Environment

Strategy (Stance, Approach, Risks and Opportunities)

Basic Concept

The planet's air, water, land, and other elements interact with each other to form a healthy foundation for the survival of living things and a rich biodiversity. Moreover, humankind and economic activities develop sustainably through the use of the Earth's valuable natural capital and the social capital generated in the course of wide-ranging activities. SEKISUI CHEMICAL Group is working to help create this kind of planet and society and has positioned the environment as a materiality (key focus area) of its ESG management.
We have also identified long-term targets and initiatives in our Long-term Environmental Management Vision, SEKISUI Environment Sustainability Vision 2050. Recognizing climate change, resource recycling, and water-related risks as important issues, we are promoting efforts to reduce GHG emissions and promote the recycling of resources. Not to mention the need to prevent further deterioration of natural capital, including steps to reduce the impact on ecosystems, we are endeavoring to provide returns to natural and social capital through such measures as the expansion of Products to Enhance Sustainability sales and are engaging in business activities on a daily basis with the aim of realizing an earth with maintained biodiversity.
SEKISUI CHEMICAL Group recognizes climate change as its most important challenge. Here, we reanalyzed the risks and opportunities related to this issue. In response to efforts aimed at accelerating targets as a result of initiatives taken to date, we also revised our strategy based on the roadmap laid to maintain the increase in temperature to less than 1.5˚C in fiscal 2022, the final year of our previous Medium-term Management Plan. In addition, we acknowledge the critical need to reduce greenhouse gas emissions not only in our corporate activities, but also across the supply chain as a whole in order to contribute to the realization of a truly decarbonized society. With this in mind, we have adopted a strategy that prioritizes resource recycling and are strengthening efforts in collaboration with the supply chain.
Under the Medium-term Management Plan starting from fiscal 2023, we will focus on certain key points. These points include the following:

- Accelerate the shift to renewable energy for purchased power and reduce fuel-derived GHG emissions in a bid to address the risks associated with climate change
- As far as resource recycling is concerned, focus on the resource conversion of raw material resins and increasing the material recycling rate for waste plastics
- From a water-related risk perspective, place particular emphasis on reducing water intake volume and COD emission volumes while minimizing the impact of our business

Furthermore, we will renew our understanding toward the interrelated nature of such environmental issues as climate change, resource recycling, water-related risks, and biodiversity, and bolster efforts to consider solutions that do not involve trade-offs throughout the product lifecycle as we carry out these endeavors.

Note: Natural capital: A term that refers to physical resources from nature, such as soil, air, water, minerals, flora and fauna, as well as biological capital, human capital, and social capital.
Social capital: A term that refers to the social infrastructure and facilities that form the basis of production activities and living environments, such as roadwork, housing, ports, airports, railroads, water supply and sewerage systems, public parks, educational facilities, social welfare facilities, electricity, gas, and hospitals.

Please refer to Environmental Management Policy on P.349.

Risks and Opportunities

SEKISUI CHEMICAL Group assesses the impact of the environment on companies as well as the scale of impact that companies have on the environment, determines the importance of risks, and sets priorities to be addressed.
As far as the risks and opportunities associated with environmental issues are concerned, we assess the scale of economic impact on companies with respect to transition and physical risks.
Transition risks are those that arise when policies and regulations that support the resolution of environmental issues are strengthened, resulting from delays in response to policy and technological changes. On the other hand, if we take the lead in tackling environmental issues, we will quickly respond to the needs of society, which will become increasingly demanding in the future. This in turn will lead to opportunities to acquire additional markets through cost reductions and technological changes.
Physical risks are those that arise from physical changes in the external environment when environmental issues, especially climate change, are not successfully resolved. Meanwhile, reducing this risk will increase corporate sustainability, while at the same time developing products and services that mitigate this risk will lead to opportunities.
Specific risks and opportunities are extracted using the scenario-based analysis method recommended in the TCFD Guide. This scenario analysis was conducted using two axes.
One axis was based on a social scenario centered on climate change with temperatures of not less than 4˚C or not more than 1.5˚C. We have determined that climate change issues are correlated with other environmental issues and have the greatest impact on social scenarios. Here, we use this common axis as an axis when setting up scenarios based on overall environmental issues.
The other axis was based on the decentralization of social systems in rural areas or concentration in large cities. In the Group's four business domains (Residential, Advanced Lifeline, Innovative Mobility, and Life Science), we conducted statistical processing based on a survey of internal and external experts for events that fluctuate widely in their feasibility. Then, we extracted what kind of events could be considered in the four social scenarios of the four quadrants based on two axes. With a focus on climate change, we predicted how the impacts of resource recycling, water-related risks, and biodiversity will change the future.

These analyses are reviewed once a year in light of social trends related to environmental issues, the policies of each country, and status of the Group. As a result of the above analyses, the following risks and opportunities are considered.

- **Increase in energy procurement costs due to carbon tax hikes and a decrease in sales through adjustments to product pricing**
  We recognize this as a policy-related transition risk that has a significant impact on the Group as a whole. On the other hand, we recognize the prospect of capturing business opportunities by taking measures at an early stage compared with other companies and other company products. One such opportunity is the stabilization of energy costs through the conversion to renewable energy.

- **Conversion of low-carbon materials and processes to meet the growing market demand for a shift to low-carbon products**
  We see this as a technology-related transition risk that has a significant impact on the Group as a whole.
  On the other hand, we recognize the potential for business expansion, including growth opportunities for Products to Enhance Sustainability that contribute to low carbonization and business growth by prioritizing the procurement of resource recycling friendly designed products.

- **Increase in damage caused by typhoons, torrential rains, droughts, etc., and decrease in sales**
  We recognize this as an acute physical risk that has a significant impact on the Group as a whole resulting in an increase in damage caused by such incidents as plant shutdowns as well as a decrease in sales, etc. Meanwhile, we see opportunities in the growing need to strengthen infrastructure, the prospect of an increase in sales of Products to Enhance Sustainability in high water risk areas, and an upswing in the need for disaster-preparedness facilities.

- **Opportunity loss due to changes in consumption behavior, preferences, etc.**
  As a market transition risk, we recognize the possibility for opportunity loss due to a decline in the number of new vehicle sales and a lack of access to resource recycling and decarbonization incentives. As such, changes in consumer behavior and preferences may significantly impact the Group as a whole. In contrast, we recognize the opportunity to gain incentives through resource recycling and the visualization of decarbonized value as well as an increase in profitability from the shift to higher-performance products.

Approach to Environmental Issues and Our Long-term Vision
Long-term Environmental Management Vision, SEKISUI Environment Sustainability Vision 2050

SEKISUI CHEMICAL Group contributes to solving a variety of natural and social environment issues through its corporate activities, products, and business in order to realize an earth with maintained biodiversity. We recognize that we are conducting our corporate activities using the earth's natural capital as well as meaningful social capital from society. We are therefore committed to accelerating efforts aimed at returning such capital back to the environment and society while collaborating with stakeholders.

Our goal is to create an earth with maintained biodiversity. This earth cannot be realized without a society in which various issues related to the natural and social environments have been resolved. I believe that this is the same as our stance toward achieving the SDGs in 2030.

The following three activities are important for the Group to contribute to the resolution of issues.

1. Expand and create markets for Products to Enhance Sustainability*1
2. Reduce environmental impact
3. Conserve the natural and social environments*2

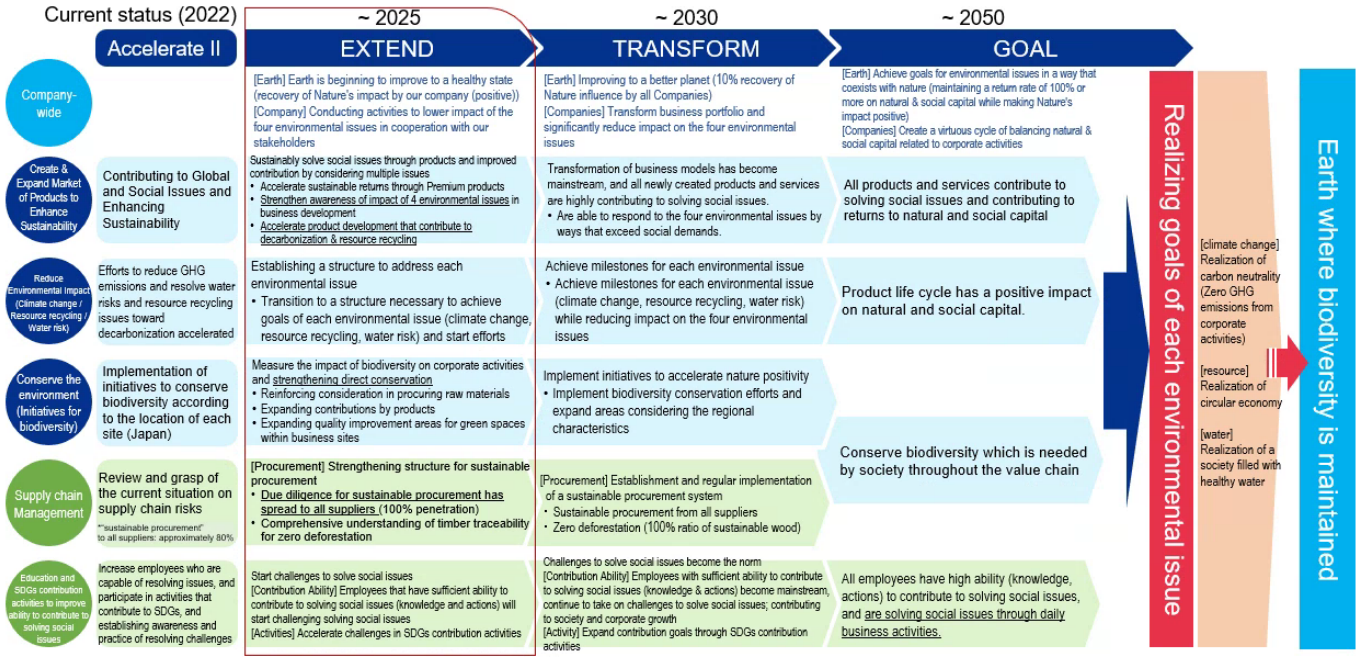
*1 For details, please refer to Products to Enhance Sustainability on P.23.
*2 For details, please refer to Social and SDGs Contribution Activities on P.240.

*Stakeholders: "Customers" "Shareholders" "Employees" "Business partners" "Local Communities and the Environment"

In order to revitalize our activities and accelerate efforts to resolve issues, the Group believes that it is necessary for each employee to be aware of different environmental issues and not only to become a group with a strong ability to contribute to solving issues, but also to promote activities in partnership with all stakeholders.
Backcasting from our vision for 2050, we set milestones on a medium-term basis, and established an environmental roadmap.
In fiscal 2023, we promoted initiatives based on this environmental roadmap.

- What kind of situation will we achieve over the medium term by tackling environmental issues?
- Key actions to be taken and medium-term milestones

Environmental Roadmap



Long-term Goals for Each Environmental Issue

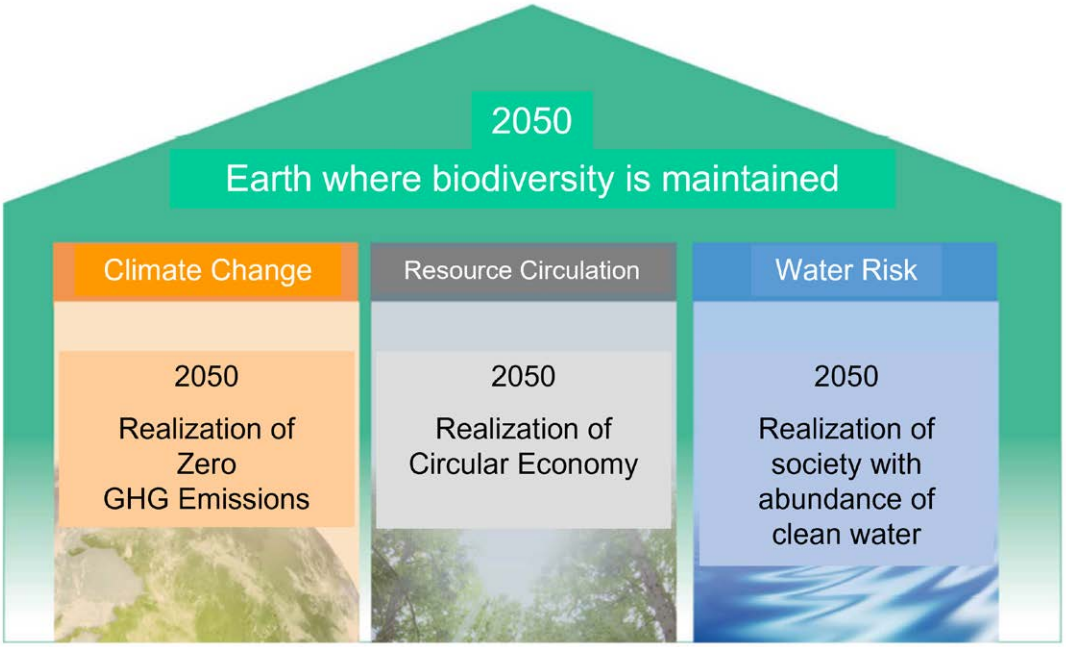
In order to realize an earth with maintained biodiversity targeted under our Long-term Environmental Management Vision, we have identified the following environmental issues that are particularly important, and the goals we aim to achieve by 2050.

[Environmental issues]

- Climate change: Achieve zero greenhouse gas emissions that arise from business activities (achieve carbon neutrality)
- Resource recycling: Achieve a circular economy
- Water-related risk: Realize societies with abundant access to clean water

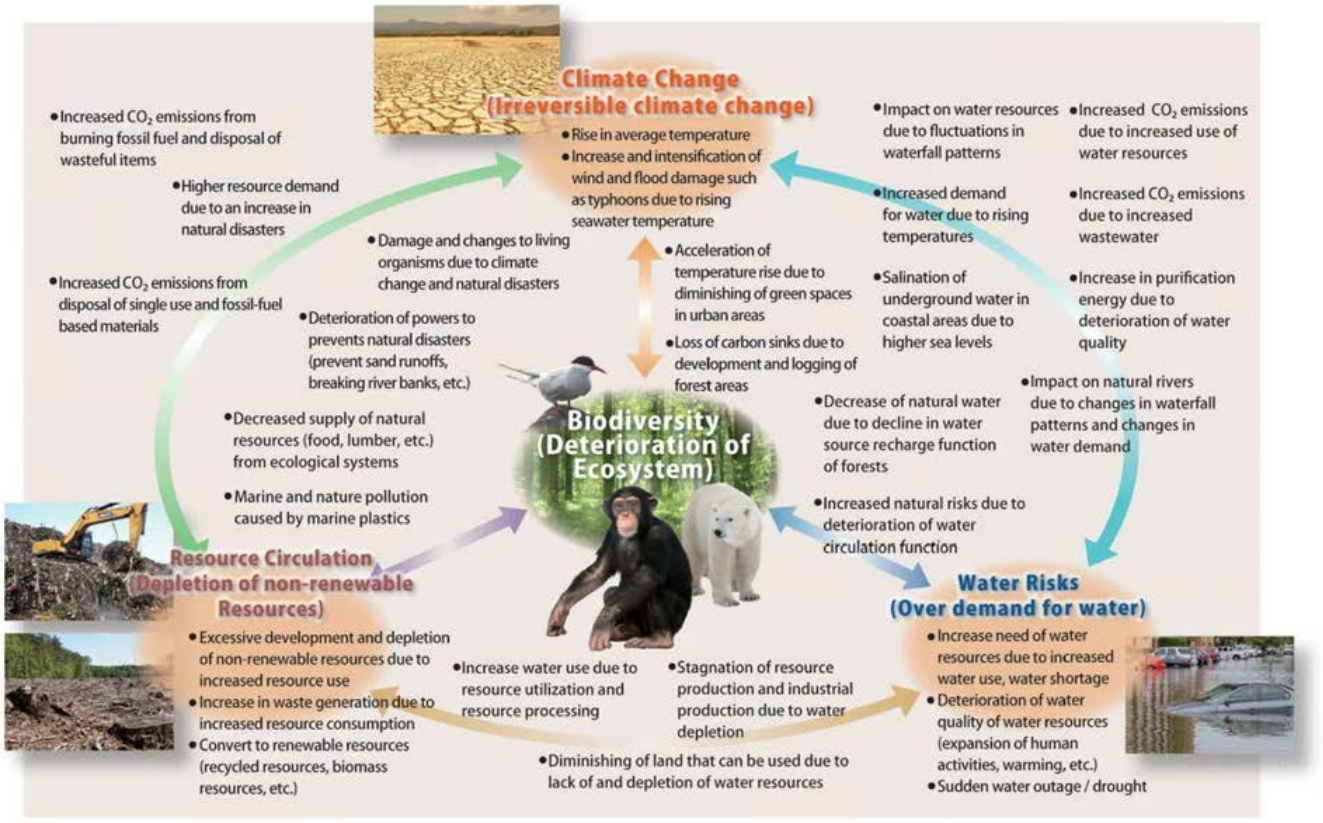
  By achieving all of these environmental issue-related long-term goals, we aim to achieve
- Biodiversity: An earth with maintained biodiversity (realize nature positivity).

Long-term Goals for Each Environmental Issue



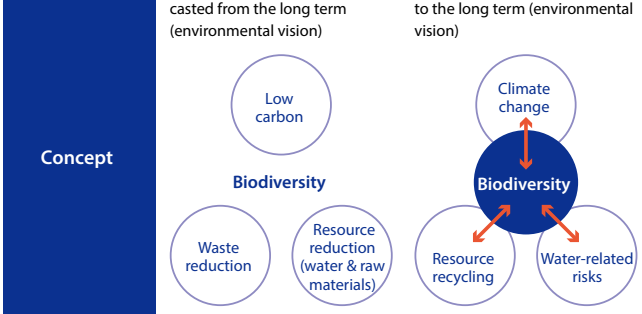
For each environmental issue, we have drawn up a roadmap backcasted from our goals in 2050, and have set medium-term milestones. Environmental issues are interrelated, and choosing and promoting solutions that do not involve trade-offs will lead to the simultaneous realization of long-term goals. For this reason, we will focus on improving the quality of solutions to environmental issues under our current Medium-term Management Plan.

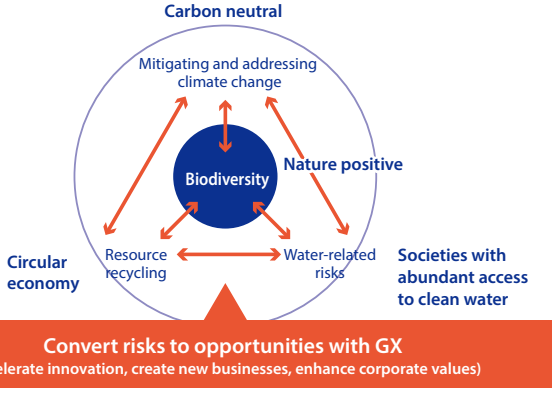
Correlation between Environmental Issues



Trends in Environmental Issue Initiatives Enhancement Points

Points of enhancement	Reduction of environmental impact	Response to individual environmental issues	Improving the quality of solving environmental issues: Solving with awareness of the correlation between environmental problems
Term	Until recently	Previous Medium-term Management Plan	Current Environmental Medium-term Plan
Concept	Measures taken by Medium-term Management Plan to achieve milestones back casted from the long term (environmental vision)	Work to decouple environmental impact and corporate growth looking ahead to the long term (environmental vision)	Recognize interrelationships between environmental issues from a long-term perspective (environmental vision), solve environmental issues with solutions that consider all issues, and direct the impact on natural capital (biodiversity) in a positive direction





Environmental Medium-term Plan, SEKISUI Environment Sustainability Plan: EXTEND (2023-2025)

SEKISUI CHEMICAL Group is promoting SEKISUI Environment Sustainability Plan: EXTEND, its environmental medium-term plan that covers the three years from fiscal 2023. As previously mentioned, using backcasting to achieve the goals we have set for 2050 in our Long-term Environmental Management Vision, SEKISUI Environment Sustainability Vision 2050, we are aiming for milestones established for the Medium-term Plan and implementing initiatives for each important working item.

The key environmental issues that the Group must address are climate change, water-related risk, and resource recycling. With regard to biodiversity, which is directly or indirectly related to these issues, we recognize the importance of understanding the issues and working to progress of biodiversity conservation.
In order to accelerate the resolution of issues aimed at achieving our long-term goals, we have set creating and expanding the market for Products to Enhance Sustainability, reducing environmental impact, and environmental conservation" as items on which to focus.
We have also established the following items as specific measures to be taken.
・Supply chain management
・Improve employees' ability to contribute to solving social issues

Under the current Mid-term Management Plan, we are promoting initiatives to achieve the following targets.

Important measures and targets

- **Improving the rate of return of natural and social capital**
  Monitoring progress with the integrated index, SEKISUI Environment Sustainability Index: Maintaining a rate of return to natural capital of 100% or more

- **Improving global and social sustainability through our products**
  Sales of Products to Enhance Sustainability: In excess of ¥1 trillion

- **Tackling climate change issues**
  [Decarbonization]
  Renewable energy as a percentage of purchased power: 70%
  Reductions in greenhouse gas emissions: 33% or more (compared with FY2019)

- **Efforts to address resource depletion issues**
  [Promote resource recycling]
  Recycling rate for waste plastics: 65% (Japan)

- **Initiatives to address water-related risk issues**
  [Preservation of water resources]
  Water intake volume at production sites that use large amounts of water: 10% (medium-term three-year period) (compared with FY2016)
  Total volume of COD discharged into rivers by production sites where discharge is substantial: 10% (medium-term three-year period) (compared with FY2016)
  [Minimizing water risk]
  Implement initiatives to minimize impacts at business sites with a significant business impact due to water risk

- **Improving the ability of employees to contribute to solving issues**
  Promote education and training
  Promote activities that contribute to SDGs

Summary of Crucial Action Items in the Current Environmental Medium-term Plan

Products to Enhance Sustainability

The Environment-Contributing Products program, which preceded Products to Enhance Sustainability, was launched in 2006. Since then, we have registered products that make a significant contribution to solving environmental issues based on internal standards. We have made a commitment to society to increase the ratio of Group-wide products registered, and have promoted the creation of products that solve social issues while working to expand the market. From the beginning of the program's operation, the Group has aimed to accelerate the resolution of environmental issues through products and realize a balance between ecology and economy.

In fiscal 2017, we expanded the scope of Environment-Contributing Products to include not only the natural environment, but also the social environment, including human and social capital. Our goal is to improve people's lives and the global environment. We believe that it is essential to resolve the issues set out in the SDGs adopted by the United Nations in 2015. This includes promoting well-being and health and securing resilient infrastructures to improve people's lives as well as mitigating and responding to climate change to improve the global environment. We are focusing our efforts on solving these issues.

In fiscal 2020, the name of the product program was changed to Products to Enhance Sustainability. This measure was designed to improve the Group's sustainable management capabilities and profit-generating capacity to sustainably solve social issues, including the environment, and to grow as a Group by solving social issues. At the same time, the following two systems have been launched.

- Sustainability Assessment: To improve the sustainability of companies and products, we confirmed and assessed social responsibilities and risks, including governance (internal control), customer satisfaction, and environmental considerations in the development process, across the supply chain. We identify areas that need improvement and reinforcement, and use this information to implement each item.
  In particular, environmental issues include reducing greenhouse gas emissions from raw material suppliers, procuring from sustainable forests, and confirming that consideration is given to environmental issues from raw materials to disposal.
- Premium Framework: We have set this as a strategic framework for products that contribute to solving social issues, including environmental issues, and that strategically grow products that are driving profits.

Climate Change Issues

With regard to the issue of climate change, we have set a long-term target of zero greenhouse gas emissions by 2050. In order to achieve this goal, we have drawn up a path to achieve the 2˚C target. We were able to achieve the milestones set in the roadmap for greenhouse gas reduction halfway into the previous Medium-term Management Plan (fiscal 2021). As a result, we revised our roadmap to achieve a target of 1.5˚C with the aim of accelerating our efforts.
We have not changed our milestone of converting all purchased power (Scope 2) to renewable energy by 2030. However, we will also focus on reducing greenhouse gas emissions with a view to switching to alternative fuels, and aim for a 50% reduction compared with fiscal 2019.

Under the current Medium-term Management Plan, we will actively promote the reduction of fuel-derived greenhouse gases, in addition to the conversion of electricity used at production plants to renewable energy. We have identified the period from fiscal 2023 as the time for production process innovation. Our goal is to convert 70% of purchased power to renewable energy, and are continuing to implement measures to support this conversion. For fuel-derived sources under Scope 1, we are continually promoting energy conservation activities at our production sites, including more efficient operations and energy conversion to electricity by replacing aging facilities.

Products manufactured under these initiatives are low-carbon products that emit low levels of GHGs throughout the product life cycle. We are working diligently to create and expand markets for Products to Enhance Sustainability with a low carbon footprint (CFP) for use in products that allow customers to engage in low carbon manufacturing and ultimately to a decarbonized society. In order to reduce GHG emissions throughout the product lifecycle, it is vital to reduce GHG emissions (Scope3) in the supply chain.
In upstream corporate activities, we are calling on the cooperation of suppliers and strengthening efforts to convert to non-fossil-based and recycled raw materials in a bid to reduce raw material-derived GHG emissions. In downstream corporate activities, we are endeavoring to increase the sales ratio of net-zero energy houses (ZEH) and are promoting increased awareness toward the recovery and disposal methods of used products at the product and business model design stages in order to reduce GHG emissions at the time of products use.
As far as disposal methods at the product disposal stage are concerned, we are engaging in a variety of activities. This includes coordinating with waste contractors and the industry as well as refining proprietary technologies. One such technology to emerge from these efforts is the Group's Biorefinery (BR) technology that produces ethanol from waste using microorganisms.
Taking the aforementioned into consideration, the Group recognizes that resource recycling contributes significantly to the reduction of Scope 3 emissions, and is promoting initiatives accordingly.

Water-related Risk Issues

In fiscal 2020, we set realizing societies with abundant access to clean water as our goal for 2050. We set milestones for priority items by backcasting and formulated a roadmap for water-related risk reduction. Based on the aforementioned, we will continue to reduce the volume of water consumed throughout the Group and promote recycling, while also working to improve the quality of water discharged into rivers based on COD indicators. In addition, we work to ascertain water-related risks specific to each region and formulate and implement risk reduction measures tailored to the region for sites with high risks.

As far as efforts to mitigate water intake risks are concerned, we recognize that one measures is to incorporate water intake risks in the formulation of BCPs at each production and business site. This is also an effective measure in efforts to adapt to climate change.

In addition to such environmental management measures as the prevention of pollution during both regular and non-regular periods, efforts to improve the quality of wastewater are also one measure to reduce water discharge risk. We recognize that these endeavors will help reduce the negative impact on biodiversity.

Through these measures, we will strive to improve the water environment in basins centered on production sites and reduce water-related risks in the supply chain, thereby reducing water-related risks for companies and society.

Looking in particular at the supply chain, we will share and recognize risks through dialogue with suppliers (Environmental Due Diligence) while working together to consider and implement measures to improve risks in an effort to reduce the water-related risks associated with the raw materials procured.

Resource Recycling Issues

With regard to resource recycling, we will strive to reduce the total amount of waste, even as the scope of our operations doubles toward 2030. At the same time, we will focus on recycling and promote initiatives to realize a recycling-oriented society and a circular economy by 2050. Recognizing that efforts to recycle resources in the supply chain are indispensable to realizing a decarbonized society, we formulated a resource recycling policy, strategy, and a resource recycling roadmap to achieve a circular economy in 2050 in fiscal 2020.

With innovation centered on the creation of Products to Enhance Sustainability for resource recycling, we have initiated steps to strengthen our efforts to convert existing products into raw materials and to recycle valuable materials from waste discharged in the production process.

From a waste recycling perspective, we are considering and promoting in-house measures so that we can select high-quality material recycling methods. Among a host of endeavors, we are evaluating the degree to which we contribute to other environmental issues, including the reduction of GHG emissions, conservation of biodiversity, and recycling.

As a technology to accelerate resource recycling not only in-house, but also in society, we established and demonstrated a Biorefinery (BR) technology to produce ethanol from waste using microorganisms. Moving forward, we will continue to work toward social implementation.

We believe that solutions to environmental issues will accelerate as the entire supply chain works together. We will develop and implement measures that emphasize supply chain management that spans the lifecycle of our products.

In order to realize a recycling-based society, it is necessary for society to recognize the value of recycled raw materials, biomass, and their use in products, and to acknowledge activities that were previously treated as external diseconomies as economic costs.

In order to raise social awareness, the Group is vigorously participating in and driving activities through various rule-making and other initiatives, including the certification of recycled products and recycling processes.

Biodiversity Issues

SEKISUI CHEMICAL Group's Long-term Environmental Management Vision is to realize an earth with maintained biodiversity where the ecosystem hierarchy is kept healthy and in a nature-positive state. We believe that this goal will be achieved when all environmental issues are resolved.
The Group recognizes the dependence and impact its corporate activities have on natural capital, and strives to maintain returns that exceed the natural capital used. Going forward, we will reduce the dependence and impact on natural capital from the perspective of five impact drivers (climate change, resource consumption, water and land use, pollution, and invasive species) that affect natural capital through corporate activities. Specifically, we will implement the following seven measures.

<Providing returns to natural capital through corporate activities>
1. Review manufacturing processes
2. Review nature-positive product design
3. Increase contribution through Products to Enhance Sustainability

<Supporting returns to natural capital by society>
4. Strengthen initiatives for raw material procurement
5. Support social change

<Accelerating returns to natural capital in corporate activities and society>
6. Human resource development
7. Coordinate with stakeholders

Furthermore, with regard to biodiversity issues, we recognize the importance of ensuring that the impact imposed by corporate activities is positive based on the concept of no net loss. At the same time, it is equally important to understand the impact of each area, and to not only reduce any negative impact, but to promote a positive result. As with other environmental issues, we will also consider activities that include initiatives that encompass the supply chain.

Governance

Environmental Management System

SEKISUI CHEMICAL Group has established an environmental management system at each of its production sites and research facilities in its bid to promote environmental activities. This system is based on ISO 14001.

Steady achievement of medium-term and annual milestones under the leadership of top management is important for resolving environmental issues aimed at achieving long-term goals. We strive to reduce the impact of all environmental issues by constantly monitoring legal compliance and the impact on the environment. In addition, in order to minimize the impact on the environment as much as possible in the event of disasters, accidents, and other irregularities, we regularly conduct education and training based on an examination of preventive measures and post-event responses.

Recognizing the need to take action based on a view of the entire supply chain, we have reviewed the Group's Sustainable Procurement Guidelines and systems to strengthen supply chain management. We will accelerate efforts aimed at resolving environmental issues by approaching and collaborating with suppliers.

Environmental Management Promotion System

Since fiscal 2020, we have managed and promoted the environmental aspects of the Group under the Sustainability Committee. This Committee discusses policies and strategies for improving the sustainability of society and the Group.

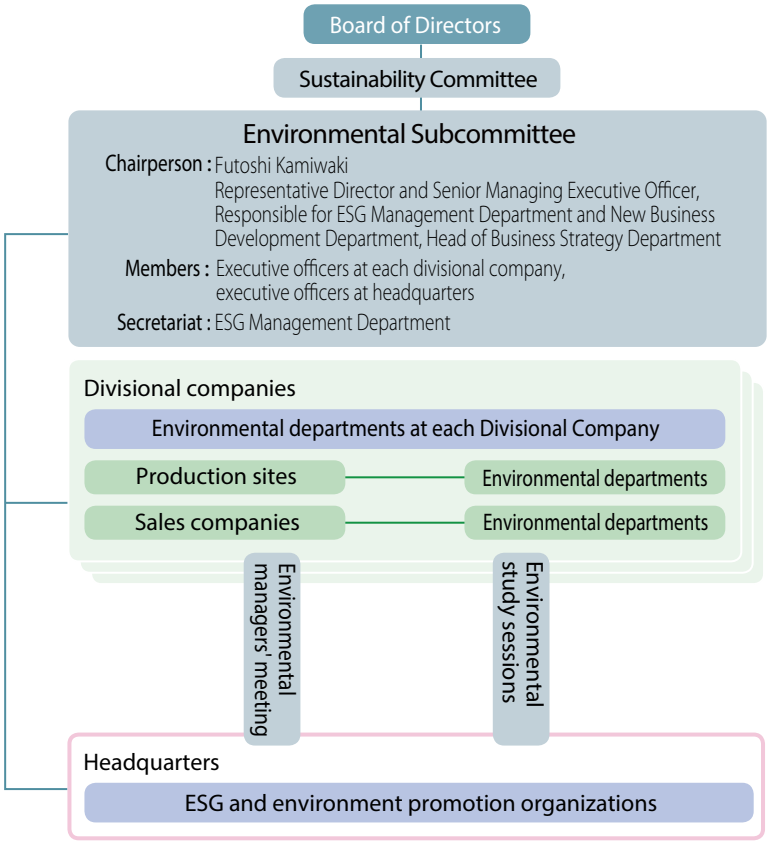
As a subordinate structure under the Sustainability Committee, we established subcommittees for each issue defined under materiality by the Group. As a part of this initiative, we established the Environmental Subcommittee to address environmental issues.

Key sustainability-related initiatives, policies, and other matters encompassing a host of issues, including the environment, that are discussed by the Sustainability Committee are reported to and approved by the Board of Directors and accordingly reflected in management.

Specific environmental action plans are formulated and implemented through meetings of environmental managers for each issue between divisional companies and Corporate Headquarters.

In fiscal 2023, the Environmental Subcommittee met twice, in November and March. In addition to confirming progress of the Environmental Medium-term Plan, the subcommittee also discussed plans for the next fiscal year, initiatives, and promotion measures for each issue, including the reduction of greenhouse gas emissions, response to water-related risks, and reduction of waste generation. Projects requiring rapid attention are also discussed and reported to the Board of Directors at monthly management meetings, chaired by person in charge of the ESG Management Department and head of the Business Strategy Department.

Environmental Management Promotion System



Expansion of EMS Overseas

Our overseas bases are expanding and implementing the environmental management system (EMS) developed in Japan. In this manner, we have established a system for acquiring environmental impact data and are working to reduce environmental impact based on this data.

As of the end of March 2024, 51domestic sites and 35 overseas sites had acquired ISO 14001 or other certification. These certified sites account for 90% of the total number of Group production sites and research institutes. ☑

We are also working to obtain ISO 14001 certification at all of our production sites.

Business Sites That Have Received Third-party Certification for Their Environment Management Systems ☑

Housing Company

SEKISUI CHEMICAL Co., Ltd. Tsukuba R&D Site*
Hokkaido Sekisui Heim Industry Co., Ltd.
Tohoku Sekisui Heim Industry Co., Ltd.
Sekisui Heim Industry Co., Ltd. Kanto Site
Sekisui Heim Industry Co., Ltd. Tokyo Site
Sekisui Heim Industry Co., Ltd. Chubu Site
Sekisui Heim Industry Co., Ltd. Kinki Site
Chushikoku Sekisui Heim Industry Co., Ltd.
Kyushu Sekisui Heim Industry Co., Ltd.
Sekisui Board Co., Ltd. Minakuchi Site
Sekisui Board Co., Ltd. Gunma Site

Urban Infrastructure & Environmental Products Company

SEKISUI CHEMICAL Co., Ltd. Shiga-Ritto Plant
SEKISUI CHEMICAL Co., Ltd. Gunma Plant
SEKISUI CHEMICAL Co., Ltd. Kyoto R & D Laboratories
Chiba Sekisui Industry Co., Ltd.
Sekisui Chemical Hokkaido Co., Ltd.
Toto Sekisui Co., Ltd. Ota Plant
Nishinihon Sekisui Industry Co., Ltd. Okayama Plant
Shikoku Sekisui Industry Co., Ltd.
Kyushu Sekisui Industry Co., Ltd.
Nara Sekisui Co., Ltd.
Higashinihon Sekisui Industry Co., Ltd. Watari Site
Yamanashi Sekisui Co., Ltd.
Sekisui SoflanWiz Co., Ltd.
[Sekisui SoflanWiz Co., Ltd. Iwaki Plant, Atsugi Plant, Akashi Plant and R&D Division]
Sekisui Home Techno Co., Ltd.
Sekisui Specialty Chemicals (Thailand) Co., Ltd.
S and L Specialty Polymers Co., Ltd.
Sekisui Eslon B.V.
Sekisui Rib Loc Australia Pty. Ltd.
Sekisui Industrial Piping Co., Ltd
Sekisui (Wuxi) Plastics Technology Co., Ltd.
Sekisui (Shanghai) Environmental Technology Co., Ltd.
Tokuyama Sekisui Industry Co., Ltd.
Tokuyama Sekisui Industry Co., Ltd. Piping Plant

High Performance Plastics Company

SEKISUI CHEMICAL Co., Ltd. Musashi Plant
SEKISUI CHEMICAL Co., Ltd. Shiga-Minakuchi Plant
[Sekisui Fuller Company, Ltd. Shiga Plant]
SEKISUI CHEMICAL Co., Ltd. Taga Plant
SEKISUI CHEMICAL Co., Ltd. Minase Site
Sekisui Techno Molding Co., Ltd. Tochigi Plant
Sekisui Techno Molding Co., Ltd. Mie Plant
Sekisui Techno Molding Co., Ltd. Aichi Plant
Sekisui Fuller Co., Ltd. Hamamatsu Plant
Sekisui Nano Coat Technology Co., Ltd.
Sekisui Polymatech Co., Ltd.
Sekisui Seikei, Ltd. Chiba Plant
Sekisui Seikei, Ltd. Kanto Plant
Sekisui Seikei, Ltd. Hyogo Plant
Sekisui Seikei, Ltd. Hyogo-Takino Plant
Sekisui Seikei, Ltd. Izumo Plant
Sekisui S-Lec B.V. Film Plant
Sekisui S-Lec B.V. Resin Plant
Sekisui S-Lec Mexico S.A. de C.V.
Sekisui S-Lec Thailand Co., Ltd.
Sekisui S-LEC (Suzhou) Co., Ltd.
Sekisui-Alveo B.V.
Sekisui Alveo BS G.m.b.H.
Sekisui Votek, LLC. Coldwater Plant
Thai Sekisui Foam Co., Ltd.
Sekisui Pilon Pty. Ltd.
Youngbo Chemical Co., Ltd.
Youngbo HPP (Langfang) Co., Ltd.
Sekisui Specialty Chemicals America, LLC. Pasadena Plant
Sekisui Specialty Chemicals America, LLC. Calvert City Plant
Sekisui Speciality Chemicals Europe, S.L.
Sekisui Polymatech Europe B.V.
Sekisui Polymatech (Thailand) Co., Ltd.
Sekisui Polymatech (Shanghai) Co., Ltd.
Sekisui DLJM Molding Private Ltd. Great Noida Plant,Tapukara Plant,Chennai Plant, Chennai2 Plant, Gujarat Plant
Sekisui KYDEX, LLC. Bloomsburg Plant
Sekisui KYDEX, LLC. Holland Plant

Headquarters

SEKISUI CHEMICAL Co., Ltd. R&D Center*
Sekisui LB Tec Co., Ltd. Chubu Plant

Medical Business

Sekisui Medical Co., Ltd. Iwate Plant
Sekisui Medical Co., Ltd. Tsukuba Plant
Sekisui Medical Co., Ltd. Tsukuba Plant and Ami Site
Sekisui Medical Co., Ltd. Tokuyama Plant
Sekisui Diagnostics (UK) Ltd.
Sekisui Diagnostics, LLC, San Diego
Sekisui Diagnostics P.E.I. Inc.
Sekisui Medical Technology (China) Ltd.
Sekisui Medical Technology (Suzhou) Ltd.
Veredus Laboratories Pte. Ltd.

Note: Some sites without brackets may include related sections that have received EMS certification.
[ ]: Organizations in brackets are included in the scope of certification.
* The SEKISUI CHEMICAL Co., Ltd. Tsukuba R&D Site and the Development Center share a single certification.

Indicator	Calculation Method
Number of EMS-certified business sites	Number of business sites that have received external EMS certification External EMS certification: ISO 14001
The proportion of all production sites and research facilities within SEKISUI CHEMICAL Group that have received external EMS certification	The proportion of all EMS-certified business sites within SEKISUI CHEMICAL Group = The number of all production sites and research facilities that have received external EMS certification / The number of all production sites and research facilities within SEKISUI CHEMICAL Group

Environmental Audits

SEKISUI CHEMICAL Group conducts environmental audits with the aim of complying with laws and regulations and preventing accidents. The audits are conducted in advance by checking laws and regulations, hazard maps, etc., with an emphasis placed on continuous legal compliance, the reduction of environmental risks, and accident prevention in accordance with the business activities of each business site.

We conduct voluntary audits at all of our business sites and request reports on the results. We also conduct environmental audits at our production sites and research institutes every three years. In fiscal 2023, these initiatives were conducted at 15 domestic and 14 overseas sites.

There were no breaches involving significant fines or penalties.

Risk Management

As far as risk management is concerned, we have established an ERM* system that in addition to identifying Group-wide major risks, shares and manages these risks within the Group. Risks related to environmental issues are also assessed in an integrated manner, together with other risks that are expected to have a significant impact on management.

Risks that effect the Group as a whole and each organization, including such environmental issues as climate change, resource recycling, water resources, and biodiversity, are shared and deliberated at Board of Directors, Sustainability Committee, in-house management, and subcommittee meetings.

The Board of Directors shares the view that risks related to environmental issues are important external environmental risks. Consideration is also given to medium-to long-term strategies when formulating management plans as well as transition plans that contribute to the solution of environmental issues. Against this backdrop, we formulate the Environmental Medium-term Plan.

* Enterprise Risk Management: Refers to Group-wide mechanisms and processes for Group-wide and integrated risk management and risk management activities.
(For details see Risk Management System on P.278.)

Risks related to environmental issues are reported to the Sustainability Committee after information is gathered and evaluated by the Environmental Subcommittee and deliberated along with Group-wide policies, major measures, and target achievement levels.

The issues discussed by the committee are identified as major risks by the Board of Directors with countermeasure policies and major measures finalized. The identified major risks, Group-wide policies, and major measures are reported to each subcommittee, including the Environmental Subcommittee, and incorporated into action plans as Group-wide and divisional company-specific measures.

In addition, by reflecting the results in organizational risk management activities conducted by 170 organizations, including domestic and overseas affiliates, we are promoting an ERM system that combines Group-wide risk management activities with organizational risk management activities.

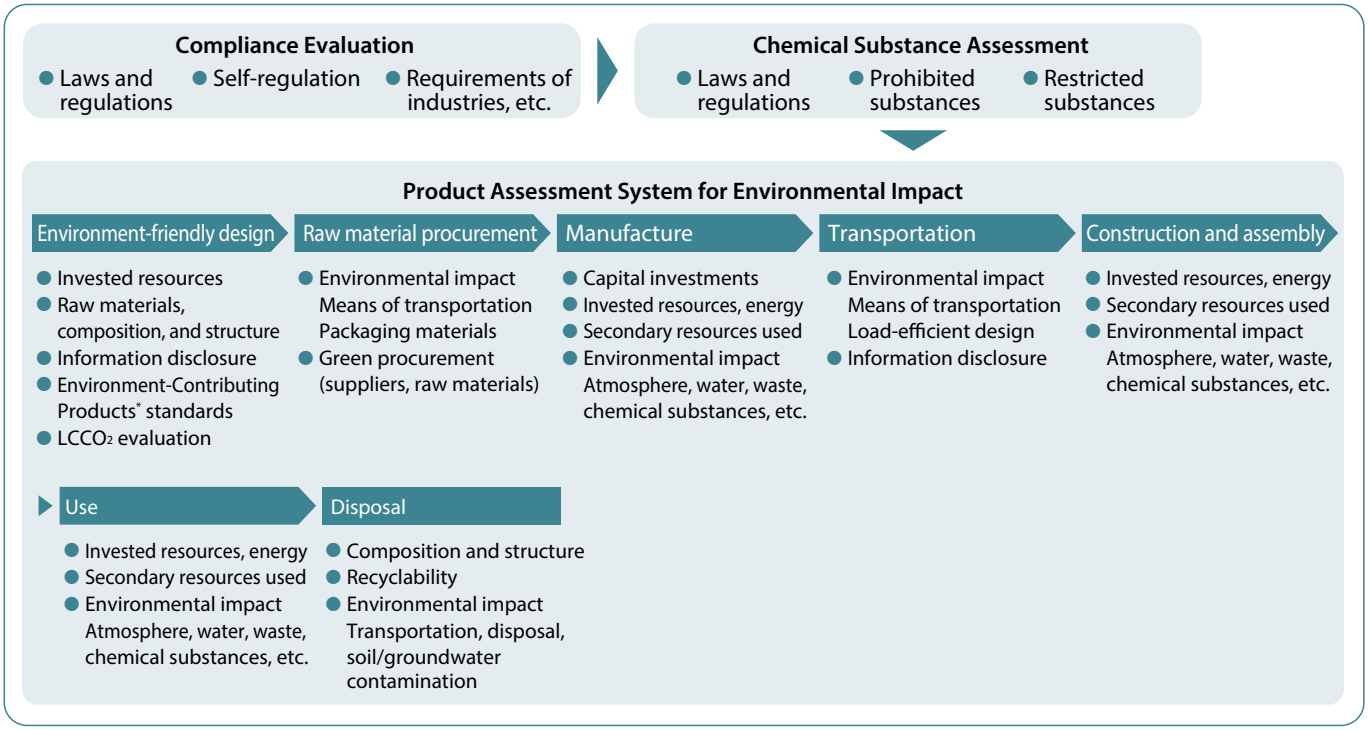
Environmental Impact Assessment

SEKISUI CHEMICAL Group undertakes design reviews at the time of product process development and modification and conducts environmental impact assessments at all stages of a product's lifecycle.

Assessment of the environmental impact of products

Scope: All stages of the product lifecycle

Targets: Products and processes



* Environment-Contributing Products have evolved into Products to Enhance Sustainability from fiscal 2020.
For details, see Products to Enhance Sustainability on P.23.

Indicators and Targets

Targets

The long-term goal of SEKISUI CHEMICAL Group's environmental activities is to realize an earth with maintained biodiversity as stated in its Long-term Environmental Management Vision, SEKISUI Environment Sustainability Vision 2050. To this end, we believe it is important to simultaneously achieve the such long-term goals for environmental issues as climate change, resource recycling, and water risks.
In the current Environmental Medium-term Plan, SEKISUI Environment Sustainability Plan: EXTEND (2023-2025), we focus on improving the quality of solutions to avoid imposing any negative impact on each of the aforementioned environmental issues.
Progress on each environmental issue is managed by setting milestones that are backcast from long-term goals and are based on individual management targets. The SEKISUI Environment Sustainability Index, an integrated indicator, is used to monitor the progress of environmental issues as a whole.

Environmental Medium- to Long-term Plan and FY2023 Results

Environmental Medium- to Long-term Plan and FY2023 Results (Environmental Medium-term Plan SEKISUI Environment Sustainability Plan: EXTEND (2023 to 2025)

✓: FY2023 target achieved ×: FY2023 target not achieved

Initiatives		Goals	Level Setting Guidelines	Indicators	Base year	FY2023 Targets and Results		Self-evaluation	Reference Page(s)	FY2024 Targets	FY2025 Targets	FY2030 Targets	FY2050 Targets	Targets					
						FY2023 Targets	FY2023 Results							Domestic (Japan) Sites	Research Facilities	Domestic (Japan) Offices	Overseas Production Sites	Overseas Offices	Other
Progress management through the Integrated Index		Achieve an earth with maintained biodiversity through corporate activities	Environmental returns that exceed environmental impact	SEKISUI Environmental Sustainability Index Rate of return to natural and social capital	—	Maintain 100% or more	106% ☑	✓	P.61	Maintain at 100% or more	Maintain at 100% or more	Maintain at 100% or more	Maintain at 100% or more	✓	✓	✓	✓	✓	✓
Products to Enhance Sustainability	TOTAL	Achieve a balance between economic and social value	Doubling of the Group's business by 2030	Net Sales of Products to Enhance Sustainability	—	960 billion yen	950.2 billion yen ☑	×	P.36	—	Over 1 trillion yen	—	—						
	By major environmental issue	Contribute to the promotion of resource recycling (particularly carbon)	Realization of a recycling-based society	Increase in sales of products that contribute to resource recycling	2020 55.3 billion yen	1.6 times (88.5 billion yen)	99 billion yen	✓	P.96	1.65 times (91.2 billion yen)	1.7 times (94 billion yen)	Double or more (110.6 billion yen)	All products						
				Net Sales of products derived from non-fossil fuel sources and use of recycled materials	2019 3 billion yen	38.0 billion yen	34.7 billion yen	×	P.96	39 billion yen	40.0 billion yen	100 billion yen	—						
Reduce environmental impact	GHG	Promote decarbonization zero GHG emissions	The Paris Agreement 1.5 ˚C target Realization of a decarbonized society	GHG emission reduction rate	FY2019	-26%	-32.8% ☑	✓	P.74	-30%	-33%	-50%	-100%	✓	✓	✓	✓	✓	
				Renewable energy ratio of purchased electricity	—	50%	49.5% ☑	×	P.74	60%	70%	100%	Total power consumption including co-generation 100%	✓	✓	✓	✓	✓	
				Fuel-source GHG emission reduction rate (including GHGs not arising from energy consumption)	FY2019	-10%	-15.9% ☑	✓	P.76	-10%	-12%	-11%	-100%	✓	✓	✓	✓	✓	
	Reduce energy usage volume	Improve the efficiency of energy use in production and reduce energy costs	Cost reductions above cost increases from purchasing renewable energy	Reduction rate of energy consumption per unit of production	FY2022	-1%	+3.5% ☑	×	P.74	-2%	-3%	—	—	✓			✓		
	Resource recycling	Promote resource recycling (particularly carbon)	Realization of a resource-recycling society	Reduction rate of the amount of waste generated per unit of production	FY2022	-1%	+0.3% ☑	×	P.102	-2%	-3%	—	Achieve a circular economy	✓			✓		
			Issue of marine plastics	Recycling rate for waste plastic materials	—	Japan: 61% (Overseas: Base acquisition)	Japan: 60.7% ☑	×	P.102	Japan: 63% (Overseas: Base +3%)	Japan: 65% (Overseas: Base +5%)	100%	100%	✓	✓		✓		
			Reduction of resource use in offices	Reduction rate of copier paper use per unit of people	FY2022	-1%	-6.6% ☑	✓	P.102	-2%	-3%	—	Achieve a circular economy			✓		✓	
			Reduction of waste generation at new construction sites	Reduction rate of the amount of waste generated per building at new housing construction sites	FY2022	-4%	-5.2% ☑	✓	P.102	-8%	-12%	—	Achieve a circular economy						✓
	Water-related risk	Minimize business impact due to water-related risks	Enabling of sustainable operations	Implementation of initiatives to minimize the business impact of water-related risks specific to five sites in Japan and Overseas	—	Efforts to minimize business impact at individual business sites with large business impact	Initiatives decided at all 5 locations ☑	—	P.118	Efforts to minimize business impact at individual business sites with large business impactEfforts to minimize business impact at individual business sites with large business impact		Minimum to the environment where water-related risks exist	Minimizing water risk in all areas	✓			✓		
		Contribute to solving watershed-specific water issues	Contributions to returns to natural capital																
		Maintain water resources	No increase in water stress in watersheds	Reduction rate of water intake volume at production sites which use large quantities of water	FY2016	-10% over a 3-year period	-8.5% ☑	—	P.119	-10% over a 3-year period		—	—	✓					
			No increase in the impact on watersheds	Reduction rate of total COD volume of river discharge water at production sites with high COD emission volumes	FY2016	-10% over a 3-year period	-2.7% ☑	—	P.119	-10% over a 3-year period		—	—	✓					
	Ecosystem	Ecosystem impact:	Biodiversity conservation	JBIB Land Use Score Card® evaluation points	FY2022	+3 points over a 3-year period	+1.5 points ☑	—	P.136	+3 points over a 3-year period		Promote ecosystem friendliness at all business sites	Promote ecosystem friendliness at all business sites	✓	✓				
		Minimize risks of ecosystem degradation																	

FY2023 Results Against Environment-related KPIs

・Climate change
Rate of GHG reduction-32.8% (compared with FY2019)

・Resource recycling
Material recycling rate for waste plastics (Japan) 60.7%

Other Priority Item FY2023 Results

Expand and create markets for Products to Enhance Sustainability

In FY2023, 11 products and services were newly registered.
Specifically, the following is a list of products that contribute to the resolution of resource recycling and climate change issues (certain examples).

・PVC sashes: A product that contributes to the reduction of energy consumption in cold climates due to its thermal insulation and high airtight performance. PVC sashes are recovered after product use and applied as a raw material for other products.

・Standard film Recycling system of interlayer film for laminated glass: Inserted between the laminated glass of vehicle front windshields, this product improves safety by preventing shattering in the event of an accident. Established a mechanism to collect film scraps from BtoB customers for use as raw materials.

In response to the upswing in low-carbon and decarbonization demand, sales of products that contribute to the resolution of climate change issues have expanded, which in turn is contributing to higher overall sales of Products to Enhance Sustainability.

Quantification of the Contribution Effect on Solving Issues through Products

In fiscal 2023, we identified environmental values from products equivalent to 50% of Products to Enhance Sustainability sales.
As far as returns to social capital and value are concerned, we are undertaking economic value conversion using the impact-weighted accounting method.
We visualize the environmental and social value of our products and businesses (the degree to which they contribute to solving problems) and disclose this information to raise society's awareness. Moving forward, we will also strengthen activities that can be fed back to our business.

Environmental Conservation

SDG Contribution Activities*

As far as such social contribution activities as environmental conservation and nurturing of the next generation are concerned, which are mainly conducted by business sites and employees, we recommend that employees change their stance and become more aware of the SDGs while continuing existing activities.

By considering which social issues to focus on and why we are working to solve social issues based on the SDGs, we can clarify the significance of our existing activities and undertake a review our activities with the expectation of further improving their effectiveness.

* For details, please refer to Social and SDGs Contribution Activities on P.240.

Integrated index SEKISUI Environment Sustainability Index.

The SEKISUI Environment Sustainability Index measures the impact of the Group's corporate activities on the environment (use of natural and social capital) and the degree of contribution to the environment (returns to natural and social capital) as a single index.

We are gradually expanding the scope of coverage to encompass not only the impact on and return of natural capital, but also on and of social capital.

The SEKISUI Environment Sustainability Index integrates the effects of the major items for implementation in the Environmental Medium-term Plan: reducing various impacts on the environment, expanding products and services that contribute to the natural and social environments, and environmental conservation. We established a method for undertaking preliminary calculations in fiscal 2013 and have employed this method since fiscal 2014. Since fiscal 2017, we have applied this index to monitor the progress of the Group's overall environmental management.

In our Environmental Medium-term Plan, which began in fiscal 2020, we have declared our intention to use the SEKISUI Environment Sustainability Index to evaluate not only the natural environment, but also the impact and contribution to the social environment, and to contribute to the return to natural and social capital.

In 2050, even as we expand our business scope, we will promote ESG management while maintaining a return of 100% or more on natural and social capital.

Calculation Results

SEKISUI Environment Sustainability Index calculations based on FY2023 results are as follows. Setting the use of natural and social capital (the impact on the natural and social environments) at 100, the return to natural and social capital (contributions to the natural and social environments) was 106%, confirming that the return to natural and social capital was maintained above 100%.
Trends in the rate of return are analyzed as follows.

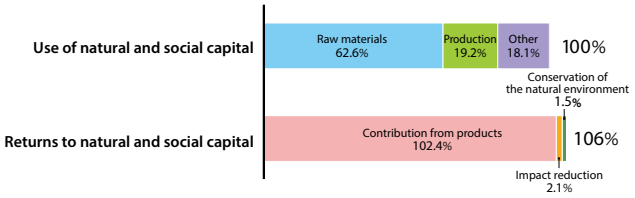
1. Use (impact) of natural and social capital
   A reduction in the impact on natural and social capital is considered to have been made through progress in the shift to renewable energy for purchased power.
2. Returns to natural and social capital (contributions)
   Returns (contributions) from Products to Enhance Sustainability are steadily increasing.

Looking ahead, we will grow as a company and expand our business scope, while maintaining a rate of return to natural and social capital of more than 100%.
In 2050, we aim to realize the sustainable use of the earth's natural capital and the social capital generated by human society.

In this index, SEKISUI CHEMICAL Group believes that solving issues through products helps to improve the sustainability of the earth and society. We also recognize that improving returns to natural and social capital leads to an improvement in the sustainability of SEKISUI CHEMICAL Group and its products.

Results of FY2023 Calculation ☑

SEKISUI Environment Sustainability Index(FY2023)



Calculation Method

(1) Quantitatively calculate the amount of environmental impact and the benefits of environmental activities for each category

Environmental impact and environmental activities (I)

- Raw material usage
- Water intake volume
- Environmental contribution of each product
- GHG emissions
- Emissions of chemical substances
- Employee participation rate in activities to conserve the natural environment
- Volume of waste generated
- Area of land used

(2) Calculate the impact (-factor) and contribution (+ factor) for each category using a database of experts who have accumulated coefficients for calculating the impact on the environment.

Raw data by category Ai × Coefficient ki = Environmental impact (TI)

(3) Add up the amount of impact and contribution for each category (= integration)

Σ (Raw data for each category) Ai × Coefficient ki = Σ (Environmental impact TI)

Note: Units are the amount of damage calculated (= amount necessary to restore the environment to the original conditions [living organisms, plants, and global warming] if our activities damaged the environment)

After compiling the raw data in (1), above, the damage calculation-based impact assessment method LIME2, developed for use in Japan by Professor Norihiro Itsubo of WASEDA University, was employed for the calculations in stages (2) and (3).

The LCA database IDEA ver2.3 has been upgraded to ver3.1 in the calculation system MiLCA, which uses LIME2 to calculate the rate of return. We have been using the upgraded MiLCA ver3.1 since fiscal 2023. (MiLCA ver2.3 was used until fiscal 2022).

In MiLCA 3.1, the ascertained data shows that the environmental impact per unit amount is larger, especially in terms of the impact of chemical substances on ecosystems. Under the current Medium-term Management Plan we will place even more importance on the impact on biodiversity, and promote activities aimed at shifting from negative to positive aspects. We have determined that our approach is consistent with the direction MiLCA 3.1 upgrades We will reconfirm the status of current conditions by utilizing the updated calculation system and continue to confirm the progress of activities aimed at addressing environmental issues based on the rate of return from fiscal 2023.

Note: The impact of the change in MiLCA calculation system approach (upgrade) on the rates of return as verified based on fiscal 2022 data is as follows.
Rate of return on natural and social capital of 127.3% (using MiLCA ver. 2.3) in fiscal 2022.
Rate of return on natural and social capital of 100.1% (using MiLCA ver. 3.1) in fiscal 2022.

Indicator	Calculation Method
SEKISUI Environment Sustainability Index	SEKISUI Environment Sustainability Index = Group-wide amount of natural and social capital returned / Group-wide amount of natural and social capital used Calculating the amount of natural and social capital used and the amount of natural and social capital returned Employing LIME 2 (a damage calculation-based impact assessment method developed for use in Japan by Professor Norihiro Itsubo of WASEDA University) and covering all the four criteria for conservation defined by LIME 2, the impacts on each of human health (including the effects of global warming), societal assets (including the effects of global warming), the effects on plants (reducing interference on growth), and the effects on life (restricting the extinction of living species) were evaluated and then made into a single indicator. The amount of return to natural and social capital is calculated assuming that the risk of damage to natural capital has been reduced by various environmental contribution efforts of the entire Group compared to the case without such efforts. ・Items included in the amount of natural and social capital used Direct use: Use of land, greenhouse gases, amounts of emissions into the air of PRTR substances and air pollutants, the COD discharged into bodies of water Indirect use: Purchased raw materials*1, energy use, water intake volume, amount of waste material emitted, amount of GHGs emitted indirectly in supply chains (Scope 3) ・Items included in returns to natural and social capital Amount of contributions to reducing use of natural capital through Products to Enhance Sustainability, the amount of contribution from environmental conservation activities, environment-related donations, mega-solar (solar farms that produce over 1,000 kilowatts (1 megawatt) of energy each year) power generation output *1 The Group is reflecting the actual GHG emissions of its raw material suppliers with regard to four principal resins (PP, PE, PVC and PVA).

Indicator	Calculation Method
SEKISUI Environmental Sustainability Index	Scope of Calculation / Listing by category of calculation: Estimated calculations were conducted using the following assumed conditions: ・Raw materials: Purchased raw materials covered; estimates incorporated into calculations Concerning housing, the calculation includes the constituent raw materials for one structure multiplied by the number of structures manufactured ・Manufacturing / Emissions of harmful chemical substances: 〈Japan〉 emissions of 1 t per year or more of substances covered under PRTR are included in the calculation. 〈Overseas〉 Not included ・Manufacturing / Land maintenance: Domestic plants and research facilities were incorporated into the calculation using the area of the premises, generally considered in terms of the land used for buildings*2. The areas of the premises of overseas plants were estimated. The effects of land use are included in the calculation based on the 30-year period after the purchase of the land *2 Concerning land use, starting with FY2017, improvements to land quality in the JBIB Land Use Score Card® system promoted in Japan were deemed as reductions of the impact of land use, weighted accordingly, and included in the calculation. ・Others: Capital goods in supply chains, other fuel- and energy-related activities, transport and shipping, waste, business trips, commuting by employees, leased assets (downstream), processing/use/disposal of sold products Business trips and commuting by employees: Covers consolidated numbers of employees and includes some estimation Use of sold products: Covers housing sold during the fiscal year, and included in the calculation with assumed energy use for 60 years into the future. We are also calculating the effect of reduction in energy used in residences built to net zero energy house (ZEH) specifications. Processing of sold products: Energy use by customers while processing our products anticipated to consume large amounts of energy was estimated and included in the calculation Disposal of sold products: Major raw materials for each fiscal year were covered and included in the calculation based on the assumption that they would be made into products and disposed of during that fiscal year

Indicator	Calculation Method
SEKISUI Environmental Sustainability Index	・Product contributions: (1) The differences in contribution to the environment between the relevant products and previous technologies were evaluated qualitatively for each criterion, based on the contribution to the natural and social environments for each life-cycle (the five stages of procurement of raw materials, manufacturing, distribution, use/maintenance, disposal/recycling) in terms of CO_2 reductions and energy savings, reductions in waste materials, resource savings, water-savings and the water cycle, preventing pollution, direct preservation of biodiversity, QOL improvements, and other factors. For factors for which a significant difference was estimated, data per product unit was investigated. (2) Based on the results*3 of these investigations, a coefficient for calculating the impact on the environment for each series of data was multiplied by the data, yielding a calculation of the degree of contribution to the environment of each product unit. (3) The sales amount for products in each fiscal year were multiplied by the results found in (2) to calculate the degree of contribution to the environment for each product, and the results were included in the calculation. Trial calculation was performed on the effects of products equivalent to around 51% of Products to Enhance Sustainability. *3 Based on individual standards of the divisional companies ・Direct contribution / Contribution from activities reducing environmental impacts: The effects on the environment relating to production for each fiscal year were compared to [the effects on the environment relating to manufacturing in FY2016 × (revenue in that fiscal year / revenue in FY2016)], and the difference was included in the calculation. There was a proportional relationship between revenue and the effects on the environment relating to manufacturing, based on the idea that the difference was the result of efforts undertaken in the Group's activities. ・Direct contribution / Conservation of the natural environment: The Group keeps track of the number of participants and the amount of time spent on each activity. In the case of planting cedar trees, a fixed coefficient of CO_2 (1.1 t-CO_2 / person-hour) was multiplied by the number of people and the amount of time spent and incorporated into the calculation. Regarding activities in cooperation with local communities which were promoted in Japan, because improving the sustainability of activities through local cooperation and making them conduct the activities on their own (autonomous) were made targets from FY2017, the Group's ability to work toward this target was weighted against the growth axis and included in the calculation ・Direct contributions / donations: The amount willing to pay for conservation was deemed equal to the amount of money calculated for damage caused and included in the calculation. ・Direct contribution / Mega-solar: Amount of electricity generated included in the calculation as generated energy converted to a CO_2 basis

Scope of Tabulation for Environmental Performance Data

Note: As far as the scope of environmental performance data aggregation is concerned, SEKISUI CHEMICAL's main business sites (including all production sites) on a consolidated basis are subject to environmental reporting.

Japan

Housing Company

R&D institute — **One business site**

SEKISUI CHEMICAL Co., Ltd. Tsukuba R&D Site

Production plants — **10 business sites**

Hokkaido Sekisui Heim Industry Co., Ltd. / Tohoku Sekisui Heim Industry Co., Ltd. / Sekisui Heim Industry Co., Ltd. / Chushikoku Sekisui Heim Industry Co., Ltd. / Kyusyu Sekisui Heim Industry Co., Ltd./ Sekisui Board Co., Ltd., etc.

Sales and construction companies — **758 business sites**

Sekisui Heim sales companies
Construction and service companies, etc.

Urban Infrastructure & Environmental Products Company

R&D institutes — **Two business sites**

SEKISUI CHEMICAL Co., Ltd. Kyoto Research & Development Laboratories
Sekisui SoflanWiz Co., Ltd. R&D Division

Production plants — **17 business sites**

SEKISUI CHEMICAL Co., Ltd. Shiga-Ritto Plant and Gunma Plant / Higashinihon Sekisui Industry Co., Ltd. / Nishinihon Sekisui Industry Co., Ltd. / Chiba Sekisui Industry Co., Ltd. / Sekisui Chemical Hokkaido Co., Ltd. / Toto Sekisui Co., Ltd. / Shikoku Sekisui Industry Co., Ltd. / Nara Sekisui Co., Ltd. / Yamanashi Sekisui Co., Ltd. / Tokuyama Sekisui Industry Co., Ltd. / Sekisui SoflanWiz Co., Ltd., etc.

Sales — **116 business sites**

SEKISUI CHEMICAL Co., Ltd. Tohoku Sales Headquarters, Higashinihon Sales Headquarters, Chubu Sales Headquarters, Nishinihon Sales Headquarters, Kyushu Sales Headquarters, etc.

Medical Business

R&D institutes — **One business site**

Sekisui Medical Co., Ltd. Drug Development Solutions Center

Production plants — **Four business sites**

Sekisui Medical Co., Ltd. Iwate Plant, Tsukuba Plant, Ami Site, and Tokuyama Plant

Sales — **Nine business sites**

SEKISUI CHEMICAL Co., Ltd. Higashinihon sales office, etc.

High Performance Plastics Company

R&D institutes — **One business site**

SEKISUI CHEMICAL Co., Ltd. Minase Site

Production plants — **15 business sites**

SEKISUI CHEMICAL Co., Ltd. Musashi Plant, Shiga-Minakuchi Plant and Taga Plant / Sekisui Techno Molding Co., Ltd. / Sekisui Nano Coat Technology Co., Ltd. / Sekisui Fuller Company, Ltd. / Sekisui Polymatech Co., Ltd. / Sekisui Seikei, Ltd., etc.

Sales — **19 business sites**

Sekisui Material Solutions Co., Ltd., etc.

Headquarters

R&D institutes — **One business site**

SEKISUI CHEMICAL Co., Ltd. Advanced Technology R&D Center

Production plants — **Two business sites**

Sekisui LB Tec Co., Ltd. Chubu Plant, Research Laboratory of Plastics Technology Co., Ltd.

Sales, etc. — **19 business sites**

SEKISUI CHEMICAL Co., Ltd. Osaka Headquarters and Tokyo Headquarters, etc.

Overseas

Housing Company

Production plants

Sekisui-SCG Industry Co., Ltd.

One business site in total

Sales and construction companies

SCG-Sekisui Sales Co., Ltd.
Sekisui (Dalian) Housing Technology Co., Ltd.
PF-Sekisui JV Co., Ltd.

Three business sites in total

Urban Infrastructure & Environmental Products Company

Production plants

Sekisui Eslon B.V.
Sekisui Industrial Piping Co., Ltd.
Sekisui Rib Loc Australia Pty. Ltd.
Sekisui (Wuxi) Plastics Technology Co., Ltd.
Sekisui Specialty Chemicals (Thailand) Co., Ltd.
S and L Specialty Polymers Co., Ltd.

Six business sites in total

Sales

Sekisui SPR Americas, LLC., etc.

11 business sites in total

Medical Business

Production plants

Sekisui Diagnostics, LLC. San Diego
Sekisui Diagnostics (UK) Ltd.
Sekisui Diagnostics P.E.I. Inc.
Sekisui Medical Technology (China) Ltd.
Sekisui Medical Technology (Suzhou) Ltd.
Veredus Laboratories Pty. Ltd.

Six business sites in total

Sales

Sekisui Diagnostics, LLC., etc.

29 business sites in total

High Performance Plastics Company

Production plants

Sekisui S-Lec America, LLC.
Sekisui S-Lec Mexico S.A. de C.V.
Sekisui S-Lec B.V. Film Plant
Sekisui S-Lec B.V. Resin Plant
Sekisui S-Lec (Thailand) Co., Ltd.
Thai Sekisui Foam
Sekisui S-LEC (Suzhou) Co., Ltd.
Sekisui Specialty Chemicals America, LLC. Pasadena Plant
Sekisui Specialty Chemicals America, LLC. Calvert City Plant
Sekisui Specialty Chemicals Europe S.L.
Sekisui Voltek, LLC, Lawrence Plant
Sekisui-Alveo B.V.
Sekisui Alveo BS G.m.b.H.
Sekisui Pilon Pty. Ltd.
Youngbo Chemical Co., Ltd.
Sekisui Youngbo HPP (Wuxi) Co., Ltd.
Sekisui DLJM Molding Private Ltd. Greater Noida Plant
Sekisui DLJM Molding Private Ltd. Tapukara Plant
Sekisui DLJM Molding Private Ltd. Chennai Plant
Sekisui DLJM Molding Private Ltd. Chennai Factory 2
Sekisui DLJM Molding Private Ltd. Gujrat
Sekisui Polymatech (Thailand) Co., Ltd.
PT. Polymatech Indonesia
Sekisui Polymatech (Shanghai) Co., Ltd.
SEKISUI AEROSPACE CORPORATION, Renton
SEKISUI AEROSPACE CORPORATION, Sumner
SEKISUI AEROSPACE CORPORATION, ORANGE CITY
Sekisui KYDEX, LLC. Bloomsburg-North Campus
Sekisui KYDEX, LLC. Bloomsburg-South Campus
Sekisui KYDEX, LLC. Holland Plant

30 business sites in total

Sales

Sekisui Products, LLC., etc.

41 business sites in total

Headquarters

Sales

Sekisui Europe B.V., etc.

Seven business sites in total

Environmental Accounting

We are working to reduce the environmental impact of our business activities while identifying the effects of costs incurred and investments undertaken.

SEKISUI CHEMICAL Group Refers to Public Guidelines and Adds Its Own

SEKISUI CHEMICAL Group employs environmental accounting to promote efficient environmental initiatives as a part of its ESG management endeavors and to fulfill its corporate reporting responsibility. In adopting environmental accounting, our goals are to reduce the Group's environmental impact and to identify the costs incurred and investments undertaken to contribute to the environment. In the management strategy perspective, we position environment-related investments and expenses as capital costs. Environmental accounting helps to highlight the fact that managing capital costs and improving productivity will improve ROIC.

Performance Data

Summation period	April 1, 2023 to March 31, 2024
Scope of summation	Production sites, research facilities, housing sales company sites, and Corporate Headquarters departments in Japan.
Calculation Method	Based on the Ministry of the Environment's Environmental Accounting Guidelines 2005 Edition
Approach toward summation	・Depreciation and amortization are excluded from environmental conservation costs because they overlap with investment costs. ・Investment amounts are based on budget approvals during the summation period. ・Expenditures and investments that contain other than environmental conservation activities are distributed pro-rata in 10% increments. ・Disclosure categories have been revised, environmental conservation costs are subcategorized, and the economic effects of environmental conservation measures are limited to effects on an actual basis, excluding deemed effects from FY2020. ・The environmental conservation effects of physical quantity are shown in environmental performance data disclosed in each chapter.

Environmental Conservation Costs

(Millions of yen)

Items			FY2020		FY2021		FY2022		FY2023	
Category	Description of main activities		Costs	Investments	Costs	Investments	Costs	Investments	Costs	Investments
1) Costs within business areas	(1) Pollution prevention costs	a. Air	369	62	319	98	355	16	312	17
		b. Water	130	77	85	68	110	198	93	197
		c. Soil	0	7	0	4	0	7	0	2
		d. Noise	12	1	1	0	2	0	2	0
		e. Vibration	0	0	0	0	0	0	0	0
		f. Odor	255	0	242	4	235	0	163	5
		g. Ground	106	3	105	0	102	0	76	2
		h. Others	304	8	307	29	315	5	211	5
		Subtotal	**1,176**	**157**	**1,058**	**202**	**1,118**	**226**	**856**	**227**
	(2) Countermeasures against global warming	a. Global warming (including energy saving)	686	588	114	833	132	510	171	690
		b. Ozone layer	100	18	6	33	6	4	4	39
		c. Others	0	4	0	55	0	14	1	0
		Subtotal	**786**	**611**	**120**	**921**	**138**	**528**	**176**	**729**
	(3) Resource recycling costs	a. Effective utilization of resources	63	17	6	31	10	12	6	46
		b. Water conservation, utilization of rainwater, etc.	4	4	7	28	8	6	8	105
		c. Waste volume lightening, reduction, recycling, etc.	176	93	177	76	180	362	140	141
		d. Waste processing, disposal, etc.	6,293	4	6,477	106	4,878	1	4,775	2
		e. Others	18	1	1	6	19	14	1	45
		Subtotal	**6,553**	**119**	**6,668**	**246**	**5,095**	**394**	**4,930**	**339**
2) Upstream/downstream costs	Cost increases due to recycling of products such as those manufactured and sold, greener purchasing, etc.		**113**	**0**	**109**	**28**	**161**	**0**	**145**	**0**
3) Administrative costs	Environmental education, EMS certification, running costs for green action organization, information disclosure, etc.		**2,385**	**12**	**2,206**	**1**	**1,624**	**2**	**1,929**	**2**
4) Research & development costs	Research and development on environmental conservation		**3,740**	**313**	**15,009**	**813**	**16,128**	**760**	**6,528**	**8**
5) Social activities costs	Social contributions, etc.		**112**	**98**	**78**	**0**	**128**	**0**	**201**	**0**
6) Environmental damage costs	Nature restoration, etc.		**30**	**2**	**57**	**5**	**63**	**8**	**44**	**0**
Total			14,896	1,311	25,306	2,216	24,455	1,918	14,809	1,306

Substantive Economic Effects of Environmental Conservation Measures

(Millions of yen)

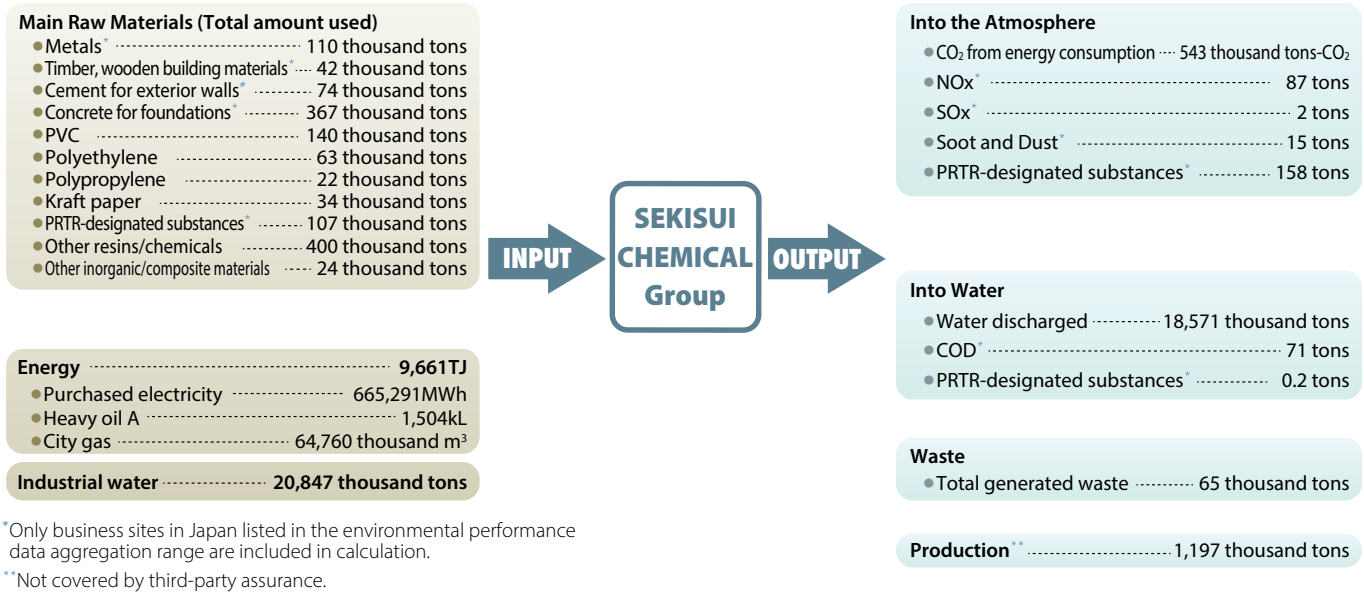
Description of effects		FY2020	FY2021	FY2022	FY2023	Remarks
Revenue	(1) Profit on sales of valuable waste resources	176	139	116	126	Profit on sales of valuable waste resources from promotion of waste segregation and recycling
	(2) Revenues from sale of electricity	402	334	348	337	Revenues from sale of electricity generated by megasolar facilities
Cost savings	(3) Cost savings through energy-saving activities	1,311	256	420	803	Including savings through utilization of co-generation
	(4) Cost savings through waste-reduction activities, etc.	502	463	522	284	Reductions through optimization, reuse, and zero emissions activities
Total		2,392	1,191	1,407	1,550	

Material Balance

Performance Data ☑

SEKISUI CHEMICAL Group releases information on the resources and energy used in its business activities (input) and on the substances that have an environmental impact generated by those activities (output).

Material balance (Japan and overseas total)
FY2023 Results



*Only business sites in Japan listed in the environmental performance data aggregation range are included in calculation.
**Not covered by third-party assurance.

Setting Self-management Targets

SEKISUI CHEMICAL Group has set its own environmental management targets. This includes reducing emissions into the atmosphere and water, which are stricter than legal regulations. Each business site closely follows these internal targets. We aim to prevent environmental accidents before they occur by conducting internal environmental audits to uncover latent environmental risks.
In addition, we are developing comprehensive activities by sharing information on new legal and regulatory trends as well as incidents at other companies within the Group.
In fiscal 2023, there were no major violations of environmental laws and regulations related to such issues as the treatment of waste, water discharge, air emissions, and soil pollution. There were also no reports on incidences of administrative guidance.

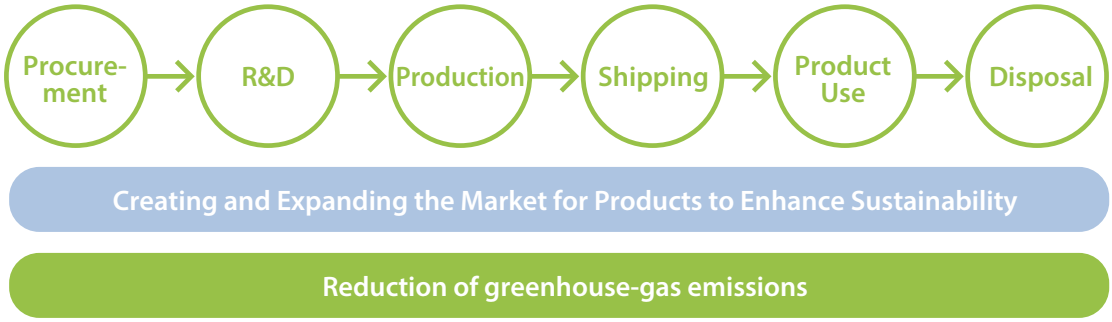
Climate Change

Strategy (Stance, Approach, Risks and Opportunities)

Reducing Emissions throughout the Supply Chain

In line with the targets agreed at the 21st Conference of the United Nations Framework Convention on Climate Change (COP21), SEKISUI CHEMICAL Group has formulated a medium-term greenhouse gas (GHG) emission reduction plan.

In order to achieve the ambitious targets of the Paris Agreement, which are based on Science Based Targets (SBTs), we identify and disclose the risks and opportunities that climate-change have on business continuity based on scientific evidence. This is reflected in business planning and targets for reducing GHG emissions. We are working to reduce GHG emissions at every stage, from the procurement of raw materials through development to manufacturing, transportation, and use. We ascertain and disclose details of GHG emissions not only at our own business sites, but also throughout the entire supply chain, including suppliers of raw materials and the use of products sold.



Note: Please refer to Policy Toward Mitigating and Addressing Climate Change on P.350.

Risks and Opportunities Posed by Climate Change to Our Businesses

SEKISUI CHEMICAL Group assesses the impact that climate change issues have on companies as well as the scale of impact that companies have on climate change, determines the importance of risks, and sets priorities to be addressed.

As far as the risks and opportunities associated with climate change issues are concerned, we assess the scale of economic impact on companies with respect to transition and physical risks. For risks and opportunities related to specific climate change issues, the scale, scope of impact, and other items are identified through scenario analyses based on the TCFD Guide.

We examine measures to mitigate the risks uncovered and consider the creation of new businesses by developing products and services for identified opportunities. Important risks along with possible countermeasures and strategies are reported to the Board of Directors through the Sustainability Committee. Important strategies are determined by the Board of Directors.We examine measures to mitigate the risks uncovered and consider the creation of new businesses by developing products and services for identified opportunities. Important risks along with possible countermeasures and strategies are reported to the Board of Directors through the Sustainability Committee. Important strategies are determined by the Board of Directors.

We believe that this kind of management will allow us to sustain our business into the future and remain a company that society demands to survive.

When considering the risks and opportunities of climate change associated with our business, we assess the impact of climate change mitigation and adaptation on transition and physical risks.

Examples include the following:

1. Housing Business

   For example, the mandate for low-carbon products is one of the policy regulation risks that constitute a transition risk. By taking the lead in promoting such low-carbon products as ZEH housing, we are differentiating ourselves from the market, However, if the entire market works to address the low-carbon environment attributable to mandatory standards at an accelerated pace, we may not be able to differentiate our products over the long term. The risk then arises that our market share will decline. Notwithstanding the aforementioned, we believe that even if our market share declines, the market itself will expand, leading to opportunities for sales growth. Similarly, in the Housing Business, and from an acute physical risk perspective, the need for products that address infrastructure resilience and water risks will increase. Therefore, we believe that opportunities will emerge as demands on the resilient Town and Community Development Business increase.

2. Example in the Plastic Molding and Processing Business

   In the Innovative Mobility, Advanced Lifeline, and other Plastic Molding and Processing Business fields, we believe that transition risks of a market nature will have a significant impact. Changes in consumption behavior may induce opportunity losses due to the inability to recycle resources and use decarbonized incentives. On the other hand, we believe that visualizing resource recycling and decarbonization value will provide us with the opportunity to acquire incentives and expand sales.

Addressing Climate Change

SEKISUI CHEMICAL Group believes that it is important to earnestly confront all climate change risks and make every effort to keep the temperature rise to less than 1.5˚C.
Based on SEKISUI Environment Sustainability Vision 2050 formulated in 2019, we will contribute to the resolution of environmental issues by reducing the environmental impact of our business activities.
Our goal is to eliminate GHG emissions from our own business activities by 2050. In addition to promoting the installation of solar power generation facilities for on-site consumption, we are increasing the Group's renewable energy utilization ratio for the electricity purchased from outside sources. In this regard, we are targeting the goal of 100% by 2030.
With an explicit roadmap in place, SEKISUI CHEMICAL Group had continued to promote GHG emission reduction activities with the goal of limiting the increase in global mean temperatures to no more than 2˚C by 2030 until fiscal 2021. (We became the first chemical company in the world to obtain SBT certification in 2018). Having achieved reductions that exceeded our initial milestone, we set the new targets of 1.5˚C from fiscal 2022 and a reduction of 50% in 2030 compared with 2019. In order to achieve these targets, we revised our GHG emissions roadmap for which we again obtained SBT certification. As a part of efforts to steadily reduce GHG emissions and achieve the 1.5˚C target, we will take steps to consider and pursue fuel conversion and manufacturing innovation that will help secure reductions in GHGs from extremely difficult fuel sources (Scope 1) while further promoting the conversion of electric power to renewable energy.

Risk Management

As far as risk management is concerned, we have established an ERM system that in addition to identifying Group-wide major risks, shares and manages these risks within the Group. Among environmental issues, risks related to climate change issues are also assessed in an integrated manner, together with other risks that are expected to have a significant impact on management. Risks that effect the Group as a whole and each organization, including such environmental issues as climate change, resource recycling, water resources, and biodiversity, are shared and deliberated at Board of Directors, Sustainability Committee, in-house management, and subcommittee meetings.

Governance

Promotion System for Climate Change Issues

As far as external environmental issues that may pose certain management risks in connection with, for example, efforts to mitigate and address climate change are concerned, steps are taken to ascertain the magnitude of each risk and to consider as well as implement appropriate countermeasures under the supervision of the Board of Directors. In similar fashion to other environmental issues, our supervisory and executive systems for reducing the Group's impact on climate change issues and expanding its contribution to the resolution of issues are based on our Environmental Management Promotion System. (For details see P.51). The Board of Directors has made the following final decisions on climate change issues.

- Policies and strategies to mitigate the impact of environmental issues, including climate change, and to expand contributions to solving them.
- The organization's plan to achieve a sustainable society, including the transition to a low-carbon economy (transition plan).
- Assessment of the impact of environmental issues, including climate change on management, and policies for addressing those issues.

Turning to major matters discussed and determined by the Board of Directors, the Sustainability Committee deliberates on policies and strategies in advance, based on conditions surrounding the Group as a whole regarding such environmental issues as climate change that have been discussed and summarized by the Environmental Subcommittee. In addition, based on the policies, strategies, and transition plans finalized by the Board of Directors, the Environmental Subcommittee discusses specific measures and goal setting while managing progress.

Indicators and Targets

Targets

GHG

Aim: Decarbonization/zero GHG emissions

Indicator 1. GHG emission reduction rate

Current Medium-term Management Plan Target (final year: FY2025) -33% (compared with FY2019)

FY2023 Results -32.8% (compared with FY2019)
2030 Target -50% (compared with FY2019)
2050 Target -100%

Indicator 2. Renewable energy ratio of purchased electricity (including solar power generation for in-house use)

Current Medium-term Management Plan Target (final year: FY2025) 70%

FY2023 Results 49.5%
2030 Target 100%
2050 Target 100% Total power consumption including co-generation

Reduce energy usage volume

Aim: Improve energy efficiency and reduce energy expenses during production

Indicator: Reduction rate of energy consumption per unit of production

Current Medium-term Management Plan Target (final year: FY2025) -3% (compared with FY2022)

FY2023 Results +3.5% (compared with FY2022)
2030 Target —
2050 Target —

Major Initiatives

Addressing the Rising Costs Associated with Climate Change Strategies

SEKISUI CHEMICAL Group is working to significantly improve energy efficiency in its production processes in order to reduce the Group's environmental impact. By transforming and improving production processes and continuously upgrading equipment, we are taking steps to visualize energy use and to reduce consumption.
Since fiscal 2020, we have been promoting the conversion of purchased power to renewable energy on a global basis. We are working to reduce electricity costs from a long-term perspective by introducing solar power generation facilities at our production sites through capital investment and consuming the power generated in-house.
Since fiscal 2023, we have also worked to innovate our production processes and consider ways to reduce fuel-derived greenhouse gases.

Product Development and Strategies Aimed at Solving Environmental Issues and Meeting the Changing Needs of the Market

SEKISUI CHEMICAL Group develops products that contribute to the resolution of issues related to the natural and social environments, and continues to disclose and disseminate details of specific results. Through these efforts, we are managing risks that arise from changes in market needs against the backdrop of such global issues as climate change. At the same time, we believe that this will be enable us to seize opportunities attributable to increased demand.
In particular, by quantifying as much as possible the size (degree of contribution) of each product's contribution to the resolution of issues, we believe that we can magnify the impact we create, which in turn will lead to opportunities to create markets that help solve global issues and further heighten the awareness of consumers.
In fiscal 2020, we established the MINASE INNOVATION CENTER (MIC) as an organization to promote open innovation with stakeholders. The goals here are to strengthen partnerships with stakeholders and to engage in activities to increase our contribution to solving issues through co-innovation (fusion) while accelerating solutions through early dissemination.
Through MIC, we are actively engaging in technology exchanges with startup companies that possess low-carbon technologies as well as materials and other technologies that contribute to resource conversion, and are initiating steps to accelerate the resolution of social issues.

Addressing the Deterioration in Operating and Working Conditions

If climate change worsens and the minimum and maximum temperatures become increasingly severe, people engaged in manufacturing and construction may not be able to work. SEKISUI CHEMICAL Group believes that it is also possible to minimize the impact of climate change by proposing construction and engineering plans that take into consideration the seasonality of each region.
Each divisional company and Group subsidiary has formulated a BCP tailored to its own circumstances as a means of mitigating the risk of a loss in operations and employment opportunities caused by natural disasters or other events.

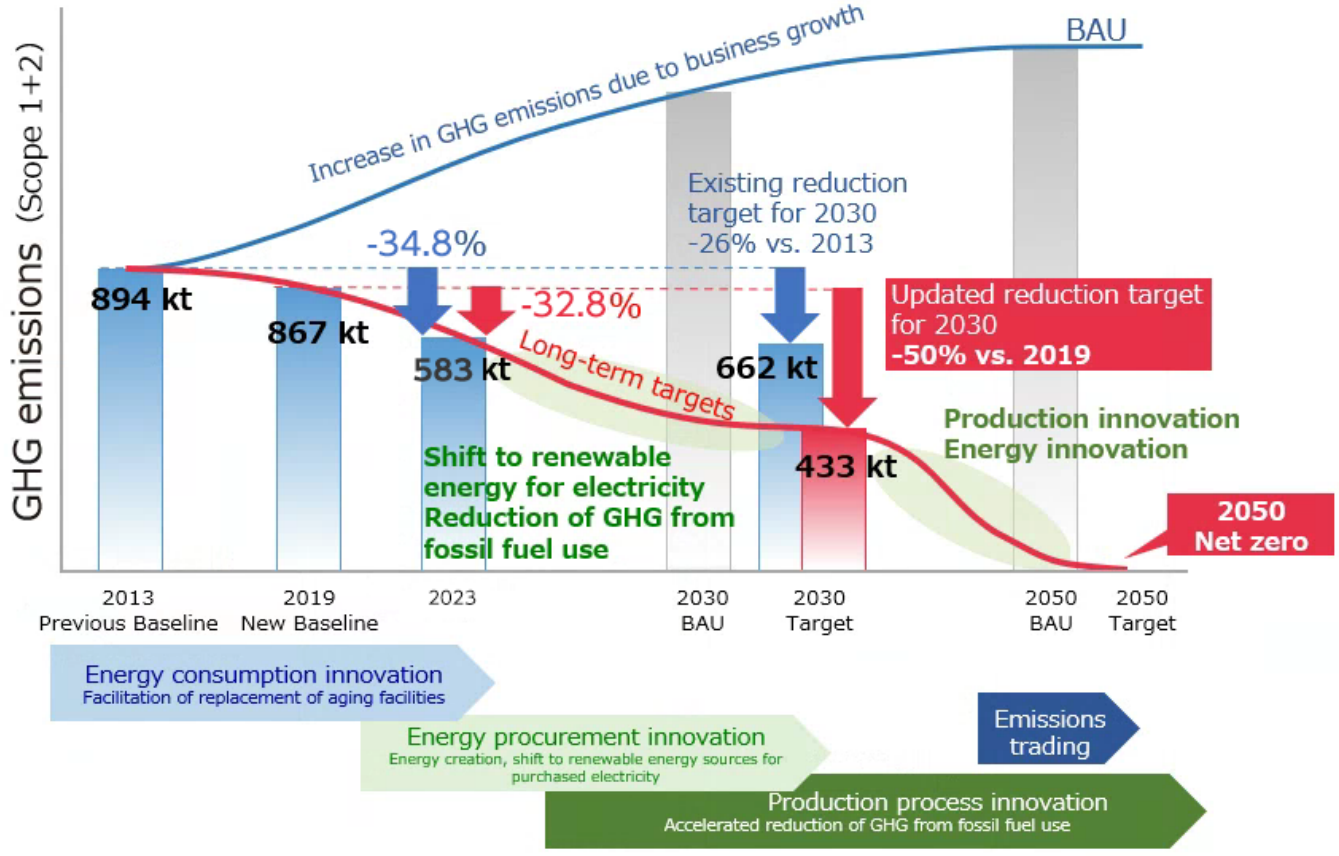
Certification under the SBT* Initiative

SEKISUI CHEMICAL Group was the first company in the chemical sector to acquire SBT certification in 2018. The Group set a target of reducing GHG emissions by 26% by 2030 compared with the levels recorded in fiscal 2013. In order to achieve this goal, we have promoted energy consumption innovation, including the replacement of aging facilities, and such energy procurement innovation initiatives as the conversion of purchased electricity to renewable energy and the installation of solar power generation facilities for on-site consumption.

As a result, the ratio of renewable energy ratio to the Group's total purchased electricity reached 49.5% in fiscal 2023. The rate of GHG emission reduction was 32.8% compared with fiscal 2019.

As climate change countermeasures become an even more urgent social issue, we have decided to increase our 2030 GHG emission reduction rate target by pursuing the technically difficult task of reducing fuel-derived GHG emissions ahead of schedule. This includes the use of electric power at facilities that consume fuel, switching to low-carbon fuels, and innovating production processes.

With the aforementioned in mind, we updated our SBT certification to the 1.5˚C target in March 2023.



	Previous Targets	Updated Targets	Means of Achieving Updated Targets
Scope1+2	Base year: 2013 Target year: 2030 Reduction rate: 26% (2.0˚C target)	Base year: 2019 Target year: 2030 (unchanged) Reduction rate: 50% (1.5˚C target)	Adopt renewable energy for conventional purchased electricity, and also pursue in advance the shift to low-carbon fuels, electrification, and production innovation to reduce fuel-derived GHGs
Scope3	Base year: 2016 Target year: 2030 Reduction rate: 27%	Base year: 2019 Target year: 2030 (unchanged) Reduction rate: 30%	Add resource recycling measures (conversion to non-fossil raw materials, increased use of recycled materials, and recycling of waste) to promote reductions in categories 1, 5, and 12

<Progress in FY2023>

Scope 1+2: Reduced greenhouse gas emissions by 32.8% compared with FY2019

Scope 3: Reduced greenhouse gas emissions by 8.8% compared with FY2019

In the future, we will continue to recognize our responsibility as a driving force within the industry and strive to lead and implore society as a whole to deal with climate change.

* SBT: Science Based Targets. The adoption of the Paris Agreement led to the proposal of such joint initiatives as the United Nations Global Compact. SBT initiatives certify that the GHG reduction targets set by companies are science based targets (SBT) that contribute to long-term measures aimed at combating climate change.

Promoting the Shift to Renewable Energy for Electric Power

We recognize that climate change is not only a major social issue, but also a major risk factor for the Group. In August 2020, we joined RE100, an international initiative which aims to procure the energy consumed in business activities entirely from renewable energy sources, in order to accelerate efforts that contribute to solving this issue throughout society. In the future, we will promote activities in cooperation with member companies and organizations.

We will promote thoroughgoing energy conservation measures and the shift to renewable energy in a bid to achieve zero GHG emissions from our business activities by 2050 as well as the GHG emissions target certified by the SBT Initiative by 2030.

Moreover, we will shift to renewable energy for all of the electric power we purchase from outside sources by 2030, and ensure that all electric power is derived from renewable energy sources, including co-generation systems, by 2050.

Environmental Management Across the Supply Chain

When we begin or continue to undertake business with our suppliers, we ask them to establish environmental management systems that comply with ISO 14001 and t to reduce their environmental impact. In particular, with regard to the issue of climate change, we are taking steps to ascertain the progress made in setting and tackling reduction targets.
Furthermore, we monitor the volume of raw materials used by the Group as well as the impact on the environment.
With regard to wood, which is considered to have a significant impact on biodiversity issues, we have formulated procurement guidelines* specific to wood in an effort to procure all of our needs from sustainable forests. Looking ahead, we will identify risks and conduct due diligence to reduce risks through supplier surveys.

* For details, please refer to the Timber Procurement Policy on P.364

Addressing Climate Change Challenges

Compatibility with Scope 3*

The volume of GHG emissions that falls under the Scope 3 category is substantial at the raw material procurement and product use stages. Based on this, we are stepping up efforts to reach out to raw material suppliers. We recognize that the reason for the large volume of emissions at the raw material procurement stage is the nature of our business as a chemical manufacturer.
In order to reduce GHG emissions when procuring raw materials, we reviewed our selection criteria for new materials. From a raw material perspective, we are requesting the presentation of GHG emissions data during raw material manufacture from more than 10 manufacturing companies, while promoting efforts to reduce greenhouse gases under Scope 3 in the future for the four major resins that are purchased in large volumes and have high levels of GHG emissions In this manner, we are working to reduce Scope 3 GHG emissions in the future.
While the Group obtains only a portion of the total data from suppliers, by using this data we are able to grasp the volume of GHG emissions over the entire lifecycle.
Drawing on the IDEA database, we are studying measures to reduce GHG emissions and promoting reduction activities across the supply chain.
In addition, we have confirmed with suppliers the possibility of providing lower-carbon biomass-derived raw materials and recycled materials, and have begun to consider alternatives.
In specific terms, we will switch to non-fossil sources for resin materials, which account for 50% of purchased products and services (Category 1), and expand the use of recycled materials. This will help reduce GHG emissions from the disposal of products sold (Category 12).
Moreover, we will promote the recycling of waste plastics and work to reduce the amount of waste (Category 5) generated by our operations.
Meanwhile, GHG emissions at the product-use stage are largely attributable to the substantial volumes of greenhouse gases emitted as a result of the energy consumed by the houses we sell.
Regarding the use of products sold (Category 11), higher sales of ZEH homes with Sekisui Heim's energy-saving performance and large-capacity photovoltaic/large-capacity storage batteries have contributed significantly to reducing GHG emissions. We will continue to expand sales of ZEH homes, which will lead to further reductions.

* Scope 3: Other indirect emissions for the portion other than direct emissions at the Company (Scope 1) and indirect emissions to the Company (Scope 2).

Promoting the Use of Renewable Energy

SEKISUI CHEMICAL Group has been promoting the use of renewable energy by installing solar power generation systems at its production sites in Japan and overseas.
Since fiscal 2020, we have also actively promoted the switch to renewable energy sources for electricity purchased. As of the end of March, 2023, 41 business sites in Japan and overseas have switched to renewable energy sources for all of their electricity purchased. Electricity consumption derived from renewable energy sources in fiscal 2023 was 355GWh, which is equivalent to 49.5% of all electricity purchased (including solar power generation for in-house use) and 44.2% of total electricity consumption, including electricity generated in-house by co-generation systems.

In fiscal 2023, the following 5 business sites newly installed solar power generation systems for in-house use, bringing the total number of business sites to 20.
- SEKISUI POLYMATECH (THAILAND)
- Sekisui Heim Industry Co., Ltd. Tokyo Site
- SEKISUI YOUNGBO HPP (WUXI) CO., LTD.
- Sekisui LB Tec Co., Ltd.
- Sekisui Soflan Wiz CO., LTD. Astugi Plant

Solar Power Generation Facilities Producing Electricity for On-site Use			
Japan	Tohoku Sekisui Heim Industry Co., Ltd.	USA	SEKISUI S-LEC AMERICA, LLC.
	Chushikoku Sekisui Heim Industry Co., Ltd.	Netherlands	SEKISUI S-LEC B.V. Film Plant
	Kyushu Sekisui Heim Industry Co., Ltd.	Thailand	SEKISUI S-LEC (THAILAND) CO., LTD.
	Sekisui Heim Industry Co., Ltd. Kanto Site		SEKISUI-SCG INDUSTRY CO., LTD.
	Yamanashi Sekisui Co., Ltd.	China	Sekisui Medical Technology (China) Ltd.
	SEKISUI SEIKEI, LTD. Kanto Plant		Sekisui (Wuxi) Plastics Technology Co., Ltd.
	Sekisui Medical Co., Ltd. Tsukuba Plant		
	SEKISUI CHEMICAL Co., Ltd. Taga Plant		
	SEKISUI CHEMICAL Co., Ltd. Shiga-Ritto Plant		

Facilities for which 100% of electricity is derived from renewable energy sources			
Japan	SEKISUI CHEMICAL Co., Ltd. Gunma Plant	Netherlands	SEKISUI S-LEC B.V. Film Plant
	SEKISUI CHEMICAL Co., Ltd. Taga Plant		SEKISUI S-LEC B.V. Resin Plant
	SEKISUI CHEMICAL Co., Ltd. Research and Development Institute		SEKISUI ALVEO B.V.
			SEKISUI POLYMATECH EUROPE B.V.
	SEKISUI CHEMICAL Co., Ltd. Tsukuba Site		SEKISUI ESLON B.V.
	SEKISUI CHEMICAL Co., Ltd. Tokyo Headquarters	Germany	SEKISUI ALVEO BS GmbH
	SEKISUI CHEMICAL Co., Ltd. Osaka Headquarters	Spain	SEKISUI SPECIALTY CHEMICALS EUROPE S.L.
	Hokkaido Sekisui Heim Industry Co., Ltd.	UK	SEKISUI DIAGNOSTICS (UK) LIMITED
	Tohoku Sekisui Heim Industry Co., Ltd.	USA	SEKISUI S-LEC AMERICA, LLC.
	Sekisui Heim Industry Co., Ltd. Kanto Site	China	SEKISUI S-LEC (SUZHOU) CO., LTD.
	Sekisui Heim Industry Co., Ltd. Tokyo Site		SEKISUI (WUXI) PLASTICS TECHNOLOGY CO., LTD.
	Sekisui Heim Industry Co., Ltd. Chubu Site		
	Sekisui Heim Industry Co., Ltd. Kinki Site		SEKISUI YOUNGBO HPP (WUXI) CO., LTD.
	Chushikoku Sekisui Heim Industry Co., Ltd.		SEKISUI POLYMATECH CO., LTD. Shanghai Plant
	Kyushu Sekisui Heim Industry Co., Ltd.		
	Sekisui Board Co., Ltd. Minakuchi Plant	Thailand	SEKISUI S-LEC (THAILAND) CO., LTD.
	Sekisui Board Co., Ltd. Gunma Plant		SEKISUI POLYMATECH (THAILAND) CO., LTD.
	Yamanashi Sekisui Co., Ltd.		
	Sekisui Medical Co., Ltd. Tsukuba Plant		SEKISUI SPECIALTY CHEMICALS (THAILAND) CO., LTD.
	Sekisui Medical Co., Ltd. Ami Site		
	Sekisui Medical Co., Ltd. Drug Development Solutions Center		THAI SEKISUI FOAM CO., LTD.
			S AND L SPECIALTY POLYMERS CO., LTD.
	Sekisui Soflan Wiz CO., LTD. Iwaki Plant	Singapore	VEREDUS LABORATORIES PTE. LTD.
	Chiba Sekisui Industry Co., Ltd.		

Environmental Activities at Offices in line with the Group's Environmental Management System (EMS)

SEKISUI CHEMICAL Group is promoting environmental activities in its offices that are in line with the Group's Environmental Management System (EMS). We are implementing a variety of environmental activities at our offices nationwide, including such energy-saving activities as turning off lights during lunch breaks and reducing paper consumption.

Head Office Building Renewal and New Energy Creation Products

SEKISUI CHEMICAL Group has continued to work with Kanden Realty & Development Co., Ltd. to renovate its Osaka Head Office (Dojima Kanden Building), which is 50 years old, since 2023. This building was the first office building over 30 years' old to receive the highest S-rank "CASBEE Smart Wellness Office Certification".*

* The "CASBEE Smart Wellness Office Certification" System is a system that evaluates the health, comfort, and intellectual productivity of building users as well as the performance of buildings in terms of their energy-saving environment, safety, and security from multiple perspectives.

In renovating the building, steps were taken to utilize Low-E double glazing, which improves indoor comfort while reducing air conditioning power consumption, thanks to its high thermal insulation and solar radiation shielding properties. We recognize that the renewal and continued use of aging buildings is not a conventional scrap and build approach, but a concept of building use that is critical to a resource-recycling society. Improving the durability of buildings and using them for a long time can save resources and reduce waste, reduce the amount of energy needed to manufacture building materials, and in turn, reduce GHG emissions throughout the lifecycle of buildings. In addition, more than 20 of the Group's products that contribute to the safety, durability, and environmental performance of buildings and infrastructure were used in the renewal. In October 2023, film-type perovskite solar cells, which are currently under development, were installed on the exterior walls of the building. This is the first such case of exterior wall installation in Japan.

Conceptual diagram of the Group's Osaka headquarters after completion of renewal work.

Contributing to Carbon Reduction and Decarbonization through Our Businesses

SEKISUI CHEMICAL Group will accelerate efforts to help realize a decarbonized society in 2050 through its business activities. To this end, we are promoting the creation of Products to Enhance Sustainability and the expansion of related markets through an internal system.
As far as the need to address climate change is concerned, we are focusing on products not only from a mitigation, but also an adaptation perspective in a bid to expand markets.
Specific examples are listed as follows.

[Examples of Products That Contribute to Climate Change Mitigation]

<Housing> Products and services that use renewable electricity and support energy-efficient lifestyles
Example) ZEH housing (net-zero energy house)

<Innovative Mobility> Lightweight and highly functional products that reduce energy consumption during transportation and shipping
Example) Interlayer films for automotive laminated glass (S-LEC®) that boasts thermal and acoustic insulation functions
Sheet materials used in airplanes, trains, etc. (SEKISUI KYDEX product)

<Electronics> Materials essential for energy-efficient products, products that contribute to improving the durability and performance of related components, which are becoming increasingly important with the development of 5G connectivity, etc.
Example) Heat release materials that help mitigate issues caused by overheating circuit boards (Sekisui Polymatech Co., Ltd. product)
Materials used in energy-efficient equipment (Micropearl). functional tape

<Infrastructure> Products that reduce GHG emissions throughout their life cycles by swapping out conventional raw materials, production, and molding methods that extend their useful lives, etc.
Example) Plastic piping in factories through which chemicals and other materials flow. Compared to mainstream metal piping, plastic piping reduces GHG emissions over its life cycle.

[Examples of Products That Contribute to Climate Change Adaptation]

<Building and Civil Engineering> Products that contribute to the management of disasters that are increasing and becoming more severe due to the progress of climate change
Example) Products that enable temporary storage of rainwater in the event of torrential rain

[Initiatives in Collaboration with Other Companies] Carbon recycling technology project in partnership with ArcelorMittal S.A.
In order to reduce our reliance on fossil fuels and contribute to decarbonization during steelmaking, SEKISUI CHEMICAL and ArcelorMittal entered into a partnership on projects to recover and reuse CO_2 emitted during the steelmaking process. Through this project, we will work to develop technologies for separating, recovering, and reusing CO_2 from the gases emitted during the steelmaking process in the steel industry. Key to this work is SEKISUI CHEMICAL's innovative technology that converts CO_2 into carbon monoxide at higher yield.

[Progress against Commitments] Increasing the market penetration rate of ZEH housing

We are committed to increasing the percentage of homes sold that use ZEH in order to reduce the use of fossil-based energy by our customers in the Sekisui Heim homes. In fiscal 2023, the ratio of new detached net-zero energy houses (ZEH) (actual results calculated based on ZEH builder's reporting methods) was 96%, of which 89% was for ZEH, which has the highest rate of energy savings among the three categories defined in the national ZEH.

The cumulative number of houses equipped with storage batteries (energy self-sufficient houses), which we are proposing along with houses with ZEH specifications, is also increasing, and the storage cell installation rate for new detached homes has grown to 87%*.

* Based on Company data, the percentage of storage batteries (including VtoH) used on a contract basis from April 2023 to March 2024. Figures are rounded to the nearest whole number.

Activities in Related Initiatives

Toward Climate Change Mitigation

SEKISUI CHEMICAL Group is collaborating with other companies and organizations in an effort to achieve its long-term goals and ultimately to contribute to the resolution of climate change issues. Through collaboration, we hope to expand our contribution and achieve milestones ahead of schedule.

The Group aims to achieve the goals set out in the Paris Agreement, namely the 1.5˚C target, and to ensure carbon neutrality. We participate in and register with various initiatives, forums, and other organizations after confirming that their founding intentions, direction of initiatives, goals, etc. are consistent with the will and direction of the Group. To continue this participation, we check each year to see if there are any discrepancies in the direction we are taking, and to then make the necessary decisions. If we determine that the direction differs, we will take steps to withdraw.

The Japan Climate Change Initiative (JCI)

Significance/Objectives····· Joining the front line from Japan in the global push toward decarbonization in order to mitigate climate change.

Activities····· In order to drive social change and steer toward decarbonization, steps are being taken under the JCI to promote the dissemination of information and exchange of views from companies, local governments, and NGO that are actively engaged in climate-change measures, and to advance the declaration of goals and activities aimed at achieving objectives.

Our role ····· We share the latest information on our efforts and use that information to consider measures.

RE100

Significance/Objectives····· Aim for companies to obtain 100% of the electricity used by their own operations from renewable energy sources.

Activities····· Motivated companies that have made the declaration work together to promote communication and activities that have an impact on society.

Our role ····· By declaring our commitment to shift to renewable energy, we are contributing to the widespread use of renewable energy in society.

JAPAN CLIMATE LEADERS' PARTNERSHIP (JCLP)

Significance/Objectives····· Aim to realize a rapid transition to a decarbonized society and achieve the 1.5˚C target to avert a climate crisis.

Activities····· Leading Japan in five pillars to achieve policy changes
Pursuing policy engagement, promoting decarbonization within companies, providing solutions to decarbonize society, communicating with society, and cooperating with global networks

Our role ····· Decarbonize the Company and society by making a decarbonization declaration, transitioning to a decarbonized business model, and pursuing corporate collaboration to promote internal decarbonization mainly within supply chains.

GX League

Significance/Objectives····· Aim to accelerate corporate collaboration in an effort to address the challenges associated with the transition to carbon neutrality in Japan.

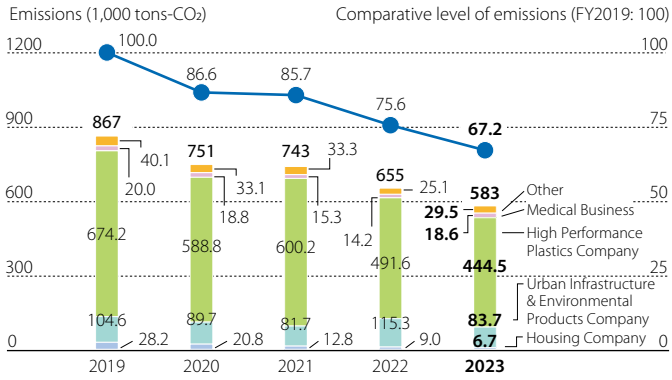
Activities····· Participating companies that have endorsed the objectives of the GX League are working together and are preparing to promote initiatives to solve various issues.

Our role ····· We will consider participating in and promoting initiatives to resolve various issues in the future.

Performance Data

Note: In line with a change in the control of certain businesses in the UIEP and HPP companies implemented from October 2022, the data of both companies for FY2022 is collated as if the change in control had been initiated from the beginning of FY2022.

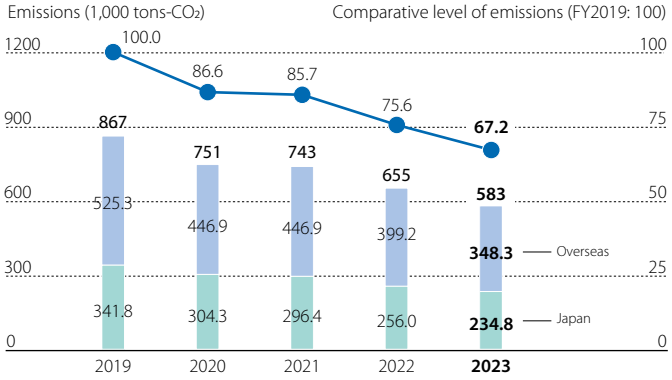
Scope1+2 (By Divisional Company)



Note 1: Some past figures have been revised due to improvements in precision.

Note 2: Data after deducting 64 thousand tons of CO_2 equivalent to non-fossil certificates.

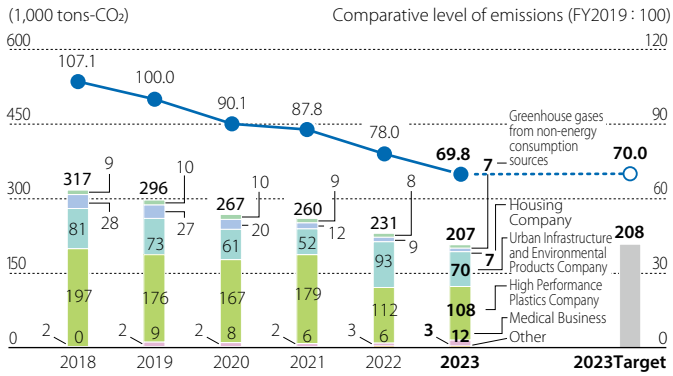
Scope1+2 (By Japan and overseas)



Note 1: Some past figures have been revised due to improvements in precision.

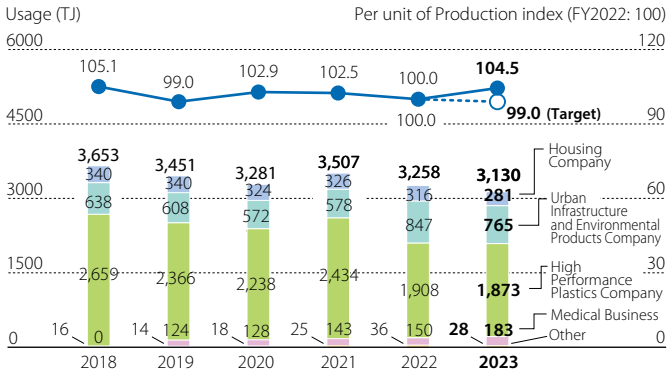
Note 2: Data after deducting 64 thousand tons of CO_2 equivalent to non-fossil certificates.

Greenhouse Gas (GHG) Emissions during Manufacturing / Japan



Note: Some past figures have been revised due to improvements in precision.

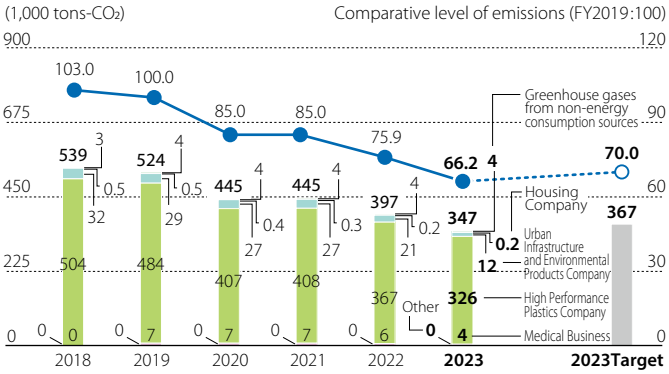
Energy Use and per Unit of Production* (Index) during Manufacturing / Japan



* Energy consumption per unit of production weight

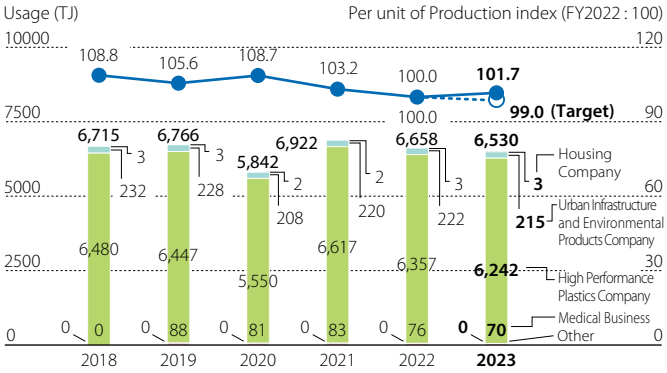
Note: Some past figures have been revised due to improvements in precision.

Greenhouse Gas (GHG) Emissions during Manufacturing / Overseas



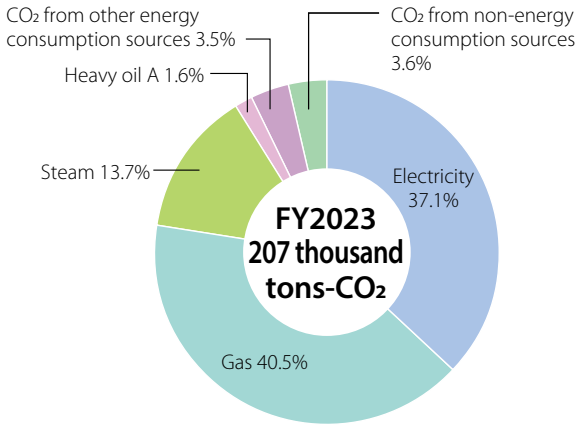
Note: Data after deducting the equivalent non-fossil certificate of 64 thousand tons of CO_2.

Energy Use and per Unit of Production* (Index) during Manufacturing / Overseas

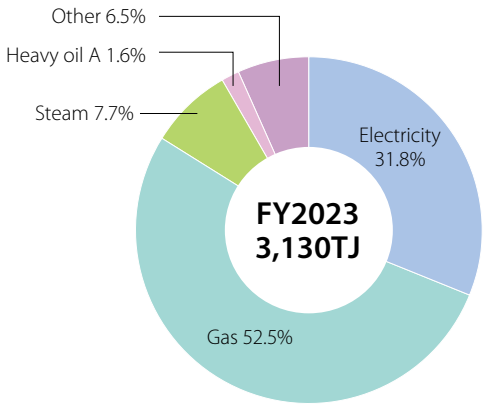


* Energy consumption per unit of production weight

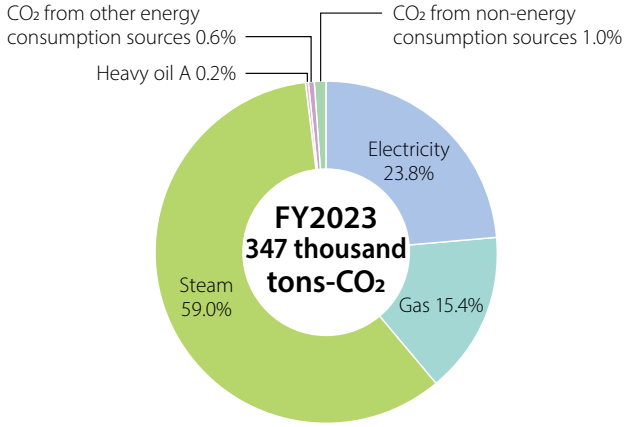
Breakdown of Greenhouse Gas (GHG) Emissions during Manufacturing / Japan



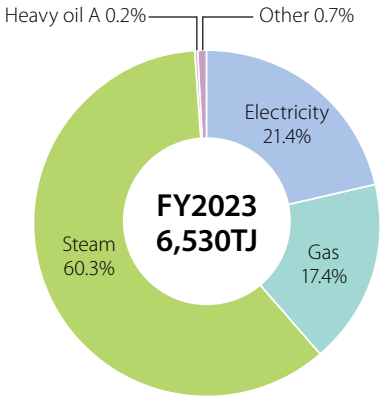
Breakdown of Energy Use during Manufacturing / Japan



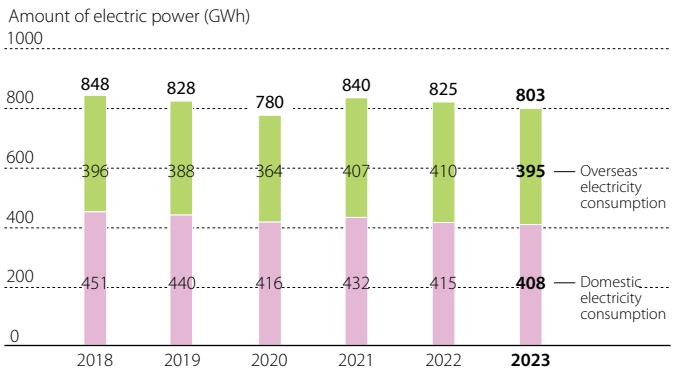
Breakdown of Greenhouse Gas (GHG) Emissions during Manufacturing / Overseas



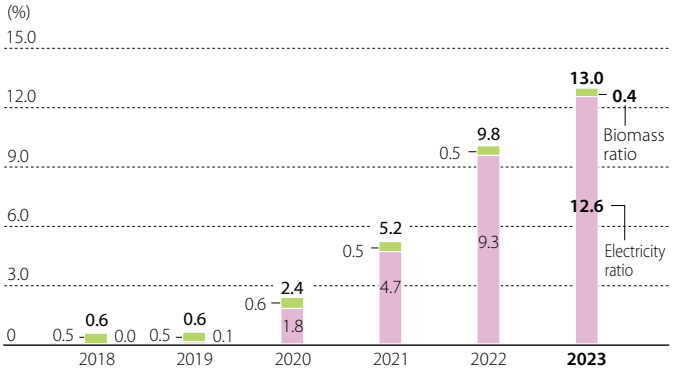
Breakdown of Energy Use during Manufacturing / Overseas



Electricity Consumption in Japan and Overseas

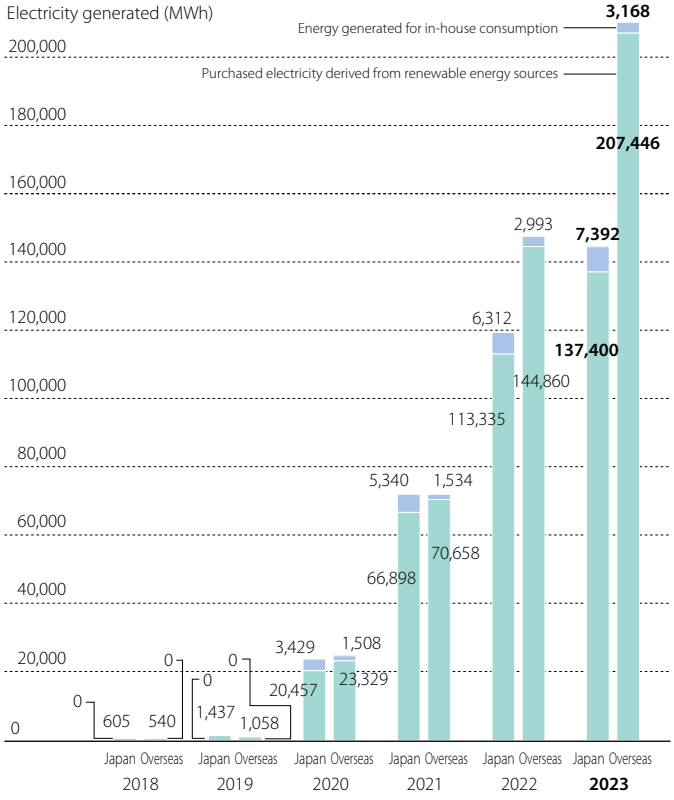


Ratio of Renewable Energy to Total Energy Consumption / Electricity, Biomass Boilers

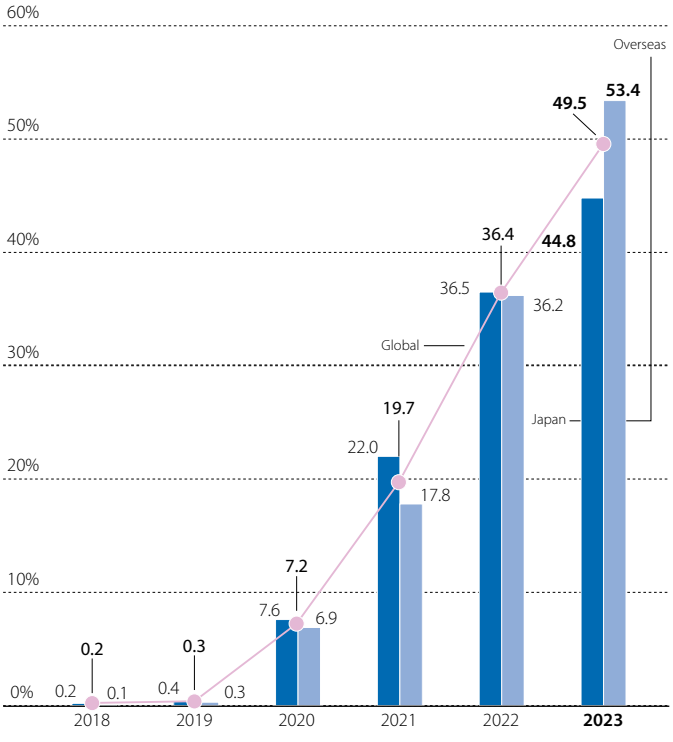


Note: Some past figures have been revised due to improvements in precision.

Energy generated for in-house consumption, amount of purchased electricity derived from renewable energy sources / Japan and overseas
Note: excluding co-generation



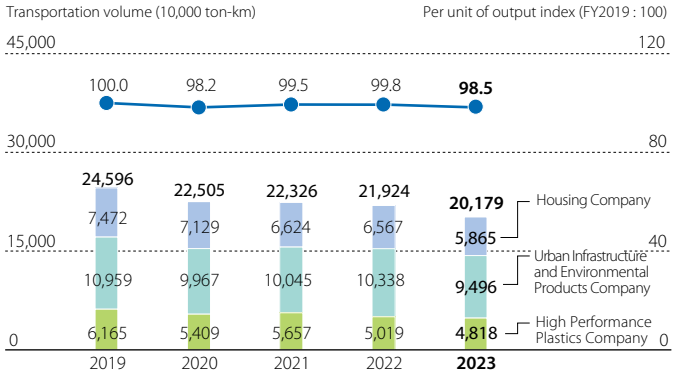
Ratio of electricity derived from renewable energy sources / Japan and overseas
Note: excluding co-generation



Note: Some past figures have been revised due to improvements in precision.

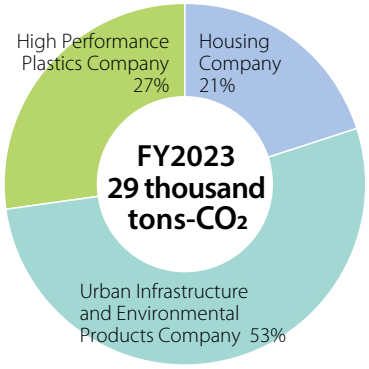
Indicator	Calculation Method
Greenhouse Gas Emissions	GHG emissions = ∑[fuel use, purchased electricity, purchased steam × CO_2 emissions coefficient] + greenhouse gas emissions from non-energy consumption sources Greenhouse gas emissions from non-energy consumption sources = CO_2 emissions not arising from energy consumption* + ∑[emissions of non-CO_2 greenhouse gases × global warming potential] *Includes CO_2 emissions from burning of non-fuel gases based on the Act on Promotion of Global Warming Countermeasures, both inside Japan and overseas [CO_2 Emissions Coefficient] Purchased Electricity: In Japan, the coefficient provided in notices pursuant to the Act on Promotion of Global Warming Countermeasures is applied to the latest data at the start of each fiscal year. In case the purchased electricity for which the emission factors are set for each menu, the adjusted emission coefficient applies. For overseas data, the latest coefficient data obtained from local power suppliers as of the beginning of each fiscal year is applied. If not available, based on IEA Emission factors 2022, EPA eGRID 2021. City Gas / Natural Gas and Purchased Steam: Coefficients obtained from suppliers are applied to the latest data at the start of each fiscal year. If a coefficient cannot be obtained in this manner, it is based on the Act on Promotion of Global Warming Countermeasures. Fuel Other than the Above: Based on the Act on Promotion of Global Warming Countermeasures. Global warming potential: Emissions coefficients determined based on greenhouse gas emission calculations, reports, and official disclosures. Fuels that corresponds to energy sources is calculated based on the Act on Promotion of Global Warming Countermeasures both in Japan and overseas.
Energy Use	Energy use = ∑[amount of fuel used, amount of electricity purchased, amount of solar power generation for in-house use, and amount of steam purchased x unit calorific value] [Unit Calorific Value] Purchased Electricity: 3.60 MJ/kWh (Amount of solar power generation for in-house use and amount of purchased electric power from renewable energy sources are included in the energy use) Fuel, Purchased Steam: Based on the Act on Rationalization of Energy Use and Shift to Non-fossil Energy

Transportation Volumes and Energy per Unit of Transportation (Index)* / Japan



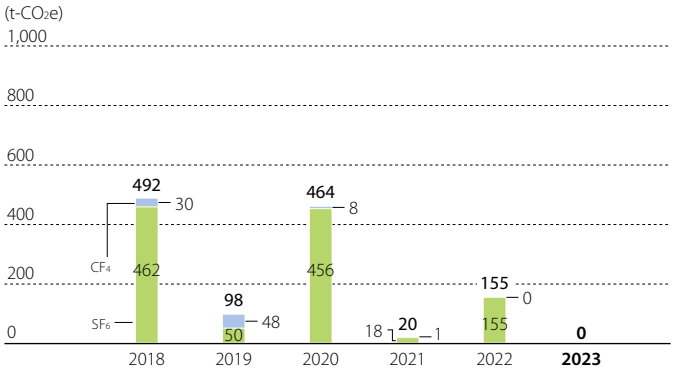
* Energy consumption per unit of transportation volume

CO_2 Emissions during the Transportation Stage / Japan



Indicator	Calculation Method
CO_2 Emissions during the Transportation Stage	The calculation is made by combining the fuel consumption method (transport of housing units, etc.) and the improved ton-kilometer method (other than transport of housing units, etc.) CO_2 emissions = Σ[fuel use × CO_2 emissions coefficient] + Σ[amount transported (metric tons) × distance transported (km) × fuel use per unit of transportation × CO_2 emissions coefficient] Fuel use per unit of transportation is the value used in the reporting system for specified freight carriers under the Act on the Rational Use of Energy Major domestic distribution (shipment of products) is covered

Emissions of Non-CO_2 Greenhouse Gases (Global Production, Laboratories)

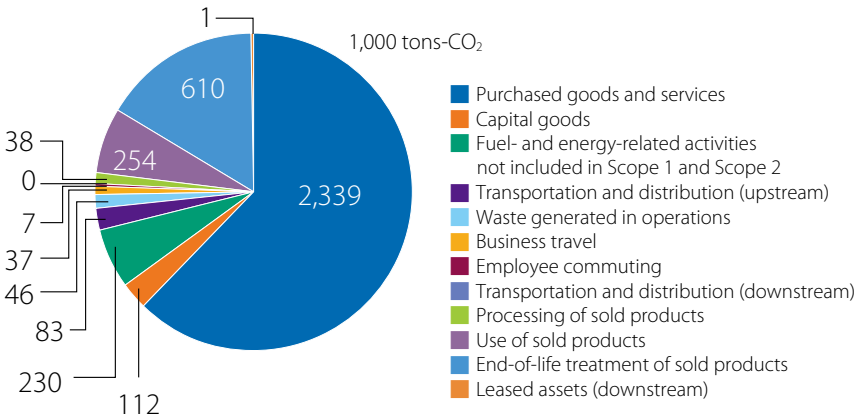


Note: Zero emissions due to improvements in working method with respect to the recovery of SF_6 from FY2023.

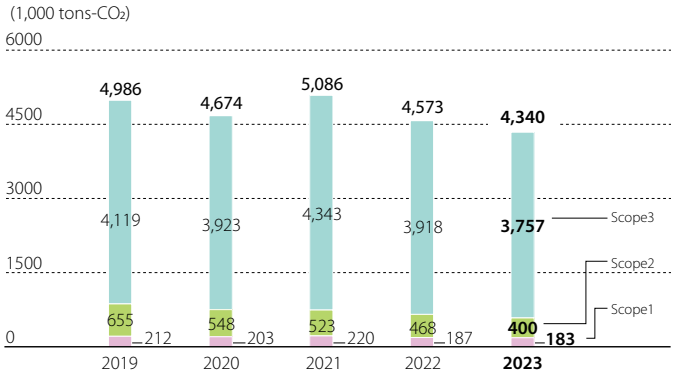
Greenhouse Gas Emissions throughout Our Supply Chain (Scope 3)

(1,000 tons-CO_2)

Category		FY2019	FY2020	FY2021	FY2022	FY2023
Upstream	Purchased goods and services	2,352	2,282	2,445	2,205	2,339
	Capital goods	96	80	74	113	112
	Fuel-and energy related activities not included in Scope 1 and Scope 2	127	198	226	220	230
	Transportation and Distribution (Upstream) (Transportation of major raw materials)	95	86	93	77	83
	Waste generated in operations	44	37	41	44	46
	Business travel	24	7	6	23	37
	Employee commuting	6	5	4	9	7
Downstream	Transportation and Distribution (Downstream) (Transportation of products)	0	0	0	0	0
	Processing of sold products	45	39	41	41	38
	Use of sold products	772	708	810	625	254
	End-of-life treatment of sold products	558	481	601	559	610
	Leased assets (downstream)	2	1	1	2	1
Total(upstream / downstream)		4,119	3,923	4,343	3,918	3,757



Greenhouse Gas Emissions throughout Our Supply Chain as a Whole (Classified by Scope)



Note: Some past figures have been revised due to improvements in precision.

Indicator	Calculation Method	
Greenhouse Gas Emissions throughout Our Supply Chain	Purchased Goods and Services	CO_2 emissions = ∑[(amount of major raw materials used (excluding substances subject to regulation by the PRTR Law) as listed in Material Balance section of this report + estimated values for other raw materials) × emission coefficient (Inventory Database for Environmental Analysis (IDEA) Ver.3.1 (the world's largest GHG emissions database developed by the National Institute of Advanced Industrial Science and Technology (IDEA v.3.1))] Calculated using MiLCA v.3.1 software from LCA Expert Center Co., Ltd. that incorporates IDEA v.3.1. The Group has reflected the actual GHG emissions of its raw material suppliers with regard to four principal resins (PP, PE, PVC and PVA) from FY2018.
	Capital Goods	CO_2 emissions = ∑[(amount of spending on capital expenditures authorized for the given fiscal year for buildings, structures, mechanical equipment, and transport vehicles) × emissions coefficient (per unit emissions database for calculating organizational greenhouse gas emissions, etc., arising from supply chains (Ver. 3.4) (Ministry of the Environment and Ministry of the Economy, Trade and Industry))]
	Fuel- and Energy-related Activities not Included in Scope 1 and Scope 2	CO_2 emissions = ∑[(fuel use, amount of purchased electricity, and amount of purchased steam) × emissions coefficient] The emissions coefficients used are as follows. For fuel IDEA v.3.3 For purchased electricity and steam, per unit emission database for calculating greenhouse gas emissions by organizations, etc., arising from supply chains (Ver. 3.4) (Ministry of the Environment and Ministry of the Economy, Trade and Industry). Applicable to production sites, laboratories, and offices both inside Japan and overseas.
	Transportation and Distribution (Upstream) (Transportation of major raw materials)	CO_2 emissions = ∑[amount of major raw materials used (excluding substances subject to regulation by the PRTR Law) as listed in the Material Balance section of this report × transport distance × emission coefficient (IDEA v.3.3)] (Calculated assuming that the transport distance was uniformly 200 km)
	Transportation and Distribution (Downstream) (Transportation of products)	The calculation is made by combining the fuel consumption method (transport of housing units, etc.) and the improved ton-kilometer method (other than transport of housing unit, etc.) CO_2 emissions = ∑[fuel use × CO_2 emissions coefficient] + ∑[amount transported (metric tons) × distance transported (km) × fuel use per unit of output × CO_2 emissions coefficient (value used in the reporting system for specified freight carriers under the Act on the Rational Use of Energy)] (Estimates used for overseas) Covers shipments of products by Group companies in Japan and overseas.

Indicator	Calculation Method	
Greenhouse Gas Emissions throughout Our Supply Chain	Waste Generated in Operations	CO_2 emissions = Σ[amount of waste materials generated (by type) × emission coefficient (IDEA v.3.3)] Scope: Major production sites and research facilities in Japan and overseas.
	Business Travel	CO_2 emissions = Σ[transportation costs by method of transport × emissions coefficient (per unit emissions database for calculating organizational greenhouse gas emissions, etc., arising from supply chains (Ver. 3.4) (Ministry of the Environment and Ministry of the Economy, Trade and Industry))] (Includes estimates of transportation costs for Group companies) Group companies in Japan and overseas all covered.
	Employee Commuting	CO_2 emissions = Σ[amount spent on commuting allowance × emissions coefficient (per unit emissions database for calculating organizational greenhouse gas emissions, etc., arising from supply chains (Ver. 3.4) (Ministry of the Environment and Ministry of the Economy, Trade and Industry)] (Calculated based on the assumption that all commuting is done by passenger train) (Group company commuting costs include estimates) Group companies in Japan and overseas all covered.
	Processing of Sold Products	CO_2 emissions = Σ[production volume of relevant products × emission coefficient at the time of processing the relevant products (IDEA v.3.3)] Covers products for the automotive industry by Group companies in Japan and overseas.
	Use of Sold Products	CO_2 emissions = Σ[number of structures sold as housing during the relevant fiscal year × amount of electricity purchased from power companies throughout a year × 60 years × electricity-based emissions coefficient], including the effect of the solar power generation system. The amount of electricity purchased from power companies throughout a year is based on the Electricity Income and Expenditure Home Survey of Houses with Built-In Solar Power Generation Systems (2023). The electricity-based emissions coefficient employed is the emissions coefficient from the FY2023 report produced by the Act on Promotion of Global Warming Countermeasures reporting system (alternate value), equal to 0.441 metric tons-CO_2 /MWh. The calculation is performed under the assumption that housing will be used for 60 years. Housing sold within Japan for the fiscal year relevant to the calculation is covered. Up to and including FY2017, the Group calculated the amount of greenhouse gas reduction achieved through solar power generation as the amount of reduced environmental impact. From FY2018, however, we are also calculating the effect of reduction in energy used in residences built to zero energy house (ZEH) specifications.

Indicator	Calculation Method	
Greenhouse Gas Emissions throughout Our Supply Chain	End-of-life Treatment of Sold Products	CO_2 emissions = ∑[amount of major raw materials used in the products sold during the relevant fiscal year × emission coefficient (IDEA v.3.3)] The calculation assumes that products sold during a given fiscal year are disposed of during the same fiscal year.
	Leased Assets (Downstream)	Calculated for construction work carried out using machinery leased by SEKISUI CHEMICAL. CO_2 emissions = ∑[relevant installation units × fuel usage per unit × CO_2 emissions coefficient (emissions coefficient determined based on a system of greenhouse gas emission calculations, reports, and official disclosures)]

Realizing Resource Recycling

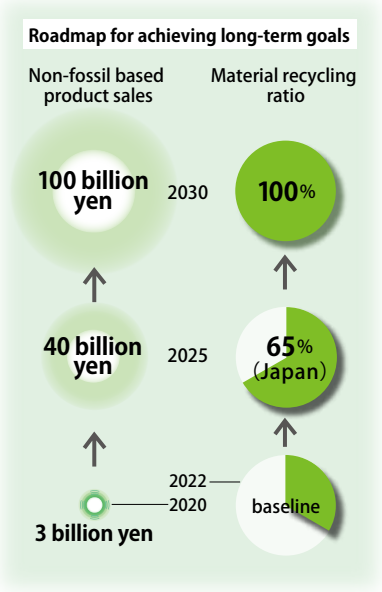
Strategy (Stance, Approach, Risks and Opportunities)

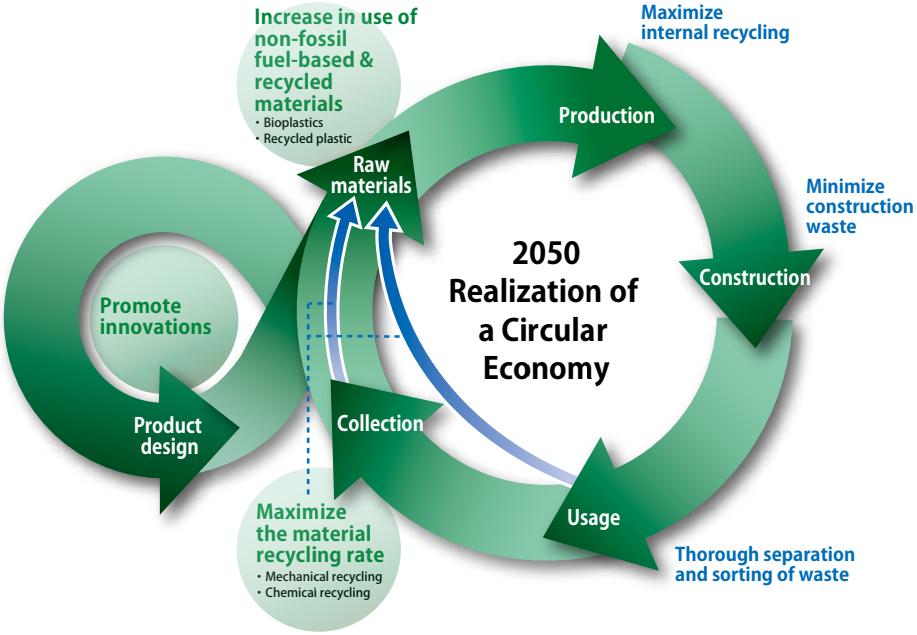
Basic Concept

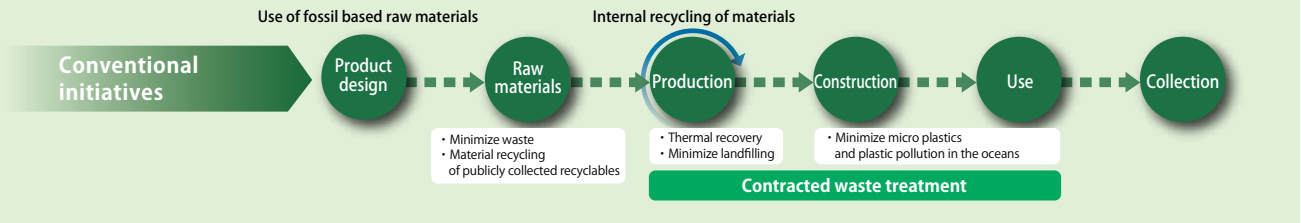
Establishment of the Resource Recycling Policy

SEKISUI CHEMICAL Group aims to help create a sustainable society through the realization of a circular economy by 2050. To achieve this long-term goal, we formulated a resource recycling policy and strategy in fiscal 2020.
In partnership with the supply chain, we are working to minimize the use of virgin raw materials derived from fossil fuels. At the same time, we are promoting resource recycling and aim to realize a circular economy through our businesses. To this end, we will strengthen our efforts based on the following three points, which comprise our Group Policy.

Please refer to Resource Recycling Policy on P.351.







Promoting Efforts Based on the Resource Recycling Policy

Under Vision 2030, SEKISUI CHEMICAL Group is strategically expanding its four business domains. By doubling our sales volume through solutions to social issues, we aim to realize a sustainable society and achieve corporate growth. We consider plastics to be an important raw material in these business domains. In order to reduce the amount of waste generated in the production process, we have continued our efforts to reduce the amount of waste per unit of production every year. In specific terms, we carry out internal recycling by returning wood scraps and other materials generated to raw materials for reuse. In addition, when disposing of materials as waste, we have promoted reuse as recycled materials that contain energy.

Under the Resource Recycling Policy, released in fiscal 2021, we will expand the use of non-fossil-derived and recycled raw materials, such as biomass plastics, for plastic raw materials used. At the same time. we will continue to promote internal recycling in our production processes. We are endeavoring to minimize the amount of waste generated at construction sites. In addition, at the use and recovery stages, we will work on product design and supply chain initiatives to ensure thorough sorting and separation of waste materials. Through these means, we will make every effort to maximize the reuse of materials through mechanical and chemical recycling.

Based on results achieved ahead of schedule through initiatives up to fiscal 2022, the Group reviewed and re-established milestones for fiscal 2023 and 2025. Since fiscal 2023, we have accelerated our efforts to achieve the revised milestones.

We believe that innovation at the product design stage is important for driving the promotion of resource recycling throughout the product life cycle. By rethinking the design of new products and revising the processes for existing products, we are promoting initiatives for innovation that accelerates resource recycling.

Road Map for Long-term Goal Achievement

		2020-2022	By 2025	By 2030
Business strategy	Net sales of Products to Enhance Sustainability that contribute to resource circulation (Base year: 2020)	1.1 times	1.7 times	2 times or more
Raw material resource conversion	Net sales of products not derived from fossil fuels and using recycled materials	3 billion yen	40 billion yen	100 billion yen
Recycling waste products	Rates for recycling waste plastic into new materials	Analyze current conditions and set baselines	Japan 65%	100%

Plan to Accelerate the Recycling of Waste Plastics into Materials

Under the current Medium-term Management Plan, we have set the material recycling rate (MR rate) for waste plastics as one of the Group's environmental KPIs. The Group is applying this KPI under the following Plan while taking into consideration such factors as the high level of technological hurdles and timing of realization.

Plan for Recycling Waste Plastic into New Materials

Phase	Initiatives Implemented	2023	2024	2025	2028	2030
【Phase1】 Use of existing technologies	•Review of recycler suitability			Continued expansion of content		
	•Thorough separation of blended materials					
	•Improved (1) storage and (2) transportation efficiency due to compression/grinding					
【Phase2】 Introduction of new material recycling technologies	Development of new material recycling technologies 1. Identification and application of technologies according to difficult-to-recycle material targets 2. Establishment of operating methods			Establishment of material recycling methods for composite materials and other difficult-to-recycle materials		
【Phase3】 Completion utilizing chemical recycling technologies	Use of Biorefinery(BR) and other chemical recycling technologies Acceleration through collaboration with other companies				Enable recycling up to miscellaneous and other waste	

●:Increase in the material recycling rate to start taking effect (expected)

Risks and Opportunities Posed by Resource Recycling on Our Businesses

Opportunity losses caused by changes in consumer behavior and preferences

We analyze and assess the risks and opportunities of resource recycling on the Group's business in the same four scenarios as the climate change scenario analysis conducted based on the TCFD Guide.
We are considering measures to mitigate the identified risks. With regard to opportunities, we are also considering the creation of new businesses through the development of products and services. When looking at the risks and opportunities of resource recycling on the Group's business, we take into consideration resource conversion, resource recycling, and the transition and physical risks posed by innovation to accelerate them. In particular, and from a resource recycling perspective, an analysis was conducted with a focus on the importance of services that connect the supply chain and the products that utilize those services in order to turn risks into opportunities.
The following are certain examples.

1. The Plastic Molding and Processing Business
   In the Innovative Mobility, Advanced Lifeline, and other Plastic Molding and Processing Business fields, we recognize the risk of technological transition, which not only involves short-term costs, but also medium- to long-term investments in equipment installation and technological research when promoting the recycling of waste generated in the manufacturing process and resources in products after use. On the other hand, if we build products based on the assumption that resources will be recycled through upfront investment or a recycling system for products, we believe that this will be a point of differentiation from other companies' products and will lead to opportunities to expand our business.
2. Town and Community Development Business
   In the Town and Community Development Business, there is the transition risk of losing market opportunities should we fail to respond to growing customer demand for products made from recycled and non-fossil-derived materials as a result of a certain level of environmental consideration given to raw materials and materials used, as in the case of LEED certification pioneered in the U.S. On the other hand, we believe that by taking the lead when considering urban development projects that take into consideration the conversion of raw materials, the potential exists to provide communities with high real estate value, which in turn could result in opportunities to expand our business.

Addressing Plastic Waste Issues

In recent years, plastic waste, represented by marine plastic waste, has become a major environmental issue. The Group does not manufacture or sell primary microplastics where use presupposes dissolution. However, we recognize that plastic products and plastic materials contained in products that are used or disposed after use may deteriorate in the natural environment and become microscopic if not properly treated.

Employee training

The Group promotes employee training as well as environmental and social contribution activities as a part of efforts to develop human resources with considerable ability in resolving social issues. Human resources with this ability can correctly recognize such problems as plastic waste in both the products they produce and the processes they manufacture, and are able to take appropriate remedial action.

Contributing to social change

We recognize that the proper use and disposal of plastics requires the construction of a social system as well as a shift in employee awareness based on education and training. The Group is therefore engaged in various collaborations with industry, government, and academia.

For example, we are participating in the Clean Ocean Materials Alliance (CLOMA), a collaborative initiative between companies organized by Japan's Ministry of Economy, Trade and Industry. For a fundamental solution, we are working on the common issues necessary for the social implementation of resource recycling schemes with the aim of realizing a circular economy.

Creating and expanding the use of products, technologies, and services that contribute to the realization of a recycling-based society and a circular economy

SEKISUI CHEMICAL Group has developed a technology to convert combustible waste into gas and then convert that gas to ethanol, a raw material for plastics, by means of a microbial catalyst. A one-tenth commercial scale (processing capacity of approximately 20 tons/day) demonstration plant has been constructed in Kuji City, Iwate Prefecture, and is currently in operation.

Promoting recycling into materials

SEKISUI CHEMICAL Group has exchanged manifests with waste disposal companies to ensure the proper disposal of waste generated by its own production activities.

In fiscal 2020 we formulated a resource recycling policy and strategy, and are promoting material recycling. Given there are various methods of material recycling, we will strive to improve the material recycling rate while paying attention to the quality of recycling and GHG emissions.

Governance

Promotion System for Resource Recycling Issues

As far as resource recycling issues are concerned, including resource conversion, the recycling of waste, and external environmental issues that may constitute management risks, steps are taken to ascertain the magnitude of each risk to consider appropriate countermeasures, and to carry out the necessary decision-making process under the supervision of the Board of Directors.

In similar fashion to other environmental issues, our supervisory and executive systems for reducing the Group's impact resource recycling issues and expanding its contribution to the resolution of issues are based on its Environmental Management Promotion System. (For details see P.51)

The Board of Directors has made the following final decisions on resource recycling issues.

・Policies and strategies to mitigate the impact of resource recycling and other environmental issues and to expand contributions to solving these issues.

・The organization's plan to achieve a sustainable society, including the transition to a circular economy (transition plan).

・Assessment of the impact of environmental issues, including resource recycling on management and policies for addressing those issues.

Turning to major matters discussed and determined by the Board of Directors, the Sustainability Committee deliberates on policies and strategies in advance, based on conditions surrounding the Group as a whole regarding such environmental issues as resource recycling that have been discusses and summarized by the Environmental Subcommittee. In addition, based on the policies, strategies, and transition plans finalized by the Board of Directors, the Environmental Subcommittee discusses specific measures and goal setting while managing progress.

Risk Management

Risk Management

As far as risk management is concerned, we have established an ERM system that in addition to identifying Group-wide major risks, shares and manages these risks within the Group. Risks related to such environmental issues as resource recycling are also assessed in an integrated manner, together with other risks that are expected to have a significant impact on management. Risks that effect the Group as a whole and each organization, including resource recycling are shared and deliberated at Board of Directors, Sustainability Committee, Management meetings, and subcommittee meetings.

Indicators and Targets

Resource Recycling Targets

Aim: Promote resource recycling

Indicator 1: Reduction rate of the amount of waste generated per unit of production

Current Medium-term Management Plan Target (final year: FY2025) Per unit of production -3% (compared with FY2022)
FY2023 Results +0.3% (compared with FY2022)
2030 Target —
2050 Target Achieve a circular economy

Indicator 2: Recycling rate for waste plastic materials

Current Medium-term Management Plan Target (final year: FY2025) Japan: 65% Overseas: Base +5%
FY2023 Results 60.7% (Japan)
2030 Target 100%

Indicator 3: Reduction rate of copier paper use per unit of people

Current Medium-term Management Plan Target (final year: FY2025)) -3% (compared with FY2022)
FY2023 Results -6.6% (compared with FY2022)
2030 Target —
2050 Target Achieve a circular economy

Indicator 4. Reduction rate of the amount of waste generated per building at new housing construction sites

Current Medium-term Management Plan Target (final year: FY2025) -12% (compared with FY2022)
FY2023 Results -5.2% (compared with FY2022)
2030 Target —
2050 Target Achieve a circular economy

Major Initiatives

Waste Plastic Initiatives

Promotion Material Recycling

SEKISUI CHEMICAL Group defines mechanical and chemical recycling as material recycling, and is working to maximize material recycling using existing technologies. In addition to promoting the recycling of these materials as in-house raw materials, we are also advancing the selection of treatment methods with an emphasis on material recycling.
As far as waste that is difficult to manage using material recycling is concerned, we are also working to establish new treatment methods.

Use of Quality Evaluations to Improve the Material Recycling Rate

In order to mitigate and resolve risks not only with regard to resource recycling issues, but also other environmental issues, and to ensure international competitiveness through the sustainable development of products and businesses, it is vital that the Group promotes the use of plastic as a material, while also identifying the accelerated use of recycling methods. Working also to identify material recycling technologies that should be prioritized and to promote higher quality recycling, we have clarified our stance toward recycling and are determining the initiatives to be taken based on the following three assessment criteria.

[Stance Toward Recycling]
- Minimum resource consumption
- Minimal GHG emissions during the process of reuse
- Expansion of waste recycling through innovation

[Evaluation Scale]
① Recycling properties
② Amount of CO_2 emission reduction through the use of waste plastics
③ Degree of contribution to the environment (handling of difficult-to-recycle materials, etc.)

① In terms of recyclability, there are various methods of material recycling (e.g., horizontal recycling of plastics, cascade recycling, use as other functional materials, etc.). Accordingly, the Group evaluates the recycling properties that it aims for.
② In terms of reducing CO_2 emissions, we evaluate the positive impact of material recycling on climatic change, and ensure there is no negative impact.
③ In terms of the degree of contribution to the environment, we evaluate the social significance and degree of environmental contribution of processing difficult-to-recycle materials*.

* Difficult-to-recycle materials: Materials that are currently difficult to dispose of and can only be thermally recycled or landfilled

Accelerating Efforts through Internal Measures

SEKISUI CHEMICAL Group has initiated the following measures and mechanisms to realize its plan to turn waste plastic into materials.

1. Use of resource recycling support measures
   In order to promote the recycling of waste plastics into materials using high-quality recycling methods, we have considered and are implementing resource recycling support measures that provide financial support for initiatives and equipment according to the amount of resources recycled into materials from fiscal 2024.
2. Establishment of an environment in which to consider and conduct research on plastic resource recycling
   Urban Infrastructure & Environmental Products Company , which engages in business using highly durable plastic products such as infrastructure, has established a resource recycling working group to consider the issue of turning waste plastic into materials. The goal is to accelerate the resource recycling of waste plastic at business sites and research institutes, and to promote the development and evaluation of new recycling technologies for difficult-to-recycle materials. Once a quarter, we hold a plastic resources recycling review meeting to share progress on initiatives and to horizontally deploy good practices.

Promoting the Reduction of Packaging Materials

SEKISUI CHEMICAL Group has long engaged in efforts to reduce the volume of packaging materials, employ reusable boxes*, and eliminate packaging.
We have been actively working to reduce packaging since the early 2000s, and have achieved certain results. We will continue to undertake these activities and strive to reduce packaging material waste.
* Boxes that can be used multiple times to ship materials, parts, and products between locations.

Promoting Construction Material Recycling

The entire housing industry is engaged in the efficient use and recycling of construction materials. As a member of this industry, SEKISUI CHEMICAL Group is reducing the amount of construction waste produced when building houses and promoting recycling.

Converting External Wall Panel Scrap into Raw Material for Products

At the Gunma and Mizukuchi business sites of Sekisui Board Co., Ltd., which manufacture exterior wall panels for Sekisui Heim, scraps are generated during the production process. In addition to reducing the amount of scraps produced as much as possible, these sites are also promoting in-house material recycling.
In addition to reducing the amount of scraps produced as much as possible, these sites are also promoting in-house material recycling.
Specifically, wood chips and cement are used as recycled raw materials by crushing and sorting the scraps generated in the process of making exterior wall panel products.

Contributing to Resource Recycling through Business

Without realizing a circular economy in 2050, there can be no decarbonized society. Based on its resource recycling strategy and roadmap, SEKISUI CHEMICAL Group is looking to convert plastic raw materials to non-fossil fuel-derived or recyclable raw materials, and is reviewing product designs that contribute to the recycling of existing products. We will promote the creation and market expansion of Products to Enhance Sustainability in an effort to accelerate contributions through our businesses.

[Examples of Products That Contribute to Resource Recycling]

<Housing> Remodeling menus to extend the life of products and services when reusing homes

Example) Be-Heim, a service that allows a customer to pass on a home to another customers and continue to live in it with peace of mind.

<Building and Civil Engineering> Products that use recycled plastic as a raw material

Example) Products that enable temporary storage of rainwater in the event of a torrential downpour (rainwater storage material Cross-Wave)

Infrastructure with resource recycling properties (foamed three-layer pipes)

<Innovative Mobility> Buy-back system that collects customer scraps for reuse as raw materials (SEKISUI KYDEX product)

[Initiatives Undertaken in Collaboration with Other Companies]

Initiatives for the social implementation of Biorefinery (BR) technologies

We believe that in order to recycle resources, it is essential to collaborate with companies and organizations that are responsible for each process of the product's life cycle.

Through a joint development project with U.S.-based venture company Lanzatec, NZ, Inc., we have established a technology to convert combustible waste into ethanol using a microbial catalyst.

In order to validate the viability and commercial application of this chemical recycling technology, which is essential to resource recycling, SEKISUI CHEMICAL, INCJ, Ltd., and SEKISUI BIO REFINERY CO., Ltd. are operating a demonstration plant approximately 1/10th the size of a commercial plant in Kuji City, Iwate Prefecture. Plans are in place for the ethanol produced at the plant to be recycled as a raw material for plastics in collaboration with SUMITOMO CHEMICAL CO., LTD.

Initiative Collaboration

As far as the issue of resource recycling is concerned, we are collaborating with various entities, including other companies and organizations, to achieve our long-term goals, thereby expanding our contributions toward the resolution of issues and raising the potential to achieve milestones ahead of schedule. Based on the aforementioned, the Group participates in and registers with various initiatives and organizations, including forums. When participating or registering, we confirm that founding principles, the direction of initiatives, and goals are consistent with the Group.
Our continued participation is determined on an annual basis to ensure that there are no discrepancies in the direction in which we are heading. In the event that the direction differs, steps will be taken to withdraw from the initiative, forum, or other organization.

[Initiatives, Forums, etc. in which the Group Participates or has Registered]

Clean Ocean Materials Alliance (CLOMA)

Organizer ..... Japan's Ministry of Economy, Trade and Industry, Ministry of the Environment, Ministry of Agriculture, Forestry and Fisheries

Significance/Objectives..... To solve the issue of marine plastic waste, which is a global environmental issue

Activities ..... Aiming for the more sustainable use of plastic products, and the development, introduction and popularization of innovative substitutes that will lead to a reduction of plastic waste.

Our role ..... The Company chairs Working Group 3 (WG3), one of five key action working groups that promote activities aimed at plastic recycling through corporate collaboration. WG3 focuses on the development and social implementation of chemical recycling technologies as well as efforts to identify and clear issues in connection with the promotion of related companies.
In fiscal 2023, we formulated and published a position paper on chemical recycling technology. In the future, we plan to use this position paper to drive dialogue with various government agencies, municipalities, brand owners, consumers, and other stakeholders in order to resolve various issues.

Japan Partnership for Circular Economy (J4CE)

Organizer ..... Japan's Ministry of the Environment, Ministry of Economy, Trade and Industry, and Japan Business Federation.

Significance/Objectives..... To further foster understanding and promote efforts by a wide range of responsible parties, including domestic companies, as the trend toward a circular economy accelerates on a worldwide basis.

Activities ..... Introduction of case studies through case study brochures, dissemination of information for the general public, and support for inter-company collaboration.

Our role ..... To accelerate the creation and social implementation of new recycling businesses by disseminating case studies and providing feedback on internal technologies and measures based on an understanding of the latest information.

Japan Circular Economy Partnership (J-CEP)

Significance/Objectives..... To create a society where things, information, and feelings revolve around each other by considering everything as a resource and designing relationships.

Activities ..... Engaging in (1) the optimal recycling of resources in Japan and (2) the creation of businesses that contribute to the realization of a sustainable society.

Our role ..... As a member of a consortium of companies, we contribute to the realization of a circular economy by disseminating case studies and providing technical cooperation.

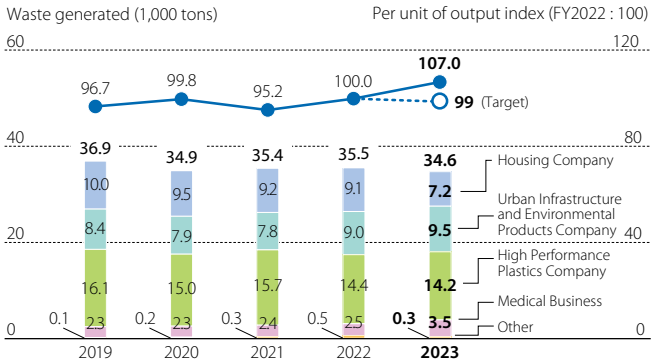
Performance Data ☑

Waste Generated by Production Sites

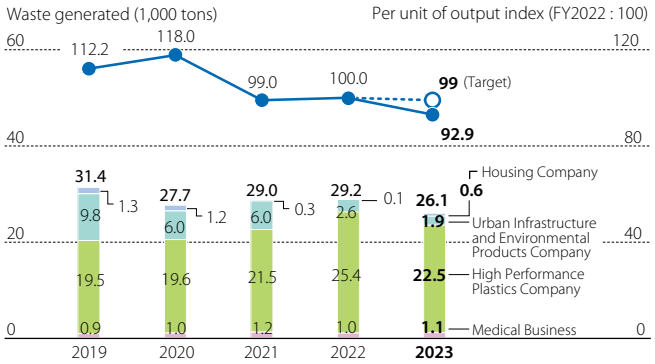
Note 1: Some past figures have been revised due to improvements in precision.

Note 2: In line with a change in the control of certain businesses in the UIEP and HPP companies implemented from October 2022, net sales for FY2022 of both companies are collated as if the change in control had been initiated from the beginning of FY2022.

Waste Generated by Production Sites, per Unit of Production (Index) / Japan



Waste Generated by Production Sites, per Unit of Production (Index) / Overseas



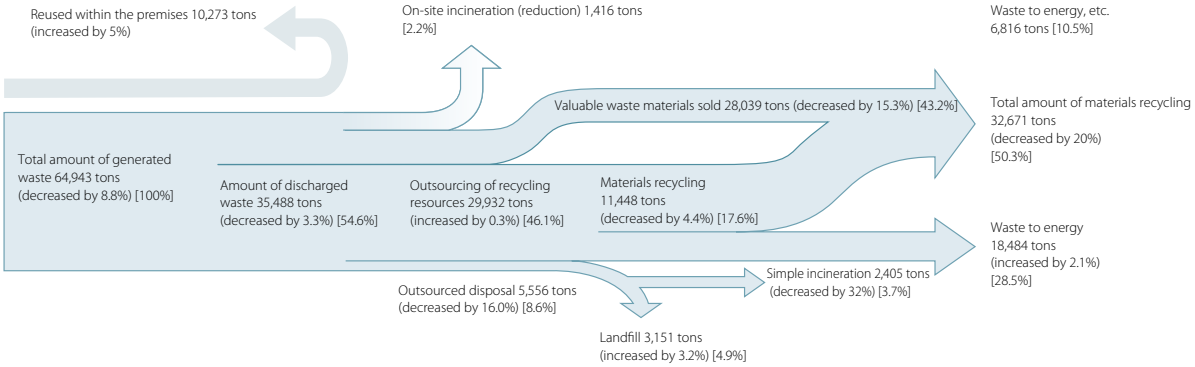
Note: Amount of waste generated: Only focusing on waste responsible by the production site is considered. Prototypes and inventory disposal due to the responsibility of the Divisional Companies are not included.

Production Site Waste Generation and Disposal / Japan and Overseas

(tons)

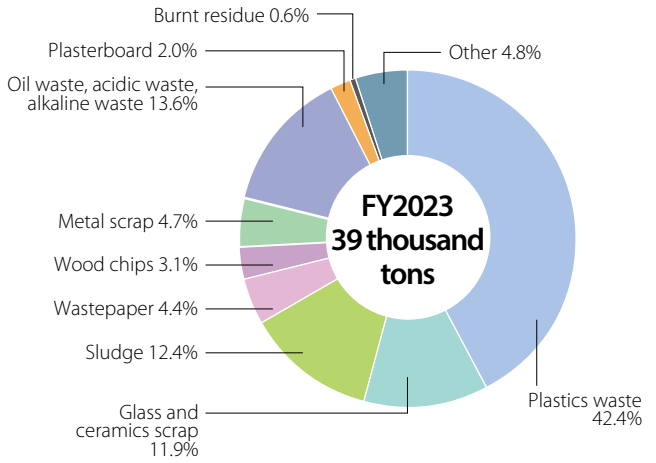
	Total Waste	Recycled Waste	Unrecycled Waste
FY2018	76,249	65,525	10,724
FY2019	70,947	61,928	9,020
FY2020	67,555	58,435	9,120
FY2021	68,939	63,243	5,696
FY2022	71,179	63,139	8,040
FY2023	64,943	57,971	6,972

FY2023 Annual Production Site Waste Generation and Disposal / Japan and Overseas

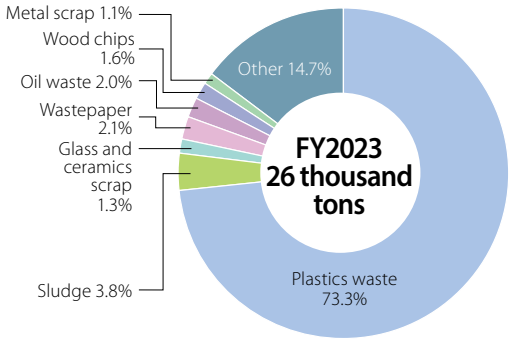


Note: Change over previous year is in ( ) and proportion of total waste generation is in [ ].

Breakdown of Waste Generated at Production Sites / Japan

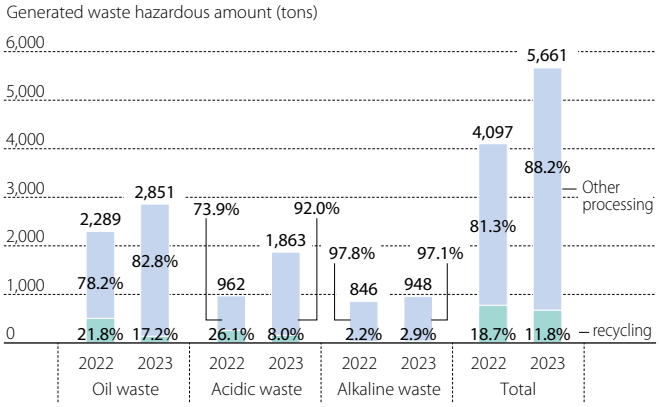


Breakdown of Waste Generated at Production Sites / Overseas



Index	Calculation Method
Generated Waste Amount	Amount of waste generated = Amount of waste collection outsourced + Amount recycled (incinerated waste to energy + recycled back to materials + recyclable waste sold) + Amount incinerated in-house; the items below are excluded: Waste generated by demolition of customers' old houses, remains of construction work at our sites, disposal of machinery, office equipment, etc., medical waste from medical treatment in in-house clinics

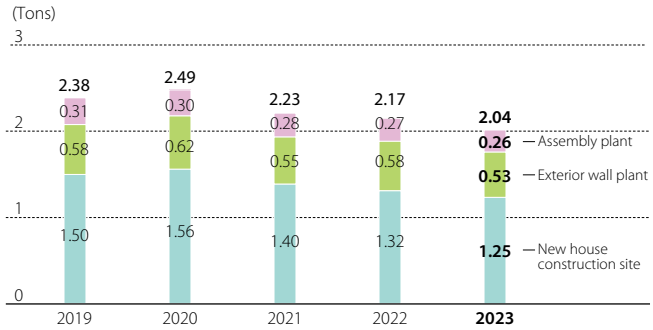
Amount of Hazardous Waste Generated / Recycling rate (Japan and Overseas) FY2023



Index	Calculation Method
Amount of Hazardous Waste Generated and Recycling Rate	Recycling rate = Amount of recycled waste / Amount of hazardous waste generated Hazardous substance: Oil waste, acidic waste, alkaline waste Recycling: Material recycling

Waste Generated on Construction Sites of New Housing

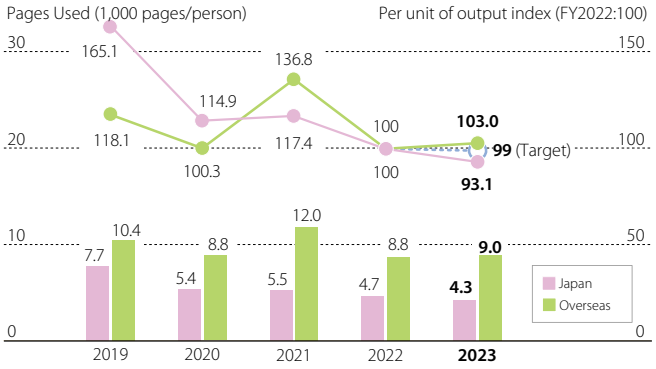
Amount of Waste Generated on Construction Sites of New Housing (per Building) / Japan



Index	Calculation Method
Amount of waste generated per building at construction sites	Amount of waste generated per building at new housing construction sites = Total amount of waste generated at new housing construction sites / Number of new houses sold Note: Reference: Amount of waste generated during new housing construction = Amount of waste generated during construction of outer walls (at factories) + Amount of waste generated during assembly (at factories) + Amount of waste generated at new housing construction sites Amount of waste generated per building during new housing construction = Total amount of waste generated during new housing construction / Number of new houses sold Scope: Housing business in Japan

Waste Generated in Offices

Amount of Copy Paper Used at Offices per Person (Index)



Note: Some past figures have been revised due to improvements in precision.

Indicator	Calculation Method
Amount of Copy Paper Used at Offices per Unit of Output	Amount of Copy Paper Used at Offices per Unit of Output = Amount of Copy Paper Used at Offices / Office Personnel

Disclosure of the Recycling Status of Waste Plastics in accordance with the Act on Promotion of Resource Circulation for Plastics.

(Status of FY2023 Emissions and Recycling (Japan))

	Disclosure according to the Act on Promotion of Resource Circulation for Plastics								Recycling as the Management Indicator for SEKISUI CHEMICAL Group (including waste sold as raw materials)							
	Waste emissions (ton)		Rate of recycling (%)		Rate of thermal recycling(%)		Rate of recycling (%)		Waste emissions (ton)		Rate of recycling (%)		Rate of thermal recycling(%)		Rate of recycling (%)	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
SEKISUI CHEMICAL CO., LTD.	4,487	4,417	9.5	8.1	83.4	85.0	92.9	93.1	9,995	9,946	58.4	59.2	37.5	37.7	95.8	96.9
Hokkaido Sekisui Heim Industry Co., Ltd.	48	31	0.0	0.0	100.0	100.0	100.0	100.0	48	31	0.0	0.0	100.0	100.0	100.0	100.0
Tohoku Sekisui Heim Industry Co., Ltd.	21	17	0.0	0.0	100.0	100.0	100.0	100.0	28	31	24.4	45.1	75.6	54.9	100.0	100.0
Sekisui Heim Industry Co., Ltd.	358	316	2.5	1.8	97.5	97.3	100.0	99.2	486	430	17.0	16.2	83.0	83.2	100.0	99.4
Chushikoku Sekisui Heim Industry Co., Ltd.	80	54	0.0	0.0	100.0	100.0	100.0	100.0	84	57	5.4	5.1	94.6	94.9	100.0	100.0
Kyushu Sekisui Heim Industry Co., Ltd.	75	43	0.0	0.0	100.0	100.0	100.0	100.0	75	50	0.0	13.9	100.0	86.1	100.0	100.0
Sekisui Board Co., Ltd.	67	96	0.0	24.2	100.0	75.8	100.0	100.0	67	96	0.0	24.2	100.0	75.8	100.0	100.0
Higashinihon Sekisui Industry Co., Ltd.	2	1	0.0	0.0	100.0	0.0	100.0	0.0	10	9	84.5	94.1	15.5	0.0	100.0	94.1
Nishinihon Sekisui Industry Co., Ltd.	153	181	0.0	0.4	100.0	99.6	100.0	100.0	157	181	2.2	0.4	97.8	99.6	100.0	100.0
Sekisui Chemical Hokkaido Co., Ltd.	277	285	68.1	74.5	31.9	25.5	100.0	100.0	370	309	76.0	76.5	24.0	23.5	100.0	100.0
Chiba Sekisui Industry Co., Ltd.	128	98	16.7	37.7	68.9	15.9	85.6	53.6	166	153	36.0	60.1	52.9	10.2	88.9	70.2
Toto Sekisui Co., Ltd.	284	311	0.0	0.0	100.0	92.0	100.0	92.0	758	806	62.5	61.5	37.5	35.4	100.0	96.9
Yamanashi Sekisui Co., Ltd.	115	158	78.7	86.5	21.3	13.5	100.0	100.0	389	464	93.7	95.4	6.3	4.6	100.0	100.0
Nara Sekisui Co., Ltd.	247	192	1.0	18.6	6.8	35.8	7.8	54.4	266	220	8.0	28.8	6.3	31.3	14.3	60.1
Shikoku Sekisui Co., Ltd.	300	14	0.0	0.0	95.0	100.0	95.0	100.0	685	307	56.3	95.3	41.6	4.7	97.8	100.0
Kyushu Sekisui Industry Co., Ltd.	96	107	65.0	70.1	35.0	29.9	100.0	100.0	840	507	96.0	93.7	4.0	6.3	100.0	100.0
Sekisui Techno Molding Co., Ltd.	73	71	3.0	42.5	53.3	56.1	56.3	98.6	469	598	78.8	87.5	14.5	12.4	93.2	99.8
Sekisui Fuller Company, Ltd.	94	90	0.0	0.0	100.0	84.9	100.0	84.9	136	145	30.8	38.1	69.2	52.6	100.0	90.7
SEKISUI MEDICAL CO., LTD.	66	74	0.0	0.6	98.6	99.2	98.6	99.8	66	75	0.0	2.1	98.6	97.7	98.6	99.8
Sekisui Nano Coat Technology Co., Ltd.	79	88	0.0	0.0	96.2	100.0	96.2	100.0	79	88	0.0	0.0	96.2	100.0	96.2	100.0
Tokuyama Sekisui Industry Co., Ltd.	252	120	0.0	0.0	55.6	89.6	55.6	89.6	427	464	41.0	74.1	32.8	23.2	73.8	97.3
Sekisui Polymatech Co., Ltd.	230	229	0.0	0.0	0.0	98.7	0.0	98.7	230	229	0.0	0.0	0.0	98.7	0.0	98.7
Sekisui SoflanWiz Co., Ltd.	70	50	0.0	0.0	54.5	11.4	54.5	11.4	70	50	0.0	0.0	54.5	11.4	54.5	11.4
Sekisui Seikei, Ltd.	188	152	15.3	11.7	84.7	80.9	100.0	92.6	1,201	986	86.7	86.4	13.3	12.4	100.0	98.9
Sekisui LB Tec Co., Ltd.	100	58	8.9	13.1	0.0	0.0	8.9	13.1	100	58	8.9	13.1	0.0	0.0	8.9	13.1
Research Laboratory of Plastics Technology Co., Ltd.	7	6	0.0	0.0	0.0	0.0	0.0	0.0	7	6	0.0	0.0	0.0	0.0	0.0	0.0
Group Total	7,897	7,259	10.7	13.0	75.6	78.7	86.3	91.6	17,208	16,297	57.9	60.7	35.2	35.6	93.1	96.3

Rate of recycling: Material recycling and Chemical recycling

Rate of recycling (broad): Material recycling, chemical recycling, and thermal recycling

Note: Some past figures have been revised due to improvements in precision

Reducing Water-related Risks

Strategy (Stance, Approach, Risks and Opportunities)

Basic Concept

Minimizing Water-related Risks and Solving Water-related Issues

SEKISUI CHEMICAL Group has identified realizing society with abundant access to clean water as one of its goals to realize an earth with maintained biodiversity, a major target of its SEKISUI Environment Sustainability Vision 2050. The Group has outlined the following two-tier vision in its efforts to realize this goal.

<Vision>

1. Minimize water-related risks at SEKISUI CHEMICAL Group
   We will minimize the water-related risks to which the Group is exposed in order to maintain sustainable operations. At the same time, we will minimize the water-related risks that the Group poses in order to preserve biodiversity.
2. Contributing to the resolution of local water-related issues
   We will contribute to the resolution of local water-related issues through Products to Enhance Sustainability and collaboration with watershed stakeholders, aiming not only to minimize water-related risks, but also to provide positive returns to natural capital.

Please refer to Water Resources Policy on P.352

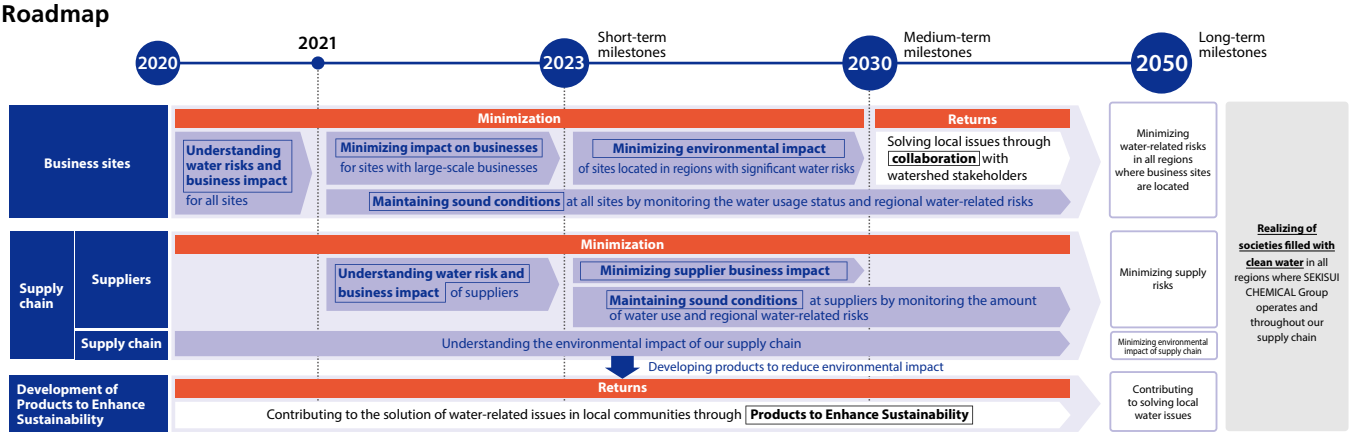
Roadmap to Realize Societies with Abundant Access to Clean Water

SEKISUI CHEMICAL Group has set specific measures and milestones by backcasting from the goal of realizing societies with abundant access to clean water, and is moving forward with initiatives.

- We will evaluate local water-related risks and their impact on business, and select business sites and suppliers that have a significant business impact, as well as sites with significant local water-related risks.
- For business sites with a significant impact on business, we will initiate steps to minimize this impact by 2023 in line with the risks at individual sites.
- For suppliers with a significant impact on business, we will minimize risks by 2030 by reviewing suppliers and through other means.
- For business sites with significant local water-related risks, we will minimize their environmental impact by 2030.
- We will put in place monitoring guidelines and oversee all sites to assess whether there is an increase in business impact or environmental impact.

In addition, we will continue to promote the development of Products to Enhance Sustainability to accelerate returns to natural capital, including the conservation of water resources. This in turn will help solve local water-related issues and minimize the environmental impact across the supply chain.
Moreover, we will work to help solve local water-related issues by building a collaborative system with watershed stakeholders from 2030 to 2050 as an initiative undertaken at business sites around the world.

Roadmap



As far as the Group's water-related risks are concerned, we have drawn up four social scenarios that are based on two presupposed axes. One axis focuses on the decentralization of social systems in rural areas against concentration in large cities. The other axis focuses on mitigation as opposed to the acceleration of climate change, with temperatures of not more than 1.5˚C and not less than 4˚Cs. We have examined the impact of water-related risks aspects on each social scenario and analyzed the risks and opportunities that arise under these impacts.

Risks and Opportunities Posed by Water Resource Issues to Our Businesses

SEKISUI CHEMICAL Group assesses the impact that water resource issues have on companies as well as the scale of impact that companies have on water resources, determines the importance of risks, and sets priorities to be addresses. For risks and opportunities related to specific water resource issues, the scale, scope of impact, and other items are identified through scenario analyses based on the TCFD Guide.

The following are certain examples.

1. Suppliers
   We are aware of the high operational risks of our suppliers' plants and our own plants that are engaged in manufacturing activities in areas where water-related disasters are more frequent or severe due to climate change. We believe that the opportunity exists to expand the need for products that can reduce such operational risks, including those that can temporarily store and gradually release rainwater to reduce the probability of rivers bursting their banks or the flooding of and damage to houses above floor level.

2. The Plastic Molding and Processing Business
   As far as businesses related to plastic molding and processing are concerned, depending on the conditions of river basins surrounding plants where production takes place, the possibility exists of an increase in the risk of water intake, which may result in an inability to secure an adequate water supply or an increased risk of wastewater discharge due to stricter laws and regulations. We believe that these risks can be mitigates by recognizing our dependence and impact on water resources in our operating areas, and by continuing to improve water recycling and the quality of wastewater beyond legal requirements. Moreover, we believe that opportunities exist to provide water purification equipment as well as water purification-related technologies and products that make this possible.

Governance

Promotion System for Water-related Risk Issues

As far as water-related risks that may pose a risk to management are concerned, steps are taken to ascertain the magnitude of each risk and to consider as well as implement appropriate countermeasures under the supervision of the Board of Directors. In similar fashion to other environmental issues, our supervisory and executive systems for reducing the Group's impact on water resources and water-related risks and expanding its contribution to the resolution of issues are based on the Environmental Management Promotion System. (For details see P.51).

The Board of Directors has made the following final decisions on water-related risk issues.

- Policies and strategies to mitigate dependence and impact on water resources and to increase contributions to resolving challenges.
- The organization's plan to realize societies with abundant access to clean water (transition plan).
- Assessment of the impact of water-related risks on management, and policies for addressing those issues.

Turning to major matters discussed and determined by the Board of Directors, the Sustainability Committee deliberates on policies and strategies in advance, based on conditions surrounding the Group as a whole regarding water-related risks that have been discussed and summarized by the Environmental Subcommittee. In addition, based on the policies, strategies, and transition plans finalized by the Board of Directors, the Environmental Subcommittee discusses specific measures and goal setting while managing progress.

Risk Management

As far as risk management is concerned, we have established an ERM system that in addition to identifying Group-wide major risks, shares and manages these risks within the Group. Water-related risks are also assessed in an integrated manner, together with other risks that are expected to have a significant impact on management. Risks that affect the Group as a whole and each organization, including Water -related risks, are shared and deliberated by at Board of Directors, Sustainability Committee, Management meetings, and subcommittee meetings.

Assessment of the Impact on Businesses from Water-related Risks

In fiscal 2020, the first year of the roadmap for 2050, we conducted assessments on the likely impact on business from water-related risks at all SEKISUI CHEMICAL Group production sites and research institutes.
Seven years have passed since the Group first conducted a water-related risk survey in 2013. Over this period, certain business sites have been newly established and others closed. Accordingly, steps were taken to again conduct a survey.
The purpose of the survey conducted in fiscal 2020 was to identify water-related issues in the areas in which each business site is located (assessment of external factors) as well as business sites that are heavily affected by water-related risks and those that have a major impact on the environment.
In identifying local water-related issues, we utilized assessment results drawn from Aqueduct Water Risk Atlas 3.0, a tool for assessing water-related risks in each region of the world, created by the World Resources Institute (WRI), an International Environmental NGO, as well as data on water use obtained through surveys of individual business sites. Based on this information, we undertook quantitative assessments of the business impact of water-related risks as well as the environmental impact of our business activities.
In undertaking assessments, we followed the standards recommended in the Guidelines for Setting Water Targets for Companies* issued by the CEO Water Mandate.
In fiscal 2023, we identified initiatives to minimize the impact on business in accordance with the specified water-related risks, set specific quantitative targets, and implemented initiatives at the five domestic and overseas sites that were evaluated as having a major impact on business.

* Setting Site Water Targets Informed By Catchment Context: A Guide For Companies

Indicators and Targets

Water-related Risk Targets

Aim: Preservation of water resources

Indicator 1. Reduction rate of water intake volume at production sites which use large quantities of water

Current Medium-term Management Plan Target (2023-2025) -10% (compared with FY2016)
FY2023 Results -8.5% (compared with FY2016)
2030 Target —
2050 Target —

Indicator 2. Reduction rate of total COD volume of river discharge water at production sites with high COD emission volumes

Medium-term Management Plan Target (2023-2025) -10% (compared with FY2016)
FY2023 Results -2.7% (compared with FY2016)
2030 Target —
2050 Target —

Major Initiatives

Impact of Water-Related Risks on the Supply Chain

The following two broad categories of suppliers that consume large quantities of fresh water during their manufacturing processes supply raw materials to SEKISUI CHEMICAL Group:
・Manufacturers of steel products used in the housing business, and
・Manufacturers of synthetic resins used in the plastics business.

In fiscal 2023, the Group took steps to confirm the policies, target setting, and initiatives on environmental issues, focusing on water-related risks and biodiversity, with respect to the second broad category, manufacturers of synthetic resin, and initiated efforts to determine what kind of risks are evident. In order to organize and reduce the risks identified, we recognize the critical need to think work together, and will consider implementing environmental due diligence in the future.
In addition, we take steps to continuously monitor all of these suppliers based on the SEKISUI Environmental Sustainability Index. In specific terms, we calculate and work to identify the environmental impact of pollutants contained in water drainage during the production of raw materials as the use of natural capital.
We also evaluate the degree of contribution to the environment by reducing the impact on the water environment in the Group's business activities and expanding products and services that contribute to the improvement and maintenance of the water environment as a return to natural capital*.
Since fiscal 2020, we have continued to gain a better understanding of water-related risks in the supply chain in which our products are involved, as well as the impact of reducing water-related risks through our products on returns to natural and social capital.

* For details of the Integrated SEKISUI Environment Sustainability Index see P.59.

Contributing to the Reduction of the Water-related Risks through Our Businesses

SEKISUI CHEMICAL Group is engaged in water infrastructure-related businesses, including water supply, storage, and drainage. Specifically, we provide technologies and products that help improve the quality of water drainage, such as water treatment systems and sewage pipes. We also contribute to society by building resilient and disaster-resistant water infrastructure.
For example, one of our products, Cross Wave*, is being marketed in Japan, India, China, Taiwan, and other ASEAN regions, to reduce water-related risks by helping to prevent chronic water shortages, promoting the greening of urban areas and recycling rainwater as a disaster prevention measure, and minimizing the damage caused by floods.
With the goal of not only reducing damage from the ever-increasing number of disasters brought on by climate change, but also promoting disaster mitigation in support of recovery efforts after a disaster, we are expanding the peace of mind we can offer to our housing customers by recommending, for example, the installation of a drinking water storage system that uses water infrastructure piping.

* Cross Wave: Rainwater storage system. A molded product made from recycled plastic that is used to store rainwater by burying it underground to form a space. It regulates the amount of rainwater flowing into sewer systems and rivers during heavy rains, making it possible to recycle rainwater.

Reducing Water-related Risks at Businesses Sites with High Water Intake and Discharge Volumes

SEKISUI CHEMICAL Group draws the water that it needs for its business from public water systems, industrial water systems, underground reservoirs, and surrounding rivers.
Recognizing that water is a valuable resource shared by the community, we are working to reuse and reduce the amount of water consumed through various means, including the recycling of cooling water.
In the past, we set targets for reducing water intake and the chemical oxygen demand (COD) of discharged water at all of our production sites, and undertook reduction activities. In the future, we will promote reduction activities targeting sites where the impact on business is especially large based on the state of water use at business sites and local water-related risk conditions.

Reducing of Water Intake and the Chemical Oxygen Demand (COD) of Discharged Water

In FY2023, water intake volume at production sites which use large quantities of water subject to reduction decreased 8.5% compared with the base FY2016 year. This reflects the installation of equipment that control the volume of direct water intake from rivers at production sites in Japan that consume large volumes of water and the effects of reduction endeavors.
The COD impact of river discharge water at production sites with large COD emission volumes decreased 2.7% compared with the base FY2016 year.

Examples of capex using the environmental contribution investment incentive program Base year: FY2016

	Site	Reduction strategy	Result (Expected)
Reduction in Water intake volume	Shiga-Minakuchi Plant	Introduction of filtration equipment allowing the reuse of recycled wastewater as a coolant. Strengthen management and promoted visualization of water use at the facility.	Reduction of 9%
	Sekisui Medical Co., Ltd. Iwate Plant	10% reduction through automation of industrial water intake adjustment	Reduction of 10%
Reduction in wastewater COD	Sekisui Nano Coat Technology Co., Ltd.	Improve treatment capacity by upgrading wastewater treatment facility	Reduction of 25%

Increase in Water Treatment Capacity

At SEKISUI NANO COAT TECHNOLOGY CO., LTD., highly concentrated COD wastewater is discharged from the degluing and refining processes of textile products. High-concentration COD wastewater is treated at our own wastewater treatment facilities before being discharged into the sea. In recent years, the volume of wastewater has declined due to changes in the business domain.
Owing to changes in the composition of the glue used in raw materials, the COD of wastewater is becoming difficult to eliminate. In response, we have made modifications to optimize the capacity of our wastewater treatment facilities.
Treatment capacity has improved by making the treatment process more compact according to the amount of decrease in wastewater and installing a process in which microorganisms suitable for the treatment of persistently decomposed COD particles are optimized.
In FY2023, the COD volume of water discharged decreased by 72% compared with FY2016.

Wastewater treatment facility of SEKISUI NANO COAT TECHNOLOGY CO., LTD.

Water Recycling

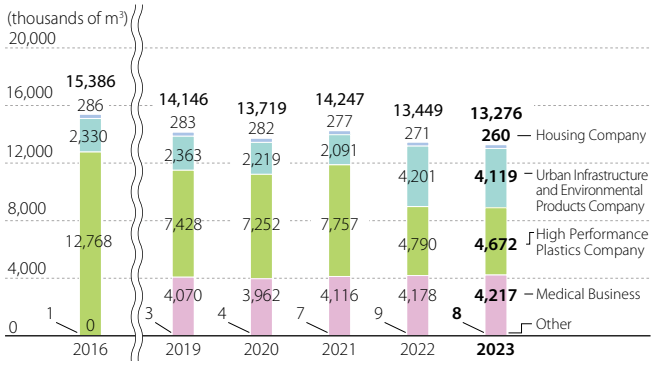
In order to reduce the amount of water it draws from water sources, SEKISUI CHEMICAL Group is promoting the reuse of water in its production processes. Each production plant of the UIEP and HPP companies recycles large volumes of cooling water for reuse in the production process. In FY2023, approximately 64 million cubic meters of recycled water was used at production sites in Japan and overseas.
In Hasuda City, where the Musashi Plant is located, wastewater purified in accordance with environmental standards is used as the main source of water for Lake Kurohama*, which is designated as a nature conservation area by Saitama Prefecture.

* For details regarding Lake Kurohama, see the following website.
https://www.sekisui.co.jp/musashi/eco/ (In Japanese only)

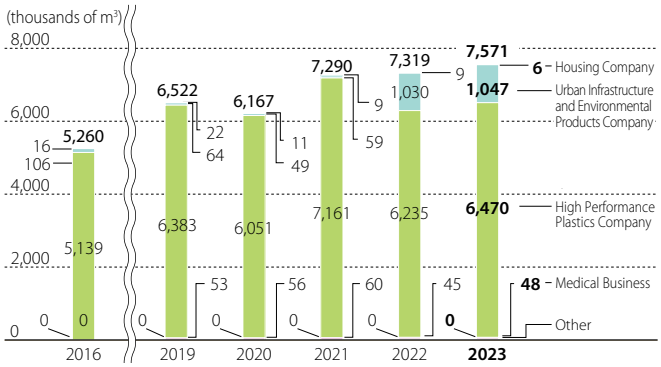
Performance Data ☑

Note: In line with a change in the control of certain businesses in the UIEP and HPP companies implemented from October 2022, the data for FY2022 of both companies is collated as if the change in control had been initiated from the beginning of FY2022.

Water Intake Volume at Production Sites / Japan

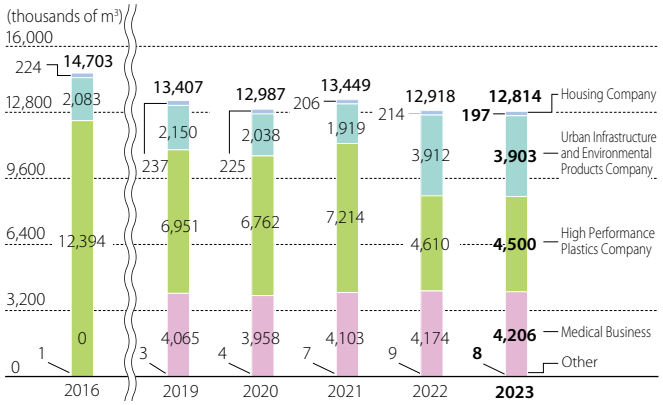


Water Intake Volume at Production Sites / Overseas

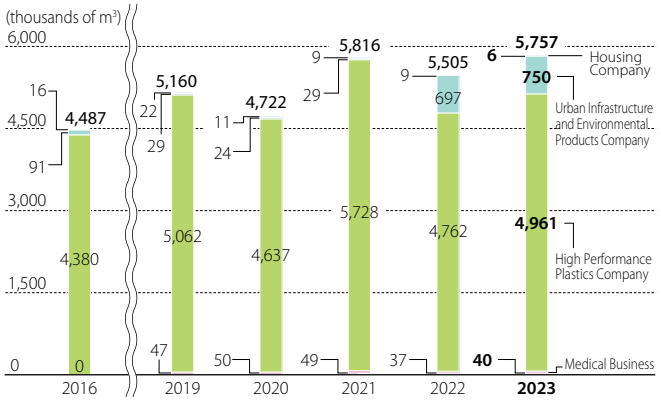


Note: Some past figures have been revised due to improvements in precision

Wastewater Discharge at Production Sites / Japan

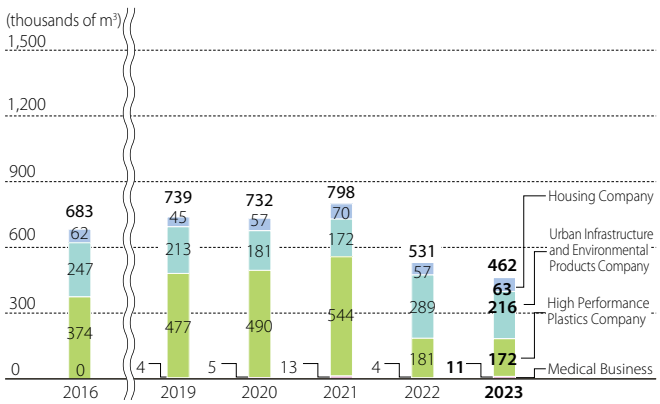


Wastewater Discharge at Production Sites / Overseas

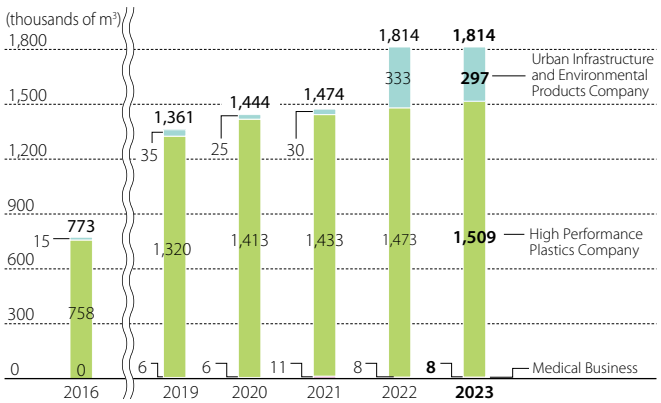


Note: Some past figures have been revised due to improvements in precision

Water Consumption at Production Sites / Japan



Water Consumption at Production Sites / Overseas



Note: Some past figures have been revised due to improvements in precision

Water Intake Volume at Production Sites by Water Source

(thousands of m^3)

Water source	Regions	All regions						Areas in regions with water stress					
		2016	2019	2020	2021	2022	2023	2016	2019	2020	2021	2022	2023
Surface water	Japan	696	726	129	185	18	25	0	0	0	0	0	0
	China	0	0	0	0	0	0	0	0	0	0	0	0
	Southeast Asia and Oceania	0	1	3	0	0	0	0	1	3	0	0	0
	Europe	0	0	0	0	0	0	0	0	0	0	0	0
	North and Central America	0	0	0	0	0	0	0	0	0	0	0	0
	Total	696	727	131	185	18	25	0	1	3	0	0	0
Ground water	Japan	2,604	2,517	2,340	2,238	2,232	2,041	0	0	0	0	0	0
	China	0	0	0	0	0	0	0	0	0	0	0	0
	Southeast Asia and Oceania	103	111	121	132	125	116	25	16	22	24	29	116
	Europe	0	0	0	0	0	0	0	0	0	0	0	0
	North and Central America	4	0	0	5	21	12	0	0	0	0	0	8
	Total	2,710	2,628	2,461	2,375	2,378	2,169	25	16	22	24	29	125
Seawater	Japan	0	0	0	0	0	0	0	0	0	0	0	0
	China	0	0	0	0	0	0	0	0	0	0	0	0
	Southeast Asia and Oceania	0	0	0	0	0	0	0	0	0	0	0	0
	Europe	0	0	0	0	0	0	0	0	0	0	0	0
	North and Central America	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0
Third-party water*	Japan	12,086	10,903	11,250	11,824	11,199	11,210	0	0	0	0	0	0
	China	273	265	247	243	226	213	236	256	241	235	222	204
	Southeast Asia and Oceania	896	1,093	957	1,087	1,146	1,194	18	80	55	42	58	1,162
	Europe	1,943	1,960	1,674	2,527	2,603	2,705	1,857	1,887	1,606	2,444	2,527	2,679
	North and Central America	2,042	3,092	3,165	3,297	3,198	3,331	10	141	94	121	132	1,920
	Total	17,241	17,313	17,293	18,977	18,372	18,653	2,121	2,365	1,996	2,842	2,938	5,965
Total volume of water withdrawn	Japan	15,386	14,146	13,719	14,247	13,449	13,276	0	0	0	0	0	0
	China	273	265	247	243	226	213	236	256	241	235	222	204
	Southeast Asia and Oceania	999	1,204	1,081	1,219	1,271	1,310	44	97	80	65	86	1,279
	Europe	1,943	1,960	1,674	2,527	2,603	2,705	1,857	1,887	1,606	2,444	2,527	2,679
	North and Central America	2,046	3,092	3,165	3,301	3,219	3,343	10	141	94	121	132	1,928
	Total	20,646	20,668	19,885	21,537	20,768	20,847	2,146	2,382	2,021	2,866	2,967	6,090

* Third-party water: Water withdrawn from local government water suppliers (public water systems, water systems for industrial use)

Note: Some past figures have been revised due to improvements in precision

Wastewater Discharge at Production Sites by Discharge Destination

(thousands of m^3)

Discharge destination	Regions	All regions						Areas in regions with water stress					
		2016	2019	2020	2021	2022	2023	2016	2019	2020	2021	2022	2023
Surface water	Japan	11,219	10,680	10,179	10,623	10,183	9,998	0	0	0	0	0	0
	China	0	0	0	0	0	0	0	0	0	0	0	0
	Southeast Asia and Oceania	22	43	18	13	16	15	2	22	4	1	2	15
	Europe	0	0	0	0	0	0	0	0	0	0	0	0
	North and Central America	0	0	0	0	0	0	0	0	0	0	0	0
	Total	11,241	10,722	10,197	10,636	10,199	10,012	2	22	4	1	2	15
Ground water	Japan	0	0	0	0	0	0	0	0	0	0	0	0
	China	0	0	0	0	0	0	0	0	0	0	0	0
	Southeast Asia and Oceania	0	0	0	0	0	0	0	0	0	0	0	0
	Europe	0	0	0	0	0	0	0	0	0	0	0	0
	North and Central America	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0
Seawater	Japan	2,892	2,160	2,293	2,205	2,149	2,303	0	0	0	0	0	0
	China	0	0	0	0	0	0	0	0	0	0	0	0
	Southeast Asia and Oceania	0	0	0	0	0	0	0	0	0	0	0	0
	Europe	0	0	0	0	0	0	0	0	0	0	0	0
	North and Central America	0	0	0	0	0	0	0	0	0	0	0	0
	Total	2,892	2,160	2,293	2,205	2,149	2,303	0	0	0	0	0	0
Third-party water*	Japan	591	567	515	622	586	513	0	0	0	0	0	0
	China	272	255	237	233	218	205	235	246	232	226	214	198
	Southeast Asia and Oceania	679	860	790	881	860	908	26	60	54	37	36	888
	Europe	1,930	1,944	1,664	2,511	2,592	2,696	1,857	1,875	1,601	2,439	2,521	2,674
	North and Central America	1,585	2,060	2,012	2,177	1,819	1,934	9	81	62	62	73	704
	Total	5,057	5,685	5,219	6,424	6,075	6,256	2,127	2,262	1,949	2,764	2,844	4,464
Total Volume of Wastewater	Japan	14,703	13,407	12,987	13,449	12,918	12,814	0	0	0	0	0	0
	China	272	255	237	233	218	205	235	246	232	226	214	198
	Southeast Asia and Oceania	701	902	809	895	876	922	29	83	58	38	38	902
	Europe	1,930	1,944	1,664	2,511	2,592	2,696	1,857	1,875	1,601	2,439	2,521	2,674
	North and Central America	1,585	2,060	2,012	2,177	1,819	1,934	9	81	62	62	73	704
	Total	19,190	18,567	17,709	19,265	18,423	18,571	2,129	2,285	1,952	2,765	2,846	4,478

* Third-party water: Wastewater (sewer systems) discharged to wastewater treatment facilities of local governments, etc.

Note: Some past figures have been revised due to improvements in precision

Water Consumption at Production Sites

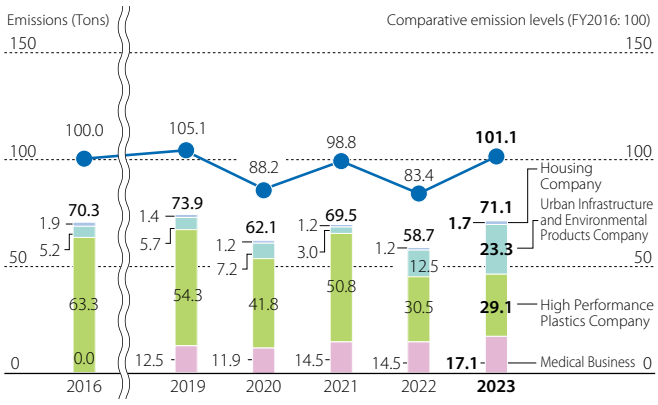
(thousands of m^3)

Regions	All regions						Areas in regions with water stress					
	2016	2019	2020	2021	2022	2023	2016	2019	2020	2021	2022	2023
Japan	683	739	732	798	531	462	0	0	0	0	0	0
China	1	10	10	9	8	8	1	10	10	9	8	6
Southeast Asia and Oceania	298	302	272	324	395	388	15	15	22	27	48	376
Europe	13	17	9	16	11	9	0	13	5	6	6	5
North and Central America	461	1,032	1,153	1,125	1,400	1,409	1	60	33	59	59	1,225
Total	1,456	2,101	2,176	2,272	2,345	2,276	17	98	69	101	121	1,612

Note: Some past figures have been revised due to improvements in precision

Indicator	Calculation Method
Water intake volume	Water intake volume = Total Water intake volume = (The sum of water intake from surface water, ground water, seawater, and third-party water)
Wastewater discharge	Wastewater discharge = Total wastewater discharge = (The sum of wastewater discharged to surface water, ground water, seawater, and third-party wastewater)
Water consumption	Water consumption = Water intake volume - wastewater discharge
Areas in regions with water stress	Areas where Baseline Water Stress is ranked as High or Extremely High under the WRI Aqueduct™ Water Risk Atlas (Aqueduct 4.0) Evaluation System

COD Discharge / Japan



Note: Some past figures have been revised due to improvements in precision

Indicator	Calculation Method
COD Discharge	Discharge = Σ[COD concentration (annual average of measured values) × Water discharge volume]

Addressing Biodiversity

Strategy (Stance, Approach, Risks and Opportunities)

Reducing the Impact of Corporate Activities on Biodiversity

While the corporate activities of SEKISUI CHEMICAL Group benefit from the multitude of blessings of nature brought about by biodiversity, they also place a burden on ecosystems. Recognizing this, we view nature as a form of capital that has value, and will therefore realize returns on the burden of its use through products and initiatives.
We will promote the efficient use of limited resources and energy, and strive to reduce the environmental impact caused by greenhouse gases and hazardous chemical substances while preventing pollution. At the same time, we will endeavor to improve functions and services so that our customers who use our products can contribute to the conservation of biodiversity.
We will work with various stakeholders to conserve and restore biodiversity to realize "Nature Positive*" through environmental considerations and contributions in our business activities and environmental conservation activities around the world, while making returns that have a positive impact on natural capital beyond the natural capital we utilize. We will work to conserve and restore biodiversity toward the realization of "Nature Positive".

* Nature Positive: To prevent damage to biodiversity on a global scale and to increase natural capital in a positive manner.

Land Use Concept

As a general rule, SEKISUI CHEMICAL Group does not use or develop land in the vicinity of protected areas (World Natural Heritage, IUCN Category I, II, III, and Ramsar Convention on Wetlands sites).
We will ascertain the impact of our business activities on biodiversity throughout the global value chain, and will review, minimize, recover, and offset activities in areas deemed important from the perspective of biodiversity.

Note: Please refer to Biodiversity Policy and Biodiversity Action Guidelines on pp.353-354

Biodiversity Conservation Initiatives based on the SEKISUI Environment Sustainability Vision 2050

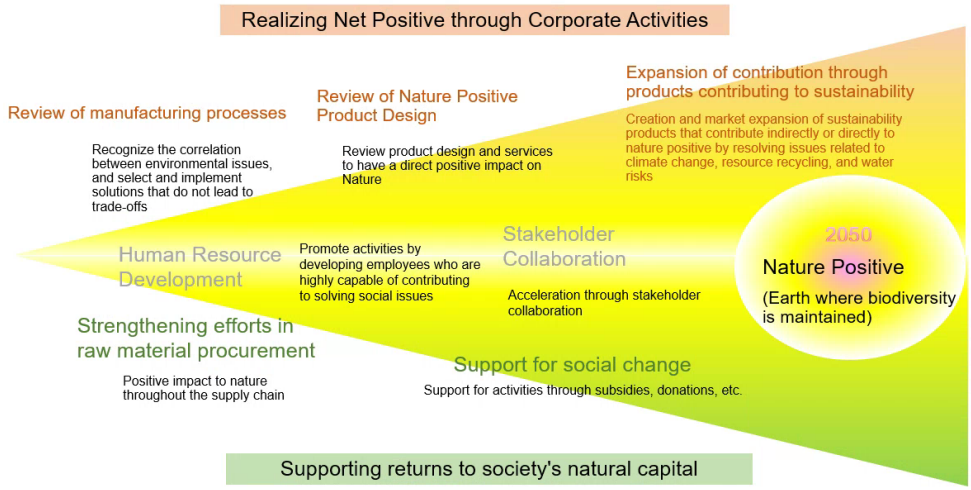
In order to contribute to the realization of an earth with maintained biodiversity, SEKISUI CHEMICAL Group engages in activities based on its Long-term Environmental Management Vision, SEKISUI Environment Sustainability Vision 2050*1.

As stated in the SDGs, natural and social environmental issues are interconnected, and in order to solve a single issue, we must remain conscious of multiple issues while working to find solutions.

Going forward, the Group will strengthen partnerships with stakeholders and work to evolve its activities, conscious of the need to not only solve issues relating to society, but also those that relate to the natural environment. By doing so, we will contribute to realizing returns on both natural and social capital*2, through which we hope to achieve a nature positive earth.

With this in mind, we have drawn up the following grand design of initiatives that will prioritize by 2050.

Biodiversity Grand Design



In order to achieve nature positivity and an earth with maintained biodiversity in 2050, the Group will undertake the following initiatives to realize returns on natural capital through its corporate activities.

- Review manufacturing processes
- Review nature-positive product designs
- Increase the degree of contribution through Products to Enhance Sustainability

In addition, we will implement the following initiatives to help support returns to natural capital by society.

- Strengthen initiatives involving raw material procurement
- Support social change

Moreover, we will undertake initiatives aimed at accelerating returns to natural capital through corporate activities and by society.

- Develop human resources
- Collaborate with stakeholders

*1 For details of the Long-term Environmental Management Vision, SEKISUI Environment Sustainability Vision 2050 see P.41.

*2 For details of the Integrated SEKISUI Environment Sustainability Index see P.59.

Risks and Opportunities

As far as the Group's biodiversity-related risks are concerned, we have drawn up four social scenarios that are based on two presupposed axes. One axis focuses on the decentralization of social systems in rural areas against concentration in large cities. The other axis focuses on mitigation as opposed to the acceleration of climate change, with temperatures of not more than 1.5˚C and not less than 4˚Cs. We have examined the impact from a nature perspective on each social scenario and analyzed the risks and opportunities that arise under these impacts.
As a result, we have identified the following as important risks to the Group's biodiversity.

1. Risk of biodiversity impairment with respect to timber raw materials at the procurement stage in the Housing Business
   [Ecosystem impact] Concerns surrounding the negative impact of deforestation on biodiversity.
   [Company impact] Reputational and procurement risks.

2. Risk of biodiversity impairment in the event of the illegal dumping of a product on marine ecosystems at the disposal stage after use in the Plastic Molding and Processing Business
   [Ecosystem impact] Impact of illegal dumping on marine ecosystems.
   [Company Impact] Possible reputational risk.

3. Risk of biodiversity impairment due to foundation work that entails the modification of land at the time of reclamation in the Town and Community Development Business
   [Ecosystem impact] Risk of fragmentation of the habitats of living creatures when fostering town and community development.
   [Company impact] Risk that habitat fragmentation may reduce the attractiveness and sustainability of urban environments coupled with possible reputational risk.

4. Risk of water-related disasters in Southeast Asia due to the impact of climate change on the manufacture and operation of our own and customers' plants.
   [Ecosystem impact] Disasters destroy ecological balance
   [Company impact] Physical risks

In addition, we analyzed the identified risks using the locate, evaluate, assess, and prepare (LEAP) method. Based on the results, we are advancing the following initiatives in a bid to convert risks into opportunities.

1. By procuring from sustainable forests, we are working to avoid risks and ensure a stable supply of housing with a durability of 60 years or more. We recognize that in gaining the understanding and trust of customers, we will be better placed to expand opportunities for housing sales.
2. We are endeavoring to develop a resource recycling system that prevents illegal dumping of molded plastic products at the time of disposal. In this regard we have developed a new Biorefinery (BR) technology that produces ethanol from combustible waste through the power of microorganisms. A one-tenth commercial scale demonstration plant is currently in operation with the aim of implementing this technology in society. By establishing a resource recycling system, we recognize the potential to eliminate the illegal dumping of molded plastic products and its impact on the ecosystem. This in turn will help mitigate any deterioration in the reputation of existing products. At the same time, we are prioritizing innovation as a means to address and mitigate risks which can then lead to the development of new business opportunities.
3. In order to prevent the fragmentation of the habitats of living creatures across regions, we are strengthening ecosystem bridges by raising the environmental awareness of local residents through the planting of endemic species and awareness-raising activities. As a result of these efforts, we obtained ABINC-ADVANCE certification for Asaka Lead Town, a model for the Group's Town and Community Development Business. This has allowed us to turn risk into opportunity, as the ecological considerations have helped enhance the attractiveness of the town.
4. We are expanding businesses that strengthen water infrastructure in the Asian region thereby reducing risks and generating opportunities.

Past and Future Biodiversity Initiatives

SEKISUI CHEMICAL Group has promoted the following initiatives to address biodiversity.

1. Assessment and reduction of the impact of business activities on biodiversity
   - Developing assessment methods and conducting assessments, reducing impacts
   - Greening of business sites (promoting landscaping and biotope development)
   - Promoting biodiversity-conscious purchasing

2. Development and promotion of related technologies and products
   - Incorporating biodiversity assessments at the product development stage

3. Raising employee awareness
   - Conducting nature conservation activities at all business sites
   - Expanding the SEKISUI Nature Study Course and nature conservation activities

4. Dialogue and collaboration with external stakeholders
   - Supporting innovation inspired by nature, and holding periodic forums
   - Supporting NPO's and other organizations through the Japan Business Federation (Keidanren)

5. Transmission of information
   - Participating in exhibitions
   - Providing education to the next generation (children's nature study course, school visits)
   - Publishing sustainability reports, site reports, and posting information of the Company's websites

Beginning with the current Medium-term Management Plan, we will first take action to resolve environmental issues, which are already underway, while taking into consideration biodiversity (natural capital). In addition, we will strengthen our understanding of the current situation, and if any negative impact on biodiversity is identified, we will find measures that will lead to positive nature results while mitigating negative aspects with the aim of increasing the effectiveness of initiatives.
To this end, we will also expand indicators to ascertain current conditions.

Biodiversity initiatives in the Current Medium-term Management Plan

		Recognize impact and dependence	Reduce negative impacts	Increase the positive impact
Achieve net positive through natural capital throughout the product life cycle	Products to Enhance Sustainability	• Understanding current situation and identifying important aspects by analyzing the impact of products on natural capital (LCA method, etc.) Reduction contribution • Raising awareness raising for product registration Rate of return	Consideration of product design and services to reduce negative impact on product life cycle (confirmation at registration and holding study sessions) Management indicators for each issue	Creation and market expansion of products to enhance sustainability that contribute indirectly or directly to nature positive by resolving issues related to climate change, resource recycling, and water risks. Number of registrations Net sales
	Manufacturing Process	• Understand the impact on ecosystems of water use • Grasping the impact of land of production sites by utilizing the "Land Use Score Card" (expanding target areas) Area and number of business sites	• Considering solutions that do not involve trade-offs in order to solve each environmental issue • Reduction of water risk in river basins at production sites • Promoting the use of chemical substances with only small impact on the ecosystem and suppressing the release of chemical substances • Promotion of resource recycling for plastic products	• Expanding the positive impact of green space on the premises by utilizing the results of the Land Use Score Card Points
	Human Resource Development	Improve ability to contribute to solving social issues through educational and SDGs contribution activities Awareness to SDGs No.14 and No.15 Level of ability to contribute to solving social issues, number of human resources		
Supporting Net Positive in Social	Procurement of Raw Materials	• Understanding raw material risks through CSR/timber procurement questionnaires in procurement Risk score	Strengthen sustainable procurement (focus on certification + due diligence). Especially for timber, traceability needs to be understood and sustainable procurement is pursued.	-
	Social Transformation	-	-	• Continuing research grants (manufacturing that learns from nature) Cumulative number of grants Area, CO2 fixation, job creation value, etc. • Mangrove planting in Thailand • Corporate collaboration activities supported by 30by30

: Examples of indices to measure

Governance

Promotion System for Biodiversity Issues

As far as biodiversity issues that may pose a risk to management are concerned, steps are taken to ascertain the magnitude of each risk and to consider as well as implement appropriate countermeasures under the supervision of the Board of Directors. In similar fashion to other environmental issues, our supervisory and executive systems for reducing the Group's impact on biodiversity issues and expanding its contribution to the resolution of issues are based on the Environmental Management Promotion System. (For details see P.51)

When new land is acquired, for example through large-scale land development, such as when constructing our own factories, or through M&As, we carry out environmental assessments of the impact that our business may have on the atmosphere, water areas, soil, etc. During these environmental impact assessments, we also verify any impact with regard to biodiversity.

Risk Management

As far as risk management is concerned, we have established an ERM system that in addition to identifying Group-wide major risks, shares and manages these risks within the Group. Risks related to biodiversity issues are also assessed in an integrated manner, together with other risks that are expected to have a significant impact on management. Risks that affect the Group as a whole and each organization, including such environmental issues as biodiversity, are shared and deliberated at Board of Directors, Sustainability Committee, Management meetings, and subcommittee meetings.

Assessment of Impact on Biodiversity (Natural Capital)

Under SEKISUI Environment Sustainability Vision 2050, SEKISUI CHEMICAL Group is working to realize an earth with maintained biodiversity. To that end, we are promoting initiatives that utilize the net-positive approach toward ecosystems.
We use the SEKISUI Environment Sustainability Index as an integrated indicator to confirm the degree of progress toward realizing our environmental vision. As a result, we calculate the rate of return on natural and social capital, which we consider an assessment of the degree of impact on biodiversity as a whole.
In the future, we will also identify and monitor the impact of two aspects on plant biomass (primary production of plants) and biodiversity (number of extinct species) as a breakdown of this calculation.

We have long been aware that the use of raw materials, emission of chemical substances, and disposal of products sold have a significant impact on biodiversity in our business activities.
Due to the greater understanding of the unique effects of these chemical substances in recent years as part of LCA databases used to monitor impact, the impact per unit amount of chemical substances has been increasing.
In light of this, we are updating the databases we use, reconfirming the benchmark, and expanding returns starting with the targets in the current Medium-term Management Plan.

SEKISUI CHEMICAL Group confirms the return rates of both plants (primary production of plants) and biodiversity (extinction rate of living species). The data in each case is used as a confirmation indicator to enable the Group to have a direct positive impact. The following table outlines trends in the aforementioned. Although the return rate in each case remains below 100%, we will promote corporate activities that move steadily toward nature positivity by addressing such environmental issues as climate change and resource recycling.

Trends in Rates of Return to Biodiversity and Plant Primary Production

	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Biodiversity aspects	38.3	39.4	43.1	40.8	49.7	38.0	30.5
Plant Biomass aspects	35.0	35.1	34.9	38.2	41.0	67.8	50.4

Among the raw materials used by the Group, biomass-derived paper and petroleum-derived materials have a significant impact on biodiversity.
In order to reduce this impact, we recognize the importance of strengthening procurement in a manner that takes into account sustainability with respect to non-fossil resources as stipulated in our resource recycling policy.
With the aim of bolstering the sustainable procurement of raw materials, we have also reviewed items that need to be considered in supplier management. Based on the aforementioned, we are engaging in activities with a view to reducing environmental impact and corporate risks in cooperation with suppliers.

Meanwhile, products that contribute significantly to the conservation of biodiversity include those that contribute to the reduced use of minerals, fossils, and forest resources. These include products that contribute to resource recycling by reducing energy consumption during the use of vehicles and transportation, improving durability, and switching to alternative materials. Examples of the former include KYDEX, LLC products for aircrafts and railroads. Examples of the latter include products related to the SPR method for sewage pipe restoration.
Products that contribute significantly to the primary production of plants include, for example, products that curb global warming and products that can reduce waste.
Examples of the former are Sekisui Heim's solar panel-equipped houses, and the latter are Kraft tapes that enable the use of thinner paper cores than previously possible.
In order to expand these contributions, it is important to develop products and technologies that contribute to decarbonization, and to establish services and technologies that reduce the waste from products sold while promoting recycling. With this in mind, we are working to achieve the aforementioned goals by expanding our lineup of Products to Enhance Sustainability.

In fiscal 2023, the rate of return to plant biomass increased. We believe this increase can be attributed to a variety of factors, including the reduced use of raw materials that have a negative impact, improvements in the quality of green spaces at production sites, and contributions from products that have a positive impact on the land used.
As far as biodiversity is concerned, we also recognize that increases in the impact of chemical emissions and the decrease in sales of products that contribute to biodiversity have led to a decline in the rate of return.

Going forward, we will continue to promote manufacturing while examining the direction of these return rates in order to engage in nature positive corporate activities.

Indicators and Targets

Targets related to Addressing Biodiversity

JBIB Land Use Score Card® Points

Current Medium-term Management Plan (FY2023-2025) Targets +3 points over a 3-year period (compared with FY2022)
FY2023 Results +1.5 points (compared with FY2022) ☑
2030 Target Promote ecosystem consideration* at all business sites
2050 Target Maintain ecosystem consideration at all business sites

* Ecosystem consideration: Increased quantitative evaluation of biodiversity

Major Initiatives

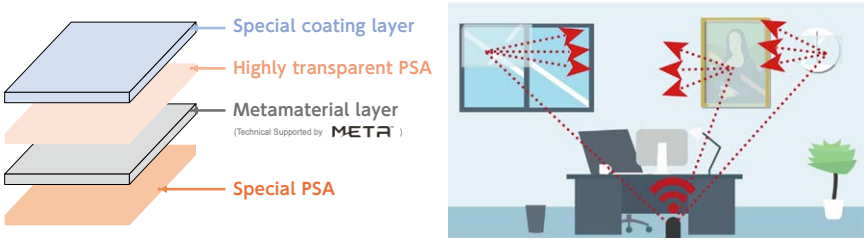
Innovation Inspired by the Nature Research Support Program and Holding of Forums

Since 2002, SEKISUI CHEMICAL Group has provided grants for manufacturing with a focus on learning from nature, while also holding forums to share the results of research work. As an effective approach to manufacturing that is geared toward the resolution of social and environmental issues, we recognize the critical need to learn from nature's wisdom. With this in mind, we are implementing various measures develop biomimicry* technology.

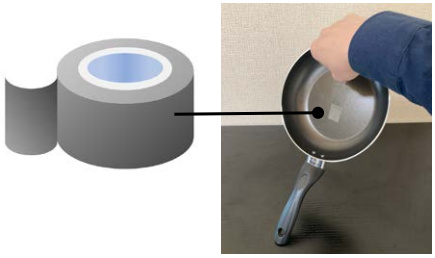
While basic science requires time for research and support, we believe that learning from nature's wisdom has the potential to create fundamental innovations that differ from conventional energy-consuming technologies.
By providing these grants to researchers outside the Company, we have supported the development of 306 technologies (cumulative total as of the end of March 2024). Amid efforts to promote development based on this understanding, the following technologies and product examples have emerged. (See the diagram below)

* Biomimicry (biomimetic) is the use of what is learned from the mechanisms of nature in the development of technology. The term is a combination of "Bio," meaning living things, and "Mimicry," meaning imitation.

[Contribution to a next-generation telecommunications society]



Transparent flexible reflector film developed from studies of the brilliance of morpho butterfly wings



Fluoroplastic-compatible adhesive tape developed from the study of mussel secretions

[Contribution to extending healthy lifespans (and COVID-19 countermeasures)]

Viru-taker™ and Allerbuster developed from the study of plant-based resins

[Contribution to addressing climate change (heat island effect countermeasure)]

Fractal sunshade material Airyshade developed from the study of the cool shade of trees

We will continue to develop nature positive products and businesses by placing considerable importance on learning from nature's wisdom in our manufacturing activities.

Use of Sustainable Timber and Ensuring Traceability

SEKISUI CHEMICAL Group promotes the use of FSC-certified and other legally harvested timber, as well as timber that has been confirmed to be sustainable through direct engagement. In this manner, we contribute to the eradication of deforestation and the sustainable use of timber resources. In addition, we conduct surveys on commercial distribution with a focus on the logging area, tree species and quantity of timber materials to ensure traceability. For recycled materials, we use timber- and timber-based materials that are already in use in the market, unused thinnings, and branches.
In 2022, we set the target of eliminating deforestation by 2030. As a part of efforts to achieve this target, we revised our Timber Procurement Policy* and put in place Sustainable Timber Procurement Guidelines to facilitate procurement in line with this policy. In addition to the legal procurement of timber, we are also promoting initiatives to reduce the impact of deforestation on the human rights of indigenous peoples and the environment.

* For details of the SEKISUI CHEMICAL Group Timber Procurement Policy see P.364.

Initiatives to Improve the Quality of Green Spaces

SEKISUI CHEMICAL Group is implementing initiatives to improve the quality of green spaces at all of its domestic production sites and research institutes.

We are promoting initiatives to improve the quality of the green spaces within our 45 business sites in Japan (total site area: 3,282,000 m^2, total green space area: 855,000 m^2) in an effort to improve the habitats of local flora and fauna, build an ecosystem network that connects local communities and business sites, and revitalize regional cooperation. Utilizing the JBIB Land Use Score Card®, we are aiming to improve our score by three points compared with FY2022 during the period of the Environmental Medium-term Plan (FY2023-2025).

Under the guidance of the environmental consulting company Regional Environmental Planning, Inc.,, we engaged in a variety of activities, including the following.

- Planning and implementation of green space design as well as management plans in harmony with the surrounding natural environment
- Sustainable maintenance and management utilizing the natural cycle
- Eradication of invasive species
- Conservation of rare species
- Communication with stakeholders

As a result, our average score for FY2023 improved by 1.5 points compared with FY2022.

Activities to Survey Non-native and Conservation Plant Species and to Eradicate Non-native Plant Species

Many non-native species have invaded our surrounding, firmly taking root. Some of these are plants that damage ecosystems, including those that deprive native species of their habitat, and others are plants that are harmful to people.
Under these circumstances, SEKISUI CHEMICAL Group has conducted surveys of exotic and precious plants in and around its 27 plants and offices in cooperation of experts since fiscal 2018.
Based on the results of the survey, we have selected those species to be eradicated and those to be preserved, and have prepared a countermeasure manual that outlines appropriate eradication methods and timing, which we are using while continuing to engage in eradication activities.
In order to create and maintain a better environment within business sites, we recognize the need to manage green spaces with biodiversity in mind, while focusing on non-native species and species conservation (precious species).

Plant survey (SEKISUI NANO COAT TECHNOLOGY CO., LTD.)

Lecture on eradication (SHIKOKU SEKISUI CO., LTD.)

Example of a species to be eradicated (Desmodium paniculatum)

Certified as a Site Coexisting with Nature by Japan's Ministry of the Environment

Sekisui Medical Co., Ltd.'s Iwate Plant was certified as a site coexisting with nature by Japan's Ministry of the Environment.
Location: Hachimantai-shi, Iwate Prefecture Area: 27.8ha

The following items were highly evaluated by experts, which led to certification.

- A survey revealed that 951 species of flora, fauna, and spring water creatures grew in and inhabited the plant site.
- Among these species, the survey discovered 22 rare species, including Capricornis crispus (special protected species) and Glirulus japonicus (protected species).
- To create an environment that contributes to biodiversity, such as the continuous planting of deciduous broad-leaved trees by employees and the development of spawning grounds for Hynobius lichenatus and Zhangixalus arboreus, efforts were being made to engage in sustainable maintenance and management that leverages natural cycles.

Panoramic view of Iwate Plant

Typical landscape

Hynobius lichenatus

Mangrove Reforestation Activities in Thailand

SEKISUI CHEMICAL Group is engaged in mangrove reforestation activities to restore and maintain the mangrove ecosystem in Thailand and to contribute to the local community.
In fiscal 2023, the Thai province of Nakhon Si Thammarat was buffeted by extreme weather conditions, which caused the tidal flats to become dry due to high temperatures. To address this grave situation, and in cooperation with local fishermen, about 30,000 trees on 10 ha of tideland were planted at the beginning of the monsoon season. Through observation of the growth and condition of the trees planted in fiscal 2022, we found that many of the trees had already sprouted branches and that supporting roots were firmly extending into the ground. These activities are contributing to the creation of carbon-rich tropical peatlands.

Afforestation on dry tidal flats

Afforestation undertaken in FY2022

Tree planting conducted in FY2017

Collaboration with External Organizations

Corporate Organizations That Take Action with the Aim of Preserving Biodiversity

30by30 Alliance

Organizer ..... Japan's Ministry of the Environment

Significance / Objectives ... Achievement in Japan of internationally agreed 30by30 targets

Activities ..... Compile and promote necessary measures to halt and restore biodiversity by 2030 (nature positivity), including OECM certification.

Our role ..... Express support and aim to accelerate efforts through in-house and corporate collaboration.

Japan Business Initiative for Biodiversity (JBIB)

Significance / Objectives ... Contribute to the conservation of biodiversity in Japan and overseas

Activities ..... Promote a variety of activities, such as research on biodiversity in collaboration with various companies.

Our role ..... Exchange opinions with companies that promote biodiversity conservation, share case studies while accelerating in-house efforts, and raise awareness of social efforts.

Keidanren Declaration of Biodiversity Initiative

Significance / Objectives ... Work to realize a sustainable society by building a society in harmony with nature

Activities ..... Voluntarily and proactively address the seven items that make up the Keidanren Declaration of Biodiversity and Action Guidelines (revised version)

Our role ..... Endorse and work to mainstream biodiversity by developing activities in accordance with this spirit and aspiration.

Activities to Conserve Green Spaces

We work together with an environmental consulting firm on environmental conservation activities and development of local environment, such as research on ecosystems at production sites and laboratories, conservation of biodiversity, and eradication of invasive species.

Environmental Conservation Activities

As part of efforts to develop human resources that contribute to the environment, we are working with local governments, academia, NGOs, NPOs, and other organizations at our bases in Japan and overseas to conduct environmental conservation activities worldwide.

Performance Data ☑

Results from the JBIB Land Use Score Card®.

	FY2023
JBIB Land Use Score Card®	Up 1.5 points (compared with FY2022)

Index	Calculation Method
Points of JBIB Land Use Score Card®	The JBIB Land Use Score Card® is an Ikimono Symbiotic Coexistence Enterprise® promotion tool that aims to evaluate the degree of contribution to biodiversity of company-owned land. This Score Card serves as a sheet that evaluates the area, quality, and management system of green spaces at each business site on a 100-point scale. The JBIB Land Use Score Card® is used to evaluate each business site for the fiscal year in question, and to calculate the increase from the number of points compared with FY2022. The indicator is the average point increase across all business sites.

Chemical Substance Management

Strategy (Stance and Approach)

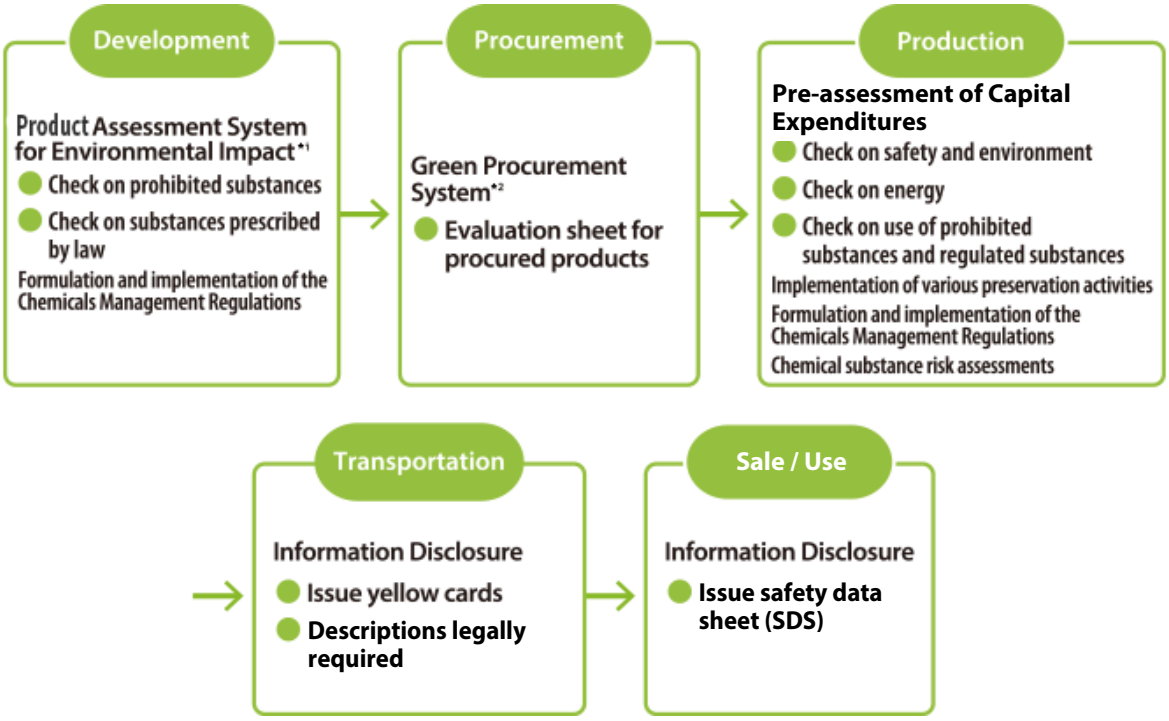
Minimizing Environmental Impact through Proper Control and Reduction of Chemical Substance Emissions

While the chemical substances that SEKISUI CHEMICAL Group is involved in make people's lives more convenient, they can also have harmful effects on the environment and human health. Therefore, we believe that it is an important corporate responsibility to properly manage chemical substances and to consider product safety, occupational safety and health, and environmental impact.

In addition to operating the Product Assessment System for Environmental Impact*1 and the Green Procurement System*2, the Group has set and worked toward its own targets for reducing emissions and the transfer of chemical substances. Moreover, in order to respond to legal and other regulatory revisions, we periodically review the chemical substances that require regulation.

*1 Product Assessment System for Environmental Impact: A system for assessing the environmental impact of products at all stages from raw material procurement through manufacture, use, disposal, and transportation.

*2 Green Procurement System: A system which prioritizes lower levels of environmental impact when procuring raw materials, parts, etc.



Governance

Promotion System for Chemical Substance Management Issues

In similar fashion to other statutory and regulatory requirements, and as far as the management of chemical substances is concerned, steps are taken to consider and implement appropriate countermeasures under the supervision of the Board of Directors. The Group's supervisory and executive systems are based on the Environmental Management Promotion System for matters related to environmental issues. (For details see P.51)

Major Initiatives

Controlling VOC Emissions

In FY2023, VOC emissions in Japan increased 83.7% compared with FY2022.
Note: However, due to revision to the applicable law, the number of substances subject to aggregation has been drastically changed since FY2023.

Preventing Air and Water Pollution

SEKISUI CHEMICAL Group complies with the values stipulated in laws and ordinances for equipment related to exhaust gases and water drainage.

Soil Contamination Countermeasures

We conduct voluntary assessments of soil contamination at all of our production sites. Where contamination is found, we take measures to purify and prevent further contamination, and report the results to the government. In addition, we continuously monitor groundwater to confirm that contamination has not spread.
When land is sold due to the closure of a production site, we undertake steps in accordance with the law. In FY2023, no new measures were required.

Disposal and Storage of Devices Containing PCBs and Management of Equipment That Uses Fluorocarbons

We are progressively disposing of transformers and capacitors that contain PCBs, starting with business sites that are now able to accept them at PCB treatment facilities.
Machines and equipment that contain PCBs in storage are strictly managed through a variety of means. This includes the locking of storage facilities and periodic inspections.
Steps are also being taken to enhance awareness toward mandatory requirements regarding equipment that uses fluorocarbons in accordance with Japan's Act on Rational Use and Proper Management of Fluorocarbons (Freon Emission Control Act) and to ensure thoroughgoing management including periodic inspection.

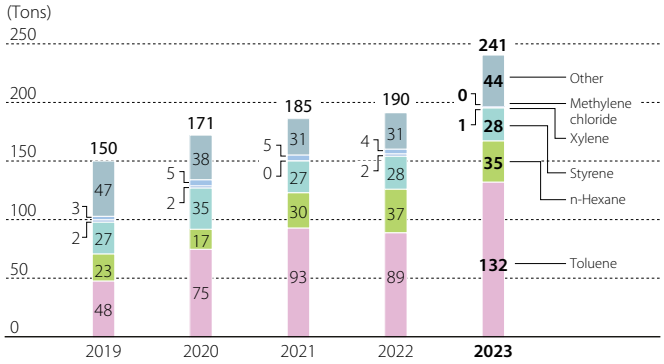
Performance Data ☑

Note 1: From FY2019, Medical Business results have been tabulated on a stand-alone basis owing to its separation from the HPP Company. The presentation of Corporate Headquarters results has been reclassified as Other.

Note 2: In line with a change in the control of certain businesses in the UIEP and HPP companies implemented from October 2022, the data for FY2022 of both companies is collated as if the change in control had been initiated from the beginning of FY2022.

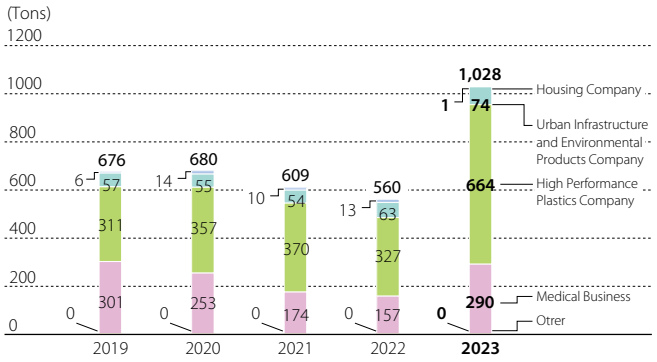
Note 3: Figures are tabulated based on the review of designated chemicals under the PRTR Law, which was revised in FY2023. However, data prior to FY2022 has not been retroactively revised.

Amount of Chemical Substance Emission and Transfer (PRTR Law) / Japan



Note: Despite a change in the substances covered following revisions to the law in 2023, past data has not been retroactively adjusted.

Discharge of Volatile Organic Compounds (VOCs) into the Atmosphere / Japan

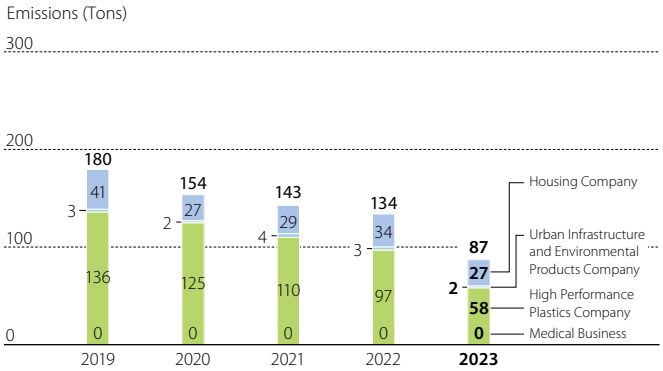


Note: Despite a change in the substances covered following revisions to the law in 2023, past data has not been retroactively adjusted.

Index	Calculation Method
Amount of Emissions / Transfer of Chemical Substances	Amount of emissions / transfer of chemical substances subject to regulation by the PRTR Law: Amount of emissions = Amount of emissions into the air + Amount of emissions into public waters + Amount of emissions into the soil on-site + Amount disposed by landfill on-site Transfer volume = Amount transferred to sewers + Amount transferred as waste material Scope: Covers production sites and research facilities in Japan

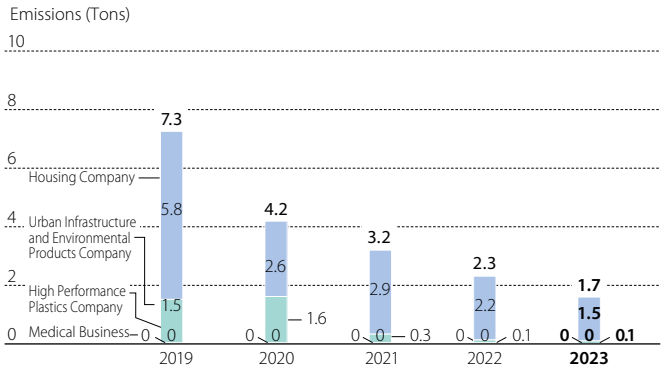
Index	Calculation Method
VOC Emissions	Amount of emissions into the atmosphere of volatile organic compounds (VOC) among the substances subject to regulation by the PRTR Law and Japan Chemical Industry Association

NOx Emissions / Japan



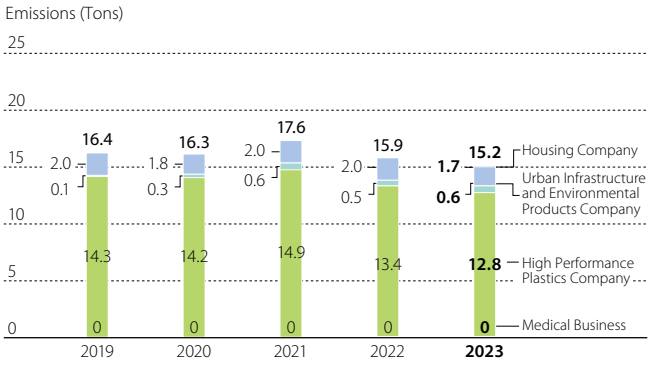
Index	Calculation Method
NOx Emissions	NOx emissions =∑(Amount of exhaust gas airflow per year × NOx concentration × 46 / 22.4)

SOx Emissions / Japan



Index	Calculation Method
SOx Emissions	SOx emissions =∑(amount of SOx per year × 64 / 22.4)

Soot and Dust Emissions / Japan



Index	Calculation Method
Soot and Dust Emissions	Soot and Dust emissions =∑ (amount of exhaust gas airflow per year × soot concentration)