

Air & Water Pollution Prevention

Kao has established strict standards that go beyond the legal requirements for the prevention of air and water pollution and is thoroughly managing emissions at each of its bases. In addition, the Company is contributing to the prevention of air and water pollution throughout society through its products and technologies.

Risks	Strategy	Metrics, targets and results			Initiatives	Financial impact	
		Metrics	Targets	2025 results			
<ul style="list-style-type: none"> Increased costs due to stricter regulations on air and water pollution in factories and supply chain areas, and deterioration in profits due to operational shutdowns caused by regulatory violations Declined competitiveness and worsening profitability due to increased costs caused by the stagnation of technological development related to air and water pollution Declined reputation and corporate value if insufficient action is taken to address air and water pollution 	Plants	(1) Accurate management to prevent air and water pollution			Monitoring and management using self-imposed controls stricter than regulatory values, and compliance	<ul style="list-style-type: none"> Environmental Conservation Cost – Investment Amount: 3,172 million yen Economic effects as a result of environmental conservation measures: 4,820 million yen Total fines for environmental law violations: 221 thousand yen 	
		(1) Reduce emissions of chemical substances	% of plants which disclose VOC and COD pollution load (1)	100% 2025	VOC 94% COD 80%		Management and reduction of emissions of substances subject to the Japanese PRTR system
		(1) Prevent air pollution caused by fuel combustion	Number of deviations from environmental laws and (1) (2) regulations	–	3		Use of fuels with low air pollution
		(2) Reduce emissions of volatile organic compounds (VOCs)	Total emissions of chemical substances subject to the PRTR system (2)	–	3.7 tons		VOC emission management and reduction
		(2) Prevent water pollution caused by wastewater discharge	NOx emissions (1)	–	333 tons		Management and reduction of pollutants associated with wastewater
		(2) Prevent groundwater and soil contamination	SOx emissions (1)	–	33 tons		Investigation and prevention of groundwater and soil contamination
			VOC emissions (1)	–	3.8 tons		
Opportunities	Products	(3) Contribute to the prevention of air and water pollution caused by products	Environmental risk assessment of surfactants (3)	–	Low	<ul style="list-style-type: none"> Contribution to the conservation of the ecological system by preventing pollution in the area around plants Protect the health of residents living near plants and preserve their living environment by improving the air quality 	
		(3) Prevent water pollution caused by wastewater from product use					
	Logistics	(2) Prevent air pollution in logistics			Smart logistics in collaboration with Lion Corporation		

Decarbonization
Zero Waste
Water Conservation
> Air & Water Pollution Prevention
Product Lifecycle and Environmental Impact
Environmental Accounting

Walking the Right Path

Environmental and social impact

* The numbers at the end of the metrics, targets, and initiatives indicate the strategy identifiers.

Strategy

Towards reducing the risk and creating opportunities for air & water pollution prevention, we are implementing strategies that are unique to Kao, are effective, and contribute to business growth and solving social issues.

Social issues

For Kao to remain a sustainable and competitive entity, it is essential to have an accurate understanding of social issues. An understanding of social issues will not only mitigate business risks for Kao, but will also be an important starting point for identifying new business opportunities that will drive growth. Kao recognizes the following social issues related to this theme.

- Health hazards caused by air, water and soil pollution, and destruction of the ecological system
- Soil and groundwater pollution caused by chemical substances and agricultural chemicals
- Unhygienic living environments caused by water pollution

Risks and opportunities

In this business environment, which includes these social issues, Kao faces various risks, but is also identifying new business opportunities. Identifying these risks and opportunities is an important process in formulating corporate strategies and measures. The main risks and opportunities identified by Kao in this theme are as follows.

Risks

- Increased costs due to stricter regulations on air and water pollution at plants and across supply chain areas and reduced profits due to operational shutdowns caused by regulatory violations
- Declined reputation and corporate value if insufficient action is taken to address air and water pollution

Opportunities

- Stabilization of operations through the prevention of air and water pollution in production, and the reliable realization of corporate and business strategies
- Expanded profits through increased demand for products that contribute to the prevention of air and water pollution and increased competitiveness

Strategy

Kao has formulated the following strategies to address the identified risks and opportunities.

Kao is working to reduce risk by appropriately managing the areas and substances subject to pollution based on the characteristics of its plants and external requirements such as legal regulations. Kao will leverage its long-cultivated knowledge of pollution response and its activities in the global chemical industry to promote a comprehensive strategy for a sustainable environment, with the aim of realizing the basic policy of its Mid-term Plan K27 of Becoming an Essential Company in a Sustainable World.

(1) Appropriate management to prevent air pollution

Prevent air pollution in the areas around our plants by closely monitoring and managing the amount of air pollutants such as NOx, SOx, and VOCs emitted by each plant, and strictly controlling them by setting standards that exceed legal regulations.

Related initiatives: [P194](#) Initiatives to prevent air pollution in plants, [P195](#) initiatives to prevent air pollution through product development and provision of products

(2) Accurate management to prevent water pollution

Reduce the amount of organic matter and other substances contained in plant wastewater, and prevent water pollution in the areas around plants by strictly controlling the amount of substances contained in the wastewater, setting standards that exceed legal regulations.

Related initiatives: [P195](#) Initiatives to prevent air pollution in plants, [P195](#) initiatives to prevent water pollution through product development and provision

(3) Contribution to the prevention of air and water pollution through products

Contribute to the prevention of air and water pollution for customers and society through Kao products and technologies. In doing so, create value that contributes to solving environmental issues.

Related initiatives: [P194](#) Initiatives to prevent air pollution in plants, [P196](#) initiatives to prevent water pollution through product development and provision of products

Impact generated by implementing the strategies

We believe that the aforementioned strategies will have the following financial, environmental and social impacts.

Financial impact

- Increase sales of eco-friendly products that contribute to the prevention of air and water pollution
- Reduce costs related to fines and lawsuits for non-compliance with environmental regulations

Environmental and social impact

- Contribution to the conservation of the ecological system by preventing pollution in the area around plants
- Protect the health of residents living near plants and preserve their living environment by improving the air quality

Strategic resilience

Kao is working to prevent air and water pollution by thoroughly managing emissions at each of its bases and improving wastewater treatment technology. By maintaining strict standards that go beyond legal and regulatory requirements, we ensure compliance with global regulations while minimizing business risks. Furthermore, we are committed to resolving social issues and enhancing corporate value by providing products and technologies that contribute to environmental conservation. These efforts have given us the resilience to respond flexibly and quickly even when risks materialize.

Metrics and targets

To enhance the effectiveness of our strategies, we have established performance metrics related to risks and opportunities, and we regularly monitor our progress. We have set targets for the metrics related to particularly significant risks and opportunities, and we are steadily promoting initiatives by utilizing the PDCA cycle to check the status of achievement of these targets.

Following a review of the scope of calculation, the calculation scope for the ratio of factories disclosing COD emissions and COD pollution load was changed to include only factories that discharge industrial wastewater directly into public water bodies. As a result, the data, including historical data, have been revised.

Targets and progress

Strategy	Metrics						Mid- to long-term targets	
		2021	2022	2023	2024	2025	Target value	Year
(1)	% of manufacturing sites disclosing VOC air emissions and COD pollution load <small>* Applies to manufacturing sites that directly discharge industrial wastewater into public water bodies.</small>	VOC 65%	VOC 68%	VOC 84%	VOC 94%	VOC 94%	100%	2025
		COD 80%* (100%)	COD 80%* (100%)	COD 80%* (100%)	COD 80%* (100%)	COD 80%* (100%)		

* Following a review of the scope of calculation, the calculation scope was changed to include only factories that discharge industrial wastewater directly into public water bodies. As a result, data have been revised retroactively to 2021. Inogami Co., Ltd. in the Kao Group, is not included in the calculation scope. Values in parenthesis are based on former definition.

Metrics and results

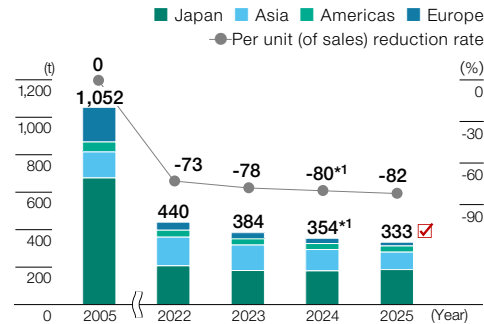
Strategy	Metrics	Results			
		2022	2023	2024	2025
(1)	NOx emissions (all production sites)	440 tons	384 tons	354 tons*1	333 tons ✓
(1)	SOx emissions (all production sites)	43 tons	37 tons	37 tons	33 tons
(1) (2)	Total emissions of chemical substances subject to the PRTR system	2.1 tons*2	5.3 tons*2	4.2 tons*2	3.7 tons
(1)	VOC air emissions of chemical substances Boundary: Kao Group production sites in Japan	6.8 tons	5.0 tons	4.1 tons	3.8 tons ✓
(1) (2)	COD pollution load (specific production sites)	80 tons*3	73 tons*3	66 tons*3	72 tons ✓

*1 NOx emissions from ESP cogeneration, which started in 2024, were emitted by the gas turbine service operator and have therefore been excluded from the recalculated figures.

*2 Revised to correct errors in the Sustainability Report 2025, including the omission of certain emission media and incorrect fiscal years.

*3 Following a review of the scope of calculation, the calculation scope for COD pollution load was changed to include only factories that discharge industrial wastewater directly into public water bodies. As a result, the data, including historical data, have been revised. Inogami Co., Ltd. in the Kao Group, is not included in the calculation scope.

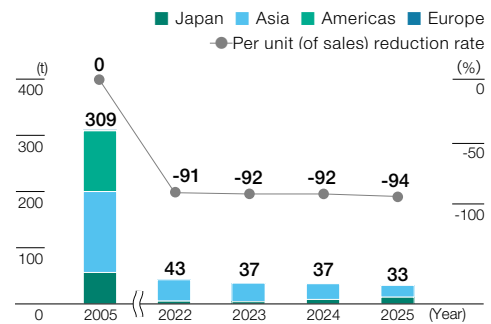
NOx emissions (all production sites)



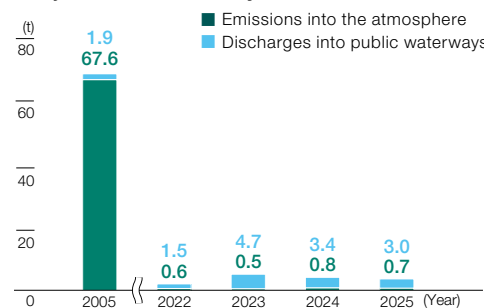
* Assurance provided for NOx emissions

*1 NOx emissions from ESP cogeneration, which started in 2024, were emitted by the gas turbine service operator and have therefore been excluded from the recalculated figures.

SOx emissions (all production sites)

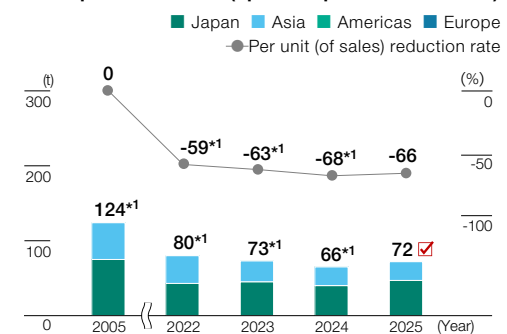


Total emissions of chemical substances subject to the PRTR system



* The PRTR Law changed in April 2023, so the figures for 2023 are the actual results for the period from April to December for the chemical substances subject to the law after the change.

COD pollution load (specific production sites)



*1 From 2025, the calculation scope for COD load was changed to include only factories that discharge industrial wastewater directly into public water bodies. As a result, COD load data for 2005 and 2022–2024, as well as the reduction rates for 2005 and 2022–2024, have been revised.

* Assurance covers COD load data.

* Inogami Co., Ltd. in the Kao Group, is not included in the calculation scope.


Making Thoughtful Choices
for Society

Making the World Healthier
& Cleaner

Decarbonization
Zero Waste
Water Conservation
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Emissions of VOCs

Although we have no facilities subject to the VOC emission regulations provided in the Air Pollution Control Law, we work to voluntarily cut VOC emissions. For the 100 VOC substances defined in the notice issued by the Director General of the Environmental Management Bureau, Ministry of the Environment, we set voluntary targets on the annual atmospheric emissions from each plant for each substance (5 tons or less in 2005, 3 tons or less in 2009, 1 ton or less in 2010), conducted emission reduction activities and accomplished our targets. We are managing VOC emissions with the current target of maintaining our activities. Plants of the Kao Group in Japan handled 32 types of VOCs in quantities over 1 ton in 2025, with total emissions into the atmosphere of 3.8 tons .

Compliance with environmental legislation

In 2021, there was a failure to install sufficient gas detection equipment at Kao Huludao Casting Materials Co., Ltd. (fine of 542,000 yen), a failure to report the designated manager (fine of 1,444,000 yen) at the same company, and an exceedance of hydrogen sulfide limits at Kao USA Inc. (fine of 1,192,000 yen). In 2023, surfactant leaked from a facility of Kao Specialties Americas LLC into a river (fine of 832,000 yen). In 2024, Quimi-Kao in Mexico was fined 4.3 million Mexican pesos (32 million yen) for failing to submit cogeneration system operation data to the authorities. Additionally, the KCSA Olesa plant in Spain paid a fine of 12,000 euros (2 million yen) for exceeding NOx regulatory limits and 6,296.40 euros (1.01 million yen) for exceeding permitted water usage volumes. In 2025, KCSA in Berbera, Spain exceeded the regulatory limit for nitrate concentration (resulting in a fine of 221,000 yen), and Kao Specialties Americas in the United States reported two surfactant leak incidents (no fines imposed). Environmental laws and regulations include permits, standards, and regulations for water quality.

Compliance with environmental laws and regulations

Classification	Unit	2021	2022	2023	2024	2025
Number of deviations*1	Cases	3	0	1*3	3	3
Of which, number of leaks	Cases	0	0	1*3	0	2
Of which, water quality	Cases	0	0	0	0	1
Total fines*2	1,000 yen	3,178	-	-	35,010	221
Of which, number of leaks	1,000 yen	0	-	-	-	-
Of which, water quality	1,000 yen	0	0	-	0	221

*1 All incidents detected by authorities during the reporting period

*2 Fines paid during the reporting period

*3 Revised actual measurements (Recalculated due to omission in calculations)

Governance

Under the supervision of the Board of Directors, risk management related to air & water pollution prevention is carried out by the Internal Control Committee and the ESG Managing Committee, and opportunity management is carried out by the ESG Committee. These committees are both headed by the President & CEO.

Furthermore, as a specific initiative focused on preventing air & water pollution, the Responsible Care Promotion Committee, chaired by the Managing Executive Officer (in charge of the Corporate Strategy). This committee formulates policies, plans for the next fiscal year, evaluates performance, identifies areas for improvement, and reports the results of these activities to the Internal Control Committee.

 Our ESG Vision and Strategy > Governance

 Responsible Care (RC) activities

https://www.kao.com/content/dam/sites/kao/www-kao-com/global/en/sustainability/pdf/our_foudations2025-e-02.pdf

Risk and opportunity management

■ Policies

In implementing its Air & Water Pollution Prevention, Kao has established the following policies as guidelines for its daily operations and decision-making. For details, please see the website.

 • 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/>

■ Management process

The status of our initiatives to address the risks and opportunities associated with Air & Water Pollution Prevention is managed through the following process: planning, implementation, evaluation of results, and corrective action, and we are working to make steady improvements.

Overall management process (outside of sites) of Air & Water Pollution Prevention

P (Planning)

Design of activities for the following year (Nov.-Dec.), approval of targets (Feb.).

D (Implementation)

Improvement and promotion activities (from Feb.)

C (Evaluation of results)

Aggregation of results (until Apr.), reporting of results in the Sustainability Report (June).

A (Corrective action)

Reflection and identification of areas for improvement (June).

Site management process

P (Planning)

The RC Promotion Committee formulates company-wide targets (Sept.) and annual plans for each site (until Dec.).

D (Implementation)

Please see our initiatives (P194-196).

C (Evaluation of results)

Internal inspection (until July), RC secretariat audit, ISO14001 internal audit, external audit, etc. (around Aug.).

A (Corrective action)

Corrective action requests within the workplace, corrective action requests from the ISO Central Secretariat, corrective action requests from the RC Secretariat, etc.

Initiatives

Kao is engaged in a variety of initiatives aimed at Air & Water Pollution Prevention. These initiatives are based on the aforementioned strategies and are being promoted in collaboration with each other to achieve our targets. Here, we will introduce some of the important initiatives from among the many we are engaged in.

Strategy	Initiatives	
(1) Appropriate management to prevent air pollution	Using cleaner fossil fuels	Reducing emissions of chemical substances subject to PRTR
(2) Accurate management to prevent water pollution	Compliance with wastewater-related laws and regulations	Surveys of groundwater and soil contamination
(3) Contribute to the prevention of air and water pollution through products	Prevention of contamination by products for Chemical Business such as pigment ink and commercial cleaning agents	Monitoring through field surveys such as river environment monitoring

Initiatives to prevent air pollution in plants

Region: Global

Corresponding strategy: (1)

Using cleaner fossil fuels

To reduce emissions of NOx, SOx, PM, etc. generated during the combustion of fuel, we now use natural gas, a clean fossil fuel, at all our plants with the necessary infrastructure, and have discontinued the use of coal.

Reducing emissions of chemical substances subject to PRTR

In FY2000, we set a voluntary target to reduce the annual emissions of each substance from each plant to 1 ton or less and achieved this target in FY2002. Since then, we have continued to achieve this voluntary target, excluding leaks of chlorofluorocarbons and similar emissions.

In 2025, 129 target chemicals were handled in quantities of 1 ton or more, with a total emissions into the atmosphere and public waters of 3.7 tons. In addition, we are voluntarily monitoring and controlling releases and transfers (in the same way as would be done for chemical substances subject to PRTR) of chemical substances that the Japan Chemical Industry Association has specified as being subject to voluntary surveys.

Reducing emissions of VOCs

Some of our plants outside Japan have not yet been able to accurately assess their VOC emissions, and some of them are also high emitters. Kao is accelerating its investigation of the emission status at these plants and is actively introducing measures to reduce emissions.

* Since the chemical substances subject to the PRTR Law were changed in April 2023, we have not been able to compile data on the volume of chemical substances handled, emissions, etc. for the full year of 2023.

Initiatives to prevent water pollution in plants

Region: Global

Corresponding strategy: (2)

Compliance with wastewater-related laws and regulations

Kao has installed wastewater treatment facilities at many of its plants to minimize the impact of wastewater from its plants on the local water environment. Wastewater is treated to a high standard before being discharged outside the plant.

In addition to ensuring compliance with the wastewater regulations stipulated by law, we have established necessary management metrics for ongoing monitoring at each site.

Surveys of groundwater and soil contamination

To clarify the impact of chemical substances used in the past, we measure environmental standard substances in groundwater on the premises of each plant every year. Initiatives to prevent air pollution through product development and provision of products.

Initiatives to prevent air pollution through product development and provision of products

Region: Global

Corresponding strategies: (1) (3)

LUNAJET water based pigmented inkjet ink

The world's first water based pigmented inkjet ink, *LUNAJET*, which applies pigment nano-dispersion technology cultivated by Kao, has a VOC-free*1 design that emits extremely low levels of VOCs during printing, making a significant contribution not only to the prevention of air pollution but also to the improvement of the working environment for workers in printing operations. Furthermore, this water based pigmented inkjet ink technology can be applied to water-based gravure-printing ink and is expected to contribute to a wider range of applications.

*1 VOC-free: VOC emissions (carbon equivalent) in the printing process are 700 ppmC or less.

 [LUNAJET®
https://chemical.kao.com/global/digital-printing-materials/lunajet/](https://chemical.kao.com/global/digital-printing-materials/lunajet/)

Visco Top UT thickener for concrete spraying construction

Kao has developed a thickening agent called *Visco Top UT* that greatly reduces the amount of dust generated during the spraying of concrete in mountain tunnel construction and has begun full-scale sales of the product. Even when using a "powder quick-hardening agent" that tends to scatter dust, *Visco Top UT* can achieve a dust concentration of 2 mg/m³ or less (dust guidelines enforced from 2021) with half the amount of a typical dust reducer, making a significant contribution to improving safety at work sites. Furthermore, this technology has already been registered with the New Technology Information System (NETIS)*2 (number KT-200035-A), and it is expected to be adopted for various tunnel construction projects ordered by the national government and local public bodies.

*2 NETIS: A database system operated by the Ministry of Land, Infrastructure, Transport and Tourism for the purpose of sharing and providing information on new technologies.

 [Visco Top UT
https://chemical.kao.com/content/dam/sites/kao/chemical-kao-com/en/products/catalog_glen_B0089661.pdf](https://chemical.kao.com/content/dam/sites/kao/chemical-kao-com/en/products/catalog_glen_B0089661.pdf)

LUNABIND H-100, an environment-friendly, biomass-derived soil conditioner

Clay paving is widely used in school grounds and parks. However, when soil deteriorates due to extreme weather and similar factors, rainwater may not be properly drained, resulting in muddy conditions. Furthermore, the surface of dried soil is prone to releasing fine particles. When blown by wind, these particles may adversely affect the health of local residents and the environment. For this reason, ongoing improvements in clay paving performance are needed.

Building on the soil aggregation technology Kao has cultivated in the agriculture field, we developed *LUNABIND H-100* through extensive observation of soil particle interfaces and research into interaction energy. *LUNABIND H-100* aggregates soil particles into larger, heavier clumps, thereby preventing them from being lifted and scattered by wind. As a granular soil conditioner, *LUNABIND H-100* helps minimize dust dispersion when applied to the ground.

 • Development of *LUNABIND H-100*, an Environment-Friendly, Biomass-Derived Soil Conditioner
<https://chemical.kao.com/jp/infrastructure/topics/news-037/>

• *LUNABIND*, an Environment-Friendly, Biomass-Derived Soil Conditioner
<https://chemical.kao.com/jp/infrastructure/product/lunabind/>

Initiatives to prevent water pollution through product development and provision of products

Region: Japan

Corresponding strategies: (2) (3)

Visco Top surfactant liquid thickener

Construction work carried out near rivers, coasts and other bodies of water requires environmental measures to prevent water pollution. In the case of bridge pier construction for long bridges or suspension bridges that cross ocean straits, because the piers are actually built in the river water or seawater, special underwater concrete that has high viscosity and is resistant to washout is used. Furthermore, when construction is undertaken near underground watercourses, care must be taken not to contaminate the groundwater. In this kind of water-related environment, thickening agents must be added to inorganic materials such as grouting materials and concrete to enhance water-immiscible properties. Kao's high-performance specialty thickener *Visco Top* makes it possible to achieve high-viscosity injection materials and concrete that are superior to conventional products and enables high-quality construction while preventing environmental pollution near bodies of water. It has also been used in the removal of highly contaminated water at the Fukushima Daiichi Nuclear Power Plant and has a proven track record.

Smash alkali-free professional-use detergent

Alkaline detergents, which are effective for removing stubborn grease and oil stains from kitchen surfaces, need to have their pH adjusted and neutralized when the cleaning solution is drained to prevent water pollution. On the other hand, mild cleansers, which do not contain alkali, generally tend to lack cleaning power.

Kao's new kitchen grease and oil stain detergent Smash has the same cleaning power as alkaline detergents, but is neutral in formulation, so it is safe and gentle on materials, and contributes to the prevention of water pollution.

 Alkali-free professional-use detergent SMASH
<https://pro.kao.com/jp/products/kps05/4901301384201/>

Monitoring of wastewater after product use

We are focusing on understanding the actual situation in relation to wastewater discharge after product use and we are conducting our own field surveys on an ongoing basis, such as environmental monitoring of river water to get an idea of the ecological risks of chemical substances.

In response to the globalization of our business, we have been working with experts to verify the usefulness of simulation models that predict river water concentrations and develop new models, as well as to conduct monitoring activities outside Japan, with the aim of carrying out eco-friendly business activities in each region.

In recent years, we have been analyzing the impact of chemical substances on ecological system in detail, using data from ecological monitoring and river environment monitoring in Japan. Kao also participates in environmental monitoring conducted by the Japan Soap and Detergent Association. Currently, we are monitoring four representative types of surfactants in urban rivers (four rivers, seven locations, four measurements per year) to assess the environmental risk to ecological system. The results of previous surveys have confirmed that the risk to aquatic organisms from these surfactants is consistently low.



Stakeholder engagement

Evaluation and expectations for Kao's initiatives in air & water pollution prevention

Kenji Furukawa
Professor Emeritus, Kumamoto University

The Kao Sustainability Report 2025 highlights the company's unwavering commitment to contributing to a circular society. In 2025, Kao once again received the highest rating of Triple A from CDP, an international NGO, across three categories: Climate Change, Forests, and Water Security. Only two companies in the world have been rated CDP Triple A for six or more consecutive years, indicating that Kao's corporate commitment to building a sustainable world as a consumer goods company has earned exceptionally high global recognition.

The following are my observations on Kao's FY2025 initiatives to prevent air and water pollution, as presented in its sustainability report and environmental data book.

1. Initiatives to prevent air pollution

Kao's NOx emissions across all production sites have shown a consistent downward trend, which is commendable. While SOx emissions, mostly from its production sites in Asia, have remained limited since 2021, I encourage the company to take prompt action. The total release of chemical substances subject to PRTR has been drastically reduced compared to 2005 levels. Although the recent increase is attributable to changes in the scope of regulated substances that took effect in April 2023, the releases should be further reduced.

In 2025, 3 cases of non-compliance with environmental regulations occurred at overseas sites, which resulted in fines. To prevent recurrence, governance across these sites should be further strengthened.

2. Initiatives to prevent water pollution

The COD emission loads from all of Kao's production sites had been steadily decreasing before finally rising in 2024. The COD emission loads from production sites in Japan

remain low thanks to well-maintained plant wastewater treatment facilities. In contrast, the emissions from production sites in Europe and Asia increased in 2024. Since the wastewater treatment performance is affected by both qualitative and quantitative changes in manufactured products, effective localized measures are required to reduce COD emission loads.

For many years, Kao has been trying to reduce the volume of sludge generated from wastewater treatment facilities. In June 2025, at the Toyohashi Plant, Kao introduced a wastewater treatment method that places tubifex worms at the top of the food chain. Data collection is currently underway, and I look forward to learning about the method's impact. The key to this treatment method is creating a suitable culture environment for tubifex worms. I hope that the data will reveal the environmental conditions suitable to the species' survival and demonstrate the system's cost-effectiveness. The findings should be utilized to support the broader application of this eco-friendly treatment method at suitable facilities across Kao's plants in the world.

3. Expectations for Kao

I'd like to commend Kao for developing environmentally friendly products, including: eco-Peko Bottles, which reduce plastic use by as much as 40%; fire-extinguishing agents free of PFAS; LUNAJET, a VOC-free, water-based pigmented inkjet ink; Visco Top, an additive used in grout and concrete to prevent watershed pollution; Smash, an alkali-free industrial detergent; and CuCute, a dishwashing detergent that requires less water for rinsing. I encourage Kao to continue developing such products.

In the summer of 2025, we saw extreme heat waves around the world. Although Japan is traditionally known for having four distinct seasons, spring and fall are becoming less pronounced, raising concerns that the country may be shifting toward a two-season climate characterized by prolonged summer and winter. Global warming is an urgent issue that cannot wait and requires a global response, but it is deeply regrettable that the United States, the world's second-largest emitter of greenhouse gases, withdrew from the Paris Agreement in February 2026. In particular, developed countries are planning to use fossil fuels to generate power to meet the enormous electricity demand for AI technologies, which will certainly accelerate global warming and air pollution. Under these circumstances, I expect Kao, as a proponent of ESG-oriented manufacturing, to serve as a global leader in advancing a circular society.