' in 2021, declared its new destination and vision, and is leaping forward automobile manufacturer into a mobility brand. KIA is leading the popularization of eco-friendly cars based on establishing full line-ups for Electric Vehicles and expanding its business into Purposed-Based Vehicle (PBV) and Mobility services for sustainable mobility solutions. KIA aims to be a 'Sustainable Mobility Solution Provider' by realizing its mid-long term strategy 'Plan S' centered on three pillars of Plant, People, and Profit and sustainable management activities.

KIA aims to be a future mobility leader by bolstering a brand image as a leading company in the domestic EV market. KIA already has a brand reputation as a future market leader based on its achievements of reaching 41% (30% for EV) of eco-friendly M/S in 2022 and launching a leading PBV. Furthermore, KIA is pushing forward growth of brand value based on high quality and diverse marketing activities in the U.S. According to Initial Quality Study (IQS) announced by 'J.D Power,' an American market investigating agency, KIA ranked No.1 out of 31 overall car makers brands, including premium brands, in 2020. KIA topped in Vehicle Dependability Study (VDS) and earned 'first prize overall VDS' in 2021 among 18 non-premium brands, ranked third place out of 32 premium and non-premium brands, and even placed the No.1 out of overall 32 premium and non-premium brands in 2022 receiving 'Overall Nameplate.'

KIA will further accelerate the realization of its vision of 'Sustainable Mobility Solutions Provider' by reorganizing its mid to long term management strategy Plan S with the three pillars of Planet, People, and Profit, which emphasize eco-friendliness and social responsibility. Beginning with RE100 membership in April 2022, substantial changes are being made for 2045 carbon neutralization. KIA has refined carbon reduction targets for each milestone and is laying the groundwork for carbon reduction in the entire value chain, including supply/production/logistics/use/disposal. It will contribute to the virtuous cycle of resources by establishing a system for reusing/recycling waste batteries and expanding the application of recycled parts in vehicles, and plans to respond more sincerely and preemptively to climate change through domestic mudflats restoration projects and marine plastics collection/recycling projects.

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 2022	December 31 2022

W0.3

(W0.3) Select the countries/areas in which you operate. China India Mexico Republic of Korea Slovakia United States of America

W0.4

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

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

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	KR7000270009

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		Vital	 Main purpose of use (Direct Operation) KIA uses fresh water in processes such as cooling, cleaning, and painting to prevent corrosion and improve its appearance in the process of manufacturing and producing its main product, automobiles (Indirect operation) Kia defines indirect use of freshwater as "freshwater required by suppliers to produce their products." And Kia's suppliers also use fresh water for manufacturing products and cleaning.
			 Importance evaluation standard (Direct operation) Fresh water with Sufficient quality is evaluated as 'essential element for operation' because it can affect the production, quality of the product and financial costs such as refining costs. (Indirect operation) Fresh water with Sufficient quality is evaluated as an 'essential element for operation' because it is an important factor in the manufacturing process of major automotive parts of partners.
			3. Presence / absence and reasons for changes of water dependence in future - (Direct Operation) Cooling, cleaning, and painting processes in which fresh water is used in the automobile manufacturing process are indispensable processes, and dependence on water for direct use is an essential element for operation. In addition, water consumption is expected to increase in the future due to the expansion of the electric vehicle market and increase in market share, so it is very important to secure sufficient water. - (Indirect Operation) Cooling, cleaning, and painting processes in which fresh water is used in the automobile parts production process are indispensable processes, and dependence on water for indirect use is an essential element for operation. In addition, due to the expansion of KIA's electric vehicle market, it is expected that the water consumption required for the production of its partners will increase, and it is very important to secure sufficient water.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	 Main purpose of use (Direct Operation) KIA uses recycled water in processes such as cooling, cleaning, painting, and in a settling tank. It does not use saline and production water, which can affect the quality of products. (Indirect Operation) Recycling water is vital to improve the efficiency of water use and secure sufficient fresh water as Partners, the indirect subjects of KIA, also use recycled water It does not use saline and production water, which can affect the quality of products.
			 Importance evaluation standard (Direct Operation) KIA highly evaluates not only fresh water but also recycling water to improve the efficiency of water used in processes and secure a sufficient amount of freshwater as 'essential' elements because it uses enormous amounts of water for manufacturing and producing automobiles. (Indirect Operation) KIA highly evaluates the use of recycled water by Partners as 'essential elements' under the understanding that KIA can save operational costs though KIA's major Partners use non-fresh water less than fresh water.
			 3. Changes in water dependence in the future and reasons for change - (Direct Operation) Settling tank painting, cooling, and cleaning processes in which recycled water is used in the automobile manufacturing process are indispensable, and dependence on water for direct use is expected to be an essential element for operation, which will bring more importance to the dependence on recycled water. - (Indirect Operation) Settling tank painting, cooling, and cleaning processes in which recycled water is used in the automobile parts production process are indispensable, and dependence on water for indirect use is expected to be an essential element for operation, which will bring more importance to the dependence on recycled water.

W1.2

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

	% of sites/facilities/operations		Method of measurement	Please explain
Water withdrawals – total volumes	100%	Daily	How to monitor - Monitoring of total water withdrawal through a flowmeter installed in workplaces Frequency of measurement - Measure and manage water withdrawal by workplace on a daily basis (Once/day)	KIA monitors volumes of water withdrawals in all workplaces (100%) every day for systematic and stable automobile manufacturing and production management. The volumes of water withdrawals information in the workplace is managed by the facility management team of each workplace, and it is monitored through a flowmeter installed at the workplace.

	% of sites/facilities/operations	Frequency of measurement		Please explain
Water withdrawals – volumes by source	100%	Daily	How to monitor - Monitoring of water withdrawal by water source through a flowmeter installed in workplaces Frequency of measurement - Measure and manage water withdrawal by water source on a daily basis (Once/day)	KIA is conducting risk assessment based on WRI Aqueduct assessment tools. As a result, the plant in India, plant in Mexico and AutoLand plant in Gwangmyeong were classified as water stress areas, and the water withdrawal by the water source from these areas is monitored on a daily basis for 100% through a flowmeter. In addition, although not classified as a water stress area, the AutoLand plant in Hwaseong is strategically classified as a management-required workplace, and the water withdrawal by the water source is monitored through a flowmeter 24 hours a day.
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	<not applicable=""></not>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	<not applicable=""></not>
Water withdrawals quality	100%	Yearly	How to monitor - KIA manages water quality through mandatory inspection and self inspection carried at workplaces under laws and local governments, and monitors water withdrawal performed by water quality measuring company. Frequency of measurement (1) Mandatory Inspection : Water tank (Once/year), Water pipe (Once time or more/2 years) (2) Self-Inspection : Monitoring of water quality of Pure Water Manufacturing Plants (RO) in painting factories (Once or more/year)	Cuality of water withdrawal source is managed by facility/energy management teams regularly as it may cause disruptions to manufacturing and production of automobile. For domestic factories, as per Article 33 of Water Supply And Waterworks Installation Act, quality of water stored in tanks is inspected at least once a year, and for Water pipes, at least once every 2 years. For painting factories, as pure water must be used, RO is installed to supply and use pure water, and quality of which is frequently monitored. In addition, local governments in Korea directly check the quality of water withdrawal by taking in water with a water withdrawal facility (pump) once every three years. As such, the quality of water withdrawal is monitored and managed by local governments or themselves through water withdrawal facilities.
Water discharges – total volumes	100%	Daily	How to monitor Monitoring of total water discharges through a flowmeter and Safety and Health Environment Management System (SHE) Frequency of measurement - Measure and manage water discharges by business site (Once/day)	As water regulations in each country where our business sites are located are getting stronger, KIA are managing water quality information through the safety and environment team for each workplaces. In addition, the water discharges is conducted in accordance with the discharge standards of each country and the total volumes of water discharges in all workplaces is monitored daily through a flowmeter, and in particular, in the case of domestic factories, the system is managed through the Safety and Health Environment Management System. Also, in the case of Indian plant, a zero-discharge system has been built and used, and data is collected and managed in real time as the level of pollution during water withdrawal greatly affects it.
Water discharges – volumes by destination	100%	Daily	How to monitor - Water discharge by local government (Flowmeter), Direct water discharge (TMS) Frequency of measurement - Water discharge by local government (Once/day), Direct water discharge (Real time/day)	In order to comply with the Water Resources Act, KIA is monitoring the total volumes of water discharge as well as the volumes by destination of water discharges. In the case of discharging water to a third party, discharged water through wastewater treatment according to the level required by the local government. In addition, water discharge in direct is also monitored in real time 24 hours through TMS, and not only the volumes of water discharges but also water quality and temperature are managed. Representatively, AutoLand plant in Hwaseong discharges, but also the quality and temperature of the water discharge are specially managed.
Water discharges – volumes by treatment method	100%	Daily	How to monitor - Monitoring of water discharges by treatment method through a flowmeter Frequency of measurement - Measure and manage water discharges by business site (Once/day)	KIA treats wastewater in different ways, taking into account the water management standards and discharge methods of each country where its business sites are located, and the concentration of wastewater from product production. 100% of the treated wastewater is monitored daily through a flowmeter, and the treatment method is applied as follows. In the case of domestic factories, wastewater is discharged to a third party (local government) through physical, chemical, and biological treatment, and all volumes of water discharges are monitored daily through a flowmeter. Also, the Indian plant is 100% reused after physical, chemical, and biological treatment, as well as advanced treatment through the RO process, and the amount of reuse is monitored daily through a flow meter.
Water discharge quality – by standard effluent parameters	100%	Daily	How to monitor - Monitor through external authorized institutions and a self-analysis lab and regularly report to the government Frequency of measurement - Monitor every day, record and manage in the water quality operation log (Once/day)	KIA manages water pollutants that need to be managed in accordance with the water management standards of each country where our business sites are located. Managed parameters include COD, BOD5, etc., and manage less than 30% of the legal standard. The parameters are monitored daily through an external authorized institution and self-analysis room, and water quality information is stored and managed through water quality operation log records, and regularly reported to the government. In addition, in the case of domestic business sites, the amount of water pollutants such as COD and BOD5 is reported through the annual sustainability report and is subject to third-party verification.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	100%	Yearly	Monitoring method - Monitoring and management through the internal analysis team (key water pollutants) and an external authorized institution (all water pollutants) Measurement frequency - Key water pollutants (once a week), all water pollutants (once /year)	Kia manages water pollutants according to the water management standard of each country in which its business site is located. The company also measures and manages nitrates (TN discharges) and phosphates (TP discharges) caused during automotive production processes. It monitors such parameters every day through an external authorized institution and the internal analysis team, keeps and manages water quality information with an operation log, and reports it to the government regularly. In addition, for domestic business sites, the discharge of water pollutants, such as TN and TP, are reported through sustainability reports and verified by third parties.

	% of	Frequency of		Please explain
	sites/facilities/operations	measurement		
Water discharge quality – temperature	100%	Continuously	How to monitor - AutoLand plant in Hwaseong monitors and manages temperature in real- time through TMS. Frequency of measurement - AutoLand plant in Hwaseong measures and manages real-time temperature (Real-time/day)	The temperature of water discharge generated by not using high-temperature water in the production of automobiles from KIA is almost similar to that of room temperature. In the case of AutoLand plant in Hwaseong, water temperature management is particularly important as it is directly discharged into seawater, so the temperature is measured and managed in real time through TMS. In addition, to prevent changes in the ecosystem due to changes in the water temperature of seawater, it is primarily discharged into the factory pond, maintaining the same water temperature (1~10°C) as the pond, and is discharged into seawater at a constant temperature.
Water consumption – total volume	100%	Continuously	How to monitor - Monitoring through an in- house management system Frequency of measurement - Monitor 24 hours in real-time (Real-time/day)	KIA manages the total volume of water consumption (the volume of water withdrawal = the volume of water discharge + the volume of water consumption) for production unit and water consumption. The person in charge of the facility and wastewater treatment monitors the volume of water withdrawal and discharge in real time 24 hours a day through the in-house management system. The volume of water consumption is managed by integrating the energy management system and water, and it is monitored 24 hours a day through the in-house management system. The amount of water required per vehicle is managed annually, and the information is transparently reported every year through the Sustainability Report.
Water recycled/reused	100%	Daily	How to monitor - Monitors the reuse/recycling through a flowmeter Frequency of measurement - Measure and manage the volume of reuse/recycling by business site on a daily basis (Once/day)	KIA monitors water reused/recycled to minimize the risk of characteristics and water stress of areas. Water reused/recycled is expanded to reduce the dependence of water withdrawal source and monitored daily through a flow meter. In addition, for some unmonitored reused/recycled water, we are installing flow meters continuously after securing a budget. In the future, all reused/recycled water will be 100% monitored and managed through flow meters. And in the case of the Indian plant, the total amount of factory wastewater is reused/recycled by adopting a zero- discharge system from the design stage of the plant, and it is managed through a flow meter every day. In addition, domestic plants install a pure water production facility (RO) in their painting plants to reuse and monitor RO concentrated water, and plan to increase the reuse rate through investment.
The provision of fully- functioning, safely managed WASH services to all workers	100%	Yearly	How to monitor - Inspect water quality by a professional water quality measuring company, and monitor water consumption through a flowmeter Frequency of measurement - Measure water quality by a professional water quality measuring company and monitor real-time water usage (Once/year)	KIA conducts a WASH water quality test at least once a year through a water quality measuring company to ensure that the WASH used at all business sites does not cause any problems to the health of its employees, and the test results are managed in documents. In addition, if an abnormality occurs in the inspection result, it takes action immediately and manage it so that all workers of business sites can receive safe WASH service. And WASH usage is monitored in real time through a flow meter.

W1.2b

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

			D :			
	Volume (megaliters/year)		Primary reason for comparison with previous reporting year	Five- year forecast	Primary reason for forecast	Please explain
Total withdrawals	10776.47	About the same	Increase/decrease in efficiency	Lower	Investment in water-smart technology/process	[Year-on-year change] [XIA's total volumes of water withdrawals in 2022 was 10,776.474 ML/yr, up 2.9% year-on-year. It is considered as 'About the same' according to the variation range (±15%) defined by KIA. As a result of identifying water stress areas and risks using the WRI Aqueduct evaluation tool, 6 out of 8 domestic and international workplaces have a high water stress index of 'Extremely High (80% or more), so it is necessary to manage the water withdrawal. Therefore, in order to minimize the risk, KIA is making efforts to reduce the water intake at the work places by expanding reused/recycled water - Volume of water withdrawal (2021) = 10,475.527 ML/yr - Volume of water withdrawal (2022) = 10,776.474 ML/yr - Vear-on-year rate of change +2.9% = (10,776.474 - 10,475.527) ± 10,475.527 x 100 [Prospect in future] As the demand for eco-friendly vehicles such as electric vehicles is expected to gradually increase, it is expected that more water will be required to produce automobiles. However, since water resources are limitedly distributed in the nearby basin where the workplace is located, there is a risk in securing water as much as the increase in production volume. Therefore, KIA plans to continuously reduce the volume of water withdrawal for each business site through technical applications such as optimizing water use for stable production. [Basis for calculation] Total volume of water withdrawal is equal to the sum of total volume of water discharge and total volume of water consumption(the total volume of water withdrawal = the total volume of water discharge + the total volume of water consumption(the total volume of water withdrawal (10,776.474 ML) = the total volume of water discharge (6,893.297 ML) + the total volume of water consumption (3,883.177 ML)
Total discharges	6893.29	About the same	Increase/decrease in efficiency	Lower	Investment in water-smart technology/process	[Year-on-year change] KIA's total volume of water discharge in 2022 was 6,893.297 ML/yr, down 1.9% year-on-year. It is considered as 'About the same' according to the variation range (±15%) defined by KIA. Discharge information is measured and managed every day through the flow meter installed at each business site, and is thoroughly managed in accordance with the discharge rate standards of each country in order not to cause damage to the surrounding watershed and local communities. Wastewater generated in the automobile manufacturing process is discharged by a third-party consignment treatment plant after physical and chemical treatment. In addition, calibration is performed once a year to increase the accuracy and reliability of the water discharge measured through the flow meter. - Volume of water discharge (2021) = 7,029.494 ML/yr - Volume of water discharge (2022) = 6,893.297 ML/yr - Volume of water discharge (2022) = 6,893.297 AL/yr - Year-on-year rate of change -1.9% = (6,893.297 - 7,029.494) ± 7,029.494 x 100 [Prospect in future] Water discharge is expected to increase the volume of water used in the process as production increases due to increased demand for Eco-friendly vehicles such as electric vehicles. But on the contrary, efficient and sustainable use of water resources is expected to gradually reduce the volume of discharge from business sites to nearby watersheds through the expansion of reuse/recycling of wastewater and 'no wastewater discharge system' introduced at the India and Asan factories [Basis for calculation] Total volume of water discharge is equal to total volume of water withdrawal minus total volume of water consumption.(the total volume of water discharge (6,893.297 ML) = the total volume of water withdrawal (10,776.474 ML) - the total volume of water consumption (3,883.177 ML)
Total consumption	3883.18	About the same	Increase/decrease in business activity	Lower	Investment in water-smart technology/process	[Year-on-year change] KIA's total volume of water consumption in 2022 was 3,883.177 ML/yr, up 12.7% year-on-year. It is considered as 'About the same' according to the variation range (±15%) defined by KIA. It conducted a water conservation campaign and facility improvement to reduce total consumption, but it was almost the same compared to the previous year due to increased production. - Volume of water consumption (2021) = 3,446.033 ML/yr - Volume of water consumption (2022) = 3,883.177 ML/yr - year-on-year rate of change +12.7% = (3,883.177 - 3,446.033) ÷ 3,446.033 x 100 [Prospect in future] Water consumption is expected to rise due to increased output and an expanded number of executives and staff caused by facility expansion, but Kia will reduce total water consumption by improving facilities, expanding saving campaigns, and optimizing operations. In addition, the company will supply water stably through reusing and recycling. [Basis for calculation] Total volume of water consumption is equal to total volume of water withdrawal minus total volume of water discharge (the total volume of water consumption (3,883.177 ML) = the total volume of water withdrawal (10,776.474 ML) - total volume of water discharge (6,893.297 ML)

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	areas with water stress	withdrawn from areas with	with previous	Primary reason for comparison with previous reporting year	Five- year forecast	-	Identification tool	Please explain
Row 1	Yes		About the same	Increase/decrease in efficiency	Lower	Investment in water-smart technology/process	WRI Aqueduct	Kia uses tools such as WRI Aqueduct and internal risk assessments to identify water-stressed areas. Through WRI Aqueduct, we identified physical water stress areas in domestic as well as overseas business sites and analyzed water stress areas for positive and negative scenarios in 2030 and 2040. Then, through internal risk assessment, we selected high water risk areas (water stress areas) that need to be managed by Kia through internal and external expert evaluation (opinions). As a result of the water risk assessment, three of the total plants (AutoLand Gwangmyeong, India, and Mexico plants) were evaluated as water stress areas. In addition, AutoLand Hwaseong, which is not in a water-stressed area but requires strategic water management, was selected as a key management site. In addition to the water-stressed sites, AutoLand Hwaseong was selected as a key management site because it discharges directly into a sea through its own wastewater treatment plant, which poses a high risk to water resources.

W1.2h

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

	Relevance	Volume (megaliters/year)		Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	KIA uses filtered water manufacturing automobiles. It does not take not filtered water such as surface water and fresh water, which can affect the quality of the product. Therefore, KIA does not use 'fresh surface water, including rainwater, water from wetlands, rivers, and lakes' to all workplaces.
Brackish surface water/Seawater	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	KIA uses filtered water in manufacturing automobiles. It means that the the Company does not use saline and sea water that can affect the quality of the product. Therefore, KIA does not use saline and sea water to all workplaces.
Groundwater – renewable	Relevant	1380.59	About the same	Investment in water-smart technology/process	KIA's AutoLand plants in Gwangju and Gwangmyeong are located in place for taking renewable groundwater, which makes the plant use groundwater. They are continuously increasing the use of reused/recycled water and conducting activities to reduce water withdrawal. As a result, groundwater withdrawal amount decreased by 117.857 ML (-7.9%) compared to the previous year.
Groundwater – non- renewable	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	KIA does not take in non-renewable groundwater as it thinks social value and sustainable development are important.
Produced/Entrained water	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	KIA does not generate produced/entrained water, and does not take produced/entrained water as it does not use water that will affect the quality of the product.
Third party sources	Relevant	9395.88	About the same	Increase/decrease in efficiency	All of KIA's factories take in water from the municipal water supply systems. The water supply is used as the main source of water withdrawal in consultation with the local government to use the water supply policy. KIA is increasing the use of water reused/recycled, and it plans to continuously reduce water withdrawal through water reduction campaigns and water saving activities. In 2022, water intake increased by 418.804 ML (4.7%) compared to the previous year due to increased production of automobiles.

W1.2i

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

	Relevance		Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	Kia releases waste water to municipal sewage treatment plants due to legal regulations, except in certain regions. Therefore, the company can not discharge water directly to surface water.
Brackish surface water/seawater	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	Kia releases waste water to municipal sewage treatment plants due to legal regulations, except in certain regions. Therefore, the company can not discharge water directly to salt water/seawater.
Groundwater	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	Kia releases waste water to municipal sewage treatment plants due to legal regulations, except in certain regions. Therefore, the company can not discharge water directly to underground water.
Third-party destinations	Relevant	6893.29	About the same	smart technology/process	Kia releases all water to third-party municipal sewage treatment plants or sea(Hwaseong Plant discharges to the West Sea) through discussion with local governments. The company makes great efforts to minimize the amount of discharge by recycling RO concentrate and boiler condensate. Thanks to such efforts, the discharge in 2022 decreased by 136.197ML (-1.9%) compared to 2021.

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance	Volume	Comparison of	Primary reason	% of your	Please explain
	of treatment level to	(megaliters/year)	treated volume with previous reporting year	for comparison with previous reporting year	sites/facilities/operations this volume applies to	
	discharge					
Tertiary treatment	Relevant	2284.49	About the same	Investment in water-smart technology/process	31-40	Regulation compliance The AutoLand factory in India complies with effluent standards according to the wastewater treatment rules of the Indian government when discharging effluent. Kia establishes a stronger standard than governmental regulations and manages wastewater because the water stress index of India is high. The Indian factory has advanced (tertiary) treatment as well as physical and chemical treatment for wastewater and does not release wastewater thanks to a zero discharge system. Future trend Kia intends to minimize the influence of domestic and overseas business sites on nearby water sources and the water ecosystem of local communities. For this, the company is considering a plan to expand the proportion of tertiary treated wastewater. Thus, the proportion of tertiary treated wastewater will increase. Year-on-year change (Year-on-year change) The amount of tertiary treated wastewater in 2022 was 2,284.497 ML/year, down 8.9% year-on-year but considered as 'About the same' according to the variation range (±15%) defined by the company. (Calculation formula) (2,284.497 – 2,508.317) ± 2,508.317 x 100 = -8.9% * In 2021 = 2,508.317 ML/year / In 2022 = 2,284.497 ML/year
Secondary treatment	Relevant	4608.8	About the same	Investment in water-smart technology/process	51-60	Regulation compliance Most business sites in Korea, China, Slovakia, the USA, Mexico, etc. comply with effluent standards of each country and region when discharging effluent. They also keep water pollutants in wastewater below 30% of the legal criteria through more advanced wastewater treatment. The business sites have physical and chemical treatment before discharging wastewater. Future trend Kia intends to minimize the influence of domestic and overseas business sites on nearby water sources and the water ecosystem of local communities. For this, the company is considering a plan to expand the proportion of advanced treated wastewater. Thus, the proportion of primary and secondary treated wastewater will decrease.
						Year-on-year change (Year-on-year change) The amount of secondary treated wastewater in 2022 was 4,608.8 ML/yr, up 1.9% year-on-year but considered as 'About the same' according to the variation range (±15%) defined by the company (Calculation formula) (4,608.8 – 4,521.177) ÷ 4,521.177 x 100 = 1.9% * In 2021 = 4,521.177 ML/year / In 2022 = 4,608.8 ML/year
Primary treatment only	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	<not applicable=""></not>	After final treatment of discharged water, Kia is sending it to the terminal treatment plant, and in order to meet the final treatment criteria of discharged water, it is necessary to conduct the primary treatment as well as the secondary treatment. Therefore, there is no plant that can discharge after primary treatment. Kia does not discharge primary treated wastewater because releasing primary treated wastewater
						is legally prohibited.
Discharge to the natural environment without treatment	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	<not applicable=""></not>	Kia uses water in pressing, car body, painting, and assembly processes, and wastewater from the processes includes impurities and pollutants. There is no wastewater 'released directly to the natural environment without any treatment' because releasing wastewater directly to the natural environment without any treatment is legally prohibited.
Discharge to a third party without treatment	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	<not applicable=""></not>	Kia uses water in the press, car body, painting, and assembly processes. Since wastewater from water use contains impurities and contaminants, when sending it to a third party (terminal treatment plant), the wastewater is treated according to the relevant standards. must be released. Therefore, the Kia plant is not applicable because it treats wastewater and then discharges it to the terminal treatment plant.
Other	Not relevant	<not applicable=""></not>	<not Applicable></not 	<not applicable=""></not>	<not applicable=""></not>	Kia uses water in the press, car body, painting, and assembly processes. Since wastewater from water use contains impurities and contaminants, when sending it to a third party (terminal treatment plant), the wastewater is treated according to the relevant standards. must be released. Therefore, the Kia plant is not applicable because it treats wastewater and then discharges it to the terminal treatment plant.

W1.2k

(W1.2k) Provide details of your organization's emissions of nitrates, phosphates, pesticides, and other priority substances to water in the reporting year.

	water in the reporting year	Category(ies) of substances included	List the specific substances included	Please explain
Row 1	37.6	Nitrates Phosphates	Applicable>	Nitrates Nitrates are caused in painting processes of business sites and processed biologically with aeration tanks Kia designates 'total nitrogen (TN)' among nitrates as an index of water pollutants. It measures TN discharges when measuring the water quality of effluent and reports and manages the measurements.
				Phosphates Painting processes of business sites use chemicals containing phosphorus and treat it chemically Kia designates 'total phosphorus (TP)' among phosphates as an index of water pollutants. It measures TP discharges when measuring the water quality of effluent and reports and manages the measurements.
				Activities to reduce the discharge of water pollutants Kia minimizes the discharge of water pollutants by building a real-time pollutant measurement system for managing the water quality of effluent. As a result, domestic business sites discharge water pollutants 30% less than the legal criteria, and Kia AutoLand in India employs a zero discharge system that reuses wastewater 100%. In 2022, it won an excellence award at the '2022 CDP Korea Awards' for excellence in water resource management and climate change response.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water	Total	Anticipated forward trend
		withdrawal	water	
		volume	withdrawal	
		(megaliters)	efficiency	
Row 1	8655902 9000000			Recognizing the importance of water resources and the seriousness of the global water shortage, KIA is implementing various countermeasures such as investment in process wastewater reuse facilities and replacement of auxiliary facilities/equipment. In Korea, the paint factory recycles RO concentrated water to reduce water consumption, and the Indian factory is working to reduce water resource consumption by introducing a zero wastewater discharge system.

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	No	

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

		Primary reason for no engagement	Please explain
Suppliers	Yes	<not applicable=""></not>	<not applicable=""></not>
Other value chain partners (e.g., customers)		so within the next two	As water resources management has become more important, Kia encourages engagement of its business sites and suppliers. Because water resources are major factors that directly affect not only business activities but also local communities and ecosystems, it will promote engagement of other value chain partners, such as customers and NGOs.

W1.5a

(W1.5a) Do you assess your suppliers according to their impact on water security?

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

Basin status (e.g., water stress or access to WASH services) Supplier dependence on water Supplier impacts on water availability Supplier impacts on water quality

Number of suppliers identified as having a substantive impact

1680

% of total suppliers identified as having a substantive impact 100%

Please explain

Method to evaluate the influence of suppliers on water resources

Kia conducts an 'ESG assessment' on major suppliers to understand the environmental management policies of domestic and overseas suppliers, including water resources, and enhance the sustainability of the supply chain. The ESG assessment is carried out once a year to figure out the ESG management and implementation of suppliers and consists of questions to check water usage, water resources management (basin status), dependence on water, and the influence of suppliers on water affordability and water quality.

Critical value used to identify an influence on suppliers

Kia defines 'the number of suppliers engaging in the ESG assessment' as a critical value to identify an influence on supplier engagement.

In 2022, Kia performed the ESG assessment on 1,680 domestic and overseas tier 1 suppliers (380 domestic and 1,300 overseas) and achieved 100% engagement as all of them participated in the assessment.

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements	Comment
Row 1	Yes, water-related requirements are included in our supplier contracts	<not applicable=""></not>

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement

Complying with going beyond water-related regulatory requirements

% of suppliers with a substantive impact required to comply with this water-related requirement 100%

% of suppliers with a substantive impact in compliance with this water-related requirement 100%

Mechanisms for monitoring compliance with this water-related requirement Supplier self-assessment

Response to supplier non-compliance with this water-related requirement Retain and engage

Comment

W1.5d

(W1.5d) Provide details of any other water-related supplier engagement activity.

Type of engagement Information collection

Details of engagement

Collect information on water-related risks at least annually from suppliers Collect water quantity information at least annually from suppliers (e.g., withdrawal and discharge volumes) Collect water quality information at least annually from suppliers (e.g., discharge quality, pollution incidents, hazardous substances)

% of suppliers by number 100%

% of suppliers with a substantive impact 100%

Rationale for your engagement

The basis for engagement

(Purpose) Kia conducts ESG assessments on suppliers with a goal of mutual growth through sustainable supply chain management. Through the assessments, the company checks water information and management status, such as water intake, water consumption, and wastewater discharge, and the discharge of water pollutants and management status. It strengthens the ESG capabilities of suppliers by identifying their ESG management level and providing various empowerment programs, including technical guidance and business consulting, if necessary.

(Target) Kia performs ESG assessments on tier 1 suppliers. In 2022, the company expanded the assessments that had been carried out on a trial basis since 2021 to overseas parts suppliers. As of 2022, tier 1 suppliers of Kia consist of 1,680 companies, including 380 domestic and 1,300 overseas. It selects and manages them based on whether they have key parts and technologies for automotive production and the trade volume with Kia. In 2023, it will conduct assessments on domestic and overseas companies and provide ESG consulting to small and medium-sized suppliers to strengthen their ESG capabilities.

Impact of the engagement and measures of success

Measurement of impact and success

(Evaluation and measurement of success) Kia carries out an annual ESG assessment to reinforce the ESG capabilities of suppliers and measures success with the number of suppliers engaging in the assessment. In 2022, the company asked all tier 1 suppliers to participate in the assessment and achieved a 100% engagement rate as all 1,680 suppliers responded. It evaluates the ESG capability and response level of each supplier based on information on water resources (water usage, wastewater discharge, water resource-related environmental policies, policies to prevent groundwater pollution, and policies to reduce water pollution) collected through the assessment. According to the result, Kia provides various support programs, such as empowerment training and quality improvement, to suppliers and enhances the sustainability of the supply chain.

(Example) In 2022, Kia conducted ESG assessments on all tier 1 suppliers and drew up measures to manage risks in the supply chain and raise the level of ESG implementation through the result. With the assessments, the company recommends suppliers obtain relevant certifications (ISO 45001, ISO 14001) so that they can build a safety and health management system and environmental management system, which helps suppliers strengthen their ESG capabilities. In addition, it supported 180 companies that failed to meet the standard in 2022 to do ESG benchmarking for similar companies, improve their vulnerabilities, and receive written or field consulting customized to their business strategies.

Comment

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts? No

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?

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	No	<not applicable=""></not>	

W3. Procedures

W3.1

CDP

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	Yes, we identify and classify our potential water pollutants	Management process of water pollutants Kia uses and manages water according to the rules of the environmental management policy. It manages the water quality of effluent thoroughly by applying a strengthened internal standard, or below 30% of the legal criteria, and prevents unexpected leakages by improving old facilities for stable water quality and monitoring the concentration of effluent discharge.	<not Applica ble></not
		Standards for water pollutants Kia operates production plants at home and abroad. The company conforms to regulations on water pollutant discharge applied by each country and region, such as Korea's Environmental Water Quality Standard (Ministry of Environment), India's Environment Protection Act, and Mexico's Clean Water Act, and manages water pollutants of effluent from workplaces.	
		Indices used to identify pollutants and the explanation Kia complies with the water pollution management standards of each region, monitors the discharge of water pollutants, such as BOD, TOC, SS, TN, and TP, and installs and operates facilities necessary to keep the discharge below the permitted criteria.	

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category Nitrates

Description of water pollutant and potential impacts

The potential effects of water pollutants

Kia uses a lot of water and causes water pollutants during manufacturing vehicles. Major pollutants generated during vehicle production are nitrates and phosphates.

(Nitrates) Nitrates are air pollutants caused when fuels burn but flow into near water sources through the rain. If the nitrogen concentration of water increases due to nitrates, it is toxic to aquatic organisms and reduces biodiversity, and water pollution is worsened due to lack of oxygen.

(Phosphates) Phosphates are caused in cleaning processes. If the nitrogen concentration of water increases due to phosphates, excess nutrients propagate algae and raise the turbidity of water, which has a bad effect on water quality.

Nitrates and phosphates are considered major water pollutants due to their various effects. Kia monitors the discharge of water pollutants from its processes and installs and operates facilities required to manage it below the legal criteria.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Beyond compliance with regulatory requirements

Please explain

How to manage potential risks

Kia uses and manages water according to the rules of the environmental management policy. It manages the water quality of effluent thoroughly by applying a strengthened internal standard, below 20% of the legal criteria, and prevents unexpected leakage accidents by improving old facilities for stable water quality and monitoring the concentration of effluent discharge.

How to measure and evaluate success

(Success criteria) Kia measures water pollutants of effluent from business sites and keeps the level below the legal criteria. The company's criteria for successful water pollution management is below 30% of the legally permitted criteria.

(Example) Kia minimizes the discharge of water pollutants by building a real-time pollutant measurement system for managing the water quality of effluent. As a result, domestic business sites discharge water pollutants 30% less than the legal criteria, and indian factory employs a zero discharge system that reuses wastewater 100%. The company releases the results of water pollutants through the public and external stakeholders by reporting the discharge status of water pollutants through the annual sustainability report.

Water pollutant category

Phosphates

Description of water pollutant and potential impacts

The potential effects of water pollutants

Kia uses a lot of water and causes water pollutants during manufacturing vehicles. Major pollutants generated during vehicle production are nitrates and phosphates.

(Nitrates) Nitrates are air pollutants caused when fuels burn but flow into near water sources through the rain. If the nitrogen concentration of water increases due to nitrates, it is toxic to aquatic organisms and reduces biodiversity, and water pollution is worsened due to lack of oxygen.

(Phosphates) Phosphates are caused in cleaning processes. If the nitrogen concentration of water increases due to phosphates, excess nutrients propagate algae and raise the turbidity of water, which has a bad effect on water quality.

Nitrates and phosphates are considered major water pollutants due to their various effects. Kia monitors the discharge of water pollutants from its processes and installs and operates facilities required to manage it below the legal criteria.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Beyond compliance with regulatory requirements

Please explain

How to manage potential risks

Kia uses and manages water according to the rules of the environmental management policy. It manages the water quality of effluent thoroughly by applying a strengthened internal standard, below 20% of the legal criteria, and prevents unexpected leakage accidents by improving old facilities for stable water quality and monitoring the concentration of effluent discharge.

How to measure and evaluate success

(Success criteria) Kia measures water pollutants of effluent from business sites and keeps the level below the legal criteria. The company's criteria for successful water pollution management is below 30% of the legally permitted criteria.

(Example) Kia minimizes the discharge of water pollutants by building a real-time pollutant measurement system for managing the water quality of effluent. As a result, domestic business sites discharge water pollutants 30% less than the legal criteria, and indian factory employs a zero discharge system that reuses wastewater 100%. The company releases the results of water pollutants through the public and external stakeholders by reporting the discharge status of water pollutants through the annual sustainability report.

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.

Value chain stage Direct operations

Coverage Full

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment Annually

How far into the future are risks considered? More than 6 years

Type of tools and methods used Tools on the market

Tools and methods used WRI Aqueduct

Contextual issues considered

Impact on human health Water regulatory frameworks Status of ecosystems and habitats Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers Employees Investors Local communities

Comment

Value chain stage Supply chain

Coverage Full

Risk assessment procedure Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment Annually

How far into the future are risks considered? More than 6 years

Type of tools and methods used Tools on the market

Tools and methods used

WRI Aqueduct WWF Water Risk Filter

Contextual issues considered

Impact on human health Water regulatory frameworks Status of ecosystems and habitats Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers Employees Investors Local communities

Comment

W3.3b

(W3.3b) 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.

	Rationale for approach to risk	Explanation of contextual issues	Explanation of stakeholders	Decision-making process for risk response
	assessment	considered	considered	
Row 1	KIA regularly conducts risk assessment through the WRI tool to identify water risks in all domestic and overseas business sites and supply chains. As a result of risk evaluation using the assessment tool, three plants in India, Mexico, and AutoLand plant in Gwangmyeong fell under water stress areas, and it was identified that there was a risk in receiving water withdrawal source. Therefore, in order to prevent this risk, KIA is reviewing and promoting the expansion of recycled/reused water.	-(Effects on the human body) Kia	 - (customer) If the company uses a lot of water indiscriminately or pollutes the water quality in the production of vehicles due to the increasing demand for eco-friendly products by customers, a decrease in sales and a risk of reputation may occur - (Employee) The supply of safe and clean water in the workplace is directly related to the health of employees, so it is classified as an important stakeholder for the company. If all of KIA's employees are not guaranteed access to the clean and safe WASH service, it will affect safety, health and hygiene, so the responsible safety and environment team is working to meet the water quality standards - (Investor) Investors may withdraw their investment if water-related risks have a material impact on KIA's business. Accordingly, it selects investors as one of the six major stakeholders and discloses the company's risks and response strategies through management reports to prevent risks in advance 	 Every year, KIA collects information from each domestic and overseas business sites, evaluates physical, operational, regulatory, and reputational risks through the WRI Aqueduct assessment tool, and uses the results of the risk assessment to make decisions on water-related risks. Based on the risk assessment results, It establishes and reviews future countermeasures for each business site department. As a result of the water risk assessment, risk sites with a high (4 or higher) score are selected and managed as sites that require priority management, and risks that may have a significant impact on the business are reported to the executives. The Indian plant was evaluated as the highest HIGH RISK plant among all our plants with 4.45 points as a result of the water risk assessment. The Indian plant started production in 2019, and the entire zero-discharge system was introduced by evaluating it as a water risk plant from the time the plant was designed. Currently, it is used by recycling water with 100% zero discharge Indian plant introduced a zero discharge system from the design stage of the factory and has recycled wastewater 100% since 2020. In addition, it performs continuous monitoring for water pollution management and manages wastewater by investing in recycling facilities and replacing auxiliary facilities.

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, both in direct operations and the rest of our value chain

W4.1a

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

1. Criteria for material financial or strategic impacts

Kia carries out a materiality assessment every year to identify major sustainability issues. Beyond a materiality assessment that considers financial risks caused by the society and environment important from an investor's point of view, the company introduced a 'double materiality assessment' that reflects social and environmental influences of a company when selecting materiality issues according to the GRI (Global Reporting Initiative) Standards and EU's Corporate Sustainability Reporting Directive (CSRD) or considers issues that affect the evaluation or decision-making of stakeholders actually together.

The Corporate Strategy Group identifies risks and opportunities related to water, and if material financial or strategic impacts are identified, the ESG Consultative council reports to the CEO and delivers key issues to the board of directors for decision-making. Kia considers two aspects, financial and strategic when selecting material issues. For material financial issues, financial impacts caused by climate change should be more than 2 billion won. Material strategic issues refer to issues that have a significant effect on core tasks established according to the sustainable management strategy system.

Among the core tasks, water-related matters are (1) stable water supply through water resources management, (2) shutdown of factories due to water risks and sales of products, and (3) basin protection through water quality management. The ESG Consultative council discusses water-related risks and opportunities identified by the Corporate Strategy Group, reports them to the CEO if they meet materiality assessment criteria given business impacts and stakeholders' interests, and shares core issues with the board of directors.

Kia conducted a survey with a five-point scale to evaluate impact materiality and financial materiality by applying the double materiality assessment. The impact materiality assessment aimed at internal executives and staff and other stakeholders and identified the 'possibility of impact' and the 'severity (size, range, and resilience) of impact' for each material topic. The financial materiality assessment aimed at external stakeholders (investors) and internal financial experts and identified financial impacts and risks, regulations and policies, the same industry and related industries, stakeholders and social reputation, and the influence of innovation opportunities on the company's financial state for each material topic.

2. Explanation for quantitative indices used to define material financial or strategic impacts

- (Impact materiality) Evaluating the materiality of the company's economic, environmental, and social impacts from the inside-out perspective through the GRI method

- (Financial materiality) Evaluating the materiality of impacts on the company's value and finance from the outside-in perspective according to the SASB guidelines

The company classifies those that can cause water-related risks as potential risks and those that can cause a shutdown of factories and prohibition of sale as material financial and strategic risks. If a plant is shut down due to drought or typhoon, the actual losses may be small temporarily. But it affects finished product lines by stages and then global production lines, finally resulting in a large loss in operating profits. Issues that meet one or more criteria of the material assessment are considered material. Kia evaluates strategic impacts on a five-point scale according to the influence on the company by applying evaluation indices of 'possibility (X-axis)' and 'severity (Y-axis).' In 2022, 'advancing supply chain ESG risk management,' contributing to local communities and managing negative effects,' 'expanding the role of the board in ESG management and monitoring,' and 'preserving biodiversity' were selected as major issues.

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	26-50	

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				
Republic of Korea Han-Gang (Han River)				
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=""></not>				
% company's annual electricity generation that could be affected by these facilities <not applicable=""></not>				
% company's global oil & gas production volume that could be affected by these facilities <not applicable=""></not>				
% company's total global revenue that could be affected 11-20				
Comment				
Country/Area & River basin				
India Penner River				
Number of facilities exposed to water risk				
% company-wide facilities this represents 1-25				
Production value for the metals & mining activities associated with these facilities <not applicable=""></not>				
% company's annual electricity generation that could be affected by these facilities <not applicable=""></not>				
% company's global oil & gas production volume that could be affected by these facilities <not applicable=""></not>				
% company's total global revenue that could be affected 1-10				
Comment				
Country/Area & River basin				
Mexico Bravo				
Number of facilities exposed to water risk				
% company-wide facilities this represents 1-25				
Production value for the metals & mining activities associated with these facilities <not applicable=""></not>				
6 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 <not applicable=""></not>				
% company's total global revenue that could be affected 1-10				
Comment				

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

Han-Gang (Han River)

Type of risk & Primary risk driver

Chronic physical

Water scarcity

Primary potential impact

Increased production costs

Company-specific description

- Kia has production plants in various countries, including Korea, the USA, China, India, Mexico, and Slovakia, and the effect of abnormal weather conditions due to climate change varies by location. Therefore, if the company does not identify climate change risks of each region and respond to potential risks preemptively, the range and effect of potential damage will increase.

Kia established a mid-and long-term response strategy based on the WRI Aqueduct tool and the RCP scenario to prevent such issues and minimize damage with a proactive response. It developed a mid-term strategy by 2040 by identifying a variation in water resources of each region and the effect of abnormal weather conditions, such as flood and drought, through the WRI Aqueduct tool. The WRI assessment shows that the importance of water resources management increases as the water stress index of six out of eight business sites, including AutoLand Gwangmyeong plant and plants in Mexico and India, was classified as over 'High.' Kia aims to sell 1.6 million eco-friendly cars annually by 2030, so if the company fails to secure and manage the industrial water necessary for production, it can affect production and goal achievement directly.

Timeframe

More than 6 years

Magnitude of potential impact

High

Likelihood Virtually certain

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

Potential financial impact figure (currency) 2340000000

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

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

Explanation of financial impact

- Financial impact: 2,340,000,000 won

- Description: Kia is proving its capability to lead the future electric vehicle market by speeding up its entry into the electric vehicle market, showing electric vehicles of which innovativeness is recognized by the global car market, and boldly investing in the development of a future PBV platform for electric vehicles. The company established a global car sales target of 4.3 million units in 2030, and among them, the proportion of electric vehicles is 37%. As a transition to electric vehicles accelerates, it plans to expand the market share of electric vehicles in major regions like Europe to 45%. Therefore, the amount of industrial water required by production factories is expected to increase. However, an assessment based on the RCP 8.5 scenario and WRI Aqueduct tool classified the water stress index of AutoLand Gwangmyeong as 'Extremely high,' the highest class. The factory uses 2,000 tons of underground water daily on average, but if underground water is exhausted due to climate change like drought, it has to produce vehicles using expensive tap water. For this reason, the financial damage will be about 2.34 billion a year.

* Method to calculate the financial impact: water usage of AutoLand Gwangmyeong (2,000 tons/day) × annual average working days (300 days/year) × water bill (3,900 won/ton) = 2,340,000,000 won a year.

Primary response to risk

Adopt water efficiency, water reuse, recycling and conservation practices

Description of response

- (Situation) Risks related to water resources have increased due to climate change. Kia has production plants in various countries, such as Korea (Gwangmyeong, Hwaseong, Gwangju, etc.), the USA, China, India, Slovakia, and Mexico, and uses a large amount of water during production (painting processes, cleaning processes, etc.)

- (Task) If the plants fail to secure stable water sources and supply necessary industrial water due to long-term physical environmental changes like drought, it can lead to a suspension of production and a reduction in the quality of products.

- (Action) Kia analyzed mid- and long-term risks related to water resources based on an internal process to identify, evaluate, and respond to climate risks and opportunities. It evaluated risks with the WRI tool and discovered that the water stress index of three work places, Gwangmyeong, Mexico, and India, was 'Extremely high.'

- (Result) Kia has made an active effort to reduce the usage of water by changing equipment to raise water use efficiency and expanding recycling. In preparation for water supply problems due to the exhaustion of water sources like underground water, the company plans to discover and apply methods to recycle wastewater and industrial water, for example, reusing tertiary treated wastewater as wash water for dehydration facilities.

Cost of response

5000000

Explanation of cost of response

Kia is investing in facilities for water resource recycling facilities to reduce its impact and dependence on water resources and to use water efficiently. Kia is making investments to introduce water recycling facilities in Autoland Gwangmyeong, which has the highest risk of water resources among domestic production plants.

* Method to calculate response costs: costs to introduce recycling facilities in AutoLand Gwangmyeong (investment costs and other costs such as labor costs) = 50,000,000 won

(W4.2a) Provide details of risks identified within your value chain (beyond 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 India Other, please specify (North Coast) Stage of value chain Supply chain Type of risk & Primary risk driver Chronic physical Other, please specify (Risk of securing industrial water supply due to the danger of water scarcity.) Primary potential impact Reduced revenues from lower sales/output

Company-specific description

Kia has production plants in various countries, including Korea, the USA, China, India, Mexico, and Slovakia, and the effect of abnormal weather conditions due to climate change varies by location. To prevent potential issues due to climate change and minimize damage through a preemptive response, Kia analyzed risks based on the WRI Aqueduct tool and the RCP scenario and established a mid- and long-term response strategy. As a result of evaluating the effect of abnormal weather conditions on each region, such as a variation in water resources, flood, and drought, the water stress index of Indian plant was classified as 'Extremely high,' the highest class. According to the India Meteorological Department (IMD), the average temperature for March and April 2022 in India was the highest in 122 years after 1900, and the maximum temperature reached 50°C. The Yamuna River that runs through the heart of New Delhi, the Indian capital, dried up because of the record-breaking heat wave, which caused a severe drought. As heat waves and droughts occur more frequently due to long-term physical environmental changes, the importance of securing industrial water is becoming increasingly important.

Timeframe More than 6 years

Magnitude of potential impact Medium-high

Likelihood Virtually certain

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

Potential financial impact figure (currency) 79962139800

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

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

Explanation of financial impact

- Financial impact: 79,962,139,800 won

- Description: If suppliers of the Indian factory are disrupted in production due to a worsened temperature rise and drought, it will have a significant effect on the operation of the factory. If local parts factories fail to secure industrial water due to drought and then cease production, it will have a great effect as well. If 1% of the 2022 output (342,597 units, representative model: Carens) decreases due to production suspension, the financial damage would be about 79,962,139,800 won.

* Method to calculate the financial impact: output of Indian plant (342,597 units/year) × price of Carens (23,340,000 won/unit) x decrease in production due to shutdown (1%) = 79,962,139,800 won

Primary response to risk

Direct operations Other, please specify (Water reuse, recycling, and water conservation activities)	erations
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Description of response

- (Situation) Kia produces vehicles through cooperation with various domestic and overseas suppliers. As droughts and floods occur more frequently due to abnormal weather conditions, it becomes difficult to secure and manage stable water resources. Risks related to securing stable water resources affect the production of Kia and the supply chain directly.

- (Task) If water resource risks, such as drought, occur due to long-lasting climate change, there may be problems for Kia's major suppliers to secure water resources required to produce their products. In this case, the possibility of quality problems and factory shutdowns due to a lack of water increases.

- (Action) Kia is looking for a solution with a focus on suppliers located in regions with high water stress so that key suppliers secure necessary water resources. In particular, it is seeking cooperative measures to reduce the water consumption of the Indian factory and major suppliers in the mid-and long-term, such as wastewater recycling.

- (Result) Kia uses and manages water according to the rules of the environmental management policy, recognizes the seriousness of global water shortage, and analyzes the trend of policies/regulations about water resources. The company is considering investing in wastewater recycling facilities, changing old equipment, and running water storage facilities mainly in areas of water stress and plans to analyze water resource risks of the Indian factory and local parts suppliers and seek measures.

Cost of response 99500000

Explanation of cost of response

Kia will invest 99,500,000,000 won to increase the capacity and operation rate of the Indian factory, enhance the quality of existing products, and develop new products. Assuming that 1% of the investment cost is invested in suppliers like local parts factories as part of Kia's ESG support and diagnosis for supply chain risk management, the response cost is estimated at 99,500,000 won.

* Method to calculate response costs: future investment in AutoLand India (99.5 billion won) × investment in local suppliers (1%) = 99,500,000 won

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 Efficiency

Primary water-related opportunity Improved water efficiency in operations

Company-specific description & strategy to realize opportunity

- Description Of Opportunity Factor

3 out of 9 KIA's plants are located in areas of extreme water stress. In terms of promoting climate change, effective water management can mitigate climate change, reduce production downtime due to water scarcity, and protect against rising water supply costs. KIA declared global environmental management and established an environmental strategy to become a leading company for environmental protection.

To this end, it aims to complete an eco-friendly process by researching and executing a step-by-step process that minimizes environmental impact in the entire process from design to completion of a vehicle. The environmental load per unit of production is defined as part of the strategy, and to achieve this includes optimizing the use of water in the process, recycling water, and introducing zero-discharge facilities. We plan to gradually expand water reuse of all our plants, as well as the highly water-stressed plant, so that wastewater can be recycled into process water or reused for irrigation and toilet cleaning after physical, chemical and biological treatment.

- Strategy

Kia is considering a plan to apply facilities that can recycle wastewater, such as reverse osmosis (RO) concentrate and boiler condensate, to all domestic factories. For example, AutoLand Gwangmyeong plant installed RO concentrate recycling facilities in painting processes as the necessity of water recycling increased because it is located in a water-stressed region. If the amount of water required to produce a vehicle reaches the 2023 target of 5.4 tons/unit from the current 5.5 tons/unit, the factory can reduce the intensity of water for production by building an eco-friendly production system. It will allow the factory to establish a stable production system by minimizing effects on nearby ecosystems and responding to water resource risks that can occur due to climate change, such as heat waves and drought.

Estimated timeframe for realization 1 to 3 years

Magnitude of potential financial impact Medium-high

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

Potential financial impact figure (currency) 196945476

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

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

Explanation of financial impact

Method to calculate the financial impact: Kia reduces water usage due to vehicle production by decreasing the intensity of water resources. If the decreased intensity applies, the company can reduce 100 ml of water per 1 million vehicles. The financial impact was calculated based on the 2022 vehicle production, a difference caused by the decreased intensity, and water bill, and the result is 196,945,476 won

* Financial impact (196,945,476 won) = vehicle production (2,731,560 units) x decreased intensity (5.5 to 5.4 m³/unit) x water bill (721 won/m³)

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)

AutoLand Gwangmyeong plant

Country/Area & River basin

Republic of Korea

Han-Gang (Han River)

Latitude 37.437718

Longitude 126.88828

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 <Not Applicable>

Total water withdrawals at this facility (megaliters/year) 1633.09

Comparison of total withdrawals with previous reporting year About the same

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 632.6

Withdrawals from groundwater - non-renewable 0

Withdrawals from produced/entrained water 0

Withdrawals from third party sources 1000.49

Total water discharges at this facility (megaliters/year) 1409.38

Comparison of total discharges with previous reporting year About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater 0

Discharges to groundwater 0

Discharges to third party destinations 1409.38

Total water consumption at this facility (megaliters/year) 223.7

Comparison of total consumption with previous reporting year Much higher

Please explain

Facility reference number Facility 2

Facility name (optional) India Plant

Country/Area & River basin

India

Penner River

Latitude 25.746987

Longitude -99.98092 Primary power generation source for your electricity generation at this facility <Not Applicable> Oil & gas sector business division <Not Applicable> Total water withdrawals at this facility (megaliters/year) 579.5 Comparison of total withdrawals with previous reporting year Higher 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 Withdrawals from produced/entrained water Withdrawals from third party sources 579.5 Total water discharges at this facility (megaliters/year) Comparison of total discharges with previous reporting year About the same Discharges to fresh surface water Discharges to brackish surface water/seawater Discharges to groundwater Discharges to third party destinations Total water consumption at this facility (megaliters/year) 579.5 Comparison of total consumption with previous reporting year Higher Please explain Facility reference number Facility 3 Facility name (optional) Mexico plant Country/Area & River basin Mexico Bravo Latitude 16.163687 Longitude 79.618671 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 <Not Applicable> Total water withdrawals at this facility (megaliters/year) 685.6 Comparison of total withdrawals with previous reporting year

CDP

Located in area with water stress

Yes

0

0

0

0

0

0

0

0

0

0

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 0 Withdrawals from groundwater - non-renewable 0 Withdrawals from produced/entrained water 0 Withdrawals from third party sources 685.6 Total water discharges at this facility (megaliters/year) 348.92 Comparison of total discharges with previous reporting year Higher Discharges to fresh surface water 0 Discharges to brackish surface water/seawater 0 **Discharges to groundwater** 0 **Discharges to third party destinations** 348.92 Total water consumption at this facility (megaliters/year) 336.68 Comparison of total consumption with previous reporting year Lower Please explain

W5.1a

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

Water withdrawals – total volumes

% verified 76-100

Verification standard used AA1000AS

Please explain <Not Applicable>

Water withdrawals - volume by source

% verified 76-100

Verification standard used AA1000AS

Please explain <Not Applicable>

Water withdrawals - quality by standard water quality parameters

% verified Not verified

Verification standard used <Not Applicable>

Please explain

The company has performed water management continuously, and water data is verified through ISO 14001, environmental information disclosure, and sustainability reports. However, water quality information on water intake has not been verified, and it is considered to be verified in the future.

Water discharges - total volumes

% verified 76-100

Verification standard used AA1000AS

Please explain <Not Applicable>

Water discharges - volume by destination

% verified Not verified

Verification standard used <Not Applicable>

Please explain

The company has performed water management continuously, and water data is verified through ISO 14001, environmental information disclosure, and sustainability reports. However, the discharge amount of each site has not been verified, and it is considered to be verified in the future.

Water discharges – volume by final treatment level

% verified Not verified

Verification standard used <Not Applicable>

Please explain

The company has performed water management continuously, and water data is verified through ISO 14001, environmental information disclosure, and sustainability reports. However, the discharge amount by each treatment method has not been verified, and it is considered to be verified in the future.

Water discharges - quality by standard water quality parameters

% verified 76-100

Verification standard used AA1000AS

Please explain <Not Applicable>

Water consumption - total volume

% verified 76-100

Verification standard used AA1000AS

Please explain <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	KIA's water resource policy is to resolve water risk from identifying policy/regulatory trends and current situations in order to participate in recognizing the importance of water resources and resolving the seriousness of global water shortage problem. Thus, KIA analyzed the current status of water used in press, car body, painting, and assembly processes and determined that our water dependence is high, and in case of water shortage, production may be disrupted, which will cause drop in sales.
		water Description of business impact on water Commitment to align with	As global temperature is increasing recently due to climate change, as well as risk of water shortage, environmental management policies are being established and managed to reduce water dependence. Accordingly, water-related qualitative and quantitative goals are set and managed, and they are operated with more responsibilities than regulatory compliance. As KIA's production increases water usage, it is implementing a policy to expand recycled water in all business sites, and its Indian plant contributes in reducing water withdrawal by a zero-discharge system. In addition, wastewater from all business sites is set at 30% or less of the legal standard to establish a stronger target than regulation Also, by establishing unit-level goals, it is possible to quantitatively determine whether the goals have been achieved.
		international frameworks, standards, and widely-recognized water initiatives	In this way, information on sources of water withdrawals and wastewater is managed, and we disclose transparently the status of water management by writing it in the sustainability report for internal and external understanding. In addition, KIA is complying with UN SDGs activity goals and implementation process, and is achieving qualitative goals through biodiversity conservation activities by joining major associations and organizations in automobile industry. All suppliers apply stricter standards to deliver products only when they comply with KIA's environmental standards.
		Commitment to prevent, minimize, and control pollution Commitment to reduce or phase-out	Water-related standards are included in water policy to overcome concerns of water standard not being met. And for hygiene of customers and employees, it is our policy to provide 100% clean and safe WASH service for household water. As use of water resources is linked to energy use, water saving activities are conducted with energy saving activities, thereby conducting activities to save water resources. Moreover, we also plan to establish and implement water-related policies by providing water-related education for stakeholders including customers.
		hazardous substances Commitment to reduce water	
		withdrawal and/or consumption volumes in supply chain Commitment to	
		safely managed Water, Sanitation and Hygiene (WASH) in local	
		communities Commitment to water stewardship and/or collective	
		action Commitment to the conservation of freshwater	
		ecosystems Reference to company water-	
		related targets Recognition of environmental linkages, for	
		example, due to climate change	

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 or committee	Responsibilities for water-related issues
Director on board	1. Responsibility of board of directors and water relation KIA's highest decision-making body is the Sustainability Management Committee. The Sustainability Management Committee was launched in March 2021 to strengthen the water deliberative function and is making final decisions on water. Among the water issues identified by the ESG consultative council, the key issues are finally reported to the Sustainability Management Committee through the Sustainability Management Team. And the final decision is made by the Sustainability Management Committee. As such, it plays a pivotal role in strengthening ESG to minimize water risk.
	 Water-related decision-making example In order to improve marine pollution, KIA reported to the Sustainability Management Committee that it cooperated with a non-profit foundation called 'Ocean Cleanup' to obtain a decision. Kia studied a technology to block plastics flowing from rivers and remove plastics accumulated in the sea through cooperation with the Ocean Cleanup in 2022 and strives to conduct sustainable water improvement with the goal of using collected plastics in vehicle production.

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	Scheduled - some meetings	Monitoring progress towards corporate targets Overseeing expenditures Overseeing the setting of corporate targets Providing employee incentives Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding corporate responsibility strategy Reviewing and guiding risk management policies	KIA operates consultative bodies and committees to respond to all risks in business sites and products, including climate change, and each meeting is held by a member of the board of directors as the chief decision maker. In March 2021, the existing Transparent Management Committee was expanded and reorganized into the 'Sustainability Management Committee' norder to strengthen ESG management capabilities, etc. In addition, the results of operation are included in the management performance at regular board meetings, and the inside directors (management capabilities, etc. In addition, the results of operation are included in the management performance at regular board meetings, and the inside directors (management capabilities, etc. In addition, the results of operation are included in the management performance of water values and propare countermeasures for material issues from time to time. KIA is selecting eco-friendly cars as one of its core business strategies to respond to climate change, which is closely related to water-related issues. Water pollutants generated in the production process affect sales and future growth, such as the performance of water values in the workplace, minimization of wasterwater generation, and suspension of business for violations of water-related laws. Accordingly, the management strategy meeting is held based on water-related agendas, including the management of water pollution in the production process of eco-friendly vehicles and the current status of investment in water reuse within the workplace. The meeting management affecting production, nicluding water-related issues and plans for the safety and health of business sites to the Sustainable Management commission (an organization in charge of ESG matters under the board of directors) to promote actively tasks related to water issues.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

Board membe have compe on wate related issues	ence	Primary reason for no board-level competence on water- related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row Yes	KIA evaluates the professionalism of the board of directors in consideration of their academic background, industry experience, and tenure in the industry in order to secure an understanding of the board's business and expertise in each career field. The Sustainable Management Committee, one of the committees within the board of directors, is deliberating on matters aimed at practicing sustainable management, such as the status of ESG promotion	<not< td=""><td><not applicable=""></not></td></not<>	<not applicable=""></not>
1	Since he was appointed CEO in 2020 as a member of the board of directors of KIA and as CEO of KIA, he has been transitioning into an eco-friendly company that creates sustainable value through KIA's future car strategy, 'Plan S'. Among these, efforts are being made to improve the unit of water used in automobile production every year to reduce the environmental impact of product production, and various efforts are being made, such as recving water in the workplace and introducing a zero wastewater discharge system. These	Applicable>	

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) Chief Executive Officer (CEO)

Water-related responsibilities of this position

Assessing water-related risks and opportunities Managing water-related risks and opportunities Setting water-related corporate targets Monitoring progress against water-related corporate targets Managing annual budgets relating to water security Providing water-related employee incentives

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

Please explain

KIA monitors water-related risks and opportunities in the ESG consultative council, and the identified risks and opportunities are materially evaluated in accordance with internal evaluation criteria. Significant water issues are reported to the CEO, KIA's top management, and the CEO makes decisions on the issues. According to the CEO's decision-making, water usage, and discharge volume are disclosed in the sustainable report every year, and critical issues affecting the indicators are responded to according to the CEO's decision-making. As such, KIA is making efforts to minimize water issues, evaluating future water demand trends, and taking into account national and regional characteristics, systematically responding to water demand trends. Accordingly, in the case of plant in India where water withdrawal is insufficient, the risk of water demand is prevented by introducing a zero-discharge system according to the decision of the CEO and the Sustainability Management Committee.

(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					

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		Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward		water withdrawals – direct operations Reduction in water consumption volumes – direct operations Improvements in water efficiency – direct operations	KIA implements the use and management of water following the water principle in Environment Management Policy. The wastewater discharged from KIA's workplaces is applied with its standard strengthened by up to 20% to the legal water discharge standard to manage the quality of effluent thoroughly. Furthermore, KIA improves aged facilities to keep stable water quality and monitors the discharge concentration regularly to prevent unexpected leakage accidents. KIA manages the water intensity required for manufacturing one unit of cars, the intensity of discharging water pollutants, and other indicators linked with the CEO's KPI to establish internal policies and achieve goals of reducing water usage and pollutants to water quality.	KIA induces systematic plant water management by including water management indicators in the CEO's KPI. Performance related to water in the environment sector is mainly water usage reduction items, and the criteria for determining water usage is to calculate the volume of water used to make a vehicle, and the increase or decrease is compared with the average of the last 3 years. In order to improve the unit of water use, it is necessary to improve the production efficiency of automobiles within the business site and supply chain, so it is necessary to manage the overall product production. Accordingly, the recycled/reused rate of water is increasing, and efforts are being made to use less water. As a result, water withdrawal and consumption are decreasing, and water efficiency of business sites/supply chains/products is improving. The information is transparently disclosed in the sustainability report. As such, KIA transparently discloses water information related to the CEO's KPI, and the performance of the indicator directly affects the CEO's KPI rating, which results in monetary reward.
Non- monetary reward	No one is entitled to these incentives	<not Applicable></not 	<not applicable=""></not>	KIA pays monetary rewards for performance against water-related KPIs. There are no separate non-monetary rewards.

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

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 SHE department under the CEO is in charge of all general affairs such as water-related engagement activities, water strategies, greenhouse gas, etc. To maintain consistency with company-wide risks in all issues related to water, KIA inspects internal and external risk factors related to sustainable management and gathers major risks in each business site, presenting and reporting to the Board of Directions if necessary in case there are issues that have a significant impact on business activities.

For direct engagement activities with external agencies and industrial associations, the activity goal is to devise ways to minimize damages such as financial loss and adverse effects on corporate image as well as create new business opportunities and establish company-wide counterstrategies if necessary. We have never found any case in which consistency has not been maintained with policy engagement activities, however, if we do, we intend to actively reflect our views through regular monitoring and activities through councils and automobile associations to maintain consistency with policy engagement activities.

Furthermore, in case we find such cases, the Safety and Environment Planning Department will report them to the Board of Directors as major risks, thereby changing our company's policy to maintain consistency with the government policy. In addition, we maintain policy consistency at all times by organizing departments and TFs to take the necessary measures.

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report? Yes (you may attach the report - this is optional)

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?

	related issues	Long- term time horizon (years)	Please explain
Long- term business objectives	Yes, water- related issues are integrated	11-15	- Water is essential for KIA to produce vehicles, and as the EV market is expected to expand starting with the EV6, the sales of vehicles by EVs are expected to further increase. Therefore, when the WRI and WWF analysis was conducted considering the impact of the increase in automobiles by 2045, the water stress area among the factories where our business site is located is affected by 3 out of 9, so there is a risk of product production disruption exists. Therefore, in order to minimize the risk of water withdrawal, KIA has a long-term business goal for the expansion of recycled water such as RO concentrated recycling and no-discharge system.
			- Integrated case for water issue : In the case of the Indian plant, as it is a water stress area, a zero-discharge system was applied when the plant was established. In addition, the Hwaseong Plant is reviewing ways to recycle and spread water to maximize the recycling rate, such as recycling RO concentrated water. And it plans to reduce the volume of water leaking by improving the aging pipeline in stages. However, as the project plan requires a lot of cost, continuous improvement will be carried out sequentially, and additional improvement plans will be continuously reviewed and reflected.
0	Yes, water- related issues are integrated	11-15	- KIA will identify government/regulatory trends and analyze its current status to derive risks to achieve long-term goals (2045) and seek and implement various countermeasures such as facility investment and replacement of auxiliary facilities/equipment for recycling plant wastewater. In addition, KIA plans to expand the installation of RO (Reverse Osmosis), a pure water manufacturing facility, to improve quality and maximize the recycling rate of concentrated water discarded from pure water manufacturing facilities, thereby reducing water withdrawal and continuously lowering the unit of water used to produce one car. And the water unit for automobiles will transparently report that it is being well implemented in line with our target strategy through the sustainability report.
			- Integrated case for water issue : In order to lower the unit of water used to produce automobiles, various reduction activities such as recycling of RO concentrated water and recycling of factory wastewater are being carried out. In the case of plant in Gwangju, it is moving in the direction of maximizing water recycling, such as recycling industrial water and applying paint scrubber washing water as paint RO tertiary concentrated water. In addition, the plant in Hwaseong is moving water-saving faucets to expand boiler condensate recycling.
Financial planning	Yes, water- related issues are	11-15	- KIA incorporates water-related issues into its long-term (2035) financial plan. KIA is making investments in fields of water resources that require large-scale investments such as improving obsolete pipelines, building the zero liquid discharge system, and RO facilities with the goal of achieving energy and water independence.
	integrated		- In order to solve the water shortage problem, KIA is planning to make a step-by-step investment to introduce facilities that improve water recycling rates in the process. In the case of factories in USA, KRW 1.07 billion was invested in installing the final water collection tank and facilities to improve the inflow of wastewater at the wastewater treatment plant, energy savings were achieved by reducing about 60,000 tons of water and energy efficiency. In addition, various projects such as improving environmental facilities, installing turboblers, and improving process wastewater pipes are carried out at domestic workplaces and an annual budget is allocated to promote this.

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

```
-8
```

1

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

Please explain

Year-on-year changes in CAPEX and OPEX

Even though the vehicle production of Kia increased compared to the previous year, the CAPEX and OPEX decreased year-on-year thanks to activities to improve the efficiency of water resources.

Prospects of CAPEX and OPEX

Kia plans to invest in and improve facilities continuously to seek environmentally sound and sustainable development and use water resources efficiently in domestic and overseas business sites. In addition, it continues to install flowmeters for some reused/recycled water that is not monitored and plans to monitor reused/recycled water 100% through flowmeters. Domestic business sites reuse and monitor RO concentrate by setting up water purifiers (RO) in painting processes and plan to the reuse rate through investment. Therefore, Kia predicts that its CAPEX and OPEX will increase thanks to efficiency improvement.

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

	Use of scenario analysis	Comment
Row 1	Yes	KIA analyzed water risk based on RCP 8.5 scenario to analyze the impact of climate-change on business sites. First, WRI was used to evaluate the water stress index, predict damage in areas with high water stress index, and seek ways to respond continuously. In addition, WWF was used to analyze the water risk in the areas by water shortage index, flood and water risk, and plan was sought to minimize water risk that may occur from the analysis.
		As such, KIA participated in mitigating climate-change as water changes caused by climate change directly affect production and employees' safety. KIA declared a 2045 Net Zero in Nov. 2021. Net Zero aims to reduce carbon emissions by 97% by 2045 compared to 2019, and seek ways to offset residual emissions, making net emissions '0' at all stages.
		KIA plan to become a global EV Tier 1 brand and minimize the environmental impact of products by promoting 100% conversion of electric vehicles in 4 major markets by 2040, and globally by 2045.

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organ	ization's business
strategy.	

Type of scenario analysis used		Description of possible water-related outcomes	Influence on business strategy
Row Water- 1 related	Parameter KIA has set a transition target for the electrification of vehicles and a mid-term production target for 2030. KIA set the sales target of selling 4.3 million vehicles by 2030 and expected the share of EVs by 37% in this sales. It plans to minimize the impact of water resources and increase production by continuously improving vehicle water usage units and recycling rates. Assumption The assumptions used by KIA in scenario analysis reflected indicators that directly affected water resources in the area where the workplace is located, such as water shortage index (water depletion, moisture stress index, drought frequency), flood risk (estimated flood occurrence frequency), and water quality risk (surface water quality) among the indicators provided by the scenario assessment tools WRI Aqueduct and WWF Water Risk Filter. - (Water Shortage Index) Water shortage refers to the volume of freshwater that can seriously affect businesses, such as suspending production, high operation costs, and growth constraints, and is calculated in the formula of water usage/demand. According to the evaluation, the risk of water shortage was relatively low and stable, but the water stress index was somewhat high, so efficient use of surface water and groundwater was required. Among KIA's workplaces, Autoland in Gwangmyeong, Mexico, and the plant in India need to develop priority measures for stable water supply and utilization because the water shortage index is quite high, showing a result of "Extremely high." - (Flood Risk) Flood can affect the overall operation and value chain of companies, such as closure of business sites, impact of supply chain production activities, and suspension of transportation. WRF predicts the frequency of occurrence by considering the past and future patterns of floods, and since the risk of flooding in the basin is relatively high, it is necessary to respond to such issue. - (Water Quality Risk) The influence of water quality is determined according to the	the WRI Aqueduct risk assessment tools, and three of the total workplaces (AutoLand in Gwangmyeong, India, and plants in Mexico) were evaluated as water stress areas, it is defined as the volume of fresh water available out of the total quantity, and the higher the figure, the more intense the competition among water users. Since all three KIA's workplaces have very high levels of more than 80%, efforts are needed to sustainably manage water resources. In order to stably produce products in accordance with KIA's target production volume, measures such as efficiency of water resources and improvement of recycling rates at workplaces located in water stress areas are needed.	 Countermeasure n order to minimize the risk of regional characteristics and water stress areas, KIA is making various efforts such as expanding reused/recycled water and introducing a wastewater discharge system. In addition, flowmeters are continuously installed for some unmonitored reused/recycled water will be managed through 100% flowmeters in the future. And in the case of Indian business site, by introducing a wastewater free flow system from the factory design stage, the entire volume of wastewater is reused/recycled, and it is managed through a flowmeter every day. In addition, domestic business site install pure water manufacturing facilities (RO) in paint factories to reuse and monitor RO concentrated water, and plan to increase the reuse rate through investment. Estimated Response Period KIA has established a goal for a low-carbon transformation plan through analysis of climate change scenarios, and plans to establish a strategy for promoting water resources accordingly. Starting with the short-term plan by 2026, a sustainable water resource management system will be established tor all workplaces through the establishment of goals for the mid-term 2030 and the long-term 2045.

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, but we are currently exploring water valuation practices

Please explain

KIA does not set a price for water internally. However, based on the results of the water risk assessment, KIA plans to set the most appropriate price for internal water use. As the company plans to set the water price by checking the physical risk index of the business site in the future, it is determined that the risk of water price increase and supply chain risk can be managed.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	Yes	In the process of manufacturing automobiles, KIA goes through a painting process to paint the body surface of car to prevent corrosion and improve the appearance of the products. In order to prevent the attachment problem between the painted surfaces, a cleaning process is performed to clean the painted surface, and a large volume of water is used in this process.	<not applicable=""></not>	Recognizing the importance of water resources and the seriousness of water shortage, KIA is implementing various countermeasures such as investing on wastewater recycling facilities of waters wasted during process and replacing equipment. Every year, KIA strives to improve the volume of water required per vehicle production, and is expanding the volume of water savings through recycling/reusing wastewater.
		KIA plans to continuously reduce water withdrawal through recycled/reused fresh water used in painting, cleaning and cooling processes through the introduction of the wastewater discharge system and RO process.		In addition, in areas with high water stress, a zero-discharge system is introduced, and the volume of water leakage is also reduced by sequentially replacing aging pipes. As a result, the unit of water used in automobile production is expected to continue to decrease, and this information can be confirmed through the annual sustainability report.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets? Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	Yes	<not applicable=""></not>
Water withdrawals	Yes	<not applicable=""></not>
Water, Sanitation, and Hygiene (WASH) services	Yes	<not applicable=""></not>
Other	Please select	<not applicable=""></not>

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number Target 1

Category of target Water pollution

Target coverage Company-wide (direct operations only)

Quantitative metric Reduction in concentration of pollutants

Year target was set 2019

Base year 2020 Base year figure 0.66

Target year 2025

Target year figure 0.49

Reporting year figure

% of target achieved relative to base year

Target status in reporting year

Underway

Please explain

Goal overview

- (Target) All domestic production factories

- (Goal) To reduce the intensity of water pollutants (BOD) per sales (1 trillion won) (ton/trillion won)

- (Background) Kia uses and manages water according to the rules of the environmental management policy. In particular, as the chemical oxygen demand (COD) has been replaced by the total organic carbon (TOC) since 2022, the company manages the TOC values by converting the COD values based on internal standards. As such, it minimizes environmental impacts by reducing water usage and expanding recycling throughout all business processes.

Achievement rate

- (Progress and prospects) Kia manages the water quality of effluent thoroughly by applying a strengthened internal standard, or below 30% of the legal criteria. In 2022, the number of water pollutants (BOD) slightly decreased ($0.66 \rightarrow 0.65$ ton/trillion won), and the company expects to achieve the goal by 2025 through continuous water pollution management and reduction activities.

Target reference number Target 2

Category of target Water withdrawals

Target coverage Company-wide (direct operations only)

Quantitative metric

Increase in water use met through recycling/reuse

Year target was set 2019

Base year 2020

Base year figure 179499

Target year 2025

Target year figure 157095

Reporting year figure 162633

% of target achieved relative to base year

Target status in reporting year Underway

Please explain

Goal overview

- (Target) All domestic production factories

- (Goal) To reduce the intensity of water usage per sales (1 trillion won) (ton/trillion won)

- (Background) Painting and cleaning processes use a large amount of water. Kia has established a car sales goal of 4.3 million units by 2030 according to a plan for transition to electric vehicles. To achieve the goal, the company should manage water resources by responding to an increase in water usage due to expanded production and risks of securing water resources due to accelerated climate change.

Achievement rate

- (Progress and prospects) Kia has production factories in various countries and analyzed risks related to the supply of water resources by examining the water stress of each region. As a result of analyzing water stress for eight domestic and overseas factories with the WRI tool, the water stress index of three business sites, Gwangmyeong, Mexico, and India, was 'Extremely high,' the highest class. Because vehicle production will rise due to the transition to electric vehicles, the company plans to minimize water dependence and water resource risks by enhancing the efficiency of processes and expanding wastewater recycling. For this, Kia measures the intensity of water used to produce one vehicle every year, recording 150,971 tons/trillion won in 2022. It expects to achieve the goal through continuous facility investment and process efficiency improvement.

Target reference number Target 3

Category of target

Water, Sanitation and Hygiene (WASH) services

Target coverage

Company-wide (direct operations only)

Quantitative metric

Increase in the proportion of employees using safely managed drinking water services

Year target was set 2008

Base year 2007

Base year figure

Target year 2040

Target year figure

Reporting year figure

100

% of target achieved relative to base year <Calculated field>

Target status in reporting year Underway

Please explain

Goal overview

- (Target) All domestic production factories

- (Goal) To Provide all executives and staff of business sites with a 'WASH service'

- (Background) Kia considers the UNGC's 10 principles and the UN SDGs together. According to the SDGs 6.1 and 6.2, it has established and implemented a plan to provide safe water, hygiene, and services to all employees at home and abroad.

Achievement rate

- (Progress and prospects) Kia has production factories in various countries, such as Korea (Gwangmyeong, Hwaseong, Gwangju, etc.), the USA, China, India, Slovakia, and Mexico. The company provides a WASH service to executives and staff of all existing factories and expects to do the same for all business sites and production factories that will be established.

W9. Verification

W9.1

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

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W0 Introduction	- Company Introduction and Information	AA1000AS	KIA announces the current status of water (water withdrawal, water discharge, water consumption, etc.) and water quality pollutants, which are used for car production every year, on the Sustainability Report.
	- Scope of operation of the workplace		KIA follows the use and management of water in accordance with water principles stipulated in the Environment Management Policy, and Sustainable Management Committee under the Board of Directors reviews risks and countermeasures to significant ESG risks of the Company, including water resources.
			KIA discloses the operation status related to water resources of the Corporation, the Board of Director's voting result on the Sustainability Report, and secures data reliability through validation from a third person.
W1 Current state	 water intake water discharge water usage 	AA1000AS	KIA announces the current status of water (water withdrawal, water discharge, water consumption, etc.) and water quality pollutants, which are used for car production every year, on the Sustainability Report.
			KIA follows the use and management of water in accordance with water principles stipulated in the Environment Management Policy, and Sustainable Management Committee under the Board of Directors reviews risks and countermeasures to significant ESG risks of the Company, including water resources.
			KIA discloses the operation status related to water resources of the Corporation, the Board of Director's voting result on the Sustainability Report, and secures data reliability through validation from a third person.
W6 Governance	 Board composition and activities an incentive 	AA1000AS	KIA announces the current status of water (water withdrawal, water discharge, water consumption, etc.) and water quality pollutants, which are used for car production every year, on the Sustainability Report.
			KIA follows the use and management of water in accordance with water principles stipulated in the Environment Management Policy, and Sustainable Management Committee under the Board of Directors reviews risks and countermeasures to significant ESG risks of the Company, including water resources.
			KIA discloses the operation status related to water resources of the Corporation, the Board of Director's voting result on the Sustainability Report, and secures data reliability through validation from a third person.

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

			Please explain
	mapping	chain stage	
		staye	
Row	Not	<not< td=""><td>Monitoring plans for expanding the use of recycled plastics</td></not<>	Monitoring plans for expanding the use of recycled plastics
1	mapped -	Applic	
	but we plan	able>	KIA is driving the expanded use of recycled plastics in full swing, aiming to reduce potential risk factors of the future environment caused by waste plastics, protect the natural
	to within		environment, and reuse resources efficiently. The plan is to increase the use of recyclable plastics in finished vehicles from 2% to 20% by 2030.
	the next		
	two years		KIA is making enormous efforts for relevant R&D and its materialization by operating consultative council for expanded use of recycled plastic materials and a pilot network project for
			collecting plastics from waste components. In particular, a company-wide cooperation system was established through the organization of the 'Recycled Plastics Council,' which will serve
			various roles, such as drawing action plans following a roadmap for widely applying recycled plastics and discussing cooperation for the relevant fields. The Council established 'Set
			promotion direction of recyclable plastics,' 'Establish a roadmap for expanded application of recycled plastics,' and 'Secure supply chain of waste plastics' as the 3rd promotion plan for
			2023 and is concentrating its capacity to put those plans into practice.

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact	Value	Please explain
	assessment	chain	
		stage	
Row	Not assessed -	<not< td=""><td>Automobile industries focus on enhancing electricity and fuel efficiency through lightweight vehicles to reduce carbon emissions. As a result, the application of light materials and the</td></not<>	Automobile industries focus on enhancing electricity and fuel efficiency through lightweight vehicles to reduce carbon emissions. As a result, the application of light materials and the
1			use of plastics have been increased, driven by electrification. Plastics from scrapped cars are also a problem that takes more than 600 years to be disposed of after being buried and
	within the next	able>	disturbing the natural ecosystem. KIA plans to expand the use of recyclable plastics to reduce potential risk factors of these waste plastics toward the future environment, protect the
	two years		natural environment, and reuse waste resources.
			Therefore, KIA plans to identify the use and production status of plastics in workplaces and supply chains to evaluate the potential influence of plastics on the environment and human
			health in 2 years. Based on the result, KIA will establish action plans to expand the use of recycled plastics and countermeasures to minimize plastic waste.

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Value chain stage	Type of risk	Please explain
Row 1			Regulatory Technology Physical	Regulatory Risks following the establishment of plastic circular economy (Definition of Risks) European Commission announced a strategy for establishing a plastic circular economy in 2018 and suggested goals to reuse or recycle 100% of plastic packaging by 2030 and recycle 50% of waste plastics thrown in Europe. Regulation for compulsory use of waste plastics in new vehicles is estimated to be introduced like in Europe as the Korean Government proposed building of plastic circular economy as a major national policy agenda aligning with the compulsory regulations for a 95% target of scrapped car recycling rates, which is recommended currently. (Potential Influence) Suppose a regulation for the mandatory use of recycled plastics for a new car takes into action. In that case, it is likely to cause relevant risks such as the increase of plastic materials, production suspension risks from short supplies, and regulatory risks since the supply of qualified waste plastics for the safety of a new car is insufficient. If a mandatory regulation for reaching 95% scrapped car recycling rates just like the EU's End-of-Life Vehicles (ELV) in Korea, there will be high regulatory risks from the limitation in mass scrapping and recycling with the preliminary dismantlement unlike Europe. (Countermeasure) KIA drives the expanded use of recycled plastics, aiming to reduce potential risk factors of the future environment caused by waste plastics, protect the natural environment, and reuse resources efficiently. The plan is to increase the use of recycled plastics in finished vehicles from 2% to 20% by 2030. KIA is making enormous efforts for relevant R&D and its materialization by operating consultative council for expanded use of recyclable plastic materials and a pilot network project for collecting plastics from waste components.

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets	Target	Target metric	Please explain
	in	type		
	place			
Row 1	Yes	goods	Increase the proportion of post-consumer recycled content in plastic goods	Expanded use of recycled plastics KIA drives the expanded use of recycled plastics, aiming to reduce potential risk factors of the future environment caused by waste plastics, protect the natural environment, and reuse resources efficiently in full swing. The plan is to increase the use of recycled plastics in finished vehicles from 2% to 20% by 2030. KIA is making enormous efforts for relevant R&D and its materialization by operating consultative council for expanded use of recycled plastic materials and a pilot network project for collecting plastics from waste components. In particular, a company-wide cooperation system was established through the 'Recycled Plastics Council,' which will serve various roles, such as drawing action plans following a roadmap for widely applying recycled plastics and discussing cooperation for the
				relevant fields. In addition, KIA is also concentrating on recycling marine plastic wastes to minimize fine plastics that cause marine pollution and threaten ecosystems as a part of eco-friendly projects for a sustainable Earth. Especially the Company has supported 'Ocean Clean-up,' a global environmental NGO, for a long time and has promoted the reuse of resources by reusing collected marine plastic wastes into car accessories and car components. The Corporation is building a value chain and carrying out R&D by coordinating with numerous preprocessing companies for fishing nets and material companies from home and abroad to recycle marine plastic waste further and planning to expand the application by securing a stable supply chain of recycled plastics.

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

	Activity applies	Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	No	
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

W11. 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.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	CEO	Chief Executive Officer (CEO)

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	

SW1.1

(SW1.1) Could any of your facilities reported in W5.1 have an impact on a requesting CDP supply chain member?

SW1.2

(SW1.2) Are you able to provide geolocation data for your facilities?

	Are you able to provide geolocation data for your facilities?	Comment
Row 1	Please select	

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website. Yes, CDP may share our Main User contact details with the Pacific Institute

Please confirm below

I have read and accept the applicable Terms