SUMCO

Sustainability Report 2023

Editorial Policy

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Editorial Policy

The objective of this report is to convey the SUMCO Groups' stance on CSR and report its activities to stakeholde rs in order to enhance their understanding and earn their support. This report has been prepared with reference to portions of the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines, Standards.

Period Covered

January 2022 to December 2022
Data for periods outside the above are noted as such.

Organizations Covered

SUMCO Corporation and its Group companies.
"SUMCO" and "the Company" as used in this report refers to SUMCO Corporation.
The Financial Highlights cover SUMCO Corporation and its consolidated subsidiaries. Other performance data outside the above scope are noted as such.

Publication

July 2023

Note Regarding Forward-Looking Statements

Projections, predictions, prospects, and other forward-looking statements contained in this report are made by the Company based on the information available at the time of the release of the statements and therefore are subject to risks and uncertainties. Due to various factors, actual results may vary significantly from results anticipated in the forward-looking statements.

Top Message

CEO & Chairman of the Board
Mayuki Hashimoto

SUMCO Vision

1. World's Best in Technology
2. Stable Profitability Even During Economic Downturns
3. Empower Employee Awareness of Profit
4. Competitiveness in Overseas Markets

Contributing to Society through SUMCO's Silicon Wafers

Semiconductor devices are used in every facet of our lives, from information terminal devices such as smartphones and personal computers, communications equipment essential for remote work , which have expanded dramatically during the COVID-19 pandemic, data centers that process and store large volumes of electronic data, home appliances including televisions and air conditioners, medical devices that affect human lives, through to automobiles, trains and other vehicles. Providing the technological base for such devices, silicon wafers can also be considered critically important as a key material in maintaining today's standard of living.

Additionally, the SUMCO Group's silicon wafers are used in various devices that are indispensable for saving energy, promoting clean energy, and reducing greenhouse gas emissions, such as power-saving semiconductor devices, IGBTs for electric vehicles (EV) and hybrid vehicles, and power-management devices for renewable energy such as solar and wind power generation.

The SUMCO Group will continue to contribute to the development of industries, improvement of quality of life, solving social issues, and the realization of a sustainable society through the stable supply of silicon wafers that support our daily lives and the technological development of cutting-edge silicon wafers that drive the advancement of semiconductor devices.

Promotion of CSR and Sustainability Activities

Aiming to be a Good Corporate Citizen, the SUMCO Group has established the SUMCO CSR Policy, identified priority issues to be addressed to solve social issues and enhance sustainable corporate value as ‘materiality,’ and is actively engaged in CSR and sustainability promotion activities to achieve the goals.

Furthermore, we enhance our organizational structure, to strengthen CSR and sustainability activities by appointing an Executive Officer Responsible for Sustainability Promotion, as well as regularly holding "Sustainability Promotion Council" to discuss sustainability promotion activities throughout the Group.

The SUMCO Group will continue to actively adopt ideas and requests of stakeholders and enhance CSR and sustainability activities.

CSR and Sustainability Promotion Structure

Message from an Executive Officer Responsible for Sustainability Promotion

Managing Executive Officer, an Executive Officer Responsible for Sustainability Promotion
Atsuro Fujii

Promoting CSR and ESG/SDGs initiatives

Guided by the SUMCO CSR Policy, the Company has been committed to CSR and sustainability promotion activities, considering it our corporate social responsibility to value all stakeholders, including customers, shareholders, suppliers, employees, and all of society including the global environment.

SUMCO CSR Policy

1. Supported by its cutting edge technology, SUMCO shall steadily provide products and service with excellent quality, ability and safety, shall win customers' satisfaction and trust, and shall contribute to the sustainable development of society.
2. SUMCO shall produce legitimate profits, grow corporate value, proceed with timely and appropriate disclosure to the public, and aim at returns to its shareholders and investors.
3. SUMCO shall comply with law and regulations, international rules, and social norms, shall implement risk management, and shall maintain business continuity.
4. SUMCO shall choose its suppliers by fair and rational standards, establish mutual confidence, and prosper together.
5. SUMCO shall manage environmental activities, make use of resources and energy efficiently, and control emission.
6. SUMCO shall maintain safe, healthy, comfortable and appropriate workplaces for everybody working in SUMCO, shall have a high regard for human rights, ability and personality, and shall realize fair and diverse ways of working.
7. SUMCO shall respect various cultures and histories, and shall interact with society and local communities.

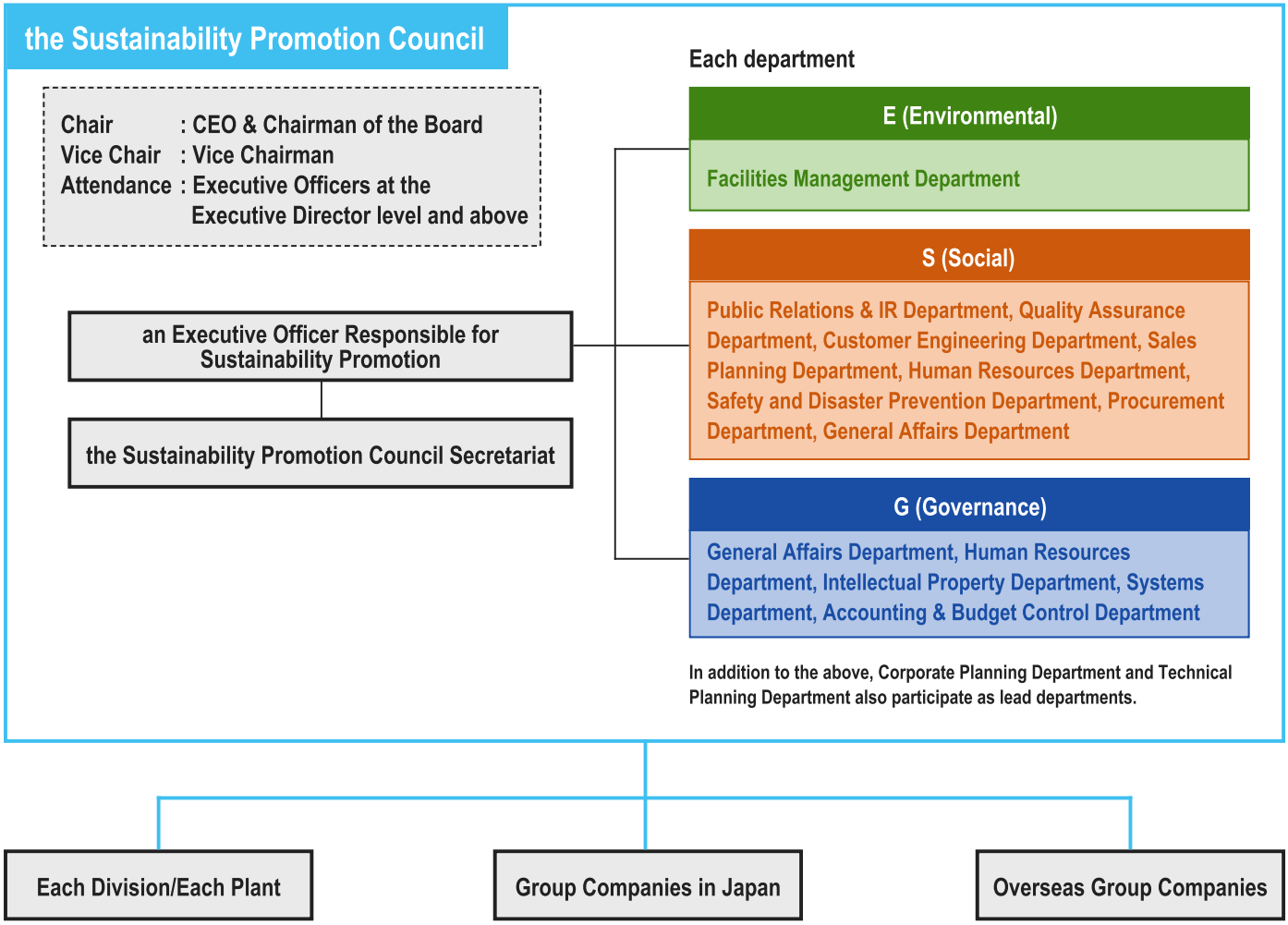
Based on the belief in valuing and respecting these multiple stakeholders, “ESG” refers to areas of investor demands on corporations, while the “SDGs” set out goals and targets to be aimed for by society and the world, the objects of this belief, and ask corporations to contribute proactively to their realization. Accordingly, engaging with ESG issues and the SDGs can be seen as leading to the promotion of CSR and sustainability, which is aimed at contributing to multiple stakeholders.

SUMCO's Initiatives and Framework

SUMCO provides high-quality silicon wafer products of use in solving issues for the environment and society, while also conducting sustainability promotion activities that address issues for the environment, society, and corporate governance in our own business processes. In such ways we are devoting efforts to the SDGs in pursuit of global sustainable growth. Toward further accelerating these initiatives, in 2021 we launched the ESG/SDGs Council (renamed to “the Sustainability Promotion Council” from 2023) and appointed an Executive Officer Responsible for ESG and SDGs (renamed to “an Executive Officer Responsible for Sustainability Promotion” from 2023), a position I have held since 2021.

Made up of members of Executive Officer level and above, the Sustainability Promotion Council meets (twice a year in principle) for reporting and deliberation on activities related to sustainability promotion in each division. It then reports a summary of the proceedings to the Board of Directors, where lively discussions take place involving also the outside directors.

Structure of the Sustainability Promotion Council



Of the numerous sustainability promotion activities that are undertaken under this structure, introduced here are initiatives on behalf of carbon neutrality and in the area of diversity and inclusion, with a special focus on gender equality.

Carbon neutrality: Decoupling economic growth from environmental degradation

Carbon neutrality can be seen as a prime example of an issue to which contributions are being made both in our product provision and on the business process front.
One of the 169 targets included in the SDGs is endeavoring “to decouple economic growth from environmental degradation.” As this implies, the SDGs are based on the philosophy of achieving both solutions to issues for the environment and society and economic growth, of which carbon neutrality is a representative undertaking. Today when CO2 emissions are seen as the greatest threat to the environment, we are asked not only to reduce the rate of emissions per unit (emission factor) but to reduce the absolute emission amounts, while maintaining economic growth. Having a major role in the semiconductor industry with its ongoing growth, we are directly confronting this difficult demand, resolving to go ahead with various initiatives toward carbon neutrality while carrying out our business processes in a way that reduces other environmental impacts resulting from our business activities.
We will also contribute toward carbon neutrality on the business end by providing high-quality semiconductor silicon wafers essential for power management in electric vehicles and renewable energy, and for making data centers more energy efficient.

Diversity & Inclusion

The promotion of diversity & inclusion (hiring, training, and promoting the active involvement of diverse human talent) is essential to the Company’s growth and continued existence. To meet the demands of leading-edge semiconductor manufacturers worldwide while continuing to grow, we need to keep on hiring diverse, outstanding personnel and empower them to make full use of their abilities. An important element of this, which is also a key goal of the SDGs, is gender equality; and here we will step up our efforts to achieve this equality in the form of greater involvement of women. Along with making the Company a better place for women to work in, we will create the opportunities and means for excellent people to shine regardless of gender, aiming for the continued growth of employees and the Company.

Fulfilling our role

Even more than previous UN initiatives, the SDGs are a call to corporations and individuals to contribute to the world by becoming more proactively and energetically involved in solving issues for the environment and society. In our own role, including the supply chain, we will continue being one of the “good corporate citizens” working to solve these issues. For my own part, I too intend to devote a maximum effort to this end, together with people inside and outside the Company.

Relationships with Stakeholders

SUMCO endeavors to fulfill its responsibilities to stakeholders, who support our business activities.

▶ To ESG-oriented Investors

SUMCO Vision

SUMCO Strives to be an Excellent Company through the Combined Power of All its Employees

1. World's Best in Technology

SUMCO's technological capabilities and abilities to ensure stable supply of products has earned high praise from customers, and has been officially recognized by many semiconductor manufacturers with excellent supplier awards. In 2022, we received the Excellent Performance Award for the ninth consecutive year from Taiwan Semiconductor Manufacturing Co., Ltd. (TSMC), the world's largest foundry. We also received the 2022 Best in Value Award from Samsung, the world's largest semiconductor memory manufacturer. Based on this strong recognition, we will continue to promote collaboration with our customers based on long-term commitment and mutual trust, and focus on further improving our technical capabilities.

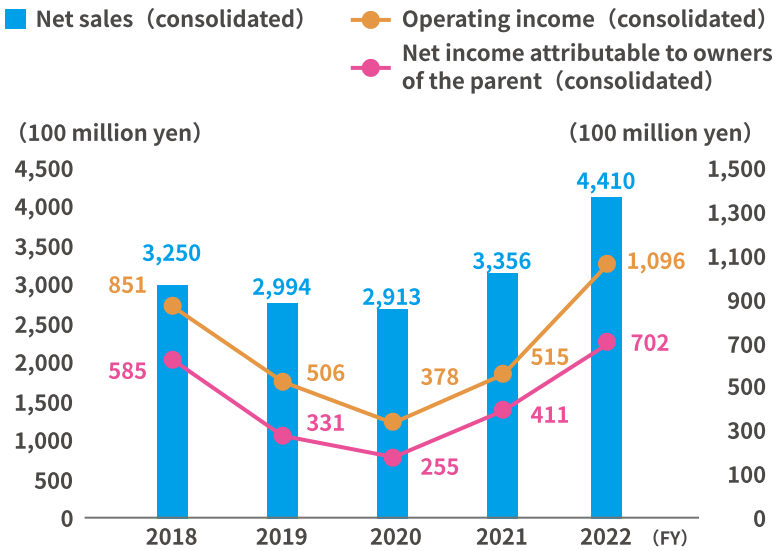
2022 Best in Value Award from Samsung

Excellent Performance Award from TSMC

2. Stable Profitability Even During Economic Downturns

The silicon wafer market is characterized by major short-term changes in its business environment. The SUMCO Group has been working to achieve a revenue structure that stable profitability even during economic downturns, and we are striving to improve our earnings. Through continuous efforts in cost reduction, quality improvement and product differentiation from competitors, we will further strive to establish a corporate structure to ensure higher earnings.

Net sales/Operating income/Net income attributable to owners of the parent



3. Empower Employee Awareness of Profit

Business conditions briefing
(by Michiharu Takii, Vice Chairman)

The employees, rather than the chairman, president or executives, are the main manufacturers and sellers of our silicon wafers. All employees of the SUMCO Group share the SUMCO Vision, maintain an awareness of profit and cost, and work to identify and solve issues. To cultivate this awareness among employees, CEO & Chairman of the Board and Vice Chairman visit each plant frequently to hold management briefings in order to share the management issues facing the Group in the current business environment change.
(In 2022, in consideration of COVID-19, presentations for all employees were streamed.)

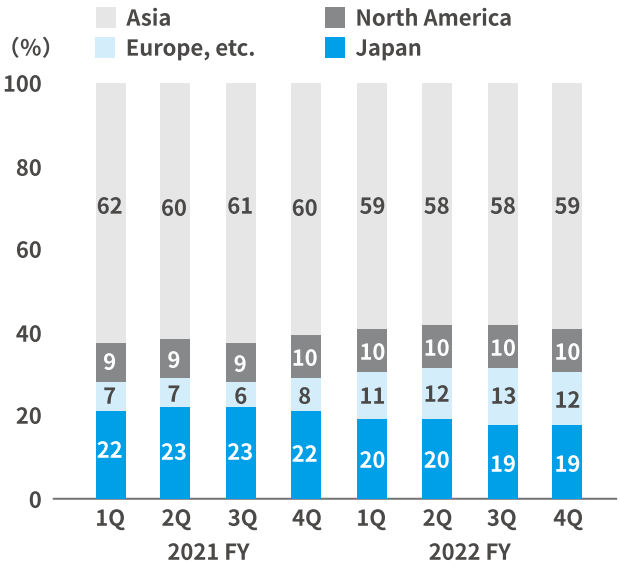
Employees of SUMCO Phoenix Corporation

We also recognize that without high levels of employee motivation, we will be unable to realize the SUMCO Vision of becoming "World's Best in Technology" and "Stable Profitability Even during Economic Downturns." The SUMCO Group works to boost employee motivation by establishing a variety of award systems to appropriately recognize and reward employees' efforts and achievements.
Moreover, with the aim of cultivating a workplace in which all employees can work comfortably, SUMCO has been pursuing initiatives to help employees strike a balance between work and child-rearing. As part of these efforts, SUMCO has established various work styles allowing employees to utilize flexible working hours to reflect their childcare responsibilities, and has set up an in-house nursery school at the Kyushu Factory (Imari), our largest manufacturing site.

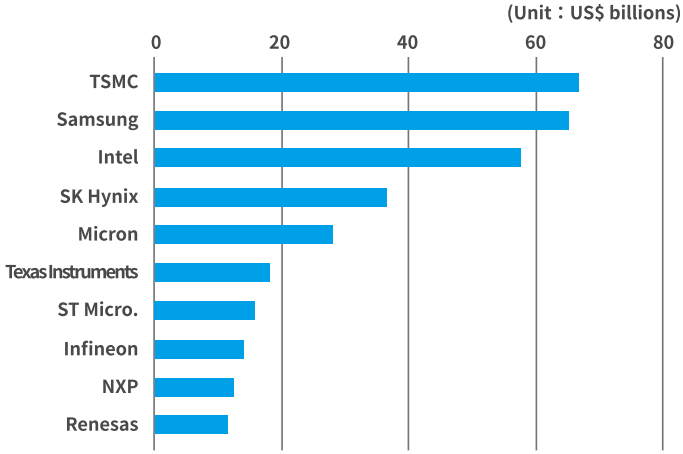
4. Competitiveness in Overseas Markets

In addition to Japan, the SUMCO Group has plants in the United States, Taiwan and Indonesia, as well as a network of sales offices in various parts of the world, allowing us to supply silicon wafers to semiconductor manufacturers around the world. Nearly 80% of our sales come from the overseas market and we are proud to count all of the top 10 global companies in semiconductor sales among the customers of the SUMCO Group. The solid and longstanding relationships of trust developed with these customers represent a significant advantage to the SUMCO Group, and to further reinforce this advantage, we actively cultivate talented global human resources regardless of nationality.

Sales composition by region



Global top 10 companies in semiconductor sales (2022)



＊ Excludes Fabless, includes Foundry
Created by SUMCO based on various sources and databases

▶ To ESG-oriented Investors

SUMCO CSR Policy

1. Supported by its cutting edge technology, SUMCO shall steadily provide products and service with excellent quality, ability and safety, shall win customers' satisfaction and trust, and shall contribute to the sustainable development of society.
2. SUMCO shall produce legitimate profits, grow corporate value, proceed with timely and appropriate disclosure to the public, and aim at returns to its shareholders and investors.
3. SUMCO shall comply with law and regulations, international rules, and social norms, shall implement risk management, and shall maintain business continuity.
4. SUMCO shall choose its suppliers by fair and rational standards, establish mutual confidence, and prosper together.
5. SUMCO shall manage environmental activities, make use of resources and energy efficiently, and control emission.
6. SUMCO shall maintain safe, healthy, comfortable and appropriate workplaces for everybody working in SUMCO, shall have a high regard for human rights, ability and personality, and shall realize fair and diverse ways of working.
7. SUMCO shall respect various cultures and histories, and shall interact with society and local communities.

▶ To ESG-oriented Investors

Materiality (Key Issues)

As materialities, SUMCO identifies those issues it will address on a priority basis to solve social issues and enhance corporate value in a sustainable manner while responding to demands from stakeholders. SUMCO engages in ESG activities to achieve the materiality targets.

The Materiality Identification Process

STEP 1

We take stock of the ESG issues currently being worked on and check their consistency with the GRI standards.

STEP 2

We set the order of priority based on the degrees of importance both to SUMCO and its stakeholders, and create a list of candidate materialities.

STEP 3

We verify the relevance between the issues and the SUMCO Vision, Invisible Assets and CSR Policy, which represent the source of enhanced corporate value at SUMCO, and determine the materialities.

STEP 4

The Board of Directors deliberates and approves the materiality issues.

SUMCO Vision

1 World's Best in Technology

2 Stable Profitability Even During Economic Downturns

3 Empower Employee Awareness of Profit

4 Competitiveness in Overseas Markets

Invisible Assets

SUMCO Materiality

Environmental (E)	Social (S)	Governance (G)

	Materiality	Material Issue Themes	Reasons for Identification
E	Combatting global warming	Reduction of energy consumption intensity	Reducing the environmental impact in our business activities is a corporate responsibility for the future. To ensure that our irreplaceable global environment is passed on to the next generation, the SUMCO Group has developed an environmental management system and obtained ISO 14001 certification for all of its plants. We also conduct environmentally friendly production activities including the prevention of global warming, the effective utilization of water resources and the reduction of waste and emissions. To enhance our initiatives preventing global warming, we have added new targets aimed at achieving carbon neutrality.
		Carbon neutrality	
	Resource conservation activities	Effective utilization of water resources	
	Contributing to the creation of a recycling-oriented society	Waste management	
S	Health, hygiene and safety initiatives	Prevention of occupational accidents	Under the principle that "the safety and health of employees take the highest priority over all," the SUMCO Group is committed to "creating a safe and pleasant workplace environment supporting good mental and physical health" through active communication in which all parties participate. On safety, we work to maintain and improve our occupational safety management system with the aim of creating a safe workplace free from occupational accidents, and with regard to health management, activities are focused on the three issues of mental health, smoking cessation and lifestyle habits.
		Maintenance of health and productivity management	
	Human resources development	Enhancement of training	To be the "World's Best in Technology" and "Empower Employee Awareness of Profit" as declared in the SUMCO vision, we will continue to invest in human resources and make enhancements to our career development program. We will enhance training opportunities with a multi-faceted approach that covers everyone from new employees to managers and officers.

	Materiality	Material Issue Themes	Reasons for Identification
S	Promotion of women’s active participation	Raising the percentage of women in management positions	We have set new medium-term targets for percentage of women in management positions to increase diversity boost women's active participation. We will enhance our initiatives to create a more favorable working environment for women.
	R&D and technological capabilities supporting customer value creation	Contributions as a development partner	The source of enhanced corporate value is R&D and technological capabilities that support customer value creation through our "invisible assets," and as a development partner to customers, SUMCO enjoys a high global market share in cutting-edge products. Moreover, we will contribute to the achievement of the SDGs, which are social issues affecting the entire world, by supporting advances in semiconductors.
		Increasing customer satisfaction	To continually maintain our "first call" status as a company, we value close communication with customers. By quickly providing customers with the products that meet their needs while continuing with performance checks and follow-ups, we build robust relationships of trust. We analyze the information customers provide through QCDS (quality, cost, delivery and service) evaluations, share the insights with management and relevant departments, direct what we have learned into improvement activities and strive to improve customer satisfaction levels.
	Promoting CSR procurement and mitigating procurement risks	Promoting firm establishment of the CSR Procurement Policy	We believe it is important to share CSR-related societal demands with our suppliers and jointly tackle issues in the supply chain such as human rights, labor, safety, the environment and ethics. We share the SUMCO CSR Procurement Policy with suppliers through briefing sessions, audits and other activities, and promote responsible procurement activities.
		Strengthening BCP in materials procurement	Supply chain risk management is an important issue and a theme to which customers also have high levels of interest. SUMCO secures appropriate levels of inventory in line with risks, pursues advance preparations such as ensuring multiple procurement sources under normal circumstances, and has established the necessary systems to minimize the impacts on production in the event of a disaster or accident.

	Materiality	Material Issue Themes	Reasons for Identification
S	Communication with shareholders and investors	Enhancement of IR activities	We fully recognize that the timely and appropriate disclosure of corporate information to investors forms the basis of a sound stock market and have adopted the basic policy of continually ensuring the prompt, accurate and fair disclosure of corporate information from the perspective of investors. We proactively disclose any information that is beneficial to investment decisions, such as medium-to-long-term demand forecasts for the silicon wafer market based on end product demand forecasts.
G	Enhancing risk management	Initiatives to develop BCP	The silicon wafer business is a critical industry supporting an IT-based society, and the SUMCO Group is responsible for ensuring the stable supply of silicon wafers to the world's semiconductor device manufacturers. The Business Security Committee (BSC), which is an organization responsible for risk management, promotes risk management activities while working to improve business continuity and the ability to respond in an emergency through periodic training.
	Promoting compliance	Ongoing enhancement of compliance awareness	Ensuring compliance with laws, regulations and social norms to be observed forms the basis for SUMCO fulfilling its social responsibilities and is also essential for the sustainable growth of corporate value. Training on topics including the SUMCO Charter of Corporate Conduct, which prescribes the norms to be observed by employees, is conducted regularly for all employees as part of ongoing efforts to strengthen awareness of compliance.

SUMCO Materiality Targets

	Materiality	Material Issue Themes	Targets
E	Combatting global warming	Reduction of energy consumption intensity*1	By 2030, reduce energy consumption rate by 14.9% compared with 2014 levels (average reduction of 1% every year)
		Carbon neutrality	By 2030, reduce CO_2 emissions (Scope 1+2) by 33% compared with 2014 levels (2.5% annual reduction); and by 2050, reduce by 100% (carbon neutrality)
	Resource conservation activities	Effective utilization of water resources	By 2030, reduce water consumption rate by 10% compared with 2020 levels (average reduction of 1% every year)
			High and stable water recycling rate
	Contributing to the creation of a recycling-oriented society	Waste management	Conversion of waste into valuable resources and improved recycling rate
S	Health, hygiene and safety initiatives	Prevention of occupational accidents	Accident frequency rate of 0.2 or lower
		Maintenance of health and productivity management	Maintaining certification in the Health & Productivity Management Outstanding Organization Recognition Program (White 500)
	Human resources development	Enhancement of training	Increasing training time compared with the previous year by utilizing web-based training
	Promotion of women's active participation	Raising the percentage of women in management positions	(SUMCO*2) the end of December 2021: 1%→2030: 10% (Group) the end of December 2021: 6.5%→2030: 12%
	R&D and technological capabilities supporting customer value creation	Contributions as a development partner	Maintaining a worldwide share of over 50% in cutting-edge fields
		Increasing customer satisfaction	Maintaining high evaluation with the leading customer satisfaction score

	Materiality	Material Issue Themes	Targets
S	Promoting CSR procurement and mitigating procurement risks	Promoting firm establishment of the CSR Procurement Policy	Holding briefing sessions for suppliers and conducting CSR audits
		Strengthening BCP in materials procurement	Continuing to maintain multiple procurement sources and implementing supplier safety training
	Communication with shareholders and investors	Enhancement of IR activities	Maintaining the number of IR activities for investors
G	Enhancing risk management	Initiatives to develop BCP	Implementing BCP training
	Promoting compliance	Ongoing enhancement of compliance awareness	Implementing compliance education

SUMCO Materiality Initiatives and Achievements in 2022

In pursuit of medium- to long- term targets, SUMCO works on continuous improvement.
Our initiatives and achievements in 2022 are as outlined below.

	Materiality	Material Issue Themes	Initiatives and Achievements in 2022
E	Combatting global warming	Reduction of energy consumption intensity*1	A 15.4% reduction (from 2014 levels) was achieved in fiscal 2022, exceeding the 7.7% target for that year.
		Carbon neutrality	A 32.4% reduction (from 2014 levels) was achieved in fiscal 2022, exceeding the 18.3% target for that year.
	Resource conservation activities	Effective utilization of water resources	A water recycling rate of 36.6% was achieved, down slightly from the level in previous years due to the impact of investment in production increases and other factors.
	Contributing to the creation of a recycling-oriented society	Waste management	An industrial waste recycling rate of 82.9% was achieved, up from the 77.2% rate in the previous year.

	Materiality	Material Issue Themes	Initiatives and Achievements in 2022
S	Health, hygiene and safety initiatives	Prevention of occupational accidents	Although we carried out regular safety education and training, working to raise safety awareness, the lost work day accident frequency rate was 0.35 compared to the target of 0.2.
		Maintenance of health and productivity management	We won recognition as one of the “White 500” as a healthy enterprise for the fifth consecutive year, and for the second time earned recognition also in the Health & Productivity Stock Selection program. Aware that the good health of employees is a key management resource, we took initiatives toward maintaining and promoting health and improving the working environment.
	Human resources development	Enhancement of training	Time devoted to training in 2022 rose by around 1,000 hours, or 4.6%, from the previous year. We sought to make training more effective, with online training as the norm.
	Promotion of women’s active participation	Raising the percentage of women in management positions	In 2022, we achieved a 2.1% increase in SUMCO[*2] and 7.0% increase on a consolidated base. Besides enhancing diverse working arrangements that support women’s active participation, we actively promoted mid-career hiring of women.
	R&D and technological capabilities supporting customer value creation	Contributions as a development partner	We continued to boast a worldwide share of over 50% in wafers for leading-edge logic chips. We maintained our top supplier position, winning customer recognition as a development partner for our high technology development capability and consistent quality.
		Increasing customer satisfaction	We again achieved an overall average rating of 85 points or higher (100 point scale) in supplier evaluations by customers. By sharing the supplier evaluations throughout the Group and reflecting them in improvement activities in each division, we won high ratings from customers in quality and technology.
	Promoting CSR procurement and mitigating procurement risks	Promoting firm establishment of the CSR Procurement Policy	We explained our CSR Procurement Policy in briefing sessions for suppliers, and worked to further instill the policy. CSR audits of suppliers were conducted remotely.
		Strengthening BCP in materials procurement	We sought to diversify our procurement sources as a hedge against the risk of disasters and accidents. We held a total of seven supplier safety education sessions, for each of the plants.
	Communication with shareholders and investors	Enhancement of IR activities	In the midst of the pandemic, we continued our work-from-home policy. However, we were able to hold nearly the same number of IR events for shareholders and investors in and outside Japan as before the pandemic, relying on web conferences and telephone conferences.

	Materiality	Material Issue Themes	Initiatives and Achievements in 2022
G	Enhancing risk management	Initiatives to develop BCP	Again in 2022, we worked on further developing BCP based on the findings in the previous year by the Business Security Committee (BSC). We also held drills to prepare for the loss of headquarter functions in the event of an earthquake directly under Tokyo, as well as conducting comprehensive disaster prevention drills and BCP drills at each plant to prepare for accidents.
	Promoting compliance	Ongoing enhancement of compliance awareness	Again in 2022, we conducted training for all employees on the SUMCO Charter of Corporate Conduct, by e-learning and other means.

*1 Calculations are those made using the "Tool for preparation of periodic reports under the Act on the Rational Use of Energy," issued June 29, 2021 by the Energy Efficiency Division, Energy Efficiency and Renewable Energy Department, the METI Agency for Natural Resources and Energy.

*2 Total figures include the number of Sumco employees assigned to other companies and exclude secondees to Sumco Corporation from other companies

▶ To ESG-oriented Investors

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The SUMCO Group's Business Activities and the Sustainable Development Goals (SDGs)

Silicon wafer products from SUMCO are not seen first-hand in everyday life, but they are essential to the manufacturing of the semiconductor devices equipped in all manner of electronic products that enrich our lives.
To fulfill our responsibilities as one of the companies supporting social infrastructure, SUMCO utilizes the SDGs as indicators of the medium-to-long-term demands of the international community and makes every effort to realize a sustainable society.

Main Goals of the SDGs and SUMCO's Initiatives

Contributing to the SDGs through our products

▶ SUMCO Products that Support Our Lives

Contributing to the digital infrastructure supporting our daily lives

Silicon wafers that serve as the basic materials for semiconductor devices used in a wide range of areas including communications equipment, automobiles, digital appliances, medical equipment and urban infrastructure

Creating innovation

Silicon wafers that support the miniaturization of semiconductors to usher in an era of industrial and technical innovation, and the utilization of big data, through IoT, AI and robots

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Contributing to reduce traffic accidents

Silicon wafers for the automotive semiconductor devices supporting driver assistance systems such as self-driving and automatic braking

Contributing to make cities secure and safe

Silicon wafers for security cameras, communication network tools utilized in smart grid system and various IoT tools

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Contributing to improved energy efficiency

Silicon wafers for power-saving devices

Contributing to curb greenhouse gas emissions

Silicon wafers for IGBTs which are utilized for electric vehicles (EV) and hybrid vehicles (HV, PHV)

Silicon wafers for power-management devices which are utilized for renewable energy generation system such as solar power and wind power

Contributing to the SDGs through business processes

Promoting eco-friendly corporate activities

- Initiatives to combat global warming
- Initiatives to reduce waste
- Effective utilization of water resources
- Participation in local cleaning activities and environmental conservation initiatives
- Publication of an environmental report on the company website

Supporting the success of women in the workplace

- Establishing an in-house nursery school and improving the childcare allowance scheme, etc.
- Prohibiting discrimination on the basis of gender and clearly stating it in the SUMCO Charter

Promoting a safe and secure working environment

- Developing and utilizing diverse human resources
- Initiatives aimed at safety, health and hygiene

Promoting compliance and fair business activities

- Initiatives to prevent bribery and other forms of corruption
- Implementing CSR procurement based on CSR Procurement Policy in the supply chain

Support activities for welfare institutions and other facilities

- Activities with Non-Profit Organizations, etc.
- Participation in emergency drills at welfare institutions

Support for education

- Interaction with local educational institutions
- Provision of apprenticeship programs
- Provision of scholarship programs

About the SDGs

SDGs, or the Sustainable Development Goals, refer to the goals laid at in "Agenda 2030", which was adopted at the "United Nations Sustainable Development Summit" in September 2015. The SDGs comprise 17 goals and 169 targets to be achieved by the year 2030.
The goals and targets of the SDGs comprehensively deal with the various issues faced in the areas of the economy, industry and society. As the central figures of economic activities, companies are expected to play a key role as one of the main parties responsible for achieving the SDGs.

* To learn more about the SDGs, check the appropriate sections on the United Nations website, starting with the "Sustainable Development Goals Knowledge Platform ".

To ESG-oriented Investors

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Corporate Governance

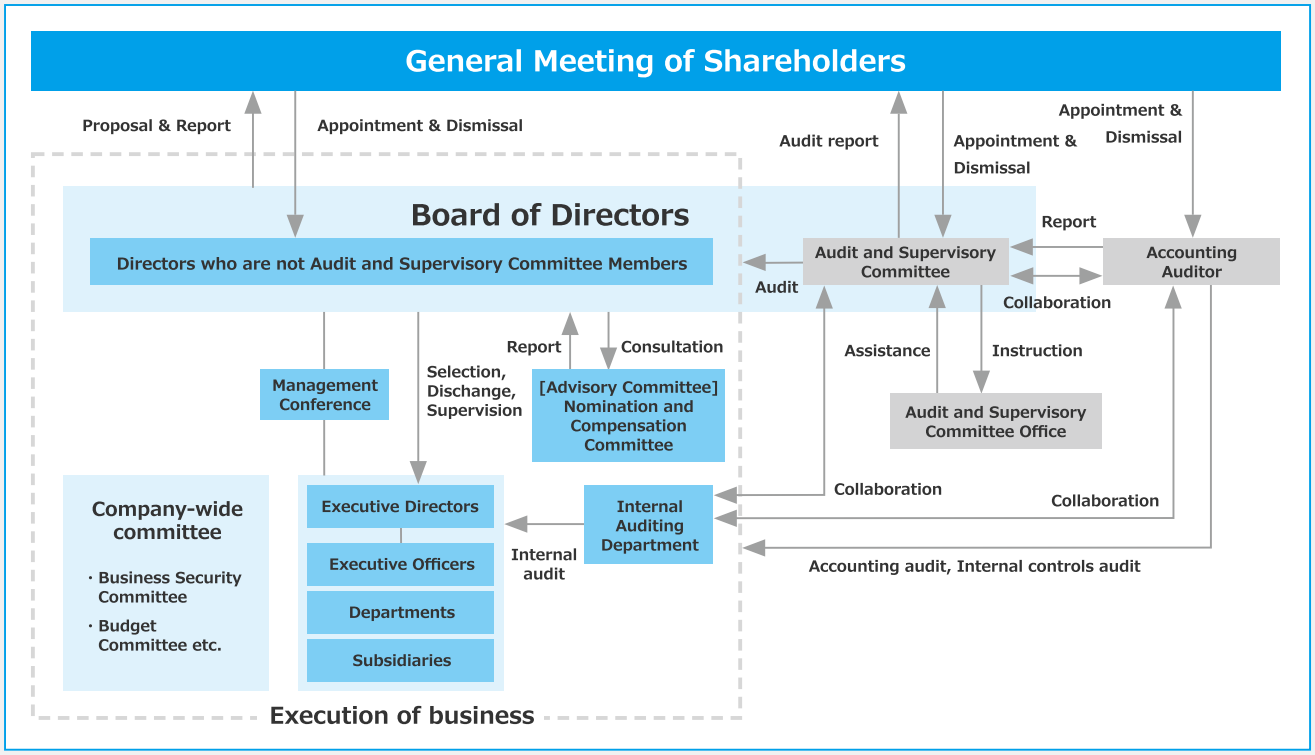
Why SUMCO Tackles Corporate Governance

SUMCO recognizes that it is a critical management challenge to fulfill its mandate from shareholders by achieving sustainable growth and improving corporate value in the medium-to-long-term, while building and maintaining positive relationships with other stakeholders. Based on this recognition, SUMCO pursues a range of measures related to corporate governance, such as reinforcing the auditing and supervisory functions of the Board of Directors, ensuring efficiency in how Directors execute their duties and improving internal controls within the SUMCO Group, in order to achieve swift management decision-making and to ensure transparency and fairness in the execution of business.

Basic Stance on Corporate Governance Structure

SUMCO is organized as a company with an Audit and Supervisory Committee. By adopting this system, the effectiveness of supervision and auditing has been enhanced through audits conducted by Directors who are Audit and Supervisory Committee Members and have voting rights at Board of Directors meetings. In addition, the effectiveness of internal controls has been enhanced through audits conducted in cooperation with the Internal Audit Department.

Corporate Governance Structure



Board of Directors

SUMCO's Board of Directors comprises internal Directors with a proven record of performance in their respective areas of responsibility and outstanding management abilities, along with Outside Directors with expert knowledge and extensive experience, based on the basic stance of SUMCO to ensure an overall balance and diversity in knowledge, experience and capabilities of the Directors.
The Board of Directors comprises five Directors (excluding Directors who are Audit & Supervisory Committee Members; one of whom is an Independent Outside Director) and five Directors who are members of the Audit & Supervisory Committee (four of whom are Independent Outside Directors).
In accordance with legal statutes, the Articles of Incorporation and the Rules of the Board of Directors, the Board of Directors makes decisions on management strategy, management plans, and other such important matters relating to business. It receives reports from every Director on the status of the execution of duties and it exercises supervision of compliance, internal controls, risk management, and important business execution at affiliated companies. With the participation of Independent Outside Directors, the Board of Directors also engages in the free exchange of opinions regarding the appropriate evaluation of company performance and related matters, and reflects that evaluation in the personnel administration of senior management members.
It is also our basic company policy that matters relating to financial results and so on, matters relating to management plans, and the execution of other such important operations should be decided after adequate discussion by the Board of Directors, including the Independent Outside Directors. For this reason, the Articles of Incorporation do not stipulate that decisions on the execution of important business can be delegated to each Director.
The effectiveness of the Board of Directors is evaluated each year in order to continually enhance the effectiveness of corporate governance.
In fiscal year 2022, the Board of Directors met 16 times to discuss important matters concerning management, address issues identified in the Board of Directors effectiveness evaluation conducted in the previous fiscal year, and discuss the compensation policy and method for determining compensation of Directors (excluding Directors who are Members of the Audit & Supervisory Committee) and the amount of compensation for individuals.

Directors

Position in the Company	Name	Skills (expertise, experience, capability, etc.) possessed by each Director						
		Corporate Management	Finance/ Accounting	Legal Affairs/ Compliance	Sales/ Marketing	Internationality/ Globality	Technology/ Manufacturing/ IT	Human Resources Management/ Human Resources Development
Director*1 Chairman of the Board	Mayuki Hashimoto	●	●			●	●	●
Director*1	Michiharu Takii	●	●	●				●
Director*1	Toshihiro Awa	●			●	●		●
Director*1	Jiro Ryuta	●			●	●	●	●
Director*2	Akane Kato	●				●		●
Director Full-time Audit and Supervisory Committee member	Fumio Inoue	●	●			●		
Director*2 Audit and Supervisory Committee member	Hitoshi Tanaka			●				●
Director*2 Audit and Supervisory Committee member	Masahiro Mitomi	●	●			●		●
Director*2 Audit and Supervisory Committee member	Shinichiro Ota	●		●		●		●
Director*2 Audit and Supervisory Committee member	Masahiko Sue					●	●	●

*1 Representative Director

*2 Independent Outside Director

Independent Outside Directors

SUMCO has appointed five Independent Outside Directors. One is a person with expert knowledge of human resource development and organizational operation as well as experience in corporate management; one is an attorney; one is a certified public accountant and management consultant who has considerable knowledge and experience in finance and accounting; one is a person with wide experience and knowledge cultivated through experience in the public sector as well as many years of experience in corporate management; and one is a person with expert knowledge and experiences in data science, etc., cultivated through experience in the public sector and education fields.
Each Outside Director satisfies SUMCO's "Criteria of Independence" established in accordance with Tokyo Stock Exchange standards on the independence of Independent Directors, and has been verified to be free of potential conflicts of interest with general shareholders.
In an effort to ensure the sustained growth of the SUMCO Group and increase its corporate value over the medium-to-long-term, the Independent Outside Directors provide advice on important matters related to management based on their own individual knowledge and take the perspective of minority shareholders and other stakeholders in supervising management. They participate in the appointment of candidates for Director and other important decision-making by the Board of Directors, and supervise business execution by the Board of Directors, senior management and others as well as conflicts of interest between SUMCO and senior management and others.

Audit and Supervisory Committee

SUMCO's Audit and Supervisory Committee is made up of five Directors who are Audit and Supervisory Committee Members (four, a majority, of whom are Independent Outside Directors). In order to ensure the effectiveness of Audit and Supervisory Committee activities, permanent Audit and Supervisory Committee Members are put in place by mutual voting among Audit and Supervisory Committee Members. In addition, it is SUMCO's basic policy to take steps to ensure that at least one Audit and Supervisory Committee Member has considerable knowledge and experience pertaining to finance and accounting. Currently, this is Mr. Masahiro Mitomi, who is also a certified public accountant. Additionally, SUMCO has established the Audit and Supervisory Committee Office and assigns staff to support the activities of the Committee and facilitate the smooth performance of its audit and supervisory functions.
The Audit and Supervisory Committee exercises its statutory right of investigation and audits the Directors' execution of their duties from the viewpoints of appropriateness and conformance with laws and regulations and the Articles of Incorporation by inspecting and confirming the status of compliance with laws and regulations, Articles of Incorporation, and so on, and by monitoring and otherwise supervising the development of and operational status of the system of internal controls, including the internal control of financial reporting.

Nomination and Remuneration Committee

In an effort to further enhance its corporate governance, SUMCO has established a Nomination and Compensation Committee composed of two Representative Directors (Directors Mayuki Hashimoto and Michiharu Takii) and three Independent Outside Directors (Directors Hitoshi Tanaka, Masahiro Mitomi and Shinichiro Ota) to serve as a discretionary advisory body for the Board of Directors. The Nomination and Compensation Committee receives requests from the Board of Directors for advice on the process for selection of candidate Directors and Executive Officers of SUMCO, their qualifications, the reasons for their designation, the structure of remuneration for Directors (excluding Directors who are Audit and Supervisory Committee Members) and Executive Officers, and related matters. The committee deliberates on the appropriateness and other aspects of the matter referred, including the perspectives of gender and other diversity as well as expert knowledge and experience, and, also taking evaluations of SUMCO's performance into account, delivers its advice. The Board of Directors, receiving the findings of the Nomination and Compensation Committee, designates candidate Directors and Executive Officers, and decides on the remuneration and other payments for Directors (excluding Directors who are Audit and Supervisory Committee Members).
The Nomination and Compensation Committee convened two times in fiscal year 2022, with full attendance each time. The main activities undertaken by the Nomination and Compensation Committee are as follows:

- Deliberation over the selection of candidate Directors and personnel matters concerning Executive Officers
- Deliberation over the systems for compensation of Directors (excluding Directors who are Audit and Supervisory Committee Members) and Executive Officers
- Deliberation concerning the individual compensation amounts of Directors (excluding Directors who are Audit and Supervisory Committee Members)

Board of Directors/Audit & Supervisory Committee Meetings in Fiscal Year 2022

Board of Directors

Name	Times Attended/ Times Held	Attendance
Mayuki Hashimoto	16/16	100%
Michiharu Takii	16/16	100%
Toshihiro Awa	13/13	100%
Jiro Ryuta	13/13	100%
Akane Kato(*1)	16/16	100%
Fumio Inoue	16/16	100%
Hitoshi Tanaka(*1)	16/16	100%
Masahiro Mitomi(*1)	16/16	100%
Shinichiro Ota(*1)	16/16	100%
Masahiko Sue(*1)	13/13	100%
Hisashi Furuya(*2)	3/3	100%
Kazuo Hiramoto(*2)	3/3	100%
Akio Fuwa(*1)(*2)	3/3	100%

Audit & Supervisory Committee

Name	Times Attended/ Times Held	Attendance
Fumio Inoue	13/13	100%
Hitoshi Tanaka(*1)	13/13	100%
Masahiro Mitomi(*1)	13/13	100%
Shinichiro Ota(*1)	13/13	100%
Masahiko Sue(*1)	10/10	100%
Akio Fuwa(*1)(*2)	3/3	100%

(*1) Independent Outside Director

(*2) Retired from the position of Director as of March 29, 2022

Executive Remuneration

Matters regarding policy regarding amounts of remuneration and other payments to officers and determination of calculation method

Details of the Remuneration Policy

SUMCO's basic policy for Executive Director remuneration aims to align the interests and risks of Executive Directors and shareholders and provide an incentive to improve business performance and medium- to long-term corporate value. To this end, Executive Director remuneration comprises basic remuneration, performance-linked monetary remuneration based on short-term performance, and performance-linked stock remuneration based on medium- to long-term corporate value, depending on each Executive Director's office and rank, within the total amount determined by resolution of the General Meeting of Shareholders. Outside Directors and Directors who are Audit and Supervisory Committee Members receive only the fixed portion of basic remuneration from the perspective of ensuring the appropriate conduct of their duties such as auditing and the supervision of the execution of business operations. The remuneration of Directors who are Audit and Supervisory Committee Members is determined through deliberations of the Audit and Supervisory Committee Members within the total amount determined by resolution of the General Meeting of Shareholders, and takes into account the role and duties of each such Director and whether he or she is a full-time or part-time member.

Pursuant to the resolution at the 17th Ordinary General Meeting of Shareholders held on March 29, 2016, the upper limit of the total remuneration for all Directors (excluding Directors who are Audit and Supervisory Committee Members) is 460 million yen annually (including 50 million yen per year as basic remuneration for Outside Directors consisting only of fixed remuneration; excluding employee salary), and the upper limit of the total remuneration for all Directors who are Audit and Supervisory Committee Members is 110 million yen annually. Pursuant to the resolution at the 24th Ordinary General Meeting of Shareholders held on March 29, 2023, a performance-linked stock remuneration plan was introduced for Executive Directors of SUMCO. This stock remuneration plan includes malus system and clawback system.

The proportion of fixed remuneration (the portion of basic remuneration that is not reduced by performance) to total remuneration for Executive Directors is expected to be approximately 20% to 30%, depending on office and rank, when the result for FY 2022 are applied.

The following is a summary of each remuneration system.

1. Basic remuneration (monetary remuneration)
   The basic remuneration of Directors is in principle a fixed cash amount paid each month based on the Director's office and rank. However, if a net loss attributable to owners of the parent is recorded, the basic remuneration of Executive Directors will be reduced gradually, depending on the amount of loss, to the amount of fixed remuneration set by their office and rank.
2. Performance-linked remuneration (monetary remuneration)
   For Executive Directors, the Company has judged that it is appropriate to use the semi-annual net income attributable to owners of the parent as an index for remuneration. Executive Directors will be paid performance-linked monetary remuneration each year calculated by a formula and multiplied by a coefficient based on office and rank. However, if the net income attributable to owners of the parent or other indicators of performance do not meet the standard set by the Board of Directors, the performance-linked monetary remuneration will not be paid.
3. Performance-linked stock remuneration
   Under the Company's performance-linked stock remuneration plan, a trust set up by the Company through money contributions will acquire shares of the Company, and the number of shares of the Company corresponding to the number of points granted to each Executive Director by the Company will be distributed to each Executive Director through the trust.

The following is a summary of the plan.

a.	Persons eligible for stock remuneration	Executive Directors
b.	Target period	From the fiscal year ending December 31, 2023, to the fiscal year ending December 31, 2025 (May be extended for a period of up to three years by resolution of the Board of Directors)
c.	Maximum amount of money that the Company will contribute as funds for the acquisition of shares of the Company necessary for distribution to persons eligible for the plan in a. during the target period in b.	Total of 675 million yen (In case of extension, up to 225 million yen per year.)
d.	Method of acquiring shares of the Company	Through the disposal of the Company's treasury shares or through the exchange market (including off-auction trading)
e.	Maximum number of points granted to persons eligible for the plan in a.	210,000 points per fiscal year

f.	Criteria for granting points	■ Points are granted based on position, degree of achievement of performance targets, etc. The performance targets include ROE, EBITDA margin, and carbon dioxide emissions. ■ No points will be granted if net income attributable to owners of the parent and similar indicators do not meet the standard set by the Board of Directors.
g.	Time of distribution of shares of the Company to persons eligible for the plan in a.	In principle, when the Company's Directors retire
h.	Voting rights pertaining to shares of the Company in trust	Not to be exercised
i.	Dividends from shares of the Company in trust	To be used for the acquisition of shares, payment of trust fees, etc.

We have introduced a similar stock-based compensation plan for the Presidents of our major domestic subsidiaries and for Executive Officers and other management-level employees of the Company.

For details of the Company's performance-linked stock remuneration plan, please refer to the press release below.
Announcement regarding Introduction of Performance-Based Stock Compensation Plan for Directors

Remuneration Determination Process

The amounts of remuneration and other payments to Directors (excluding Directors who are Audit and Supervisory Committee Members) and their calculation methods are discussed by the Nomination and Compensation Committee comprising two representative Directors and three Independent Outside Directors and finalized with the resolution by the Board of Directors. The Nomination and Compensation Committee, in response to the consultations by the Board of Directors, discusses the appropriateness of the compensation structure, etc. of the Company's Directors (excluding Directors who are Audit and Supervisory Committee Members) and Executive Officers, and submits a report to the Board of Directors also taking into consideration an evaluation of the Company's business results. Upon receiving the report from the Nomination and Compensation Committee, the Board of Directors determines remuneration and other payments to Directors (excluding Directors who are Audit and Supervisory Committee Members).
In fiscal year 2022, after discussions and considerations by the three Nomination and Compensation Committee meetings in accordance with the above procedures, the Board of Directors meeting held on April 28, 2022 resolved on the policy and determination method of remuneration and other payments to Directors (excluding Directors who are Audit and Supervisory Committee Members), and the Board of Directors meetings held on June 30 and December 27 approved the individual amounts taking into consideration the semi-annual business results.

Amount of remuneration in the recent fiscal year (disclosure by officer category)

Remuneration for Directors for fiscal year 2022

Officer category	Number of officers	Total amount of remuneration and other payments by type (thousands of yen)			Total amount of remuneration and other payments (thousands of yen)
		Basic remuneration	<Fixed remuneration within basic remuneration>	Performance-linked remuneration	
Directors [excluding Directors who are Audit and Supervisory Committee Members] (of which, Outside Directors)	7 (1)	216,516 (10,500)	<117,700> <(10,500)>	139,522 (-)	356,038 (10,500)
Directors who are Audit and Supervisory Committee Members (of which, Outside Directors)	6 (5)	75,504 (42,000)	<75,504> <(42,000)>	- (-)	75,504 (42,000)
Total (of which, Outside Directors)	13 (6)	292,020 (52,500)	<193,204> <(52,500)>	139,522 (-)	431,542 (52,500)

(Notes)

1. The upper limit of the total remuneration for all Directors (excluding Directors who are Audit and Supervisory Committee Members) is 460 million yen annually (excluding employee salary) pursuant to the resolution at the 17th Ordinary General Meeting of Shareholders held on March 29, 2016.
2. The upper limit of the total remuneration for all Directors who are Audit and Supervisory Committee Members is 110 million yen annually pursuant to the resolution at the 17th Ordinary General Meeting of Shareholders held on March 29, 2016.
3. As of the end of fiscal year 2022, there were five (5) Directors (excluding Directors who are Audit and Supervisory Committee Members) and five (5) Directors who are Audit and Supervisory Committee Members.
4. In case of net loss attributable to owners of the parent, basic remuneration of Executive Directors will be reduced gradually, depending on the amount of loss, to the amount of fixed remuneration set by their office and rank.

▶ To ESG-oriented Investors

Compliance

Why SUMCO Addresses Compliance

The SUMCO Group recognizes that properly complying with laws, ordinances and expected social norms are critical to the Company fulfilling its social responsibility and essential to the continuous enhancement of the Company's corporate value. Based on this belief, SUMCO strives to promote compliance activities.

SUMCO Charter of Corporate Conduct

For the Group's further growth while fulfilling its social responsibility, the SUMCO Group has instituted the SUMCO Charter of Corporate Conduct to define the norms that the Group's employees should uphold, not only in terms of compliance with laws and ordinances, but also more broadly in terms of CSR in general. The SUMCO Charter of Corporate Conduct is positioned as the highest level of SUMCO regulations, and is placed above the various in-house regulations and compliance programs found within the Group.

The SUMCO Group aims to make the SUMCO Charter of Corporate Conduct understood throughout the Group by preparing it in languages understandable to employees at Group companies overseas, keeping it available on the corporate intranet at all times, and providing education on the SUMCO Charter of Corporate Conduct to all employees on a regular basis.

In accordance with the SUMCO Charter of Corporate Conduct, the Company appoints a Chief Compliance Officer to embody the highest level of responsibility for compliance. The Chief Compliance Officer monitors the status of compliance with the SUMCO Charter of Corporate Conduct by means of compliance supervisors in each department and Group company, regularly reports findings to the Board of Directors, and undergoes review by the Board.

In order to further ensure compliance with laws and ordinances, the Legal Oversight Regulations appoint departments with primary responsibility for continually overseeing those laws and ordinances that are related to the execution of the departments' business. Each responsible department continuously monitors the enactment, amendment and abolishment of relevant laws and ordinances, while the auditing department confirms the status of legal compliance through internal audits.

In the event a problem related to compliance is discovered, the departments involved act in cooperation and under the supervision of the Chief Compliance Officer to immediately investigate the cause of the problem and prevent its recurrence.

Fair Business Activities / Anti-Corruption

SUMCO is committed to promoting fair business activities and preventing bribery and other forms of corruption, and the SUMCO Charter of Corporate Conduct clearly provides for legal compliance, prohibition of unfair competition and improper transactions, prohibition of comprehensive anti-corruption measures such as prohibiting any illegal or improper provision of benefits to and acceptance of benefits from public servants and any party who has business relationships, and prevention of insider trading.

To promote fair business practice and prevent corruption in particular, the Regulations on Handling the Grant of Benefits prohibit (1) unlawful political contributions and donations; (2) entertainment or gifts in connection with the duties of public servants and others; (3) financial benefits in connection with the exercise of shareholders' rights; (4) providing or accepting excessive entertainment, gifts or other such benefits that exceed commonly accepted bounds in society to or from customers, suppliers and potential business partners, and the receiving personal benefits; and any unlawful benefits as well as the entire range of actions that are recognized as wrongful or improper in light of what is commonly accepted in society. The Regulations also define standards for making donations, providing sponsorship, paying entertainment expenses, giving celebratory or condolence gifts, paying membership dues to external organizations, and outsourcing operations and ensure the implementation of them under an appropriate approval process. SUMCO also requires employees to avoid these behaviors when engaging brokers and other agents.

SUMCO makes the Regulations on Handling the Grant of Benefits available at all times on the corporate intranet, and seeks to ensure all employees are fully aware of our policies on promoting fair business practices and preventing corruption. We also provide training on the SUMCO Charter of Corporate Conduct to thoroughly familiarize all officers and employees with it, and the status of compliance with these provisions is regularly reported to the Chief Compliance Officer.

Also note that to date, the SUMCO Group has not paid any fines or made any facilitation payments stemming from political contributions or corruption, nor has the Group been penalized in any way relating to corruption.

Internal Reporting System

SUMCO has established Internal Reporting Regulations and introduced an internal reporting hotline for reporting any act in violation of the SUMCO Charter of Corporate Conduct, including conduct in violation of laws and ordinances, human rights infringements and harassment, comprehensive corruptive act such as bribery and unfair competition, and improper transactions. SUMCO accepts internal reports from our suppliers as well as employees.
To ensure that whistle-blowers can make reports with peace of mind, we have set up an in-house and external (attorney) contact points for internal reports as well as a “suggestion box” that goes straight to top management. Anonymous reports are accepted and all disadvantageous treatment including retaliation against whistle-blowers who make reports is strictly forbidden.
Information on how to use the hotline and about contact points for consultation are posted at all times on the premises of the SUMCO Group, the corporate intranet and our dedicated procurement website, and these matters are also explained to be known for all employees during training on the SUMCO Charter of Corporate Conduct which is conducted regularly for all employees.

Export Control

To ensure thorough export control aimed at maintaining international peace and security, SUMCO has clearly laid out compliance with export control rules in the SUMCO Charter of Corporate Conduct. The Company has established an appropriate export control system in accordance with the Security Export Control Rules where it ensures that exports are only executed after the reviews and examinations of all the requirements to be met, and implemented measures including regular training on export control for employees.

Renouncing Relationships with Antisocial Forces

The SUMCO Charter of Corporate Conduct declares that the Company denounces any kind of relationship with antisocial forces and rejects unreasonable requests or demands from such forces. This is thoroughly disseminated among all executives and employees of the Company through education and training.

Initiatives on Intellectual Property

As its basic policy, the SUMCO Group attaches importance to intellectual property and utilizes it as a strategic tool for the Group's business, while at the same time respecting the intellectual property rights of third parties, which is explicitly stated in the SUMCO Charter of Corporate Conduct. Based on this policy, we have set forth rules on how we obtain, maintain, utilize intellectual property and prevent infringements as well as respecting the intellectual property rights of third parties in the Intellectual Property Regulations, and provide regular education on intellectual property matters to employees. We also actively and continually pursue efforts to facilitate the effective utilization of intellectual property, including an inventor commendation scheme designed to encourage invention and improve the quality of patent applications. Obtained intellectual property rights are also reviewed periodically to eliminate obsolete intellectual property so as to keep costs at a reasonable level.

Inventor commendation

Key Elements of the SUMCO Charter of Corporate Conduct

Based on SUMCO CSR Policy, the SUMCO Charter of Corporate Conduct broadly defines the norms that the Company's employees should uphold in terms of CSR in general.

- Compliance with laws and ordinances, international rules and social norms
  In addition to complying with relevant laws and ordinances in Japan and overseas, the Charter holds SUMCO and its employees to more stringent standards with respect to anti-corruption, promotion of fair business activities such as prohibiting any illegal or improper provision of benefits to and acceptance of benefits, etc. During training on the Charter, we also cover international CSR requirements such as the RBA (Responsible Business Alliance) Code of Conduct and require employees to understand thoroughly.
- Respecting human rights and maintaining safe, comfortable and appropriate workplace environments
  We strive to cultivate a comfortable and appropriate workplace by advancing safety and health in accordance with labor standards in Japan and overseas. In an effort to respect the human rights, abilities and individuality of all employees, we also strictly prohibit discrimination on the basis of unreasonable factors including nationality, race, age, gender and religion, as well as various forms of harassment.
- Information management and intellectual property protection
  In light of the fact that information and intellectual property rights represent the source of corporate competitiveness, the Charter specifies proper information storage and management as well as prevention of leakage, and also establishes provisions concerning the utilization of intellectual property rights while prohibiting conduct that infringes upon the confidential information and intellectual property rights of others.
- Protecting the environment
  The Charter also sets forth provisions on how SUMCO should comply with environmental laws and ordinances while making every effort to reduce waste and pollutants, and also requires employees to understand this policy and act with an awareness of environmental conservation on a daily basis.
- Improving quality
  To improve customer satisfaction and mitigate the risks inherent in product liability, the Charter requires diligent efforts to maintain and improve the quality of our products and services.

Conflict Minerals

We understand that none of tantalum, tin, gold or tungsten is necessary to the functionality or production of a product manufactured by us, and that thus our product is not subject to the Conflict Mineral regulations under the Dodd-Frank Wall Street Reform and Consumer Protection Act of the United States of America established in 2010.

▶ To ESG-oriented Investors

Risk Management

Why SUMCO Addresses Risk Management

The Silicon wafer business is a critical industry that supports our IT-oriented society, and the SUMCO Group is responsible for the stable supply of silicon wafers to semiconductor device manufacturers around the world. For this reason, the SUMCO Group regards business continuity as a key management concern.
The Business Security Committee (BSC), which is an organization responsible for company-wide risk management, identifies, analyzes and assesses risks, implements countermeasures and promotes risk management activities including the formulation of business continuity plans (BCP), with the aim of predicting risks in advance, preventing them from being realized and minimizing damages when a risk is realized.

Risk Management Basic Policy

SUMCO has set forth basic matters pertaining to risk management in the Basic Rules on Risk Management, under which we undertake risk management activities.
Our basic approach to responding to risks involves the following two points.

1. Prioritize the handling of risks by likelihood of occurrence and severity of impact from the viewpoints of ensuring optimum allocation of management resources and the effectiveness of risk management.
2. Minimize damage and loss by preventing the suspension or discontinuation of business activities to ensure business continuity in the event of an accident or other emergency situation.

SUMCO's Risk Management Framework

1. Risk Assumptions and Identifying Risk

SUMCO analyzes risks that could impact business continuity for SUMCO's departments, plants, offices, and SUMCO Group companies, identifies the level of impact for each risk, and assigns priority to each risk in accordance with the Basic Rules on Risk Management mentioned above.
Risks which pose a major threat to business continuity are defined in the Basic Rules on Risk Management.
When taking on a new business as well, we use a same process to analyze business risk and assign priority.

Major Risks Recognized in the Basic Rules on Risk Management

1. Risks Related to General Management
   Examples: Contractual disputes, investment in new businesses, geopolitical risks
2. Risks Related to Accidents and Disasters
   Examples: Earthquakes, wind and flood damage, water and electric power service interruptions
3. Risks Related to Discontinuation of Business
   Examples: Fire, equipment accidents, production impediments, disruptions to raw material procurement, massive shortage of operators due to pandemics or other factors, mission-critical systems failure
4. Risks Related to Compliance
   Examples: Antitrust violations, violations of laws related to corruption and anti-corruption, violations of employment and labor standards-related laws and ordinances, violations of environmental regulations
5. Risks Related to Information
   Examples: Leaking of trade secrets, network shutdowns
6. Risks Related to Intellectual Property
   Examples: Infringing upon intellectual property rights or suffering infringement
7. Risks Related to Human Resources, Employment, and Human Rights
   Examples: Labor issues, human rights violations, harassment, occurrence of scandals, crimes and other incidents
8. Risks Related to Taxation and Accounting
   Examples: Funding impediments, rapid exchange rate fluctuations
9. Risks Related to Products and Services
   Examples: Quality issues, complaints
10. Risks Related to Safety and Health
    Examples: Industrial accidents, employee's health issues due to outbreak of infectious disease or other factors
11. Risks Related to the Environment
    Examples: Pollution, environmental accidents
12. Risks Related to Credit
    Example: Bankruptcy of a customer

2. Determining Policy with regards to Risk Countermeasures and Reporting the Status of Such Countermeasures

Responsibility for each risk is allocated between departments according to the priority established in (1) above, and the policy on risk countermeasures is determined via discussion within a company-wide committee known as the BSC (Business Security Committee). The BSC meets every year, with not only the Chairman & CEO and other senior management in attendance, but also responsible members of each department, factory, plant and group companies worldwide. It decides company-wide policy regarding risk management, deliberates and determines risk prevention measures, discusses responses on cross-department risks and new risk phenomenon and exchanges a broad range of information about risk management in general.

BSC's Structure and Objectives

1. Structure

BSC (Business Security Committee)

Chair: CEO & Chairman of the Board
Members: Vice Chairman; President; Executive Vice President; Managing Executive Officers in charge of a Division; Executive Officers in charge
Secretariat: General Affairs Dept.

- Department
- Group companies in Japan
- Overseas Group companies

2. Objectives

The BSC undertakes the following risk management activities.

a. Discuss and decide on company-wide risk management policies.
b. Discuss and decide on risk prevention measures.
c. Discuss how to respond to new risk events.
d. Share information on risk management.
e. Promote risk management awareness across the Company.
f. Assess and follow up on the progress of risk manegement.

3. Response to Each Risk

Each department, factory, plant, and SUMCO Group company responds to risk in accordance with the policy confirmed by the BSC, creates a business continuity plan (BCP; described later) and other necessary frameworks, and implements training and other regimens designed to improve response in emergency situations. In this way, we strive to prevent risks from manifesting, minimize damage and strengthen business continuity. The status of risk countermeasures is reported to the BSC mentioned above each year and reviewed by the senior management.

Ensuring Business Continuity

Our Basic Rules on Risk Management define business continuity as an important management issue, and we have been working to develop and improve our BCP (business continuity plan) to ensure business continuity.
The details of the BCP, and its state of improvements, the results of trainings and drills, and other matters are reported on the BSC, and the BSC verifies the effectiveness of the BCP, and determines policies on future action to be taken. Each department and group company improves the BCP further according to the policies.
In 2022, we confirmed procedures to transfer head office operations elsewhere, the implementation status of drills and exercises carried out by each department and issues to be addressed in the future based on the assumption of a large-scale earthquake beneath the Tokyo metropolitan area which leads the disfunction of Tokyo Head Office. These efforts were part of activities to further enhance the BCP readiness of the head office.
We also conduct integrated emergency response drills at each plant, which include activities such as evacuation, firefighting, reporting, rescue, emergency relief and transportation in the event of a disaster such as an earthquake. In addition to those drills above, we also conduct regular BCP training to confirm procedures and the contents of the BCP and enhance our response capabilities. Continuous improvements are made by reviewing the training results, identifying issues, and revising procedures and other contents after conducting the drills. Furthermore, at each site, we are implementing measures to minimize damage and ensure swift recovery in the event of a disaster such as an earthquake. This includes facility improvements such as installing earthquake-resistant measures seismic reinforcement and stockpiling necessary tools, materials and equipment to promptly resume production.

Integrated Emergency Response Drill

Integrated Emergency Response Drill

BCP training at Miyazaki Plant of SUMCO TECHXIV Corporation

Improvement in Emergency Response Capability

The SUMCO Group has established a manual to enable speedy response, ensure employee safety, protect company assets and restart business operations as soon as possible in the event of a large-scale earthquake or other disaster/accident. The manual sets out items concerning the preparation of stockpiles for disaster prevention, the initial response to be taken at each site after a disaster has struck, as well as the establishment and roles of an Emergency Response Team in the event of an emergency. Additionally, we regularly conduct initial firefighting drills such as the handling of fire extinguishers and fire hydrants, and training on the employment of lifesaving measures such as CPR and AED usage, in order to reduce damage in the event of a disaster. We also conduct exercises such as carrying drills using cloth stretchers to simulate an evacuation by stairs to further enhance employees' ability to respond in an emergency.
Additionally, at our Kyushu Factory we periodically conduct joint response drills with suppliers that deliver chemicals to our sites so that all involved can take safe and smooth action in the event of a leakage of chemicals during delivery.

First Aid Drill

Lifesaving Training

Information Management

The Company understands the importance of information in business operations and clearly stipulates the appropriate use and management of our trade secrets and all other information including confidential information received from others in the SUMCO Charter of Corporate Conduct. We have also established the Rules on Information Management along with related regulations, guidelines and other materials. We make every effort to appropriately manage and prevent leaks of our trade secrets and confidential information received from customers, suppliers and other parties by conducting regular training for all employees on these information management rules and information security.
In an effort to prevent computer system-related leaks and stop information from leaking outside the Company, the Company also implements a range of measures, under the supervision of the General Manager of AI Promotion Division who is responsible for information security, to address various risks, such as external attacks on our computer systems via the internet, the unauthorized use of computer systems and viruses that target computer systems. Regarding security incidents, we have established a Computer Security Incident Response Team (CSIRT) and implemented a system to ensure appropriate response, including the establishment of countermeasure manual. Additionally, SUMCO has established the Rules on Personal Information Management in accordance with the Act on the Protection of Personal Information to ensure that personal information is managed appropriately.

Safety Confirmation System

The SUMCO Group has introduced a "Safety Confirmation System" which enables quick conformation of the safety status of employees working in Japan. We think the system also helps speed up post-disaster recovery efforts.

Computer System-related Disaster Countermeasures

The Company has ensured redundancy for mission-critical and peripheral systems used on a company-wide basis, establishes equivalent backup servers and performs data synchronization in order to continue business operation even in the event that a server installation location is damaged by a large-scale disaster such as a major earthquake.
We conduct regular drills on switching to backup servers to confirm our switchover procedures and other details.

Voice

Katsuhito Asahi, Unit Leader
Nagasaki Safety and Disaster Prevention Section, General Affairs Department, SUMCO TECHXIV Corporation

Q. Please describe the status of implementation and the level of participation in the emergency response drills you conduct at the plant.

For integrated emergency response drills, we envisage a major earthquake measuring upper 6 on the intensity scale having occurred. With the disaster control headquarters comprised of key executives and managers we mainly confirm the actions taken in the initial response. In recent years we have focused the drills on confirming the safety of employees, searching for missing people, conducting rescue and relief activities, providing emergency medical care and selecting multiple safe evacuation routes from the perspective of placing the highest priority on human life. In fiscal year 2019, more than 400 people in Nagasaki Plant took part in the drills, a figure which suggests a heightened interest in disaster prevention among employees. We also conduct late-night emergency response drills for shift workers, envisaging a scenario in which a major earthquake strikes at night, including coordination with disaster-prevention centers . Each year when we conduct our emergency response drills, we ask the local Omura Fire Department to attend. In addition to reviewing the drills overall, the members of the fire department offer valuable insight and guidance on where we need to improve from their perspective as professionals. Moving forward, we will share these areas for improvement with employees through internal meetings, continue to coordinate with the local community with the aim of further raising our disaster mitigation and prevention levels, and ensure our capacity for self-help, cooperation, and public assistance in times of disaster.

▶ To ESG-oriented Investors

SUMCO Group Taxation Policies

Basic Approach

Based on the SUMCO Group mission to be the world's No. 1 silicon wafer supplier by exceeding the expectation of our customers and stockholders, by recognizing the value of our employees and being good neighbors in communities, SUMCO Group shall conduct its business activities faithfully in accordance with law and ethics, and shall fulfill its responsibility to society.
SUMCO Group understands that the proper payment of taxes in accordance with the relevant laws and regulations of each country contributes to economic growth and development of society in each country, and helps toward living up to the support and trust of all stakeholders.
SUMCO Group shall endeavor, in ways like the following, to achieve timely compliance with revisions to the taxation system in each country and with trends in international tax frameworks, and to establish a tax compliance framework that is suitable at all times.

Observance of Tax Laws

SUMCO Group shall always observe tax-related laws and regulations in each of the countries and regions where it does business and fulfill its tax obligations in all countries and regions.

Engagement in International Tax Frameworks

SUMCO Group understands that the OECD BEPS (Base Erosion and Profit Shifting) project and other international initiatives are important undertakings for achieving tax transparency and preventing international tax avoidance.
Along with observing the tax laws in each country, SUMCO Group shall therefore conduct its tax affairs in accordance with the intent of international initiatives, endeavoring to ensure tax transparency.
In transactions with related parties in other countries and regions, SUMCO Group shall consider Arm's Length Price (ALP), and based on analysis of the functions, assets, and risks both between countries and between subsidiaries, distribute earnings appropriately according to their contribution.

Thinking on Tax Planning

SUMCO Group understands that transactions without a legitimate business purpose or economic rationality are an impediment to achieving tax transparency, and have the potential to harm the Group business value and the interests of stakeholders including local communities.
SUMCO Group shall not conduct tax planning aimed at tax avoidance, such as the use of structures without commercial substance, the transfer of value created to low tax jurisdictions, or the use of tax havens.

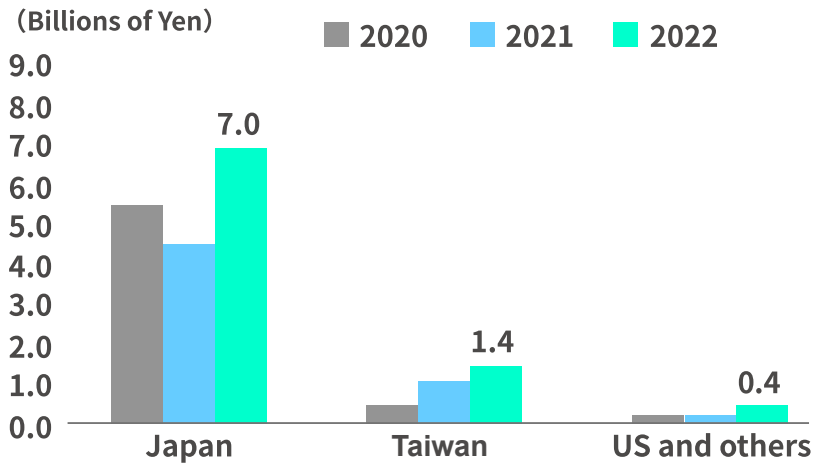
Provision of an Internal Framework for Tax Compliance

SUMCO Group, understanding the importance of instilling and reinforcing awareness of tax compliance in management and employees for the proper functioning of the tax compliance framework, shall seek to raise such awareness through education, information sharing, and consultations on proper handling of tax affairs.
Moreover, seeing tax-related risk as a material risk for business administration, SUMCO Group shall identify and analyze tax-related risk based on the risk management structure, and senior management shall perform regular annual checks of the status in dealing with issues for risk mitigation.

Establishment of Appropriate Relations with Tax Authorities

SUMCO Group shall comply with the tax administration procedures and tax collection procedures of each country. It shall maintain normal, sound relations with tax authorities and shall not provide improper benefits.

Reference: SUMCO Group Income Taxes by Country



Income Taxes Paid

	2020		2021		2022	
	Income Taxes Paid (Billions of Yen)	Number of Employee	Income Taxes Paid (Billions of Yen)	Number of Employee	Income Taxes Paid (Billions of Yen)	Number of Employee
Japan	5.4	5,885	4.6	6,095	7.0	6,710
Taiwan	0.4	1,364	1.1	1,427	1.4	1,523
US and others	0.2	950	0.2	947	0.4	956
Total	5.9	8,199	5.9	8,469	8.8	9,189

▶ To ESG-oriented Investors

Steady Progress in Digital Transformation (DX)

SUMCO established the AI Promotion Division in 2018. Today we are successfully applying AI technologies to manufacturing activities in system infrastructure areas including production control and process control. For each stage of the production processes, for example, we are collecting quality information and process information as Big Data, and associating and analyzing this information toward both greater productivity and higher quality, as we build the capability for real-time prediction. In addition, we are seeking to raise our competitiveness in commodity areas having the biggest demand, establishing a firm profit base.
Our aim is to be the top company in the area of digital transformation (DX).

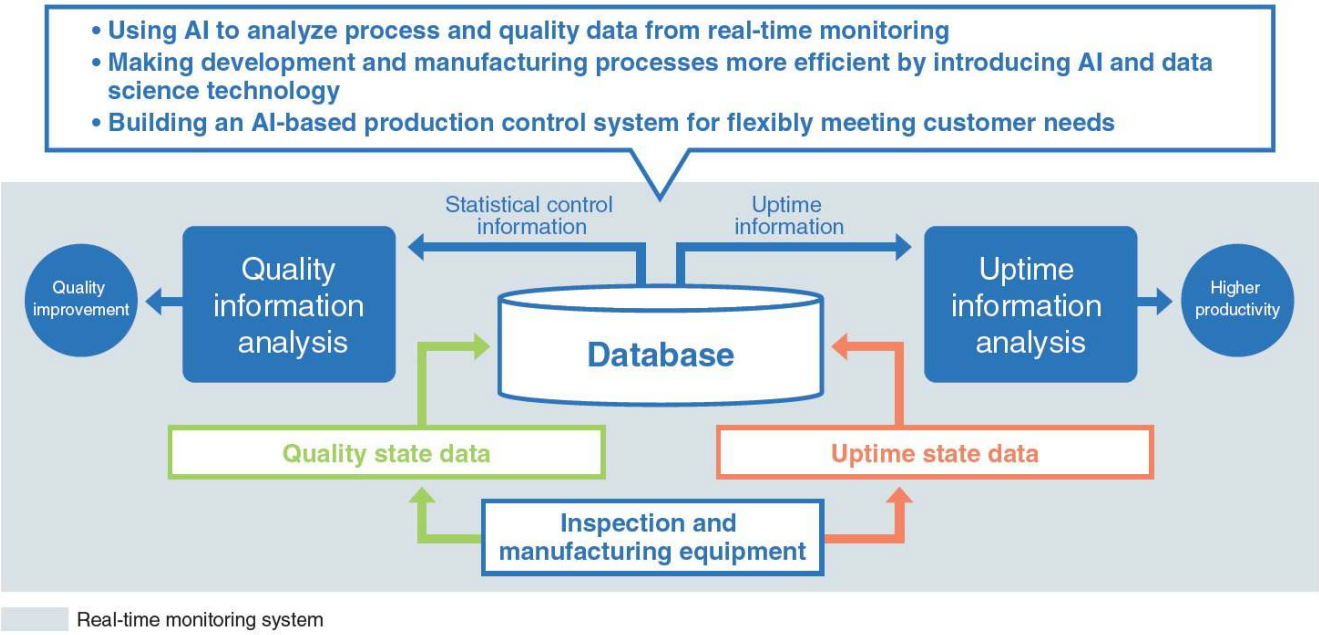
Main aims of our digital transformation

We are working to achieve real-time monitoring and automation of production processes and to establish a production capability and production plans capable of flexibly meeting market demand fluctuations. We are also seeking to increase the agility of the organization by expanding the areas where AI is employed. By realizing rapid data analysis in the technology fields of our leading-edge products, and speeding up the time from development to mass production, we are further boosting our competitive advantage.

DX Promotion Strategy

More efficient manufacturing and development through digital transformation (DX)

We are promoting DX based on the know-how and vast data assets we have accumulated over many years of business activities.



By introducing these technologies, we are seeking to improve productivity and quality, and to achieve stable operation, in such ways further boosting our competitive advantage. Toward becoming a more agile company, we will further promote digital transformation by introducing AI technology, enabling us to adapt quickly to changes in the market environment.

Successes and extent of achievement to date

Improving productivity at plants based on AI technology, data science, and IoT technologies

One of the chief objectives in pursuing DX at SUMCO is to raise the productivity of our plants, enabling us to meet the voracious demand for semiconductors.
The Production Division and AI Promotion Division worked closely together to tackle productivity issues, achieving an improvement of more than 10% in total wafers produced at our main 300 mm wafer plant, where there was no leeway for adding new equipment.
This much improvement is equivalent to more than 30 billion yen saved in capital expenditures and more than 4 billion yen in additional annual profit.

- It was achieved by taking measures like the following.
  - Devised the means for real-time acquisition and visualization of operation status and processing efficiency for all equipment in the plant.
  - Made a detailed quantitative assessment of production line balance and bottlenecks, and implemented an array of measures focused on raising processing efficiency.
  - By means of per-second time chart analysis, reduced operation variability across equipment to an absolute minimum.
  - Eliminated logistics waste based on a detailed analysis of actual conveyance data inside the plant.
  - Employed machine learning to automate specialized decision-making that had relied on the expertise of engineers, reducing process stoppage time.
- Further, through such steps as linking automated guided vehicles (AGV) and collaborative robots (co-bots) with production equipment, we are actively taking on the challenge of transforming existing plants into smart factories, as we continue with efforts to raise labor productivity and create a better working environment for employees.

Deploying DX tools to promote operation efficiency

DX tools is the general term used at SUMCO for tools that support operation efficiency, including BI tools,※1 RPA,※2and workflow systems.※3and workflow systems.
The results so far are work savings of more than 100,000 hours a year, and reduction in paper use by more than 150,000 sheets a year.
By continuing to introduce DX tools of various kinds and making them a regular part of operations, we will seek to improve product quality along with work efficiency.

Adapting flexibly to different work styles in the “new normal” era

Even before the pandemic, we had introduced a secure remote work system from the standpoint of BCP (business continuity planning). Taking advantage of this system, we switched to a full teleworking arrangement in the Tokyo region from the beginning of April 2020, ahead of the first state of emergency declaration.
Meetings to discuss management decisions were also changed to remote ones, and management has continued to be carried out seamlessly making use of the electronic approval system already in place.
While adapting to work styles for a new era, we will continue implementing measures aimed at achieving a high level of diversity.

※1 BI tools（BI＝Business Intelligence）
Tools used to collect and analyze various data in support of on-site and management decision making.
※2 RPA（RPA＝Robotic Process Automation）
Technology for automating computer-based processes and tasks to replace human labor.
※3 Workflow system
A system that computerizes various requests in an organization to make the checking and approvals process more efficient.

▶ To ESG-oriented Investors

Environmental

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Environmental Management

Why SUMCO Addresses Environmental Issues

From energy-saving initiatives to curbing greenhouse gas emissions and reducing waste, lowering the environmental load by the business activities of companies is a pressing task to ensure that the global environment is maintained and protected.
To ensure that the irreplaceable global environment is passed on to future generations, the SUMCO Group has established an environmental management system. We have obtained ISO14001 certification for all of our plants, and pursue initiatives aimed at protecting the environment.

SUMCO Environmental Policies

1. Basic Environmental Philosophy

As a manufacturer of high-quality silicon wafers for semiconductors and of quartz crucibles, SUMCO has established the following action guidelines and is committed to self-initiated and sustained environmental conservation activities to pass on the Earth's irreplaceable environment to future generations.

2. Environmental Action Guidelines

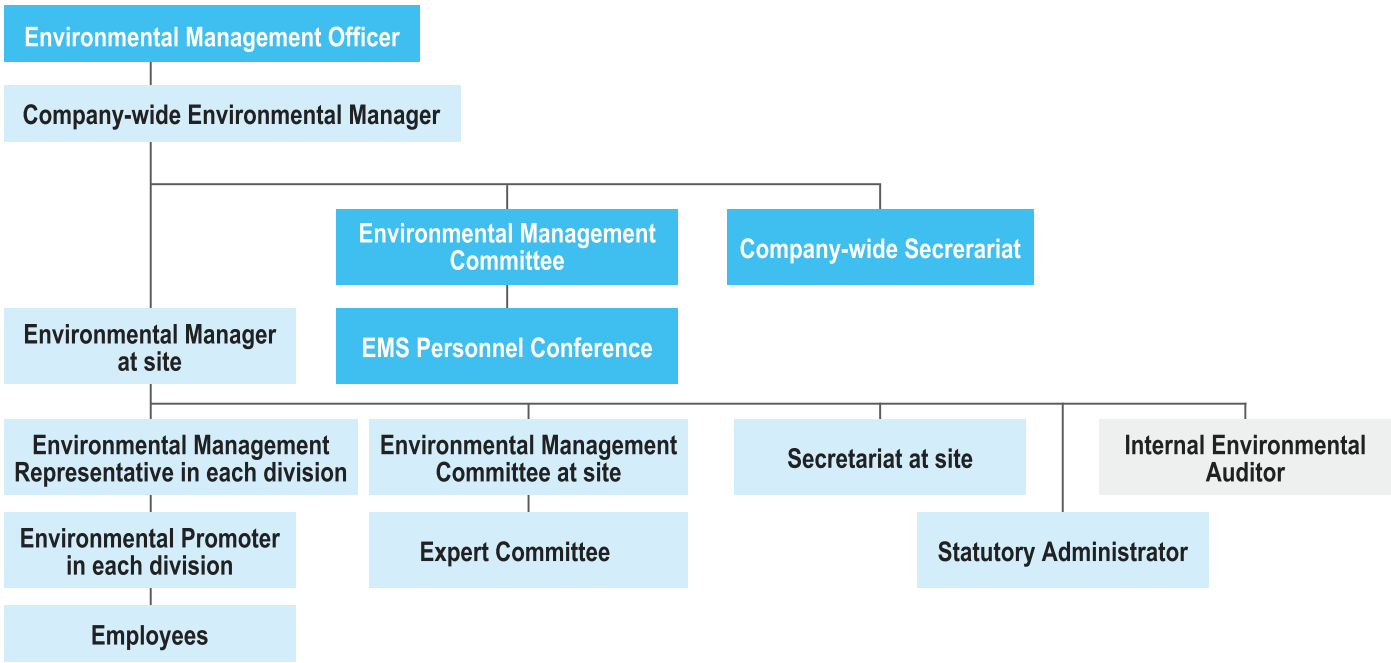
1. Through our business activities, we shall pursue activities with an emphasis on the following points.
   (1) We shall act to conserve electricity and other energies consumed by our business activities, thereby curbing emissions of greenhouse gases.
   (2) We shall strive to reduce waste and increase recycling and reuse rates.
   (3) We shall strive to reduce and recycle water used in our business activities.
   (4) We shall strive to reduce chemical substances used in our business activities.
   (5) We shall thoroughly manage the harmful chemical substances and waste, thereby reducing the risks to the environment.
2. We shall abide by environment-related laws and regulations, bylaws, and other agreed requirements.
3. We shall strive to prevent environmental pollution in our entire business activities and undertake efforts to protect the global environment and coexist in harmony with local communities.
4. We shall promote green procurement with our suppliers, thereby reducing environmental load.
5. We shall define environmental objectives, and by periodically reviewing these objectives, shall promote continuous improvement of our environmental management system.
6. We shall endeavor to consider and conserve biodiversity.

May 1, 2021

Environmental Management Structure

The SUMCO Group has established the Environmental Management Structure in which the Environmental Management Officer, a member of the board of directors, appoints the Company-wide Environmental Manager and the Environmental Managers at site, and defines their roles, responsibilities and authorities. Thoroughness of instructions and information sharing are ensured at meetings of the Company-wide Environmental Management Committee and the Environmental Management Committee at each site, both of which are convened periodically. SUMCO's Environmental Management Officer holds chief responsibility for issues related to climate change and has chief authority regarding those issues. The Environmental Management Officer convenes meetings of the Environmental Management Committee and monitors SUMCO's efforts to address climate change.

Environmental Management Structure



Tackling climate change (Goals for Carbon Neutral)

Tackling climate change is one of the goals in SDGs, and delinking of economic growth and environmental degradation is strongly required.

The SUMCO Group, which supports the growing semiconductor industry, set goals for carbon neutral covering Scope 1+2 in September 2021 toward the realization of a sustainable society.

Target Year	2030 (Mid-term Goal)	2050 (Long-term Goal)
Goals	33% reduction from 2014 (2.5% reduction per year) [in conformity to 2℃ scenario of SBT (※1)]	100% reduction (Carbon Neutral) [in conformity to the declaration aiming carbon neutral by 2050 by the Government of Japan]
Initiatives	Continuous energy-conservation activities Further introduction of more renewable energy (such as Solar power generation, etc.) Procurement of non-fossil electricity (such as J-Credit and Non-Fossil Certificates), etc.	

(※1) Science Based Targets

Reduction targets of greenhouse gas emissions set by companies that comply with the standards of the Paris Agreement.

Unit energy usage goal

In addition to the goals targeting carbon neutral, we set an unit energy usage goal in 2019.The CO_2 emissions related to the unit consumption calculation are the actual emissions of Scope1+2 (no carbon offset) and we shall strive to reduce CO_2 emissions by reducing energy consumption and improving energy efficiency in our corporate activities.

Target Year	2030
Goal	14.9% reduction from 2014 (1.0% reduction per year) (CO_2 emission in 2014 : 821,000 tons-CO_2)
Initiatives	Continuous energy-conservation activities

Environmental Objectives

The SUMCO Group sets environmental objectives for each of its operating bases based on its Environmental Policies and the results of environmental load assessments that are conducted periodically. We implement initiatives at each site to reduce environmental load in accordance with these objectives, such as reducing CO_2 emissions, chemical substances used, industrial waste generated, and water used. The accomplishments are reported and reviewed semiannually in the Environmental Management Committee and the targets are revised as needed. The standard values are based on the results of the previous year.

2022-2025 Environmental Objectives and 2022 Results

	BM*1	2022		2023	2024	2025
		Objectives	Results	Objectives	Objectives	Objectives
Reduction of CO_2 emissions Scope1+2	Previous year's results	0.5%	0.6%	0.4%	0.4%	0.4%
Reduction of chemical substance use		0.9%	1.1%	0.7%	0.7%	0.7%
Reduction of industrial waste (reduction of hazardous waste*2 released)		1.2% (0.31%)	1.4% (0.24%)	0.7% (0.06%)	0.7% (0.06%)	0.7% (0.06%)
Reduction of water consumption		0.5%	0.5%	0.4%	0.4%	0.4%

· Performance is evaluated every six months, and target values for the next fiscal year and beyond are set after scrutinizing items for horizontal development at each business site.

*1 BM : Benchmark

*2 Hazardous waste is defined as "specially controlled industrial waste" stipulated by the Japanese Waste Management Law.

Reduction Objectives for Each Base of Operations (9 Manufacturing Bases in Japan)

Site	BM	2022							
		Reduction of CO_2 emissions		Reduction of chemical substance use		Reduction of industrial waste		Reduction of water consumption	
		Objectives	Results	Objectives	Results	Objectives	Results	Objectives	Results
Kyushu Factory (Nagahama, Imari)	Previous year's results	0.5%	0.6%	0.7%	1.0%	1.5%	1.9%	0.2%	0.3%
Kyushu Factory (Kubara, Imari)		0.4%	0.4%	2.0%	2.5%	1.0%	1.1%	0.01%	0.01%
Kyushu Factory (Saga)		0.4%	0.4%	0.2%	0.3%	0.3%	0.3%	0.1%	0.1%
Yonezawa Plant		0.9%	0.9%	4.4%	4.1%	3.8%	4.1%	0.1%	0.2%
Chitose Plant		0.3%	0.3%	0.03%	0.02%	0.0%	12.5%	0.1%	0.1%
JSQ Division		0.6%	1.8%	0.2%	0.0%	2.6%	5.2%	2.1%	2.1%
SUMCO Technology Corp. Noda Plant		3.7%	3.7%	0.1%	0.1%	0.0%	0.0%	0.4%	0.4%
SUMCO TECHXIV Corp. Nagasaki Plant		0.4%	0.5%	0.2%	0.2%	0.7%	0.7%	1.3%	1.3%
SUMCO TECHXIV Corp. Miyazaki Plant		0.5%	0.5%	0.1%	0.1%	0.0%	0.0%	0.9%	0.9%
Total		0.5%	0.6%	0.9%	1.1%	1.2%	1.4%	0.5%	0.5%

- As our efforts for reduction in CO_2 emissions, we have promoted reducing electricity usage by upgrading coolers, among other initiatives.
- As our efforts for reduction in use of chemical substances, we have promoted changing the chemicals used for wastewater treatment, among other initiatives.
- As our efforts for reduction in industrial waste discharge, we have promoted reducing sludge by installing waste liquid concentrators, among other initiatives.
- To reduce the amount of water used, we are working to improve the recovery rate of pure water used on-site and optimize the amount of blow water.

Environmental Risk Management

The SUMCO Group identifies environmental risks in the Basic Rules on Risk Management, including risk related to climate. Identified risks are incorporated into an initiative plan for environmental risks such as environmental pollution and extreme weather due to global warmings under the BSC and environmental management system. Then, the achievements are reported to the Environmental Management Officer as well as BSC and reviewed by top management.

Environmental Education

Education and Training Targeted at Suppliers to Increase Understanding of the Environmental Policies and Prevent Environmental Accidents

The SUMCO Group provides environmental education to supplier of chemicals and other products and to industrial waste treatment firms covering SUMCO's Environmental Policies, prevention of environmental accidents and compliance with laws and ordinances.
In 2022, we conducted online group training and document distribution training to prevent infection due to the COVID-19 pandemic. As for the results of the training, we receive training records from each company to confirm the level of understanding.

Contents of Education

1. Requests for vehicle inspections to prevent fuel, oil and other substances from leaking
2. The importance of SUMCO personnel being present at the time of delivery or collection, and request that their instructions be followed
3. Request for inspection of industrial waste collection vehicles, particularly to prevent leakage or dripping of sludge, liquid waste, etc.
4. Introduction to actual environmental accidents that occurred at the Company in the past

Environmental Accounting

In accordance with Ministry of the Environment's Environmental Accounting Guidelines 2005, the SUMCO Group calculates the results of our group (Japan) from January 2022 to December 2022.

Environmental Costs

(million yen per year)

Investments	763
Expenses*1	4,675

*1 Internal labor cost, depreciation expenses and energy costs (electric power, fuel, water, etc.) related to operation are not included.

Environmental Conservation Benefits, Economic Effect

Category (Unit)	Environmental Conservation Benefits (2021-2022)*2	Economic Effect (million yen)*3
Electricity consumption (GWh)	(70)	140
Fuel consumption (crude oil equivalent kL)	(460)	
Water consumption (Mm^3)	(1.8)	
Chemical substance consumption (t)	(180)	
Industrial waste emissions (t)	(2,600)	

*2 The negative value indicates that the increase in environmental impacts exceeded reductions due to increases of production volume and trial productions that does not contribute to sales.

*3 Calculated by our original estimating method.

Environmental Audits

Through the SUMCO Group, internal environmental audits are conducted by internal auditors, while environmental management system audits are implemented by an outside review organization.

Internal Environmental Audit

Internal environmental audits are annually conducted by internal auditors for all organizations in the SUMCO Group subject to the Company's environmental management system. The results are reported to the Environmental Management Officer and reflected in the following year's activities to enable continuous improvement of the environmental management system.

Environmental Management System Audit

The SUMCO Group is subject to regular audits conducted every year and a renewal audit conducted every three years by an external independent auditor. Any nonconformity was not found in the audit conducted in 2022.

Compliance with Environmental Legislation

The SUMCO Group identifies the requirements of laws, regulations and agreements and verifies compliance. None of the items which is incompliance with laws and regulations were found in 2022. We also ensure compliance with overseas chemical substance regulations, namely the Restriction on Hazardous Substances (RoHS) Directive and Regulation on Registration, Evaluation, Authorization and Restriction of Chemical Substances (REACH).

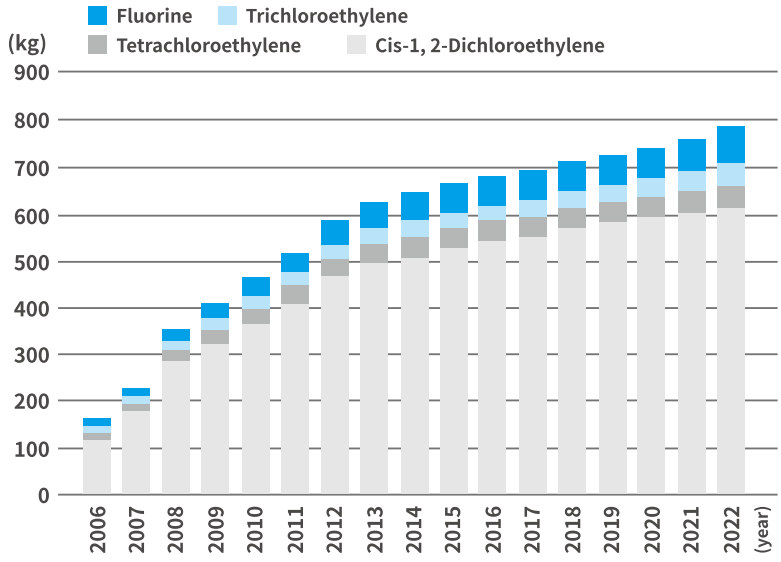
State of Compliance with Environmental Laws and Regulations

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
Violations	0	0	0	0	0
Fines (yen)	0	0	0	0	0

Progress of Soil and Groundwater Contamination Countermeasures

The SUMCO Group conducts soil and groundwater contamination surveys at all facility sites.
In a voluntary survey implemented at the Noda site in 2005, it was found that amounts of volatile organic compounds (VOC) and fluorine exceeded the soil and groundwater environmental standard values. We have been pursuing countermeasures in consultation with relevant parties. At present, we are working to prevent the spread of and recover contaminated substances by using a pumping well set up near the boundary of the plant grounds.

Accumulated Amount of Contaminated Substances ecovered Annually from Groundwater at the Noda Plant



In fiscal year 2022, there were no new incidents related to industrial water/wastewater across the SUMCO Group.

ISO 14001 Management System Certificate

- ISO 14001 Management System Certificate [4.8MB/5Pages]
- To ESG-oriented Investors

Environmental Load of Business Activities

The depletion of energy resources, global warming, threats to biodiversity and other environmental problems are having an increasingly serious impact on the global environment. The SUMCO Group identifies forms of energy such as electric power, chemical substances, waste products and wastewater as significant environmental aspects in its production activities and pursues initiatives to make environmental considerations and reduce the environmental load across all of its business activities.

Business Activities and Environmental Load in 2022 (SUMCO Group [Japan])

Input

Energy

Electricity	1,571 GWh
(crude oil equivalent)	395,942 kL
Fuel(crude oil equivalent)	7,181 kL

Water

Industrial water	13.5 Mm^3
Tap water	0.1 Mm^3
Groundwater	3.8 Mm^3

PRTR-reguleted substances

Amount handled	1,082 t

Business activities

Product development

- Environmental assessment

Procurement

- Safe raw materials
- Use of recycled materials

Production

- Energy conservation
- Compliance with laws and ordinances
- Reduced water consumption
- Reduced use of chemical substances
- Reduced emissions of pollutants
- Reduced amount of waste

Transport

- Use of reusable shipping cartons
- Reuse of materials
- Improved transport system

Output

CO_2 emissions 555 thousand tons-CO_2

Breakdown

Electricity*	531 thousand tons-CO_2
Fuel	23 thousand tons-CO_2

CO_2 emissions from transport

7 thousand tons-CO_2

Discharged wastewater

Ocean	8.0 Mm^3
Rivers	3.5 Mm^3
Sewerage	3.6 Mm^3

Waste

Ordinary business waste	335 t
Industrial waste	28,238 t
Specially controlled industrial waste	4,239 t

PRTR-reguleted substances

Amount released	12 t
Amount transferred	316 t

* CO_2 emissions from electricity are calculated using the CO_2 emission coefficient of each electric power supplier.

List of Boundaries

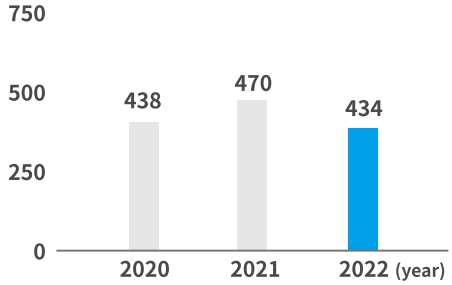
Site		Energy usage	CO_2 emissions stemming from energy usage	Water used/ waste-water	Industrial waste generated	VOC emissions	PRTR emissions	Atmos-pheric pollutant emissions	Abbre-viation
Includes SUMCO Group companies in Japan	Kyushu Factory (Nagahama, Imari)	○	○	○	○	○	○	○	SUMCO
	Kyushu Factory (Kubara, Imari)	○	○	○	○	○	○	○	
	Kyushu Factory (Saga)	○	○	○	○	○	○	○	
	Yonezawa Plant	○	○	○	○	—	○	—	
	Chitose Plant	○	○	○	○	○	○	—	
	JSQ Division	○	○	○	○	—	○	○	
	SUMCO TECHXIV Corp. Nagasaki Plant	○	○	○	○	○	○	○	STC
	SUMCO TECHXIV Corp. Miyazaki Plant	○	○	○	○	○	○	○	
	SUMCO Technology Corp. Noda Plant	○	○	○	○	—	○	○	STEC
SUMCO Group Companies Overseas	SUMCO Phoenix Corporation	○	○	○	○	—	—	○	SPX
	PT. SUMCO Indonesia	○	○	○	○	—	—	—	SPTI
	FORMOSA SUMCO TECHNOLOGY CORPORATION	○	○	○	○	○	○	○	FST

* Including all Japan and overseas sites.

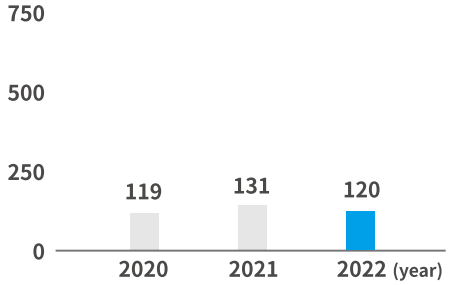
Environmental Load (Japan)

CO_2 emissions (Japan) (thousand tons-CO_2 per year)

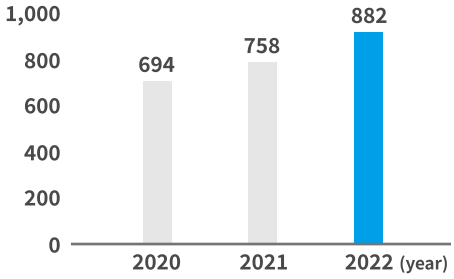
SUMCO (Scope 1+2)



STC (Scope 1+2)

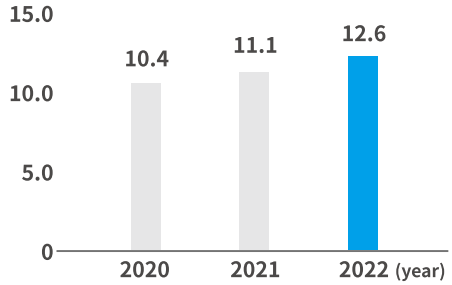


Scope 3 (Japan)

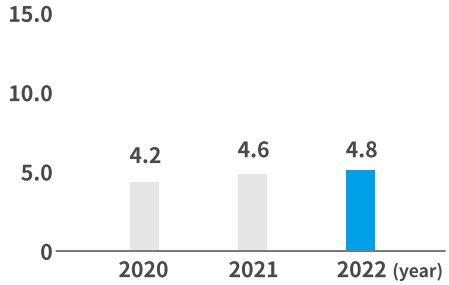


Water consumption (Japan) (Mm^3 per year)

SUMCO

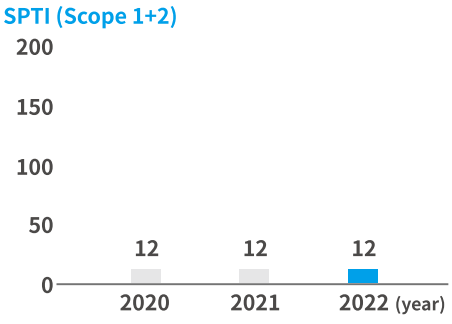


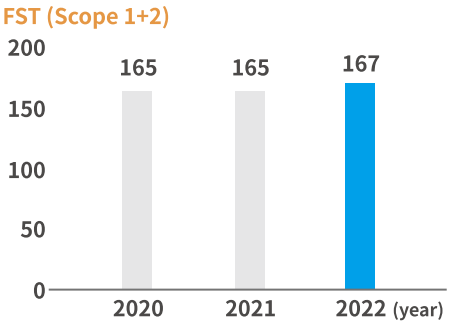
STC

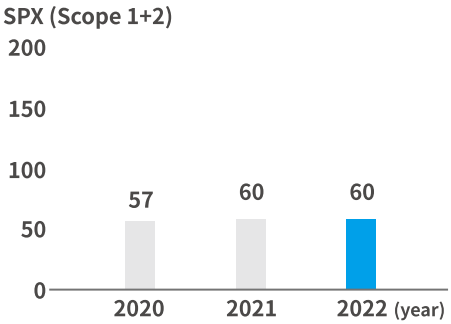


Environmental Load (Overseas)

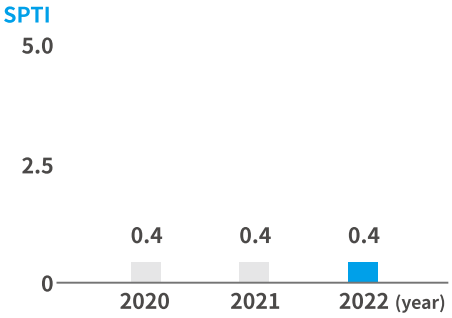
CO_2 emissions (overseas) (thousand tons-CO_2 per year)

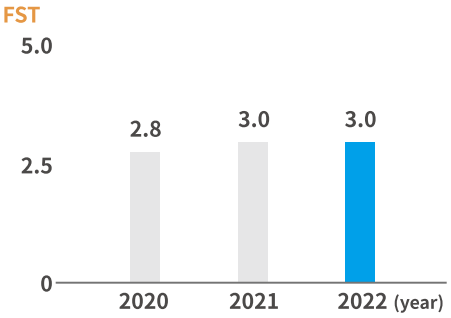


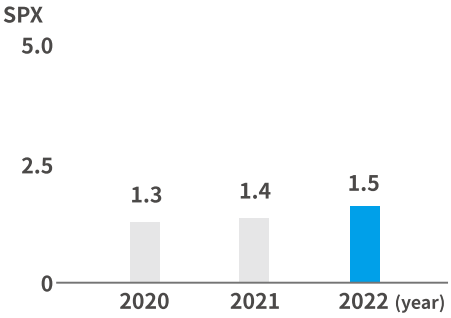




Water consumption (overseas) (Mm^3 per year)







* CO_2 emissions of the overseas subsidiaries are calculated using the emission coefficient of each country based on the Greenhouse Gas Protocol Initiative.

Environmental Data (SUMCO Group)

Greenhouse Gas Emissions Data

(thousand tons-CO_2 per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
Scope 1 (direct)	25	26	25	27	28
Scope 2 (indirect)	877	702	765	812	765
Scope 3 (other indirect)	4	612	694	758	882
Scope 1&2	902	728	790	839	793
Scope 1, 2&3	906	1,340	1,484	1,597	1,675

* Numbers of Scope 3 (other indirect) until 2018 include category 4 (upstream transportation and distribution) only.

Greenhouse Gas Emissions Scope3 Data (Japan)

(thousand tons-CO_2 per year)

Category		2022
1	Purchased goods and services	561
2	Capital goods	123
3	Fuel- and energy-related activities (not in Scope 1 or 2)	110
4	Upstream transportation and distribution	48
5	Waste generated in operations	26
6	Business travel	1
7	Employee commuting	13
8	Upstream leased assets	Not applicable
9	Downstream transportation and distribution	—*1
10	Processing of sold products	—*1
11	Use of sold products	Not applicable
12	End-of-life treatment of sold products	—*1
13	Downstream leased assets	Not applicable
14	Franchises	Not applicable
15	Investments	Not applicable

*1 SUMCO products are potentially intermediate products with many downstream applications. It is difficult to make an accurate and reliable calculation, and we have determined that the calculation is not appropriate in terms of reliability.

Greenhouse Gas Emissions Data (by Company)

(thousand tons-CO_2 per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
SUMCO	524	1,014	1,132	1,228	1,316
STC	156	112	119	131	120
FST	152	144	165	165	167
SPX	61	58	57	60	60
SPTI	12	12	12	12	12
Total	906	1,340	1,484	1,597	1,675

* Greenhouse Gas Emissions Scope3 is aggregated as "SUMCO".

Breakdown of Greenhouse Gas Data (Scope 1)

(tons)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
CO_2	25,000	26,000	25,000	27,000	28,000
CH_4	—	—	—	—	—
N_2O	—	—	—	—	—
HFC	0.012	0.012	0.006	0.014	0.014
PFC	—	—	—	—	—
SF_6	—	—	—	—	—
Other	—	—	—	—	—

Energy Consumption

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
Electricity usage (GWh)	1,793	1,707	1,792	1,877	1,963
Electricity (converted to petroleum) (kL)	451,403	429,838	451,085	472,505	494,290
Fuel (converted to petroleum) (kL)	8,711	9,054	8,804	9,670	10,103

Water Supplied

(Mm^3 per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
Surface water (rivers, wetland, natural lakes)	13.2	13.5	14.8	15.7	17.3
Water underground (well water)	3.4	3.3	3.2	3.5	3.8
Quarry water	—	—	—	—	—
Potable water	1.3	1.2	1.1	1.3	1.3
External drainage water	—	—	—	—	—
Rainwater	—	—	—	—	—
Seawater	—	—	—	—	—
Total	17.9	18.0	19.1	20.5	22.4

Water Supplied (by Company)

(Mm^3 per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
SUMCO	9.4	9.7	10.4	11.1	12.7
STC	4.1	4.1	4.2	4.6	4.8
FST	2.6	2.5	2.8	3.0	3.0
SPX	1.4	1.3	1.3	1.4	1.5
SPTI	0.4	0.4	0.4	0.4	0.4
Total	17.9	18.0	19.1	20.5	22.4

* Please refer the page of "Effective Use of Water Resources" for water-stressed area.

Drainage Water

(Mm^3 per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
Total water drained into the ocean	7.7	7.8	8.6	9.1	10.3
Total water drained to surface water sources	—	—	—	—	—
Total water drained to underground sources/ well water sources	—	—	—	—	—
Total water drained outside of plants	5.0	5.2	4.7	4.8	5.1
Other drainage water	3.3	3.3	3.1	3.5	3.5
Total drainage water	16.0	16.3	16.4	17.4	18.9

Drainage Water (by Company)

(Mm^3 per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
SUMCO	8.3	8.4	8.9	9.6	10.8
STC	3.7	3.8	3.7	4.0	4.2
FST	2.1	2.1	2.3	2.3	2.3
SPX	1.5	1.6	1.1	1.1	1.2
SPTI	0.4	0.4	0.4	0.4	0.4
Total	16.0	16.3	16.4	17.4	18.9

VOC emissions

(tons per year)

	5 years prior (2018)	4 years prior (2019)	3 years prior (2020)	2 years prior (2021)	Last year (2022)
VOC	9.3	8.7	8.4	11.3	10.3

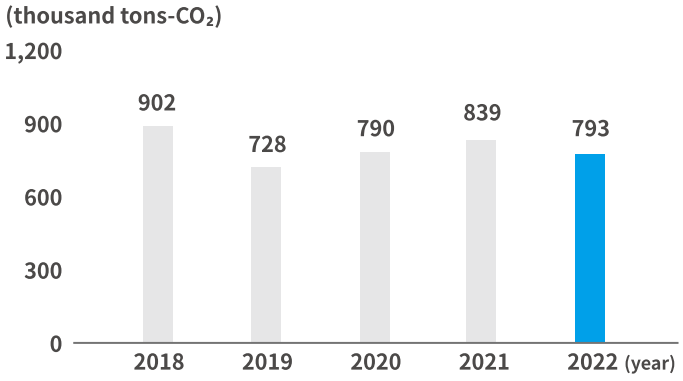
Note; Chemical Substances have been tabulated based on the PRTR system of the Ministry of Economy, Trade and Industry since last year.

▶ To ESG-oriented Investors

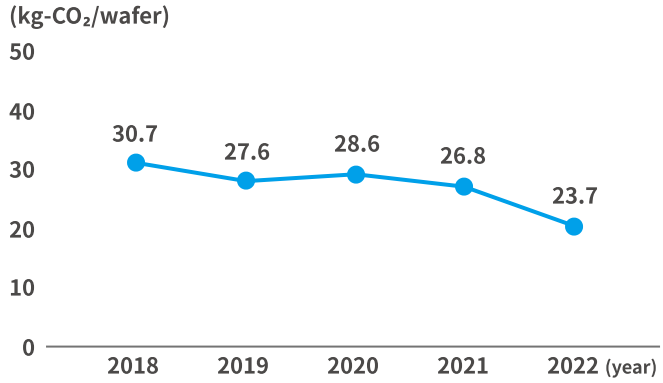
Combating Global Warming

To help prevent global warming, the SUMCO Group identifies both external and internal challenges to preventing climate change based on the Company's business goals/Environmental Policies and the needs and expectations of related stakeholders. In this way, the Group determines risks and opportunities related to these external/internal issues and needs/expectations.
Based on these, we resolve and implement year-long initiatives targeting climate change issues that take into account the risks and opportunities for each department, report the results to Environmental Management Officer, evaluate and analyze the results at meetings of the Environmental Management Committee, and as necessary, revise these risks and opportunities.
To look at a specific example: For the production of silicon wafer, the SUMCO Group makes every effort to streamline production and promote rationalization in order to reduce electric power consumption. When it comes time to update production and utility facilities, we replace them with energy-saving and high-efficiency alternatives. In offices, lighting is turned off during lunchtime and other breaks, and air conditioners are set at a reasonable temperature to save energy. At the Noda Plant, we cut electric power usage by upgrading coolers, changing over to LED lighting, and other measures.
In Japan, the SUMCO Group also has registered with the Environmental Reporting Platform Development Pilot Project of the Ministry of the Environment. This undertaking encourages the disclosure of environmental information and dialog among parties including companies and investors. It is contributing toward the creation of a sustainable society by helping to ensure that companies actively engaged in environmental activities are properly recognized for their efforts and gain investor funding support as a result.
In 2022, major investment in CO_2 reduction totaled 889 million yen.

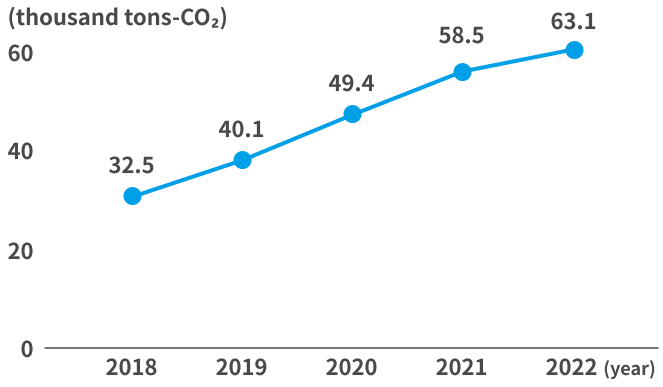
CO_2 Emissions (Scope 1+2) (SUMCO Group)



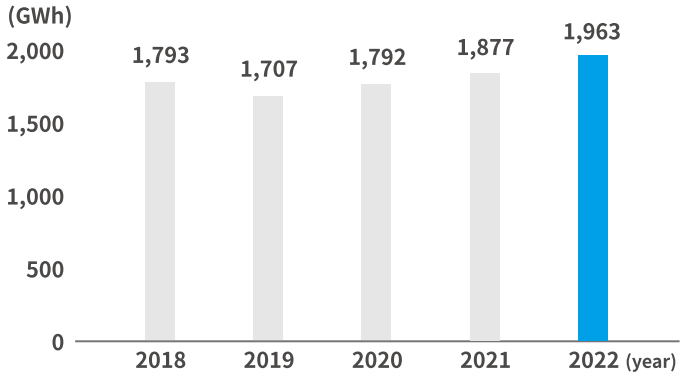
CO_2 Emissions per Silicon Wafer (sales) (SUMCO Group)



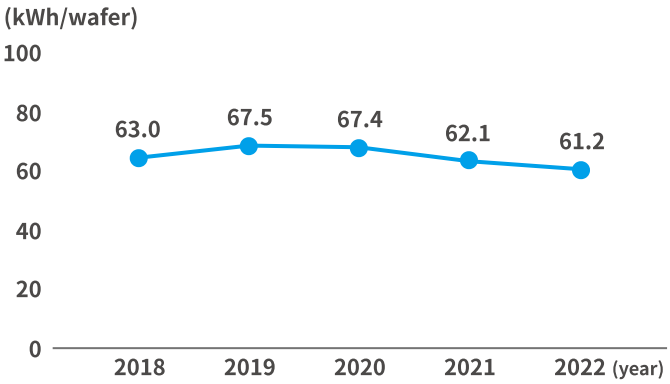
Cumulative Reduction of CO_2 Emissions (SUMCO Group)



Electric Power Consumption (SUMCO Group)



Electric Power Consumption per Silicon Wafer (sales) (SUMCO Group)



Efforts to Introduce Renewable Energy

Investment in Clean Technologies (such as Solar Power Generation, etc.)

We have installed 2.3MW of solar power generation equipment at our Kyushu Factory (Kubara, Imari), and we use and sell renewable energy. Upon replacing production or utility equipment, we also adopt energy-saving or high-efficiency equipment and aim to curtail energy consumption through LED lighting.
We are considering the introduction of renewable energy (green electricity) in the future, and will contribute to the further reduction of CO_2 emissions.

Procurement of Non-Fossil Electricity (such as J-Credit and Non-Fossil Certificates, etc.)

The SUMCO Group has started introducing procurement of non-fossil electricity to achieve the goals for goals for carbon neutral set in 2021. With this introduction, the Group's procurement of non-fossil electricity input in CY2022 will be 1.61GWh, which is expected to contribute to a reduction of approximately 480t/year.

SUMCO Group Renewable Energy Introduction Results

	Unit	Last year (2022)
Renewable electricity	GWh	1.74
Non-renewable electricity		1,556
Total		1,558
Renewable energy ratio (Ratio of renewable electricity)	%	0.11

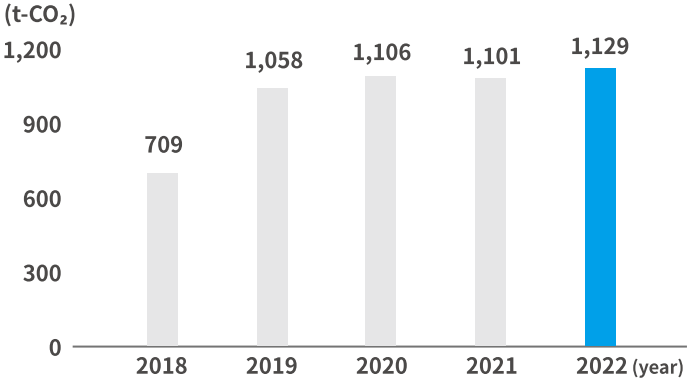
Internal carbon pricing（ICP）system

The SUMCO Group has introduced an Internal Carbon Pricing (ICP) system from January 2022 in order to achieve both reduction of CO_2 emissions and business growth. We will convert CO_2 emissions into costs and use them as one of the judgment criteria for environmental investment to promote the reduction of CO_2 emissions and energy conservation.

CO_2 Reduction through Modal Shift to Ship Transport in the Field of Logistics

SUMCO used to rely solely on airfreight for the transportation of silicon wafers to overseas markets. However, to reduce both CO_2 emissions and transportation costs, we have been promoting a modal shift to ship transport for some of our products since 2009, taking into account factors affected by longer transportation lead time and changes in the transportation environment. We conduct tests before switching to ship transport to confirm that the quality of products is not affected, as well as consulting with customers.

CO_2 Reduction through Modal Shift to Ship Transport



Climate Initiative

SUMCO has endorsed the Japan Climate Initiative (JCI) declaration to "join the global frontline for decarbonization from Japan" and has been participating since April 2023.
JCI is a network of companies, local governments, NGOs, and other organizations in Japan that are actively working to combat climate change.

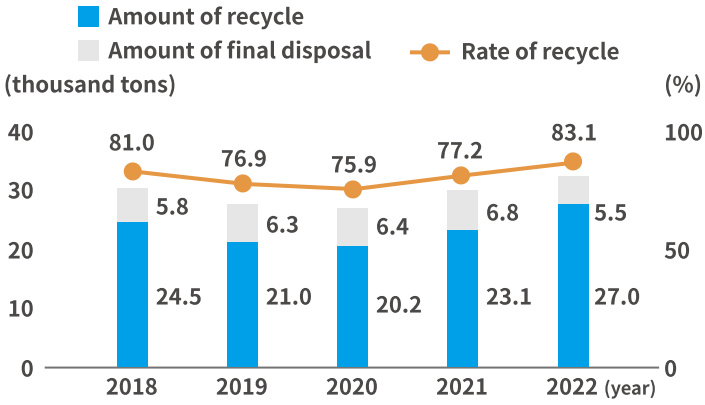
- Click here for Japan Climate Initiative (JCI)

- To ESG-oriented Investors

Reduction of Waste

In Japan, the SUMCO Group is working to reduce the amount of waste generated as part of environmental conservation efforts. In particular, to deal with the large volume of sludge generated at our plants, the SUMCO Group is making efforts to optimize the chemicals injected for wastewater treatment, and to deal with waste oil, waste acid, waste alkali, waste plastics and other waste, we are focusing on promoting their recycling and conversion into valuable resources.

Amount of Disposal and Rate of Recycle (SUMCO Group [Japan])



Waste Reduction through the Adoption of Reusable Containers

We are replacing the containers used to ship 300-mm diameter silicon wafers with reusable alternatives as one of the initiatives to reduce post-shipment waste.
The percentage of reusable containers used for shipment in 2022 was 84.8%.
Before introducing reusable containers, we conduct tests to ensure that the quality of the products is not affected.

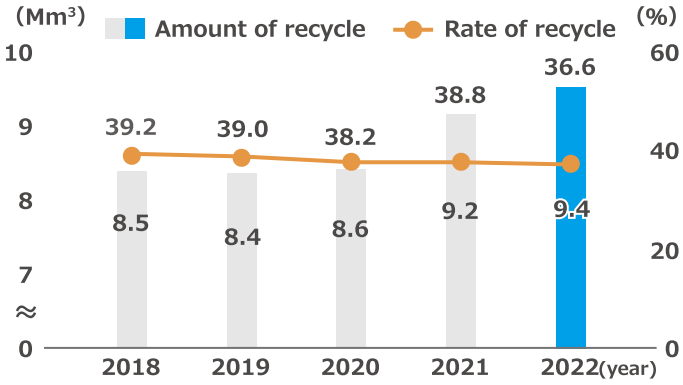
▶ To ESG-oriented Investors

Effective Use of Water Resources

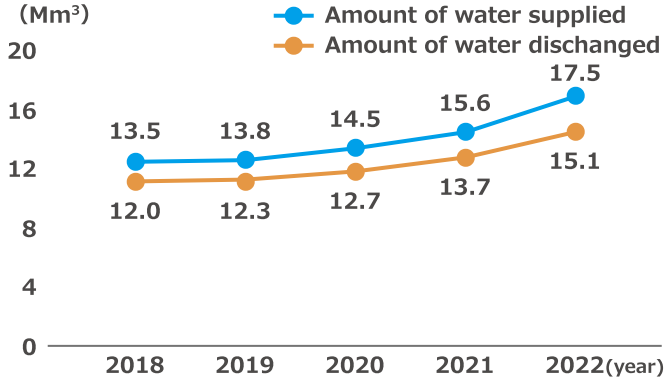
The SUMCO Group recognizes that water is an important resource playing a vital role in manufacturing silicon wafers. We have set environmental objectives related to reducing water used by our business, and we are working to use water resources effectively at all of our manufacturing bases.

The SUMCO Group's water recycling rate hovers at around 39% and was 36.6% in 2022.

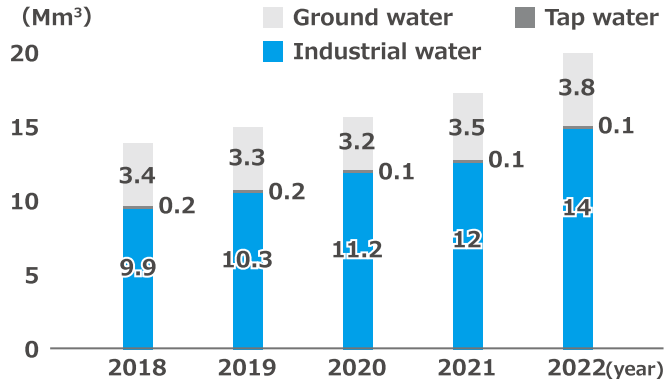
Amount of Water Recycled and Rate of Recycle(SUMCO Group [Japan])



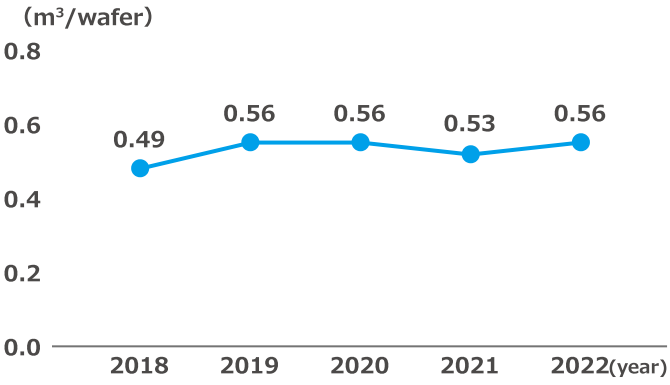
Amount of Water Supplied and Discharged (SUMCO Group [Japan])



Amount of Water Consumption by Water Source (SUMCO Group [Japan])



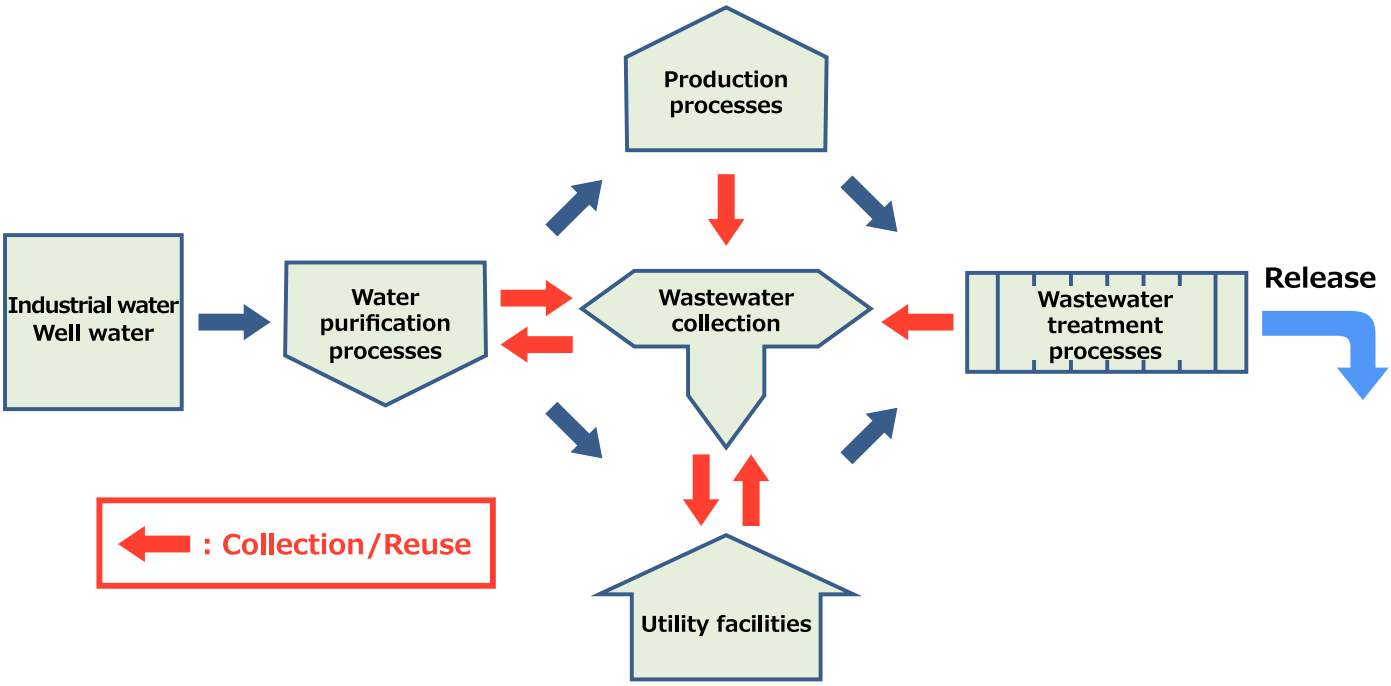
Amount of Water Supplied per Product (Sale) (SUMCO Group [Japan])



* The amount of Water Supplied per Product (Sale) until 2021 have been corrected from those disclosed in the last year's report.

At our plants in Japan and overseas, we utilize the reject water generated in the water purification process as cooling water for utility facilities and dilution water for wastewater treatment chemicals. We are also working to conserve as much water as possible for recycling, such as collecting the rinse water used to clean silicon wafers.

Water Recycle Flow (SUMCO Group)



Cooperation with Stakeholders

■ Disclosures through CDP (Water Security)

The SUMCO Group disseminates information regarding its ESG efforts to a wide range of stakeholders.
Starting 2021, we respond to the water security questionnaire conducted by the CDP, which publishes information on companies' environmental initiatives according to common measures.

Water-stressed Areas

The SUMCO Group investigates water stress using the AQUEDUCT tools provided by the WRI[*1]. The following shows the results of the 2022 investigation.

Operating Base		Water stress[*2]
Includes SUMCO Group companies in Japan	Kyushu Factory (Nagahama, Imari)	2
	Kyushu Factory (Kubara, Imari)	2
	Kyushu Factory (Saga)	2
	Kyushu Factory (Nagasaki)	2
	Yonezawa Plant	1
	Chitose Plant	1
	JSQ Division	1
	SUMCO TECHXIV Corp. Nagasaki Plant	2
	SUMCO TECHXIV Corp. Miyazaki Plant	1
	SUMCO Technology Corp. Noda Plant	2
SUMCO Group Companies Overseas	SUMCO Phoenix Corporation	3
	PT. SUMCO Indonesia	4
	FORMOSA SUMCO TECHNOLOGY CORPORATION	2

*1 WRI: The World Resources Institute. A U.S. policy center.

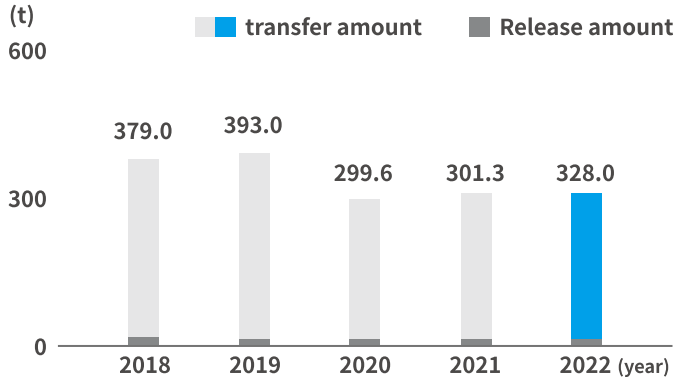
*2 Water stress: Evaluated on a scale of 1-5. The higher the number, the more water-stressed the area is.

▶ To ESG-oriented Investors

Chemical Substance Management

The Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register / PRTR Law) requires businesses to report the amounts of any designated chemical substances released into the environment or transferred.
There are 12 substances subject to reporting under the PRTR Law. The majority of these are substances contained in cleaning agents and fuels.

Amount of PRTR-Regulated Substances Released and Transferred (SUMCO Group [Japan])



* The figure for each year shows the amount of released or transferred substances during the preceding year from April through March.

With regard to the substances subject to reporting under the PRTR Law, the SUMCO Group measures the amounts of such substances transferred or released into the environment based on a stringent management system and issues reports without omission.

List of Substances Subject to PRTR Reporting (Class 1 Designated Chemical Substances: 1 ton or more per year; Specific Class 1 Designated Chemical Substances: 0.5 tons or more per year)
Period covered: April 2021 to March 2022

(t per year)

Ordi-nance No.	Name of Class 1 Designated Chemical Substance	Amount handled	Amount released				Amount transferred	
			Atmos-phere	Public waters	Soil	Landfill	Sewerage	Waste
20	2-aminoethanol	17.0	-	0.0	-	-	-	-
30	Linear alkylbenzene sulfonate (LAS)	1.5	-	0.0	-	-	-	-
71	Ferric chloride	6.9	-	-	-	-	-	-
80	Xylene	85.2	0.8	-	-	-	-	1.0
88	Hexavalent chromium compound	2.3	-	-	-	-	-	1.9
296	1,2,4-Trimethylbenzene	96.8	0.2	-	-	-	-	-
300	Toluene	10.8	10.5	-	-	-	-	0.4
332	Arsenic and its inorganic compound	1.6	-	-	-	-	-	-
374	Hydrogen fluoride and its water-soluble salts	784.3	0.2	0.0	-	-	-	269.6
405	Boron compound	2.5	-	0.0	-	-	-	-
407	Poly (oxyethylene) alkyl ether	24.6	-	0.0	-	-	-	3.2
410	Poly (oxyethylene) nonylphenyl ether	40.0	-	-	-	-	-	40.0
438	Methylnaphthalene	8.0	-	-	-	-	-	-
Total		1,081.5	11.7	0.1	-	-	-	316.1

* The amount handled is not equal to the total amount released and transferred because some substances were released after decomposition and detoxification.

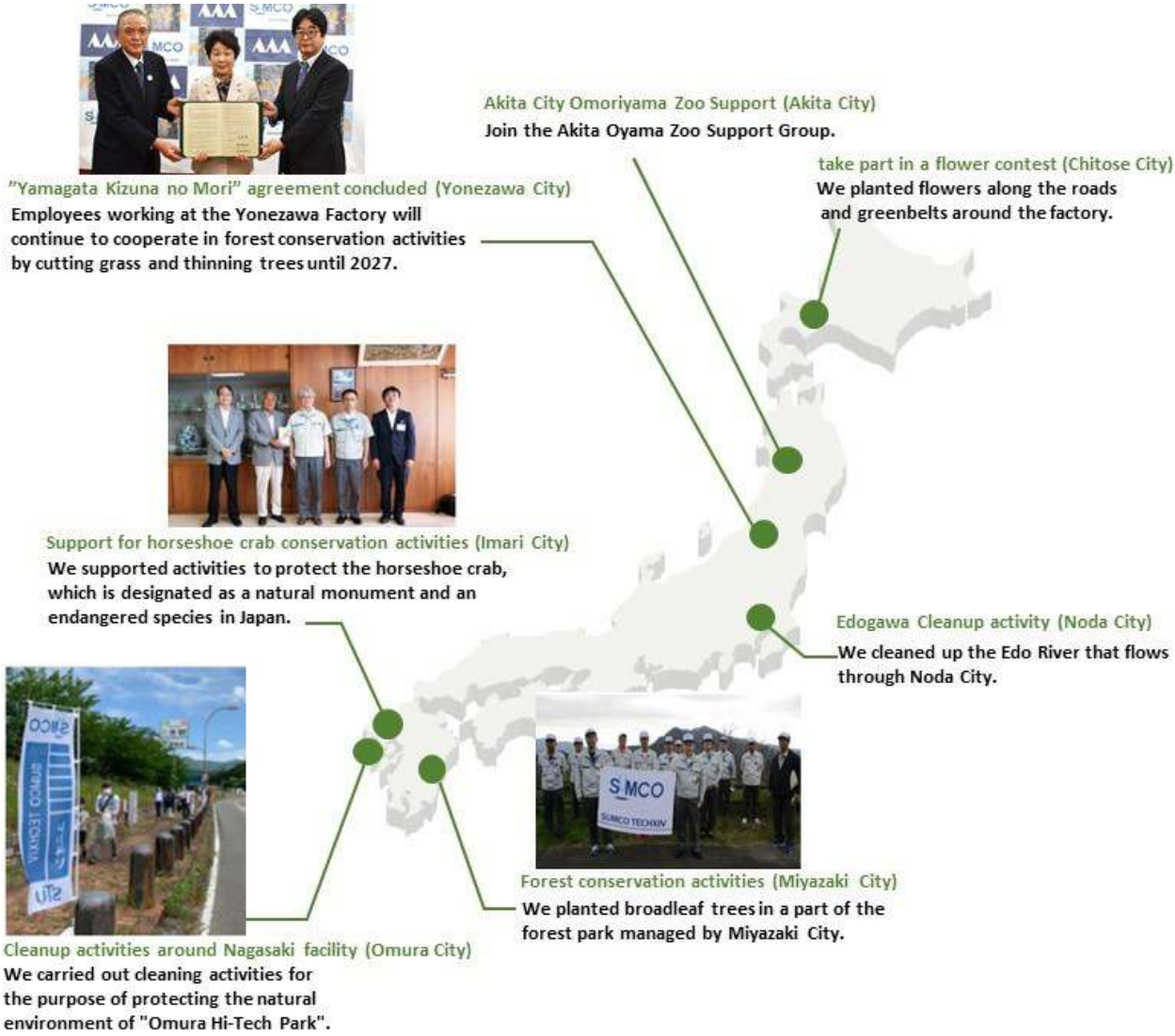
▶ To ESG-oriented Investors

Initiatives for Biodiversity Activities

Our lives are supported by various benefits from "biodiversity" . "Biodiversity" is also essential for human survival and quality of life.
The SUMCO Group recognizes that our business activities have a direct or indirect impact on biodiversity. Based on this recognition, The SUMCO Group aims to realize a sustainable society in harmony with nature that can continue to receive the benefits of "biodiversity" based on the "SUMCO Basic Environmental Policy".

Biodiversity Conservation Activities

In 2022, we carried out biodiversity conservation activities at seven locations in Japan, mainly in areas where our facilities are located.



▶ Click here for other social contribution activities

Disclosure Based on TCFD Recommendations

In April 2021, we expressed our support for the TCFD[*1] recommendations.
This section discloses our governance, strategy, risk management, and metrics and targets in line with the TCFD recommendations.

*1 The Task Force on Climate-related Financial Disclosures established by the Financial Stability Board (FSB)

1. Governance and Risk Management

In SUMCO, the Environmental Management Committee, chaired by an environmental officer who is a member of the Board of Directors, reviews the risks and opportunities arising from climate change, sets environmental objectives (reduction of CO_2 emissions, reduction of water consumption, etc.) to be addressed, and manages the status of such efforts.

As regards climate change and other risks, the Business Security Committee (BSC), which is attended by the Chairman and CEO and other senior management, determines company-wide policies and deliberates and decides on risk prevention measures.

- Environmental Management Committee: Environmental Management Structure
- BSC: BSC's Structure and Objectives

2. Strategy

We recognize that the risks and opportunities associated with climate change are among the key business issues that will affect our future finance.

We therefore forecast and quantified the risks and opportunities that are likely to have a financial impact and carried out a scenario analysis in line with the TCFD recommendations.

(1) Major risks and opportunities related to climate change

Scope: SUMCO Group

Timing of embodiment: short term (1 year or less), medium term (1 to 3 years), medium to long term (3 to 10 years), long term (over 10 years)

Possibility: small, medium, large

Degree of impact: small (1 billion yen or less), medium (1 to 10 billion yen), large (over 10 billion yen)

Classification		Expected result	Timing of embodiment	Possibility	Degree of impact
Risk	Transition risk	Loss of sales opportunities and increase in procurement costs due to intensifying competition in the semiconductor sector	Medium to long term	Large	Large
		Increase in operating costs due to the introduction of a carbon tax (carbon pricing)	Medium term to medium to long term	Large	Medium
		Increase in waste disposal costs due to the formation of a recycling-oriented society	Medium to long term	Large	Medium
		Increase in business costs due to the increased burden of renewable energy levy	Short term to medium to long term	Large	Medium
		Increase in capital costs due to the expansion of ESG investments	Medium term	Large	Small
	Physical risk	Suspension of business activities due to wind and flood disasters	Short term	Medium	Small to large
		Supply chain disruptions due to wind and flood disasters	Short term	Medium	Small to large
Opportunity		Expansion of demand for energy-saving-related equipment due to the advancement of energy conservation and renewable energy	Long term	Large	Large
		Expansion of demand for automotive products due to the spread of Evs	Medium to long term	Large	Large
		Increase in demand for server-related equipment due to the spread of telework	Medium to long term	Large	Large
		Increase in demand for automation equipment due to the spread of automation and digitization	Medium to long term	Large	Large

(2) Scenario analysis

Although all the items identified as risks and opportunities are evaluated as having a significant impact on SUMCO, three items (blue items in the above list) have been selected for the scenario analysis in the current fiscal year.

1) Increase in operating costs due to the introduction of a carbon tax (carbon pricing) [Risk]

Since we emit large amounts of greenhouse gases and there will be a significant impact on our business if a carbon tax is introduced, we conducted a scenario analysis for the 2°C and 4°C scenarios.

(i) Assumptions of scenario analysis

(1) Total emissions for scopes 1 and 2

Emissions in 2030 are estimated, with emission factors calculated for each country's electric utilities based on the World Energy Outlook (WEO) 2019 of the International Energy Agency (IEA).

	2°C Sustainable Development Scenario (SDS)	4°C Stated Policies Scenario (STEPS)
Emissions in 2030	Approx. 430,000 t-CO_2/yr	Approx. 675,000 t-CO_2/yr

(2) Carbon prices

Carbon prices of each country are set on the basis of the World Energy Outlook (WEO) 2019 of the International Energy Agency (IEA).

	2°C Sustainable Development Scenario (SDS)	4°C Stated Policies Scenario (STEPS)
Japan, USA, Taiwan	\$100/t-CO_2 *2	\$33/t-CO_2 *4
Indonesia	\$75/t-CO_2 *3	\$12/t-CO_2 *5

*2 The value for advanced economies is adopted.
*3 The value for selected advancing economies is adopted.
*4 The value for EU is adopted.
*5 The lowest value among the values given for different countries in the WEO 2019 is adopted.

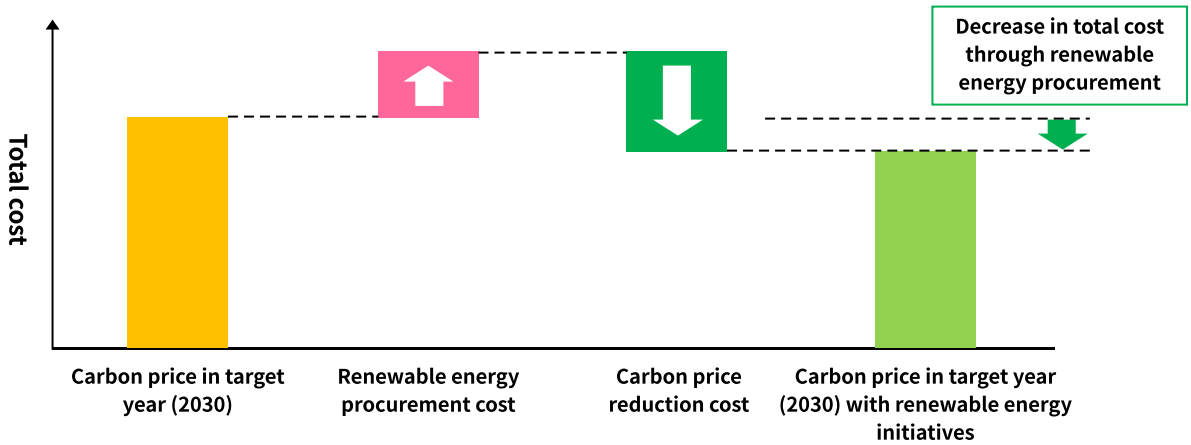
(ii) Scenario analysis results

The cost burden will increase by about 2.4 billion yen/yr under the 4°C scenario and about 4.7 billion yen/yr under the 2°C scenario.

(iii) Proposed cost reduction initiatives

Since the scenario analysis has indicated that the total cost decreases when the unit cost of procuring renewable energy is lower than the unit carbon price, we discuss the introduction of renewable energy in addition to our current efforts toward energy conservation.

Image of costs associated with carbon tax



2) Expansion of demand for energy-saving-related equipment due to the advancement of energy conservation and renewable energy [Opportunity]

As we move toward a decarbonized society, demand is expected to increase for power semiconductors that provide stable and efficient power supply and streamlined, high-precision control.

We have conducted scenario analysis for representative products that are expected to become more widespread in the future due to climate-change-related factors and for which both the 2°C and 4°C climate change scenarios exist and have evaluated changes in the demand for power semiconductors in each industrial sector.

	Consumer equipment sector	Electric railcar sector	Energy sector	Automotive & electronics sector	Information & communication equipment sector	Industry sector
Market size of power semiconductors in percentage *6	30%	A few percent	A few percent	20%	20%	20%
Products and devices with semiconductors having promising growth potential	Inverters for home appliances, AC adapters, etc.	Electric railcars (inverter modules)	Solar and wind power generation equipment, power transmission infrastructure, etc.	EVs, quick charging stations, wireless power supply systems, etc.	Server power supplies, UPS, etc.	High-voltage and high-current applications, such as motor control, inverter control, and welding machinery
Products and equipment subject to scenario analysis	Air conditioners	Electric railcars	Solar and wind power generation equipment	Electronic control unit (ECU)	This sector was not included in the analysis because there are no appropriate climate change scenarios for the sector, and the cycle of products and services is shorter than in other sectors, making medium- to long-term projections difficult.	Energy efficiency of the entire manufacturing plant
Changes in power semiconductor demand toward achieving the goal of less than 2°C in 2030	Production of high-efficiency air conditioners with inverters is estimated to be about 1.3 times higher than that under the 4°C scenario (business as usual). The production percentage of air conditioners with inverters is also expected to rise.	The demand for rail travel, whose CO_2 emissions per travel distance is low, will grow. The production of railcars is estimated to be about 1.2 times higher, compared to the 4°C scenario (business as usual).	Although it is difficult to forecast the volume of power semiconductors to be installed in power generation equipment and related products, we estimate that the amount of solar and wind power to be introduced globally will be about 1.5 times greater than in the 4°C scenario (business as usual).	A separate scenario analysis is conducted for general automotive semiconductor devices (see "Expansion of demand for automotive products due to the spread of EVs")		Although there are no climate change scenarios for individual equipment and products in this sector, we estimate that energy intensity in the manufacturing industry will decrease by about 7% in comparison with the 4°C scenario (business as usual) due to energy conservation and improved efficiency.

	Consumer equipment sector	Electric railcar sector	Energy sector	Automotive & electronics sector	Information & communication equipment sector	Industry sector
Our business opportunities in the transition toward achieving the goal of less than 2°C	Increased production of air conditioners due to global warming and greater extremes of weather is expected to have a positive impact on demand for our products.	Although the market size is small, we expect a positive impact on demand for our products as demand for electric railcars increases due to a modal shift.	Although the market size is small, we expect that the global shift to renewable energy will increase the production of power conditioners and other products, which will have a positive impact on demand for our products.	A separate scenario analysis is conducted for general automotive semiconductor devices (see "Expansion of demand for automotive products due to the spread of EVs")	Considering that there are no direct climate change factors affecting the demand for products and services in this sector, we assess that the difference in demand for power semiconductors in this sector between the 2°C and 4°C scenarios is small.	We expect that demand for power semiconductors will increase due to such factors as progress in energy conservation and higher efficiency in factories, which will lead to increased demand for our products.
Our business opportunities with the spread of next-generation power semiconductors	The market for next-generation power semiconductors (SiC, GaN, etc.), which are currently undergoing development, commercialization, and cost reduction, is expected to expand significantly by 2030. We will therefore continue to monitor the spread of next-generation power semiconductors, pursue development, and increase our capacity.					

*6 Based on a research company's forecast data

3) Expansion of demand for automotive products due to the spread of EVs [Opportunity]

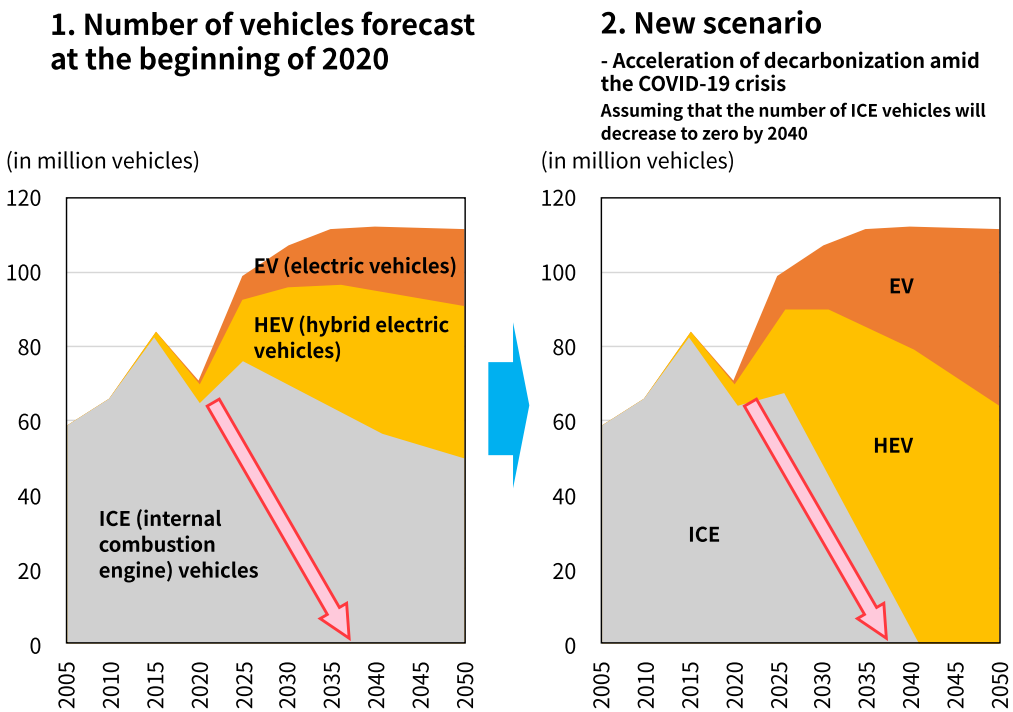
In forecasting the demand for automotive wafers, we estimated the ratios of future EV/HEV production as shown in the figure below.

Regarding the right-side graph (New scenario) as the 2°C scenario and the left-side graph as the 4°C scenario (business as usual), we analyzed the trend of silicon wafer demand until 2030 by multiplying the projected area of silicon wafers for automotive semiconductors by the production ratio of each vehicle type.

The results indicate that the demand for silicon wafers in 2030 will be more than doubled compared to 2020 in both the 2°C and 4°C scenarios. When both scenarios are compared, the demand as of 2030 under the 2°C scenario is estimated to be about 1.1 times higher than that under the 4°C scenario.

In the automotive and electronics sector, we expect, as a baseline, increasing demand for automotive semiconductors due to such trends as automated driving and computerization of display devices. In addition, we expect that the spread of EVs and PHEVs for decarbonization will have the effect of further boosting demand, with a positive impact on demand for our products.

We will therefore continue to develop high reliability and durability and increase our capacity.



Source: Earnings briefing for the fiscal year ending December 2020

* The scenario analysis was conducted with the help of an external research company in collecting and analyzing external information.

3. Metrics and Targets

Setting the reduction of CO_2 emissions as one of our environmental objectives, we are working to reduce CO_2 emissions.

We are also publishing the results of our activities to achieve the objective.

- Environmental objectives
- Environmental load of business activities

Social

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Speedy, Accurate and Fair Disclosure of Corporate Information

Why SUMCO Addresses Information Disclosure

SUMCO makes every effort to enhance management transparency and earn legitimate recognition of its corporate value from shareholders and investors by releasing information including the Company's management vision, the status of its business activities and financial performance in a speedy, accurate and fair manner. We also undertake activities to continually improve corporate value by reflecting the feedback received from shareholders and investors in our management.

Basic Policy on Information Disclosure

SUMCO believes timely and appropriate disclosure of corporate information to investors is a core element in ensuring a sound stock market. The Company shall commit itself to speedy, accurate and fair disclosure of corporate information while always adopting the perspective of investors. Corporate information that is useful in investor decision-making shall be actively disclosed even when not mandated by laws and regulations.

Information Disclosure System

The Public Relations & IR Department is responsible for dialogue with shareholders and other investors, under the supervision by executive management, the results of which are reported to the Board of Directors and executive management as needed. Top management also provides its own explanations during financial results briefings held quarterly and also takes part in individual meetings with shareholders and other investors as needed.
When engaged in IR activities, the necessary information is collected from the relevant departments and coordinated and summarized by the Public Relations & IR Department. The details of IR activities are also confirmed by top management in advance, with due care in handling insider information.
Through these activities, SUMCO reflects feedback and requests from shareholders and investors in management in an effort to achieve sustained growth and enhance its corporate value in the long-term.

Communication with Shareholders and Investors

General Meeting of Shareholders

SUMCO positions General Meeting of Shareholders as the occasion where important decisions on the Company's policies and other matters are made as well as an opportunity to have dialogues with shareholders.
We are engaged in early dispatch of the notice of convocation, posting on our website and preparation for the English translation.
We also effort to provide explanations of the details of business report and answer questions asked by shareholders during meetings in as clear a manner as possible by utilizing narrated video footage.

IR Activities

The Timely Disclosure Network (TDnet) of the Tokyo Stock Exchange is utilized to disclose information that needs to be disclosed in a timely fashion, and documents are posted both in Japanese and English simultaneously on our website to ensure the fair disclosure of information to shareholders and investors in Japan and overseas. Our Annual Report and Message to Shareholders are also published to convey messages from top management and report on business performance and conditions.

Message to Shareholders

Annual Report 2022

As well as regularly held meetings with institutional investors and securities analysts, SUMCO also periodically provides company briefings to individual investors and organizes visits to overseas institutional investors in Europe, North America and Asia to help investors develop a better understanding of the Company.
While some IR activities for overseas stakeholders were postponed in fiscal year 2022 due to the COVID-19 pandemic, briefings on financial results led by senior management were held quarterly. SUMCO also actively participated in domestic and overseas conferences, and held web- and tele-conferences with investors.

▶ To ESG-oriented Investors

The Pursuit of Quality and Reliability

Why SUMCO Addresses Quality and Reliability

As a company that manufactures silicon wafers that represent the base materials for the semiconductors installed in all kinds of electronic devices, we see it as a social responsibility of the highest priority to ensure the safety and reliability of our products while making sure they comply with all applicable laws, ordinances and regulations.
For this reason, the SUMCO Group makes every effort to implement the stable supply of products that meet the quality requirements of customers and further boost customer satisfaction by implementing quality management in an appropriate and effective manner.

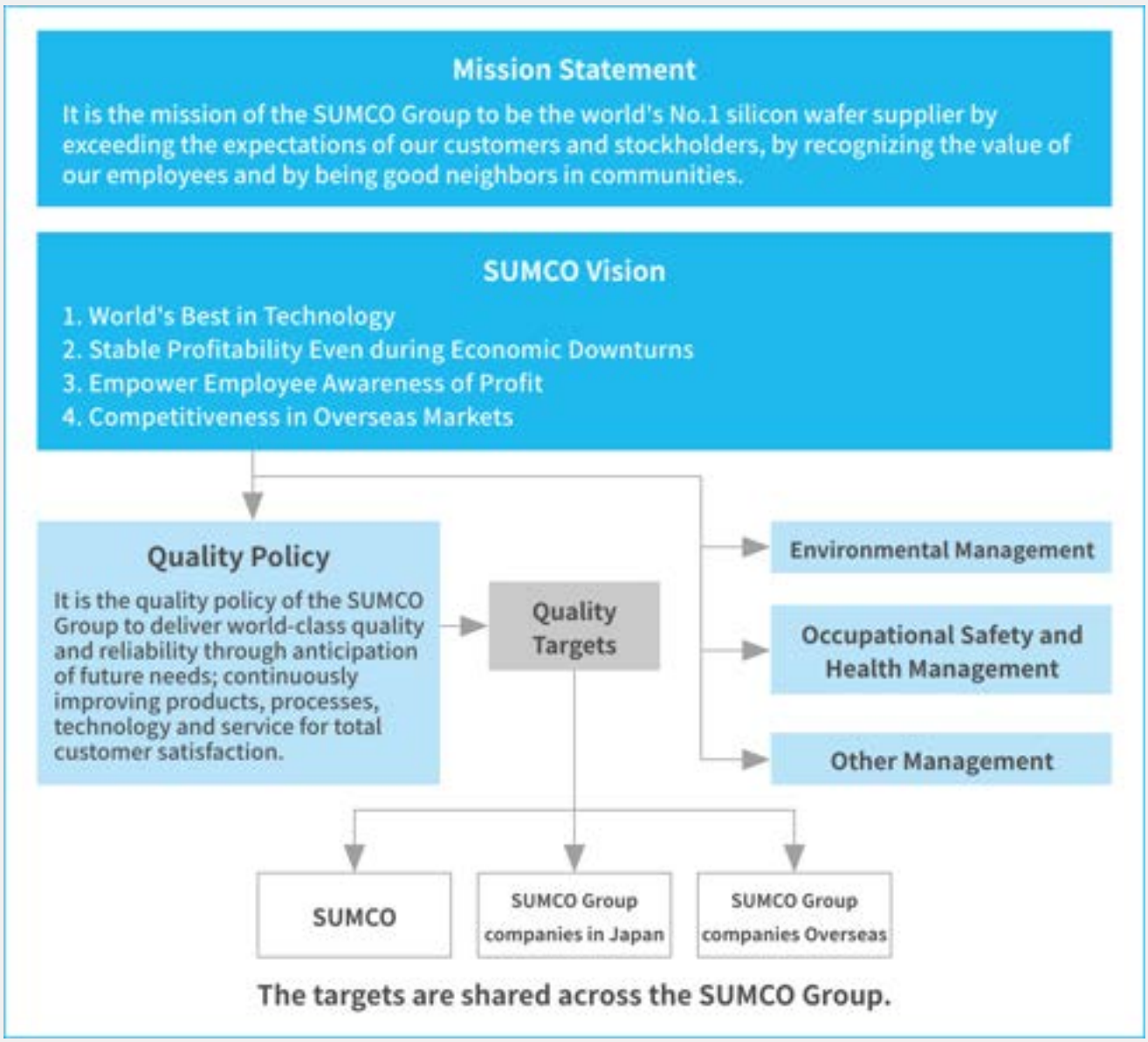
The SUMCO Quality Policy

It is the quality policy of the SUMCO Group to deliver world class quality and reliability through anticipation of future needs; continuously improving products, processes, technology and service for total customer satisfaction.

Quality Control System

In the SUMCO Group, all sites that manufacture silicon wafers including affiliate companies in Japan and overseas have obtained IATF 16949 and ISO 9001 certifications. Furthermore, all sites that manufacture quartz crucibles and polycrystalline silicon including affiliate companies in Japan and overseas have obtained ISO 9001 certifications. We strive to ensure stable levels of quality as well as further enhance it, and have made continuous improvements to our quality management system.

The SUMCO Group Mission Statement, Quality Policy and Targets



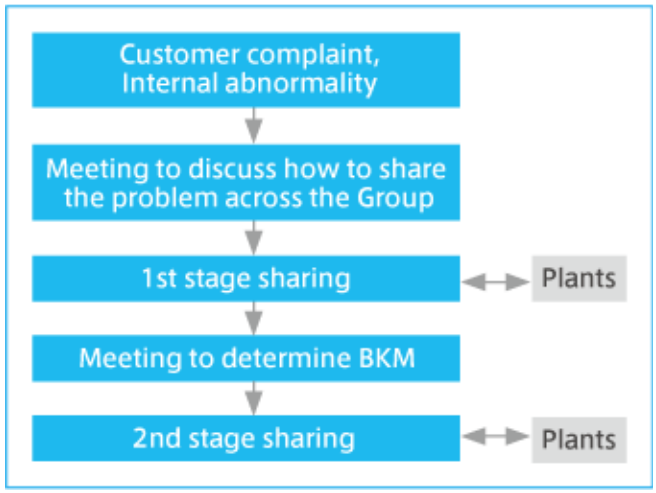
Quality Education

To enhance product reliability and safety, it is necessary for not only those in charge but also each worker to have the mindset of a supervisor and improve their skills.
For this reason, we have developed quality education programs for each job and level of employee and assigned instructors for each education program to each production site to provide necessary education to the human resources that need it whenever required.
In 2022, having taken steps to deal with COVID-19, the SUMCO Group conducted around 250 internal seminars in an effort to enhance the knowledge and awareness of quality control on the part of employees.

Response to Quality Problems

Should a plant become the subject of a customer complaint, experience an abnormality or other quality problem, the plant handles the problem immediately, investigates the cause and takes measures to prevent recurrence, in order to minimize the impact on customers.
When complaints or internal abnormalities occur, we consider the best known method (BKM) to prevent recurrences and swiftly deploy a response throughout the entire SUMCO Group as needed, and build systems to ensure similar issues do not occur in the future.

Flow for Sharing Quality Problems



Initiatives to Improve Customer Satisfaction

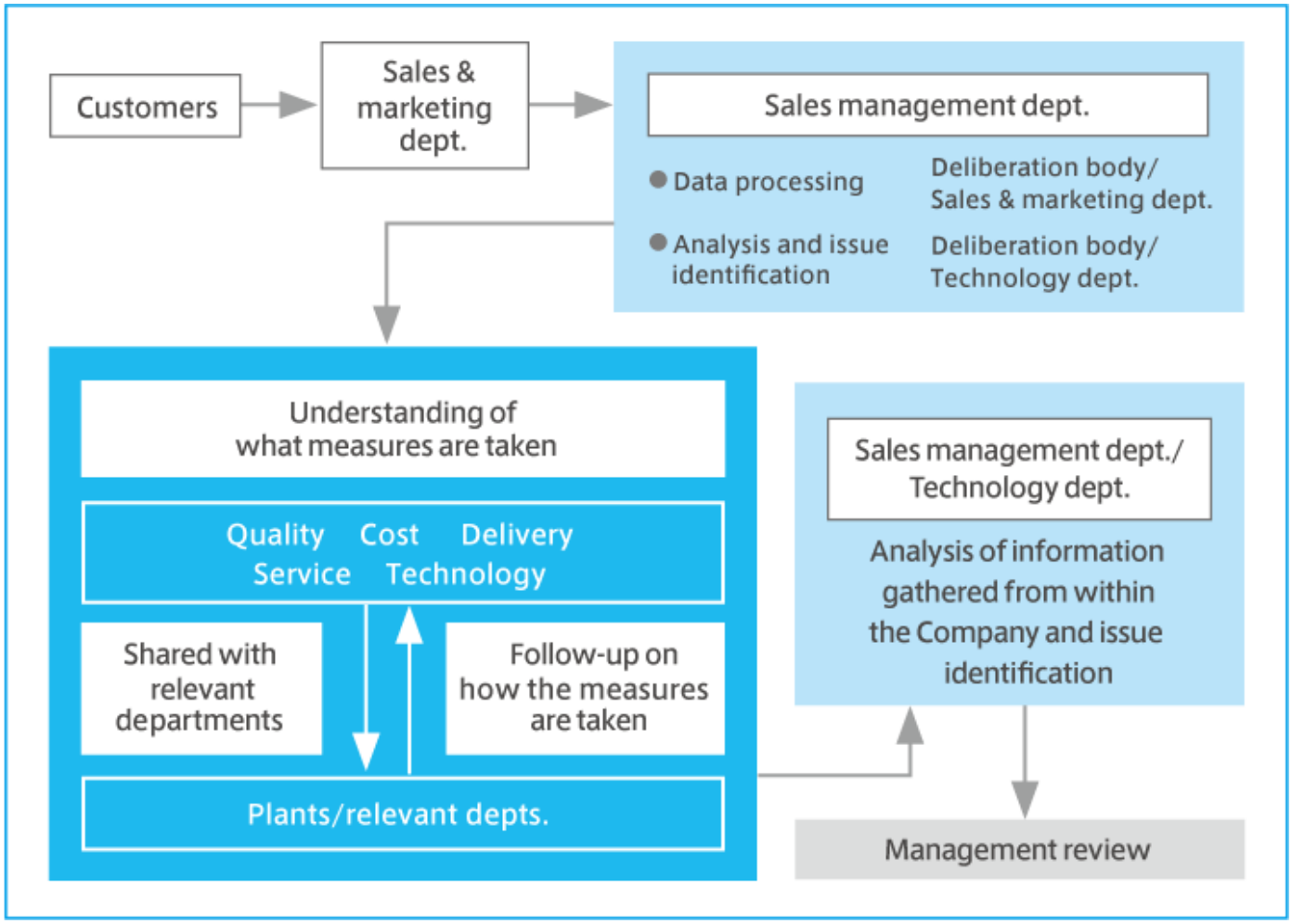
Conducting Customer Satisfaction Surveys

To maintain our "first call" status among customers, evaluations received from customers are shared with relevant departments each time for continuous improvements, and analyzed from four different aspects: quality, cost, delivery and service (QCDS).
The results of analysis are shared among management and other relevant departments, incorporated into the improvement plans of each department, and used to further enhance customer satisfaction.

Communication with Customers

To further enhance customer satisfaction, we strive to improve the quality of products and services through two-way communication with customers.
As part of this initiative to promote communication with customers, we proactively hold technical communication meetings both domestically and internationally in order to grasp customer needs accurately and at an early stage, foster technological development at a rapid pace, and reliably provide products that match customer needs.
At the technical communication meetings, we make proposals based on our unique technologies, as well as check and follow up on the performance of our products. We position these technology conferences as opportunities to win recognition and trust from customers. The feedback and demands of customers learned from the technical communication meetings are utilized for continuous product improvement of our products. In addition, our business plan reflects our customers' demand for EVs, which are being further developed and popularized to achieve carbon neutrality, and for leading-edge products incorporating increasingly diverse and advanced AI technologies, as well as the formulation of technology development roadmaps that accommodate customers' needs for higher precision and enable product differentiation. By doing so, we strive to gain and maintain a strong presence among customers.
Through these SUMCO Group initiatives to promote close communication with customers, we endeavor to provide the most appropriate information.

Flow for Sharing Customer Satisfaction (CS) Evaluation Information



Ensuring the Safety of Products

Management of the Chemical Substances Contained in Products

SUMCO ensures that the chemical substances regulated by law or those that customers have asked us to eliminate or reduce the use of are managed properly according to internal rules and standards.

Provision of Safety Data Sheets (SDS)

SUMCO makes available safety data sheets (SDS) based on JIS Z7253 to provide information on the related hazards of chemical substances used by the Company and to give instructions on how to handle them safely.

▶ To ESG-oriented Investors

Supply Chain

Why SUMCO Addresses the Supply Chain

Year after year, stakeholders have been exhibiting a growing interest in companies' social responsibility through the supply chain in the course of their business activities.
In light of these growing concerns, the SUMCO Group believes it is important to share CSR-related societal demands with suppliers and to collaborate with them on issues including human rights, labor, safety, the environment and ethics in the supply chain.

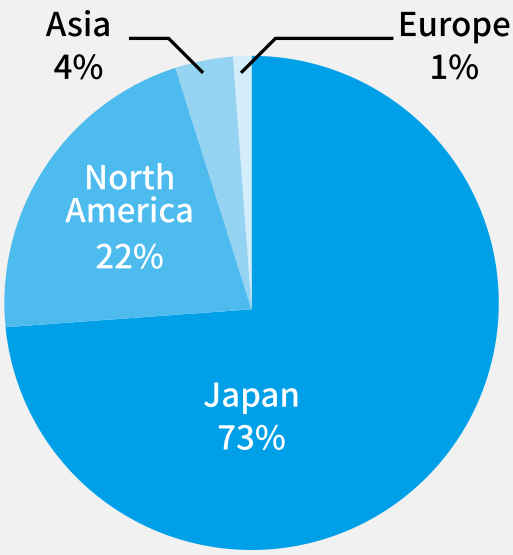
Procurement Policy

In our procurement activities, SUMCO strives to engage in fair and rational trade with all suppliers, both domestic and overseas [*1], based on mutual trust.
With the cooperation of all suppliers, we also actively promote initiatives to fulfill our corporate social responsibilities, including compliance with related laws, ordinances and social norms, and efforts to support global environmental conservation.

<Procurement Policy>

1. Transactions based on partnership
   We will develop favorable partnerships with our suppliers based on mutual trust.
2. Fair transactions
   We will ensure that our procurement is clean, open and fair.
3. Promotion of value analysis (VA) activities
   We will encourage our suppliers to conduct value analysis (VA) activities in order to propose cost improvement methods, new materials, new technologies and others, and will actively adopt such proposals.
4. Compliance in procurement activities
   We will comply with laws, ordinances and social norms in the course of our procurement activities.
5. Fulfillment of corporate social responsibilities
   We will fulfill our social responsibilities when conducting procurement activities across our entire supply chain, including our suppliers.
   - SUMCO CSR Procurement Policy [95KB/3Pages]
6. Green procurement
   We promote the procurement of materials with minimum environmental impact.

*1 [Reference] Procurement amount ratio by area in 2022



Management System

In addition to procurement departments, the departments at SUMCO responsible for quality assurance, CSR, environmental management and safety and health coordinate on the selection of new suppliers, evaluation of existing suppliers, establishment of procurement plans and other supply chain management efforts. Specifically, we issue various questionnaire forms (described later) and collect the responses, conduct written or on-site audits and due diligences on quality, CSR and the environment respectively and reflect the results obtained from these efforts in our assessment of suppliers in an effort to develop a more robust supply chain.

CSR Procurement Activities

Basic Stance on CSR Procurement

SUMCO has established the SUMCO CSR Procurement Policy and it promotes responsible procurement activities to fulfill its social responsibilities across the supply chain. We share various issues related to the supply chain with all suppliers, both domestic and overseas, and tackle procurement activities while keeping those issues in mind to ensure that customers can use our products confidently and to satisfy our stakeholders.

- SUMCO CSR Procurement Policy [95KB/3Pages]

Through periodic briefings to suppliers and procurement activities such as those described below, we request our suppliers to make voluntary efforts to promote CSR management. We also call for their efforts to respect human rights, protect the environment, comply with corporate ethics, etc. when contracting with new suppliers.

(1) Briefings on CSR Procurement

We share the SUMCO CSR Procurement Policy with our suppliers at regularly held briefing sessions, and through separate briefing sessions and CSR audits, we explain the SUMCO CSR Procurement Policy, SUMCO Environmental Policies and RBA (Responsible Business Alliance) Code of Conduct and provide advice on compliance with these standards. In this way, SUMCO continues to deepen suppliers' understanding of the Company's labor, safety/health, environment and ethics-focused efforts towards CSR procurement.

Briefing Sessions for Suppliers

Briefing Sessions for Suppliers (In 2022, same as 2021, we held the session by web-based meeting due to COVID-19.)

- June 3, 2022 (461 people from 241 companies)
- November 18, 2022 (463 people from 241 companies)

(2) Supplier Handbook

To help suppliers understand our approach to procurement activities, we distribute Supplier Handbook, which includes a section on our procurement policy and requests to suppliers including items relating to CSR. The Supplier Handbook is posted on our dedicated procurement website used in SUMCO's daily procurement activities for easy reference at any time by suppliers.
In this handbook, we ask suppliers that comprise our supply chain to promote CSR. As guideline to be followed in implementing CSR management, we ask suppliers to utilize the RBA Code of Conduct, and also encourage subcontractors and sub-subcontractors to implement CSR management in a similar fashion. Furthermore, we request them to develop an environmental management system that complies with ISO 14001 by distributing this handbook.

(3) Green Procurement Guidelines

To promote the procurement of products with a minimal environmental impact (green procurement), we have also posted Green Procurement Guidelines on the dedicated procurement website. The guidelines summarize relevant laws and ordinances, the RoHS Directive, REACH regulations, prohibited or controlled substances designated in customer requests and other pertinent information.

(4) Raw Material Surveys

SUMCO's procurement and environmental management departments work together to promote green procurement by asking suppliers to submit certificates of non-use of prohibited substances as well as issuing and collecting various questionnaires, in order to confirm that substances specified in the Green Procurement Guidelines are not being used.

(5) CSR Questionnaires and Audits

We distribute and collect CSR questionnaires based on the RBA Code of Conduct to our main suppliers to review the status of CSR initiatives at each company. The questionnaires are issued to the suppliers we regard as important because we purchase large amounts from them and they are essential or irreplaceable to our production activities. There are more than 200 such companies, and SUMCO has managed to secure responses from almost all of them. Based on the results of these questionnaires, we conduct regular CSR audits that include field audits of a given number of suppliers. Along with providing explanations of our CSR procurement policy and environmental policy and asking for understanding and cooperation, we verify the state of compliance with each of the items on the CSR questionnaire such as human rights, safety, environment, ethics, information security, and management systems, as well as confirming the status of improvements.
The CSR Audit found suppliers who had failed to sufficiently protect whistleblowers in internal reporting, suppliers who had not conducted training on how to prevent insider trading for several years, suppliers who had not adequately managed expiration dates for legally stipulated safety and environmental qualifications and suppliers who had failed to secure emergency exits and escape routes for employees. SUMCO requested the understanding of suppliers and asked them to correct these issues, leading suppliers to improve their operations. SUMCO Group will continue to promote CSR management in our supply chain.

Major Items in the CSR Questionnaire

1. Human Rights and Labor
   (1) Freely chosen employment
   Examples: Prohibition of forced and bonded labor
   (2) No use of child labor
   Example: Prohibition on child labor, not having young workers engage in dangerous work
   (3) Limitation on Working Hours
   Example: Compliance with laws and ordinances on working hours and holidays
   (4) Lawful Wages
   Examples: Compliance with laws and ordinances on minimum wages
   (5) Humane Treatment
   Examples: Respect for human rights, prohibiting harassment and establishing disciplinary mechanisms
   (6) Non-Discrimination
   Examples: Prohibiting discrimination on the basis of race, nationality, gender, age, sexual orientation, religion, disabilities or other traits
   (7) Freedom of Association

2. Safety and Health
   (1) Occupational Safety
   Examples: Obtaining and renewing permits and licenses, providing personal protective equipment
   (2) Preparedness for Emergency
   Examples: Setting up appropriate emergency evacuation doors and evacuation routes, conducting drills
   (3) Prevention of Occupational Injury and Illness

3. Environment
   (1) Compliance with Environmental Laws and Ordinances
   Examples: Obtaining the necessary licenses and other permits, compliance with environmental standards
   (2) Pollution Prevention and Waste Reduction
   Examples: Reducing waste and greenhouse gases, controlling wastewater
   (3) Reduction in Energy Consumption and Greenhouse Gas Emissions

4. Ethics
   (1) Compliance with Laws
   Examples: Prohibiting bribery and corruption, establishing internal reporting systems
   (2) Fair Business Activities
   Examples: Compliance with laws and ordinances on fair trade, competition and advertising
   (3) Information Management
   Examples: Appropriate management of customer information and protection of intellectual property rights

5. Information Security
   (1) Defense Against Threats on the Network.
   (2) Management of Electronic Data and Access Rights, and Establishment of On-site Entry Rules

6. Management Systems

(6) Training for Procurement Staff

SUMCO's procurement staff also need sophisticated expertise and a compliance-oriented mindset to conduct the CSR procurement activities listed above. By training staff about the SUMCO Charter of Corporate Conduct and providing departments in charge of procurement with opportunities to train themselves regarding laws and regulations every year, the Company aims to increase employee understanding and awareness regarding the background and meaning of the SUMCO CSR Procurement Policy, legal compliance, unfair competition and improper transactions, anti-corruption and respect for human rights.

Risk Management within Procurement Activities

We work to identify the many risks facing the company in its procurement activities, including risk of instability in procurement of raw materials, risk of corruption, risk of legal violation and risk of use of controlled or prohibited substances. We assess the extent of impact should any of these risks materialize, assign priorities to them, and implement management measures according to the level of each risk. (Refer to the section titled "Risk Management" for details.)
When selecting new suppliers or evaluating existing suppliers, we conduct risk assessment on various risks such as disruptions to raw material procurement, comprehensive corruption risk, violation of laws and risk of using regulated/prohibited substances, asking suppliers with high-risk items to improve their operations to prevent risks.

Strengthening of Business Continuity Plans for Material Procurement

SUMCO promotes optimum inventory control and multiple sources for procured materials according to the level of risk involved.
If a disaster or accident should occur, we will immediately launch an investigation into its impact, while we take all possible steps for emergency procurement, including finding alternative suppliers and adopting alternative products, thus ensuring the necessary framework to do all we can to minimize the impact on production. As part of this initiative, we distribute a self-check sheet on Business Continuity Plan (BCP) and risk countermeasures to main suppliers along with the aforementioned CSR questionnaires to confirm their BCP and risk management status. Based on the responses, we conduct checks on the efforts and status of BCP and risk countermeasures for the relevant suppliers during supplier audits.

1. Continuing optimum inventory control based on the characteristics of each procured material
   We will review inventory quantities, storage sites, transportation methods and other aspects for each type of material whenever necessary.
2. Source investigation and risk response
   We will investigate and confirm production sites and sources of major items and respond according to the level of risk involved.
3. Maintenance, enhancement and review of business continuity plan for each item procured
   We will develop business continuity plans for each major item so that we can properly respond to the occurrence of any risk.
4. Risk assessment of suppliers
   We will periodically conduct checks on our main suppliers with respect to their financial condition, production systems, business continuity plans and other aspects, and respond appropriately based on the results.

Initiatives to Reduce Environmental Impact

Through the aforementioned CSR questionnaires and CSR audits, SUMCO strives to reduce environmental impact across the entire supply chain by incorporating items designed to review initiatives aimed at reducing the amount of waste generated, curbing greenhouse gas emissions and reducing the use of electricity, water and energy, and by recognizing suppliers implementing continually concrete reduction activities by setting numerical targets or taking other measures. Besides getting suppliers to understand the SUMCO Basic Environmental Policy, education and training are provided in such areas as environmental accident prevention and legal compliance.

▶ To ESG-oriented Investors

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Respect for Human Rights

SUMCO’s Basic Policy on Human Rights

The SUMCO Group regards respect for basic human rights to be an important social responsibility. We pursue a number of initiatives to be a company that "values people" and respects the human rights of all people associated with the SUMCO Group.

The SUMCO Group looks towards international standards such as the Universal Declaration of Human Rights and the Guiding Principles on Business and Human Rights. In the SUMCO CSR Policy, we pledge to ensure a safe, health, comfortable and appropriate workplace, maintain a strong respect for human rights, abilities and personalities, and to achieve equal opportunity employment, ensure the fair treatment of employees and realize diverse ways of working. To this end, we strive to create a workplace where employees are motivated to work hard. Based on this policy, SUMCO Group's Code of Corporate Conduct and various regulations clearly define rules prohibiting workplace harassment (bullying or teasing) and other conduct in violation of human rights based on illegitimate reasons such as race, religion, gender, nationality, age, sexual orientation, and disability. In addition to establishing theinternal reporting hotline, translating the regulations into various languages and educating to increase human rights awareness among all employees of the Group, we have also established human rights violation and harassment consultation services at each Company site in Japan.
We not only prohibit child labor, but base our business activities on a clearly defined, written policy which respects the rights of every child and prohibits forced labor. We had no problems with child labor and forced labor.
In accordance with the labor laws and regulations of each country, we work to build trust between labor and management while respecting employees’ freedom of association and their right to organize and engage in collective bargaining. We also offer working conditions including wages that are appropriate to living standards in light of minimum wages, and strive to manage working hours appropriately by reducing excessive overtime.
SUMCO develops guidelines based on the above and shares them internally by posting them to the Company intranet and we also ask our suppliers to respect human rights in accordance with the SUMCO CSR Procurement Policy. (Refer to the Supply Chain page for details.)

Promotion Framework

The SUMCO Group in Japan annually convenes the Human Rights Awareness and Promotion Committee, as a framework to promote employee awareness of human rights issues. The committee confirms the policies and details of human rights awareness initiatives, while each plant or Group company implements activities in line with this policy. The activities include invitation of outside experts to give talks and awareness training using audiovisual materials.
In examining new businesses, we look at the laws of the country in question and other possible human rights/labor risks, and to ensure there is no discrimination based on factors unrelated to the legitimate interests of the business, we conduct internal training on the aforementioned policies.

Major Themes Covered in Human Rights Awareness Training

- Respect for diversity (especially gender, sexual orientation, etc.)
- Human rights for the elderly
- Workplace harassment
- Sexual harassment
- Harassment related to pregnancy, childbirth, childcare or nursing care leave in the workplace
- Mental health issues in the workplace
- Measures based on the number of consultations to the consultation service in the year, harassment, etc.

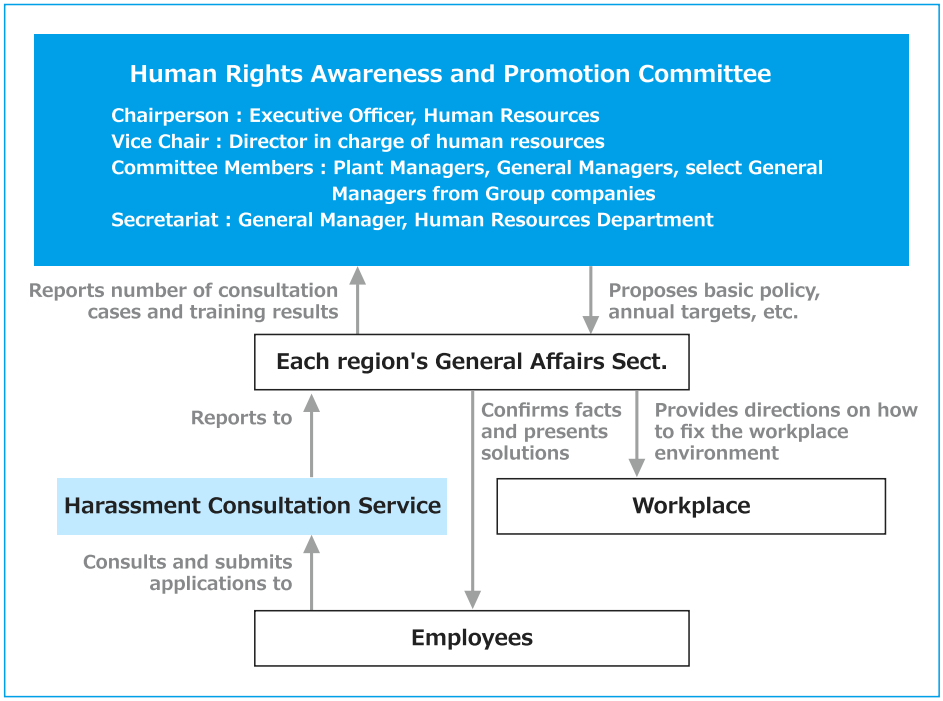
Maintaining and Enhancing a Pleasant Working Environment

SUMCO regularly educates for all employees on various forms of harassment, aiming to prevent all forms of discrimination, and makes every effort to improve awareness of these issues in the workplace.
In addition, we formulate and implement action plans aimed at improving the working environment at each workplace by conducting a stress check each year as part of our health management initiatives and adding items related to employee satisfaction to the stress check.
Seeking to eliminate all forms of employment discrimination, we also actively pursue initiatives such as attending lectures held by the U.S. Equal Employment Opportunity Commission (EEOC), as well as ADA (Americans with Disabilities Act) training seminars.
Additionally, as a part of efforts to maintain and enhance a pleasant workplace environment, the SUMCO Group also conducts various in-house recreation activities and deepens exchanges between employees at each site to revitalize workplace communication.

Establishment of a Harassment Consultation Service

SUMCO has established a Harassment Consultation Service, in addition to the internal reporting hotline, to serve as the point of contact for employees to consult about issues related to human rights violations and harassment. To ensure that employees can casually seek advice at any time, the consultation services are staffed by both male and female consultants who work based on three principles: (1) protecting the privacy of employees seeking consultation; (2) prohibiting disadvantageous treatment of related persons; and (3) dealing with consultations in a fair manner. In particular, the service accepts consultations by e-mail or telephone to keep them confidential. Each consultation request received is investigated in the relevant department, measures for rectification and prevention of a recurrence are taken as the situation calls for, and the results are reported to management, while the consulting party is given feedback. In addition, the results are shared with the Human Rights Awareness and Promotion Committee, putting them to Group-wide use in measures for preventing a recurrence.
In 2022, the Harassment Consultation Service handled 16 consultation cases.

Harassment Consultation Service System



Harassment Training

We hold harassment training to eradicate harassments for management-level staff in each region. In 2022, a total 1,100 staff members underwent the training.

Response to Risks of Labor Standards Violations, etc.

Based on the ILO Labor Principles, the Group strives to comply with the labor standards and regulations of each country. When an administrative directive for a labor standard violation is issued by a governmental authority, the SUMCO Group submits a report on the directive to the upper management and members of the Audit and Supervisory Committee, ensures that corrective action is undertaken throughout the Group, and works to raise awareness of the issue and prevent it from reoccurring.

Regarding the occurrence of events that violate various laws or infringe on human rights, we consider them as risks that could impede SUMCO's business continuity. Based on the Basic Rules on Risk Management, we conduct risk assessment and develop countermeasures. (Refer to the Risk Management page for details.)

Labor-Management Relations

The SUMCO Group grants consideration to and respects the rights of all employees, including employees' right to freedom of association based on the laws of the countries and regions in which the SUMCO Group does business. We also aim to strengthen labor-management relations while respecting employees' right to assembly and collective bargaining.
In Japan, for example, the labor agreement concluded between the Company and workers, in addition to rules, sets out as a basic policy that issues between labor and management are to be resolved through collective bargaining and discussion based on mutual understanding and trust, aimed at the perpetual development of the Company and improvement of working conditions, while recognizing the rights of the labor union to assembly, collective bargaining, and strike.
For that purpose, high-level labor-management meetings are generally held twice a year with the aim of promoting communication between labor and management, and business operations are managed with shared information and challenges.
In addition, at production briefings and labor-management meetings held once a month at each plant, the plant managers and union representatives meet to exchange information and views concerning the production situation and other matters.
Meanwhile the Labor-Management Study Committee meets regularly throughout the year to discuss important labor-management issues such as the improvement of working conditions and review of various systems from multifaceted, holistic and long-term perspectives, thus allowing labor and management to work closely together to address various issues. The ratio of labor union members to the employees of our company and domestic group companies is 88%.

Compliance with Fair Wages

Average income per employee for fiscal 2022 was 6,786,000 yen. At SUMCO, we divide the compensation systems of employees into different courses according to the work they undertake, and based on the basic concept of “equal pay for equal work,” we properly compensate employees based on their abilities, performance and contribution levels, offering the same treatment irrespective of gender. The SUMCO Group also follows laws and regulations regarding minimum wages in each country, and fulfills its obligation to pay employees appropriate wages based on the local cost of living and other factors.

Employee Benefits Programs

SUMCO and Group companies in Japan offer employees a wide range of benefits packages as guarantees for the future. In addition to Japan’s social security system, these include additional health insurance association payments, and individual options such as enrolment in an employee shareholding association, TSUMITATE NISA, property accumulation savings, and group life insurance.

▶ To ESG-oriented Investors

Human Resources Development and Utilization

Human Resources Development

As declared in the SUMCO Vision, SUMCO aspires to become the "World's Best in Technology." To reach this goal, diversified training opportunities are provided to employees at all levels, from new recruits to managers and executives. We encourage employees to stay abreast of the changing times, making every effort to foster the development of human resources who will be able to think and act independently. Each year, up-and-coming engineers are also given the chance to present their research findings to senior management as a means of enhancing their motivation. In addition, we dispatch a certain number of engineers to the doctoral program at domestic universities every year to develop highly specialized technical personnel.

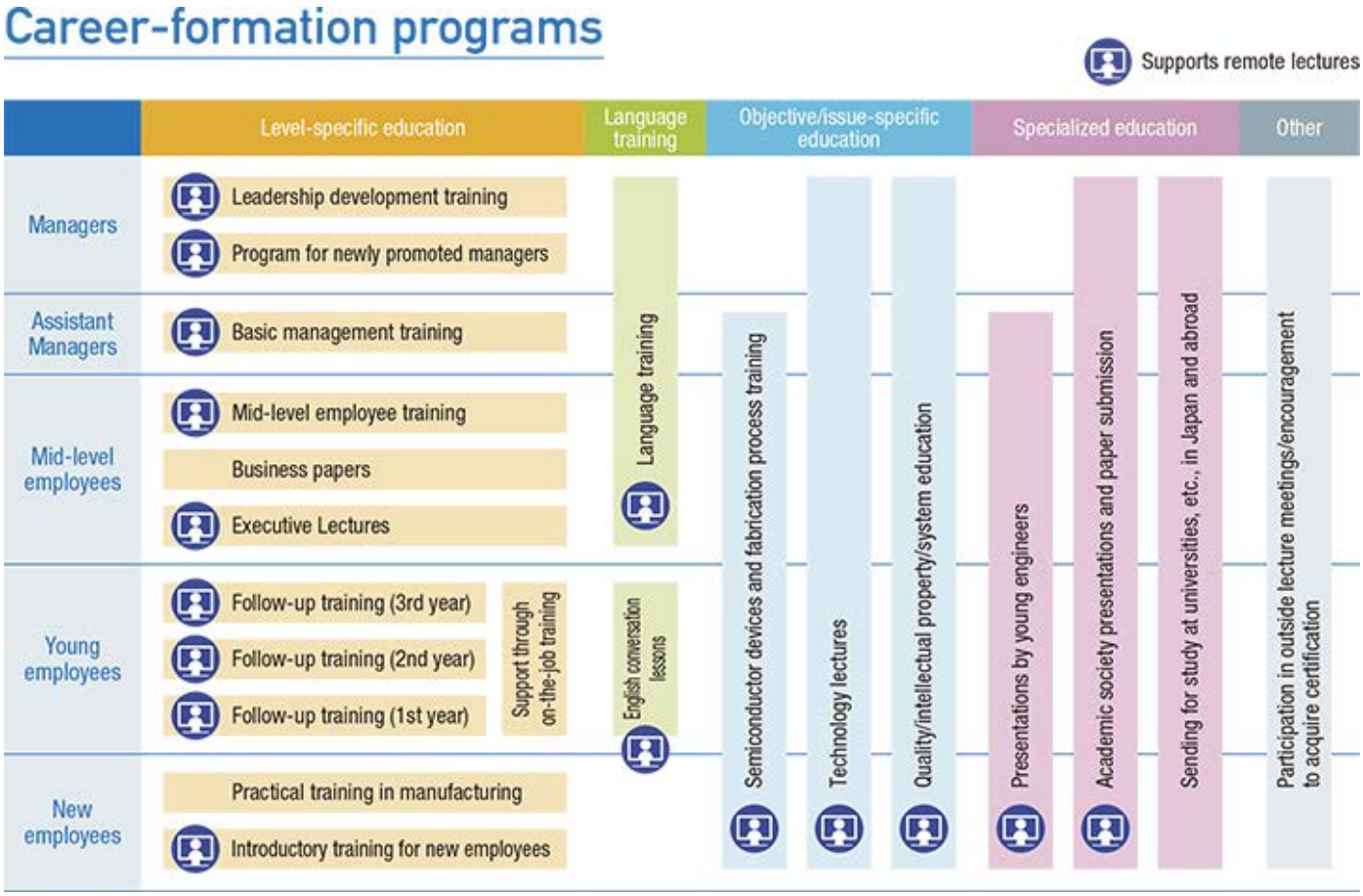
In pursuit of "Empower Employee Awareness of Profit," another element to the SUMCO Vision, the SUMCO CEO AWARD was established as the SUMCO Group's highest award, part of a measure to boost employee awareness of participation. The award is annually presented to individuals and organizations that have made meaningful contributions to enhancing corporate value. Along with this award, the Group also holds presentations by TPM teams annually in order to recognize outstanding success.

Moreover, to achieve "Competitiveness in Overseas Markets" as declared in the SUMCO Vision, we are working to cultivate an awareness of understanding and respecting a diverse range of cultures and values within the Group, and are endeavoring to develop globally competitive human resources by enhancing programs such as study abroad and foreign language learning schemes.

In 2022, a total 22,829 hours of company-wide training was held by departments in charge of human resources.

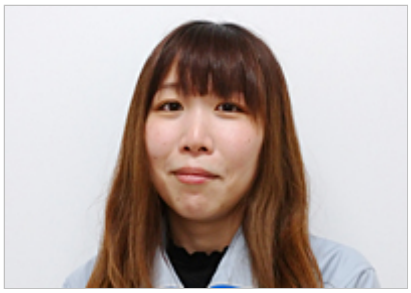
Undergoing regular review, the training programs are revised in line with changing needs; moreover, many suggestions received from outside directors with a wealth of experience in training and education are incorporated, aimed at making them better programs.

Career-formation programs



Voice

Process Planning Office
Mami Kubota



Q. You spent two years doing research work at the State University of New York. What made you decide to apply for the overseas program?

Ever since joining the Company, I had been thinking about the need to improve my communication skills, since the work includes opportunities to give presentations in front of people from abroad. When I heard about the chance to apply for this program, I jumped on it, eager to take on the challenge.

Q. Looking back at your research experience at an overseas university, was it different from a Japanese university?

One difference I noticed from Japanese universities is the way American university students actively offer their opinions, and are good at persuasion. Japanese university students, on the other hand, I feel are better when it comes to carrying out a detailed investigation of their research topic in advance, and are more thorough in setting up experiments. As for instructors, a big difference is that in the US they tend to leave research up to their students, mostly staying out of things, whereas instructors at Japanese universities give detailed advice.

Q. How do you plan to put to use what you learned abroad in your company activities?

Before I went abroad, when conversing with people I often just assumed, “Surely this person shares the same awareness as mine.” After living in the US and talking with people of diverse backgrounds, however, I changed to the assumption, “The other person’s awareness is certainly not the same as mine.” From this experience, since returning to Japan I try to confirm the other person’s understanding of things as much as possible. People in US research labs, while being sure to get a solid grasp of the main points of their studies, also value their private life, carrying out their research with a proper work-life balance. Drawing on this experience, when I am in a situation where I have to confirm understanding, I make it a practice to stick to the basics and provide balanced guidance.

Engineer Presentation Contest

Engineer Presentation Contest

Diversity and Inclusion

SUMCO believes that the promotion of diversity and inclusion is essential for becoming the strong company which can grow sustainably. Since our company has three roots: Mitsubishi, Sumitomo, and Komatsu, we have fostered a culture in which we can bring together and utilize the knowledge and expertise of each. In addition to this, we work to further enhance our corporate value so that diverse talents can work to utilize their ideas and experiences by expanding measures to promote women's career and systems, local hires at our domestic and overseas bases and experienced workers of other companies, so that diverse talents can work to utilize their ideas and experiences. We will continue to actively promote diversity and inclusion initiatives to meet our stakeholders' expectations.

Promoting Active Participation of Women

To provide employees who raise children with a more comfortable workplace environment and to support their work-life balance, SUMCO is focusing on creating an environment in which it is easy for women to work by establishing diverse employment support programs such as longer child-care leave period than the statutory leave period, a telework system, and a diverse short working hour system. In 2016, as part of these efforts, the Company has established the SUMCO Nursery School Imari as an in-house day-care facility at our Kyushu Plant in the Imari area, the largest site across the SUMCO Group. We also provide a childcare support allowance for employees who are unable to use the SUMCO Nursery School Imari.

Additionally, we improve support for women employees by developing a “Retiree Comeback Program” that allows employees who are forced to leave the company temporarily due to childcare or other reasons to return to work again. To further increase diversity within the company and to further promote women’s participation, we have set a medium-term goal of increasing the percentage of female managers to 10% in SUMCO* and 12% on a consolidated basis (in SUMCO Group) by 2030, and actively promote regular and experienced female employee hiring.

Goals: **Percentage of women in management positions**

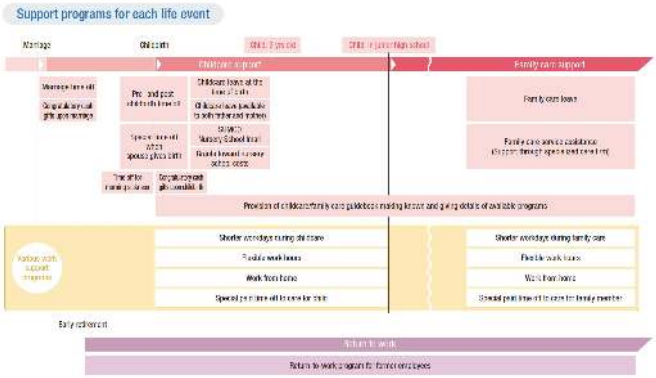
(SUMCO*, the end of December 2021) 1% → 2030：10%

(Group, the end of December 2021) 6.5% → 2030：12%

* Total figures include the number of SUMCO employees assigned to other companies and exclude secondees to SUMCO Corporation from other companies.

As a new form of regional contribution, the facility is a community day-care service based on the Japanese government's Comprehensive Support System for Children and Childrearing. Accordingly, a portion of the capacity is made available to local residents who are not SUMCO employees.

Support programs for each life event



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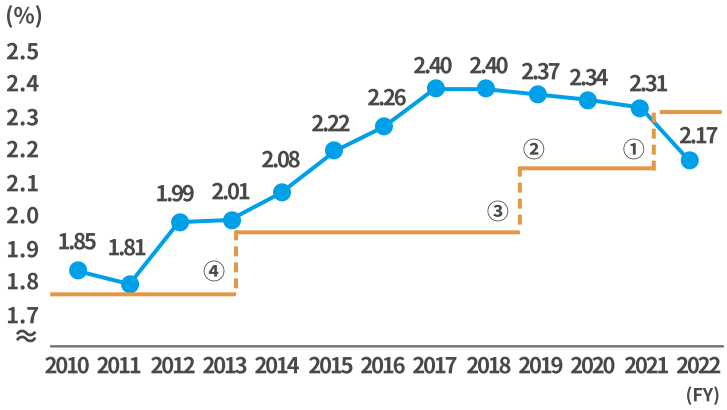
Program	Name of policy measure	Description
Childcare support	Childcare leave	Eligible up to time child is 3 years old
	Childcare leave at the time of birth	Up to 4 weeks of paternity leave within 8 weeks after the child's birth, which can be divided into 2 periods
	Shorter workdays during childcare	Up to time child enters junior high school, choice of 4-hour or 6-hour workdays
	Flexible work hours	Up to time child enters junior high school, free arrangement of work times during the day adding up to a normal workday of 7 hours 45 minute
	Work from home (remote work) option	Employees in a department and work category enabling them to work from home may choose to work remotely, as their circumstances warrant, at a maximum until child enters junior high school
	Special paid time off	Up to time child enters junior high school, in addition to the legally mandated time off for care of an ill child, paid time off can be taken for the necessary number of days when care for an illness is needed
	SUMCO Nursery School Imari	A nursery school on the company premises, available also to children of employees within access range
	Grants toward nursery school costs	Employees outside the range of access to SUMCO Nursery School Imari can receive monthly grants of 10,000 to 20,000 yen up to time child is 3 years old
Family care support	Family care leave	Leave for care of a family member can be taken for a total of one year in up to three installments
	Shorter workdays during family care	A choice of 4-hour or 6-hour workdays (for a total of up to three years; can be divided into multiple installments)
	Flexible work hours	Free arrangement of work times during the day adding up to a normal workday of 7 hours 45 minutes (for a total of up to three years; can be divided into multiple installments)
	Special paid time off	In addition to the legally mandated time off for family care, paid time off can be taken for the necessary number of days when family care is needed
	Work from home (remote work) option	Employees in a department and work category enabling them to work from home may choose to work remotely, as their circumstances warrant
Other support	Special time off when spouse gives birth	When a spouse gives birth, a total of 3 days of paid time off within 10 days before and after birth
	Return-to-work program for former employees	Former employees who had to leave their job behind for personal reasons such as childcare or family care, and who wish to return, can do so by following the set procedures

PT.SUMCO Indonesia also offers a scholarship program for the children of its employees. We hope that this scholarship will contribute to the future development of Indonesia.
(Photo: Scholarship program event at PT.SUMCO Indonesia)

Employment of People with Disabilities

The SUMCO Group is actively working to employ persons with disabilities, as demonstrated by SUMCO establishing a company that specifically hires persons with disabilities in Japan. In 2022, the employment rate of people with disabilities in Japan and overseas is 1.55%, and the actual employment rate of people with disabilities in Japan is 2.17%, in comparison with 2.3%, the statutory employment rate.
Due to the increase in total number of employees through securing personnel for production expansion, the employment ratio of persons with disabilities has relatively decreased. However, the entire group is promoting the hiring of persons with disabilities to increase the employment ratio.

Employment Ratio of People with Disabilities (SUMCO Group [Japan])



① The statutory emloyment rate for persons with disabilities from March 2021 to March 2024 : 2.3%
② The statutory emloyment rate for persons with disabilities from April 2018 to February 2021 : 2.2%
③ The statutory emloyment rate for persons with disabilities from April 2013 to March 2018 : 2.0%
④ The statutory emloyment rate for persons with disabilities until March 2013 : 1.8%

* The figure for each fiscal year is the average of the period from January to December of the following year.

Employment of Older Workers

We have set up a re-employment system by which employees, if they are well-motivated and wish to continue working after mandatory retirement at age 60, can continue working until age 65. This allows them to continue working while leveraging their extensive experience, sophisticated skills and high-level abilities.
Additionally, by maintaining the same compensation applied at the time of mandatory retirement even after a regular employee is re-employed, the system allows employees to contribute with a strong sense of motivation even after reaching mandatory retirement age.

Utilization of Global Talent

The SUMCO Group maintains manufacturing plants in the US, Taiwan and Indonesia, as well as sales offices around the world. By utilizing local hiring and actively working to hire and utilize talented global human resources regardless of nationality. The SUMCO Group seeks to achieve even further growth as a global company by improving each other.

Number of Employees

(People)

Item		Actual at end of 2022	
		Consolidated	Sumco *
Regular employees	Total number of people	9,189	4,471
	Male	8,334	4,101
	Female	855	370
	Percentage of female	9.3%	8.3%
Managers	Total number of people	817	512
	Male	760	501
	Female	57	11
	Percentage of female	7.0%	2.1%

Item		Sumco	Remarks
Board member	Total number of people	10	As of Dec. 31, 2022
	Male	9	
	Female	1	
	Percentage of female	10.0%	
New employee	Total number of people	98	FY2022
	Male	72	
	Female	26	
	Percentage of female	26.5%	
Average years of service (years)	Male	15.8	As of Dec. 31, 2022
	Female	12.4	
	Difference	3.4	

* Total figures include the number of Sumco employees assigned to other companies and exclude secondees to Sumco Corporation from other companies.

Item	Regular employees (As of Dec. 31, 2022)		Temporary employees (2022 average)
Sumco		4,622	682
Consolidated		9,189	1,182
	Japan	6,710	
	Overseas	2,479	

Number of Employees by Region (Consolidated)

(People)

Region	Number of employees (As of Dec. 31, 2022)
Japan	6,710
North America	605
Southeast Asia	326
East Asia	1,523
Europe	25
Total	9,189

Breakdown of Employees (Consolidated)

(People)

	Managers	General employees	Total (As of Dec. 31, 2022)
Male	760	7,574	8,334
Female	57	798	855
Total	817	8,372	9,189

2022 Data

Number of harassment consultation cases		16
Number of participants in harassment training for management-level employees		1,100
Resignation rate for personal reasons among permanent employees (graph below shows the change in the past turnover rate)		0.91%
Human resource development	Total hours of company-wide training held by the Human Resources Dept.	22,829 hours
	Total cost	136 million yen
	Percentage of employees who attended the above training	32%
	Training hours per employee	4.9 hours
Percentage of persons with disabilities employed	Global Total	1.55%
	Japan Only	2.17%

Change in resignation rate among permanent employees

		2018	2019	2020	2021	2022
Resignation rate for personal reasons		0.66%	0.83%	0.77%	0.85%	0.91%
	Men	0.62%	0.73%	0.70%	0.76%	0.88%
	Women	1.16%	2.08%	1.60%	1.88%	1.23%

▶ To ESG-oriented Investors

Initiatives for Safety and Health

Why SUMCO Addresses Safety and health

In order for employees to reach their full potential and work with vitality, the SUMCO Group sees ensuring environment where employees can work at ease as one of its crucial social responsibilities.
Additionally, in the SUMCO CSR Policy, the SUMCO Group pledges to "maintain safe, healthy, comfortable and appropriate workplaces for everybody working in SUMCO, shall have a high regard for human rights, ability and personality, and shall realize fair and diverse ways of working." Based on this, the SUMCO Group promote safety and health initiatives under the following basic principles and policy.

SUMCO Group Basic Policy on Safety and health

Basic Principle

Under the principle that "the safety and health of employees takes the highest priority over all," the SUMCO Group is committed to "creating a safe and pleasant workplace environment supportive of good mental and physical health" through leadership by supervisors and through active communication across the organization.

Basic Policy

1. We will collectively and thoroughly strive to create a workplace where all members adhere to relevant laws and regulations as well as rules stipulated in manuals and work procedures.
2. In the event of any work-related accidents, we will collectively and thoroughly analyze the root causes and implement measures to prevent their recurrence.
3. We will collectively and thoroughly strive to create an open workplace environment, as well as to maintain and promote their mental and physical health and to prevent occupational illnesses.
4. We will collectively and thoroughly engage in raising awareness of traffic consideration and promote traffic safety initiatives as models for society.

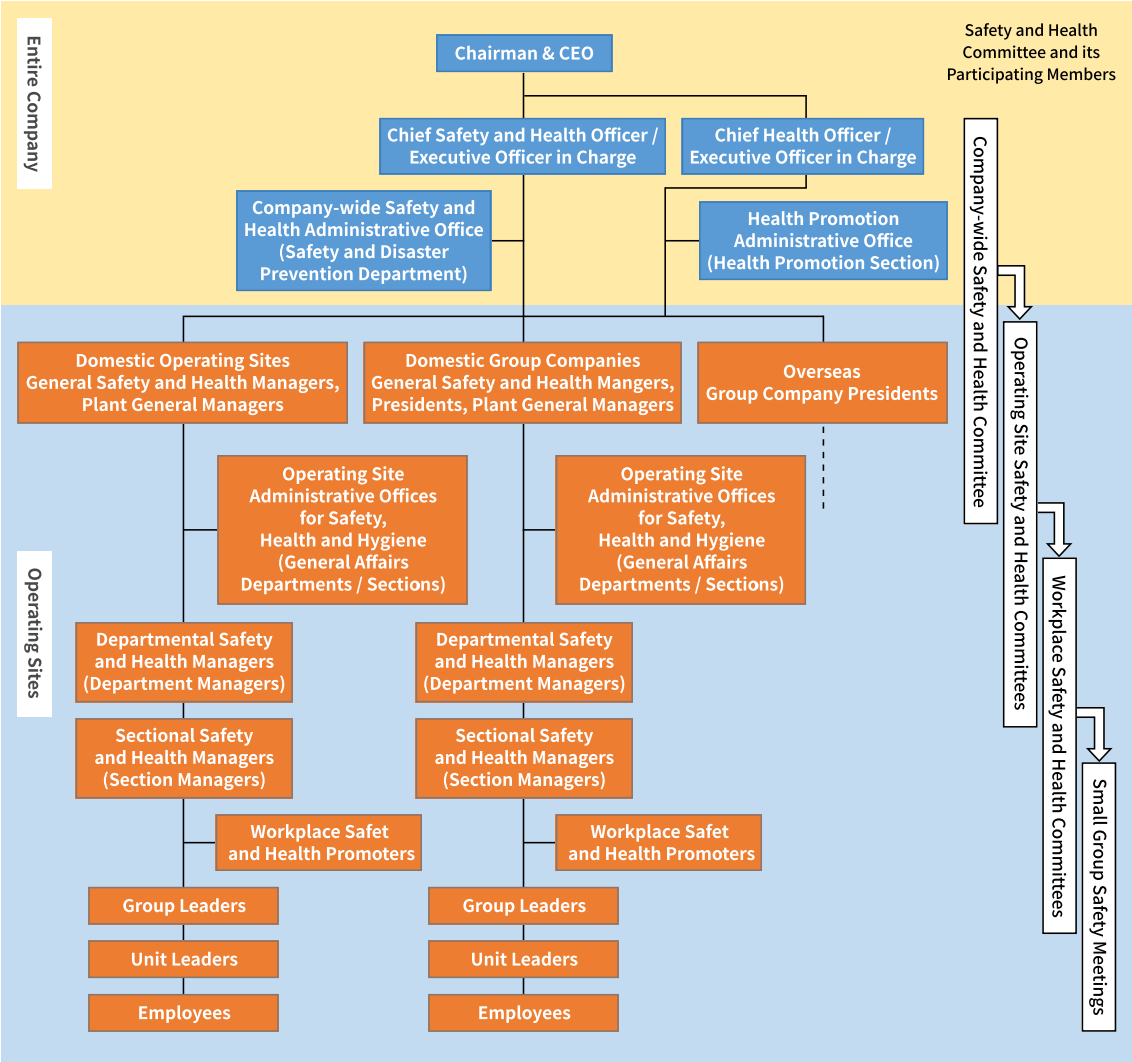
Safety and health Initiatives

Promotion Framework

For the purpose of maintaining and enhancing the Group's levels of safety and health, the SUMCO Group annually convenes the Company-wide Safety and Health Committee in which report on the status of safety and health-related initiatives and information sharing are made. The committee, attended by the Chief Safety and Health Officer, plant general managers, and presidents of group companies, reports on Group-wide performance, issues, activities related to safety and health. It also reviews and approves safety and health-related issues and targets to be addressed in the following fiscal year.

Additionally, each plant shares safety and health information and improve safety and health issues, and engages in daily activities to achieve safety and health objectives, through operating site safety and health committees, workplace safety and health committees and small group workplace safety meetings.

Company-wide Safety, Health and Hygiene Promotion Structure



Meetings and Committees (Communication) Related to Safety, Health and Hygiene

Level	Meeting	Frequency	Main Participants	Functions
Company-wide	Company-wide Safety and Health Committee	Once a year	Chairman, officers, presidents of affiliate companies, plant general managers, department managers, labor union executive board, industrial physicians, company-wide and operating site safety and health administrative offices	Review and discussion of SUMCO Group safety, hygiene and health management policies and measures
	Production Technology Division Safety and Health Committee	Once a year	Chief Safety and Health Officer / Executive Officer in Charge, executive officers, plant general managers, industrial physicians, company-wide and operating site safety and health administrative offices	Review and discussion of Production Technology Division health, hygiene and safety measures
	Labor-Management Safety Round-Table Meeting	Once a year	Labor union executive board (three highest ranks of the board, union branch manager), company-wide safety and health administrative office	Review and discussion of SUMCO Group (domestic) safety, hygiene and health measures
	Meeting of Safety and Health Personnel	Once a month	Company-wide and operating site safety and health administrative offices	Review and discussion of SUMCO Group (domestic) safety and health measures
	Overseas Affiliate Company Safety Liaison Meeting	Six times a year at each company	Overseas affiliate company presidents and safety and health administrative offices, company-wide safety and health administrative office	Explanation of SUMCO Group (domestic) safety and health measures, and exchange of information on domestic and overseas activities
	Workplace Safety and Health Promotion Personnel Exchange Meeting	Once a month	Workplace safety and health promotion personnel, company-wide safety and health administrative office	Explanation of SUMCO Group (domestic) safety and health measures, and exchange of information on activities between operating sites
	Safety and Disaster Prevention Department Inspections	Nine times a year	Managers of each department, workplace safety and health promotion personnel, company-wide and operating site safety and health administrative offices	Confirmation and discussion on the implementation status of SUMCO Group (domestic) safety and health-related measures
Operating Site	Safety and Health Committee	Once a month	General safety and health manager, plant general managers, labor union branch management, industrial physicians, operating site safety and health administrative offices	Review and discussion of operating site safety, hygiene and health-related policies and measures
	Workplace Safety Promotion Committee	Once a month	Workplace safety and health promotion personnel, workplace safety and health administrative offices	Detailed review and discussion of operating site measures

Level	Meeting	Frequency	Main Participants	Functions
Operating Site	Workplace Safety and Health Committee	Once a month	Department and section managers, group leaders, unit leaders, workplace safety and health promotion personnel, contractor managers	Review and discussion of departmental safety, hygiene and health-related policies and measures
	Small Group Workplace Safety Meetings	Once a month	Group leaders, unit leaders, workplace safety and health promotion personnel	Review and discussion of process-level safety, hygiene and health-related measures
Contractor	Safety Cooperation Association Meeting (Kyushu Factory)	Three times a year	Representatives from contractors, SUMCO (advisors, Facility Engineering Department)	Discussion occupational accident prevention at operating sites

Occupational Safety and Health Initiatives

The SUMCO Group has introduced an Occupational Safety and Health Management System (OSHMS) and obtained certification from outside certification bodies, chiefly ISO 45001 certification, and is actively working towards creating a safe and comfortable workplace environment.
Under the system, the management defines a sequence of "Plan - Do - Check - Act" (PDCA) actions to manage safety and health on a regular and voluntary basis, with the help of employees. This is a safety and health management framework designed to prevent work-related accidents, advance employee health, promote the formation of a pleasant workplace environment and raise the level of safety and health in the workplace. We also work to quantify employee safety awareness through periodic safety awareness surveys, reflect the findings in the occupational safety and health management system, and make efforts to raise awareness of safety.

Status of Occupational Safety and Health Management System Certification

Category	Total Number of Operating Sites	Number of Certified Operating Sites	Certification Rate (%)	Remarks
Group (Domestic / Overseas)	14	11	79%	-
Group (Domestic)	10	9	90%	■ ISO 45001 / JISQ 45100 certification in 9 operating sites
Group (Overseas)	4	2	50%	■ ISO 45001 certification: 1 operating site ■ SMK3 certification: 1 operating site*

* Certification provided by Indonesian National Standard (equivalent to OHSAS18001)

Major Initiatives to Prevent Work-Related and Traffic Accidents

The SUMCO Group conducts annual system audits (internal audits) and management reviews of all operating sites in accordance with its Occupational Safety and Health Management System. The SUMCO Group also endeavors to maintain and enhance safety management levels by seeking to prevent work-related accidents through promoting voluntary safety and health initiatives and encouraging the advancement of health and the formation of a pleasant workplace environment. Additionally, when workers notice a potential hazard, they are obligated to report on it as a near miss case. Through the case reports and risk assessments, the risk factors at each operating site are identified. We try to avert accidents by implementing countermeasures to these risks based on hazard levels, and reducing the degree of risk posed accordingly. Information on these risks and the corresponding countermeasures are shared across the entire SUMCO Group through Company-wide meetings attended by the safety and health personnel at each operating site, safety exchange meetings attended by the workplace safety and health promotion personnel at each operating site, and safety and health committee meetings at each operating site. Awards are given for outstanding near-miss reports, and examples of improvements are disseminated across each operating site.
In addition to safety patrols conducted at each operating site and other regular safety and health patrols of each operating site by the Safety and Disaster Prevention Department, labor unions, industrial physicians, etc., daily patrols are conducted by workers to inspect and correct potential hazards and unsafe behaviors in the workplace, aiming at realization of higher levels of safety and health.

Safety and Health Education and Training Initiatives

The SUMCO Group focuses on employee education and training with the aim of preventing work-related and traffic accidents. In terms of matters related to safety and health, we provide various types of audiovisual education, including tiered safety and health education, small group workplace safety meetings, risk prediction training (KYT), the viewing of movies produced in-house for prevention of chemical injury and disaster of being caught and drawn, other safety-related DVDs and e-learning programs. In addition, we have established "safety dojos" at 9 operating sites in Japan to enhance employees’ awareness of safety while raising employees' sensitivity to danger through simulated dangerous experiences and to learn about what actions to take in the event of an emergency, thereby aiming to prevent disasters in advance and minimize damages.
Furthermore, the prevention of traffic accidents and drunk driving is another key challenge. The SUMCO Group strives to prevent traffic accidents and drunk driving by providing traffic accident prevention training through traffic accident cases and traffic-related DVDs, implementing KYT using videos of traffic accidents, and creating maps of dangerous areas along commuting routes.

Main Education and Training Activities

Category	Name of Training	Trainees	Frequency	Instructors
Statutory Training	Induction training	New employees	Once a month	Company-wide and operating site safety and health administrative offices
	Training for newly appointed safety managers	General Safety and Health Manager appointees Departmental and Sectional Safety and Health Manager appointees	Upon selection	Outside instructor
	Unit leaders safety training	Newly appointed unit leaders	Once a year	
	Various special training, courses for various licenses, skills training, etc.	Employees engaged in the relevant work Supervisors of the relevant work	When engaging in the relevant work	
	Various skills improvement training	Qualification holder (every 5 years)	Once a year	Qualified in-house employee or outside instructor
Group Training	Training for newly appointed managers	Newly appointed managers	Once a year	Company-wide Safety and Health Administrative Office
	Group leader safety training	Newly appointed group leaders	Once a year	Company-wide Safety and Health Administrative Office
	Training for employees who has been working in the Company for 3 years and 10 years.	Employees who has been working in the company for 3 years and 10 years.	Once a year	Company-wide Safety and Health Administrative Office
	Internal auditor development training	Newly appointed internal auditors	Each time	Outside instructor
	Internal auditor skills improvement training	All internal auditors	Once a year	Company-wide Safety and Health Administrative Office
	Safety training for risk assessment, etc.	Workers, unit leaders, and workplace safety and health promotion personnel	Once a year	Operating site safety administrative office and outside instructor
	OSHMS self-awareness training (e-Learning)	All employees	Once a year	Planned by Company-wide Safety and Health Administrative Office
	Traffic accident prevention training (e-Learning)	All employees	Once a year	Planned by Company-wide Safety and Health Administrative Office
	Safety confirmation drills	All employees	Four times a year	Use of safety confirmation system
	General disaster prevention drills	Employees and contractors	Once a year	Operating site safety administrative office
	Late-night evacuation drills	Shift workers	Once a year	Operating site safety administrative office
Individual Training	Follow-up training	Employees after hiring or transfer	1, 3, 6, and 12 months after hiring/transfer	Supervisor at workplace safety and health promotion personnel and superior at workplace

Experiencing a simulated hazard (body parts crushed by or caught in machinery) at a "safety dojo"

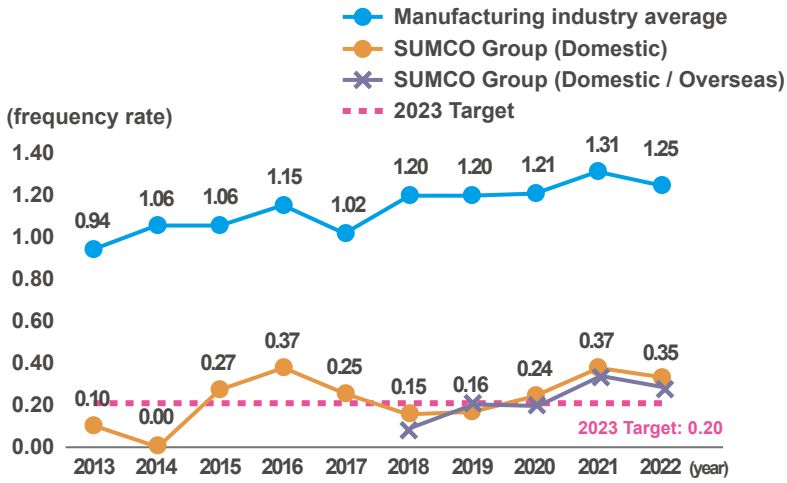
Experiencing hazards (electric shock, overcurrent, tracking) at a "safety dojo"

Status of Occupational Accident Occurrences

During fiscal 2022, five lost-time accidents occurred (the same number of times as in the previous fiscal year), most of which were daily life type accidents or due to lack of risk prediction. SUMCO conducts risk assessments to prevent such accidents from occurring in the future, with particular emphasis on risk assessments for high-risk work (heavy objects, high places, rotating objects, etc.), and also strengthen knowledge and awareness education on hazards and harmfulness.

For the SUMCO Group and contractors, the number of deaths due to occupational accidents was zero.

**Change in the Accident Frequency Rate*
(Domestic SUMCO Group)**



* Accident Frequency Rate = Number of workers killed or injured in occupational accidents (injuries requiring one or more days off) / total number of working hours × 1,000,000

Aiming for zero occupational accidents, the Group is working to enhance the effectiveness of existing activities while actively engaging in new initiatives, including broad introduction of the lockout-tagout (LOTO) safety procedure. Having acquired ISO 45001 certification for its occupational health and safety management systems, the Group is further developing and enhancing these systems, while carrying out safety awareness-raising activities based on employee survey results. In these and other ways, the Group is endeavoring to create a workplace environment, one that is safe, healthy, comfortable and pleasant to work in.

Occupational Safety and Health Data

Indicator	Target	Unit	2019	2020	2021	2022
Number of lost time injuries	Group (Domestic / Overseas)	cases	2	3	5	5
	Contractors	cases	0	0	0	0
Number of accidents (lost time + non-lost time)	Group (Domestic / Overseas)	cases	17	17	21	13
	Contractors	cases	0	0	1	4
Number of occupational illnesses	Group (Domestic / Overseas)	cases	1*	0	2*	1*
	Contractors	cases	0	0	0	0
Lost time injury frequency rate	Group (Domestic / Overseas)	-	0.18	0.17	0.27	0.26
	Contractors	-	0.00	0.00	0.00	0.00
Accident frequency rate (lost time and non-lost time)	Group (Domestic / Overseas)	-	1.01	0.98	1.15	0.67
	Contractors	-	0.00	0.00	3.83	16.64
Occupational injury frequency rate (OIFR)	Group (Domestic / Overseas)	-	0.06*	0.00	0.11*	0.05*
	Contractors	-	0.00	0.00	0.00	0.00

* Backache (backache resulting from work-related accident)

- Lost time accident frequency rate = Number of workers killed or injured in occupational accidents (lost time injuries) / total number of working hours × 1,000,000
- Accident frequency rate (lost time + non-lost time) = Number of workers killed or injured in occupational accidents (lost time + non-lost time) / total number of working hours × 1,000,000
- Occupational injury frequency rate = Number of workers killed or injured in occupational accidents (occupational injuries) / total number of working hours × 1,000,000

Community-based Traffic SafetyInitiatives

The Kyushu Factory is engaged in traffic safety initiatives as a member of the Shiroishi district's Safe Driving Supervisors Committee, including annual participation in the "Traffic Mirror Cleaning Initiative (March)" for mainly local elementary and junior high schools and "Early Headlight Lighting Warning Initiative(November)" to encourage drivers to turn on their headlights before it gets dark.
SUMCO’s Chitose Plant's Regional Cooperation Committee, made up of companies in the industrial park, has been encouraging for safe driving on the city's main roads to coincide with the National Traffic Safety Campaign in autumn. Furthermore, we actively participate in the Challenge Safety Rally organized by the Chitose District Safety Driving Management Association and take the lead in promoting safe driving.
SUMCO's Yonezawa Plant also regularly encourages safe driving at events and on the road with the city’s and the industrial park's Safe Driving Supervisors Committee.
SUMCO Technology Corporation also improves the traffic safety environment in the industrial park where it is located and runs environmental beautification activities around its operating site as chair of the Noda City Sothern Factory Liaison Council.

Safe Driving Warning Initiative (Chitose Plant)

Early Headlight Lighting Warning Initiative (Kyushu Factory)

Safety and Health/Disaster Prevention Awards Received (in the past five years)

Year & month	Award	Awarded site
October 2017	Yamagata Labor Bureau Director's Commendation	Yonezawa Plant, SUMCO Corp.
October 2017	Letter of Appreciation from Miyazaki Fire Prevention Committee	Miyazaki Plant, SUMCO TECHXIV Corp.
December 2017	Letter of Appreciation from Japanese Red Cross Society (Blood donation)	Chitose Plant, SUMCO Corp.
June 2018	Hazardous Material Safety Awards from Japan Association for Safety of Hazardous Materials	SUMCO Technology Corp.
September 2018	Commendation as Model Business Site for Safe Driving Management from the Miyazaki Prefecture Police Headquarters	Miyazaki Plant, SUMCO TECHXIV Corp.
October 2018	Silver Order of Merit from Japan Red Cross Society	SUMCO Technology Corp.
February 2019	Ministry of Health, Labour and Welfare Class 3 No Accident Record (15.8 million hours)	Kyushu Factory (Saga), SUMCO Corp.
September 2019	Commendation for Business Operators with Excellent Traffic Safety	Miyazaki Office, SUMTEC Service Corp.
October 2019	Ministry of Health, Labour and Welfare Class 1 No Accident Record (7.5 million hours)	Kyushu Factory (Kubara), SUMCO Corp.
October 2020	Commendation from the Hokkaido Labor Bureau (Award for Excellence in Safety and Health)	Chitose Plant, SUMCO Corp.
November 2020	Letter of Appreciation from Japanese Red Cross Society (Blood donation)	Kyushu Factory, SUMCO Corp.
October 2021	Commendation for Business Operators Cooperating with the Local Fire Brigade.	Kyushu Factory (Nagahama), SUMCO Corp.

▶ To ESG-oriented Investors

Health and Productivity Management Initiatives

Promotion of Health

The SUMCO Group's Approach to Employees' Health

Under the principle that “the safety and health of employees take the highest priority over all,” the SUMCO Group strives to create a bright, lively and fulfilling workplace. The Group has announced the SUMCO Group Health Declaration both internally and externally, and strategically promotes various health advancement activities as investment in health.

SUMCO Group Health Declaration

The SUMCO Group considers employee's health to be an important management resource and strives to be a group in which all employees work energetically by supporting the voluntary health promotion by each employee, as well as implementing active organizational initiatives.

Health Promotion Framework

The Company-wide Health Committee and Health Promotion Meeting are convened regularly. These bodies report on the status of initiatives and attainment level of health objectives (KPIs) for each site, and reflect finding in the planning of new measures and improvement activities. As expert knowledge is important to promote these improvements, working primarily through the supervising industrial physician in the Health Promotion Section under the Human Resources Department, industrial physicians, full-time public health nurses and regular nurses (12 full-time, 2 part-time) have been assigned to each site of the SUMCO Group to offer Group employees individual health guidance, meetings and smoking cessation support, as well as to promote health and productivity management including efforts to improve the workplace environment through stress checks, mental health training, and other services.

Health-related Meetings

Company-wide Safety and Health Committee

↓

Company-wide Health Committee

【Chairperson】 Exective officer

【Members】 Plant general managers,Technology Division, President of affiliate comanies

【Administrative Office】 Health Promotion Section, Human Resources Department

↓

Health Promotion Meeting

【Members】 Industrial physicians,plant general affairs section managers,public health nurses, regular nurses and persons in charge of hygiene

【Administrative Office】 Health Promotion Section, Human Resources Department

Health and Productivity Management Initiatives

We promote initiatives to maintain and improve the health of each employee as a company through various well-planned company-wide initiatives.
SUMCO was selected by the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE) as a company that excels in health management under “the 2023 Health & Productivity Stock Selection,” for the second consecutive year, where one company from one industry category was generally selected from among the listed companies. Additionally, SUMCO Group has been certified as one of the “White 500” corporations under “the 2023 Certified Health & Productivity Management Outstanding Organization Recognition Program” sponsored by the METI and The Nippon Kenko Kaigi for the fifth consecutive year from 2019.

Our health management challenges

We focus on three health management issues in particular: "1. mental health," "2. smoking cessation," and "3. lifestyle-related diseases," set target values, create medium- to long-term plans, and carry out activities.

1. Mental Health

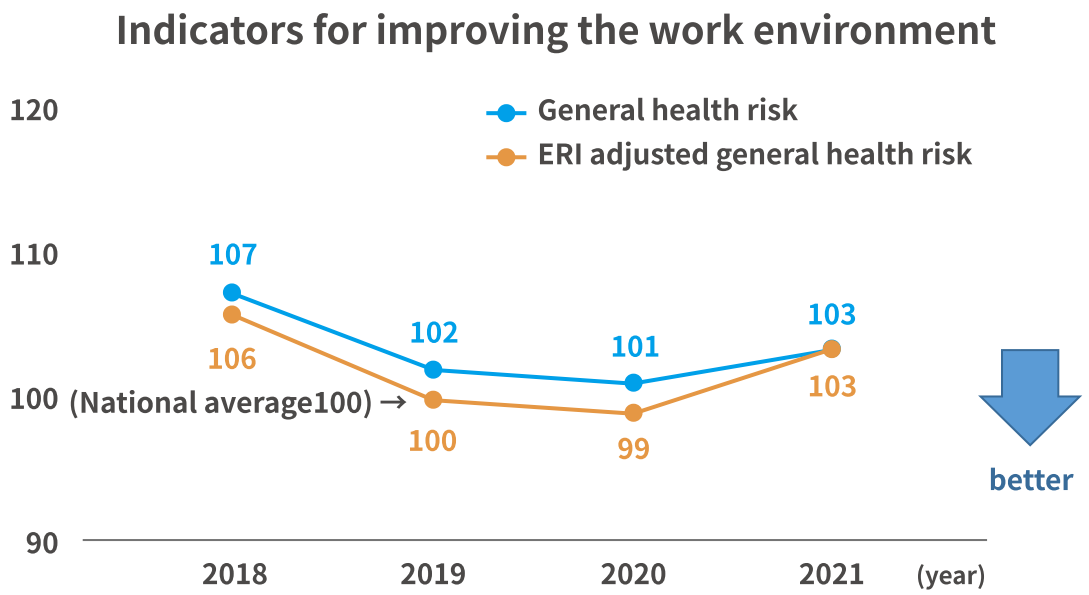
SUMCO believes that maintaining good mental health among employees leads to the development of a workplace environment where employees meet the high demands of customers, be highly productive and work with vitality. As a part of the primary prevention of mental health issues, since 2003 SUMCO has been operating and assessing workplace environment improvement activities as part of its occupational safety and health management system (OSHMS).
In addition, based on the results of stress checks conducted regarding workplace environment improvements at each workplace, we have each employee exchange feedback aimed at improvements to be made within the workplace, decide on and implement action items, and post collections of effective initiatives as good practices on the company intranet site.

Main Action Items

- Mental health training (stratified training, e-learning) and consultation framework for counselors and other staff
- Workplace environment improvement activities based on stress check results

Results of Activities

Workplace Environment Improvements Based on Stress Check Results



*1 General health risk is calculated from the stress check using a work stress determination chart.
*2 ERI-adjusted general health risk is calculated using general health risk and an effort reward imbalance model.

Case Studies of Activities

Workplace Environment Improvements Based on Stress Check Results (Examples of Good Practices)

In the SUMCO Group, departments whose stress check results show higher loads in the analysis are voluntarily improving the workplace environment by their respective departments within the framework of OSHMS. As an example of improvement activities, there is a case where the leader of a workplace where long working hours continued created and executed a Fault Tree Analysis (FTA), reviewed the results, and evaluated the effectiveness of the countermeasures. We succeeded in earlier leaving times for each employees and reduction of overtime hours by adjusting work volume and personnel, redistributing tasks among employees, and implementing initiatives such as posting messages on workplace bulletin boards to reduce overtime hours in order to foster awareness towards reducing working hours and monitoring the utilization of regular leaving days. In addition to these efforts, the SUMCO Group promotes initiatives that respect the employees' work-life balance, such as tracing the annual paid leave utilization rates and encouraging them to take annual leave.

Main Action Items

- Workplace environment improvement activities by OSHMS
- Preparing and sharing a collection of workplace good practice case studies
- Company-wide development of workplace environment improvement award system, including the SUMCO Group companies in Japan

2. Activities to Encourage Smoking Cessation

In January 2020, a survey on smoking was conducted among all Group employees. Trend analysis was conducted on factors such as smoking frequency and number of smoking sessions by employees who are smokers, and as a result of conducting smoking cessation training and individual health guidance in light of the various traits and age groups, the smoking rate among the Group employees has diminished by 14.1 % during these five years, from 46% in 2018 to 31.9% in 2022.
Additionally, to coincide with the closure of all smoking areas within SUMCO Group premises as a measure related to the nationwide spread of COVID-19, we reviewed our system to allow outpatient treatment for smoking cessation without co-payments and to provide subsidies through the purchase of medications, as part of our own support measures. This support provides smokers with the opportunity to take up the challenge of quitting smoking at no cost to themselves, while also taking advantage of health insurance programs.

Main Action Items

- Trend analysis based on results of survey of all employees on smoking
- Smoking cessation training based on the results of the above survey and encouraging the use of smoking cessation treatment through individual health guidance (Free company-subsidized smoking cessation treatment)
- Workplace anti-smoking challenge race (All workplace participation: Kyushu Factory)
- Continued closure of smoking areas on company-premises as a COVID-19 related measure

3. Measures to Address Lifestyle-related Disease, Other Initiatives

The results of periodic medical checkups show that the percentage of employees with metabolic syndrome increases between the ages of 30 and 40. We therefore offer health classes and health guidance to employees before the age of 40 to improve their lifestyles. We also hold health classes for employees aged 39 with the cooperation of external managerial dietitians, to verify the effectiveness of these classes, which will lead to improve guidance for the following year.
To promote exercise habits, our Kyushu Factory (Saga Prefecture) has conducted a walking activity using SAGATOCO, a walking application developed by Saga Prefecture. As a result of the effort, our Kyushu Factory was awarded the 2021 Saga Saiko Grand Prize in the health management category. In the walking rally, we also visualize aspects such as team rankings based on participants' step analysis, aiming to enhance their motivation to participate.
Additionally, due to the advancing age structure of the workforce, we assume that incidents of falls and trips will increase. To address this, we have assessed the motor functions of employees in a joint initiative with the Department of Sports Science at Fukuoka University to develop the SUMCO Fall Prevention Exercises and implement them in-house. In addition, as part of measures to ensure the health of female employees, we conduct surveys targeting all female employees to understand their needs, and implement initiatives such as providing free health classes, conducting the free Equol test, and offering company assistance programs for women's cancer screenings.

Main Action Items

- Health classes for employees at age 39: Participation rate 100%
- Walking activities: Participation rate 51.7%
- Improvement of dietary habits: Participation rate 99.9%
- Individual health guidance following regular medical checkups (including guidance to improve blood pressure and blood glucose levels)
- SUMCO fall prevention exercises: Implementation rate 81.0%
- Free Equol test (for those who wish)
- Company assistance programs for women's cancer screenings

4. Results and Medium-term Targets for Mental Health, Smoking Cessation and Lifestyle-related Disease Issues

Assessment Item	2018 Results	2019 Results	2020 Results	2021 Results	2022 Results	Medium-Term Targets (2025)
Current smoker	40.6%	38.2%	36.6%	31.9%	31.9%	20.0%
Percentage of Employees with Metabolic Syndrome	26.3%	26.9%	28.6%	29.4%	29.9%	25.0%
Exercising for 30 minutes or more / week	24.2%	25.4%	28.4%	27.6%	29.0%	35.0%
Percentage of employees not feeling refreshed after a night's sleep	38.9%	32.6%	31.7%	33.5%	33.7%	24.0%

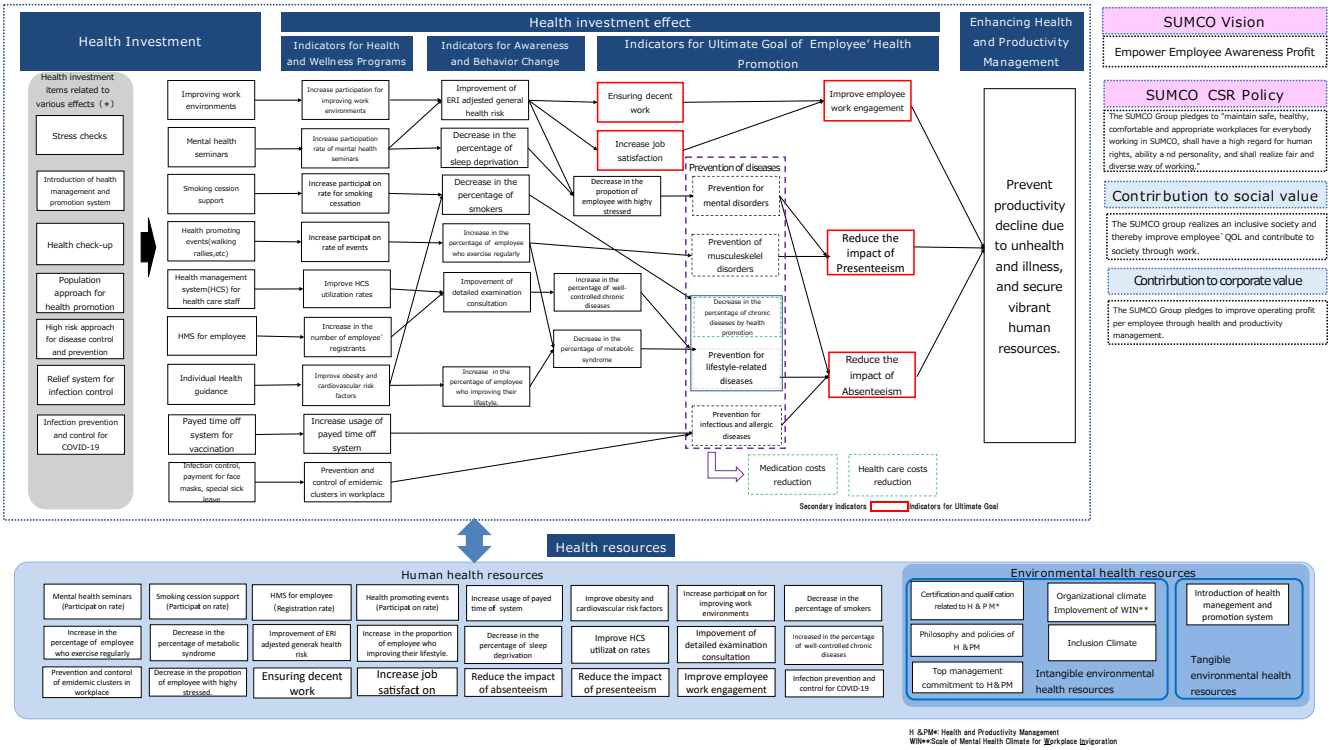
Comprehensive Indicators of SUMCO's Health and Productivity Management and Their Development into a Strategic Map of Each Initiative

By working on health and productivity management, SUMCO believes that health and productivity management help solving the ultimate goal of our health strategy map, which is to create high creativity by ensuring a workforce that works with vitality, and to prevent the possibility of poor health, injury or illness to reduce productivity. Therefore, we quantify comprehensive indicators to visualize these status and apply each initiative to our health strategy map to achieve results by strategically systematizing each initiative as a health investment. This allows us to conduct evaluations each year, leading to the necessary measures being implemented in the future.

Comprehensive Indicators

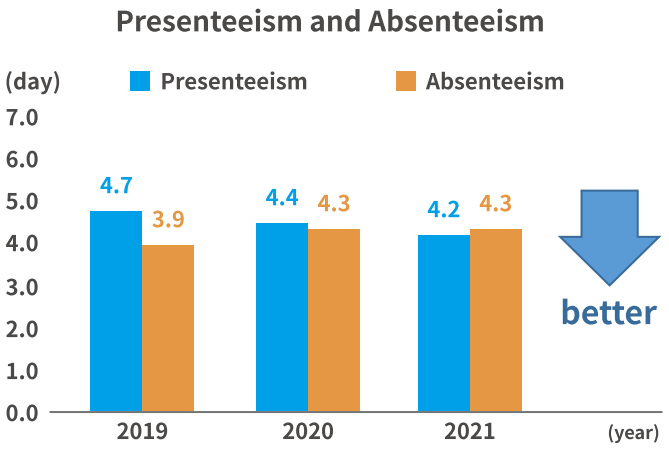
- Reduced productivity indicators: presenteeism (reduced productivity when attending work despite poor health or physical condition), absenteeism (missing work due to poor health or physical condition)
- Indicators of vitality level: work engagement (positive perception and emotion for work), job fulfillment, job satisfaction

【SUMCO Health (Management) Strategy Map】

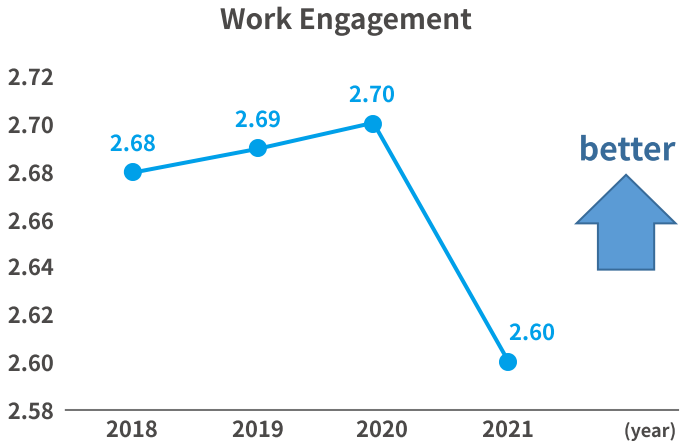


Results of Activities

Results of Activities 1. Presenteeism and Absenteeism (From Employee Questionnaire Survey)

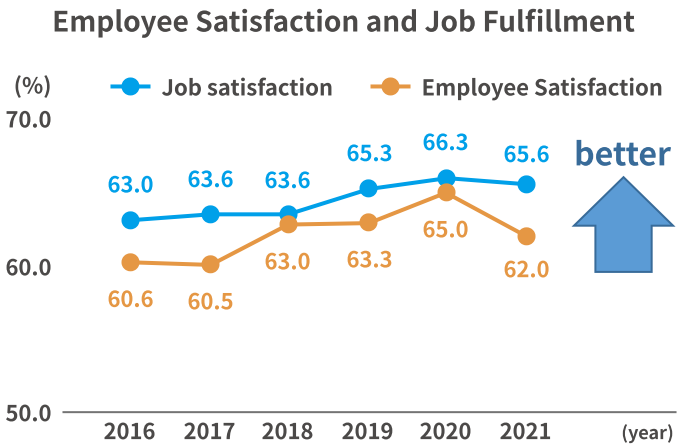


Results of Activities 2. Work Engagement (From Employee Questionnaire Survey)



＊ Work Engagement: average points from employee questionnaire on nine items regarding work (7-grade evaluation from 0 to 6 points)

Results of Activities 3. Employee Satisfaction and Job Fulfillment (From Employee Questionnaire Survey)



*1 satisfaction: the percentage of employees who responded that they were “satisfied” or “somewhat satisfied” with their job

*2 Employee Satisfaction of Job fulfillment: the percentage of employees who responded “yes” or “somewhat yes” as to whether they are in a fulfilling job

Creation of the SUMCO Health and Productivity Management Strategy Map

Supervising Industrial Physician
Minako Iyadomi

Measures related to the various selection based on the Health and Productivity Management Strategy Map aim not only to solve our Company's challenges in health and productivity management, but also to evaluate the effectiveness of health-related measures and contribute to the improvement of the next measures. In the fiscal year 2023, we plan to evaluate the effects of newly established workplace environment support system, strengthened smoking cessation support measures, and newly established cancer screening subsidy system.

▶ To ESG-oriented Investors

Community-based Social Contribution Activities

Why SUMCO Addresses the Local Community

The SUMCO Group sees existing in harmony with the local community and contributing to the region as one of the corporate social responsibilities.
In SUMCO CSR Policy, the SUMCO Group declares that "SUMCO shall respect various cultures and histories, and shall interact with society and the local communities." We take into account local communities' expectations for SUMCO and focus on the following in particular, in an effort to be a company that can contribute to the local community as a good corporate citizen.

1. Activities aimed at the local environment, safety, and disaster prevention
2. Activities aimed at providing education, culture promotion and sports promotion to the local community
3. Activities to support persons with disabilities

Due to the impact of COVID-19 from fiscal year 2020 to 2022, there were activities we were unable to perform to the same extent as regular years, including having to cancel some activities altogether, but for its part the SUMCO Group hopes to continue to focus on community-based social contribution activities going forward.

Participation in Local Cleaning Activities and Environmental Conservation Initiatives

SUMCO’s Chitose Plant has been working to maintain a pleasant road environment for pedestrians by implementing a clean-up program on approximately 1.5 km of sidewalks along the main roads of the Chitose Industrial Complex where the plant is located. Plant members pick up empty cans and trash that have been discarded, as well as fallen leaves and other refuse.
SUMCO's JSQ Division participates annually in the Omono River Basin Joint Clean-up organized by Akita City with the participation of local residents and nearby companies.

Clean-up activities on the grounds of the Chitose Industrial Complex

(From fiscal year 2020 to 2022, it was canceled due to the impact of COVID-19.)
In addition to cleanup activities along the major arterial roads in the industrial park as a member of the “Hachimanpara Corporate Council” made up of companies in the industrial park, SUMCO's Yonezawa Plant also participates in conservation and maintenance activities such as forest thinning and fertilization in Zusayama, Bansei-cho, Yonezawa City, which is located near the plant. The forest management in Zusayama is being carried out through the "Yamagata Bond Forest" agreement between SUMCO, Yamagata Prefecture and the local territorial group, Zusayama Ward Assembly.

Forest managment activities in Zusayama

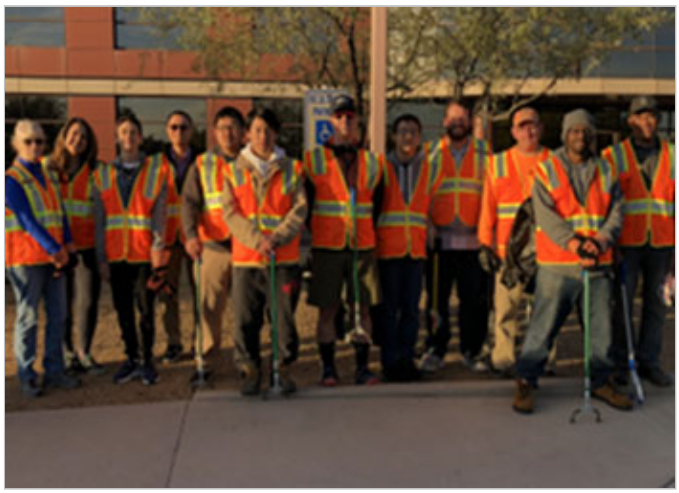
SUMCO’s Kyushu Factory supported the conservation activities of the horseshoe crab, the endangered species Class I, which inhabits the Makishima area of Imari City, Saga Prefecture. Conservation activities are being conducted at the “Imari Bay horseshoe crab breeding area,” which was designated a national natural monument in 2015, and continue to protect this precious biological resource that is in danger of extinction.
At the Nagasaki Plant of SUMCO TECHXIV Corporation, many employees and their families participated in the cleanup activities of the area around the plant (Omura Hi-Tech Park) in May 2022.
In August 2020, the Miyazaki Plant of SUMCO TECHXIV Corporation signed a management agreement with Miyazaki City for Tsubakiyama Forest Park and planted new broadleaves and other trees (sawtooth oak, konara oak, weeping cherry tree) to help protect the environment in the vast 41-hectare park.
SUMCO Technology Corporation regularly takes part in cleanup operations along nearby municipal roads and sidewalks, and also engages in cleanup activities within the industrial park where its plant is located. Furthermore, SUMCO Technology Corporation participates annually in the Edogawa Clean Campaign organized by the Edogawa River Office of the Ministry of Land, Infrastructure, Transport and Tourism and 13 other municipalities around Noda City as a member of the Southern Plant Liaison Council. The activities include collecting discarded cans and bottles, etc. and performing cleanup activities on the riverbed, embankments and side ditches along the Edogawa River. The fiscal year 2023 marked the first time in three years that the event was held following the COVID-19 pandemic.
In September 2021, SUMCO Taiwan Technology Corporation supported and participated in the International Coastal Cleanup (ICC) program of the environmental organization Ocean Conservancy, joining 80 local university students to pick up more than 800 kilograms of trash around Nanliaobeike Park, Taiwan.
SUMCO Phoenix Corporation (USA) regularly conducts community cleaning activities called 'Litter Patrol’. Litter Patrol is an initiative that employees voluntarily conduct patrols around the factory premises and collect trash, with many employees participating each time.

Donation ceremony to the horseshoe crab conservation organization

Cleanup activities at Omura High-Tech Park

Tree-planting activities at Tsubakiyama Forest Park

International Coastal Cleanup at Taiwan



Cleanup activities in the U.S. (Litter Patrol)

Greening Initiatives

At the Chitose Plant, in June each year, we enter the "Flower-Filled Contest" hosted by Chitose City's greening promotion foundation (Chitose Environment and Greenery Foundation) and plant colorful flowers in the green belt on roads around the plant, aiming environmental beautification.
At the SUMCO Support Corporation*, we conduct "Flower Project" initiatives including the voluntary creation of flower beds and planting of seeds and seedlings, thereby delighting visitors to the area around the company and employees alike.

Greening promotion activities at the Chitose Plant

* SUMCO Support Corporation is a special subsidiary company of SUMCO that was established with the purpose of employing persons with disabilities.

Participation in Emergency Drills at Welfare Institutions

At the Nagasaki Plant of SUMCO TECHXIV Corporation, we have organized an external rescue team, and joint rescue drills under the guidance of members of the Omura Fire Department are conducted every year to prepare the team for fire disasters at nearby welfare institutions.

Emergency drill at a welfare institution

Interaction with local educational institutions

At the Nagasaki Plant of SUMCO TECHXIV Corporation, we have maintained a relationship with local high schools since the establishment of the plant. Responding to requests from high schools, we send employees to give lectures on semiconductors.
Each year, PT. SUMCO Indonesia works with local high schools to operate apprenticeship programs that run for approximately 3 months, giving students the opportunity to develop their future careers.

Scene from the apprenticeship program

Scene from the apprenticeship program

Participation and Sponsorship of Sports Events

SUMCO participates in and sponsors local sports events. The SUMCO Kyushu Factory co-sponsors the IMARI HALF-MARATHON every year. In the 2023 event, over 2,000 participants from around Japan entered and ran through the early spring Imari Road.
Additionally, the SUMCO Imari Road Relay Race Team fielded Imari Road Relay Race Team fielded by the Kyushu Factory took part in the 75th Tozai Matsuura Relay Race Competition (sponsored by Saga Shimbun Co.,Ltd) held in January 29 2023, and achieved their 15th victory after a two-tournament hiatus. This Tozai Matsuura Relay Race Competition is an event with a long tradition that contributes to the revitalization of the region by attracting numerous teams from the local community and workplaces.
The Nagasaki Plant of SUMCO TECHXIV Corporation also actively sponsors the organization and operation of local sports events.

75th Tozai Matsuura Relay Race Competition (provided by Saga Shimbun Co.,Ltd)

Activities with Non-Profit Organizations, etc.

SUMCO donates total amount of 610,000 yen to Seacare and the Japan Heart Foundation, in support of the work done by these NPOs. Furthermore, we also donate to organizations such as the National Center for Child Health and Development and the Little Women Project, in support of their activities.
SUMCO's Chitose Plant (Chitose-shi, Hokkaido) supplies an emergency stock of food to the "Food Bank Network Mottainaiwa Chitose," and Miyazaki Plant of SUMCO TECHXIV Corporation provides an emergency stock of food to the "Children's Cafeteria Network Support Project" being promoted by Miyazaki City. We will continue our efforts to support the activities.
SUMCO Phoenix Corporation (USA) planned donation and support activities in 2022 to provide humanitarian aid to those affected by the war in Ukraine, support students in need, and organize blood donation drives for local blood banks. We are actively promoting company donations and supporting activities by soliciting donations from employees.
SUMCO Europe Sales Plc has a positive impact on the local community by way of helping the activities of local charity organisations through donations. In 2022, SUMCO Europe Sales Plc took part as a volunteer in WrapUp London, an activity to sort and deliver thousands of used coats and jackets to homeless shelters, refugee centers, and children's support centers. Additionally, SUMCO Europe Sales Plc donated £1,500 to WrapUp London to help with the costs of delivering those clothes, and £500 to Trussell Trust, which operates a food bank, to support their impactful activities. Furthermore, considering the resumption of business travel for their employees in 2022, the company offset approximately 30,000kg of CO_2 through Atmosfair, a provider of funding for various projects aimed at reducing and removing CO_2 emissions worldwide.

Clothing donation initiative in the UK（WrapUp London）

Clothing donation initiative in the UK（WrapUp London）

Contribution to Society through R&D Activities

SUMCO is a leading supplier of high-quality silicon wafers for power semiconductors, contributing to reducing emissions of CO2, which is GHG. We are actively engaged in joint research with Kyushu Institute of Technology, renowned for its research in power semiconductors, as well as participating in industry-government- academia collaboration projects focusing on power semiconductors. As a result, SUMCO is advancing the high-quality improvement of wafers while leveraging the achievements and knowledge obtained through research and development activities with various companies, universities, and research institutions. We are contributing to the resolution of social challenges such as preventing global warming and utilizing electricity effectively through proactive industry-government-academia collaboration activities aimed at further improving low-carbon and energy-saving technologies.

Regional Revitalization and Community Support Activities

Each year at the Uesugi Snow Lantern Festival, a famous winter festival that takes place in Yonezawa, SUMCO's Yonezawa Plant produces snow lanterns, a winter tradition in Yonezawa, in an effort to vitalize the local area. (The event was canceled in 2021 and 2022 due to the COVID-19 pandemic, and resumed in 2023 after a 3-year hiatus.)
In order to bring excitement to local events as a company that has established business sites in Imari City, SUMCO's Kyushu Factory participates yearly in the Imari Autumn Festival - Imari Dance in All as a means of contributing to local revitalization.(Although it was the first time the event was held in 3 years in fiscal year 2022, we chose not to participate.)
Additionally, SUMCO’s JSQ Division supports activities of the “Barajima Kanto Group,” which is located in Barajima, Akita and headed by a SUMCO Employee. The group participates by performing in the Akita Kanto Festival every year, where they put on energetic performances.
PT. SUMCO Indonesia actively participates in local contribution activities such as a program to provide food assistance to the neighboring indigent and support activities for orphans during Eid al-Adha Holiday* every year. Additionally, PT. SUMCO Indonesia makes donations to the local community for infrastructure development in the area surrounding the plant, such as road paving and waterway construction.

* Islamic holidays

Producing snow lanterns at the Uesugi Snow Lantern Festival

Participates in an annual event, the "Imari Autumn Festival–Imari Dance in All" (2019)

Performance by the JSQ Division

Support activities for orphans at PT. SUMCO Indonesia 1

Support activities for orphans at PT. SUMCO Indonesia 2

Donation presentation to the local community by PT. SUMCO Indonesia

▶ To ESG-oriented Investors

SUMCO Group Basic Policy on Safety and Health

1. Basic Principle

Under the principle that "the safety and health of employees takes the highest priority over all", the SUMCO Group is committed to "creating a safe and pleasant workplace environment supportive of good mental and physical health" through leadership by supervisors and through active communication across the organization.

2. Basic Policy

1. We will collectively and thoroughly strive to create a workplace where all members adhere to relevant laws and regulations as well as rules stipulated in manuals or work procedures.

2. In the event of any work-related accidents, we will collectively and thoroughly analyze the root cause and implement measures to prevent their recurrence.

3. We will collectively and thoroughly strive to create an open workplace environment, as well as to maintain and promote their mental and physical health and to prevent occupational illnesses.

4. We will collectively and thoroughly engage in raising awareness of traffic consideration and promote traffic safety initiatives as models for society.

SUMCO Group Health Declaration

The SUMCO Group considers employee's health to be an important management resource and strives to be a group in which all employees work energetically by supporting voluntary health promotion by each employee, as well as implementing active organizational initiatives.

Support Raising Next-Generation Children

to implement the Act on Advancement of Measures to Support Raising Next-Generation Children

SUMCO Action Plan

We have established our Action Plan in a bid to enable employees to perform fully to their ability by developing child-care support arrangements under which employees with small children balance their work and child-rearing and by enhancing comfortable and pleasant working environment for all employees.

1. Time Period

From April 1, 2019 to March 31, 2024 (five years)

2. Plan

Goal 1

Promotion of understanding of our child-care support system and increase in number of employees utilizing the system.

Action

1. Enhancing our child-care support system by promoting and improving convenience of our intra-company nursery school, etc.
2. Fully disseminating our child-care support system by posting necessary and useful information on our intranet, etc.
3. Reviewing utilization status of our child-care support system annually, and promoting awareness building activities to improve utilization ratio.

Goal 2

Continuous review and consideration of various measures for materialization of work-life balance.

Action

1. Continuously reviewing and considering effective and practicable measures to materialize work-life-balance.

Goal 3

Overtime reduction and encouragement to take paid leave in a bid to help employees with small children balance their work and child-rearing.

Action

1. Maintaining proper overtime management and further improving management awareness of overtime.
2. Reviewing and considering effective measures to increase the rate of taking annual paid leave in addition to the minimum five days paid leave per year under the Labor Standard Act.

Social Data (personnel)

Number of Employees

item		Value	Segment	Remarks
Employee	Total workfoce	9,189	Consolidated	As of Dec. 31, 2022
	Men	8,334	Consolidated	
	Women	855	Consolidated	
	Percentage of women employees	9.3%	Consolidated	
Number of senior management	Total Number	817	Consolidated	As of Dec. 31, 2022
	Men	760	Consolidated	
	Women	57	Consolidated	
	Percentage of women in senior management	7.0%	Consolidated	
Number of senior management	Total Number	512	SUMCO*	As of Dec. 31, 2022
	Men	501	SUMCO*	
	Women	11	SUMCO*	
	Percentage of women in senior management	2.1%	SUMCO*	
Number of directors on board	Total directors	10	SUMCO	As of Dec. 31, 2022
	Men	9	SUMCO	
	Women	1	SUMCO	
	Percentage of women directors on the board	10.0%	SUMCO	
Newly Hired Employees	Total Number	98	SUMCO	As of 2022
	Men	72	SUMCO	
	Women	26	SUMCO	
	Percentage of women employees in new hires	26.5%	SUMCO	
Average years employed	Men	15.8	SUMCO	
	Women	12.4	SUMCO	
	Difference in average	3.4 years	SUMCO	

* Total figures include the number of Sumco employees assigned to other companies and exclude secondees to Sumco Corporation from other companies

Site Data (2022 results)

2021 data on the acquisition status of ISO 14001 certification for the SUMCO Group's business sites/plants and regulated substances discharged from each site/plant to the surrounding air and water.

Kyushu Factory (Nagahama)/Kyushu Factory (Kubara)/Kyushu Factory (Saga)

Name of business site/plant		Kyushu Factory (Nagahama)	Kyushu Factory (Kubara)	Kyushu Factory (Saga)
Scope of business		Design, development and manufacture of silicon wafers	Design, development and manufacture of monocrystalline silicon ingots and silicon wafers	Design, development and manufacture of monocrystalline silicon ingots and silicon wafers
Status of acquisition of ISO 14001:2015 certification	Examining organization	Japan Quality Assurance Organization	Japan Quality Assurance Organization	Japan Quality Assurance Organization
	Date of acquisition	January 11, 1999	January 11, 1999	January 11, 1999
	Date of renewal	January 11, 2026	January 11, 2026	January 11, 2026

Air		Measurement results maximum value (regulation value)		
Nitrogen oxides (NOx)	ppm	Boiler 81 (150)	Boiler 69 (150)	/
Sulfur oxides (SOx)	m^3N/h	Boiler ND (0.44-0.85)	Boiler ND (1.15)	/
Soot and dust	g/m^3N	/	/	/

Water		Regulation value	Measure-ment result (Maximum value)	Regulation value	Measure-ment result (Maximum value)	Regulation value	Measure-ment result (Maximum value)
Biological oxygen demand (BOD*1)	mg/ℓ	/	/	/	/	10	9
Chemical oxygen demand (COD*2)	mg/ℓ	30	12	30	6	/	/
Suspended solids (SS)	mg/ℓ	30	15	30	9	25	8
N-hexane extract	mg/ℓ	5	ND	5	ND	3	ND
Iodine consumption	mg/ℓ	/	/	/	/	/	/
Fluorine and its compounds	mg/ℓ	8	5.6	8	4.1	3	1.3
Ammoniac nitrogen	mg/ℓ	80	14	80	14	100	14
Nitrate nitrogen	mg/ℓ						
Nitrite-nitrogen	mg/ℓ						
Nitrogen content (T-N)	mg/ℓ	120	34	120	19	60	18
Chromium content (T-Cr)	mg/ℓ	0.2	ND	0.2	ND	0.2	ND
Phosphorus content (T-P)	mg/ℓ	12	0.5	12	0.1	8	0.7
Arsenic	mg/ℓ	0.05	ND	0.05	ND	0.1	ND
Trichloroe-thylene	mg/ℓ	0.1	ND	0.1	ND	0.1	ND

*1 In case of discharging treated wastewater into the river, the drainage restriction of biological oxygen demand (BOD) applies.

*2 In case of discharging treated wastewater into the sea, the drainage restriction of chemical oxygen demand (COD) applies.

* Numbers list the maximum annual figures.
"/" denotes non-applicability
"-" denotes an unmeasured item as the regulated substance is not used.
"ND" denotes non-detection

Noda Office/Yonezawa Plant

Name of business site/plant		Noda Office	Yonezawa Plant
Scope of business		Manufacture of silicon wafers	Design, development and manufacture of monocrystalline silicon ingots
Status of acquisition of ISO 14001:2015 certification	Examining organization	Japan Quality Assurance Organization	Japan Quality Assurance Organization
	Date of acquisition	January 11, 1999	January 11, 1999
	Date of renewal	January 11, 2026	January 11, 2026

Air		Measurement results maximum value (regulation value)	
Nitrogen oxides (NOx)	ppm	Boiler 78 (260)	/
Sulfur oxides (SOx)	m^3N/h	Boiler 0.02 (0.32)	/
Soot and dust	g/m^3N	Boiler 0.0 (0.3)	/

Water		Regulation value	Measurement result (Maximum value)	Regulation value	Measurement result (Maximum value)
Biological oxygen demand (BOD)	mg/ℓ	25	15	600	13
Chemical oxygen demand (COD)	mg/ℓ	20*1	14	/	/
Suspended solids (SS)	mg/ℓ	50	10	600	56
N-hexane extract	mg/ℓ	3	ND	5	1
Iodine consumption	mg/ℓ	/	/	220	16
Fluorine and its compounds	mg/ℓ	8	6.9	8*2	1.3
Ammoniac nitrogen	mg/ℓ	100	10	380	142
Nitrate nitrogen	mg/ℓ				
Nitrite-nitrogen	mg/ℓ				
Nitrogen content (T-N)	mg/ℓ	30	19	/	/
Chromium content (T-Cr)	mg/ℓ	1	ND	0.5	ND
Phosphorus content (T-P)	mg/ℓ	2	0.2	/	/
Arsenic	mg/ℓ	0.05	ND	0.1	ND
Trichloroethylene	mg/ℓ	0.1	ND	/	/

*1 At the Noda office, since Tokyo Bay pollutant load restrictions apply, it is also subject to chemical oxygen demand (COD) restrictions.

*2 At the Yonezawa Plant, treated wastewater is discharged into public sewerage systems and is thus subject to the Sewerage Act. (Destination of treated waste water outflowing from sewerage treatment site: river) Accordingly, the regulation value for fluoridation compound is 8 mg/ℓ.

Chitose Plant/JSQ Division

Name of business site/plant		Chitose Plant	JSQ Division
Scope of business		Design, development and manufacture of silicon wafers	Design, development and manufacture of quartz crucibles
Status of acquisition of ISO 14001:2015 certification	Examining organization	Japan Quality Assurance Organization	Japan Quality Assurance Organization
	Date of acquisition	January 11, 1999	January 11, 1999
	Date of renewal	January 11, 2026	January 11, 2026

Air		Measurement results maximum value (regulation value)	
Nitrogen oxides (NOx)	ppm	/	/
Sulfur oxides (SOx)	m^3N/h	/	/
Soot and dust	g/m^3N	/	Firing furnace 0.08 (0.2)

Water		Regulation value	Measurement result (Maximum value)	Regulation value	Measurement result (Maximum value)
Biological oxygen demand (BOD)	mg/ℓ	600	6	160	17
Chemical oxygen demand (COD)	mg/ℓ	/	/	/	/
Suspended solids (SS)	mg/ℓ	600	14	200	30
N-hexane extract	mg/ℓ	5	ND	5	ND
Iodine consumption	mg/ℓ	/	/	/	/
Fluorine and its compounds	mg/ℓ	8*	3.8	8	0.2
Ammoniac nitrogen	mg/ℓ	/	/	100	4
Nitrate nitrogen	mg/ℓ				
Nitrite-nitrogen	mg/ℓ				
Nitrogen content (T-N)	mg/ℓ	/	/	120	3
Chromium content (T-Cr)	mg/ℓ	2	ND	2	ND
Phosphorus content (T-P)	mg/ℓ	/	/	16	0.1
Arsenic	mg/ℓ	/	/	0.1	ND
Trichloroethylene	mg/ℓ	/	/	0.1	ND

* At the Chitose Plant, treated wastewater is discharged into public sewerage systems and is thus subject to the Sewerage Act. (Destination of treated wastewater out flowing from sewerage treatment site: river) Accordingly, the regulation value for fluoridation compound is 8 mg/ℓ.

SUMCO TECHXIV Corporation Nagasaki Plant/SUMCO TECHXIV Corporation Miyazaki Plant

Name of business site/plant		SUMCO TECHXIV Corporation (STC) Nagasaki Plant	SUMCO TECHXIV Corporation (STC) Miyazaki Plant
Scope of business		Design, development and manufacture of monocrystalline silicon ingots and silicon wafers	Design, development and manufacture of monocrystalline silicon ingots and silicon wafers
Status of acquisition of ISO 14001:2015 certification	Examining organization	Japan Quality Assurance Organization	Japan Quality Assurance Organization
	Date of acquisition	January 11, 1999	January 11, 1999
	Date of renewal	January 11, 2026	January 11, 2026

Air		Measurement results maximum value (regulation value)	
Nitrogen oxides (NOx)	ppm	Boiler 67 (260)	Boiler 58 (150)
Sulfur oxides (SOx)	m^3N/h	Boiler ND (1.43-2.41)	/
Soot and dust	g/m^3N	Boiler ND (0.3)	Boiler ND (0.1)*2

Water		Regulation value	Measurement result	Regulation value	Measurement result
Biological oxygen demand (BOD)	mg/ℓ	600	58	25	6
Chemical oxygen demand (COD)	mg/ℓ	/	/	/	/
Suspended solids (SS)	mg/ℓ	600	20	30	2
N-hexane extract	mg/ℓ	5	0.9	5	ND
Iodine consumption	mg/ℓ	/	/	/	/
Fluorine and its compounds	mg/ℓ	15*1	10.8	8	1.0
Ammoniac nitrogen	mg/ℓ	380	56	100	4
Nitrate nitrogen	mg/ℓ				
Nitrite-nitrogen	mg/ℓ				
Nitrogen content (T-N)	mg/ℓ	240	88	120	3
Chromium content (T-Cr)	mg/ℓ	2	ND	0.2	ND
Phosphorus content (T-P)	mg/ℓ	32	0.2	16	0.0
Arsenic	mg/ℓ	0.1	0.002	/	/
Trichloroethylene	mg/ℓ	0.1	ND	/	/

*1 At STC Nagasaki plant, treated wastewater is discharged into public sewerage systems and is thus subject to the Sewerage Act. (Destination of treated wastewater outflowing from sewerage treatment site: the sea) Accordingly, the regulation value for fluoridation compound is 15 mg/ℓ.

*2 The frequency of atmospheric soot and dust measurements at STC Miyazaki was revised to once every five years (the next measurement will be taken in 2023).

SUMCO Phoenix Corporation Albuquerque Plant/SUMCO Phoenix Corporation Phoenix Plant

Name of business site/plant		SUMCO Phoenix Corporation (SPX) Albuquerque Plant	SUMCO Phoenix Corporation (SPX) Phoenix Plant
Scope of business		Design, development and manufacture of silicon wafers	Design, development and manufacture of monocrystalline silicon ingots and silicon wafers
Status of acquisition of ISO 14001:2015 certification	Examining organization	DNV	DNV
	Date of acquisition	June 19, 2000	June 19, 2000
	Date of renewal	June 30, 2024	June 30, 2024

Air		Measurement results maximum value (regulation value)	
Nitrogen oxides (NOx)	ton/y	1.788 (8.87)	13.6 (24.6)
Sulfur oxides (SOx)	ton/y	0.016 (0.351)	0.44 (1.25)
PM10 (Particulate Matter)	ton/y	0.137 (1.515)	0.73 (2.5)

Water		Regulation value	Measurement result*	Regulation value	Measurement result (Maximum value)
Biological oxygen demand (BOD)	mg/ℓ	/	/	/	/
Chemical oxygen demand (COD)	mg/ℓ	/	/	/	/
Arsenic	mg/ℓ	2.09	/	0.13	0.01
Cadmium	mg/ℓ	/	/	0.047	0.002
Copper	mg/ℓ	/	/	1.5	0.04
Cyanide	mg/ℓ	0.5	/	2	0.01
Fluorine and its compounds	mg/ℓ	36	/	/	/
Lead	mg/ℓ	1.0	/	0.41	0.01
Mercury	mg/ℓ	0.004	/	0.0023	0.0002
Molybdenum	mg/ℓ	2.0	/	/	/
Selenium	mg/ℓ	0.46	/	0.1	0.01
Silver	mg/ℓ	5.0	/	1.2	0.0
Zinc	mg/ℓ	2.2	/	3.5	0.05
Suspended solids (SS)	mg/ℓ	/	/	/	/

* At the Albuquerque Plant, only pH and water flow rate measurements are required, and the City of Albuquerque periodically takes wastewater measurements.

PT. SUMCO Indonesia、FORMOSA SUMCO TECHNOLOGY CORPORATION

Name of business site/plant		PT. SUMCO Indonesia	FORMOSA SUMCO TECHNOLOGY CORPORATION
Scope of business		Design, development and manufacture of silicon wafers	Design, development and manufacture of monocrystalline silicon ingots and silicon wafers
Status of acquisition of ISO 14001:2015 certification	Examining organization	SGS	Lloyd's Register
	Date of acquisition	April 22, 2005	May 13, 2019
	Date of renewal	April 22, 2023	May 13, 2025

Air	Indonesia	FORMOSA SUMCO TECHNOLOGY	Measurement results maximum value (regulation value)	Measurement results maximum value (regulation value)
Nitrogen oxides (NOx)	mg/m3	ton/y	ND（1000）	21.3（40.5）
Sulfur oxides (SOx)	mg/m3	ton/y	ND（800）	／
PM10 (Particulate Matter)	mg/m3	ton/y	1.7（350）	1.33（1.82）

Water		Regulation value	Measurement result (Maximum value)	Regulation value	Measurement result (Maximum value)
Biological oxygen demand (BOD)	mg/ℓ	200	57	/	/
Chemical oxygen demand (COD)	mg/ℓ	400	191	100	13
Arsenic	mg/ℓ	0.2	ND	0.35	ND
Cadmium	mg/ℓ	0.1	ND	0.02	ND
Copper	mg/ℓ	4	ND	1.5	0.0
Cyanide	mg/ℓ	0.1	ND	1	ND
Fluorine and its compounds	mg/ℓ	4	1.4	15	2.8
Lead	mg/ℓ	0.2	ND	0.5	ND
Mercury	mg/ℓ	0.004	0.001	0.005	ND
Molybdenum	mg/ℓ	/	/	0.6	0.0
Selenium	mg/ℓ	0.1	ND	/	/
Silver	mg/ℓ	/	/	/	/
Zinc	mg/ℓ	10	0.1	3.5	0.1
Suspended solids (SS)	mg/ℓ	400	11	30	3

* At PT.SUMCO Indonesia, wastewater is drained to the sewerage.
* At FORMOSA SUMCO TECHNOLOGY CORPORATION, wastewater is drained into the ocean.

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