

W0. Introduction

W0.1

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

Kao. The Company is a Japan-based company that operates through two business segments: Consumer Product and Chemical. The Consumer Product segment has three divisions. The Cosmetic Business provides cosmetics such as lotion, foundation and lipstick. The Skin Care and hair Care Business offers premium skincare products such as face washes, as well as premium hair care products including shampoos, hair styling products and hair colouring products, among others. The Human Health Care Business provides food and beverage products such as drinks ; sanitary products including hygiene products and paper diapers, as well as personal health products such as bath additives. The Fabric and Home Care Business offers fabric care products including detergents for apparel use, and home care products including detergents for kitchen use. The Chemical Business provides oil and fat products such as fatty acids; functional materials products such as surface acting agents and additives for plastic use, as well as specialty chemical products such as essences, among others.

The Cosmetic Business accounted for 18.1% of total turnover in fiscal 2018; The Skin Care and hair Care Business,22.1%; The Human Health Care Business,17.3%; The Fabric and Home Care Business, 22.3%; and The Chemical Business,20.2%. The Company reported JPY 1,508.0b in revenues and 33,664 permanent employees at December 31,2018.

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 2018	December 31 2018

W0.3

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

- Australia
- Austria
- Belgium
- Canada
- China
- China, Hong Kong Special Administrative Region
- Czechia
- Denmark
- Finland
- France
- Germany
- Indonesia
- Italy
- Japan
- Malaysia
- Mexico
- Netherlands
- New Zealand
- Norway
- Philippines
- Republic of Korea
- Russian Federation
- Singapore
- South Africa
- Spain
- Sweden
- Switzerland
- Taiwan, Greater China
- Thailand
- United Kingdom of Great Britain and Northern Ireland
- United States of America
- Viet Nam

W0.4

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

JPY

W0.5

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

Companies, entities or groups over which operational control is exercised

W0.6

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

No

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Vital	- Primary use of freshwater in direct operation Freshwater is used as a raw material of our products and is indispensable to produce steam and cooling water used in the production process at our plants. It is also used as drinking water and water for sanitation for our employees - Primary use of freshwater in indirect operation Freshwater is used as a raw material of our suppliers' products and is indispensable to produce steam and cooling water used in the production process at our suppliers' plants. It is also used as drinking water and water for sanitation for their employees - Why the chosen importance rating was selected for freshwater in direct operations Main products of our company include products used on human bodies, or body washing products. That is why our factories require pure water with a certain quality as a material. Fresh water is also needed for safety of drinking water for our employees. As Kao plans to increase sales to reach the 2030 goal, production will rise accordingly, leading to higher water consumption. - Why the chosen importance rating was selected for freshwater in indirect operations Main products of our company include products used on human bodies, or body washing products. That is why our suppliers' factories require pure water with a certain quality as a material. Fresh water is also needed for safety of drinking water for their employees. As Kao plans to increase sales to reach the 2030 goal, production will rise accordingly, leading to higher water consumption.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Not important at all	- Primary use in direct operation At our Mexico Plant, we receive water recycled at another facility, purify it, and use it to produce steam and cooling water. - Primary use in indirect operation None of our suppliers use non-freshwater. - Why the chosen importance rating was selected for their direct operation According to Kao's business plan until 2030, we plan to increase sales and the production volume at our Mexico Plant, which uses recycled water. Our Mexico plant has been improving its water footprint per product unit, but again, a production increase is planned, and water consumption during production will exceed the amount saved through the improvement effort. Consumption of recycled water will therefore increase. - Why the chosen importance rating was selected for their indirect operation Since we know from our surveys that none of Kao's suppliers use, and intend to use in future, non-freshwater, non-freshwater is not, and will not be, important at all for our suppliers.

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	We consider the water intake volume as the amount appearing on invoice, etc. that shows the measurement by the flowmeter installed by a third party when water is supplied from that third party. When ground water is pumped at each site by the relevant base, we consider the water intake volume to be the amount of water pumped as measured by the flowmeter. The person in charge at each site enters the water intake volume into the database operated by the Kao Group once every month or two. The person in charge at the head office then checks the values entered into the database every month; if this person identifies any significant data fluctuation, he or she confirms the cause with the relevant base.
Water withdrawals – volumes from water stressed areas	100%	In a region with water stress, we consider the water intake volume as the amount appearing on invoice, etc. that shows the measurement by the flowmeter installed by a third party. The person in charge at each site enters the water intake volume into the database operated by the Kao Group once every month or two. The person in charge at the head office then checks the values entered into the database every month; if this person identifies any significant data fluctuation, he or she confirms the cause with the relevant base.
Water withdrawals – volumes by source	100%	We consider the water intake volume by source as the amount appearing on invoice, etc. that shows the measurement by the flowmeter installed by a third party when water is supplied from that third party. When ground water is pumped at each site by the relevant base, we consider the water intake volume to be the amount of water pumped as measured by the flowmeter. The person in charge at each site enters the water intake volume for each source into the database operated by the Kao Group once every month or two. The person in charge at the head office then checks the values entered into the database every month; if this person identifies any significant data fluctuation, he or she confirms the cause with the relevant base.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sectors]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	The person in charge at each base checks the water withdrawals quality like as color, odor and temperature every day. The person in charge at each production site checks the water color by comparing it against the color chart, and also checks the smell. If there were any problems, the person in charge report to the water supplier to solve it.
Water discharges – total volumes	100%	At each production site, the volume of water discharge is measured daily with a voluntarily installed flowmeter. The person in charge there inputs monthly results in the database managed by the Kao Group. At the Head Office, the person responsible checks the inputted data every month and, if data fluctuates significantly, checks with relevant sites about the cause.
Water discharges – volumes by destination	100%	At each production site, the volume of water by discharge destination is measured daily with a voluntarily installed flowmeter. The person in charge there inputs monthly results by destination in the database managed by the Kao Group. At the Head Office, the person responsible checks the inputted data every month and, if data fluctuates significantly, checks with the relevant sites about the cause.
Water discharges – volumes by treatment method	100%	At each production site, the volume of effluent by treatment method is measured daily with a voluntarily installed flowmeter. The person in charge there inputs monthly results in the database managed by the Kao Group. At the Head Office, the person responsible checks the inputted data every month and, if data fluctuates significantly, checks with the relevant sites about the cause. The person responsible at the Head Office is familiar with the effluent treatment method used at each production site and tabulates data by treatment method. The same individual also annually checks whether each production site has changed its effluent treatment method.
Water discharge quality – by standard effluent parameters	100%	The person in charge at each base checks the water discharge quality by standard effluent parameters every day. He or she check them by using automatic evaluate equipment or by manual or third party evaluate equipment or under the standard on each base.
Water discharge quality – temperature	100%	The person in charge at each base checks the water temperature every day. . He or she check them by using automatic evaluate equipment or by manual or third party evaluate equipment or under the standard on each base.
Water consumption – total volume	100%	Since Kao considers the amount of water consumption to be the difference between the amount of water withdrawals and the amount of water discharge, monitoring the amount of water withdrawals and the amount of water discharge achieves monitoring of the amount of water consumption. The person in charge at each base checks the amount of water withdrawals and the amount of water discharge every month or every other month and enters the relevant data for each intake source into a database managed by the Group. The person in charge at the head office checks the values entered into the database every month; if this person identifies any significant data fluctuation, he or she confirms the cause with the relevant base.
Water recycled/reused	100%	At facilities where water is recycled, the facility operation status is monitored to measure the volume of water recycled every day by using a flowmeter or by estimating the pump capabilities and operation time. Note that in order to check which production sites actually do recycle water, the person responsible at the Head Office conducts an annual survey with all group companies to examine whether production sites that did not recycle water still do not recycle or reuse it.
The provision of fully-functioning, safely managed WASH services to all workers	100%	In accordance with the basic policy on environmental safety, we provide a fully-equipped water, sanitation and hygiene (WASH) service to all workers at all our bases. At each base, a committee run by each base (for example, the Safety and Health Committee) checks them every month. Providing fully-functioning, safely managed WASH services to all workers Every year, the Head Office checks for water or hygiene problems in services by conducting on-site audits, comparing responses against the Sedex survey, and conducting employee surveys.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	17776	About the same	If fluctuation in the water withdrawals volume in a year is within 5% when compared with the previous year, Kao regards the water withdrawals volume in both years as almost the same in its management of water withdrawals. We set 5%, which is below 8%, as the criterion because we need to continue growing our operation by about 8% per year to achieve the sales target for 2030. At the office level, some recorded a fluctuation exceeding 5%, but overall, the total water withdrawals volume remained within 5%. We are in the process of growing business as a corporate group and the total volumes of water withdrawals is expected to increase accordingly.
Total discharges	11530	Higher	If fluctuation in the water discharge volume in a year is within 5% when compared with the previous year, Kao regards the water discharge volume in both years as almost the same in its management of water discharges. We set 5%, which is below 8%, as the criterion because we need to continue growing our operation by about 8% per year to achieve the sales target for 2030. Since the water discharge volume was up 5.8% when compared with last year's figure, we consider the amount of discharge for this year is higher than last year. As a result of large volumes of water being discharged due to a new surfactant production facility starting operations etc., at the Wakayama Plant, the volume of water discharged by the entire Kao Group increased as well in 2018. We are in the process of growing business as a corporate group and the total volumes of water discharged is expected to increase accordingly.
Total consumption	6246	About the same	If fluctuation in the water consumption volume in a year is within 5% when compared with the previous year, Kao regards the water consumption volume in both years as almost the same in its management of water consumption. We set 5%, which is below 8%, as the criterion because we need to continue growing our operation by about 8% per year to achieve the sales target for 2030. At the office level, some recorded a fluctuation exceeding 5%, but overall, the total water consumption volume remained within 5%. We are in the process of growing business as a corporate group and the total volumes of water consumption is expected to increase accordingly. Total withdrawals : 17,776 Total discharge : 11,530 Total consumption : 17,776-11,530=6,246

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	19.5	Lower	WRI Aqueeduct	-why or why not the percentage of water withdrawn from stressed areas has changed from the previous reporting year Kao manages the volume of water intake by considering that it is about the same as the previous year if it is in the range of 5% difference. We chose 5% as the reference since it is lower than 8%, which is the target percentage for annual growth we need in order to achieve the 2030 sales target. We chose the answer "Lower" since the percentage of water intake in areas of high water stress decreased by 7%. This decrease is mainly attributable to a 14% production decrease at the Indonesian plant. -how the selected tool was applied to evaluate whether the water has been withdrawn from stressed areas Kao is a consumer product manufacturer and its plants are located near sites of consumption. Most sites of consumption are large cities around the world. In these cities the population is predicted to further increase, and we recognize that this will lead to water supply risk. For this reason, Kao uses the WRI Aqueeduct, whose indicators include future water risk, as an assessment tool. We check Baseline water stress and identify areas rated "High" and "Extremely high" as areas with high water stress.

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	Main products of our company include products used on human bodies, or body washing products. That is why our factories require pure water with a certain quality as a material. Freshwater is also used as drinking water, water for sanitation, for our employees. Therefore we don't use fresh surface water, including rainwater, water from wetlands, rivers, and lakes. We think that the possibility of using it in the future is low so far.
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	Main products of our company include products used on human bodies, or body washing products. That is why our factories require pure water with a certain quality as a material. Therefore we don't use non-fresh water including brackish surface water/seawater. We think that the possibility of using it in the future is low so far.
Groundwater – renewable	Relevant	5260	About the same	Kao uses groundwater if there is abundant supply and if the company concludes that intake will not affect residents in neighboring areas or those who are downstream of underwater channels. Kao uses groundwater at seven plants, and its volume accounts for approximately 30% of the total volume of water intake. Kao manages the volume of water intake by considering that it is about the same as the previous year if it is in the range of 5% difference. In 2018, production at plants using groundwater decreased by 1.1% while groundwater intake rose by 3.5% (both compared to 2017). This result was mainly attributable to using groundwater for trial runs of new equipment in 2018. For this reason, we chose "About the same." Since Kao plans to increase sales to achieve the 2030 target, production at plants using groundwater will increase, and groundwater intake will also grow.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Kao has a policy of not using non-renewable groundwater as it was suggested by third-party experts to suspend the use of such water because it is precious. This policy is in line with Kao's corporate message, "Enriching lives, in harmony with nature." In this regard, non-renewable groundwater is not relevant. We will not change this policy in the future, so we will not take water from non-renewable groundwater either in the future.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	Main products of our company include products used on human bodies, or body washing products. That is why our factories require pure water with a certain quality as a material. Therefore we don't use non-fresh water including produced/process water. We think that the possibility of using it in the future is low so far.
Third party sources	Relevant	12516	About the same	Main products of our company include products used on human bodies, or body washing products. That is why our factories require pure water with a certain quality as a material. Compared to the previous year, production at plants that intakes water from third-party sources decreased by 2.4% while intake increased by 2.5%. For this reason, we chose the answer "About the same." (Kao manages the volume of water intake by considering that it is about the same as the previous year if it is in the range of 5% difference.) Since we plan to increase sales to achieve the 2030 target, production at plants that bring in water from third-party sources will increase, and water intake from third-party sources will also increase.

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	2378	About the same	Several factories in Kao group cleans up the used water with a purification facility inside the plant and then releases it to nearby rivers. Thus, Kao is aware that the amount and quality of water discharged directly affect river water quality. So Kao manage it as the important factor to influent the environment around our factory. Kao manages the volume of effluent by considering that it is about the same as the previous year if it is in the range of 5% difference. In 2018, total production at plants that discharged effluent into fresh surface water decreased by 1.7%, and the total volume of discharge increased by 1.5% from the previous year. For this reason, we chose the answer "About the same." Since Kao plans to increase sales to achieve the 2030 target, production at plants that discharge effluent into fresh surface water will rise, as will the volume of discharge.
Brackish surface water/seawater	Relevant	6359	Higher	In some factories like as Wakayama factory, water discharges that has been cleaned by the purification equipment in their site is flowing into the neighboring sea. Thus, Kao is aware that the amount and quality of water discharged directly affect sea water quality. So Kao manage it as the important factor to influent the environment around our factory. Kao manages the volume of effluent by considering that it is about the same as the previous year if it is in the range of 5% difference, and that it is higher/lower than the previous year if it is in the range of 10% difference. Since the water discharge volume to Brackish surface water/seawater was up 9.4% when compared with last year's figure, we chose the answer "Higher". The main reason is that a lot of water discharge occurred because we have started new surfactant production facility at the Wakayama Plant. It is expected that the amount of water discharge will increase as production increases.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Groundwater is water that is filtered by natural soil, rich in mineral components, and is often used as a beverage. Therefore, we have never done drainage to groundwater and we will not do it in the future.
Third-party destinations	Relevant	2793	About the same	Many Kao plants discharge wastewater into sewer. Therefore, Kao is aware that the amount and quality of water discharged from such plants matter because they impact the quality of wastewater discharged from processing facilities run by other organizations located downstream of the sewer. For this reason, Kao manages discharging of wastewater to other organizations as one of the company's critical environmental load items. In this regard, discharging wastewater to other organizations is relevant. Kao manages the volume of effluent by considering that it is about the same as the previous year if it is in the range of 5% difference. In 2018, the total volume of discharge increased by 2.1% from the previous year. For this reason, we chose the answer "About the same." It is expected that the amount of water discharge will increase as production increases.

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	Less than 1%	Much higher	Kao manages the volume of effluent by considering that it is about the same as the previous year if it is in the range of 5% difference, and that it is higher/lower than the previous year if it is in the range of 10% difference, and that it is much higher/much lower than the previous year if it is over the range of 10% difference. Facing water risk, in 2018 our Thai plant began using recycled water. Since the plant did not manage the amount of recycled water use up to 2017, we chose the answer "Much higher." For the same plant, recycled water accounted for 32% of the total water consumption. We recognize that water recycling is an effective way to reduce the volume of water intake for a plant facing water source scarcity. To lower the impact of water issues on business activities, we plan to recycle more water.

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number

1-25%

% of total procurement spend

26-50

Rationale for this coverage

Kao participates in the Water section of the CDP SC Program and asks key suppliers to provide responses. For reporting purposes, suppliers were selected from the three fields of business that use the most water in Japan. The objectives of this supplier response system for the Water section of the CDP SC Program are to make Kao's suppliers more sensitive to water, efficiently improve their resilience against water risk, and ensure their sustainability. Kao uses its own method to assess responses to the CDP SC Program, and sends feedback to each supplier. We also send them an assessment result for Kao's suppliers as a whole. This allows suppliers to easily compare their efforts with those of other companies and efficiently address the water risk. The CDP score is reflected in our Supplier Scorecards. Suppliers with a high Supplier Scorecard rating will receive recognition at the Vendor Summit, to which we invite our key suppliers.

Impact of the engagement and measures of success

We request our suppliers to provide information through the CDP SC Program on the volumes of water intake and discharged water, targets to reduce them, facility water risk, and water-related management levels. In assessing our suppliers' water-risk management levels, we use our own method to evaluate their CDP SC Program responses. We provide feedback on the results to each supplier, share the results with Procurement Division personnel, and use it to strengthen engagement to enhance the suppliers' water-risk management levels. We also use this information to check the water risk for suppliers' plants where products supplied to us are manufactured. We consider that our suppliers have reached the level of success when they have learned how much water they use, developed a management system, set a reduction target, and reached that target. This is because, according to our past studies, once suppliers reach this level, their own efforts are predicted to gain momentum.

Comment

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement

Incentivizing for improved water management and stewardship

Details of engagement

Water management and stewardship is integrated into supplier evaluation processes
Water management and stewardship is featured in supplier awards scheme

% of suppliers by number

76-100

% of total procurement spend

76-100

Rationale for the coverage of your engagement

Since Kao requests the plants of all suppliers to participate in Sedex, which allows us to survey water-related and other matters, respond to questions, and set data access rights in accordance with the Kao Guidelines for Supplier's Assessment, the coverage for both the number of suppliers and the purchase amount is 100%.

Impact of the engagement and measures of success

-Details of the engagement activity's beneficial outcomes We believe that, as our suppliers improve their Sedex performance, their ability to respond to ESG issues including water management will improve. This will make our supply chain more resilient. -A clear description of how success of supplier engagement is measured By the end of 2018, suppliers that had necessary settings in place that allow Kao to check their Sedex performance accounted for 62% of the total amount purchased by Kao. We consider that the first stage of success is the ability to check the activity status of all suppliers. In September 2018, we evaluated Sedex performance on a five-point scale, specifically S, A, B, C, and No access right. The evaluation results indicated that 64% of suppliers were rated either S or A. For Kao, the ultimate level of success is all suppliers gain an S or A rating.

Comment

W1.4c

(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

We understand the percentages of the amount of water used at each lifecycle stage of Kao products to be as follows: 87% in the usage stage, 11% in the ingredients procurement stage, and 1% in the manufacturing stage. Accordingly, Kao considers these three stages in which much water is used to be the important phases. For this reason, Kao engages in various activities with consumers, suppliers, and other stakeholders related to our plants. For this reason, the company hosts various types of engagement activities, mainly for consumers and stakeholders connected with suppliers and Kao plants.

For consumers, Kao offers plant tours and visits schools to give lectures. We also transmit information in collaboration with the national government, local governments, and other parties involved in distribution. For suppliers, Kao promotes the establishment of water management systems and requests that important suppliers respond to the CDP SC Program. As for plants, Kao continues to reduce the amount of water used from the viewpoint of 3R (Reduce, Reuse, and Recycle) and works on joint projects related to water with the local government on-site at each Kao plant.

We consider that our suppliers have reached the level of success when 100% of them learned how much water they use, developed a management system, set a reduction target, and reached that target. This is because, according to our past studies, once suppliers reach this level, their own efforts are predicted to gain momentum.

Furthermore, we measure the effects of our consumer engagement activities. One of these effects is sales of products marked with the "eco together" symbol. This symbol is affixed to products that have a low environmental impact through significantly reducing water consumption during product use and have met our own strict certification criteria. In 2018, sales of "eco together" products in Japan accounted for 29% of total sales.

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?

Yes, enforcement orders or other penalties

W2.2b

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

Type of penalty

Enforcement order

Financial impact

0

Country/Region

United States of America

River basin

Not known

Type of incident

Other non-compliance with permits, standards, or regulations

Description of penalty, incident, regulatory violation, significance, and resolution

At Kao Specialties Americas, there were two cases of excessive effluent BOD discharged into sewage. To address this problem, the company improved the treatment capabilities of the effluent treatment facility. This has resulted in lowered effluent contamination levels; effluent is now far below various standards, including the BOD standard.

W3. Procedures

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

>6 years

Type of tools and methods used

Tools on the market
International methodologies
Other

Tools and methods used

WRI Aqueduct
Life Cycle Assessment
Internal company methods

Comment

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Annually

How far into the future are risks considered?

>6 years

Type of tools and methods used

Tools on the market
International methodologies
Other

Tools and methods used

WRI Aqueduct
Life Cycle Assessment
Internal company methods

Comment

Other stages of the value chain

Coverage

Partial

Risk assessment procedure

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

Frequency of assessment

Annually

How far into the future are risks considered?

>6 years

Type of tools and methods used

Tools on the market
International methodologies
Other

Tools and methods used

WRI Aqueduct
Life Cycle Assessment
Internal company methods

Comment

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	- an explanation of why this issue is relevant for the company's business Almost all Kao detergents (for example, ATTACK clothing detergent, Bioré body detergent, etc.), which are Kao's key products, use water as the main ingredient. In addition, a large amount of water is used to manufacture such products. Thus, we include the availability of water in watershed or catchment areas in the plants that manufacture the products in the risk assessment. - an explanation of the assessment; Surfactant, which is an ingredient found in various Kao detergents, is supplied by many suppliers in the chemical sector. Since Kao is aware that suppliers in the chemical sector are highly dependent on water, we include the availability of water in watershed or catchment areas for such suppliers in the risk assessment. Water risk assessment conducted by Kao always includes water availability. In addition, risk assessment on water availability includes both current and emerging issues. - Which tool was used in the assessment. Kao has set 2.5 trillion yen (167% of the 2018 figure) as the sales target for 2030 and will continue to increase the production volume at its plants to achieve it. Accordingly, we use WRI Aqueduct to conduct a long-term, objective evaluation of the current and future water risks (water quality, quantity, etc.) facing Kao plants. We also use the internal company method to evaluate the current and near-future water risks (water quality, water quantity, legal regulations, etc.).
Water quality at a basin/catchment level	Relevant, always included	-an explanation of why this issue is relevant for the company's business Almost all Kao detergents (for example, ATTACK clothing detergent, Bioré body detergent, etc.), which are Kao's key products, use water as the main ingredient. In addition, a large amount of water is used to manufacture such products, so we have developed or improved various facilities on the assumption that the available water has a certain level of quality. For this reason, we include the water quality (COD, number and size of particles etc.) in watershed or catchment areas in the plants that manufacture our products in the risk assessment. -an explanation of the assessment; Surfactant, which is an ingredient found in various Kao detergents, is supplied by many suppliers in the chemical sector. Generally, facilities that specify the water intake quality are also installed at the plants of suppliers in the chemical sector, as in the case of Kao plants. For this reason, we include the water quality in watershed or catchment areas for such suppliers in the risk assessment. Water risk assessment conducted by Kao always includes water quality. In addition, risk assessment on the water quality includes both current and emerging issues. Furthermore, water discharged from plants is not only subject to various limit values, but has also faced tighter regulations in recent years in general. As such, we have also added the current status and future forecast on wastewater quality regulations in the water risk survey. -Which tool was used in the assessment. Kao has set 2.5 trillion yen as the sales target for 2030 and will continue to increase the production volume at its plants to achieve it. Accordingly, we use WRI Aqueduct to conduct a long-term, objective evaluation of the current and future water risks (water quality, quantity, etc.) facing Kao plants. We also use the internal company method to evaluate the current and near-future water risks (water quality, water quantity, legal regulations, etc.).
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	- an explanation of why this issue is relevant for the company's business Almost all Kao detergents (for example, ATTACK clothing detergent, Bioré body detergent, etc.), which are Kao's key products, use water as the main ingredient. In addition, a large amount of water is used to manufacture such products. Thus, if there is a conflict with stakeholders regarding water resources in watershed or catchment areas, there is a risk that there will be insufficient water with adequate quality. Kao is also aware that since water is essential for many of Kao's key products when they are used, such conflict will spread beyond the watershed or catchment areas, which may adversely affect Kao's reputation. - an explanation of the assessment; Surfactant, which is an ingredient found in various Kao detergents, is supplied by many suppliers in the chemical sector. Kao is also aware that a large amount of high-quality water is needed for our suppliers in the chemical sector to operate their plants and that an issue with stakeholders in watershed or catchment areas is a risk factor for the water supply. For this reason, we have added a conflict with stakeholders that has emerged or is likely to emerge in every water risk survey. - Which tool was used in the assessment. Kao has set 2.5 trillion yen (167% of the 2018 figure) as the sales target for 2030 and will continue to increase the production volume at its plants to achieve it. Accordingly, we use WRI Aqueduct to conduct a long-term, objective evaluation of the current and future water risks (water quality, quantity, reputation, etc.) facing Kao plants. We also use the internal company method, which includes information obtained from local governments and through communication with neighbouring residents, to evaluate the current and near-future water risks (water quality, water quantity, legal regulations, etc.).
Implications of water on your key commodities/raw materials	Relevant, always included	- an explanation of why this issue is relevant for the company's business Almost all Kao detergents (for example, ATTACK clothing detergent, Bioré body detergent, etc.), which are Kao's key products, consume a large amount of water when the product is used. Thus, the amount and quality of water when the product is used are of great interest. For this reason, we include the amount and quality of water supplied to general households in the assessment items when we conduct a water risk survey. To continue selling such products, we also predict the amount and quality of such water in the future. - an explanation of the assessment; Surfactant, which is an ingredient found in various Kao detergents, is supplied by many suppliers in the chemical sector. Kao is aware that a large amount of high-quality water is needed for our suppliers in the chemical sector to operate their plants, so we include water risks at our suppliers' plants in every survey. - Which tool was used in the assessment. Kao has set 2.5 trillion yen (167% of the 2018 figure) as the sales target for 2030 and will continue to increase the production volume at its plants to achieve it. Accordingly, we use WRI Aqueduct to conduct a long-term, objective evaluation of the current and future water risks (water quality, quantity, reputation, etc.) facing Kao plants. We are also aware through Life-Cycle Assessment that ten times the amount of water used at our plants is consumed in the raw-material procurement stage. Based on this result, we understand that the impact of water on Kao's commodities and raw materials is at least as important as on its own plants.
Water-related regulatory frameworks	Relevant, always included	- an explanation of why this issue is relevant for the company's business Almost all Kao detergents (for example, ATTACK clothing detergent, Bioré body detergent, etc.), which are Kao's key products, consume a large amount of water when the product is used. Thus, the amount and quality of water when the product is used are of great interest. For this reason, we include the water-related regulatory frameworks when we conduct a water risk survey. To continue selling such products, we also predict the amount and quality of such water in the future. - an explanation of the assessment; With respect to water intake, Kao plants in the Philippines and Germany, where a large amount of groundwater is used, are subject to water intake regulations due to the depletion of groundwater. As for wastewater, almost all Kao plants are subject to various regulations, except some plants such as those of Kao (Hefe) Co., Ltd., which only manufacture disposable diaper products and do not discharge water subject to regulations. These regulations generally tend to become stricter in an attempt to stop the worsening trends of the global environment. Therefore, Kao includes the current and future forecast for water-related regulations in the assessment items of every water risk assessment. - Which tool was used in the assessment. Kao has set 2.5 trillion yen (167% of the 2018 figure) as the sales target for 2030 and will continue to increase the production volume at its plants to achieve it. Accordingly, we evaluate the current and future legal regulations related risks facing Kao plants based on the results of surveys, conducted mainly by the secretariat of the Responsible Care Promotion Committee, of internal and external databases, trends in legal regulation, etc. using the internal company method.
Status of ecosystems and habitats	Relevant, always included	- an explanation of why this issue is relevant for the company's business Most of our plants are located in river basins. The habitat of living things can be found in the areas where our plants are located, as well as in the upstream and downstream of basins. Therefore, our plants may have an impact on the ecosystem. For example, our plant in the Philippines is the largest in a river basin. Therefore, in general, it is recognized that the plant has a dominant impact on the ecosystem and habitat in the relevant river basin. - an explanation of the assessment; As such, we believe that understanding the current status of the ecosystem and areas where living things grow is important to ensure the continuous operation of the plant and we include the understanding of such status in every water risk assessment. - Which tool was used in the assessment. Using the internal company method, we assess risks associated with the status of ecosystems and habitat based on the results of an investigation of the ecosystem within and surrounding the plant conducted by each plant (as to whether endangered species live there or have nests, etc.).
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	- an explanation of why this issue is relevant for the company's business As published in the Kao Group Health Declaration in 2008 both internally and externally, we are committed to achieving Health and Productivity Management by actively implementing support programs for our employees and their families to achieve a healthy lifestyle, which form the foundation of human resource utilization. Our policy stipulates that the health and safety of all employees have a greater priority over other matters, so the WASH service has been introduced in all work sites. However, if there is an issue with the service, it will violate Kao's policy on human resource utilization. - an explanation of the assessment; We conduct an in-house audit, on-site inspections, and a biennial satisfaction survey covering all employees, etc. to evaluate the presence of WASH service-related risks as needed. - Which tool was used in the assessment. To conduct the assessment, we employ the internal company method, including an in-house audit, on-site inspections, and a biennial satisfaction survey covering all employees.
Other contextual issues, please specify	Please select	

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, always included	-An explanation of why these stakeholders are included in the risk assessment In assessing water risk, consumers are the most important stakeholders because the majority of our products require water when used by consumers. In fact, water consumption by consumers during product use accounts for approximately 90% of the total water consumption throughout the product life cycle. We gather consumer queries about water through direct or indirect dialogues, including environment events and calls, emails, and social media posts by consumers. Product developers and brand managers use these consumer inputs for water-related risk assessment. -Stakeholder engagement method Kao has the Consumer Communication Center in place as a way collect consumer inquiries about water risk. Water-risk information obtained from consumers is used as part of the information that product developers and brand managers use to assess water risk.

	Relevance & inclusion	Please explain
Employees	Relevant, always included	-An explanation of why these stakeholders are included in the risk assessment As described above, Kao is a company that has strong affinity with water. Kao believes it is crucial that all employees understand this notion when the company as a whole addresses water risk. For example, product developers in the R&D Division staying highly sensitive to water risk should lead to development of highly water-conscious products. This means when addressing water risk, employees are critical stakeholders. The company collects employees' opinions on water and grasps their sensitivity to water risk through small, large, regular, and occasional meetings. Information obtained through these meetings is used as part of the information that the ISO 14001 Office or the ESG Division use to assess water risk. -Stakeholder engagement method Furthermore, all researchers have participated in a lecture on employees' opinions described above as part of ISO 14001. They collect employee opinions through the lecture and use them as part of the information that the ISO 14001 Office or the ESG Division use to assess water risk.
Investors	Relevant, always included	- an explanation of why these stakeholders are included in the risk assessment Investors understand that a large amount of water is needed to use Kao's key products (for example, ATTACK clothing detergent, Bioré body detergent, etc.) and Kao understands that it is in a business sector that has strong affinity with water. The company at the same time understands that gaining support from investors is one of the requirements for sustainable corporate activities. Therefore, we believe it is important that investors correctly understand Kao's water-related activities. When addressing water risk, investors are important stakeholders, and water-related information provided by investors to the IR Division or ESG Division through personal dialogues or seminars is used by the IR Division or the ESG Division as part of the information in assessing water risk. - The method of engagement with the stakeholder We have several means to create and maintain relationships with investors. Through CDP Water, the Sustainability Data Book, and our annual report, Kao provides information on our water risk mitigation activities to investors. We also participate in the Ministry of the Environment's Environmental Information Disclosure Project to communicate with investors and NGOs.
Local communities	Relevant, always included	-An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company, and a manufacturer carries out its business by producing products at plants and selling them. This means a stable and continuous plant operation is vital to Kao. Since our key products (such as ATTACK [detergent], Bioré [body soap]) require a large amount of water during use and a large amount of water is discharged afterwards, local communities could be skeptical about the effluent discharged from Kao plants. To ensure stable and continuous plant operation, Kao considers it important that local communities correctly understand water-related activities by Kao plants. For this reason, local communities are important stakeholders when addressing water risk. Water-related information that plants obtain from dialogues with local communities is used as part of the information plants use to assess water risk. - The method of engagement with the stakeholder For example, at the Sumida Plant in Tokyo, we invite community representatives to the plant to demonstrate our actual plant operations and hold meetings to discuss their thoughts on Kao every year.
NGOs	Relevant, always included	-An explanation of why these stakeholders are included in the risk assessment Since Kao is a consumer product manufacturer, reputation risk is one of the risk that may have a large impact on consumer behavior and significantly affect corporate sales. NGOs are a type of information source that could distribute information that may lead to reputation risk. Therefore, an important activity for Kao includes ensuring that NGOs understand our water management activities. For this reason, NGOs are important stakeholders when addressing water risk. Water-related information that various divisions, including the ESG Division, obtain from dialogues with NGOs is used as part of these divisions' information in assessing water risk. -Stakeholder engagement method When Kao obtains information that may lead to reputation risk, it assesses the authenticity of the information and the potential extent of impact, and then chooses a responsible division. It then, if necessary, meets the group that distributed the information in question and aims for fact-based communication. Various divisions, including the ESG Division, use the information related to water risk obtained through such engagement activities with NGOs as part of the information for assessing water risk.
Other water users at a basin/catchment level	Relevant, always included	—An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company, and a manufacturer carries out its business by producing products at plants and selling them. This means a stable and continuous plant operation is vital to Kao. Kao plants in general take in and discharge a relatively large amount of water. Residents and factories around our plants usually use water obtained from the same sources as the water used at our plants, and since water is a public good, Kao should not monopolize it. We therefore think it is important to use water within the extent to which other water users at the basin/catchment level and Kao can live side by side. Understanding the water demand of other water users at the basin/catchment level is necessary for plants to continue stable water use, so when addressing water risk, other water users at the basin/catchment level are important stakeholders. Water-related information that plants obtain from dialogues with other water users at the basin/catchment level is used as part of the plants' information for assessing water risk. - The method of engagement with the stakeholder For example, our plants in Japan prepare site reports containing environmental information to communicate with their neighborhoods. At the Sumida Plant in Japan, we hold meetings at least once a year to discuss environmental issues, including water issues, with local residents who use water from the same water source as the Office.
Regulators	Relevant, always included	—An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company, and a manufacturer carries out its business by producing products at plants and selling them. This means a stable and continuous plant operation is vital to Kao. Kao plants in general use and discharge a relatively large amount of water, and if the effluent exceeds discharge regulations, an offending plant may not be allowed to operate. Therefore, it is essential to understand the behavior of regulators in charge of discharge regulations and implement necessary measures for plants to continue stable operation. For this reason, when addressing water risk, regulators are important stakeholders. Water-related information that the RC Division or plants obtain from committees led by these regulators or from industry is used as part of the information plants use to assess water risk. —Stakeholder engagement method We attend meetings such as committee meetings held by regulators to discuss law amendments in order to learn the trends as early as possible, participate in Environment Working Group Meetings of the Japan Chemical Industry Association or explanatory meetings hosted by other organizations where regulators provide explanations, and exchange information with other parties. Information related to water risk obtained through such engagement activities with regulators is shared with plants and used as part of their information for assessing water risk.
River basin management authorities	Relevant, always included	—An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company. A manufacturer carries out its business by manufacturing products at plants and selling them. Therefore, stable and continuous plant operation is very important to Kao. When a Kao plant uses a river as a water source, we recognize that understanding of the water management policy (e.g., future supply forecasts, regulations during scarcity) applied to that source provides a part of information necessary for stable plant operation. For this reason, when addressing water risk, river basin management authorities are important stakeholders. Water-related information that plants obtain from dialogues with river basin management authorities is used as part of information in water risk assessment by plants. - The method of engagement with the stakeholder During regularly held meetings, we confirm with the authorities whether there are any plans to change the policies on regulations. For example, at the Wakayama Plant, we have a regular meeting for the purpose of obtaining information on future upgrades to water supply facilities and water price trends.
Statutory special interest groups at a local level	Relevant, always included	—An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company, and a manufacturer carries out its business by producing products at plants and selling them. This means a stable and continuous plant operation is vital to Kao. Kao plants in general use and discharge a relatively large amount of water, and statutory special-interest groups at a local level in some situations enforce regulations similar to those enforced by regulators. Kao therefore understands that plant operation cannot continue while ignoring these groups' opinions. To secure stable plant operation, we need to check whether there are any statutory special-interest groups at a local level in the area where a plant is, and if so, grasp the trends in effluent regulations that they implement and take necessary measures. For this reason, when addressing water risk, statutory special-interest groups at the local level are important stakeholders. Plants use water-related information that they obtain from committees led by these groups or from industry as part of the information for assessing water risk. -The method of engagement with the stakeholder Qumi-Kao in Mexico once experienced a situation in which a sufficient amount of water could not be secured due to restrictions on taking groundwater. Therefore, Qumi-Kao consulted with statutory special interest groups at the local level and agreed that water discharged from sewage treatment plants in the city would be directly carried in to plants instead of discharging it into rivers. As a result, Qumi-Kao's plant operations were not hindered, and now it can increase production further.
Suppliers	Relevant, always included	—An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company, and a manufacturer carries out its business by producing products at plants and selling them. This means a stable and continuous plant operation is vital to Kao. One of the key requirements is to ensure such operation is that we maintain a stable and continuous supply of materials from our suppliers. A large portion of Kao products use a wide variety of chemical substances and paper containers, and these materials come from suppliers in the three fields of business (chemicals, steel, and paper and paper processing/manufacturing) that use the most water in Japan. We therefore understand that most of our suppliers are highly dependent on water, so when addressing water risk, suppliers are important stakeholders. Water-related information that the Procurement Division or plants obtain from dialogues with suppliers is used as part of the information the Procurement Division or plants use to assess water risk. —Stakeholder engagement method We joined the Water section of the CDP SC Program in 2015, and since then have been checking how our suppliers manage their water risk. We use our own unique method to evaluate their responses and subsequently their water risk. We also gather information on the water-risk levels of supplier plants that manufacture products for Kao and how they address such risk. Furthermore, our employees in charge of plant quality and Procurement Division personnel collect information about suppliers' water risk when they exchange information with them. The Procurement Division uses information related to water risk obtained through such engagement activities with these suppliers as part of the information for assessing water risk.
Water utilities at a local level	Relevant, always included	—An explanation of why these stakeholders are included in the risk assessment Kao is a manufacturing company, and a manufacturer carries out its business by producing products at plants and selling them. This means a stable and continuous plant operation is vital to Kao. Water used at many Kao plants is received from local water utilities, and in this case, we recognize that understanding their water management policies (e.g., future supply forecasts, regulations during scarcity) provides part of the information necessary for stable plant operation. Therefore, when addressing water risk, local water utilities are important stakeholders. Water-related information that plants obtain from dialogues with these utilities is used as part of their information for assessing water risk. - The method of engagement with the stakeholder We explain our policy and the situation of our activities to them so as to have them understood through meetings. For example, at Wakayama factory, at least once a year regular meeting is held to exchange information.
Other stakeholder, please specify	Please select	

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

Kao identifies, evaluates, and addresses water-related risk every year.

Examples involving our plants are as follows:

Employees in charge of plants (e.g., plant managers, officers in charge of SCM), who have been chosen internally in advance, use internal company methods to conduct primary assessment of short-term water risk for each size of risk to be addressed, and approve payments. The Responsible Care Promotion Committee Secretariat checks the risk response plan and status and requests corrections as necessary.

To identify long-term water risk (ten years or more), the Responsible Care Promotion Committee Secretariat refers to WRI Aqueduct Water Stress Projections and information provided by employees in charge of plants. At each plant, the risk level is assessed using the internal company method and a long-term response plan is created. The officer in charge of SCM, the Responsible Care Promotion Committee Secretariat, or another individual/unit checks the plan and requests corrections as necessary.

W4. Risks and opportunities

W4.1

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

Yes, only within our direct operations

W4.1a

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

- A definition of substantive financial or strategic impact is given

We define an event as having a substantive impact if the amount of financial damage exceeding 1 billion yen (or equivalent to roughly 0.1% of the sales figure) is expected to appear within ten years and continue for several years. We recognize that the relevant risk no longer exists if a measure for preventing the existence of the relevant risk has been developed and implemented.

We review the validity of this definition every year and correct it as necessary.

- The measure(s), metric(s) or indicator(s) used to identify substantive change

Kao evaluates substantial changes in terms of financial aspects and the continuity of direct operation.

- The threshold or amount of change in the metric/measure/indicator which indicates substantive change

We define an event as a substantive change if it is expected that the amount of financial damage will exceed 1 billion yen and a suspension of our operation in terms of direct operation for one day or more will appear within ten years. We recognize that the relevant risk ceases to exist if a measure has been developed and implemented to prevent the existence of the relevant risk.

We review the validity of this definition every year and correct it as necessary.

- Whether the definition applies to direct operations, or supply chain, or both

The above definition applies to both direct operation and the supply chain.

- At least one example of substantive impact considered

In Japan, which accounts for over 60% of Kao's sales, torrential downpours occurring due to climate change and natural disasters causing devastating damage, though in a limited area, are becoming apparent nowadays.

There are following risks to direct operation:

If such a torrential downpour occurs in an area where there is a Kao plant or logistics base, we may need to suspend the production and supply of products, which would lead to not only a decrease in sales, but also reduced profit due to the cost of repairs incurred. Even if such a plant or logistics base is not damaged, if employees' homes are damaged and they cannot get to work, there is a resulting productivity loss.

There are following risks associated with our supply chain:

If the event mentioned with regard to direct operation above occurs at a supplier's plant and the necessary amount of raw materials cannot be delivered by the day they are needed, we will not be able to perform production, posing a risk of decreased sales.

If devastating damage occurs on the regular transportation route, the means and route of transportation need to be changed, which will increase the transportation cost and therefore pose a risk of lower profit.

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	8	1-25	We recognize that many of the sites in Asia which make up the majority of Kao's bases have water risks.

W4.1c

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

Country/Region

China

River basin

Yangtze River (Chang Jiang)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

Less than 1%

Comment

Country/Region

Philippines

River basin

Other, please specify (Cablig)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

1-25

Comment

Country/Region

Thailand

River basin

Other, please specify (Bang Pakong)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

1-25

Comment

Country/Region

Indonesia

River basin

Other, please specify (Saluran Irigasi Kali Malang and Sungai)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

1-25

Comment

Country/Region

Taiwan, Greater China

River basin

Other, please specify (Touqian 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>

% 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>

% company's total global revenue that could be affected

1-25

Comment

Country/Region

Mexico

River basin

Balsas

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

1-25

Comment

Country/Region

Spain

River basin

Other, please specify (El Besos)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

1-25

Comment

Country/Region

Japan

River basin

Other, please specify (Toyokawa)

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

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

<Not Applicable>

% company's total global revenue that could be affected

1-25

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/Region

China

River basin

Yangtze River (Chang Jiang)

Type of risk

Physical

Primary risk driver

Increased water stress

Primary potential impact

Constraint to growth

Company-specific description

According to WRI Aqueduct Water Stress Projections, the water supply in the area where Kao Chemical Corporation Shanghai operates will be under strong stress in 2040. At the same time, interviews with plant employees have indicated that the number of residents will be on an upward trend in this area and the quality of water for daily living is predicted to deteriorate. Meanwhile, Kao has a sales target of 2.5 trillion yen (167% of the 2018 target) for 2030. China is one of the key areas for achieving this target and we will continue to increase production at our Chinese plants. From the information described above, Kao has concluded that the risk to water availability and quality will increase, thus limiting future growth or profit increases for these plants. Production cannot increase if water availability will not rise or the efficiency of water use inside the plants does not increase. If this happens, production will remain the same even though it actually needs to increase by 67%, and resulting production will fall 40% short ($((100/167) - 1) * 100 = -40\%$).

Timeframe

More than 6 years

Magnitude of potential impact

Medium

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

90871000000

Potential financial impact figure - minimum (currency)

<Not Applicable>

Potential financial impact figure - maximum (currency)

<Not Applicable>

Explanation of financial impact

In 2018, sales in China were 135.629 billion yen. If sales in China grow at the same rate as that needed for the Kao Group to achieve the 2030 sales target, sales in China in 2030 will be 226.5 billion yen. If this sales growth does not become a reality due to water risk, the impact is forecast to be 90.871 billion yen ($90.871 = 226.5 - 135.629$)

Primary response to risk

Establish site-specific targets

Description of response

Kao has set a goal to improve the water usage efficiency in the entire Group by 45% by 2030. Due to high water supply risk in the future, the plant has continued to reduce risks that may hinder business growth by setting a goal higher than the above and implementing activities to improve water usage efficiency. As part of such efforts, the plant is now using rainwater.

Cost of response

15340000

Explanation of cost of response

The volume of water intake by Kao Chemical Corporation Shanghai, a plant that stands in a river basin, was 90.86 million liters in 2018. If this plant's production increases at the same rate as that needed for the Kao Group to achieve the 2030 sales target, but the intensity of water use remains the same, the volume of water intake will increase by 60.88 million liters. The cost of recycling effluent generated from this additional amount of water has been calculated obtained. At one particular manufacturer, the annual running cost of an effluent recycling facility with a water-treatment capacity of 25 million liters per year is 6.3 million yen. When applying this running cost to our case, the necessary cost will be 15.34 million yen ($15.34 = 6.3/25 * 60.88$).

W4.2c

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	Kao has expanded the scope of water-related risk surveys not only directly into operations but also in the value chain. As a result of the survey, we have implemented appropriate response to supplier factories at risk. As a result of the survey, we are aware that there is no supplier factory currently exposed to substantive financial or strategic impact We are continuously improving the quality of our supplier surveys, including increasing the scope of our research in the CDP SC program. Our products require a lot of water during the use stage. As the water infrastructure in countries where we will increase sales is predicted to grow at a pace in line with the GDP growth of the respective countries, we predict that there will be no substantive financial or strategic impact in the product use stage.

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

Cost savings

Company-specific description & strategy to realize opportunity

Kao plans to increase sales by more than 1.5 times by 2030. Thus, we expect that production as well as the amount of water used at plants will also increase by about 1.5 times by 2030. Meanwhile, since we plan to increase profits at a rate greater than that of the sales increase, we are adopting various approaches to take cost reduction measures. The water usage reduction activities at each plant are part of these cost reduction activities. Such activities are budgeted into the TCR amount and managed per item. As part of water-saving activities, the Malaysia plant uses rainwater, and many other plants, including the Wakayama Plant, reuse steam. Also, we have set a goal of improving water usage efficiency by 40% by 2020, and the Head Office has been managing the progress of these efforts.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1250000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact

The sales target for Kao products for 2030 is 2.5 trillion yen. If the cost of water required to manufacture such products accounts for 0.1% of sales, the cost of water will be 2.5 billion yen. Thus, it can be expected that improving the water usage efficiency by 50% will reduce the cost by 1.25 billion yen.

W5. Facility-level water accounting

W5.1

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

Facility reference number

Facility 1

Facility name (optional)

Kao Chemical Corporation Shanghai

Country/Region

China

River basin

Yalu Jiang

Latitude

31.215818

Longitude

121.456731

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)

90.86

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

48.89

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

41.97

Comparison of consumption with previous reporting year

Lower

Please explain

Due mainly to the change in the breakdown of products manufactured (i.e., discontinuing the manufacture of products that generate virtually no effluent and significantly increasing the production of products that generate a lot of effluent), the volume of effluent significantly increased while the total production volume did not change much.

Facility reference number

Facility 2

Facility name (optional)

Pilipinas Kao, Incorporated

Country/Region

Philippines

River basin

Other, please specify (Cablig)

Latitude

8.652755

Longitude

124.756451

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)

1230.19

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

205.52

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

1024.67

Comparison of consumption with previous reporting year

About the same

Please explain

At this facility, we started operating a new plant from November 2018. Since a large volume of water, including water kept in store, was used for test runs, the volume of water discharged significantly increased more than the water intake volume as a result. Note that because the production volume in 2018 decreased only slightly from that in 2017, there was little fluctuation in 2018's water consumption compared to 2017's.

Facility reference number

Facility 3

Facility name (optional)

Kao Industrial (Thailand) Co., Ltd.

Country/Region

Thailand

River basin

Other, please specify (Bang Pakong)

Latitude

13.326396

Longitude

101.003311

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)

611.09

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

466.05

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

145.04

Comparison of consumption with previous reporting year

About the same

Please explain

The production volume at this facility in 2018 increased nearly 8% from that in 2017. However, promoting a water-saving initiative enabled us to reduce the total volume of water used, volume of water discharged, and volume of water consumed to the same levels as the previous year.

Facility reference number

Facility 4

Facility name (optional)

PT. Kao Indonesia Chemicals

Country/Region

Indonesia

River basin

Other, please specify (Saluran Irigasi Kali Malang and Sungai Bekasi)

Latitude

-6.219573

Longitude

107.065754

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)

438.16

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

256.11

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

182.05

Comparison of consumption with previous reporting year

Lower

Please explain

As the production volume at this facility decreased in 2018 by 14% from 2017 levels, the total volume of water used, volume of water discharged, and volume of water consumed declined by 11 to 12% from the previous year.

Facility reference number

Facility 5

Facility name (optional)

Kao (Taiwan) Corporation

Country/Region

Taiwan, Greater China

River basin

Other, please specify (Touqian River)

Latitude

24.803945

Longitude

120.964686

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)

191.94

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

109.82

Comparison of discharges with previous reporting year

About the same

Total water consumption at this facility (megaliters/year)

82.12

Comparison of consumption with previous reporting year

About the same

Please explain

The production volume at this facility decreased by approximately 3% from that in 2017. As a result, the total volume of water used, volume of water discharged, and volume of water consumed fell by approximately 3%.

Facility reference number

Facility 6

Facility name (optional)

Quimi-Kao S.A. de C.V.

Country/Region

Mexico

River basin

Balsas

Latitude

19.947483

Longitude

-101.640844

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)

205.85

Comparison of withdrawals with previous reporting year

About the same

Total water discharges at this facility (megaliters/year)

131.28

Comparison of discharges with previous reporting year

Higher

Total water consumption at this facility (megaliters/year)

74.57

Comparison of consumption with previous reporting year

Lower

Please explain

Although the water intake volume at this facility rose 3% from the previous year, the water discharge volume increased by slightly over 13% from the previous year. The causes of the increase in the water discharge volume were as follows: 1) An increase in the water discharge volume through sewage treatment of water received from the local government. 2) An increase in the water discharge volume as a result of introducing an ammonia water-treatment facility in 2018.

Facility reference number

Facility 7

Facility name (optional)

Kao Corporation S.A. Mollet plant

Country/Region

Spain

River basin

Other, please specify (El Besos)

Latitude

41.525107

Longitude

2.213861

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)

136.71

Comparison of withdrawals with previous reporting year

Lower

Total water discharges at this facility (megaliters/year)

108.47

Comparison of discharges with previous reporting year

Lower

Total water consumption at this facility (megaliters/year)

28.25

Comparison of consumption with previous reporting year

Much lower

Please explain

As part of our environmental conservation initiatives, in 2018 this facility promoted various measures that will lead to water savings at the production site. As a result, although the production volume in 2018 was almost the same as that in 2017, the amount of water consumed significantly reduced by approximately 30% and the water intake volume and water discharge volume also reduced.

Facility reference number

Facility 8

Facility name (optional)

Kao Corporation, Toyohashi plant

Country/Region

Japan

River basin

Other, please specify (Toyokawa River)

Latitude

34.708937

Longitude

137.322836

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)

150.86

Comparison of withdrawals with previous reporting year

Higher

Total water discharges at this facility (megaliters/year)

76.87

Comparison of discharges with previous reporting year

Much higher

Total water consumption at this facility (megaliters/year)

73.99

Comparison of consumption with previous reporting year

About the same

Please explain

Although the production volume and the amount of water consumed were almost the same as those in 2017, both the volume of water used and the water discharge volume in 2018 significantly increased compared to 2017. This is because the amount of industrial water received significantly increased due to new construction of a manufacturing plant for beauty care-related products at the site in 2018.

W5.1a

(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.

Facility reference number

Facility 1

Facility name

Kao Chemical Corporation Shanghai

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

90.86

Comment

Facility reference number

Facility 2

Facility name

Pilipinas Kao, Incorporated

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

1230.19

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

0

Comment

Facility reference number

Facility 3

Facility name

Kao Industrial (Thailand) Co., Ltd.

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

611.09

Comment

Facility reference number

Facility 4

Facility name

PT Kao Indonesia Chemicals

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

438.16

Comment

Facility reference number

Facility 5

Facility name

Kao (Taiwan) Corporation

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

191.94

Comment

Facility reference number

Facility 6

Facility name

Quimi-Kao S.A. de C.V.

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

189.2

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

16.65

Comment

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

136.71

Comment

Facility reference number

Facility 8

Facility name

Kao Corporation, Toyohashi plant

Fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Brackish surface water/seawater

0

Groundwater - renewable

0

Groundwater - non-renewable

0

Produced/Entrained water

0

Third party sources

150.86

Comment

W5.1b

(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.

Facility reference number

Facility 1

Facility name

Kao Chemical Corporation Shanghai

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

48.89

Comment

Facility reference number

Facility 2

Facility name

Pilipinas Kao, Incorporated

Fresh surface water

0

Brackish surface water/Seawater

205.52

Groundwater

0

Third party destinations

0

Comment

Facility reference number

Facility 3

Facility name

Kao Industrial (Thailand) Co., Ltd.

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

466.05

Comment

Facility reference number

Facility 4

Facility name

PT. Kao Indonesia Chemicals

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

256.11

Comment

Facility reference number

Facility 5

Facility name

Kao (Taiwan) Corporation

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

109.82

Comment

Facility reference number

Facility 6

Facility name

Quimi-Kao S.A. de C.V.

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

131.28

Comment

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

Fresh surface water

0

Brackish surface water/Seawater

0

Groundwater

0

Third party destinations

108.47

Comment

Facility reference number

Facility 8

Facility name

Kao Corporation, Toyohashi plant

Fresh surface water

0

Brackish surface water/Seawater

76.87

Groundwater

0

Third party destinations

0

Comment

W5.1c

(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name

Kao Chemical Corporation Shanghai

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

Facility reference number

Facility 2

Facility name

Pilipinas Kao, Incorporated

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

Facility reference number

Facility 3

Facility name

Kao Industrial (Thailand) Co., Ltd.

% recycled or reused

26-50%

Comparison with previous reporting year

Much higher

Please explain

This plant began to recycle waste water from the manufacturing process and reuse it as process water.

Facility reference number

Facility 4

Facility name

PT. Kao Indonesia Chemicals

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

Facility reference number

Facility 5

Facility name

Kao (Taiwan) Corporation

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

Facility reference number

Facility 6

Facility name

Quimi-Kao S.A. de C.V.

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

Facility reference number

Facility 8

Facility name

Kao Corporation, Toyohashi plant

% recycled or reused

None

Comparison with previous reporting year

About the same

Please explain

We do not use recycled water at this factory.

W5.1d

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

Water withdrawals – total volumes

% verified
76-100

What standard and methodology was used?
ISAE3000, limited assurance

Water withdrawals – volume by source

% verified
76-100

What standard and methodology was used?
ISAE3000, limited assurance

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?
We are considering the need to make it subject to external verification.

Water discharges – total volumes

% verified
76-100

What standard and methodology was used?
ISAE3000, limited assurance

Water discharges – volume by destination

% verified
76-100

What standard and methodology was used?
ISAE3000, limited assurance

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?
We are considering the need to make it subject to external verification.

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?
We are considering the need to make it subject to external verification.

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?
We are considering the need to make it subject to external verification.

Water consumption – total volume

% verified
Not verified

What standard and methodology was used?
We are considering the need to make it subject to external verification.

Water recycled/reused

% verified
Not verified

What standard and methodology was used?
We are considering the need to make it subject to external verification.

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	We declare that we provide products that will not impact on the environment including water in product lifecycle, in the Kao Environmental Declaration. In addition, Kao sets goals for securing water for consumers, and to realize the goals, Kao sets various policies and expands activities. "Responsible Care Policy" covers our compliance with international rules and regulations as well as trust from stakeholders and effective communication. In addition, the "Kirei Lifestyle Plan" clarifies our nineteen priority topics, which could contribute to themes of SDGs (including Goal 6). Furthermore, Kao discloses water reduction targets and climate-related risks. We also make it clear that employees can work in a healthy and safe environment in accordance with the "Basic Policy on Environment and Safety". "Effective use of water" is requested in the "Supplier Guidelines", and particularly we ask key suppliers water risk management and countermeasures through the CDP SC program.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Chief Executive Officer (CEO)	Since water-related issues affect Kao's business, they must be monitored as business management issues and are therefore under the CEO's oversight. The CEO is Chairperson of the Internal Control Committee, under which there are the Responsible Care Promotion Committee and Risk and Crisis Management Committee. This committee is approved by the Board, under the Kao corporate governance system. CEO is also a chairman of the ESG Committee, approved by the Management Committee. The Responsible Care Promotion Committee manages risk for individual group companies, while the Risk and Crisis Management Committee manages water risk for multiple group companies. The ESG Committee manages progress in activities related to locating new opportunities. The Internal Control Committee is convened annually and reported of the Internal Control Committee.

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 implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy Reviewing innovation/R&D priorities Setting performance objectives	The Risk and Crisis Management Committee holds a meeting at least four times per year and the Responsible Care Promotion Committee checks the status of activities at bases every month. Both committees are under the Internal Control Committee, which is under the control of the Board of Directors, and manage water-related risks. The ESG Committee, which is under the control of the Board of Directors, holds a meeting at least four times per year and manages water-related opportunities. The status of activities of these committees is explained to the Board of Directors by the secretary-general of each committee. Since water-related issues have an impact on Kao's business and thus must be supervised as one of the business management issues, they are under the oversight of the Internal Control Committee and the ESG Committee, with the CEO serving as chairperson.

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)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

Under the Board of Directors is the Internal Control Committee(ICC). The Risk and Crisis Management Committee(RCMC) and the Responsible Care Promotion Committee(RCPC), both under the ICC, manage water-related risk, while the ESG Committee, under the Board, manages water-related opportunities. The CEO chairs the RCMC and the RCPC because water is one of the management issues that influences Kao's business. Under the CEO's direction, these committees report on goals, plans, and results for water-related issues and revision proposals for plans (if necessary) to the Board once a year or more. This means water-related issues are reported to the Board four or more times a year. The RCMC has established a system for managing water risk and a plan for operating the system, and the RCPC checks that the plan is carried out properly at all divisions, subsidiaries, and affiliated companies. The ESG Committee is responsible for setting the direction of activities and promoting them.

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?

Kao supports the Water Project activities of Japan's policy makers who are working on communicating the importance of water used in Japan. To support their activities, the secretariat of the ESG Committee, which manages water-related opportunities, consults with the relevant policy makers to understand the objective and details of such activities. The secretary-general of the ESG Committee determines whether the details are consistent with Kao's policies and how Kao should support such activities. If there is any inconsistency with Kao's policies, Kao will report it to the policy makers and ask for the inconsistency to be resolved. If the inconsistency is not resolved, Kao will suspend the support for such activities based on the decision of the secretary-general of the ESG Committee.

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)
 Kao yu-ho-fy2018-all-01.pdf

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	> 30	When selecting a new plant location, Kao includes in its long-term strategy the water stress assessment results such as long-term ease of water intake, stability of water quality, and flood probability. This is because Kao recognizes that building a new plant is an inevitable task since the company aims to increase sales by 1.5 times or more by 2030, and it is Kao's policy that, once built, a plant will operate for over 30 years. In 2014, PT. Kao Indonesia Chemicals built a plant in the Karawang International Industrial City in Indonesia. This company looked for land with low risk in water supply and effluent treatment. As this industrial city possesses an industrial water plant and effluent plant that can process at least 30,000 m3 of water a day, Kao chose to build a plant there based on the low water risk.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	11-15	Kao includes in its long-term strategy water stress assessment results such as long-term ease of water intake and the stability of water quality. This is because, while Kao aims to increase sales by 1.5 times or more by 2030, large Asian urban centers like Japanese cities, which are the key areas of Kao product consumption, will grow enormous, and securing of ease of water intake and stable water quality will become an important future task. As preventive measures, we are already aiming to increase sales of products that do not require much water during use. Throughout the product life cycle, Kao is targeting a 10% decrease in water consumption in general, and a 40% reduction in areas of water scarcity. In the Kao product life cycle, approximately 90% of water consumption occurs during the product use stage. Therefore, in developing products that can contribute to achievement of the 2030 sales target, creating products that ignore water issues is not an option. Kao's current sales target is set for 2030, and we have set 11 to 15 years as the time frame for developing new products that contribute to achieving the target.
Financial planning	Yes, water-related issues are integrated	11-15	Kao has incorporated into its long-term strategy water stress evaluations regarding the ease of water intake, stability of water quality, etc. over a long period. This is because while Kao aims to increase sales by more than 1.5 times the current level by 2030, we are aware that the ease of water intake and stability of water quality will be future issues as large cities in Asia, including those in Japan, which is Kao products' main consumption area, will expand. As part of efforts to increase the sales of products that consume little water when they are used, we have already expanded the scope of water-saving clothing detergent to include the non-concentrated type, and incorporated it into the financial plan for 2017 as the measures. This has affected our earnings forecast, including sales and operating profit margin. Kao's current sales target is set to 2030, and we selected 11 to 15 years as the time scale for water-related new product development as a measure that will contribute to achieving the target.

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)

-15

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

5

Water-related OPEX (+/- % change)

-2

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

5

Please explain

Water-related capital investment is expected to continue to increase in line with the expansion of production facilities due to increased production volume.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	

W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

Yes

W7.3b

(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?

	Climate-related scenario(s)	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	IEA B2DS	Changing in rainfall patterns like as extreme rainfall incl massive typhoon	For example, an increase in temperatures will raise the risk of stronger typhoons directly striking Mindanao, where Pilipinas Kao is located. There is also a risk that a poor crop of coconut oil, which is one of the ingredients used at the plant, due to typhoons and El Nino Southern Oscillation may cause the price to soar and make it difficult to purchase.

W7.4

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

Row 1

Does your company use an internal price on water?

Yes

Please explain

At Kao plants, we use water in different quality levels according to the requirement of the facility and product. Since improving the water quality requires additional processes, we indicate water costs according to the water quality level and manage them as one of manufacturing cost items.

W8. Targets

W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	We have made it clear in the Environmental Statement that we will engage in environmental activities through products. As a result of our investigation on the amount of water consumed for products in each phase, we understand that 90% of the total water consumption is attributable to the phase in which products are used. Therefore, Kao has set a goal of reducing water consumption when the products are used. We have also set a goal of improving the water usage efficiency at all bases including plants because we consider it necessary to improve water usage efficiency in order to continue manufacturing products.

W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

Target reference number

Target 1

Category of target

Water withdrawals

Level

Company-wide

Primary motivation

Shared value

Description of target

- Relevant to the goal of achieving water security At Kao bases, we set a goal of managing water security so that we can continue the business for a long period of time. - Consistent with the category, level and metric chosen We manage the amount of water intake as the first item in the management of water security at Kao bases. In order to continue the business for a long period of time, we have set a goal of reducing the water usage load (the amount of water intake per sales) by 40%.

Quantitative metric

% reduction per revenue

Baseline year

2005

Start year

2013

Target year

2020

% achieved

100

Please explain

Our water consumption (all sites) came to 17.8 million m³ and the reduction rate was 42%, taking 2005 as the baseline year . We achieved our 2018 target of a 39% reduction and have achieved our 2020 target of a 40% reduction, continuing from the previous year.

Target reference number

Target 2

Category of target

Water consumption

Level

Business

Primary motivation

Shared value

Description of target

'- Relevant to the goal of achieving water security Kao's key products are clothing detergent and body detergent. Thus, in order for Kao to continue the business for a long period of time, we have set a goal of managing water security when the products are used. - Consistent with the category, level and metric chosen We manage the amount of water consumption when the products are used as the first item in the management of water security when Kao products are used. In order to continue the business for a long period of time, we have set a goal of reducing the water usage load (the amount of water consumption per sales) by 30%.

Quantitative metric

% reduction per revenue

Baseline year

2005

Start year

2009

Target year

2020

% achieved

92.31

Please explain

Our water consumption during product use (Kao Group in Japan) fell to 2 million m³. The per unit of sales reduction rates was same value to previous year. Enhancement of the water-conservation performance of our washing-up liquid products contributed to these improvements in water consumption. 2018 target : 30%/15year*13year=26% 2018 % achieved : 24/26*100=92.31%

W8.1b

W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

Goal

Engaging with customers to help them minimize product impacts

Level

Company-wide

Motivation

Shared value

Description of goal

Kao's goal for engagement with consumers is to help them enjoy a sustainable lifestyle. To this end, we have set a target in which we will aim to empower people –at least 1 billion by 2030 – to experience more enriched lives. Through investigating the volume of water consumed in each product phase, we discovered that 90% of the total water consumption is attributable to the phase in which products are used. Thus, we have set a target to reduce water consumption when products are used by 30% by 2020. We believe that raising awareness in consumers who use the products is essential to achieving that. Accordingly, Kao has set a goal of raising the awareness of consumers regarding eco-friendly products (laundry detergent and tableware detergent), and has been engaging in company-wide activities to reduce environmental load (including water issues) together with consumers. Specifically, we visit elementary and middle schools to give lectures, offer plant tours to students and general consumers, and participate in environmental events held by local governments and at stores. We also actively interact with the users and customers of our products through the eco website, and encourage them to use environmentally-friendly products that reduce the amount of water consumed when they are used. By strategically increasing engagements with consumers in such a way, we help them to understand environmentally-friendly products and the need to reduce environmental load when using them.

Baseline year

2005

Start year

2009

End year

2020

Progress

- A description of the indicators that are used to assess progress As an index for measuring engagements with consumers, we calculate the number of people who have been enlightened through school visits by Kao, plant tours, environmental events, and so on. - The threshold of success and how they have progressed against it Our goal for the total number of people who have been enlightened is 1 million for 2020, and we have reached 1.23 million as of 2018. The reference year for this KPI is 2014, and the percentage of achievement per time elapsed ($71\% = (2018-2013)/(2020-2013)$) is $123\% (= 1,230,000/1,000,000 \text{ persons})$.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff

Linkage

Type of linkage/tradeoff

Decreased GHG emissions

Description of linkage/tradeoff

Kao offers a wide variety of cleansers as products, including detergent, shampoo, and body soap. Because regular or warm water to wash off a cleanser is delivered using energy, the more water required to wash off a cleanser, the more energy consumed. In other words, we can help to save energy if we can reduce the amount of water needed to wash off a cleanser. Water consumption during product use and energy consumption, meaning GHG emissions, are correlated. The survey of process-specific water consumption for Kao products indicated that 90% or more of the total water use occurred during the use of cleansers. To measure the impact on GHG emissions of products that require less water consumption during use, Kao is now measuring reductions in water consumption during product use and accompanying cuts in GHG emissions.

Policy or action

Kao considers it important to reduce the amount of water consumption when the products are used, so we have been aggressively developing products that require fewer rinsing than conventional products and have been expanding such products from clothing detergent to other products with various purposes, such as shampoo, bath room cleaner, and tableware detergent. We manage such environmentally-friendly products as "eco together" certified products and aim to expand the sale of such products as part of our business strategy. In 2018, water consumption during product use was reduced by 2 million m³ in Japan, and CO₂ emissions for the same process was reduced by 123,000 tons (compared to the previous year).

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?

Yes

W10.1a

(W10.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W8. Targets	Water withdrawal (all sites) , water consumption during product use(Kao Group in Japan) , Water consumption across the entire product lifecycle (Kao Group), COD pollution load(all production site), Water withdrawal amount by source, Wastewater discharge by destination	ISAE3000	The status of water-related items that Kao has set as goals is reviewed every year by a third party. We disclose the results in our Sustainability Data Book 2018.

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	Chief Executive Officer (CEO)	Director on board

W11.2

(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes

SW. Supply chain module

SW0.1

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

	Annual revenue
Row 1	1508007000000

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	JP	3205800000

SW1.1

(SW1.1) Have you identified if any of your facilities reported in W5.1 could have an impact on a requesting CDP supply chain member?

Yes, CDP supply chain members buy goods or services from facilities listed in W5.1

SW1.1a

(SW1.1a) Indicate which of the facilities referenced in W5.1 could affect a requesting CDP supply chain member.

Facility reference number

Facility 6

Facility name

Quimi-Kao S.A. de C.V.

Requesting member

Colgate Palmolive Company

Description of potential impact on member

We believe that limiting water use and deteriorating water quality will increase the risk to our company's growth and profit growth in the future. If production cannot be increased due to the inability to increase water utilization or improve water use efficiency in factories, product production will be 40% short by 2030.

Comment

Facility reference number

Facility 6

Facility name

Quimi-Kao S.A. de C.V.

Requesting member

L'Oréal

Description of potential impact on member

We believe that limiting water use and deteriorating water quality will increase the risk to our company's growth and profit growth in the future. If production cannot be increased due to the inability to increase water utilization or improve water use efficiency in factories, product production will be 40% short by 2030.

Comment

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

Requesting member

Colgate Palmolive Company

Description of potential impact on member

We believe that limiting water use and deteriorating water quality will increase the risk to our company's growth and profit growth in the future. If production cannot be increased due to the inability to increase water utilization or improve water use efficiency in factories, product production will be 40% short by 2030.

Comment

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

Requesting member

FIRMENICH SA

Description of potential impact on member

We believe that limiting water use and deteriorating water quality will increase the risk to our company's growth and profit growth in the future. If production cannot be increased due to the inability to increase water utilization or improve water use efficiency in factories, product production will be 40% short by 2030.

Comment

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

Requesting member

Givaudan SA

Description of potential impact on member

We believe that limiting water use and deteriorating water quality will increase the risk to our company's growth and profit growth in the future. If production cannot be increased due to the inability to increase water utilization or improve water use efficiency in factories, product production will be 40% short by 2030.

Comment

Facility reference number

Facility 7

Facility name

Kao Corporation S.A. Mollet plant

Requesting member

Symrise AG

Description of potential impact on member

We believe that limiting water use and deteriorating water quality will increase the risk to our company's growth and profit growth in the future. If production cannot be increased due to the inability to increase water utilization or improve water use efficiency in factories, product production will be 40% short by 2030.

Comment

SW1.2

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

Yes, for some facilities

SW1.2a

(SW1.2a) Please provide all available geolocation data for your site facilities.

Identifier	Latitude	Longitude	Comment
KCG (Germany)	51.826485	6.269496	Chemical products
Wakayama (Japan)	32.2144	135.1514	Chemical products

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?

No

SW3.1

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

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms

