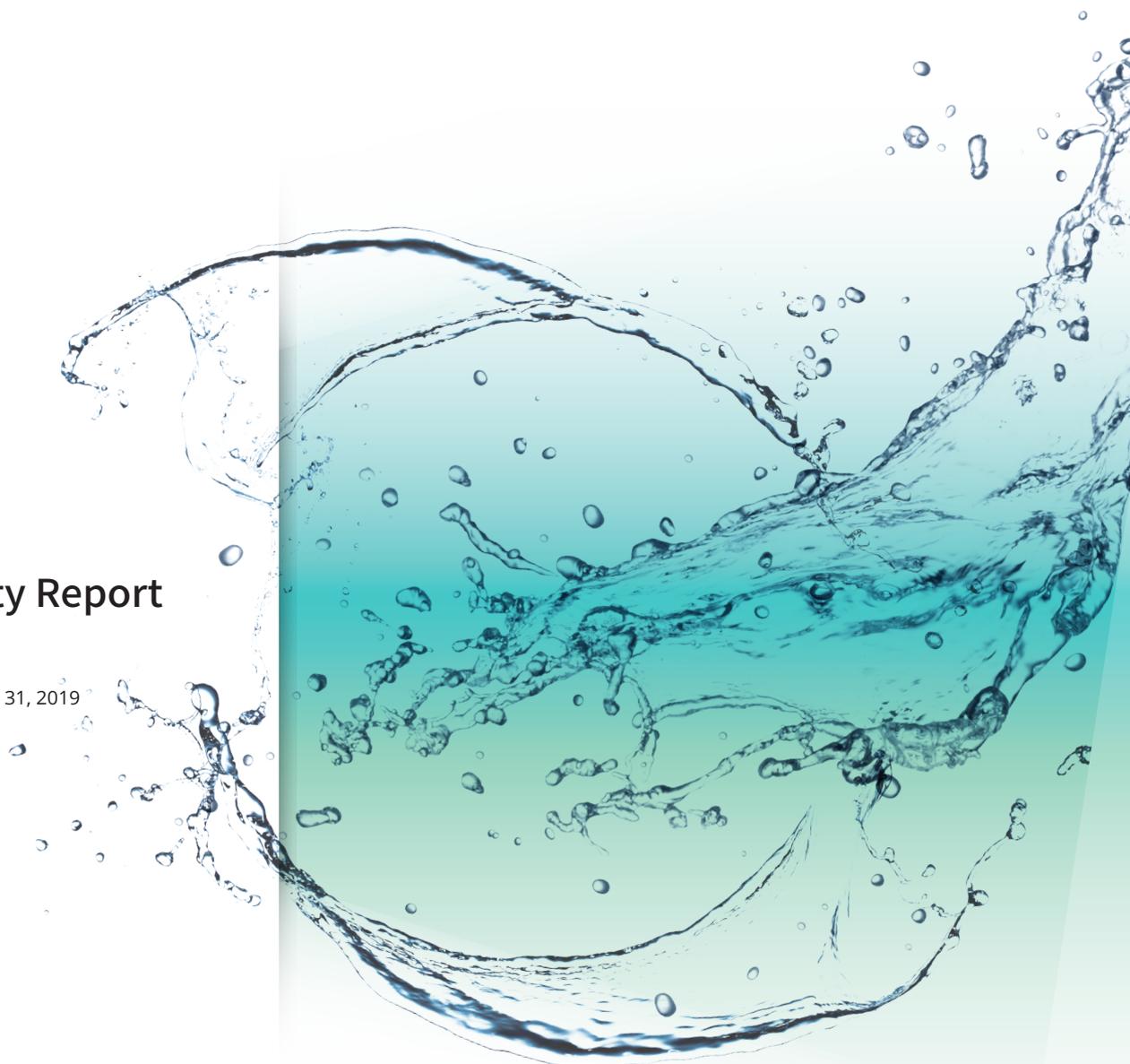




The Kurita Group
Sustainability Report
2019

For the year ended March 31, 2019



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Editorial Policy

The Kurita Group Sustainability Report 2019 (“the Report”) is published as a report to all stakeholders on the Group’s main CSR-related approaches and materiality, as well as its main initiatives during fiscal 2019.

Structure

The Report is broadly comprised of two sections on the Kurita Group’s CSR initiatives: a section reporting on strategic initiatives undertaken during the target period; and a section with follow up reports on each of the Group’s seven materiality themes. Information on other initiatives can be found on the Company’s website.

Organizations covered

Kurita Water Industries Ltd. and other domestic Kurita Group companies

* Some information on overseas Group companies is included in the report

Period covered

Fiscal 2019 (April 1, 2018 to March 31, 2019)

* Some information on policies, structures, and initiatives prior to and beyond fiscal 2020 is included in the report as necessary.

Guidelines referred to

- GRI Standards
- Environmental Reporting Guidelines 2012, Ministry of the Environment
- Environmental Accounting Guidelines 2005, Ministry of the Environment

Supplementary information to the contents of the report

- In the Report, “the Company” refers to Kurita Water Industries Ltd.; “the Company and its domestic Group companies” refers to Kurita Water Industries Ltd. and its Group companies in Japan; and “Kurita Group” refers to all Group companies including those overseas. Information pertaining to specific companies is presented using the names of the companies.
- Regarding environmental and social data, some variation in the figures reported for fiscal 2019 owing to revisions to certain fiscal 2018 data that occurred from August 2018 onwards.

Message from the President



The Kurita Group will Continue Creating Shared Value with Society, Aiming to Achieve Sustainable Growth

President and Representative Director
Michiya Kadota

A handwritten signature in black ink that reads "Michiya Kadota".

Creating Shared Value that will Form the Central Pillar of Management

In 1949, Kurita Water Industries Ltd. was founded as a boiler water treatment chemicals business aiming to contribute to the development of society through safe and efficient operation of customers' facilities. In the 70 years since then, the Company has expanded its operations in response to demands from industry and society, not only for productivity increases among customers, but also for pollution prevention and resource-saving. Today, we have grown into a corporate group with operations in over 30 countries worldwide.

The growth of the Kurita Group so far has been supported by insight into water, which has been accumulated through diligent study, and our commitment to contributing to society in the fields of water and the environment. On our 40th anniversary in 1989, we set out our corporate philosophy, "Study the properties of water, master them, and we will create an environment in which nature and man are in harmony." This philosophy truly expresses the Kurita Group's intention to create shared value with society through its business, and I believe that realizing it will lead to the Group's sustainable growth.

Responding to Uncertain Times

Today, the world appears to be growing more uncertain as time passes. The acceleration of innovation that has accompanied progress in digital technology is generating a business environment where previous experience and paradigms are of little use. Moreover, the march of globalization is causing social division due to increasing inequality, and the roles that companies should play in society are expanding. When we review the Kurita Group's direction and purpose as a company in light of the uncertainty of our times, we recognize the importance of what the corporate philosophy means. The Group is also strongly aware society's expectation that it should leverage its technology and know-how in the fields of water and the environment, built up over many years, in solving social issues indicated by the Sustainable Development Goals (SDGs).

Under the medium-term management plan Maximize Value Proposition 2022 (MVP-22), which started in April 2018, we are promoting a transformation by dismantling preconceived ideas in order to build a solid earnings base while responding to changes in the business environment. At the same time, we have positioned CSR at the core of our management strategy. To create shared value with society while preventing damage to the Group's value, our common CSR Policy for the Group sets out priority themes, namely quality and safety, fair business activities, respect for human rights, and environmental improvement. Based on these, we have established activity targets, and are working steadily to achieve them.

Potential of CSV Business and Human Resource Development

As a means for realizing shared value with society, the Kurita Group has designated products, technologies, and business models that contribute significantly to increased water-saving, CO₂ emissions reduction, and waste reduction as the “CSV business.” Increasing the ratio of CSV business across our entire business is one of our key priorities under the MVP-22 plan. We will provide total solutions generated by concentrating our technology and know-how in the Kurita Group’s three business fields of water treatment chemicals, water treatment facilities, and maintenance, and promote our CSV business. In fiscal 2018, the first year of the MVP-22 plan, we created new CSV business and we will look to expand it going forward.

To provide high value to society, we need human resources that can constantly strive to dismantle preconceived ideas, including people with various experiences and global perspectives. The Kurita Group will focus on nurturing such human resources and building an organizational culture that allows diverse human resources to play a role.

The Kurita Group’s progress on CSR-related initiatives, and its achievement status, are reported via the Company website and other means. Issues that we need to address are identified through feedback received from our stakeholders, and put to use in the Group’s CSR initiatives. I would like to thank all of our stakeholders for their cooperation, and ask for your continued understanding and support for the Kurita Group’s initiatives.

Definition and Objectives of CSR

The Kurita Group defines its CSR as “the Kurita Group’s responsibility for its impacts on society.” Premised on legal compliance, the Group has set the following two objectives for its CSR initiatives. The Group will take action by positioning these initiatives at the core of its corporate activities and management strategies.

Definition

The Kurita Group’s responsibility for its impacts on society

Objectives

1. Creating and maximizing shared value for the Kurita Group and society
2. Identifying, preventing and mitigating possible adverse impacts by the Kurita Group

CSR Policy

To promote its CSR initiatives, the Kurita Group has set out the priority themes as a common policy for the Group as follows. The Kurita Group supports the sustainable development goals (SDGs), and has set out its priority themes to conform them.

Provide solutions to issues related to water and the environment, and fulfill responsibility for the future	
Priority themes	Initiatives toward 2030
1. Provide highly safe services and products 	Maintain social trust by developing and providing services and products reflecting considerations for safety, health, and the environment.
2. Conduct fair business activities 	Maintain fair and transparent trade based on free competition. Maintain sound relationships with politics and administration.
3. Respect human rights 	Support and respect international norms related to human rights and promote human rights initiatives by following the Guiding Principles on Business and Human Rights established by the United Nations.
4. Solve issues related to water resources 	Supply water at the optimum quality and quantity by securing as much water as necessary for the life of all people and the development of industry by applying technologies for saving, purifying, and reusing water.
5. Realize sustainable energy use 	Optimize energy use in living and in industries, and introduce technologies for creating energy throughout society.
6. Reduce waste 	Introduce technologies for using waste as resources and technologies for controlling the amount of waste and aim to achieve zero waste.
7. Advance industrial production technologies 	Make full use of big data on water to contribute to innovations in production efficiency and product quality in industries.

Refer to “Identification of Materiality” for details on the process for identifying priority themes.

Stakeholder Engagement

The Kurita Group positions its customers, business partners, employees, shareholders and investors, and local communities as its stakeholders. It takes initiatives on stakeholder engagement to understand each stakeholder's expectations, concerns, requests, and other thoughts about Kurita and reflect them in its management.

Initiatives on Stakeholder Engagement

Stakeholder	Purpose	Approach
Customers	Providing solutions through products and services and winning trust from customers	<ul style="list-style-type: none"> • Suggest and provide solutions to issues of individual customers, by communicating with them through proposal activities, and check how the solutions are evaluated. • Conduct customer satisfaction surveys to find expectations and evaluations by customers as a whole and identify the Kurita Group's issues.
Business partners	Fair trade and considerations for society, human rights, and environmental aspects in supply chain	<ul style="list-style-type: none"> • Check what individual business partners expect and how they evaluate us, by communicating with them in procurement activities. • Conduct questionnaires of business partners to check expectations and evaluations by business partners as a whole and identify the Kurita Group's issues. • Set up a helpline for business partners as a contact for anonymous consultations and whistleblowing.
Employees	Respect for human rights, improvement of job satisfaction, and human resource development	<ul style="list-style-type: none"> • Check employees' opinions through a self-reporting system or the similar system. • Check needs and effects of employee capability development by providing human resource development training, supporting female employees in their career development, and taking other measures. • Conduct employee surveys to check the level of their job satisfaction. • Set up a contact for compliance consultation and one for whistleblowing to accept anonymous consultations and whistleblowing.
Shareholders and investors	Dialogues with shareholders and investors for mutual understanding with them and winning support from them	<ul style="list-style-type: none"> • The president and the director in charge have dialogues with shareholders and stakeholders in financial results briefing, briefing sessions for shareholders, ones for investors, conferences hosted by securities companies, and IR roadshows. • People who are exclusively in charge of IR have dialogues with individual securities analysts and institutional investors through meetings and conference calls. • Disclose information appropriately and in a timely manner via annual reports, website, and other media.
Local communities	Contribution to local communities	<ul style="list-style-type: none"> • Carry out activities related to nature conservation, welfare, disaster control, and other issues in areas where our business bases are located, and provide support for affected areas in the event of a disaster. • Contribute to the Kurita Water and Environment Foundation, which was established to contribute to advancing science and technologies related to water and the environment. • Check expectations and evaluations by local communities in light of presence/ absence of complaints and other feedback to each business location and their contents.

Examination of CSR Initiatives

Based on the following information, we examine our CSR initiatives to confirm that they are making progress toward achievement of goals.

- Results of questionnaire and other surveys (of customers, business partners, and employees)
- Results of assessment by major ESG investment evaluation organizations and whether Kurita stock has been selected as an ESG Stock

Number of complaints lodged against, and acknowledgements given by the local community to, Kurita at each business location

Information disclosure

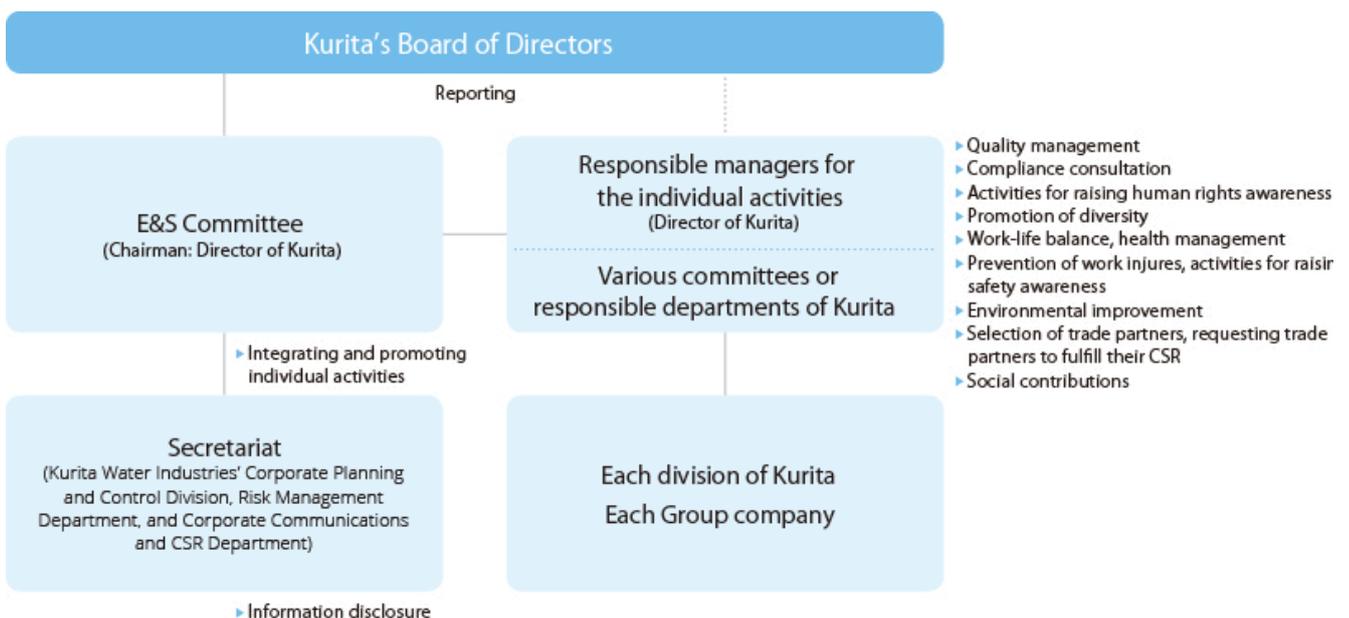
We disclose our CSR-related information to our stakeholders by the following methods.

- Disclosing reports created by referring to international standards on information disclosure
- Answering questionnaire and other surveys conducted by research institutions and other organizations
- Answering questions and surveys from customers, shareholders, and investors
-

Promotion System and PDCA

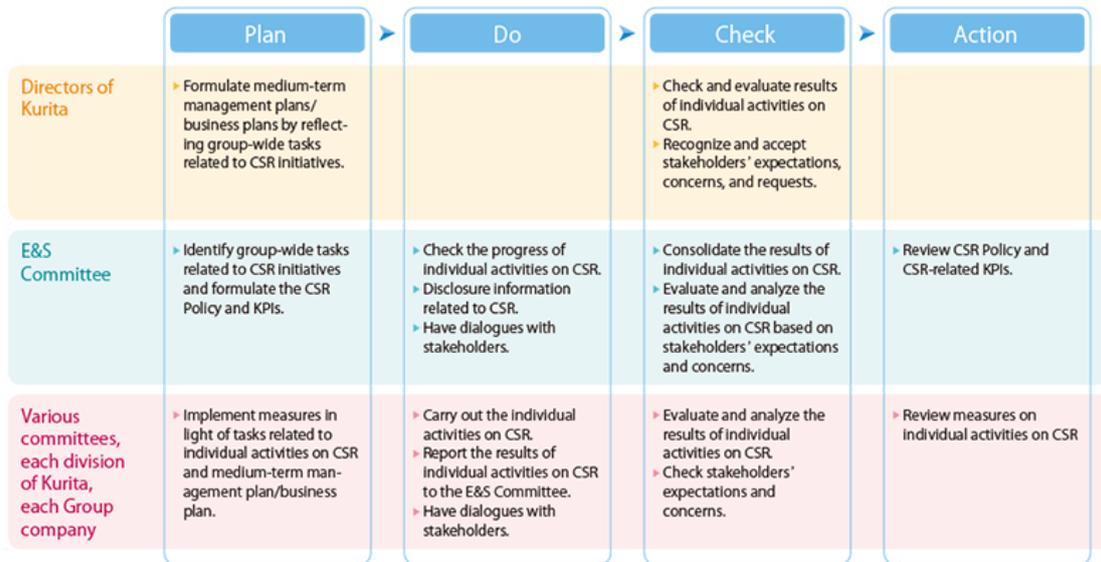
Promotion System

The Kurita Group positions the themes stipulated in its CSR Policy as material issues and makes group-wide efforts to work on activities related to the fields of 1) corporate governance, 2) product and service liability, 3) fair operating practices, 4) respect for human rights, 5) appropriate labor practices, 6) environmental improvement, and 7) social contributions ("individual activities"). The chairman of the E&S Committee, who is a director of Kurita, is responsible for integrating and promoting the individual activities, with a director or an executive officer of Kurita assigned for each one of the activities as the responsible manager.



PDCA

For each of the individual activities, we formulate the Group's common medium-term targets and annual action plans, and Kurita and Group companies manage activity targets. Determination of the action plan and evaluation of results of actions are made by Kurita's Board of Directors.

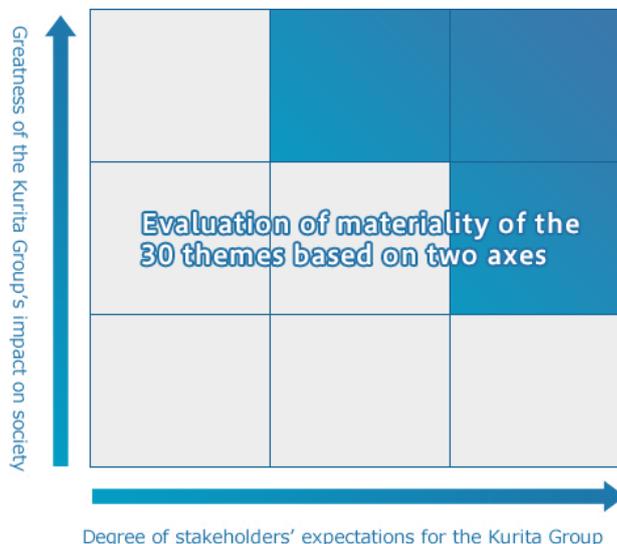


Identification of Materiality

Through the following steps, the Kurita Group identified seven material issues related to CSR and finalized as Kurita's CSR Policy, including what we should be like and the frame of mind that we should maintain firmly in 2030.

Step 1: Evaluation of Materiality

By referring to the GRI standards, ISO 26000 (Guidance on social responsibility), "OECD Guidelines for Multinational Enterprises: Recommendations for Responsible Business Conduct in a Global Context" by the Organisation for Economic Co-operation and Development (OECD), the United Nations Global Compact (UNGC), and Sustainability Development Goals (SDGs), a total of 30 themes on sustainability have been identified and the E&S committee of Kurita evaluated their materiality based on two axes of: 1) Degree of stakeholders' expectations for the Kurita Group and; 2) Greatness of the Kurita Group's impact on society.



Step 2: Basic Themes and Themes for Growth Opportunities

Based on the results of the evaluation in Step 1, we repeated discussions from the two perspectives of tasks that should be positioned as the base of management and business activities and growth opportunities for achieving our Corporate Philosophy and identified seven material issues. Further, we have set "what we should be like in 2030" or the "frame of mind" that we should maintain firmly, for each theme.



Step 3: Confirmation of Adequacy

The E&S Committee and Executive Committee of Kurita confirmed the adequacy of the seven material issues, what we should be like in 2030, and the frame of mind that were identified in Step 2, and they were finalized as Kurita's CSR Policy by its Board of Directors.



Performance

1. Achievement Status of Medium-term Targets

Our results and evaluation towards achievement of our medium-term targets in fiscal 2019, the first year of our activities, was as follows.

Priority themes	Targets for fiscal 2023	Results in fiscal 2019	Evaluation	
1. Provide highly safe services and products  	1) Proportion of themes falling into “Safety improvement” and “Response to legal changes” to product development themes	15%	△	
	2) Rate of participation in regular safety training related to “Products and services” among employees	100%	100%	○
2. Conduct fair business activities 	Rate of participation in compliance-related training among officers and employees	100%	100%	○
3. Respect human rights    	1) Rate of training conducted in relation to human rights among officers and employees	100%	100%	○
	2) Severity rate	0.005	0.06	×
4. Solve issues related to water resources      	Water savings at customers – Amount of tap water used in our business activities	50 million m ³	41 million m ³	○
5. Realize sustainable energy use     	CO ₂ emissions reduction at customers – CO ₂ emissions from our business activities	0t	-36,000 t	○
6. Reduce waste   	Waste reduction at customers – Waste generated from our business activities	100,000 t	89,000 t	○
7. Advance industrial production technologies  	Proportion of themes falling into “Contribution to improvement of production process” to product development themes	35%	33%	○

○: Achieved △: Partially achieved ×: Not achieved

2. External Evaluation (As of June 2019)

We responded to surveys from customers, investors, and external institutions regarding our CSR initiatives, and based on the survey questions, we expanded the information disclosed on our website. We conducted a Compliance Behavior Survey of our employees, and reflected the results in our Compliance Activity Plan for fiscal 2020. Our internal organizations responsible for compliance also conducted Surveys on Transactions with Kurita Water Industries Ltd. at the Company's suppliers to check directly the appropriateness of our transactions with them, and we undertook individual measures based on the feedback received.

1. Inclusion in ESG Indexes

 <p>FTSE4Good</p>	<p>FTSE4Good Index Series</p> <p>This index was developed by FTSE Russell, a global index provider based in the United Kingdom. The FTSE4Good Index Series is designed to promote investment in companies that meet global environmental, social, and governance (ESG) standards.</p> <p>Official website</p>
 <p>FTSE Blossom Japan</p>	<p>FTSE Blossom Japan Index</p> <p>This index was developed by FTSE Russell. The FTSE Blossom Japan Index is designed to measure the performance of Japanese companies that are making outstanding efforts on ESG.</p> <p>Official website</p>
 <p>2019 Constituent MSCI ESG Leaders Indexes</p>	<p>MSCI ACWI ESG Leaders Index</p> <p>This index was developed by MSCI, a global index provider based in the United States. The index is composed of companies with excellent ESG evaluations, selected from a parent index (the MSCI ACWI Index), which covers companies in 23 advanced countries and 26 emerging countries.</p>
	<p>MSCI World ESG Leaders Index</p> <p>This index was developed by MSCI. The index is composed of companies with excellent ESG evaluations, selected from a parent index (the MSCI Index), which covers companies in 23 advanced countries.</p>
 <p>MSCI Japan Empowering Women Index (WIN)</p>	<p>The MSCI Japan Empowering Women Index (WIN) This index was developed by MSCI. It is composed of companies in the MSCI IMI Top 500 Index that have been selected based on their data regarding employment of women, disclosed under the Act on Promotion of Women's Participation and Advancement in the Workplace and corporate policies regarding gender diversity.</p>
 <p>Member of SNAM Sustainability Index 2019</p>	<p>SNAM Sustainability Index</p> <p>This index was developed by Sompo Japan Nipponkoa Asset Management (SNAM), a Japanese asset management company. The index is composed of independently selected stocks, emphasizing their ESG evaluation based on the Buna-no-Mori Environmental Questionnaire (environmental assessment) conducted by Sompo Risk Management Inc. and the IntegreX Survey (social and corporate governance assessments) conducted by Integrex Inc.</p>

The inclusion of Kurita Water Industries Ltd. in any MSCI index, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement or promotion of Kurita Water Industries Ltd. by MSCI or any of its affiliates.

2. Evaluation by CSR Rating Organization

 <p>The logo features the text "Corporate Responsibility" in white on a dark blue rectangular background. To its right is a green square containing the word "Prime" in white. Below these elements, the text "rated by" is written in a smaller font, followed by the "ISS-oekom" logo, which includes a blue arrow pointing to the right.</p>	<p>oekom research</p> <p>The Company has received a "Prime" designation in its social responsibility rating on "Environmental aspects" and "Social and cultural aspects" from oekom research AG, a CSR assessment company headquartered in Germany.</p>
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Priority Themes: Basic Themes

The Kurita Group has positioned safety and quality, compliance, and human rights as basic themes for its CSR activities, and is working to prevent damage to the Group's value.



Provide Highly Safe Services and Products >

We introduce the Kurita Group's product quality improvement activities.



Conduct Fair Business Activities >

We introduce the Kurita Group's compliance activities.



Respect Human Rights >

We introduce the Kurita Group's initiatives related to respect for human rights and health and safety.

Provide Highly Safe Services and Products

Improving Quality

In order for the Kurita Group to continue its business and grow as a company, it must maintain its status as a trusted supplier for its customers. To gain the trust of our customers, we believe we must consider the impact on customers of the actual products that we supply, which is to say, we must develop products and services that consider safety, health, and environmental impact throughout the product lifecycle, and also ensure their stable manufacture as well as safe shipment and delivery.

The Kurita Group will strive to maintain the trust of society by continuing to develop and provide products and services that are considerate of safety, health, and the environment.

Basic Policy

The Kurita Group has established the “[Kurita Group Product Quality Policy](#)” and continuously promotes quality improvement activities based on this policy in an effort to raise the quality of the products and services it provides to customers.

The basis of this policy is the “Kurita Group will speedily provide our customers with products and services that can meet their quality expectations, thereby winning unshakable trust.” To provide products and services that are trusted by customers and to fulfill our social responsibilities in conducting our business, we have established the policy with the goal of conducting quality activities that take into account observance of laws and regulations, safety and quality, and environmental impact.

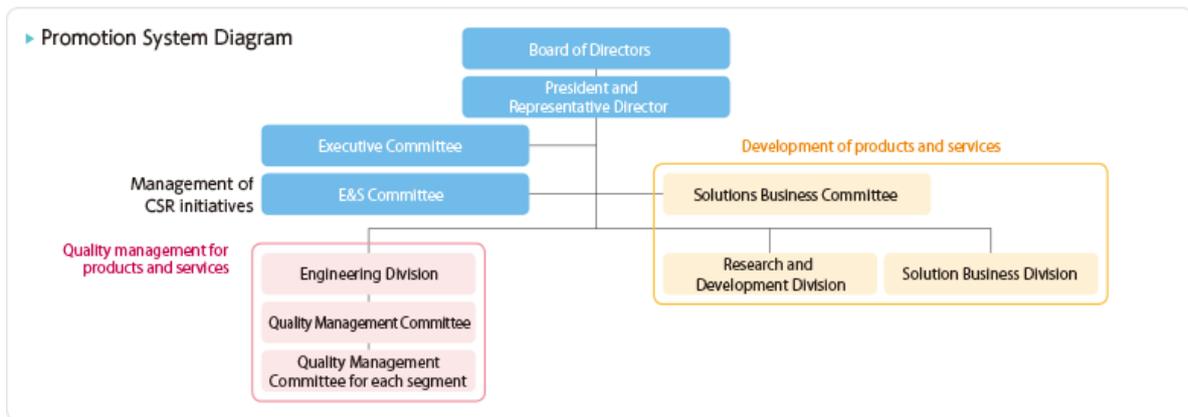
To improve quality, each Group company has built and operates a quality management system based on the policy. In addition, we constantly monitor the current quality level through self-inspections, surveys by the person in charge of promoting quality improvement activities or their designated person, and feedback of opinions and requirements from customers. Improvements are made each time an issue is recognized.

Basic Policy of Kurita Group Product Quality Policy

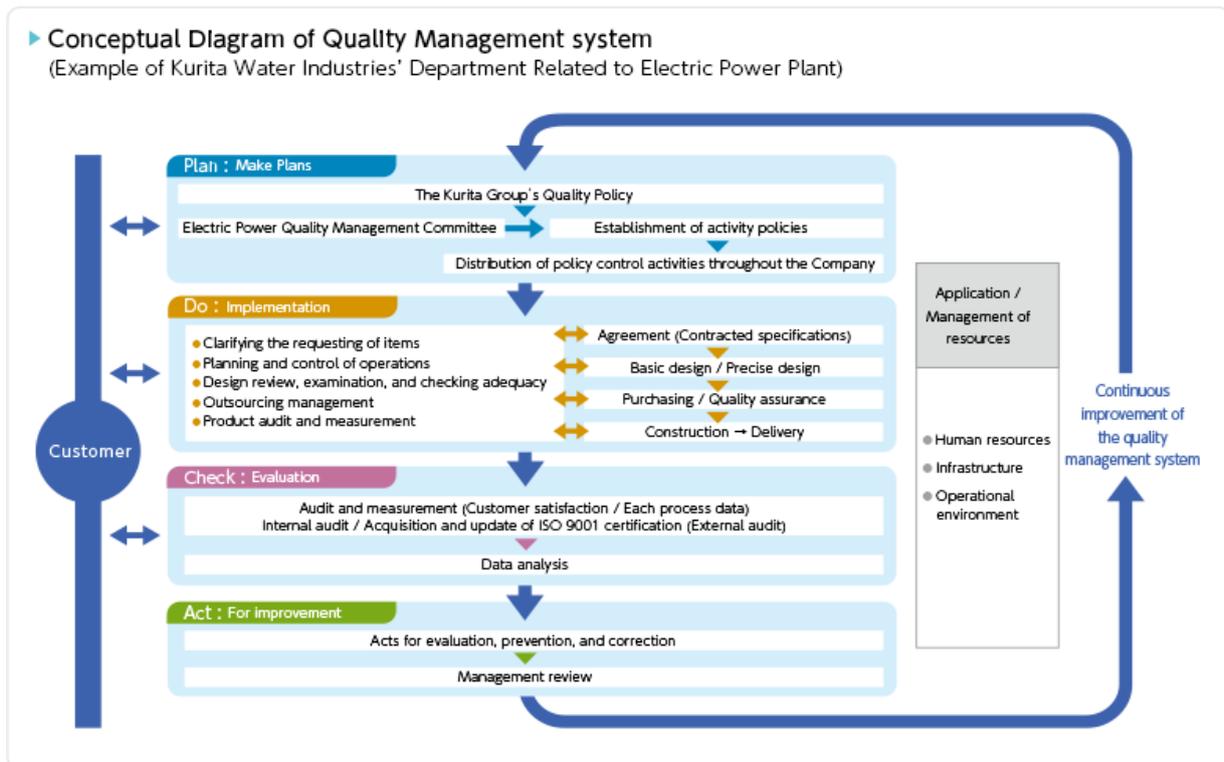
- We will establish a quality management system suitable for the business environment and continue improvement activities to enhance customer satisfaction.
- We will actively disclose appropriate information concerning products and services and provide safe and secure products and services.
- We will determine quality control processes and criteria, properly operate them, regularly confirm the operation status and thereby secure the quality of products and services.
- We will promote the development and improvement of products and services considering environmental impact and contribute to environmental preservation.

Promotion System

In developing products and services, we consider safety, health, and environmental impact throughout the product lifecycle. Specifically, we screen the development themes of high performance materials, units, and solution technologies in the Solutions Business Committee, narrowing them down to the themes that are expected to be most effective. The themes are used to develop products and services by the Research and Development Division and the Solution Business Division. For quality management for the stages from manufacture to provision of products, the Quality Management Committee is established within the Engineering Division to oversee the quality improvement activities of each organization. The Company has also created systems for autonomously carrying out continuous quality improvements and maintains quality management systems.



► Conceptual Diagram of Quality Management system
(Example of Kurita Water Industries' Department Related to Electric Power Plant)



Targets and Achievements

The Kurita Group's targets for the fiscal 2023 and achievements for the fiscal 2019 for the theme are as shown below.

	Targets for FY2023	Achievements in FY2019
Proportion of themes falling into "Safety improvement" and "Response to legal changes" to product development themes:	15%	8%
Rate of participation in regular safety training related to "Products and services" among employees:	100%	100%

Main Initiatives

Product Safety Evaluation

The Company has a rule that, when it uses a new chemical substance in product development, it assesses the risk the chemical substance poses to the environment and health based on internal rules. In addition, when we manufacture a product, we submit mandatory notifications and reports following laws and regulations, including the Industrial Safety and Health Act, the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., and the Fire Service Act.

Sharing Information Related to Product Safety

To ensure the appropriate provision of information to customers, Kurita Water Industries uses GHS^{*1}-compliant SDS^{*2} and labels to inform them of applicable laws and hazards of the product and provide other information. We also issue Yellow Cards^{*3} and affix Yellow Card-compliant labels to containers^{*4} to ensure transportation safety.

- *1 GHS stands for the Globally Harmonized System of Classification and Labeling of Chemicals. Under this system, physical hazards and health hazards/environmental hazards of chemicals are classified based on international standards, and products classified as hazardous ones are stated on SDSs and indicated on the containers. GHS has been introduced in many countries in accordance with a recommendation by the United Nations. In Japan, compliance with GHS is required by the Industrial Safety and Health Act.
- *2 SDS (Safety Data Sheet), is a sheet on which a product's hazards, applicable laws, how to handle and transport the product, emergency measures, and other information are presented in a specific format. The Company creates SDSs for all of its products, commodities, and developed articles and provides them to its customers.
- *3 A Yellow Card is a yellow-colored card showing information about procedures for handling an accident as a safety measure for transportation of a chemical. This card is taken along by the transport operator when a chemical is transported on a tanker truck or the similar vehicle.
- *4 A Yellow Card cannot be used in the case of consolidated transport or transport of small lot products. Therefore, in such a case, the Company affixes a label indicating safety information (United Nations Number and Emergency Response Guide Number of the chemical name) on each container.

Conducting CS Surveys

The Company's Engineering Group continuously conducts customer satisfaction (CS) surveys of all customers who have purchased large water treatment plants.

Based on the results of the survey, the Group continually works to revise and improve various items, including its operations procedure manual and specification sheets.

Number of Surveys Conducted		Question Items
FY2018	27	8 items, including specification, quality management, and construction
FY2019	14	

Providing Training to Improve Knowledge and Skills

In order to raise the quality of services provided to customers, the Company provides employees training to improve their knowledge and skills. For the water treatment chemicals business, the Company provides training to its own employees as well as those of its domestic Group companies and agents that conduct the same operations. The Company provides various training for each class of trainee, including basic knowledge about water treatment chemicals, as well as communication skills and problem-solving methods.

For the water treatment facilities business, the Company provides training for employees of the Company and its domestic Group companies as well as overseas local staff, including technical training, such as courses on water treatment and waste water treatment, as well as safety and legal training.



Technical training session

Number of Participants in Training (Total)	Water Treatment Chemicals Related	Water Treatment Facilities Related	Total
FY2017	274	477	751
FY2018	431	409	840
FY2019	593	520	1,113

Conducting Safety-Related Training

The Company runs a product safety e-learning course for all employees and dispatch staff except for those in its Administrative Division. The course is designed to deepen employees' understanding around product safety and was taken by around 2,000 people in the fiscal year ended March 31, 2019. We will continue to run the course in the future.

Response to Problems

Problems that arise prior to delivery to customers and complaints received from customers are entered in the in-house "problem information" database and that information was shared throughout the Company to ensure that all departments take necessary measures.

Number of Serious Accidents in the Kurita Group Involving Products and Services	
FY2017	0
FY2018	0
FY2019	0

Acquisition of ISO 9001 Certification

To encourage continuous quality improvements, the Kurita Group is promoting acquisition of ISO 9001 certification at companies that have production processes involving procurement, manufacture, and processing to provide products and services. Companies that have acquired ISO 9001 certification as of March 31, 2019 are listed below. For data such as overall acquisition rate for the entire Group, refer to presented under [ESG Data—Social](#).

List of ISO 9001 Certified Bases

- Kurita Water Industries Ltd.
(Department related to electric power plant)
- Kurita Chemical Manufacturing Ltd.
- Kuritec Service Co. Ltd.
- Kuritaz Co., Ltd.
- Kurita Engineering Co., Ltd.
- Kurita-GK Chemical Co.,Ltd.
- Kurita (Taiwan) Co.,Ltd.
- Kurita Water Industries (Dalian) Co.,Ltd.
- Kurita Water Industries (Jiangyin) Co.,Ltd.
- Hansu Co.,Ltd.
- Kurita Europe GmbH
- Kurita Iberica SL
- Kurita Turkey Kimya A.S.
- Fremont Industries, LLC
- Kurita do Brasil LTDA.
- Kurita Water Industries (Suzhou) Ltd.
- Hansu Technical Service Ltd.
- Kurita (Singapore) Pte.Ltd.
- P.T.Kurita Indonesia
- U.S. Water Services, Inc.

CSR Requirements for Suppliers

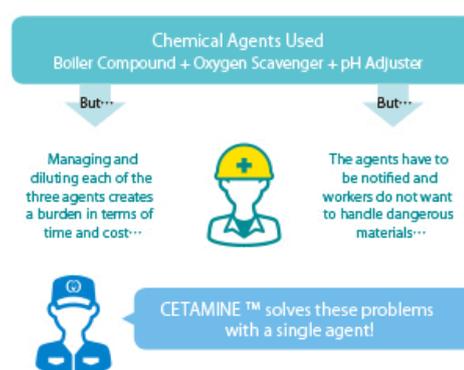
The Kurita Group considers it vital to obtain cooperation from suppliers in order to provide customers with safe, high quality products and services. To this end, we have established [the Kurita Group CSR Procurement Guidelines](#), and we have asked suppliers to comply with laws and regulations regarding product safety, provide high quality products and services to the Kurita Group, and provide appropriate information. In particular, we ask major suppliers to conduct a self-evaluation based on the guideline and to implement improvement measures.

Products that Contribute to “Safety Improvement” and “Response to Legal Changes”

The Kurita Group strives to provide customers with highly safe products and services. We are working to develop products and services where the products themselves feature improved safety and response to legal changes, based on laws, regulations, and standards related to safety and the environment in each country, as well as moves towards future regulations. Here we present some examples.

CETAMINE™ Water Treatment Chemical for Boilers Offers Outstanding Safety

Boilers that generate steam are widely used for electricity generation and production processes in plants, as well as air conditioning in office buildings, hospitals, and other facilities. To curb the amount of fuel and feed water used in boilers and achieve efficient operation, water treatment chemicals for boilers are generally used. Hydrazine has long been used as a boiler water treatment chemical, but requires caution when handling due to concerns that it may be carcinogenic. The CETAMINE™ product produced by the Kurita Group was developed by Kurita Europe GmbH. It is a water treatment chemical that does not contain Hydrazine. Traditionally, treatment of boiler water required the use of three types of agents: a boiler compound, an oxygen scavenger, and a pH adjuster. However, CETAMINE™ effectively integrates all of these functions into a single compound, enabling customers who manage boilers to reduce their handling of chemicals. The Kurita Group will continue to offer the CETAMINE™ series not only to respond to the hydrazine issue, but also to comply with environmental laws and regulations in each country and region.



Kurita’s Absorbent Contributes to Lithium-Ion Battery Safety Improvement and Service Life Extension

Lithium-ion batteries are widely used in electronic devices such as mobile phones and PCs. With their increasing use in electric vehicles, household appliances, and other areas, the batteries are advancing with higher output power and capacity. Repeated charging and discharging of lithium-ion batteries causes CO₂ to be generated inside them. This creates an increase in pressure within the sealed batteries that brings a risk of swelling, bursting, or catching on fire.

Kurita Group manufactures a special absorbent that absorbs the generated CO₂ gas, making lithium-ion batteries safer. Moreover, since the product also absorbs metal ions emitted from the electrodes during discharge, it suppresses adherence of the ions to the electrode and film formation, thereby extending the service life of the battery.



Left: A new battery
Right: A battery after repeated charging and discharging

Conduct Fair Business Activities

Compliance

The Kurita Group is involved with solving many customers’ problems in areas around the world. This is proof of the trust that customers in various countries have placed in the Group, and it entails a heavy responsibility. To ensure that we continue to be highly rated as a company by customers, suppliers, employees, shareholders, and local communities throughout the world, we recognize that it is more important than ever to conduct business fairly at all times in every country where we operate. All Kurita Group officers and employees observe the stance stated in our CSR Policy, “Maintain fair and transparent trade based on free competition. Maintain sound relationships with politics and administration,” and are committed to fulfilling the Group’s responsibilities for the future.

Basic Policy

All Kurita Group officers and employees share fairness, transparency, integrity, safety, and compatibility as five core values, and the [Kurita Group Code of Conduct](#) has been created to set out basic guidelines for judgment and conduct for how all Kurita Group officers and employees should conduct themselves and what conduct is prohibited. The Code has been translated into 18 languages so that all Kurita Group officers and employees throughout the world can understand it, and it is also disclosed on the Company website. The Kurita Group’s basic approach toward compliance is to implement this code of conduct by promoting deeper understanding of the code within the organization, reviewing the compliance guidelines formulated at each division and Group company, and promoting awareness of them throughout the organization.

► Core Values

- Fairness

To be flexible and competitive company that can survive in the market environment, we will conduct business activities in a fair manner, moving away from old values and ideas that are no longer appropriate.
- Trans-
parency

To become a global corporate group, we will proactively adopt the rules of international society and conduct business activities openly.
- Integrity

We will conduct business activities in a sincere manner, while making strenuous efforts to meet social expectations and further enhance our reputation as a company true to its word.
- Safety

As a company that leads the world with its technologies, we will provide our customers with high-quality products and services while conducting our business activities in such a way that prioritizes the minimization of negative impacts that technologies may have on the lives and properties of people.
- Compati-
bility

As a company contributing to the realization of a sustainable society, we will conduct business activities in such a manner as to ensure the compatibility of economic growth and environmental protection, so that we can help keep the global environment in good shape for the next generation.

The Kurita Group has formulated the following various policies to ensure the promotion of fair business practices throughout the entire Group, and they are now being applied in Kurita Group companies.

Kurita Group Anti-Bribery Policy

The Kurita Group formulated its [Anti-Bribery Policy](#) in order to prevent bribery and promote fair business activities within the Group. This policy defines basic items related to the Group’s bribery prevention systems. Under this policy, the Company and each Group company defines items to be complied with as rules and works on the reduction of the risk of the occurrence of bribery.

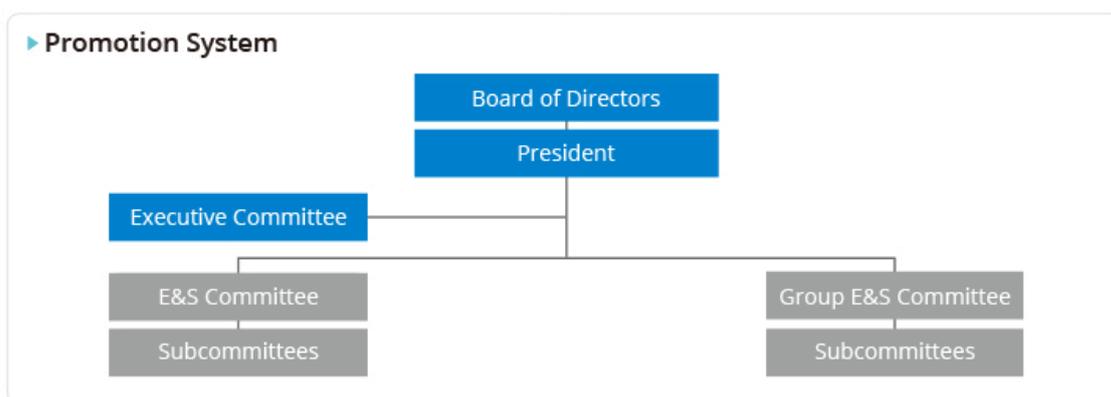
Kurita Group Antitrust Policy

The Kurita Group has established [the Kurita Group Antitrust Policy](#) to ensure that the Group conducts fair transactions and to prevent its officers and employees from violating antitrust laws in countries around the world. The policy sets out basic items regarding observing local antitrust laws and antimonopoly laws, and associated regulations and so forth in different countries and regions.

These policies have been translated into 16 languages so that all Kurita Group officers and employees throughout the world can understand them.

Promotion System

As an organization for overseeing the Kurita Group’s compliance activities, the Company has established the E&S (Environmental & Social) Committee, which is chaired by the executive senior managing director and representative director of the Company, and the Group E&S Committee, which is also chaired by the abovementioned director and whose members are representative directors of Group companies. In these committees, the Group sets out policies and important measures for compliance activities and conveys them to all employees through subcommittees at each headquarters division and Group company. The E&S Committee also manages the activities and reports the activity results once a year to the Company’s Board of Directors, which evaluates the activity results.



Targets and Achievements

The Kurita Group’s target for the theme in fiscal 2023 and its achievement in fiscal 2019 are as shown below.

	Target for FY2023	Achievement in FY2019
Rate of participation in compliance-related training among officers and employees	100%	100%

*Courses in fiscal 2019 were targeted at officers and employees of Kurita Water Industries.

Main Initiatives

Preventing Problems from Occurring

The Kurita Group has established targets and measures to be taken for improvement of the risk of legal or regulatory infringements, and is working to prevent compliance-related problems from occurring. Specifically, after creating a “Non-Compliance Risk Map” consisting of 60 items and tailored to the business characteristics of each organization and company, we have identified key themes to be addressed by conducting a risk assessment based on the results of a Compliance Behavior Survey from the previous fiscal year.

Compliance Behavior Survey

The Kurita Group conducts the Compliance Behavior Survey for Kurita Group employees and dispatch staff each year in order to clarify the impact of compliance activities and any problems, and to identify latent legal and regulatory infringement risks to help reduce risks going forward. The survey results were reported back to the personnel in charge of compliance in each organization and Group company.

Status of Compliance Behavior Survey Implementation

	FY2018	FY2019
Number of people surveyed	6,521	6,944
Number of respondents	6,230	6,867
Response rate (%)	95.5	98.9

Whistle-Blowing and Consultation Desk

The Kurita Group seeks to enable employees to work in the Group with peace of mind. To this end, we have established the Kurita Group Code of Conduct, as well as consultation desks within each company and outside organizations where people can report or consult if they observe behavior that breaks internal company rules or behavior that they think might be breaking the rules, or if they have business partners who may not be following the rules. These consultation desks are provided not only for Kurita Group employees, but also for dispatch staff sent to work in the Kurita Group and personnel at our customers and so forth. The Kurita Group strives to protect persons who consult or make reports and to achieve early detection of dishonest practices, and also operates the Kurita Global Helpline, which allows the employees of overseas Group companies to make reports to a consultation desk.

Status of Consultation Desk Usage (Cases)

	FY2017	FY2018	FY2019
Japan	21	26	27
Overseas	0	1	4
Total	21	27	31

Compliance Training for Management

The Company conducts ongoing compliance training for its management team and those of its domestic Group companies.

Number of Training Participants

	FY2018	FY2019
Theme	Antitrust law and risk management	Plea bargaining
The Company	36	35
Domestic Group companies	38	24
Total	74	59

Anti-Bribery and Anti-Corruption Training

The Kurita Group provided anti-bribery and anti-corruption e-learning training for all of its officers and employees in fiscal 2019. The training is designed to deepen understanding about points that should be observed by all directors and employees in accordance with the Kurita Group Anti-Bribery Policy, as well as to promote fair business activities. It was held at the Company and domestic Group companies, with a 100% attendance rate.

CSR Requirements for Suppliers

The Kurita Group considers it vital to obtain cooperation from suppliers in order to conduct fair business across the entire supply chain. We have established [the Kurita Group CSR Procurement Guidelines](#), and we have asked suppliers to observe laws and social norms, such as conducting fair business and prohibiting corruption and bribery, and to provide appropriate information. In particular, we ask major suppliers to conduct a self-evaluation based on the guideline and to implement improvement measures.

Respect Human Rights

Human Rights

The Kurita Group has operations in over 30 countries, where it encounters diverse working environments, business customs, and trading practices. It is important to approach business with a respect for stakeholders' human rights. Therefore, recognizing that human rights are a priority issue for management, the Kurita Group promotes respect for human rights among all stakeholders, including employees, in the countries and regions where it conducts business. The Group recognizes that these initiatives need to be thoroughly implemented both internally and throughout the supply chain. We therefore request our business partners to consider human rights and require their understanding and cooperation, and we confirm that human rights are being respected through periodic monitoring surveys.

Basic Policy

The Kurita Group Code of Conduct presents a model for specific practice of correct conduct based on observation of laws and regulations and on social ethics. The code stipulates that all officers and employees should respect and observe human rights in their conduct. Furthermore, we have also established [the Kurita Group Human Rights Policy](#) to complement the corporate philosophy and the Kurita Group Code of Conduct.

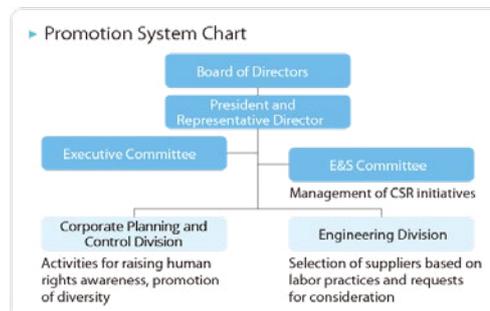
Policy

This policy applies to every directors and employees of Kurita Water Industries Ltd. and its consolidated subsidiaries. Moreover, the Kurita Group will encourage its business partners and other related parties on which it can have an influence to implement this policy.

- The Kurita Group will respect the human rights as set out in the International Bill of Human Rights and the fundamental rights and principles as set out in the Declaration on Fundamental Principles and Rights at Work. In addition, we will promote efforts to respect human rights in accordance with the Guiding Principles on Business and Human Rights stipulated by the UN.
- The Kurita Group will comply with applicable laws and regulations of each country and region in which it performs its business activities. In the case of any conflict between the internationally recognized human rights and any law, regulation or rule of any country or region, Kurita Group will search for a way to respect the principles of internationally recognized human rights.
- The Kurita Group will establish a mechanism for human rights due diligence to identify any adverse human rights impacts and seek to prevent or mitigate such impact.
- In the event of any adverse human rights impacts or its revealed involvement in such adverse human rights impacts, the Kurita Group will endeavor to provide a remedy to those affected through proper proceedings.
- The Kurita Group will publicize this policy. Furthermore, it will provide appropriate education and training to ensure the effectiveness of this policy.
- The Kurita Group will consult with the relevant stakeholders on responses regarding potential and actual impacts on human rights.
- The Kurita Group will report the progress of its efforts to respect human rights in its corporate social responsibility (CSR) reports and on its website.

Promotion System

The Kurita Group's promotion system for human rights initiatives is shown on the right. The Corporate Planning and Control Division undertakes awareness-raising activities, mainly for employees, while the Engineering Division is in charge of requesting suppliers to respect human rights.



Targets and Achievements

The Kurita Group's target for the theme in fiscal 2023 and its achievement in fiscal 2019 are as shown below.

	Target for FY2023	Achievement in FY2019
Rate of conducting training related to human rights among officers and employees	100%	100%

*Courses in fiscal 2019 were targeted at officers and employees of Kurita Water Industries

Main Initiatives

Formulation of the Kurita Group Personnel Management Guidelines

The Kurita Group formulated the Kurita Group Personnel Management Guidelines with the aim of managing personnel based on a common approach throughout the Group. The guidelines set out basic approaches to personnel management such as management development, sincere employment, and respect for diversity. The Group manages personnel in accordance with the guidelines, integrating them with the unique personnel management strategies of each company based on its individual circumstances, such as country, region, culture, and company culture.

Human Rights Awareness Raising Training

Kurita Water Industries provides ongoing "Human Rights Training Programs" to raise employees' awareness of human rights. We also conducted human rights awareness raising training for the management of the Company and its domestic Group companies, aiming to raise management's awareness of the human rights, which is becoming increasingly important in corporate management, and to promote initiatives with employees.



A management training session on the theme of considering initiatives for people of sexual minorities (LGBT) in companies

Number of Participants in Human Rights Awareness Raising Training

	FY2017	FY2018	FY2019
Theme	Power Harassment	LGBT	LGBT
Number of participants	1,818	1,669	1,947

Dialogue with Employees

The Company has been holding “Town Meetings” where President Kadota and employees can speak directly continuously since October 2016 (29 meetings as of August 2019). At the Town Meetings, President Kadota visits one of the Company’s offices, where he and the employees share their ideas with one another. The meetings are attended by the employees of the company at whose office the meeting is held, as well as those of domestic Group companies. No particular theme is set, so the conversation covers diverse themes from the vision for the company and its business strategies to concerns about the work of individual participants. These include topics such as “What is the character of Kurita?,” “What is the business strategy in the U.S.?,” and “How are we promoting utilization of diverse human resources including women?”

Dialogue with the Labor Union

In addition to securing the Company’s sound growth and continuation, Kurita Water Industries and the labor union maintain a sound and fair relationship. Labor and management each do their utmost to improve the economic and social standing of union members and to maintain and improve working conditions. Specifically, the Company and the Labor Union have concluded a labor agreement, share management information and exchange opinions at management consultation meetings and so forth, and promote dialogue.

CSR Requirements of Suppliers

The Kurita Group considers it vital to obtain cooperation from suppliers in order to ensure respect for human rights across the entire supply chain. We have established [the Kurita Group CSR Procurement Guidelines](#), and we have asked suppliers to respect basic human rights, such as prohibiting forced labor and child labor and eliminating discrimination, and to provide appropriate information. In particular, we ask major suppliers to conduct a self-evaluation based on the guideline and to implement improvement measures.

Status of Labor Issues and Response

Number of Consultations Regarding Discrimination

The number of consultations from individuals regarding instances of discrimination (including harassment) in the Kurita Group is as follows. The human resource and legal affairs divisions conduct an investigation of the facts while maintaining the anonymity of the person making the complaint. If the facts are confirmed, guidance and warnings are issued to the persons concerned.

	FY2018	FY2019
Kurita Water Industries	1	2
Domestic Group companies	14	9
Overseas Group companies	1	4

Evaluation of Employee Human Rights Risk

The results of human rights risk evaluations at Kurita Water Industries are as follows.

		FY2017	FY2018	FY2019
Child Labor	Number of business sites with significant risks regarding child labor	0	0	0
	Number of business sites with significant risk of hazardous work undertaken by people aged under 18	0	0	0
Forced Labor	Number of business sites with significant risks regarding forced labor	0	0	0

Child Labor

There were no business sites of Kurita Water Industries with significant risks regarding child labor.

Forced Labor

There were no business sites of Kurita Water Industries with significant risks regarding forced labor.

Securing Diverse Human Resources

Employment of Personnel with Disabilities

In Japan, Kurita Water Industries and certain of the Kurita Group companies in Japan provide a wide range of employment opportunities for people with disabilities. In April 2013, With Kurita Ltd. was established with the goal of securing employment opportunities for people with disabilities. As of May of the same year, With Kurita has been approved as a special subsidiary company under the Act on Employment Promotion, etc. of Persons with Disabilities.

Status of Employment of Personnel with Disabilities at Kurita Water Industries

	FY2017	FY2018	FY2019
Number of people employed	29.0	32.0	45.5
Employment rate (%)	2.1	2.3	2.3

Employment of Foreign Nationals

Kurita Water Industries seeks to recruit diverse human resources without regard to nationality. We employ foreign nationals, mainly from among overseas students studying in Japan.

Status of Employment of Foreign Nationals at Kurita Water Industries

	FY2017	FY2018	FY2019
Number of people employed	19	16	19

Securing Employment Opportunities for Senior Personnel

In conjunction with the enforcement of the amended Act on Stabilization of Employment of Elderly Persons from 2006, Kurita Water Industries has established a system to secure employment opportunities for people who have retired having reached the mandatory retirement age. These employment opportunities are offered for up to a maximum of five years from the time of mandatory retirement (60 years old) in accordance with the 2013 amendment to the Act on Stabilization of Employment of Elderly Persons.

Fair Personnel System

Ratio of Employees Receiving Personnel Evaluations

To bring out the best of each individual employee's abilities, companies need to conduct fair evaluations of each employee based on their roles and results, and provide appropriate remuneration, education, and roles based on the evaluation. At Kurita Water Industries, the employees confirm their own results and issues together with their supervisor at an interview in an effort to ensure transparent and fair evaluations.

Ratio of Employees under the Personnel Evaluation System at Kurita Water Industries

Classification	FY2018	FY2019
Management	100	100
Non-management	99	100

Introduction of a Self-Reporting System and Implementation of Transfer Survey

Kurita Water Industries has introduced the Self-Reporting System for employees to express to the Company their own views of their duties and workplaces, and their intentions regarding development and utilization of their own potential. Once a year, supervisors and employees talk about the employee's suitability for their current duties, their hopes for transfers to future career formation, their family status, and other matters. This enables the Company to understand the employee's thinking and the results are used to assist personnel development and workplace invigoration. In other initiatives, a Transfer Survey is conducted to enable employees to tell the Company about their aspirations for career advancement.

Creating a Corporate Culture that Facilitates Work

The Company is taking measures to support employees seeking to balance their careers and family life in order to create an environment that makes it easy for employees to work.

Parental Leave and Shortened Working Hours for Childcare

The Company has established an environment that makes it easier for employees to balance work with raising children in accordance with the Act on Advancement of Measures to Support the Development of the Next-Generation Children. In principle, employees can take childcare leave until the child reaches two years of age, but the period can be extended in certain specified conditions. Furthermore, employees may elect to work for shorter hours until the end of their child's third year of elementary school.

Status of System Use

		FY2018	FY2019
Number of people using leave	Male	1	6
	Female	23	25
Usage rate (%)	Male	2	6
	Female	100	100

Caregiving Leave, Work Less Hours for Caregiving, and Short-term Caregiving Leave Systems

The Company offers a Caregiving Leave system to employees who have family members requiring care and who wish to continue working after caregiving. The system can be used for up to one year (365 days) in principle. Moreover, for each eligible family member requiring care, the Company offers employees a cumulative total of up to 12 months of working less hours to provide caregiving. In addition, when employees apply for leave to provide caregiving or other care to family members who need it, they can receive 5 days of special paid leave for each eligible family member per year, up to a maximum total of 10 days in the case of two or more eligible family members.

Status of System Use (Number of people)

		FY2018	FY2019
Caregiving leave system	Male	0	1
	Female	0	0
Work less hours for caregiving system	Male	0	0
	Female	0	0
Short-term caregiving leave system	Male	4	10
	Female	0	5

Short-term Nursing Leave System

The Company provides paid leave for nursing. Employees with a child yet to enter elementary school who need to nurse that child because of an injury or illness can take up to five days a year of leave for one child or 10 days a year of leave for two children.

Leave System Due to Spouse Being Transferred

The Company offers employees up to three years of leave so that they accompany a spouse transferring overseas so that they can provide living and mental support.

Status of System Use (Number of people)

		FY2018	FY2019
Leave system due to spouse being transferred	Male	0	0
	Female	3	2

Volunteer Leave System

The Company has a volunteer leave system for all employees, enabling them to take up to two days of paid volunteer leave per year.

Status of System Use (Number of people)

	FY2018	FY2019
Volunteer leave system	1	5

Promoting Women's Participation and Advancement in the Workplace

Promoting women's participation and advancement in the workplace has been an issue for Japan as a country. The average number of years of service among female employees of the Company is 17.1, indicating a working environment that encourages women to continue working for a relatively long period. On the other hand, little progress was made in appointing women to management positions. However, as Japan faces the prospect of a society with a shrinking population, the ability to successfully promote women's participation and advancement in the workplace has become an urgent issue for the Company in terms of securing management resources. In response, we are working to improve this situation under an action plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace and the Act on Advancement of Measures to Support Raising Next-Generation Children. As a result of these efforts, Kurita Water Industries has been selected for [the MSCI Japan Empowering Women \(WIN\) Index](#).

Status of Kurita Water Industries as of March 31, 2019

Ratio of Female Personnel (%)	Management	1.1
	Employees	14.1
Average Years of Service for Female Personnel		17.1

Action Plan Based on the Act on Promotion of Women's Participation and Advancement in the Workplace

In the five-year plan for the period from April 2018 to March 2023, Kurita Water Industries has set the following targets.

- Have 15 or more women in management positions by April 1, 2023
- Achieve a ratio of 30% or more for women among new graduate recruits for career track positions To achieve these targets, the Company is implementing following four initiatives: 1) career formation support for women in career track positions, 2) increase the ratio of female recruits, and 3) expand the roles of female employees, and support career development through the self-reporting system.

Initiative	Measures Taken
Career formation support for women in career track positions	Provide opportunities that motivate women in career track positions to actively build their careers, such as career development training.
Increase the ratio of female recruits	Provide opportunities to talk with female employees in responsible positions at various junctures in the recruitment process as part of our graduate recruiting activities for career track employees.
Expand the roles of female employees	Assign female employees to departments that have few female workers. Systematically appoint women to management positions.
Support career development through the self-reporting system	Use consultations with supervisors in the self-reporting system as an opportunity to support career development.

Action Plan Based on the Act on Advancement of Measures to Support Raising Next-Generation Children

In the five-year plan for the period from April 2018 to March 2023, Kurita Water Industries has set the following four initiatives.

Initiative	Measures Taken
Ease workplace regulations	Increase the options for work styles by promoting use of satellite offices (rental offices outside the Company) and recognizing working at home for employees who have restrictions on their work.
Promote use of annual paid leave	Formulate and implement measures to promote use of annual paid leave.
Promote male participation in childcare	Remind employees that childcare leave can be taken in small increments, and aim to increase the number of men taking this leave.
Ensure time for spending on childcare	Subsidize costs of childcare services and ensure that employees have time for childcare.

Work Style Reforms

The Company is promoting work style reforms centered on reducing long working hours with a view to maintaining employees' physical and mental health and increasing their productivity.

To help employees ensure a healthy mind and body, to increase productivity, and to promote activity among diverse human resources, we are working to prevent long working hours based on the following policy.

Policy

1. Transform the mindset of workers

Increase individual employee awareness of time and train them to perform their work efficiently.

2. Reform work processes

Review work flow and operating procedures, reduce waste and promote standardization to make work more efficient.

3. Organize working environment and rules

Establish work rules that set out a balance between working and breaks and create an environment that supports flexible work styles.

Initiatives to Reduce Long Working Hours

The Company is taking the following initiatives to reduce long working hours.

Issue	Measures
Restrict working hours	- Establish no overtime day (Wednesday) - Set the hours that the Company's facilities can be used (until 8:00 p.m.)
Promote use of paid annual leave	- Encourage employees to take at least five days of continuous leave in the summer holiday period (June-October)
Changing employee awareness	- Provide Work Style Reform Seminars for engineers - Run e-learning programs for acquisition of time-management skills and efficient meeting operation
Reform and introduction of systems and schemes	- Introduction of satellite offices - Trial of interval system to break up work hours

Streamline Operations by Introducing IT Equipment

The Company has distributed mobile IT devices to employees in the Engineering Division to streamline design operations. Specifically, the confirmation of construction work that was previously done on paper, is now carried out using the screen of the IT device and photographs of the site. In addition, the confirmed items can be quickly shared inside and outside the Company, which has eliminated differences in understanding between relevant parties, and cut down reworking. The system also enables speedy communication with suppliers and reduces travel time to offices. By reducing the work time of engineers, they are able to shift their focus to creative operations.



Health and Safety

The Kurita Group recognizes that due to the nature of its business, its employees and those of subcontractors are often faced with various safety risks for manufacture and delivery of water treatment chemicals or assembly, delivery, and installation of water treatment facilities. We have therefore positioned “occupational health and safety as the top priority in operating business.” We are working to ensure the safety and support the health of Kurita Group directors and employees, as well as employees of suppliers to create working environments where they can work with confidence.

Basic Policy

The Kurita Group has established a common policy for the Group in an effort to ensure [the health and safety of directors and employees](#), create comfortable working environments, and improve on them. We continuously promote initiatives for health and safety based on this policy.

Policy

1. Compliance with laws

Kurita Group will observe laws and regulations related to occupational health and safety which apply in each country or region where it conducts business activities.

2. Investment of management resources

Kurita Group will strive to maintain and improve a safe, comfortable working environment by investing its management resources such as human resources, equipment, and funds.

3. Clarification of roles, authority, and responsibilities

Kurita Group will clarify the roles, authority, and responsibilities of occupational health and safety organizations and occupational health and safety managers of Group companies, so as to conduct voluntary, sustained occupational health and safety activities.

4. Setting targets, planning, and implementation for occupational health and safety

Kurita Group will have the occupational health and safety organizations of Group companies set targets for their occupational health and safety activities in accordance with business contents and regional characteristics of each company, as well as the laws and regulations which apply in each country, develop plans to achieve the targets, and implement the plans through the united efforts of operators and employees. In addition, Kurita Group will conduct appropriate reviews based on the results of implementation and make continuous improvements.

5. Elimination and reduction of risk factors and hazards

Kurita Group will conduct risk assessments, identify risk factors and hazards to make improvements, and eliminate or reduce the risks.

6. Education and training

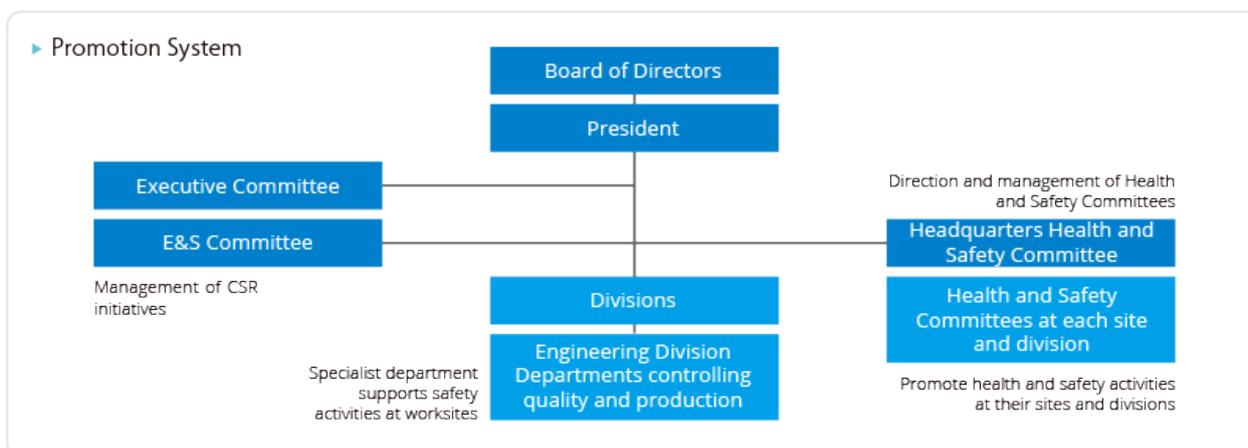
Kurita Group will provide education and training on occupational health and safety to its directors, employees, and business partners and inform them thoroughly of the Occupational Health and Safety Policy and the objective, plans, and measures of its occupational health and safety activities.

Promotion System

The Company and its domestic Group companies have established a health and safety system based on labor safety laws and regulations such as the Industrial Safety and Health Act. Under the Headquarters Health and Safety Committee, a joint labor-management committee which is chaired by the executive senior managing director and representative director of the Company, each office and division of the Company has established a Health and Safety Committee (chaired by the office manager or persons designated by the chairperson of the Headquarters Health and Safety Committee), and domestic Group companies have also established Health and Safety Committees. These work to maintain and enhance the workplace environment. Furthermore, a special department has been established to promote safety within the worksite, and it supports on-site safety initiatives as well as planning and taking measures to prevent work-related accidents. The department also follows up on the activities of the Health and Safety Committee. The activity policy of the Headquarters Health and Safety Committee and the activity results of each Health and Safety Committee are reported to the Board of Directors of the Company once a year.

Among 19 Health and Safety Committees of domestic Group companies, 16 are joint labor-management committees (as of March 2019). In addition, the percentage of employees who participate in the Health and Safety Committee is 2%* at the Company and 9% at domestic Group companies.

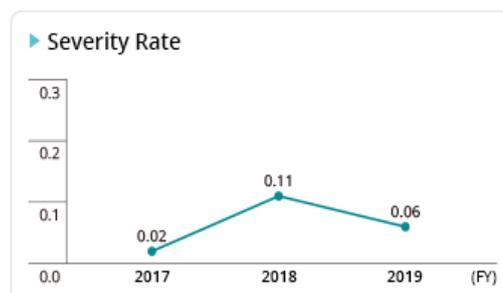
* The percentage of the members of the Health and Safety Committee among employees working at the Head Office



Targets and Achievements

The Kurita Group's target for the theme in fiscal 2023 and its achievement in fiscal 2019 are as shown below.

	Target for FY2023	Achievement in FY2019
Severity rate	0.005	0.06



The severity rate is calculated as the number of lost work days / total number of labor hours × 1,000.

The severity rate for fiscal 2019 is the actual result for the construction sites of Kurita Water Industries.

Main Initiatives

In fiscal 2019, the Health and Safety Committee stated the direction for its initiatives as "every one of us must have a sense of danger and establish the behavior of thinking for ourselves to remove any potential risks." The main themes for our priority measures have been 1) disaster response, 2) prevent work-related accidents, 3) prevent traffic accidents, and 4) health management. Our main initiatives in fiscal 2019 were as follows.

Disaster Response

The Company and its Group companies in Japan follow the Kurita Group BCM (Business Continuity Management) Policy to carry out countermeasures for earthquake risks, safety inspections and disaster preparations, and confirm the status of drills at all 153 business sites in Japan, and implement improvements.

Safety Patrols for Preventing Work-Related Accidents

Taking into consideration previous work injuries, we set preventing chemical-related injuries and falls as priority issues. In fiscal 2019, outside experts and the Company's responsible departments conducted 122 safety patrols at sites on new and existing businesses and projects with a high risk of work-related accidents, and efforts were made to discover and eliminate risks at worksites and raise the safety awareness of employees and subcontractors. In safety patrols, worksite safety measures and other aspects were evaluated by points, then the results were reported back to employees and subcontractors and improvements and remedies of the indicated items were carried out. Since fiscal 2018, we have conducted safety patrols overseas. Recently, we have also been enforcing safety education prior to the start of construction in response to an increase in subcontractors due to an increase in onsite construction

Number of Safety Patrols (Kurita Water Industries)

	FY2018	FY2019
Japan	507	449
Overseas	8	22
Total	515	471

Number of Participants in Safety Education (Kurita Water Industries)

Training name	FY2018	FY2019
Training on handling fires	42	95
Training on handling chemicals	74	86
Safety training for new employees	142	209
Safety training for overseas national staff employees	32	32
Special training on full-harness type fall prevention devices	-	288
Others	303	263
Total	593	973

Work-Related Accident Cause Identification and Recurrence Prevention

The types of injuries that occurred during work at the Company and domestic Group companies in fiscal 2019 are listed below. For the accidents that occurred, the Company's dedicated department for promoting onsite safety investigated the cause and established measures to prevent recurrences, which are promoted through the Company and domestic Group companies.

Types of Injuries

Falls, chemical-related injuries, being caught, traffic accidents, overturning, being crushed, bone fracture, lower back pain, bug bites

Traffic Accident Prevention

The Company and its domestic Group companies provide practical training for safe driving, and efforts are made to prevent traffic accidents because cars are often used when visiting the plants and offices of customers. Drive recorder records are used to educate drivers on the number of dangerous driving maneuvers that had been performed and employees with little driving experience are given safe driving education to increase their skills.

Regular Health Examination

The Company conducts regular health examinations for employees. We ensure that all eligible employees receive their examinations.

	FY2017	FY2018	FY2019
Rate of Employees Receiving Regular Health Examinations	100%	100%	100%

Response to Hazardous Operations

The Company's employees may handle organic solvents, designated chemical substances, and other materials when performing analysis and experiments. To deal with hazardous operations by its employees, the Company has devised exposure prevention measures, such as installation of onsite ventilation equipment and protective equipment. We also conduct special health examinations based on surveys of employee's substance usage records.

	FY2017	FY2018	FY2019
Rate of Employees Receiving Special Health Examinations	100%	100%	100%

Health Promotion Initiatives

The Company conducts measures to improve employee health, such as seminars on how to improve diet, measuring physical age, and holding health events such as walking rallies.

	FY2017	FY2018	FY2019
Number of Health Seminars	4	2	10
Number of Health Events	12	13	40



Initiatives to Prevent Mental Health Issues

In our initiatives to prevent mental health issues, each Health and Safety Committee holds seminars on mental health. In addition, we conduct a Stress Check, which is a survey given to all employees for promoting self-awareness, carried out under the guidance of the stress check systems designed by the Ministry of Health, Labour and Welfare according to the Industrial Safety and Health Act.

	FY2017	FY2018	FY2019
Number of Mental Health Seminars	12	15	16
Ratio of Employees Receiving Stress Checks (%)	99.2	99.6	98.4

CSR Requirements of Suppliers

The Kurita Group considers it vital to obtain cooperation from suppliers in order to conduct safe business across the entire supply chain. We have established [the Kurita Group CSR Procurement Guidelines](#), and we have asked suppliers to ensure the safety of their employees in accordance with laws and regulations, ensure healthy working environments, and conduct labor safety education for workers, and to provide appropriate information. In particular, we ask major suppliers to conduct a self-evaluation based on the guideline and to implement improvement measures.

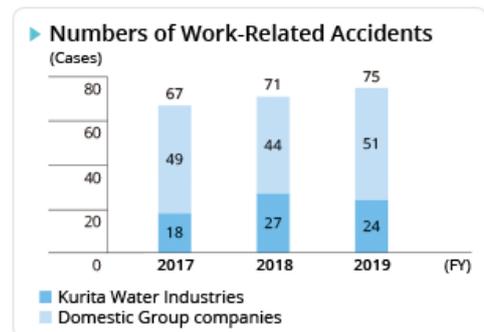
Acquisition of OHSAS 18001 Certification

Scope of data aggregation	Item	FY2018	FY2019
Kurita Water Industries and its domestic Group companies	Number of certified companies	0	0
	Certification rate (% by number of companies)	0.0	0.0
	Certification rate (% by number of employees)	0.0	0.0
Overseas Group companies	Number of certified companies	4	4
	Certification rate (% by number of companies)	16.7	14.8
	Certification rate (% by number of employees)	21.7	17.3
Kurita Group	Number of certified companies	4	4
	Certification rate (% by number of companies)	8.7	8.5
	Certification rate (% by number of employees)	8.2	7.8
Kurita Water Industries and its domestic Group companies	Number of certified bases	0	0
Number of certified bases		14	14

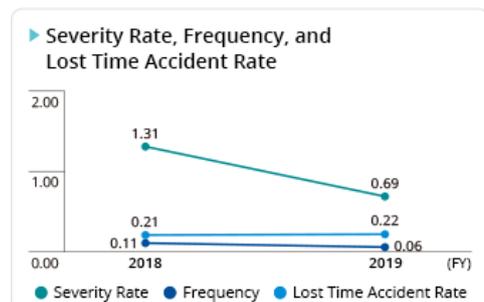
Status of Work-Related Accidents

Numbers of Work-Related Accidents at Kurita Water Industries and Domestic Group Companies

The number of work-related fatalities at Kurita Water Industries and domestic Group companies for fiscal 2018 and fiscal 2019 was 0.



Severity Rate, Frequency, and Lost Time Accident Rate at Kurita Water Industries



Priority Themes: Themes for Growth Opportunities (Environmental Improvement Activities)

The Kurita Group defines its environmental improvement activities as follows:

- 1) activities to comply with the environment-related laws and regulations of each country and region that are applicable in conducting business activities;
- 2) initiatives to solve international issues related to the sustainability of water and the environment through business activities; and
- 3) disclosure of information related to 1) and 2), and engagement with customers, business partners, employees, shareholders and investors, and local communities related to such activities.

The Kurita Group's environmental improvement activities include initiatives to reduce internal water and energy use and waste emissions. They also include activities to reduce the environmental impact of customers using the products and services related to water and the environment that the Kurita Group has developed over many years. These are linked with the themes for growth opportunities in our CSR Policy. We will create shared value by achieving solutions to social issues through the reduction of customers' environmental impact and the Kurita Group's own environmental impact, while simultaneously achieving business growth.

Basic Policy

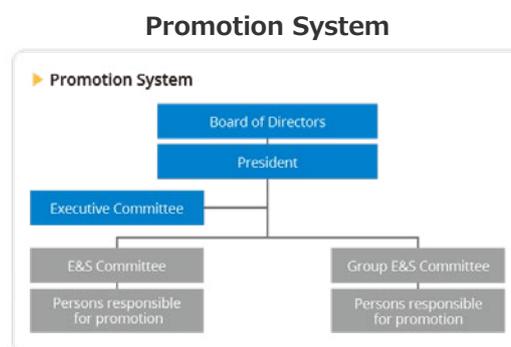
The Kurita Group has established [the Kurita Group Environmental Policy](#) as a common policy for the Group regarding environmental issues, which are a common challenge for society. We continuously promote initiatives for environmental improvements based on this policy.

General Provisions

- The Kurita Group will engage in the environmental improvement activities to achieve the four themes: "finding solutions to the water resource issues"; "realizing sustainable use of energy"; "reducing waste"; and "enhancing industrial production technology" of the "CSR Policy" (hereinafter referred to as the "Growth Opportunity Themes"), based on the corporate philosophy, "Study the properties of water, master them, and we will create an environment in which nature and man are in harmony".
- The Kurita Group will support the "SDGs (Sustainable Development Goals) adopted by the UN in 2015 and contribute to achieving relevant goals through the environmental improvement activities.
- The Kurita Group will establish systems and rules, etc. necessary for the performance of the environmental improvement activities.
- Officers and employees of the Kurita Group must actively engage in the environmental improvement activities in their respective capacities.
- The Kurita Group will develop its unified medium-term goals and activity plans by fiscal year related to the environmental improvement activities and manage its activity goals.
- If any actual or alleged breach of the local laws and regulations arises, the officers and employees of the Kurita Group will immediately report the same in accordance with the Kurita Group's Emergency Communication Procedures.
- The Kurita Group will check that business activities are being carried out appropriately in accordance with local laws and regulations.
- The Kurita Group will verify the effect of the environmental improvement activities on a regular basis, and utilize this for continual improvement.
- The Kurita Group will carry out education and training activities for the promotion of the environmental improvement activities for its officers and employees.
- The Kurita Group will disclose, in an active and fair manner, information which helps its stakeholders to understand the environmental improvement activities.
- The Kurita Group will check expectations and concerns of the stakeholders with regards to the Group, and utilize the results to continually improve the environmental improvement activities.

Promotion System

The Kurita Group has established the E&S Committee, which is chaired by an executive senior managing director and representative director of the Company, and the Group E&S (Environmental & Social) Committee, chaired by the same director and composed of representatives of domestic Group companies. These committees oversee environmental improvement initiatives in the Kurita Group. The committees formulate unified medium-term goals for the Kurita Group's environmental improvement initiatives and action plans for each fiscal year. Personnel responsible for promotion (the committee members or designated representative of each company) are to promote activities for achieving the targets of the environmental improvement initiatives at their assigned company or organization. They report the status and results of the activities to the E&S Committee. The E&S Committee confirms stakeholder expectations and concerns, and reports these to the Company's Board of Directors along with the results for the Kurita Group's CSR activities once a year.



Environmental Improvement of Customers' Operations

The Kurita Group is taking steps to solve social issues outlined in the SDGs by providing customers with solutions on the themes of "water-saving," "CO₂ emissions reduction," and "waste reduction."

Promotion of CSV Business

The Kurita Group has defined products, technologies, and business models that contribute significantly to water-saving, CO₂ emissions reduction and waste reduction compared to previous levels as the "CSV business," and has expressed these advantages as respective coefficients. The reduction of environmental impact from customers' operations is calculated based on these CSV business coefficients and application results. The CSV business is also constantly reviewed in light of the development status of more competitive products, technologies, and business models.

CSV Business Selection Standard

CSV businesses demonstrate the following standards with regard to water-saving, CO₂ emissions reduction, and waste reduction:

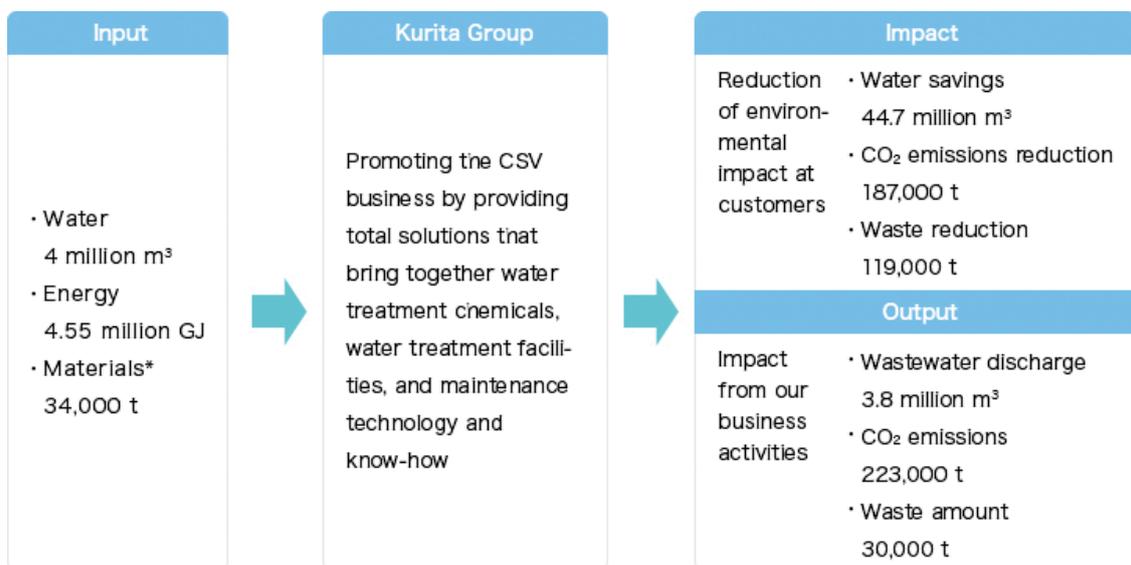
- 1) Are significantly more effective than previous or competing technologies.
- 2) Are new technologies or applications of existing technologies in new markets.
- 3) Contribute to the action plans presented in the SDGs.

Internal Environmental Improvement Activities

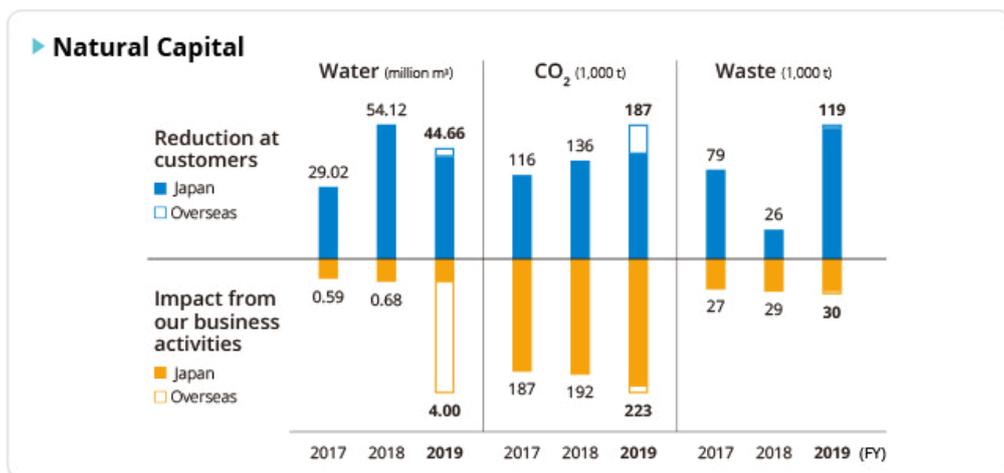
The Kurita Group works to reduce water usage, energy usage, and waste, while adhering to the environmental laws and ordinances of each country and region that apply to the Group's business activities.

Status of Compliance with Environmental Laws and Regulations

		FY2018	FY2019
Infringements of environmental laws and regulations	Number of infringements	0	0
	Fines (Thousand yen)	0	0
Emissions having a serious impact on the environment		None	None



*Materials are raw materials for water treatment chemicals in Japan.



ISO 14001 Certified Bases

The Kurita Group acquires ISO 14001 certification, mainly at business sites that have a heavy environmental impact. As of September 2019, the status of acquisition in the Group is as shown below.

Company	Office
Kurita Water Industries Ltd.	Shizuoka, Yamaguchi, Toyoura, Tsuruga plants
	Sakai Sub-branch
Kurita Chemical Manufacturing Ltd.	Head Office, Ako plant
Kurita Buil-Tech Co., Ltd.	
Kuritaz Co., Ltd.	
Kuritec Service Co. Ltd.	
Kurita-GK Chemical Co., Ltd	
Kurita (Taiwan) Co., Ltd.	
Kurita Water Industries (Dalian) Co., Ltd.	
Kurita Water Industries (Jiangyin) Co., Ltd.	
Hansu Co., Ltd.	
Kurita Europe GmbH	Ludwigshafen
	Viersen
Kurita Turkey Kimya A.S	
Kurita do Brasil LTDA.	
Hansu Technical Service Ltd.	
Kurita (Singapore) Pte. Ltd.	
P.T. Kurita Indonesia	

Communication with Stakeholders

Environmental Education of Employees

The Kurita Group holds an employee-participation event called Kurita Environment Month to foster awareness of the environment among employees. The event calls for all Kurita Group officers, employees, temporary workers, and their families to submit experiences and ideas relating to environmental improvement. In fiscal 2019, 833 people participated, with 641 submissions. The submissions were collated into a collection and published on the intranet to be shared and utilized throughout the Group.

Bolstering Information Dissemination through the Website

The Kurita Group disseminated information about its approach, initiatives, and achievements on environmental improvement through its website, sustainability reports, exhibitions, and dialogue with shareholders and investors. In particular, we are working to bolster information dissemination through our website, where we enhance our disclosure based on the Group's initiatives and achievements, making reference to the GRI standards.

CSR Requirements of Suppliers

The Kurita Group considers it vital to reduce environmental impacts across the entire supply chain with the cooperation of suppliers. To this end, we have established [the Kurita Group CSR Procurement Guidelines](#), and we have asked suppliers to comply with environmental laws and regulations, take steps to reduce their environmental impact by setting voluntary standards to reduce water and energy usage, and to provide appropriate information. In particular, we ask major suppliers to conduct a self-evaluation based on the guidelines and to implement improvement measures.

Solve Issues Related to Water Resources

The world is facing various issues related to water, including water shortages due to uneven distribution, water pollution associated with industrial development, and depletion of ground water. These rank among the most serious social issues alongside climate change. The Kurita Group will strive to reduce the amount of water intake for use in its business activities while using its water saving, purification, and reuse technologies to provide the optimal quality and volume of water required for people’s lives and industrial development.

Targets and Achievements

The Kurita Group aims to achieve a reduction of environmental impact through its business that offsets and even exceeds the environmental impact generated by its business. To this end, we have set targets for the “amount of the reduction in environmental impact of customers - the amount of the Kurita Group’s own environmental impact.” We will continue to measure these actual values going forward values.

	Target for FY2023	Achievement in FY2019
Water savings at customers – Amount of water intake used in our business activities	50 million m ³	41 million m ³

Contribution to SDGs

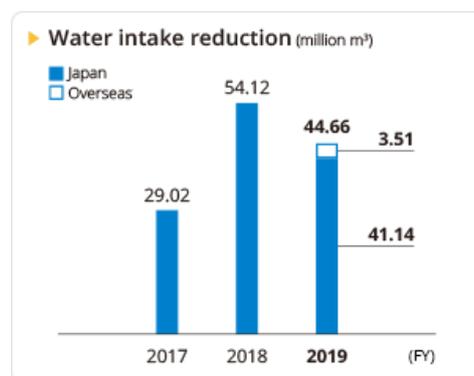


With Customers

Saving Water at Customers’ Plants and Business Sites

The graph shows the performance of water reduction at customers’ plants and business sites through proposals of the Kurita Group. These mainly represent reduction in the feed water volume by optimizing and managing water quality in boilers and recirculating water in cooling water systems, as well as recovery and reuse of wastewater. In fiscal 2019, we revised the scope and method of data aggregation.

Environmental Improvement of Customers’ Operations (million m³)



* The reduction of impacts at overseas Group companies have been ascertained since fiscal 2019.

Customer Example

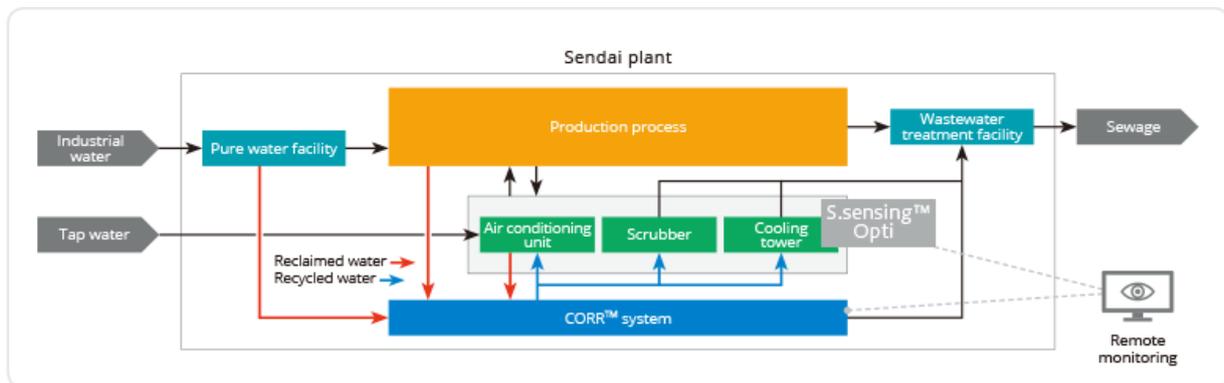
Kurita's Recycled Water Supply Service to Reduces Water Usage at the Sendai Plant of Kanazawa Murata Manufacturing

Reductions of **40%** in Tap Water Usage and **30%** in Sewage

At the electronic components manufacturer Kanazawa Murata Manufacturing Co., Ltd., an environmental initiative based on the Murata Manufacturing group's environmental action plan is under way. The Group has set a target for reducing water usage per production volume, and has set about reducing the volume of water used at its Sendai plant. Kurita Water Industries proposed a recycled water supply service that reclaims and recycles wastewater to help this customer achieve its goals. The service is a contract with the customer to supply recycled water, including operation and management of the CORR™ wastewater reclamation system. In applying this service, we cooperated with the customer to investigate the volume and quality of the reclaimable wastewater at each outlet, and to select areas for use of the recycled water depending on its quality. In this case, since the recycled water is used as make-up water for a cooling water system, we also provided cooling water quality management using the S.sensing™ Opti remote monitoring system.

Using the service has enabled the customer to use water in the plant more efficiently, and the customer expects to achieve reductions of 40% for tap water and 30% for sewage compared to fiscal 2018.

Conceptual Diagram of Recycled Water Supply Service



Voice of the Customer

Since introducing this service, we are delighted to have achieved the reductive effect on water usage as initially planned, as well as reducing labor for facility management. Furthermore, when we were at the stage of considering applications, various departments of Kurita Water Industries helped us to maximize the benefits of water usage reduction, demonstrating Kurita's powerful capabilities. We are now looking forward to receiving proposals for further reducing our environmental impact by expanding the scope of application and looking at management of water facilities throughout our entire plant.



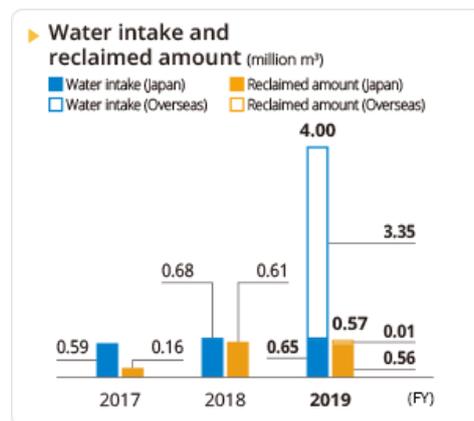
Mr. Etsuhiro Saito
Administration SEC
Sendai Plant

Internal Environmental Improvement Activities

Reducing Water Intake within the Kurita Group

Based on the characteristics of each company and business site, the Kurita Group selects the items that are strongly correlated with water usage, such as production volume, net sales, or site area, as the denominators for a per-unit measurement, then set about reducing water usage per unit. Since fiscal 2019, we have been aggregating results for overseas Group companies as well.

Internal Promotion of Environmental Improvements (million m³)

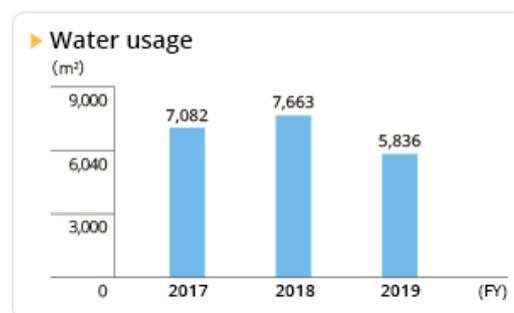


* The reduction of impacts at overseas Group companies have been ascertained since fiscal 2019.

Example of Water Saving at Kurita Analysis Service

Kurita Analysis Service Co., Ltd. is responsible for all kinds of analysis services that support the Kurita Group's business in Japan, such as quality testing of ultrapure water and cooling water and environmental testing of waste water and soil. At its headquarters facilities, sample containers send from various areas are washed after sample analysis, then the washing water is collected in a wastewater tank and treated at a wastewater treatment facility. The company noticed leakages were occurring in the facility due to changes in the water level of the wastewater treatment facility, and by implementing measures to identify the source of leaks and stop them, it has reduced its water usage.

Kurita Analysis Service/
Water usage at headquarters (m³)



Evaluation of Water Risk at Internal Facilities

Kurita Water Industries assesses and confirms the water risk of the areas where Group production bases are located once a year using the Aqueduct Water Risk Atlas provided by the World Resources Institute. In fiscal 2019, we surveyed all of the Group's production sites and found that there were four sites located in areas ranked "High risk" or above. The total amount of water intake for these sites was confirmed to be 0.2% of the intake volume for all production sites.

Participation in the Ministry of the Environment's Water Project

Kurita Water Industries is participating in the Water Project of the Ministry of the Environment, which provides an opportunity to disseminate information about its technologies and business activities related to efficient use of water resources and preservation of the water environment.

Realize Sustainable Energy Use

The Kurita Group recognizes abnormal weather and natural disasters due to global warming and other climate change issues as a major social challenge to be addressed globally. One of the ways we are responding to climate change is taking steps to reduce our CO₂ emissions by reducing our in-house per-unit energy consumption. At the same time, we are working to optimize energy use at our customers' plants and business sites, and to promote the spread of energy-creating technologies.

Targets and Achievements

The Kurita Group aims to achieve a reduction of environmental impact through its business that offsets and even exceeds the environmental impact generated by its business. To this end, we have set targets for the "amount of the reduction in environmental impact of customers - the amount of the Kurita Group's own environmental impact." We will continue to measure these actual values going forward values.

	Target for FY2023	Achievement in FY2019
CO ₂ emissions reduction at customer - CO ₂ emissions from our business activities	0 t	-36,000 t

Contribution to SDGs

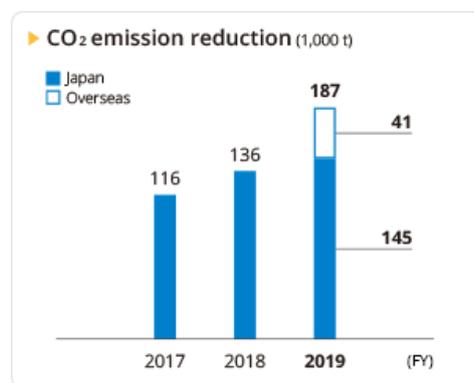


With Customers

Reducing CO₂ Emissions at Customers' Plants and Business Sites

The graph shows the performance of CO₂ emissions reduction at customers' plants and business sites through proposals of the Kurita Group. These mainly represent reduction in fuel use by maintaining or improving heat efficiency in boiler and cooling water facilities. It also represents the impact of adopting inverters for rotating equipment in water treatment facilities. In fiscal 2019, we revised the scope and method of data aggregation.

Environmental Improvement of Customers' Operations (1,000 t)



* The reduction of impacts at overseas Group companies have been ascertained since fiscal 2019.

Customer Example

Energy Creation at Fuji Clean

Reducing annual CO₂ emissions by **10,000 t**

Fuji Clean Co., Ltd.'s businesses range from collection and transportation of waste to intermediate treatment* and final disposal in landfill. It contributes to society through safe treatment of waste. Fuji Clean developed a concept of creating renewable energy by methane fermentation of waste, and contributing to the local community that provides the waste by supplying electric power and heat during disasters. Since the areas surrounding the company's facilities and the area downstream are prospering agricultural areas, the company needed a treatment that did not produce wastewater, and was seeking for a partner with suitable technologies. Kurita Water Industries proposed production of biogas from waste using the dry methane fermentation technology that it has developed over many years. This methane fermentation technology is able to treat waste such as paper waste, which has a high organic matter content and low water content, and does not produce wastewater. Since it met Fuji Clean's requirements, the proposal was accepted. Moreover, through this proposal, Fuji Clean's project was selected as the Demonstration Project for Regional Autonomous Biomass Energy System by the New Energy and Industrial Technology Development Organization (NEDO), and is currently being trialed. Furthermore, the biogas generated by the dry methane fermentation reactor is used as fuel for an onsite boiler and power generator, reducing the use of electricity and fossil fuels, and attendant CO₂ emissions.

* Intermediate treatment: Minimizing the volume of waste for landfill by separating it and then crushing or incinerating it.

Voice of the Customer

We decided to adopt Kurita Water Industries' dry methane fermentation technology because it was suitable not only for our vision, but also for the condition of the waste that we receive. Since the types and volume of waste change day by day, we encountered some difficulty in setting up a dry methane fermentation reactor, but we were glad to have Kurita alongside us as we strove to establish a method for operation and management. We hope to receive further input from Kurita on biogas generation, as well as cooperation on our social contribution activities.

Dry methane fermentation reactor



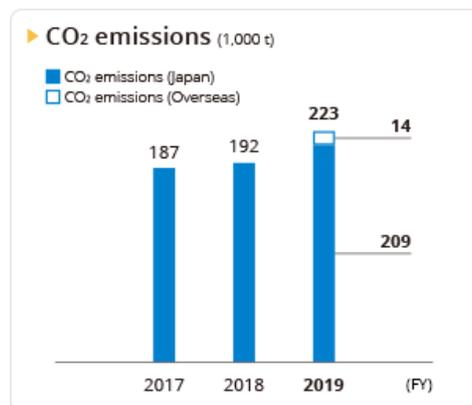
Mr. Hisato Kinjo
General Manager, Renewable Energy Department
Dry Methane Fermentation Plant

Internal Environmental Improvement Activities

Reducing Energy Usage within the Kurita Group

Based on the characteristics of each company and business site, the Kurita Group selects the items that are strongly correlated energy usage, such as production volume, net sales, or site area, as the denominators for a per-unit measurement, then set about reducing energy usage per unit. Since fiscal 2019, we have been aggregating results for overseas Group companies as well.

Internal Promotion of Environmental Improvements (1,000 t)

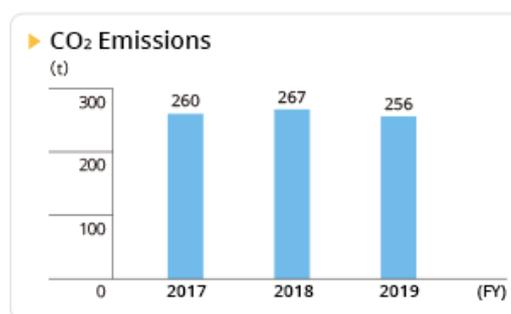


* The reduction of impacts at overseas Group companies have been ascertained since fiscal 2019.

Example of Reducing Electricity Usage at the Yamaguchi Plant of Kurita Water Industries

The Yamaguchi Plant of Kurita Water Industries carries out manufacturing of water treatment facilities and regeneration of RO membranes and ion exchange resins that perform vital functions in pure water manufacturing. It has a relatively high environmental impact among the Kurita Group's business sites in Japan. For this reason, we have taken steps to reduce electricity usage and water intake through measures such as converting to LED lighting and revising the regeneration process for ion exchange resin. In fiscal 2019, we reduced our electricity usage, mainly by renewing the pumps in our water treatment facility. In renewing the pumps, we focused particularly on the pumps that are used heavily, selecting models with the minimum electricity usage to suit the flow volume. We also swapped out our steel piping for PVC pipe, which prevents obstruction of water flow due to rust inside the pipes. This enabled us to reduce the operation time of the pumps, thereby reducing the electricity usage for the business site overall.

CO₂ Emissions of Yamaguchi Plant (t)



Participation in the Japan Society of Industrial Machinery Manufacturers' Basic Environmental Action Plan

Kurita Water Industries participates in the basic environmental action plan of the Japan Society of Industrial Machinery Manufacturers, which is working on countermeasures for global warming. We report regularly on the status of our response to climate change.

Reduce Waste

The Kurita Group needs to make effective use of limited resources in order to conduct its business activities sustainably. Therefore, the Group is working to reduce the amount of waste generated by its business activities, while making efforts to convert it into valuable material and to recycle it. For our customers, we propose technologies for making use of waste as a resource and for reducing the amount of waste generated. Through these activities, we aim to reduce waste for society in general.

Targets and Achievements

The Kurita Group aims to achieve a reduction of environmental impact through its business that offsets and even exceeds the environmental impact generated by its business. To this end, we have set targets for the “amount of the reduction in environmental impact of customers - the amount of the Kurita Group’s own environmental impact.” We will continue to measure these actual values going forward values.

	Target for FY2023	Achievement in FY2019
Waste reduction at customers – Waste generated from our business activities	100,000 t	89,000 t

Contribution to SDGs

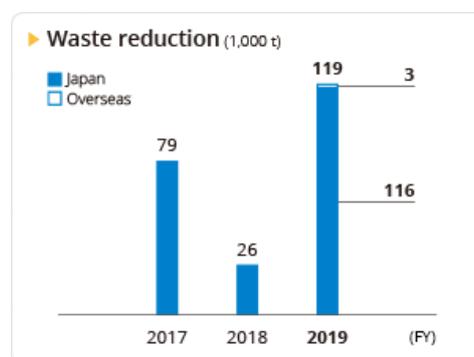


With Customers

Waste Reduction at Customers’ Plants and Business Sites

The graph shows the waste reduction performance of proposals for customers’ plants and business sites made by the Kurita Group. These results are mainly due to conversion to wastewater treatment facilities that generate little excess sludge and reduction of waste volume by dehydrating agents and dehydrators. . In fiscal 2019, we revised the scope and method of data aggregation.

Environmental Improvement of Customers’ Operations (1,000 tons)



* The reduction of impacts at overseas Group companies have been ascertained since fiscal 2019.

Customer Example

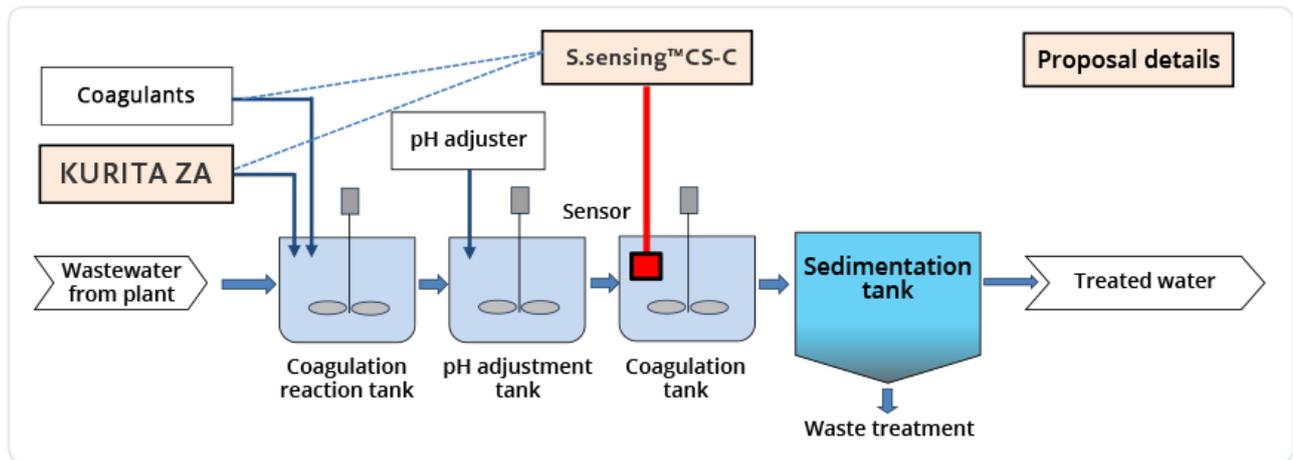
Reducing Waste at a Precision Equipment Manufacturing Plant

Reducing Waste Arising from Chemicals

At the plant of a customer who manufactures precision equipment in Thailand, wastewater from the manufacturing process is purified by coagulating suspended solids from the dicing process and so forth in a wastewater treatment facility. The coagulation process separates out matter suspended in the water by solidifying it into a mass using chemicals. The chemicals used are formed into a solid mass along with the suspended solids, and emitted as final waste product. Reducing the waste product at the plant was therefore a matter of reducing the amount of chemicals used.

Kurita-GK Chemical Co., Ltd. proposed using the water treatment chemical KURITA ZA to promote the coagulation effect of the chemicals used at the plant, and the introduction of the S.sensing™ CS-C sensor to confirm the coagulation status in real-time, allowing optimization of the amount of chemicals used. After implementing this proposal, the customer achieved a reduction of more than 80% in the amount of chemical usage, which led to an attendant reduction in the amount of chemical originated waste. Furthermore, since the coagulation status is now able to be grasped using the sensor, the customer is also able to reduce the amount of labor used in management.

Image of Wastewater Treatment Process and Proposal Details



Internal Environmental Improvement Activities

Based on the characteristics of each company and business site, the Kurita Group selects the items that are strongly correlated with waste emission volume, such as production volume, net sales, or site area, as the denominators for a per-unit measurement of waste emission volume, then set about reducing this. Since fiscal 2019, we have been aggregating results for overseas Group companies as well.

Internal Promotion of Environmental Improvements (1,000 t)



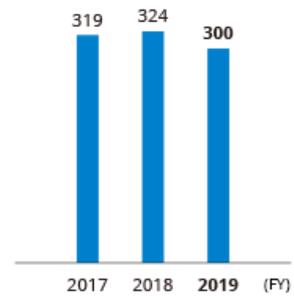
* The reduction of impacts at overseas Group companies have been ascertained since fiscal 2019.

Reducing Waste at Kurita Chemical Manufacturing

Kurita Chemical Manufacturing Ltd. is a manufacturing base for water treatment chemicals in the Kurita Group. The company's Egawa Plant manufactures over 3,000 types of water treatment chemicals. In addition to fluctuations in the raw wastewater quality arising from day-to-day changes in the products being manufactured, aging of the water treatment facility itself in the past few years caused the sedimentation process to become unstable. This led to lower concentrations of sludge in the sedimentation tanks, which caused an issue that the sludge could not undergo dehydration when it was removed and had to be discarded untreated.

Kurita Chemical Manufacturing utilized the onsite inspection service of Kuritaz Co., Ltd., which conducts water treatment facility operation, maintenance, and management services. At the same time, we took measures to strengthen the operation management approach according to changes in the raw wastewater quality. This enabled the amount of waste to be reduced by stabilizing the sedimentation process, and realized a reduction in work hours spent on operation management for stabilizing the quality of treated wastewater.

Waste Amount at the head office of Kurita Chemical Manufacturing (t)



Newly installed dissolved air floatation tank (front)

Advance Industrial Production Technologies

The Kurita Group considers it necessary to achieve both industrial development and preservation of the global environment if humanity is to enjoy a prosperous lifestyle in perpetuity. The Group will introduce water treatment into the manufacturing processes for various products, helping to improve productivity and product quality. We will also contribute to solutions for environmental issues associated with industry development.

Targets and Achievements

The Kurita Group conducts basic research on water treatment in the form of analysis and fluid and process analysis, which form the foundation of its products and services. We are also working to develop products and technologies that contribute to solving issues such as water saving and energy saving for customers and society.

	Target for FY2023	Achievement in FY2019
Proportion of themes falling into “Contribution to improvement of production process” to product development themes	35%	33%

*FY2019 figures are actual results for Kurita Water Industries

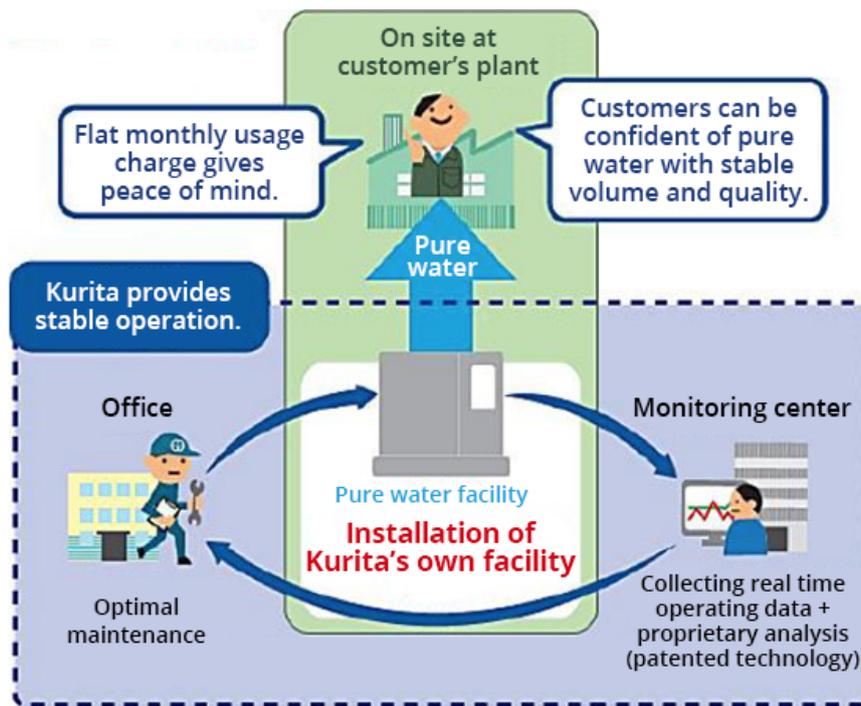
Contribution to SDGs



Expanded Application of the Pure Water Supply Service, “Kurita Water Supply Service (KWSS)”

For customers who use pure water in their manufacturing processes and peripheral facilities, a supply of water with stable volume and quality is essential to improving product quality and production yields. Proper management of their pure water manufacturing equipment is therefore necessary, and this creates a challenge for reducing labor used in operation and management of the equipment in order to improve productivity.

The Kurita Group’s answer to this issue is KWSS, a pure water supply service that reduces customers’ labor and costs by having Kurita install its own pure water facilities on the customer’s site to perform remote monitoring of facility operation status and treated water quality in real time. The service was initially provided for customers whose raw water was of low turbidity, but with the development of pre-treatment technology using water treatment membranes, the service can now be provided to a wider range of customers.

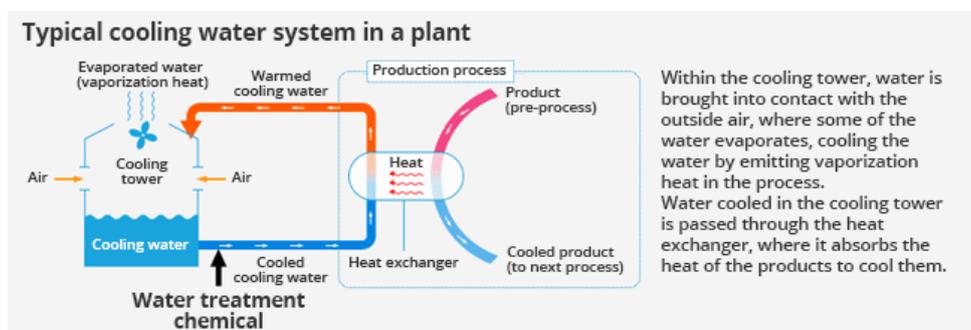


Conceptual Diagram of KWSS Pure Water Supply Service

Cooling Water Chemicals that Contribute to Safety Improvement in the Facility Environment and Labor Saving

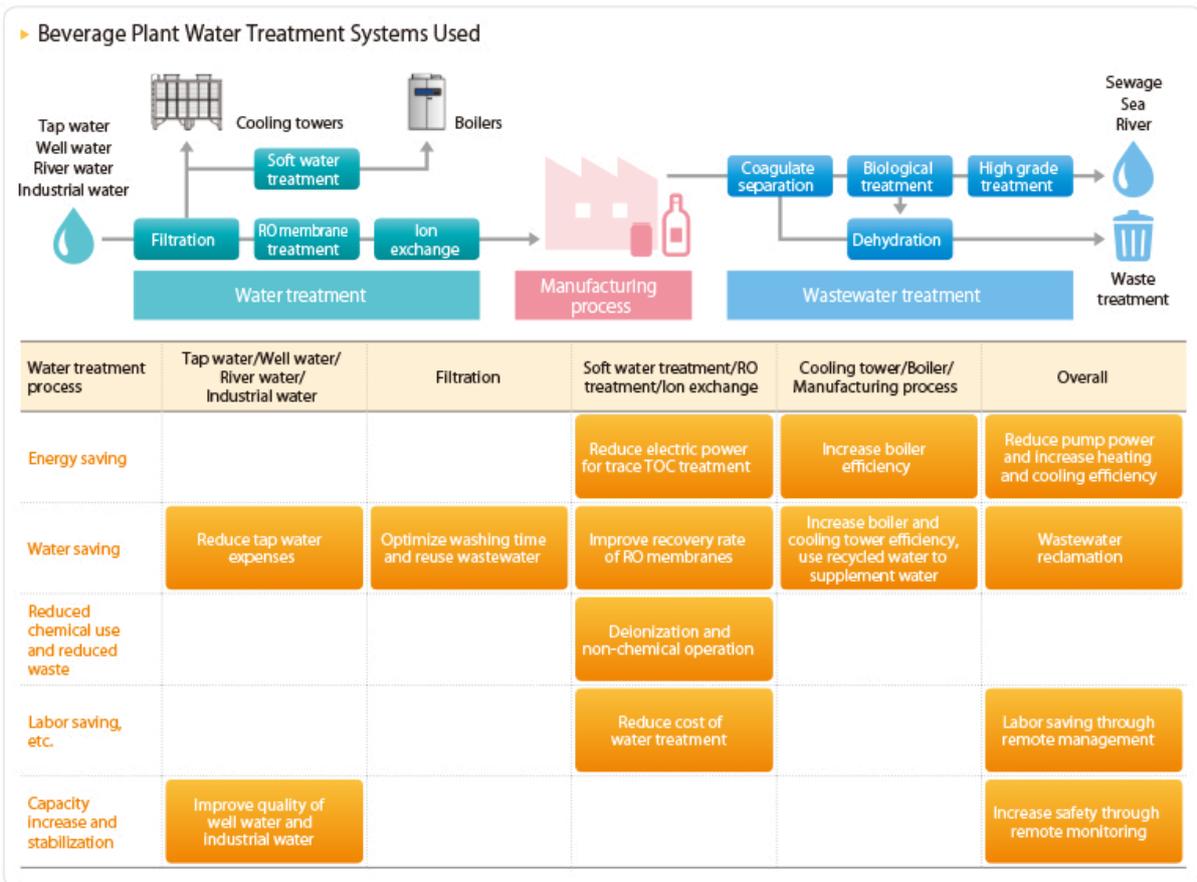
At many plants and office buildings, cooling water is used for production processes and air conditioning. When slime and scale build up in the piping and heat exchangers that cooling water passes through, heat exchange efficiency is reduced, requiring greater use of energy. Cooling water chemicals are generally used to treat and prevent this. Furthermore, hazardous Legionella bacteria sometimes grow inside cooling towers, making it necessary to implement anti-bacterial measures.

The Kurita Group has effective technologies for destroying Legionella bacteria; however, since two types of chemical agent were traditionally used, there has been an issue of labor involved in injecting the chemicals. The Kurita Group has now developed a cooling water treatment that is more effective at sterilizing Legionella bacteria with just a single agent. The new treatment increases the safety of the environment around cooling towers while reducing labor.



Development of Water Treatment Improvement Proposal Support Tools Using Insights on Water Treatment and Data

The Kurita Group’s products and services are applied to a wide range of equipment related to overall water treatment at plants, from boiler and cooling water facilities, to water treatment facilities and wastewater treatment facilities. Since the operating conditions and operating status of each facility differ by operation site, significant experience has been needed to provide optimal proposals for water saving, energy saving, and waste reduction. The Kurita Group used its accumulated insight and data on water treatment to develop a Water Treatment Improvement Proposal Support Tool, which has enabled us to make faster, more suitable proposals for customers.



Establishing Next-Generation Semiconductor Washing Technology

IoT is spreading rapidly in applications for increasing convenience in daily life and increasing the efficiency of energy use. Today, semiconductors are used not only in electronic devices such as PCs, but also in various products such as household appliances and automobiles. To support this movement, we expect to see advances in semiconductors as well as increased production volume. This will create demand for reducing the energy usage of semiconductors themselves, as well as saving energy in their production process. Research is under way to achieve further scaling and energy saving of semiconductors with a focus on new semiconductor materials and structures. As part of this effort, there is a move to replace some copper wiring elements with cobalt. However, this presents a significant problem as cobalt dissolves readily in the ultrapure water used for washing in the semiconductor manufacturing process.

The Kurita Group is involved in joint research at imec^{*1}, looking at next-generation semiconductor production technologies in response to the issues raised by diversifying washing methods associated with application of new materials and increased structural sophistication. Given the current issue, we will contribute to increased productivity in next-generation semiconductors by establishing ultrapure water production technology for rinsing^{*2} with controlled water quality and characteristics, as well as washing technologies that make use of it. We have already identified the characteristics of ultrapure water suitable for rinsing cobalt wiring and associated technologies for producing it, and we are currently carrying out trial testing with advanced semiconductor manufacturers.

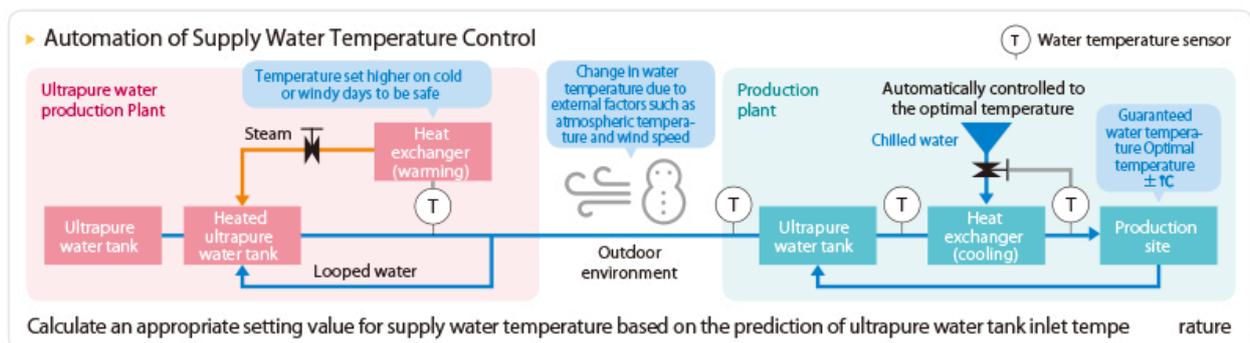
*1 Interuniversity Microelectronics Centre (imec) headquartered in Belgium is one of the world's largest private institutions related to semiconductors. Under its research mission to establish semiconductor design and manufacture technologies that are several generations ahead, the organization promotes joint development projects with leading semiconductor manufacturers and semiconductor manufacturing equipment and material manufacturers from all over the world. Kurita Water Industries is the first water treatment company to participate in joint research at imec.

*2 Rinse: To remove chemicals used for washing

Using AI to Reduce Energy Consumption

The Kurita Group operates the ultrapure water supply business, mainly at large-scale production plants for semiconductors and LCD displays. This involves constructing and maintaining water treatment facilities inside customers' plants, supplying ultrapure water for washing, and appropriately treating, reclaiming, and reusing wastewater from production plants. The Group is working on using artificial intelligence (AI) to stabilize and optimize operation and maintenance of water treatment facilities. As part of this initiative, we have automated the temperature control of supplied ultrapure water.

The ultrapure water supplied to production plants is heated to increase its washing capability; however, since the ultrapure water production facility and the manufacturing plant are separated in some cases, the water is heated to a high temperature on the supply side so that it will have cooled to the optimal temperature on the receiving side. Using AI, the temperature at the production facility can be predicted, taking into account the weather conditions and other factors, in order to set the heating temperature. This enables users to reduce excessive energy use for heating and cooling.



Building Good Relationships with Suppliers

In order for the Kurita Group to fulfill its social responsibilities, its suppliers who provide raw materials, supplies, and perform services also need to cooperate with the Group’s CSR initiatives.

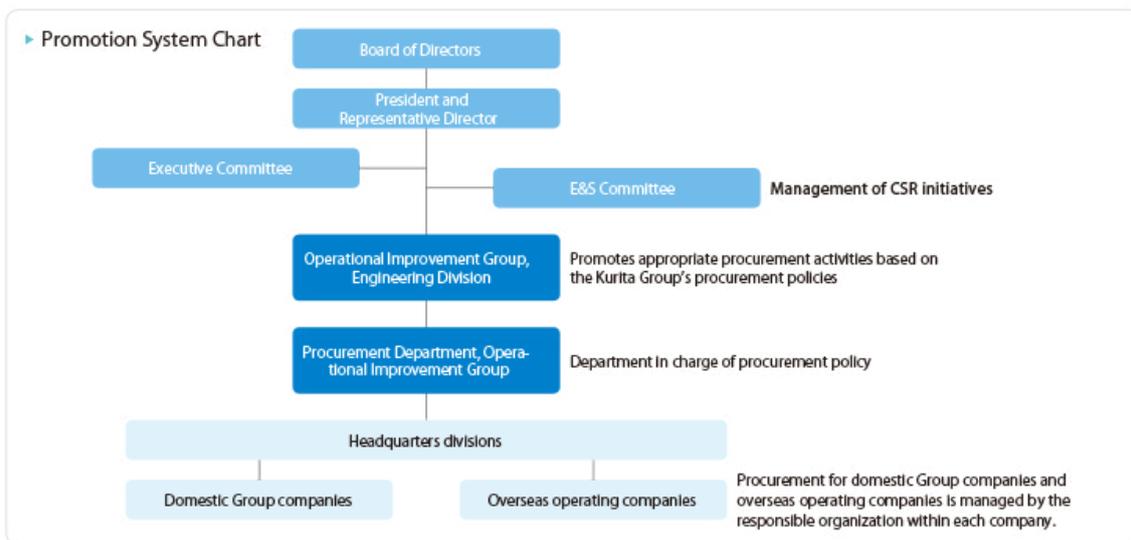
The Group has newly formulated [the Kurita Group Procurement Policy](#), as a common policy on procurement for the Group, as well as [the Kurita Group CSR Procurement Guidelines](#) to set out the Group’s expectations of suppliers, such as respecting basic human rights, preserving the earth’s environment, and complying with laws, regulations, and social norms.

Policy

- To conduct transactions in consideration of basic human rights, occupational health and safety, and preservation of the global environment in compliance with laws and regulations as well as social norms;
- To provide fair and equal business opportunities to the suppliers, to conduct transactions in reliable quality, at competitive and reasonable prices, based on appropriate specifications and standards;
- To procure materials and services that enables continuous and stable supply of our products and services to customers, and contribute to the sustainable development of the society; and
- To forbid entering into any transaction that would benefit antisocial forces or terrorist groups.

Promotion System

The Kurita Group is undertaking appropriate procurement activities in line with the Kurita Group Procurement Policy. As our system for promoting these activities, the Group Manager of the Operational Improvement Group, Engineering Division is in charge of promoting procurement activities based on the policy. The policy is promoted at Group companies in Japan and overseas through the business management divisions of their respective supervising headquarters divisions.



Main Initiatives

Formulation of Procurement Operation Regulations

Based on [the Kurita Group Procurement Policy](#) the Company has formulated Procurement Operation Regulations. These set out the implementation of appropriate procurement activities that emphasize social responsibility as a regulation related to supplies, equipment, labor and services required in the Company’s business activities.

Status of Business Dealings

The status of business dealings with the Company's suppliers is as follows.

		FY2018	FY2019
Number of suppliers		2,444	2,354
Transaction amount (Millions of yen)		69,960	98,443
Ratio (%)	Domestic	89.2	90.4
	International	10.8	9.6

Communication with Suppliers

The Company provides opportunities for communication with suppliers and strives to strengthen its partnerships with them. The main initiatives conducted in fiscal 2019 were as follows.

Name	Purpose / Details	Number of participating companies
Roundtable discussion with suppliers	Explanation of forecast for orders in the following fiscal year and explanation of new initiatives and policies	75
Liquid transportation operation training session	Safety course regarding liquid transportation operations	15
Transportation safety and quality seminar	Safety lecture for transportation service providers	10
Safety events	Safety lectures, and explanation of revised safety rules	161

Evaluation

Kurita Water Industries is highly advanced in its thorough examination of the value that it can provide and the way that it has related this to its corporate social responsibility (CSR). The Company has also clarified its stance on initiatives for the SDGs and prepared internal policies by reviewing its corporate philosophy. The Company's efforts to analyze its materiality and provide clear disclosure on its direction are laudable. Its business model excels in solving social issues through the actual business, and we sense that this is behind the Company's strong desire to embark on a new transformation having considered the direction that it should aim for and its purpose as a company in light of the SDGs. Now that the Company has defined the "CSV business" and is working to expand it, we think there is a strong expectations for it to offer further solutions for social issues and to channel these into the development of the Kurita Group.

From 2019, the Company has started producing an integrated report (annual report), and the sustainability report will now function as a medium for communicating details of the Group's CSR information. The Kurita Group's annual report had already started changing towards integrated reporting since Annual Report 2018 issued during fiscal 2019, which actively presented Value Creation of the Kurita Group as a business model and provided performance reports on each of five capitals. This is an excellent initiative, and has been evaluated highly. We think the next issue to focus on is what kind of numerical targets the Company will develop in the water treatment facilities business for manufactured capital, one of the six capitals in the integrated reporting model. Furthermore, in the medium-term management plan, MVP-22, CSR is positioned at the core of management, with priority measures including development of CSV business, creation of new business and the promotion of innovation. These represent concrete action on the measures disclosed in the business model. The seven materiality items presented in the CSR Policy are clearly related to the Sustainable Development Goals (SDGs), making them easy to understand. Moreover, the Company has been studying the integrated thinking that underpins the creation of integrated reports, and the Company's strong intention to transform management from the ground up is evident.

The relationship between value as viewed by Kurita Water Industries and KPIs is important. The Kurita Group's ordinary businesses are in a class of businesses that directly provides solutions to social issues. For this reason, the Group needs to consider its response to the SDGs anew and consider what CSV means. Under the current medium-term management plan, the volume of orders in the CSV business is presented as an internal management indicator. This CSV business is designated by the Kurita Group from among its conventional businesses as business that contributes to solving social issues through customers. The Group is expected first to start by developing this CSV business, and expanding it. As seeds for the next stage, the Group has prepared guidelines for corporate citizenship initiatives, and is now expected to build connections with people internally and externally and drive innovation, for example by entering new business fields using the Kurita Group's strengths with the theme of "water." Since water is one of the goals presented in the SDGs, it should provide a good entry point for the Kurita Group's activities.

The sustainability report features details of the Kurita Group's CSR activities structured around its new corporate philosophy system, which was rebuilt last year. The Kurita Group is making progress on globalization, with nearly 40% of net sales and over 40% of its employees originating from outside Japan. From 2019, the Group's environmental data has also been presented from a global perspective. Some variation remains in the level of accuracy of the information, but the Group is expected to align itself with the Kurita Group's corporate philosophy system and manage environmental data for KPIs at the same level as in Japan. This is because the Kurita Group's environmental database is a potential source of significant competitive advantage. Since it includes a large quantity of information, it is important for the Group to device mechanisms that ensure collection of data does not become a burden, while facilitating timely checking.

We have conducted a basic check of the collection of environmental performance data, and we found it to be free of material errors.

Professor of the Graduate School of Business Administration, Kobe University.
Ph.D. in Management. Dean of the Graduate School of Business Administration, Kobe University (2014-2016). Since 2019, Vice President of Kobe University.
Chairman of MFCA Forum Japan. Chair of ISO/TC207/WG8.
Numerous published works include *Beyond Accountability toward Management Ethics* (Yuhikaku Publishing Co., Ltd.), and *Emergent-type Responsibility Management* (Nikkei Publishing, Inc.)



Katsuhiko Kokubu

In Response to the Third-Party Opinion

I would like to thank Professor Kokubu for sharing his valuable opinion.

In fiscal 2019, the Kurita Group positioned CSR at the core of management, and started to engage fully in activities based on its CSR Policy for the first time. Accordingly, the Group's CSR-related policies and initiatives were strengthened, and we have enhanced our disclosure of information to stakeholders. As a tangible result of this effort, the Group has been included as constituent stock in new ESG indices.

Meanwhile, as Professor Kokubu has pointed out, we need to work on improving recognition of the value provided by the Kurita Group to society. In fiscal 2019, the Group has promoted its products and businesses that contribute to solving social issues presented in the SDGs as the "CSV business," and this has achieved a certain level of success. However, going forward we need to drive innovation inspired by social issues and provide value that goes beyond the Kurita Group's conventional business models and markets.

In the E&S Committee for fiscal 2020, we have started initiatives to strengthen recognition of the Kurita Group's strengths and value creation from a CSR perspective. Through these initiatives, we aim to enhance the value provided by the CSV business, and create an "environment in which nature and man are in harmony" as described by the Kurita Group's corporate philosophy.



Kiyoshi Ito
Executive Senior Managing
Director and Representative Director
Executive General Manager of Corporate
Planning and Control Division
Chairperson of the E&S Committee



KURITA WATER INDUSTRIES LTD.

Nakano Central Park East, 4-10-1 Nakano
Nakano-ku, Tokyo 164-0001, Japan

Please contact us with any inquiries regarding this report, using the [Inquiries & Request form](#) on our website.

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