

Water Conservation

GRI 303-1

Kao is promoting water conservation throughout the entire product lifecycle by providing products that have high water-saving benefits to protect future lives.

Social issues

Water is necessary to life for all plants and animals on the planet. All humans also need access to sustainable sources of sanitary water in order to maintain lives of cleanliness. In Japan, water used for washing apparently accounts for the largest share of total household water usage^{*1}. Given that water used by Japanese households when using Kao products accounts for around 15% of all household water usage in Japan^{*2}, we recognize that we have a big role to play within society in relation to water resource conservation.

Currently, problems including localized torrential rains and floods, chronic drought and related long-term dry conditions, are arising in many regions and are predicted to grow in severity due to future population growth and climate change.

In addition, water is a local resource, and consequently, for example, even when the same amount of water is taken from a river, there is a significant difference in terms of the impact on water resources between water taken in a water resource-rich basin and water taken in a water-stressed watershed. For this reason, when we undertake sustainable operation, we are aware that we need to take action both to reduce the company's own water risk and to give consideration to the local environment to address social issues and local residents.

*1 Water Resources Department, Water and Disaster Management Bureau, Ministry of Land, Infrastructure, Transport and Tourism

*2 Based on a survey conducted by the Kao Group

Policies

The product use stage accounts for around 90% of total lifecycle water usage for Kao products, with the raw materials procurement stage accounting for only around 10%. As one of Japan's leading manufacturers of consumer products, we are demonstrating leadership by actively rolling out new, water-saving products and striving to realize effective engagement with government bodies and suppliers.

We also continue to implement activities aimed at minimizing the negative impact on water conservation at every stage, from product development through to disposal.

More specifically, we are advancing our efforts in line with the following policies.

- Environmental Statement

We have expressed our determination to take advantage of our proprietary technologies to manufacture products that minimize the impact on the environment, not just in the manufacturing process, but in the daily life of the customers who use them as well. We are also determined to engage in 'eco together' with various stakeholders throughout the product lifecycle, from raw material procurement to final disposal.

- Basic Principle and Basic Policies on Environment and Safety

We have announced that we assess environment and safety aspects throughout the entire product lifecycle, from manufacture through disposal, when developing products and technologies, and to offer products with a lower environmental impact.

- Kao Group Responsible Care Policy

We have made a declaration that we will strive to develop technologies for products that consumers and customers can use with peace of mind, and to provide products that have a low environmental impact. We

shall strive to continue reducing the environmental impact of our business activities by promoting the saving of natural resources such as water.



Basic Principle and Basic Policies on Environment and Safety
<https://www.kao.com/global/en/sustainability/klp/policy/environment-safety-policy/>

Kao Group Responsible Care Policy
<https://www.kao.com/global/en/sustainability/klp/policy/responsible-care-policy/>

Kao Environmental Statement
<https://www.kao.com/global/en/sustainability/klp/policy/environmental-statement/>

Strategy

Risks and opportunities

Risks

If the populations in urban areas in the world keep growing and urban water infrastructure is unable to keep pace with urban residents' continually increasing demand for water, then residents may not have enough water to use, and it may be impossible to implement wastewater treatment properly. In this case, citizens' cleanliness and hygiene will be under threat. Furthermore, if the cost of municipal water supply rises, then plant operation costs will rise too, with a risk that this may lead to reduced profits. Plants need to act with consideration for the environment and residents of watersheds, and we believe that failure to do so will give rise to reputational risks among local residents and others.

Climate change is associated with an increased likelihood of new risks and opportunities related to infections. In 2020, the COVID-19 pandemic saw the emergence of new risks and opportunities, and water consumption increased throughout the product

Water Conservation

GRI 303-1

lifecycle, particularly during use. In such opportunities, there is a growing possibility that we may not be able to achieve our water reduction targets, and failure to achieve these targets risks damage to the company's reputation. Even though people's awareness of sanitation has been heightened, if drought occurs, there is a risk that they will not be able to perform cleaning activities adequately, and so will not be able to maintain the Kirei Lifestyle.

Opportunities

Because the rise in awareness of the need to save water and the need for cleanliness and hygiene, which has emerged in relation to climate change, is closely linked to our business areas, current developments also represent a significant opportunity for us. Continuous implementation of measures to reduce plant water consumption in response to the situations outlined above should lead to both cost reductions and increased profits.

Rising awareness of the need to save water will create opportunities for increased sales of water-saving products for washing clothes, washing one's body, etc. Furthermore, rising awareness of the importance of cleanliness and hygiene will generate opportunities for increased sales of all cleansing products.

Strategy

We recognize that water is not only an important raw material for producing Kao's products, but it also assumes an important role because Kao products that require water are used at home.

We believe that Kao products that require water should use as little water as possible. Accordingly, we continue to actively develop water-saving products based on innovation.

Approaches to reducing water consumption during production

We use water as a product ingredient as well as to clean and cool equipment at our plants. We set targets to reduce water consumption at each plant and are working to reduce water consumption and increase recycling based on the 3Rs (reduce, reuse and recycle).

Reduce

Multiple plants, including Kao Chemicals Germany, conduct efforts to increase the number of times that water is reused for boilers and for cooling to reduce their water consumption.

Reuse

Rainwater is collected and used to water green spaces at the Sumida Office, Kao Chemical Corporation Shanghai, and Fatty Chemical (Malaysia) Sdn. Bhd.

Recycle

Active recycling efforts, such as recovering steam and treating and reusing water that has been used in production processes, are being carried out at many plants.

Social impact

We aim to substantially improve water usage efficiency in all stages of the product lifecycle.

At our plants, we set targets and continue to aim for a reduction in water consumption. We believe that this contributes toward safeguarding the river basins (rivers and their sources) that are used to supply water to the plants.

As a good corporate citizen with strong roots in the community, we work actively to provide support for local residents and minimize the risk when their livelihoods are threatened by water risk.

We are also developing water-saving products, which we are rolling out globally, to reduce water consumption during product use. As we see it, in this way, even in areas where restrictions are placed on water consumption, consumers can continue to enjoy lives of cleanliness.

Also, from the point of view of ecological system conservation, we think that achieving water consumption targets for all Kao Group sites will contribute to the sustainable availability or supply of fresh water in the river basins where the water sources used by plants are located. Moreover, achieving targets for the amount of water used during product use and during the entire product lifecycle will reduce the burden of waterworks infrastructure maintenance, and reducing the amount of water used by consumers will lead to them paying lower fees for water and sewer services.

Contributions to the SDGs



Business impact

Achieving water consumption targets for all Kao Group sites will contribute to the sustainable availability or supply of fresh water in the river basins where water sources used by plants are located and the reduction of the burden of waterworks infrastructure maintenance, and will have a positive effect on conserving ecological systems. We believe that it will also contribute to the sustainability of our plants and lead to a stable product supply. Moreover, achieving targets for the amount of

Water Conservation

GRI 2-28, 303-1, 303-2

water used during product use and during the entire product lifecycle, as well as receiving consumer sympathy from all stakeholders for the use of water-saving products and our efforts toward water-saving that are not limited to drought areas and in times of disaster will lead them to choose our products and contribute to increased sales and the achievement of the Kao Group Mid-term Plan 2027 (K27).

* Source: Development Bank of Japan, The Water Supply Sector: Future Forecasts and Management Reform, 2017

Governance

Framework

Under the supervision of the Board of Directors, risk management in relation to water conservation issues is carried out by the Internal Control Committee and opportunity management is carried out by the ESG Managing Committee. These committees are both headed by the President & CEO.

Risk management related to water conservation issues is carried out by the Internal Control Committee (which meets twice a year) and its subordinate body, the Risk & Crisis Management Committee (which meets four times a year). These committees are headed by the Executive Officer Responsible for Corporate Strategy. The Responsible Care Promotion Committee, which manages policy / regulatory regime and technology risks, and the Risk & Crisis Management Committee, which manages market, reputational and acute risks, are under the Internal Control Committee. These committees are headed by the Executive Officer Responsible for Corporate Strategy.

The Risk Management & Responsible Care Committee of Corporate Strategy acts as the secretariats for the Responsible Care Promotion Committee and the Risk & Crisis Management Committee.

The ESG Managing Committee (which meets six times a year) is responsible for managing opportunities related to water conservation issues. Comprising outside experts, the ESG External Advisory Board provides advice and suggestions on issues raised by the ESG Managing Committee and offers outside viewpoints to be reflected in management strategy, and the ESG Promotion Meeting executes the strategies. Committee members are the persons in charge of the Business, Sales, R&D, SCM and other divisions, an arrangement which connects divisions horizontally. The Internal Control Committee, and the ESG Promotion Meeting that it supervises, discuss water and other environmental issues, as well as social and governance issues. The committee reports on its activities to the Board of Directors one or more times a year and is audited by the Board of Directors.

In regard to employee education based on Responsible Care (RC) activities, we provide relevant education to all employees.

We implement relevant education for all employees working at applicable worksites at plants and research institutes that have secured ISO 14001 certification.

P25 Our ESG Vision and Strategy > Governance

Education and promotion

As the product use stage accounts for around 90% of total product lifecycle water consumption, it is important to design products that contribute to saving

water. For this reason, we provide employees with numerous opportunities to learn about this.

By giving our employees opportunities to learn about water through various programs, we can ensure that they will actively engage in water conservation activities of their own accord when engaging in water conservation at plants or conducting R&D on water-saving products. This will raise the overall level of our water-saving activities.

Our employees are not only in a position to develop and supply products, but once they leave the company, they are consumers for the rest of their lives and are among those who select such products. Therefore, it is important that employees also undertake measures to conserve water in their role as consumers. We have created an e-learning program containing the knowledge needed to implement the Kirei Lifestyle Plan in both English and Japanese, and we have been delivering water conservation-themed content to employees both in Japan and overseas since 2021.

Collaboration with stakeholders

We recognize that, in order to help consumers attain the Kirei Lifestyle, it is vital for us to deepen mutual understanding with various stakeholders and to collaborate with them.

As the water consumed at the stage of production impacts local communities, having good communication with local communities is vitally important. Many of our plants compile an annual environmental report, and communicate with local residents.

In order to solve water issues faced by countries and areas, we actively participate in programs organized by the central government, local government authorities, NPOs, and others. We play a leading role in

Water Conservation

GRI 303-1, 303-2, 303-3, 303-5

the Future of Washing Initiative, which is gathering wisdom from industry, academia, government and ordinary citizens across the boundaries of traditional business domains and academic fields, and discussing and proposing washing solutions for the future. We are implementing a water conservation campaign in China and are participating in the Water Project conducted by the Ministry of the Environment of Japan.

It is essential that suppliers in high water-risk sectors understand the need to improve their water management standards and to take appropriate actions. Through the CDP Supply Chain Program, we request that suppliers respond each year. We provide feedback on supplier assessment results in order to enhance the overall level of the activities undertaken by each supplier.

Consumer behavior needs to change in order to attain the Kirei Lifestyle. We provide opportunities for consumers to think about the Kirei Lifestyle through visits to museums or plants on the subject of the water that all of them use daily. For example, the Kao Eco-Lab Museum has displays that vividly indicate the amount of water for human needs.

Risk management

In the process of assessing risks and opportunities, the Corporate Strategy examines risks and opportunities anticipated at Kao, and conducts risk and opportunity assessments based on feedback from outside experts and staff in internal departments that are implementing initiatives. These are approved by the Internal Control Committee and ESG Managing Committee, respectively.

On behalf of the Kao Group, the secretariat of the Risk & Crisis Management Committee (Risk

Management & Responsible Care) conducts comprehensive and topical risk surveys on each division and subsidiary to identify key risks and review measures. In principle, the division in charge takes the lead in addressing these risks, but cross-organizational and common risks are addressed in collaboration with related divisions to strengthen the response and are treated as corporate risk issues as appropriate.

P40 Our ESG Vision and Strategy > Risk management

Metrics and targets

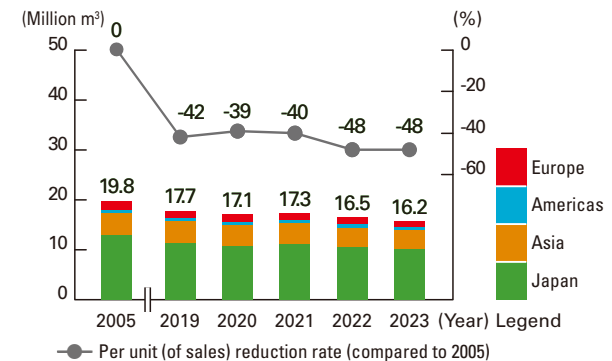
Mid- to long-term targets and 2023 results

2030 long-term targets

Item	Scope	Target for 2030
Water consumption (per unit of sales)	All Kao Group sites	45% reduction (compared to 2005)
	Across the entire product lifecycle for the Kao Group	10% reduction (compared to 2017)

At all Kao Group sites, water-saving is promoted on a daily basis in all activities, including production, research and operations. Besides providing water-saving products that help to save water across the entire product lifecycle, we also seek to spread awareness of the importance of saving water to all of our stakeholders.

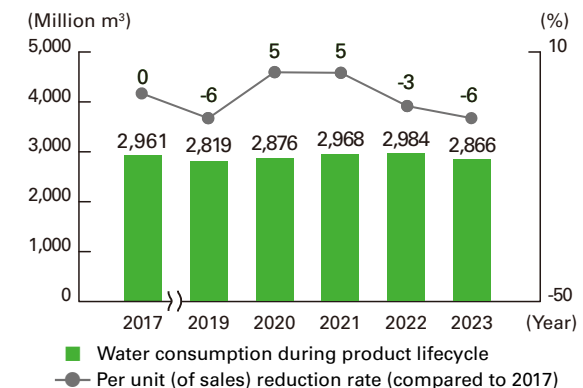
Water consumption (withdrawal) (all sites)



* Boundary: For 2005, all Kao Group production sites and non-production sites in Japan. From 2016 all non-production sites are included.

* Assurance provided for water use (withdrawal)

Water consumption trends throughout the product life cycle (Kao Group)



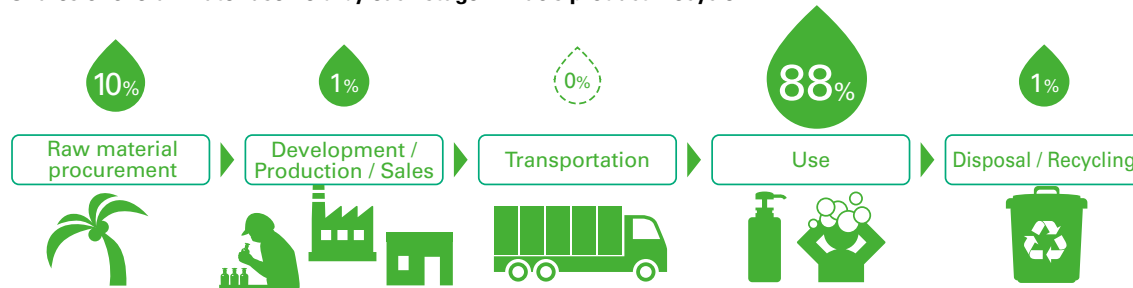
* "Water consumption throughout the product life cycle" is calculated as the combined total of the amount of lifecycle water consumption of individual products sold within and outside Japan (excluding use during production and distribution) multiplied by their annual sales quantity and the amount from the group's production and distribution processes. This amount includes water used for procurement in regard to chemical products but does not include water used in the use and disposal of such products.

* Assurance provided for water consumption and per-unit (of sales) % reduction rate

Water Conservation

GRI 303-1, 303-2, 303-3, 303-4, 303-5, 308-2

Shares of overall water use held by each stage in Kao's product lifecycle



Water withdrawal amount by source (Million m³)*¹

 (all sites)

	2020	2021	2022	2023
Surface water	0	0	0	0
Brackish water / seawater	0	0	0	0
Rainwater	0	0	0	0
Groundwater (renewable)	5.1	5.4	5.4	5.5
Groundwater (not renewable)	0	0	0	0
Oil-contaminated water / process water	0	0	0	0
City water	11.8	11.9	11.1	10.7
Wastewater from other organizations	0.10	0.01	0.03	0.05

*1 Boundary: All Kao Group sites

Wastewater discharge by destination (Million m³)*²

 (all sites)

	2020	2021	2022	2023
Rivers / lakes	2.7	2.9	2.8	3.1
Brackish water / seawater	5.7	5.7	5.0	4.9
Groundwater	0.0	0.0	0.0	0.0
Sewage system	2.8	2.9	2.7	2.5
Wastewater to other organizations	0.0	0.0	0.0	0.0
Total	11.2	11.4	10.5	10.5

*2 Boundary: All Kao Group sites

P120 Decarbonization > Metrics and targets > CDP evaluation

Reviews of 2023 results

Our water consumption (all sites) came to 16.2 million m³, lower than in the previous year. The per-unit (of sales) reduction rate was 48%, which was the same as that of the previous year, and we achieved a reduction of 42%, well above the 2023 target. Water consumption at production sites with water intake risks came to 2.9 million m³.

Water consumption across the entire product lifecycle (for the Kao Group as a whole) decreased by 118 million m³ from the previous year. The per-unit (of sales) % reduction in for water consumption across the entire product lifecycle was 6 percentage points lower than in 2017.

Due to products being replaced by water-saving products, including single-rinse laundry detergents, the quantity of water used within a product lifecycle has been reduced. Unit water consumption has also decreased due to the impact of increased sales of price pass-through from higher raw material prices.

The challenge is to reduce water consumption during the use stage. We are working to further expand our water-saving products.

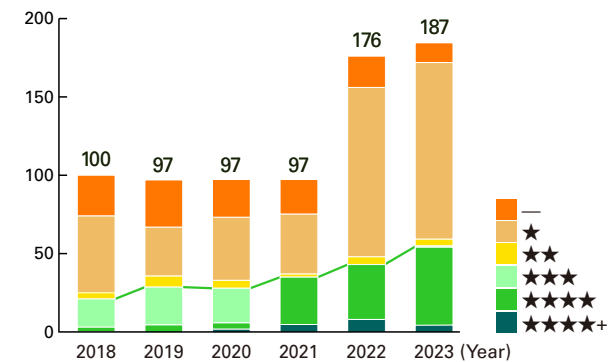
Main initiatives

Efforts in raw materials procurement

We began participating in the CDP Supply Chain Program in 2015 and we encourage suppliers in high water-risk sectors to work on improving their water management standards. More specifically, we ask suppliers to fill out the CDP questionnaire survey. We use our unique methods to evaluate suppliers' water management status, and we provide feedback on the evaluation results.

The 2023 survey results showed that the number of suppliers obtaining an evaluation of at least three stars had increased by 12 compared to the previous year, indicating that the overall supplier activity level had risen. On the other hand, the number of companies with a one-star rating increased 5 companies with the addition of 11 newly surveyed companies. We will continue to promote engagement in order to achieve a rating of three stars or higher.

Supplier activity level (Water)



Water Conservation

GRI 303-1, 303-2

Initiatives in production

Examples of 3R activities

Company name	Content
Kao Chemical Corporation Shanghai	Reduces its water consumption for the manufacturing of some products by reusing water from the reaction processes of other products
Kao Vietnam Co., Ltd.	Introduced a spray technique for washing and sanitizing tanks, resulting in reducing its use of water and steam
Kao Industrial (Thailand)	Returns overflow water to cool equipment to a pool for water to cool equipment to help eliminate unnecessary water consumption
Quimi-Kao, S.A. de C.V. (Mexico)	Concluded an agreement with the local community to receive treated water from the community's water purification plant. Reverse osmosis is employed to use sewerage effectively, and Quimi-Kao further purifies the treated water it has purchased and releases water left over from production into a river through the community's facility, thus contributing to local water recycling.

Water risk surveys for production sites

It is reported that changes in the amount of rainfall and the rise in sea levels caused by climate change are not the same around the world, differing between regions. According to the RCP 8.5 scenario, future average annual rainfall will increase in high latitudes and Pacific Ocean equatorial regions, and will decrease in arid mid-latitudes and subtropical regions during the period from 2080 to 2100. According to that scenario, the global average sea level rise will be 0.71 m during that period, with a range from 0.51 m to 0.92 m, a substantial difference.

Accordingly, we assessed water risks at worksites, plants and distribution sites, including mid- to long-term water risks.

For the initial screening, we determined site conditions (primarily confirming nearby rivers, coastlines, elevations and so on from the perspective of flooding and storm surges), performed checks using existing

tools (Aqueduct, hazard maps, etc.) and checked past examples (floods and other natural disasters in the past). Next, we used climate models to compare heavy rain, light rain and storm surge risks with the current climate (1951–2011) at sites identified in the initial screening.

The results indicated that light rain will occur at all sites at about the same frequency as under the current climate, and that heavy rain and storm surges will occur more frequently at some sites, and that flooding damage will be at about the same levels that we assumed until now.

There are several sites where a high level of drought risk is anticipated. We have been implementing quantitative evaluations of water resource risk in the drainage basins where these sites are located, using a methodology based on the CBWT*¹ method. The results confirmed that the evaluation method used was effective. We are continuing our sequential quantitative evaluation and have identified several plants that are at higher risk. Going forward, besides expanding the scope of evaluation to include more sites, we will be evaluating preventive measures to prevent latent risks from being actualized, and evaluating countermeasures that can be adopted if risks are actualized.

*1 Context-Based Water Targets: Guidance for setting water-related targets in consideration of watershed conditions

Efforts during use

As water consumption in the product use stage accounts for around 90% of water consumption across the entire lifecycle, we are providing water-saving products and implementing consumer communication in regard to how to use these products properly.

In 2009 in Japan, we launched *Attack Neo* laundry detergent, which enables washing to be completed

properly with only one rinse cycle. The year 2019 saw the launch of *Attack ZERO*, which combines superb cleaning power and odor removal capability with zero detergent residues. Our products for front-load washers, which use less water, can also be used with just one rinse cycle. For *Attack ZERO Perfect Stick*, a laundry detergent in the shape of a stick, we made it possible to reduce the number of rinsing to one time, even though it is a powder detergent. Kao offers this laundry detergent in Japan, Taiwan and Hong Kong.

Through our Essential Research focused on foam, we have also succeeded in reducing the amount of water used when rinsing with other product categories too. In 2010 we launched *Merit Shampoo*, which uses 20% less water for rinsing than conventional products, followed in 2014 by *CuCute* dishwashing detergent, which also reduces the amount of water needed for rinsing by 20%, and in 2015 by *Magiclean Bathroom* cleaning liquid, which uses 10% less water for rinsing.

We also communicate ways to save water to consumers using a variety of approaches. For example, we have developed ecology shampoo techniques to use less water when shampooing hair, and we communicate these to consumers. Communicating ways to conserve water while offering water-saving products truly embodies “eco together,” the slogan of the Kao Environmental Statement.

Implementing education and activities based on “eco together”

Employees

- We hold guided tours of the Kao Eco-Lab Museum for our employees. (We have been conducting online tours for employees to prevent the spread of the COVID-19 pandemic.)

Water Conservation

GRI 303-1

Customers

- We exhibit on water conservation at the Kao Eco-Lab Museum.

Business partners

- We hold the Kao Vender Summit for important suppliers.
- We asked suppliers to complete the CDP questionnaire survey.

Local communities

- Many plants prepare annual environmental reports and communicate with local residents.

National and local governments

- We conduct a water conservation campaign in China.
- We participated in the Water Project conducted by the Ministry of the Environment of Japan.

Participation in the Nationwide Cleanliness and Water-saving Initiatives water conservation campaign for ten consecutive years

P82

Sustainable Lifestyle Promotion > *Yoki-Monozukuri* in plan and action and proposing activities and collaboration with stakeholders > China's Cleanliness and Water-saving Campaign

Employees' opinions

Using the rain, a sustainable water source in nature, to attain the Kirei Lifestyle



Stephanie Herlambang

Foundation Promotion, ESG Division,
Kao Corporation

In everyday life, rinsing is generally required at the end of a washing process. For that reason, to clean something, the water for rinsing must also be clean. Since I was little, I have often seen people washing clothes with dirty water from a river or lake in Jakarta, my hometown, and I always wondered if the clothes would become clean by washing with such dirty water.

Indonesia is located near the equator and is endowed with abundant water resources, but ironically lacks clean water. Due to such a water issue, many people are making some sacrifices in their lives in Indonesia. For example, some of them need to buy expensive water for daily life, go far to get water, or put up with the lack of clean water despite the health hazards.

To address this issue, I am thinking of collecting and purifying the rain, which is a sustainable water source in nature, and delivering clean water to people who are facing serious water problems. In doing so, I believe that people's washing environment and overall QOL will improve, and I hope that everyone will be able to make the Kirei Lifestyle a reality.

Water Conservation

Stakeholder engagement



Takashi Namiki

Leader of the Fresh Water Group,
WWF Japan

Kao focuses on efforts in the product use stage, which accounts for the most water consumption with products, and is promoting water conservation from the aspect of product development. Moreover, Kao pays attention to water withdrawal in watershed areas where water stress is high based on the fact that the impact on the water resource varies for the same water withdrawal from region to region, which I really appreciate.

What I expect from Kao in the future is to gather the results of the studies and examinations, which have already been conducted based on the understanding that water is a regional resource, and reflect them in the water conservation target.

In so doing, there are two points I want Kao to consider. One is to include raw material procurement areas in the scope of the study, and the other is to avoid focusing only on drought.

With regard to the first point, it is important to understand the extent of the water risk, including in production regions (both within and outside Japan) of specific crops and other plants used as raw materials of products. It is then important to survey the water

risk and incorporate clearly prioritized efforts into the strategy for achieving Kao's water conservation goal. Ensuring traceability will be difficult when including raw material procurement areas both within and outside Japan. However, I want Kao to proceed with its risk investigation and reflect the results in the water conservation strategy.

As for the second point, people tend to focus on drought when talking about water risks, but I want Kao to pay attention to other risks, too. For example, the contamination level becomes relatively high in regions that often suffer from droughts, meaning that such areas tend to become severely polluted. When developing a goal, I think it is also important to focus on the multifaceted nature of water risks and reflect it in the goal.

I also expect Kao to promote its efforts in the field, including the management of water resources, measures for pollution control, and freshwater ecological system conservation, by considering the perspective of watershed areas. To produce the healthy water needed for business, all we need is to connect water, from upstream to downstream, as well as the natural environment. Kao should choose sites that it will take care of from the entire watershed area that nurtures the gift of nature, and work together with companies, governments, scientists, NGOs, and local communities to solve various water risks.

Such collective action in watershed areas with a variety of stakeholders is growing, especially among

Western companies, and it is becoming an important element for water conservation, which also contributes to the conservation of valuable natural environment in watershed areas.

I look forward to seeing Kao carry out its mission in watershed areas that are important for Kao, Kao products, and nature.