

TORAY GROUP CSR REPORT 2023



Materials change our lives



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Message from the President

Contributing to society through the creation of new value with innovative ideas, technologies and products.

President, Toray Industries, Inc.



The world faces many challenges that must be overcome to ensure global sustainability, including climate change, issues of resources and energy, food and water shortages that come with population growth, destruction of the natural environment, and safety and health concerns.

Since its founding in 1926, Toray Group has consistently made “contributing to society” a pillar of its management and has continued to do this through its business activities.

In 1986, we established our current corporate philosophy of “contributing to society through the creation of new value with innovative ideas, technologies and products.” In 2020, Toray Group organized its corporate philosophy and other management principles — the principles it has upheld since its founding — in the form of the Toray Philosophy.

The Toray Group mission is to provide fundamental solutions to the global challenges the world faces with balancing development and sustainability by delivering innovative technologies and advanced materials.

Based on this approach, we are accelerating our efforts to realize the following four perspectives of the world envisioned by the Toray Group in 2050 as outlined in the Toray Group Sustainability Vision announced in 2018.

1. A net zero emissions world, where greenhouse gas emissions are completely offset by absorption—in other words, a carbon-neutral world
2. A world where resources are sustainably managed
3. A world with a restored natural environment, with clean water and air for everyone
4. A world where everyone enjoys good health and hygiene

In March 2023, we announced our Medium-Term Management Program, Project AP-G 2025, entitled Innovation and Resilience Management—Value Creation for New Momentum, which covers the three-year period beginning in fiscal 2023. Taking the Toray Philosophy as its starting point, Project AP-G 2025 aims to achieve sound, sustainable growth by helping to solve global scale issues as indicated in the Toray Group Sustainability Vision.

With regard to corporate social responsibility (CSR), which is positioned at the highest tier of the Toray management priorities, we announced our CSR Roadmap 2025, covering the same period as Project AP-G 2025, in June 2023. This roadmap guides our systematic implementation of organization-wide CSR activities over the medium-term. These activities focus on such themes as ethics and compliance; safety, accident prevention, and environmental preservation; and human rights promotion and human resources development. Toray Group will continue to contribute to society, implementing management strategies and CSR initiatives in an integrated manner.

June 2023

measure progress for each individual guideline based on the materiality. The CSR Roadmap guides our systematic implementation of organization-wide CSR activities. In June 2023, we announced our CSR Roadmap 2025 (Fiscal 2023-Fiscal 2025), which incorporates a total of 11 selected material CSR issues classified under Contribution to Society through the Creation of New Value and Management Foundation.

We will do our utmost to enhance the CSR activities of Toray Group through the strategic promotion of CSR initiatives.

Toray Group Corporate Social Responsibility

Toray Philosophy and CSR

Under a corporate philosophy of “contributing to society through the creation of new value with innovative ideas, technologies and products,” Toray Group has from the beginning pledged to have a positive impact on society through its business. The Group’s CSR activities embody the corporate philosophy positioned at the highest tier of the Toray Philosophy.

Related Information

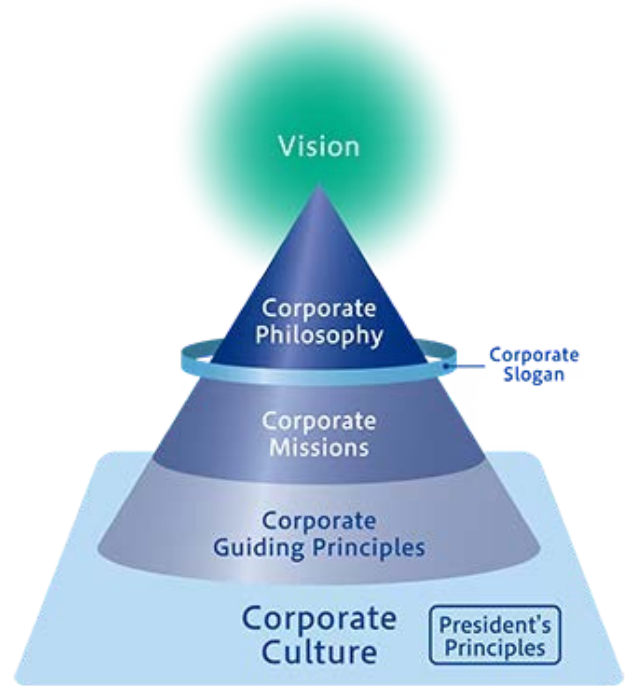
> [Toray Philosophy](#)

Toray Philosophy

The Toray Group was established in 1926, based on the principle of “realizing that corporations are public institutions of society and contributing to society through our business.” Ever since, the Toray Group has aimed to be a corporate entity respected by society.

In 1955, Toray clearly established this commitment as a Company Principle. Then, in 1986, the 60th anniversary of our founding, the company’s Management Philosophy framework was formalized with the Corporate Philosophy as its paramount concept. Since then, the Management Philosophy has been passed down, with some revisions. Accompanying the May 2020 announcement of the Long-Term Corporate Vision, TORAY VISION 2030, the Toray Group organized the principles it has followed since the beginning in the form of the Toray Philosophy.

In addition to our traditional Management Philosophy (which includes the Corporate Philosophy, Corporate Missions, Corporate Guiding Principles), the Toray Philosophy includes the Corporate Slogan (which simply expresses Toray’s stance on embodying the Corporate Philosophy), the Vision (which represents the direction the Group is headed), the Corporate Culture (which includes values and management perspectives that have been maintained since the company’s founding), and the President’s Principles.



| Toray Philosophy |

Corporate Philosophy

**Contributing to society through the creation
of new value with innovative ideas, technologies
and products**

Corporate Missions

For our customers

To provide new value to our customers through high-quality products and superior services

For our employees

To provide meaningful work and fair opportunities

For our shareholders

To practice sincere and trustworthy management

For society

To establish ties and develop mutual trust as a responsible corporate citizen

Corporate Guiding Principles

Safety and Environment

Placing top priority on safety, accident prevention and environmental preservation in order to protect the safety and health of employees, customers and local communities and contribute to building a sustainable society

Ethics and Fairness

Acting with fairness, high ethical standards and a strong sense of responsibility while complying with laws, regulations and social norms to earn trust and meet social expectations

Customer-Focus

Providing solutions of high value to customers, and pursuing customer satisfaction and the world's highest level of quality

Innovation

Achieving continuous innovation in all corporate activities, and aiming for dynamic evolution and growth

Strong *Genba-Ryoku* (Workplace Competency)

Learning from one another and making self-driven efforts to leverage technologies and expertise in order to strengthen workplace competency, which is the foundation of our corporate activities

Cooperation and Co-creation

Forming integrated internal linkages and strategic alliances with external partners, and evolving together with society by creating new value

Emphasis on Human Resources

Providing motivating work environments where employees can demonstrate their abilities, and building a vibrant corporate culture

Information Disclosure

Appropriately disclosing corporate information and enhancing communication with stakeholders in order to maintain management transparency

Respect for Human Rights

Fulfilling our responsibility to respect human rights as a good corporate citizen

Corporate Slogan

Innovation by Chemistry

Innovation is how the Toray Group delivers on its corporate philosophy of “Contributing to society through the creation of new value with innovative ideas, technologies and products.” When we say “innovation”, we mean not only development of radically new technologies but also innovation across every other facet of our corporate activity.

We use the word “Chemistry” with two meanings. The first is the science that forms the basis for the advanced materials which we supply. This allows us to create new value and support the development of a sustainable world while maintaining good relationships with everyone who encounters the Toray Group, including customers, employees, shareholders, suppliers, consumers, and local communities. “Chemistry” also means collaboration and rapport. In this spirit, Toray Group companies and business sites around the world work together as-one to deliver innovation.

Toray Group Sustainability Vision

The Toray Group Sustainability Vision outlines the world as envisioned by the Toray Group in 2050, as well as the challenges that must be undertaken to achieve that goal. It also includes KPIs to be achieved by fiscal 2030 as important milestones.

The vision indicates that the Toray Group's mission is to deliver innovative technologies and advanced materials that provide real solutions to the challenges the world faces with balancing development and sustainability. These challenges include population growth, aging demographics, climate change, water scarcity, and resource depletion.

“We are convinced that the Toray Group can continue to grow without negatively impacting global sustainability. We will do our utmost to address global issues, including the goals of the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), while working closely with our business partners worldwide”—this declaration forms the foundation for TORAY VISION 2030 and indicates the future direction of the Group.

Toray Group Sustainability Vision

Corporate Culture

Contributing to society through business activities

The Toray Group has grown through tireless effort, based on a sound understanding of its social responsibilities. Our management foundation has always been rooted in a spirit of public service. This aspiration is reflected in our corporate philosophy of “Contributing to society through the creation of new value with innovative ideas, technologies and products.” We are committed to creating innovative materials and new value that help to solve the challenges the world faces, such as global environmental issues, resource and energy issues, and contributing to a world where people everywhere can live long, healthy lives.

People-centric management

Since the beginning, the Toray Group has been striving to foster a good sense of social responsibility and high motivation among employees by building a vibrant workplace. The Toray Group holds to the philosophy that the success or failure of a company is decided by its people, and that employees shape its destiny. This approach is widely shared at Toray Group sites worldwide, and the Toray Philosophy is being practiced globally, while respecting regional differences in customs and social concepts.

Management from a long-term perspective

Over the decades, the Toray Group has passed down the key phrase, “The deeper, the newer,” and it has become a core part of our heritage. It expresses our determination to dig deep into things and pursue them to their ultimate limit, and our conviction that this always results in new discoveries and inventions. While taking a long-term perspective, Toray ascertains major social issues based on current public needs, and then pursues R&D to create innovative technologies and advanced materials that help solve those issues, while developing and growing its businesses.

Pioneering spirit

The Toray Group has always placed great emphasis on R&D as a driving force for corporate growth. By tirelessly pursuing R&D and improving production technology, we have turned superior technology and advanced science into ways to better people’s lives. In addition, the Toray Group has boldly taken on challenges in other areas. Each person at the Toray Group approaches their work with a pioneering spirit. We work together while respecting one another’s individuality and independence, and this collective strength leads to great results.

President’s Principles

The President’s Principles are core action guidelines that shape how all the people of the Toray Group approach their work.

Stay focused on the basics, search for ideal approaches, identify the right steps, and then carry them out

Thoroughly review the facts, clarify current problems and their root causes, and identify tasks and actions to take to create the ideal situation. By doing so, it soon becomes clear what should be done next. In order to solve a problem, we need to get all the relevant people involved, to coordinate everybody, and to take charge of implementing the solution. We need to respond appropriately to changing circumstances and produce results with a sense of urgency.

All solutions can ultimately be found in the *Genba* (workplace)

When problem solving, it is important to ascertain and analyze the current situation, organize the facts, and thoroughly investigate the causes. When we focus on the *Genba* and ascertain and analyze the roots causes, it soon becomes clear what needs to be done.

Consider what is best for the company

Living up to the corporate philosophy is the top priority in all actions. Based on the idea that everyone is striving to do the right thing, employees with different positions and opinions should have in-depth discussions. In this way, we should take action to achieve “total optimization” for the company or society as a whole, rather than “individual optimization” for a single person or organization. In addition, it is vital that we create a system that helps connect the two.

Have the integrity to do the right thing in the right way

When faced with various pressures and temptations, the key is to maintain integrity (truth and honesty) and sincerity (serious and enthusiastic devotion) with a firm conviction and unwavering will to stay on the path you have determined to be right. This is the strong spirit of the Toray Group, and what builds an even stronger Toray Group is each employee in the *Genba* (workplace) doing the right thing in the right way.

Toray Group Corporate Social Responsibility

Management Strategies and CSR

In order to achieve sustainable growth, corporations must do business in a way that earns the broad trust of stakeholders. Toray Group implements its management strategies and CSR initiatives in an integrated manner, striving to live up to its corporate philosophy, which outlines the principles and values the Group has upheld since the beginning, as well as its reason for being. The Group also seeks to achieve the world envisioned by Toray Group in 2050, which is outlined in the Toray Group Sustainability Vision, ensuring the sustainable development of Toray Group and society as a whole.



Toray Group will strive to accurately ascertain changes in industrial trends over the next decade or so. In May 2020, the Group announced the Long-Term Corporate Vision, TORAY VISION 2030—Achieving sound, sustainable growth and creating social value. The vision will serve as a group-wide compass for achieving sound, sustainable growth, while pursuing business model transformation.

The Medium-Term Management Program, Project AP-G 2025, entitled Innovation and Resilience Management—Value Creation for New Momentum, covers the three-year period from fiscal 2023 to fiscal 2025. It takes the Toray Philosophy as its starting point and is designed to ensure the Toray Group achieves sound, sustainable growth by helping to solve global issues arising from the need to balance development and sustainability, as indicated in the Toray Group Sustainability Vision.

With each Medium-Term Management Program, Toray Group also draws up a CSR roadmap. A three-year plan for the Group's efforts on CSR, this roadmap lays out specific initiatives and KPIs. In June 2023, the Group announced the new CSR Roadmap 2025. Under the roadmap, the Group is now facilitating systematic, organization-wide CSR initiatives.

By taking an integrated approach to social responsibility and business growth, Toray Group has positioned itself to make important contributions by helping to solve social issues. The goal is to remain a corporate group of high value to all stakeholders.

Related Information

[Toray Group Sustainability Vision](#) 

- > [Toray Philosophy](#)
- > [Long-Term Corporate Vision](#)
- > [Medium-Term Management Program](#)
- > [CSR Roadmap 2025 \(Fiscal 2023 – Fiscal 2025\)](#)

Long-Term Corporate Vision

TORAY VISION 2030

—Achieving sound, sustainable growth and creating social value

Since its foundation, the Toray Group has been driven by its core values of contributing to society through business activities, people-centric management, and management from a long-term perspective. Based on these values, the Toray Group has established the Long-Term Corporate Vision, TORAY VISION 2030 (VISION 2030) with the aim of providing new value to society by focusing on the four perspectives to build the world envisioned by the Toray Group set out in the Toray Group Sustainability Vision. KPIs for fiscal 2030 are milestones for realization of the world as envisioned by the Toray Group in 2050. VISION 2030 will be achieved by pursuing co-creation with the customers and business partners that make up the supply chain, all with a materials-oriented approach. The Toray Group will strive to accurately ascertain changes in industrial trends and to achieve sound, sustainable growth while pursuing business model transformation.

Growth Strategies Based on the Toray Group Sustainability Vision

The Toray Group's mission is to deliver innovative technologies and advanced materials that provide real solutions to the challenges the world faces in balancing development and sustainability. This is why the Group is expanding its Sustainability Innovation (SI) Business. Through this business, the Group helps solve global environmental, resource and energy issues and helps build a world where people everywhere can enjoy better medical care and hygiene and live long, healthy lives. The Group will expand its business by not only capturing increasing demand but also creating new demand in all segments with a focus on the SI Business.

In creating and expanding into new businesses, the Toray Group aims to generate one trillion yen in sales from all new businesses by 2030 by focusing resources, with an emphasis on both quality and quantity, on large-scale themes that can be expected to form individual business domains in the 2020s and accelerating development and business model construction under the Future TORAY-2020s Project (FT Project).

Toray Group's Long-Term Strategies

The Toray Group will strive to accurately ascertain changes in industrial trends impacted by aging populations, environmental issues, and technological innovation, and to achieve sound, sustainable growth while pursuing business model transformation.

“Sound, sustainable growth” means facilitating our basic strategy of business expansion by carrying out active investment and maximizing the value we create over the medium to long term across the Toray Group. The key to this is strengthening competitiveness by pursuing continuous business model innovation and total cost reduction and strengthening the management foundation to enable investment in growth driven by efficiently invested capital and financial strength.

Long-term strategies to achieve “sound, sustainable growth”

1. Global expansion in growth business fields

- Expand the SI Business, which helps solve global environmental, resource and energy issues and helps build a world where people everywhere can enjoy better medical care and hygiene and live long, healthy lives

2. Strengthening competitiveness

- Create new value through business advancement and high added value creation, thereby providing solutions with a materials-oriented approach to customers and society
- Pursue dramatic cost reductions by setting challenging targets as well as strive to reduce environmental impact

3. Strengthening the management foundation

- Improve cash flow and capital efficiency, and balance financial soundness and growth investment
- Reform and revitalize the business and organizational structures of low-growth and low-profitability businesses

KPIs for Fiscal 2030

		FY 2013 Actual (Baseline) (J-GAAP)	FY 2030 Target (compared to FY 2013) (IFRS)
Supply of Sustainability Innovation products ¹		562.4 billion yen	4.5-fold
CO ₂ emissions avoided in value chain ²		38 million tons	25-fold
Water filtration throughput contribution by Toray's water treatment membranes ³		27.23 million tons/day	3.5-fold
Greenhouse gas emissions in production activities ⁴	Per unit of revenue ⁶ across the Toray Group	337 tons/100 million yen	50% or more reduction
	Greenhouse gas emissions of Toray Group in Japan ⁵	2.45 million tons	40% or more reduction
Water usage in production activities	Per unit of revenue ⁶ across the Toray Group	15,200 tons/100 million yen	50% or more reduction

1. (1) Products that accelerate measures to counter climate change; (2) products that facilitate sustainable, recycling-based use of resources and production; (3) products that help provide clean water and air and reduce environmental impact; and (4) products that help deliver better medical care and hygiene for people worldwide
2. Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, the International Council of Chemical Associations (ICCA), and the World Business Council for Sustainable Development (WBCSD).
3. Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.
4. With the use of renewable energies and other zero emission power sources rising worldwide, the Toray Group aims to employ zero-emission power sources at a rate equivalent to or better than the targets in each country by fiscal 2030.
5. In Japan, Toray works to surpass the reduction target set for the industrial sector by the Japanese government (absolute emissions reduced by 38%) in its comprehensive plan (Cabinet decision on October 22, 2021) based on Japan's Act on Promotion of Global Warming Countermeasures.
6. FY2013 results are based on net sales (J-GAAP)

Medium-Term Management Program

Project AP-G 2025

Innovation and Resilience Management — Value Creation for New Momentum

The new Medium-Term Management Program, Project AP-G 2025 (AP-G 2025) covers the three-year period from fiscal 2023 to fiscal 2025. It takes the Toray Philosophy as its starting point and is designed to ensure the Toray Group achieves sound, sustainable growth by helping to solve global issues arising from the need to balance development and sustainability, as indicated in the Toray Group Sustainability Vision. Under AP-G 2025, we will focus on creating value to fuel this growth strategy and enhance our human resource base to support it. We will strengthen our management foundation to enable investment in growth driven by efficiently invested capital, financial strength, and human resources.

Under AP-G 2025, our five basic strategies are: sustainable growth; ultimate value creation; product and operational excellence; enhancement of people-centric management; and risk management and governance. We will work to expand our growth fields of Sustainability Innovation (SI) Business and Digital Innovation (DI) Business, while pursuing business advancement and high-added-value creation as well as enhancing quality strength and cost competitiveness. At the same time, in order to maintain financial soundness, we will focus across our business operations on balancing profit, cash flow, and asset efficiency. Furthermore, in order to create a new growth trajectory, we will expand high-growth, high-profitability businesses while implementing structural reforms in low-growth, low-profitability businesses.

Long-Term Corporate Vision, TORAY VISION 2030

Medium-Term Management Program, Project AP-G 2025

Basic Strategies	Specific Initiatives
1. Sustainable Growth	<ul style="list-style-type: none"> (1) Business expansion in growth fields based on the Toray Group Sustainability Vision (2) Contributing to the building of a carbon-neutral world (3) Contributing to the building of a circular economy
2. Ultimate Value Creation	<ul style="list-style-type: none"> (1) Business advancement and high-added-value creation (2) New business creation
3. Product and Operational Excellence	<ul style="list-style-type: none"> (1) Quality strength enhancement (2) Total cost reductions (3) Advancing management leveraging digital technology
4. Enhancement of People-Centric Management	<ul style="list-style-type: none"> (1) Strengthening human resource development (2) Developing and appointing management personnel (3) Enhancing communication and dialogue to better practice the Toray Philosophy
5. Risk Management and Governance	<ul style="list-style-type: none"> (1) Improving risk management (2) Strengthening workplace competency through collaboration between those who manage operations in the functional and regional dimensions (3) Streamlining and advancing global business management

KPIs for Fiscal 2025

1. Financial Targets

	FY 2022 Actual	FY 2025 Target
Revenue	2,489.3 billion yen	2,800.0 billion yen
Core operating income	96.0 billion yen	180.0 billion yen
Core operating margin	3.9%	6%
ROIC ^{*1}	2.7%	About 5%
ROE ^{*2}	5.0%	About 8%
Free cash flow	237.3 billion yen (3-year cumulative total)	Positive (3-year cumulative total)
D/E ratio	0.62	0.7 or lower (guideline)

Exchange rate assumption for AP-G 2025: 125 yen per US dollar

*1. ROIC = Core operating income after tax / Invested capital (average of the balances at beginning and end of the period)

*2. ROE = Net profit attributable to owners of parent / Average equity attributable to owners of parent

2. Sustainability Targets

	FY 2013 Actual (Baseline) (J-GAAP)	FY 2022 Actual (IFRS)	FY 2025 Target (IFRS)
Revenue from Sustainability Innovation (SI) Business	562.4 billion yen	1,282.8 billion yen (2.3-fold)	1,600.0 billion yen (2.8-fold)
CO ₂ emissions avoided in value chain	38 million tons	9.5-fold	15.0-fold
Water filtration throughput contribution by Toray's water treatment membranes	27.23 million tons/day	2.5-fold	2.9-fold
Greenhouse gas emissions per unit of revenue in production activities	337 tons/100 million yen	35% reduction* ¹	40% reduction
Greenhouse gas emissions of Toray Group in Japan	2.45 million tons	21% reduction* ¹	20% reduction
Water usage per unit of revenue in production activities	15,200 tons/100 million yen	32% reduction* ¹	40% reduction

*1. The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

› **Medium-Term Management Program, Project AP-G 2025**
(IR Seminar Materials)

Toray Group Corporate Social Responsibility

Toray Group Corporate Social Responsibility Initiatives

CSR Guidelines

Toray Group has established CSR Guidelines to govern its CSR initiatives. Intended to be comprehensive, they cover aspects from corporate governance to social contribution. The CSR Guidelines consist of ten themes, each of which is assigned an implementation leader.

CSR Guidelines Revised June 2023

1. Corporate Governance

Continually revise management systems, strengthen internal controls as part of efforts to fulfill the company's social responsibilities.

2. Ethics and Compliance

Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and act with a keen sense of compliance to maintain the trust of society.

3. Safety, Accident Prevention, and Environmental Preservation

Ensure the safety and health of society and employees, and protect the environment in all business processes, from procuring raw materials and manufacturing to the supply and disposal of products.

4. Product Quality and Safety

Provide safe, highly reliable products by striving to enhance management systems for product quality assurance and safety, and disclose appropriate information.

5. Risk Management

Under normal conditions, assess and analyze risks, and strive to mitigate and prevent them from materializing; and in the event of a crisis that could have a significant impact on management activities, strive to prevent damage from increasing, by bringing the situation quickly under control and normalizing conditions with a prompt and appropriate response.

6. Communication

Disclose corporate information in an active, fair and straightforward manner to maintain management transparency; and disclose information appropriately to encourage dialogue and cooperation with stakeholders including customers, employees, stockholders, business partners, consumers, mass media, and other parties.

7. Contributing Solutions to Social Issues through Business Activities

Leverage innovation to provide solutions to various social issues such as climate change, resource and energy use, water resource and natural environment conservation, improvement of medical care, and promotion of public health, thereby contributing to sustainable development for society.

8. Human Rights Promotion and Human Resources Development

Respect human rights, provide safe and healthy workplaces for employees, secure and train personnel, and diversify while striving to protect employment.

9. Establishing Sustainable Supply Chain

To establish a sustainable supply chain, work closely with suppliers, processing vendors, subcontractors, customers and distribution companies to implement socially responsible procurement throughout the supply chain in order to ensure responsible practices with respect to environmental preservation and human rights.

10. Social Contribution Activities as a Good Corporate Citizen

Proactively participate in local communities and the larger society in order to contribute to development in a way betting a good corporate citizen.

CSR Roadmap

Every three years Toray Group draws up a CSR roadmap, which is based on its CSR Guidelines and incorporates key material issues. The CSR Roadmap serves as the Group’s medium-term plan for the systematic and organization-wide implementation of CSR initiatives.

Under this roadmap, action goals, main initiatives, and key performance indicators (KPIs) are set for each of the 10 CSR Guidelines to quantitatively monitor yearly progress.

Related Information

- > [CSR Roadmap 2025 \(Fiscal2023 – Fiscal2025\)](#)
- > [Materiality](#)

“CSR Guideline Activities” and “CSR Line Activities”

Toray Group implements “CSR Guideline activities” (group-wide CSR activities) and “CSR line activities” (workplace-driven CSR activities) in parallel. The former are driven by the entire organization based on the CSR Guidelines, while the latter are pursued by individual divisions.



Related Information

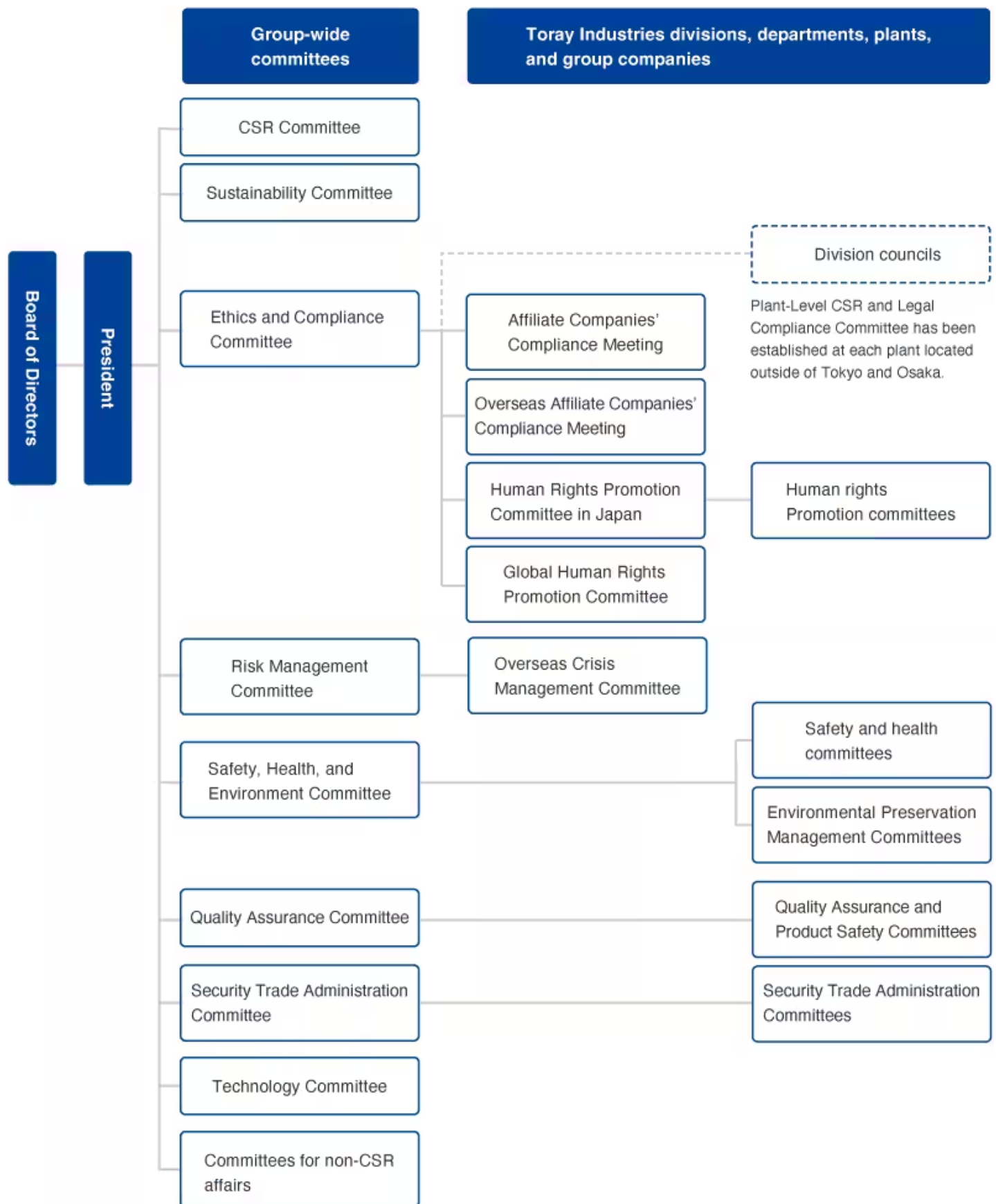
Click [here](#) to access CSR activity reports for each of the CSR Guidelines.

Organizational Structure for Social Responsibility

Toray Group's CSR Committee (headed by the chief CSR officer) serves as a group-wide deliberative organization for important issues concerning social responsibility. The committee is aligned with seven other group-wide committees and works to promote CSR activities. The issues discussed by the CSR Committee are reported to the Board of Directors.

In addition, each group company has its own CSR-related committee and committee meetings, comprising a structure for promoting CSR throughout the entire Toray Group.

Committee and Implementation Organization



Related Information

The following page reports on the prevalence of CSR activities at Toray Group.

> [Communication with Employees](#)

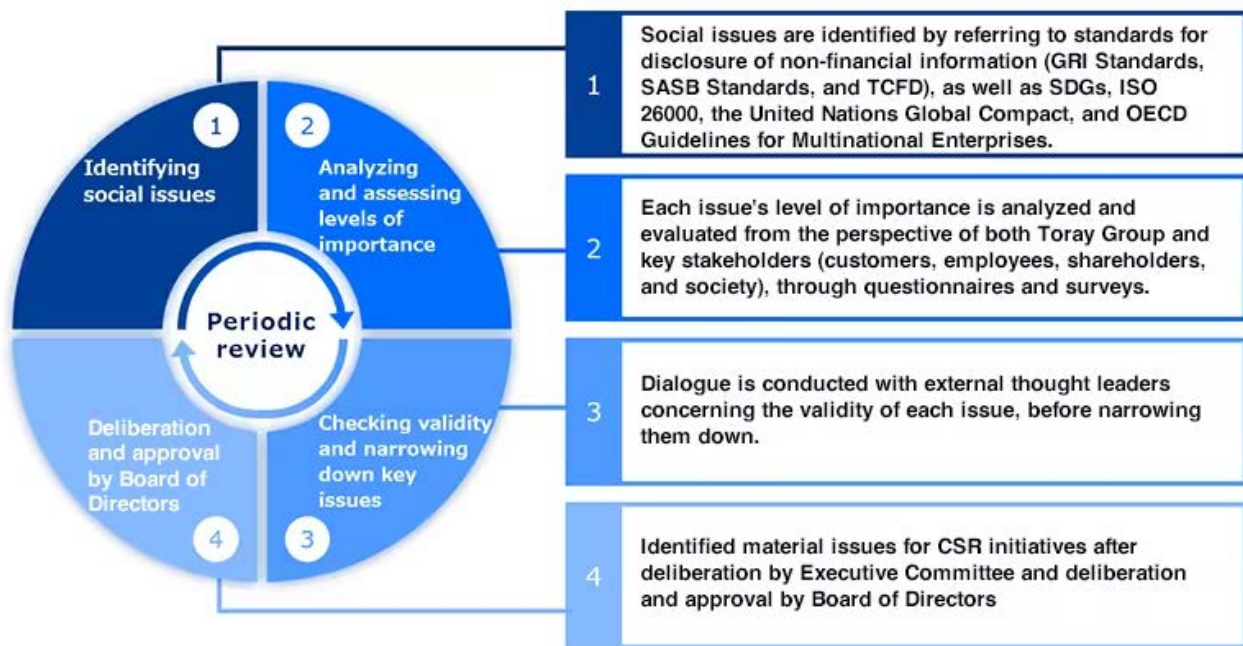
Toray Group Corporate Social Responsibility

Materiality

In June 2023, Toray Group reevaluated its CSR material issues in response to changes in the business environment and developments affecting the global community.

Materiality Assessment Process

Toray Group has identified CSR material issues through the following process, incorporating advice from external thought leaders. It will continue to update these issues regularly going forward.



Materiality Review Process from 2022 to 2023

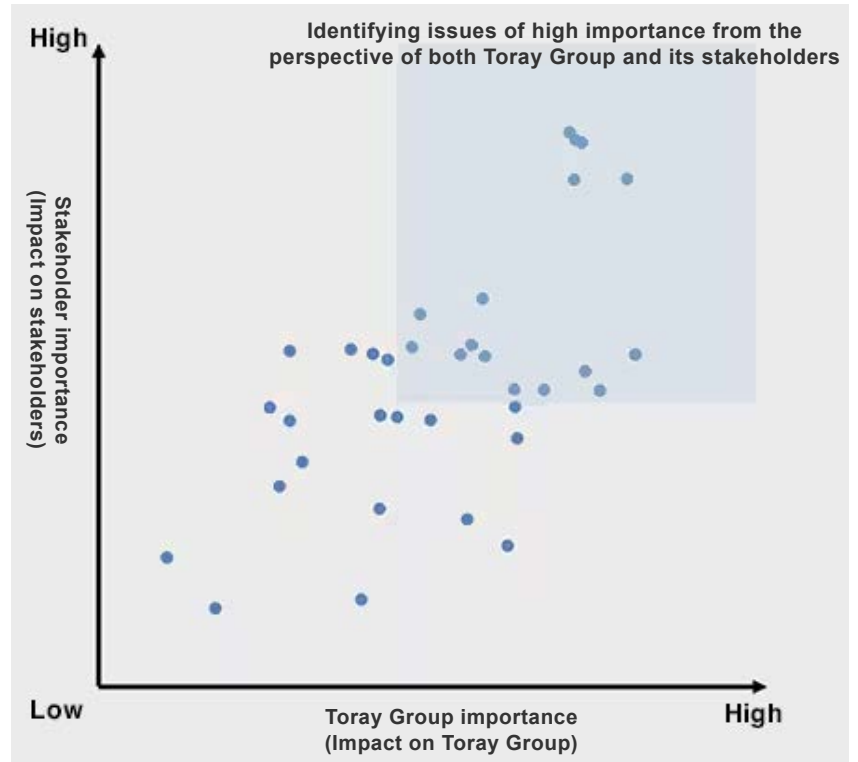
In order to realize the Toray Philosophy and vision, the Group has identified important issues that need to be prioritized and focused on over the next three to five years, as part of its Medium-Term Management Program.

1 Identifying social issues

The Group selected 35 relevant social issues by referring to range of guidelines including non-financial information disclosure standards (GRI Standards, SASB, and TCFD, etc.), the SDGs, ISO 26000, the United Nations Global Compact, and the OECD Guidelines for Multinational Enterprises.

② Analyzing and assessing levels of importance

In order to determine key stakeholders and their level of importance to the Group, Toray Industries conducted questionnaires and other surveys of major stakeholders, including customers, employees, and stockholders. The results were then analyzed and evaluated.



③ Checking validity and narrowing down key issues

A conversation was held with outside thought leaders through web conferencing, and opinions were exchanged regarding the issues Toray Group should focus more attention on. The thought leaders also provided their opinions regarding the appropriateness of the issue selection process, as well as their expectations for Toray Group.

The Group's list of important issues was narrowed down based on the feedback of thought leaders.



Date	November 24, 2022
Participants	<p>Thought Leaders</p> <p>Shunsuke Managi Distinguished Professor Kyushu University</p> <p>Sachiko Kishimoto Representative Director and Managing Director Public Resources Foundation</p> <p>Ryusuke Tanaka Programme Officer ILO Office for Japan</p> <p>Toray Industries, Inc.</p> <p>Shigeki Matsui General Manager, CSR Operation Dept.</p> <p>Sadao Kato Assistant General Manager, CSR Operation Dept.</p> <p>Noriko Osada Senior Staff, CSR Operation Dept.</p> <p style="text-align: right;">* Organization names and positions as of the date above</p>

Main Opinions from Outside Thought Leaders



Shunsuke Managi

I think Toray's keywords going forward should be supply chain and global. Furthermore, the importance of biodiversity conservation and nature positivity is increasing. There are many areas in which Toray Group can contribute through new technologies and products. So the Group should consider the kinds of risks inherent in its supply chain, which risks can be minimized, and which opportunities can be increased through new product development. In addition, it will become increasingly important to consider trade-offs between the key issues.

Next, I think the Group's current materiality selection process is excellent, including the fact that it uses weighting based on levels of importance. It was a good idea to group together the items selected for analysis and evaluation, and then narrow them down. It will also be important to provide feedback within the company about the differences between the internal and external perspectives.



Sachiko Kishimoto

I believe that the broad perspectives provided by diverse human resources, including those with various gender identities, nationalities, physical characteristics, and disabilities, will lead to greater corporate growth and respect for human rights. I see this as an important theme along with global environmental conservation.

I also think that the aging and shrinking population is Japan's biggest social issue, while healthy longevity is a global issue. As a leading country facing these problems, Japan is in a position to help solve them.

When it comes to conveying material issues, it is important to use frame these issues in a way that shows Toray Group's awareness of the issues and what it can do to help solve them. I also believe it is important that the term "human rights" be used prominently to express the company's stance. In addition, the process for selecting issues seems to be appropriately transparent and objective. It would also be a good idea to summarize material issues and include detailed information in the explanation.

Next time, the Group might host a conversation that includes representatives of international organizations, NGOs, and consumer groups.



Ryusuke Tanaka

Given the current trend, companies will soon be required to ensure that all workers' human rights are legally protected. This is based on the growing expectations of the international community for responsible corporate behavior. In order for Toray Group's business to remain sustainable, respect for human rights must be viewed as a pertinent matter and included in material issues. To achieve internationally recognized human rights protection, the Group needs to consider the human rights of those working in all positions wherever the company has influence, including the supply chain. This also includes other workplace aspects such as diversity promotion, working environment improvement, and occupational health and safety.

Therefore, I think it is important to clearly explain and provide visuals illustrating how Toray Group manufactures products across its supply chain, and how it identifies and protects vulnerable workers.

I believe that the Group's selection process was highly objective. Next time, I think it is important to obtain the opinions of government representatives and industry groups to better understand social expectations, and as a global company, to get more input from relevant stakeholders outside Japan.

④ Deliberation and approval by Board of Directors

The material issues were selected based on discussion by the Executive Committee, which is a deliberative body of the Board of Directors. The issues were then approved by the Board of Directors.

Toray Group Material CSR Issues

Toray Group has selected a total of 11 material issues for its CSR activities, including five issues relating to the Group's Corporate Philosophy of contributing to society through the creation of new value. The other six issues represent key management foundation points that are consistently necessary to address as important issues.

Material issues for Toray Group's CSR Initiatives



Contribution to Society through the Creation of New Value

Accelerating Climate Change Mitigation

Accelerate the shift to carbon neutrality by contributing to reduction of global greenhouse gas emissions through innovative technologies and advanced materials and by pursuing emissions reduction across the Toray Group.

Promoting a Circular Economy

Promote sustainable, circular resource use and production by increasing recycling, using biomass-based raw materials, and converting CO₂ into resources.

Taking a Nature-Positive Approach

Contribute to restoration of the natural environment by offering products that help provide clean water and air, reduce environmental impact, and otherwise benefit the environment and by working to preserve green spaces and properly manage chemical substances.

Committed to Healthier Lives

Contribute to healthy, hygienic lifestyles by providing advanced materials that promote health and longevity, reduce the burden on nursing care and healthcare providers, improve the quality of medical care, and contribute to human safety.

Developing in Collaboration with Stakeholders

Focus on sustainable development for both the Group and society by pursuing co-creation with stakeholders and contributing solutions to social issues. Appropriately disclose information and promote dialogue with stakeholders.

Management Foundation

Ensuring Safety and Fire Accident Prevention

Protect public safety and the personal safety of employees by pursuing zero accidents, thoroughly practicing disaster and fire prevention, and ensuring safe work environments.

Ensuring Ethics and Compliance

Act with fairness, high ethical standards and a strong sense of responsibility while complying with laws, regulations and social norms to earn trust and meet social expectations.

Enhancing Product Quality and Safety

Provide safe, high-quality products by further strengthening quality control, quality assurance, and product safety management.

Strengthening Corporate Governance

Maintain sound management across the Toray Group by reviewing management systems and programs, strengthening internal controls, and implementing risk management (managing risks related to business activities such as economic security, security trade, and information security).

Establishing Sustainable Supply Chain

Focus on building a stable, sustainable supply chain by promoting environmental conservation and respect for human rights throughout the supply chain.

Respecting Human Rights and Promoting Human Resource Diversity

Respect internationally recognized human rights and create work environments that allow a diverse pool of human resources to demonstrate their creativity.

* For more information on Toray Group's initiatives related to materiality, please see the [Materiality View of CSR Roadmap 2025](#).

CSR Roadmap

In order to promote CSR systematically, Toray Group creates three-year medium-term CSR plans that incorporates materiality.

The 8th medium-term plan, CSR Roadmap 2025, was released in June 2023, based on a resolution of the Board of Directors.

CSR Roadmap 2025 defines activity goals, main initiatives, and key performance indicators (KPIs) for each of the ten CSR guidelines.

> [CSR Roadmap 2025 \(Fiscal 2023-Fiscal 2025\)](#)

Materiality View of the CSR Roadmap

The relationships between materiality, associated CSR Roadmap 2025 main initiatives, KPIs are described in this table.

Materiality View of CSR Roadmap 2025

Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025	Fiscal 2023			Fiscal 2024			Fiscal 2025	Related CSR Guidelines	Related SDGs
			Targets	Results	Degree of success	Targets	Results	Degree of success			
Accelerating Climate Change Mitigation	Reduce greenhouse gas emissions per unit of revenue	1 Reduction of greenhouse gas emissions per unit of revenue (%)	At least 42% lower than Fiscal 2013 (Fiscal 2025)						3 Safety, Accident Prevention, and Environmental Preservation		
		2 Increase in solar power generation capacity (%)	At least 12% higher than Fiscal 2022 (Fiscal 2025)								
	Reduce water consumption per unit of revenue	3 Reduction of water usage per unit of revenue (%)	At least 42% lower than Fiscal 2013 (Fiscal 2025)						7 Contributing Solutions to Social Issues through Business Activities		
		4 Water recycling rate (%)	At least 86% / At least 87% / At least 87%								
	Aim for a high water recycling rate	(See footnote 1 below.)	5 Revenue from Sustainability Innovation Business	1,800 billion yen (Fiscal 2025)							
			6 Contribution to CO ₂ reduction in value chain	15 times compared to Fiscal 2013 (Fiscal 2025)							
	Expand water treatment throughput contribution by Toyota's water treatment equipment	7 Contribution of Toyota water treatment products	8 Contribution of Toyota water treatment products	23 times compared to Fiscal 2013 (Fiscal 2025)							
			9 Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources								
	Promoting a Circular Economy	Reduce greenhouse gas emissions per unit of revenue	1 Reduction of greenhouse gas emissions per unit of revenue (%)	At least 42% lower than Fiscal 2013 (Fiscal 2025)					3 Safety, Accident Prevention, and Environmental Preservation		
			2 Increase in solar power generation capacity (%)	At least 12% higher than Fiscal 2022 (Fiscal 2025)							
Reduce water consumption per unit of revenue		3 Reduction of water usage per unit of revenue (%)	At least 42% lower than Fiscal 2013 (Fiscal 2025)					7 Contributing Solutions to Social Issues through Business Activities			
		4 Water recycling rate (%)	At least 86% / At least 87% / At least 87%								
Aim for a high water recycling rate		(See footnote 1 below.)	5 Revenue from Sustainability Innovation Business	1,800 billion yen (Fiscal 2025)							
			6 Contribution to CO ₂ reduction in value chain	15 times compared to Fiscal 2013 (Fiscal 2025)							
Expand water treatment throughput contribution by Toyota's water treatment equipment		7 Contribution of Toyota water treatment products	8 Contribution of Toyota water treatment products	23 times compared to Fiscal 2013 (Fiscal 2025)							
			9 Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources								

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The relationships between materiality, associated CSR Roadmap 2022 main initiatives, KPIs and progress achieved, up to fiscal 2022, are described in this table.



Materiality View of CSR Roadmap 2022

Materiality	Main Initiatives of CSR Roadmap 2022	KPIs of CSR Roadmap 2022	Fiscal 2022			Fiscal 2023			Related Initiatives	Related SDGs
			Targets	Results	Degree of success	Targets	Results	Degree of success		
Contributing to the solution of environmental issues through business activities	Increase revenue from Green Innovation products	Revenue of Green Innovation products (JPY)	1,800 billion yen (Fiscal 2025)	762.8 billion yen	△	Green Innovation Business Expansion Project				
			Expand contribution to CO ₂ reduction in the value chain	Contribution to CO ₂ reduction in value chain	6.3 times compared to Fiscal 2013 (Fiscal 2022)	9.9 times		○	Green Innovation Business Expansion Project	
	Expand water treatment throughput contribution by Toyota's water treatment equipment	Contribution of Toyota water treatment products	23 times compared to Fiscal 2013 (Fiscal 2022)	55 times	○	Green Innovation Business Expansion Project				
			Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	(See footnote 1 below.)					Support to Green Innovation Products	
	Contributing to health maintenance and longevity through business activities	Increase revenue from LHM Innovation products	Revenue of LHM Innovation products (JPY)	300 billion yen (Fiscal 2025)	765.6 billion yen	○		LHM Innovation Business Expansion Project		
Contribute to countermeasures to public health risks, including infectious diseases, by developing and supplying materials and products for protective clothing and pressure garment equipment as well as materials to protect environmental hygiene including air and water								LHM Innovation Business Expansion Project		
Addressing resource and energy issues		Reduce greenhouse gas emissions per unit of revenue	Reduction of greenhouse gas emissions per unit of revenue (%)	At least 30% lower than Fiscal 2013 (Fiscal 2022)	34.9%	○	Greening, Ecology and Natural Sciences (G&E)			
				Reduce water consumption per unit of revenue	Water usage per unit of revenue (%)	At least 25% lower than Fiscal 2013 (Fiscal 2022)	22.8%	○	Initiatives for Managing Water Resources	
		Aim for a high water recycling rate	Water recycling rate (%)	At least 86% / At least 86% / At least 86%	86.8%	○	Initiatives for Product Flow			
Systematically adopt renewable energy						Greening, Ecology and Natural Sciences (G&E)				

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Materiality View of CSR Roadmap 2025



Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Accelerating Climate Change Mitigation	Reduce greenhouse gas emissions per unit of revenue	3-⑤ Reduction of greenhouse gas emissions per unit of revenue (%)
		3-⑥ Increase in solar power generation capacity (%)
	Reduce water consumption per unit of revenue	3-⑦ Reduction of water usage per unit of revenue (%)
	Aim for a high waste recycling rate	3-⑧ Waste recycling rate (%)
	Pursue the greening of each site in consideration of the regulations of each country and region and harmony with the surrounding environment	(See footnote 1 below.)
	Expand revenues from Sustainability Innovation Business ²	7-① Revenues from Sustainability Innovation Business
	Expand contribution to CO ₂ reduction in the value chain ³	7-② Contribution to CO ₂ reduction in value chain
	Expand water filtration throughput contribution by Toray's water treatment membranes ⁴	7-③ Contribution of Toray water treatment products
	Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	
	Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	
Promoting a Circular Economy	Reduce greenhouse gas emissions per unit of revenue	3-⑤ Reduction of greenhouse gas emissions per unit of revenue (%)
		3-⑥ Increase in solar power generation capacity (%)
	Reduce water consumption per unit of revenue	3-⑦ Reduction of water usage per unit of revenue (%)
	Aim for a high waste recycling rate	3-⑧ Waste recycling rate (%)
	Expand revenues from Sustainability Innovation Business	7-① Revenues from Sustainability Innovation Business
	Expand contribution to CO ₂ reduction in the value chain	7-② Contribution to CO ₂ reduction in value chain
	Expand water filtration throughput contribution by Toray's water treatment membranes	7-③ Contribution of Toray water treatment products
	Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	
	Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	

Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
Targets				
At least 40% lower than fiscal 2013 (Fiscal 2025)			3 Safety, Accident Prevention, and Environmental Preservation	
At least 10% higher than fiscal 2022 (Fiscal 2025)				
At least 40% lower than fiscal 2013 (Fiscal 2025)				
At least 86%	At least 87%	At least 87%		
1,600 billion yen (Fiscal 2025)			7 Contributing Solutions to Social Issues through Business Activities	
15 times compared to fiscal 2013 (Fiscal 2025)				
2.9 times compared to fiscal 2013 (Fiscal 2025)				
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At least 40% lower than fiscal 2013 (Fiscal 2025)			3 Safety, Accident Prevention, and Environmental Preservation	
At least 10% higher than fiscal 2022 (Fiscal 2025)				
At least 40% lower than fiscal 2013 (Fiscal 2025)				
At least 86%	At least 87%	At least 87%		
1,600 billion yen (Fiscal 2025)			7 Contributing Solutions to Social Issues through Business Activities	
15 times compared to fiscal 2013 (Fiscal 2025)				
2.9 times compared to fiscal 2013 (Fiscal 2025)				
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- Notes :**
- 1 : [Patterned cell] : No KPI set in CSR Roadmap 2025
 - 2 : Business areas and product lines that can help realize the Toray Group Sustainability Vision
 - 3 : Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the guidelines of the Japan Chemical Industry Association and the International Council of Chemical Associations (ICCA).
 - 4 : Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.
 - 5 : Volatile organic compounds
 - 6 : A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers
 - 7 : Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

Materiality View of CSR Roadmap 2025

Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Taking a Nature-Positive Approach	Reduce greenhouse gas emissions per unit of revenue	3-⑤ Reduction of greenhouse gas emissions per unit of revenue (%) 3-⑥ Increase in solar power generation capacity (%)
	Reduce water consumption per unit of revenue	3-⑦ Reduction of water usage per unit of revenue (%)
	Aim for a high waste recycling rate	3-⑧ Waste recycling rate (%)
	Reduce atmospheric VOC ⁵ emissions	3-⑨ Reduction of atmospheric VOC emissions (%)
	Pursue the greening of each site in consideration of the regulations of each country and region and harmony with the surrounding environment	
	Expand revenues from Sustainability Innovation Business	7-① Revenues from Sustainability Innovation Business
	Expand contribution to CO ₂ reduction in the value chain	7-② Contribution to CO ₂ reduction in value chain
	Expand water filtration throughput contribution by Toray's water treatment membranes	7-③ Contribution of Toray water treatment products
	Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	
	Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	
Committed to Healthier Lives	Contribute to countermeasures to public health risks, including infectious diseases, by developing and upgrading materials and products for personal protective equipment, as well as materials to protect environmental hygiene including of air and water	
	Expand revenues from Sustainability Innovation Business	7-① Revenues from Sustainability Innovation Business
	Create workplace environments in which women will feel comfortable performing their duties	
	Reduce overtime work exceeding standard hours	8-⑥ Reduction in employees who exceed 45 hours/month of non-statutory working hours
	Encourage the use of annual paid leave by labor union members	8-⑦ Available annual paid leave used by labor union members (%)

Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
Targets				
At least 40% lower than fiscal 2013 (Fiscal 2025)			3 Safety, Accident Prevention, and Environmental Preservation	
At least 10% higher than fiscal 2022 (Fiscal 2025)				
At least 40% lower than fiscal 2013 (Fiscal 2025)				
At least 86%	At least 87%	At least 87%		
At least 70% lower than fiscal 2000	At least 72% lower than fiscal 2000	At least 72% lower than fiscal 2000		
1,600 billion yen (Fiscal 2025)			7 Contributing Solutions to Social Issues through Business Activities	
15 times compared to fiscal 2013 (Fiscal 2025)				
2.9 times compared to fiscal 2013 (Fiscal 2025)				
[Patterned cell]				
[Patterned cell]				
1,600 billion yen (Fiscal 2025)			7 Contributing Solutions to Social Issues through Business Activities	
[Patterned cell]				
[Patterned cell]			8 Human Rights Promotion and Human Resources Development	
Year-on-year reduction	Year-on-year reduction	Year-on-year reduction		
90%	90%	90%		

Notes :

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- 5 : Volatile organic compounds
- 6 : A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers
- 7 : Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

Materiality View of CSR Roadmap 2025

Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Developing in Collaboration with Stakeholders	Actively dispatch information on the Toray Philosophy and use education to ensure it is embraced throughout the Group	
	Enhance information dissemination utilizing owned media such as the Group's websites and social media accounts	6-① Number of corporate website page views (per month)
	Strive to ascertain customer needs and improve customer satisfaction	
	Facilitate exchange of opinions between management and employees, ascertain issues and problems, and reflect them in the Group's CSR initiatives	6-② Interviews conducted to exchange opinions within the company (rate of progress)
	Expand opportunities for management to disseminate information and promote communication with stockholders and investors	6-③ Interviews with key investors in which management participates (number)
	Enhance communication with the mass media	6-④ News releases (number)
	Expand revenues from Sustainability Innovation Business	7-① Revenues from Sustainability Innovation Business
	Expand contribution to CO ₂ reduction in the value chain	7-② Contribution to CO ₂ reduction in value chain
	Expand water filtration throughput contribution by Toray's water treatment membranes	7-③ Contribution of Toray water treatment products
	Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	
	Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	
	Contribute to countermeasures to public health risks, including infectious diseases, by developing and upgrading materials and products for personal protective equipment, as well as materials to protect environmental hygiene including of air and water	

	Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
	Targets				
				6 Communication	
	1 million page views	1 million page views	1 million page views		
	(First round) 100% completed	(Second round) 30%	(Second round) 60%		
	Cumulative total of 120	Cumulative total of 120	Cumulative total of 120		
	200	200	200		
	1,600 billion yen (Fiscal 2025)				
	15 times compared to fiscal 2013 (Fiscal 2025)				
	2.9 times compared to fiscal 2013 (Fiscal 2025)				

- Notes :**
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Materiality View of CSR Roadmap 2025



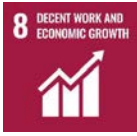



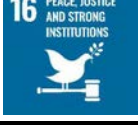

Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Developing in Collaboration with Stakeholders	Request suppliers to comply with the Toray Group CSR Procurement Guidelines, and strive to ascertain the status of each company's CSR initiatives	9-① Suppliers agreeing to the Toray Group CSR Procurement Guidelines (%)
	Identify high-risk areas that may have a negative impact on the environment and human rights, and promote supply chain due diligence to implement measures to prevent or mitigate the identified risks	9-② Implementation of supply chain due diligence (% of cases)
	Promote procurement of responsibly sourced materials such as non-conflict minerals and sustainable palm oil	9-③ Oil procurement needs met by palm oil sourced in a manner that is environmentally responsible and respectful of human rights (% of oil purchased, by value)
	Reduce CO ₂ emissions intensity from distribution activities	9-④ Reduction in CO ₂ emissions per unit of sales from distribution activities (year-on-year)
	Continually investigate and ascertain logistics risks related to natural disasters such as typhoons and heavy rains, and strive to reduce risks	9-⑤ Key external inventory sites that have been assessed for natural disaster risk and have implemented measures to mitigate serious risks (%)
	Continually work to reduce the environmental impact and improve the quality of distribution activities	
	In accordance with the Declaration of Voluntary Activities for the White Logistics Movement, ⁶ contribute to sustainable logistics, for instance by selecting logistics companies that are engaged in working style reform, etc.	
	Implement social contribution activities at the appropriate scale	10-① Social contribution expenditure (% change from average expenditure over last six years)
	Actively engage in social contribution activities that are distinctive of Toray Group, focusing on science and technology promotion	
	Promote active planning and implementation of voluntary social contribution activities at each Group site, on an ongoing basis	10-② Social contribution activities (number)
	Implement a range of educational support activities that capture the interest and curiosity of youngsters through school visits and company tours focusing on areas such as science, the environment, and career opportunities, thereby helping to inspire upcoming generations	10-③ Beneficiaries of educational support activities such as science classes for schools and career education (number)
	Educate employees at Toray Group in order to instill the significance of social contribution	
	Support the improvement and development of science and technology and the promotion of science education through the activities of Toray science foundations in and outside Japan	
	Share information with internal and external stakeholders on Toray Group's social contribution activities via websites and other means	


Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
Targets				
At least 75%	At least 85%	At least 90%	9 Establishing Sustainable Supply Chain	
At least 60% (Fiscal 2024)		At least 90%		
At least 70% (Fiscal 2024)		At least 90%		
1%	1%	1%		
At least 60%	At least 75%	At least 90%		
[Patterned cell]				
[Patterned cell]				
100% or higher	100% or higher	100% or higher	10 Social Contribution Activities as a Good Corporate Citizen	
[Patterned cell]				
2,500 or more	2,500 or more	2,500 or more		
15,000 or more	15,000 or more	15,000 or more		
[Patterned cell]				
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- Notes :**
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 - 5 : Volatile organic compounds
 - 6 : A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers
 - 7 : Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

Materiality View of CSR Roadmap 2025





Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Ensuring Safety and Fire Accident Prevention	Aim for zero major accidents	3-① Number of major accidents
	Achieve world's best standard for safety management	3-② Achievement for world's best standard for safety management (not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)
	Create a comfortable working environment to ensure the safety and health of employees and to raise the level of safety and health	
	Aim for zero fire and explosion accidents	3-③ Number of fire and explosion accidents
	Aim for zero environmental accidents	3-④ Number of environmental accidents
Ensuring Ethics and Compliance	Aim for no major cases of non-compliance with or violations of laws and regulations	2-① Number of major violations of laws or ordinances
	Practice appropriate transactions based on free, fair, and transparent market competition	
	Prohibit any association with organized criminal groups or other anti-social forces and take a firm stance against them	
	Conduct internal legal audits and improve problems found in the audits	2-② Group companies implementing internal legal audits (%)
	Appropriately operate a whistle-blowing system	
	Thoroughly disseminate the Ethics & Compliance Code of Conduct	
	Provide information and implement education on major laws and regulations and other compliance-related matters	2-③ Group companies providing information and implementing education on major laws and regulations and other compliance-related matters (%)


	Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
	Targets				
	0	0	0	3 Safety, Accident Prevention, and Environmental Preservation	      
	No more than 0.05	No more than 0.05	No more than 0.05		
	0	0	0		
	0	0	0		
	0	0	0	2 Ethics and Compliance	
	<ul style="list-style-type: none"> • Toray Industries, Inc.: 100% • Group companies in and outside Japan: Implemented focusing on high-risk companies 				
	100%	100%	100%		

- Notes :**
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 - 7 : Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

Materiality View of CSR Roadmap 2025



Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Enhancing Product Quality and Safety	Ensure that quality assurance compliance education is being fully implemented	4-① Quality assurance compliance education (% of people trained)
	Enhance the auditing function to ensure improvement and continuity of Toray Group's overall quality assurance framework, and conduct auditing to check its effectiveness	4-② Quality and product safety audit implementation rate (%)
	Expand the use of the quality-related data management system with fraud prevention features across the entire Group	
	Promote the construction of systems in each business to facilitate deliberation, approval, and management related to quality assurance activities	
	Aim for zero product accidents	4-③ Number of product accidents
Strengthening Corporate Governance	Regularly hold Toray Group Business Strategy Discussion ⁷ sessions at Board of Directors meetings	1-① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (times)
	Consider the appropriate form of Toray head office involvement in the execution of business at each group company from the viewpoint of balancing the effectiveness of group-wide governance with the dynamic decision-making of subsidiaries	
	Expand opportunities for directors and corporate auditors to get the training they need to acquire the knowledge required to fulfill their responsibilities (excluding execution) and to fulfill their roles appropriately, including use of external programs	
	Operate an effective internal control system	1-② Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)
	Under normal conditions, manage risks by identifying and addressing two main types of risks: (1) Priority risks for Toray Group, which are established based on periodic assessments every three years (2) Specified risks, which are established based on constant monitoring, investigation and analysis of risk trends in and outside Japan	
	In the event of an emergency, respond appropriately in accordance with the Risk Management Regulations	
	Follow up on progress made to address Toray Group's priority risks	
	Follow up on the status of internal control implementation at each group company concerned	5-① Group companies implementing self-assessment and results follow-up using the internal control checklist (%)
	Enhance cooperation with crisis management committees at Group sites outside Japan concerning crisis management under normal conditions	
	Implement risk reduction across the Group for information security risks such as cyberattacks and information leaks	5-② Group companies implementing information security evaluation and risk reduction (%)
Provide risk management education		


	Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
	Targets				
	100%	100%	100%	4 Product Quality and Safety	
	100%	100%	100%		
	0	0	0		
	8	8	8	1 Corporate Governance	  
	90%	90%	90%		
	35%	70%	100%	5 Risk Management	
	35%	70%	100%		

- Notes :**
- 1 :  : No KPI set in CSR Roadmap 2025
 - 2 : Business areas and product lines that can help realize the Toray Group Sustainability Vision
 - 3 : Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the guidelines of the Japan Chemical Industry Association and the International Council of Chemical Associations (ICCA).
 - 4 : Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.
 - 5 : Volatile organic compounds
 - 6 : A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers
 - 7 : Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

Materiality View of CSR Roadmap 2025

Material Issues	Main Initiatives of CSR Roadmap 2025	KPIs of CSR Roadmap 2025
Establishing Sustainable Supply Chain	Request suppliers to comply with the Toray Group CSR Procurement Guidelines, and strive to ascertain the status of each company's CSR initiatives	9-① Suppliers agreeing to the Toray Group CSR Procurement Guidelines (%)
	Identify high-risk areas that may have a negative impact on the environment and human rights, and promote supply chain due diligence to implement measures to prevent or mitigate the identified risks	9-② Implementation of supply chain due diligence (% of cases)
	Promote procurement of responsibly sourced materials such as non-conflict minerals and sustainable palm oil	9-③ Oil procurement needs met by palm oil sourced in a manner that is environmentally responsible and respectful of human rights (% of oil purchased, by value)
	Reduce CO ₂ emissions intensity from distribution activities	9-④ Reduction in CO ₂ emissions per unit of sales from distribution activities (year-on-year)
	Continually investigate and ascertain logistics risks related to natural disasters such as typhoons and heavy rains, and strive to reduce risks	9-⑤ Key external inventory sites that have been assessed for natural disaster risk and have implemented measures to mitigate serious risks (%)
	Continually work to reduce the environmental impact and improve the quality of distribution activities	
	In accordance with the Declaration of Voluntary Activities for the White Logistics Movement, contribute to sustainable logistics, for instance by selecting logistics companies that are engaged in working style reform, etc.	
Respecting Human Rights and Promoting Human Resource Diversity	Implement human rights education and training	8-① Group companies implementing human rights education and training (%)
	Achieve the legally mandated employment rate of persons with disabilities	8-② Group companies that have achieved legally mandated employment rate of persons with disabilities (%)
	Operate a whistle-blowing system and consultation service at each Toray Group company to promptly and appropriately respond to any problem reported in an effort to prevent or mitigate any negative impact on human rights	
	As part of career development initiatives for core staff, enhance the use of the career path worksheets included in the personnel information system	8-③ Career development initiatives for core staff using the personnel information system (use of career path worksheets) (% of employees)
	Systematically hire, develop, and appoint core staff outside Japan	
	Create workplace environments in which women will feel comfortable performing their duties	
	Promote the use and improve the operation of measures to support employee work-life balance	8-④ Employees returning to work from childcare leave (%)
		8-⑤ Male employees taking childcare leave or other leave for the same reason (%)
	Reduce overtime work exceeding standard hours	8-⑥ Reduction in employees who exceed 45 hours/month of non-statutory working hours
Encourage the use of annual paid leave by labor union members	8-⑦ Available annual paid leave used by labor union members (%)	

Fiscal 2023	Fiscal 2024	Fiscal 2025	Related CSR Guidelines	Related SDGs
Targets				
At least 75%	At least 85%	At least 90%	9 Establishing Sustainable Supply Chain	
At least 60% (Fiscal 2024)		At least 90%		
At least 70% (Fiscal 2024)		At least 90%		
1%	1%	1%		
At least 60%	At least 75%	At least 90%		
100%	100%	100%	8 Human Rights Promotion and Human Resources Development	
100%	100%	100%		
Year-on-year increase	Year-on-year increase	Year-on-year increase		
100%	100%	100%		
Year-on-year increase	Year-on-year increase	Year-on-year increase		
Year-on-year reduction	Year-on-year reduction	Year-on-year reduction		
90%	90%	90%		

- Notes :**
- 1 :  : No KPI set in CSR Roadmap 2025
 - 2 : Business areas and product lines that can help realize the Toray Group Sustainability Vision
 - 3 : Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the guidelines of the Japan Chemical Industry Association and the International Council of Chemical Associations (ICCA).
 - 4 : Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.
 - 5 : Volatile organic compounds
 - 6 : A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers
 - 7 : Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

Materiality View of CSR Roadmap 2022

Materiality	Main initiatives of CSR Roadmap 2022	KPIs of CSR Roadmap 2022
1 Contributing to the solution of environmental issues through business activities	Increase revenue from Green Innovation products	Revenue of Green Innovation products (IFRS)
	Expand contribution to CO ₂ reduction in the value chain ³	Contribution to CO ₂ reduction in value chain
	Expand water filtration throughput contribution by Toray's water treatment membranes ⁴	Contribution of Toray water treatment products
	Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	(See footnote 2 below.)
	Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	
2 Contributing to health maintenance and longevity through business activities	Increase revenue from Life Innovation products	Revenue of Life Innovation products (IFRS)
	Contribute to countermeasures to public health risks, including infectious diseases, by developing and upgrading materials and products for protective clothing and personal protective equipment, as well as materials to protect environmental hygiene including of air and water	
3 Addressing resource and energy issues	Reduce greenhouse gas emissions per unit of revenue	Reduction of greenhouse gas emissions per unit of revenue (%)
	Reduce water consumption per unit of revenue	Water usage per unit of revenue (%)
	Aim for a high waste recycling rate	Waste recycling rate (%)
	Systematically adopt renewable energy	

Fiscal 2020	Fiscal 2021	Fiscal 2022	Activities of Fiscal 2022			Related SDGs			
			Targets	Results	Degree of success ¹		Related initiatives		
			1,000 billion yen (Fiscal 2022)	993.4 billion yen	△	Green Innovation Business Expansion Project			
			5.3 times compared to fiscal 2013 (Fiscal 2022)	9.5 times	○	Green Innovation Business Expansion Project			
			2.4 times compared to fiscal 2013 (Fiscal 2022)	2.5 times	○	Green Innovation Business Expansion Project			
						Approach to Green Innovation Products			
						Realizing a Circular Economy			
			300 billion yen (Fiscal 2022)	369.6 billion yen	○	Life Innovation Business Expansion Project			
						Life Innovation Business Expansion Project			
			At least 20% lower than fiscal 2013 (Fiscal 2022)	34.6% ^{5&6}	○	Conserving Energy and Reducing Greenhouse Gas Emissions			
			At least 25% lower than fiscal 2013 (Fiscal 2022)	31.9% ⁶	○	Initiatives for Managing Water Resources			
			At least 86%	At least 86%	At least 86%	86.8%		○	Initiatives to Reduce Waste
									Conserving Energy and Reducing Greenhouse Gas Emissions

Notes : 1 The degree of success is defined as follows: ○ means the target was fully met; △ means the target was 50% met or better; × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

2 : No KPI set in CSR Roadmap 2022

3 Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the guidelines of the Japan Chemical Industry Association and the International Council of Chemical Associations (ICCA).

4 Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

5 Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, the reduction is 32.7%.

6 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

7 Volatile organic compounds


8 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

9 The shifting of freight transportation by truck or other vehicle to railways and ships, which have a smaller environmental impact


10 A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers

Materiality View of CSR Roadmap 2022

Materiality	Main initiatives of CSR Roadmap 2022	KPIs of CSR Roadmap 2022
4 Reducing greenhouse gas emissions	Reduce greenhouse gas emissions per unit of revenue	Reduction of greenhouse gas emissions per unit of revenue (%)
	Aim for a high waste recycling rate	Waste recycling rate (%)
	Systematically adopt renewable energy	
5 Addressing substances with negative environmental impact	Reduce greenhouse gas emissions per unit of revenue	Reduction of greenhouse gas emissions per unit of revenue (%)
	Reduce atmospheric VOC ⁷ emissions	Reduction of atmospheric VOC emissions (%)
	Aim for a high waste recycling rate	Waste recycling rate (%)
	Systematically adopt renewable energy	
	Reduce atmospheric emissions of substances subject to the PRTR Act ⁸	
6 Corporate ethics and legal compliance	Aim for no major cases of non-compliance with or violations of laws and regulations	Number of major violations of laws or ordinances
	Practice appropriate transactions based on free, fair, and transparent market competition	
	Prohibit any association with organized criminal groups or other anti-social forces and take a firm stance against them	
	Conduct internal legal audits and improve problems found in the audits	Implementing internal legal audits of group companies, group companies improving problems found in internal legal audits in the previous year (%)
	Appropriately operate a whistle-blowing system	
	Thoroughly disseminate the Ethics & Compliance Code of Conduct	
	Provide information and implement education on major laws and regulations and other compliance-related matters	Group companies providing information and implementing education on major laws and regulations and other compliance-related matters (%)

Fiscal 2020	Fiscal 2021	Fiscal 2022	Activities of Fiscal 2022			Related SDGs
			Targets	Results	Degree of success ¹	
At least 20% lower than fiscal 2013 (Fiscal 2022)			34.6%	○	Conserving Energy and Reducing Greenhouse Gas Emissions	         
At least 86%	At least 86%	At least 86%	86.8%	○	Initiatives to Reduce Waste	
					Conserving Energy and Reducing Greenhouse Gas Emissions	
At least 20% lower than fiscal 2013 (Fiscal 2022)			34.6%	○	Conserving Energy and Reducing Greenhouse Gas Emissions	         
At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	70.9%	○	Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances	
At least 86%	At least 86%	At least 86%	86.8%	○	Initiatives to Reduce Waste	
					Conserving Energy and Reducing Greenhouse Gas Emissions	
					Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances	
0	0	0	0	○	Ethics and Compliance	
					Establishing a Corporate Culture of Total Respect for Ethics and Compliance	
					Establishing a Corporate Culture of Total Respect for Ethics and Compliance	
Audits: Conduct at Toray Industries, Inc. and its group companies in and outside Japan Percent that improved: 100% for all audits by the following fiscal year			100%	○	Establishing a Corporate Culture of Total Respect for Ethics and Compliance	
					Establishing a Corporate Culture of Total Respect for Ethics and Compliance	
					Establishing a Corporate Culture of Total Respect for Ethics and Compliance	
100%	100%	100%	100%	○	Establishing a Corporate Culture of Total Respect for Ethics and Compliance	

Notes : 1 The degree of success is defined as follows: ○ means the target was fully met; △ means the target was 50% met or better; × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

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3 Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the guidelines of the Japan Chemical Industry Association and the International Council of Chemical Associations (ICCA).

4 Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

5 Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard.
Under the latter calculation method, the reduction is 32.7%.

6 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

7 Volatile organic compounds

8 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

9 The shifting of freight transportation by truck or other vehicle to railways and ships, which have a smaller environmental impact


10 A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers

Materiality View of CSR Roadmap 2022

Materiality	Main initiatives of CSR Roadmap 2022	KPIs of CSR Roadmap 2022
7 Ensuring safety and disaster preparedness	Aim for zero major accidents	Number of major accidents
	Achieve world's best standard for safety management	Achieve world's best standard for safety management (not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)
	Create a comfortable working environment to ensure the safety and health of employees and to raise the level of safety and health	
	Aim for zero fire and explosion accidents	Number of fire and explosion accidents
	Aim for zero environmental accidents	Number of environmental accidents
	Reduce greenhouse gas emissions per unit of revenue	Reduction of greenhouse gas emissions per unit of revenue (%)
	Reduce water consumption per unit of revenue	Water usage per unit of revenue (%)
	Reduce atmospheric VOC emissions	Reduction of atmospheric VOC emissions (%)
	Aim for a high waste recycling rate	Waste recycling rate (%)
	Systematically adopt renewable energy	
	Reduce atmospheric emissions of substances subject to the PRTR Act	
	Pursue the greening of each site in consideration of the regulations of each country and region and harmony with the surrounding environment	
	8 Ensuring product quality and safety	Aim for zero product accidents
Establish a system to audit effectiveness of improvement and continuity of Toray Group's overall quality assurance framework		
Introduce a group-wide quality control system with fraud prevention features		
Prepare and build a quality assurance system that covers quality assurance and quality control functions in each business		
Provide quality assurance and product safety education		Group companies implementing product quality assurance and safety education (%)

Fiscal 2020	Fiscal 2021	Fiscal 2022	Activities of Fiscal 2022			Related SDGs	
			Targets	Results	Degree of success ¹		Related initiatives
0	0	0	0	○	Occupational Safety and Accident Prevention Activities	 	
No more than 0.05	No more than 0.05	No more than 0.05	0.37	×	Occupational Safety and Accident Prevention Activities		
					Occupational Safety and Accident Prevention Activities		
0	0	0	2	×	Occupational Safety and Accident Prevention Activities		
0	0	0	7	×	Environmental Risk Management		
At least 20% lower than fiscal 2013 (Fiscal 2022)			34.6%	○	Conserving Energy and Reducing Greenhouse Gas Emissions		
At least 25% lower than fiscal 2013 (Fiscal 2022)			31.9%	○	Initiatives for Managing Water Resources		
At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	70.9%	○	Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances		
At least 86%	At least 86%	At least 86%	86.8%	○	Initiatives to Reduce Waste		
					Conserving Energy and Reducing Greenhouse Gas Emissions		
					Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances		
					Biodiversity Initiatives		
0	0	0	1	×	Initiatives for Quality Assurance and Product Safety		
					Product Quality and Safety		
					Initiatives for Quality Assurance and Product Safety		
					Product Quality and Safety		
100%	100%	100%	100%	○	Initiatives for Quality Assurance and Product Safety		

Notes : 1 The degree of success is defined as follows: ○ means the target was fully met; △ means the target was 50% met or better; × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

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4 Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

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6 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

7 Volatile organic compounds

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10 A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers

Materiality View of CSR Roadmap 2022

Materiality	Main initiatives of CSR Roadmap 2022	KPIs of CSR Roadmap 2022
9 Initiatives for managing water resources	Reduce water consumption per unit of revenue	Water usage per unit of revenue (%)
	Aim for a high waste recycling rate	Waste recycling rate (%)
	Expand water filtration throughput contribution by Toray's water treatment membranes	Contribution of Toray water treatment products
	Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	
	Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	
10 Managing social and environmental impact of suppliers	Request suppliers to practice CSR, including by conducting CSR surveys and audits, and having them make pledges, and strive to understand the status of each company's CSR initiatives	Group companies requesting their suppliers to practice CSR (%)
		Suppliers confirming the status of CSR initiatives as requested by Toray Group (%)
	Address issues in the supply chain such as human rights challenges and conflict mineral issues	
	Reduce CO ₂ emissions intensity from distribution activities	Reduction in CO ₂ emissions per unit of sales from distribution activities (year-on-year)
	Promote modal shift ⁹ across distances of 500 km or more	Modal shift to sea or rail for transport across distances for 500 km or more (%)
	Continually work to reduce the environmental impact and improve the quality of distribution activities	
	In accordance with the Declaration of Voluntary Activities for the White Logistics Movement ¹⁰ , contribute to sustainable logistics, for instance by selecting logistics companies that are engaged in working style reform, etc.	
11 Respecting human rights	Implement human rights education and training	Group companies implementing human rights education and training (%)
	Achieve the legally mandated employment rate of persons with disabilities	Group companies that have achieved legally mandated employment rate of persons with disabilities (%)
	Operate a whistle-blowing system and consultation service at each Toray Group company to promptly and appropriately respond to problems in an effort to reduce human rights risks	

Fiscal 2020	Fiscal 2021	Fiscal 2022	Activities of Fiscal 2022			Related SDGs
			Targets	Results	Degree of success ¹	
	At least 25% lower than fiscal 2013 (Fiscal 2022)		31.9%	○	Initiatives for Managing Water Resources	
At least 86%	At least 86%	At least 86%	86.8%	○	Initiatives to Reduce Waste	
2.4 times compared to fiscal 2013 (Fiscal 2022)			2.5 times	○	Green Innovation Business Expansion Project	
					Approach to Green Innovation Products	
					Realizing a Circular Economy	
At least 80%	At least 90%	At least 95%	93%	△	Socially Responsible Procurement Initiatives at Toray Group	
At least 70%	At least 70%	At least 70%	88%	○	Socially Responsible Procurement Initiatives at Toray Group	
					Socially Responsible Procurement Initiatives at Toray Group	
1%	1%	1%	15.3%	○	Toray Group Distribution Initiatives	
40% (Fiscal 2022 target)			27%	△	Toray Group Distribution Initiatives	
					Toray Group Distribution Initiatives	
					Toray Group Distribution Initiatives	
100%	100%	100%	100%	○	Human Rights Activity Report	
100%	100%	100%	53.1%	△	Promoting Diversity	
					Human Rights Activity Report	

Notes : 1 The degree of success is defined as follows: ○ means the target was fully met; △ means the target was 50% met or better; × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

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6 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

7 Volatile organic compounds

8 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

9 The shifting of freight transportation by truck or other vehicle to railways and ships, which have a smaller environmental impact

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Materiality View of CSR Roadmap 2022

Materiality	Main initiatives of CSR Roadmap 2022	KPIs of CSR Roadmap 2022
12 Creating a positive workplace	As part of career develop initiatives for core staff, use the career path worksheets included in the new personnel information system	Career development of core staff using the new personnel information system (% of staff using a career path worksheet)
	Systematically hire, develop, and appoint core staff outside Japan	
	Create workplace environments in which women will feel comfortable performing their duties	
	Support the return to work from long-term childcare leave	Employees returning to work from childcare leave (%)
	Reduce the number of employees who exceed non-statutory working hours	Reduction in employees who exceed 45 hours/month of non-statutory working hours (%)
	Encourage the use of annual paid leave by labor union members	Available annual paid leave used by labor union members (%)
13 Securing and developing human resources	As part of career develop initiatives for core staff, use the career path worksheets included in the new personnel information system	Career development of core staff using the new personnel information system (% of staff using a career path worksheet)
	Systematically hire, develop, and appoint core staff outside Japan	
	Create workplace environments in which women will feel comfortable performing their duties	
	Support the return to work from long-term childcare leave	Employees returning to work from childcare leave (%)
	Reduce the number of employees who exceed non-statutory working hours	Reduction in employees who exceed 45 hours/month of non-statutory working hours (%)
14 Conserving biodiversity	Reduce greenhouse gas emissions per unit of revenue	Reduction of greenhouse gas emissions per unit of revenue (%)
	Reduce atmospheric VOC emissions	Reduction of atmospheric VOC emissions (%)
	Aim for a high waste recycling rate	Waste recycling rate (%)
	Conduct a survey of palm oil contained in raw materials and switch to certified products	Conduct a survey of palm oil contained in raw materials (%)
	Systematically adopt renewable energy	
	Reduce atmospheric emissions of substances subject to the PRTR Act	

Fiscal 2020	Fiscal 2021	Fiscal 2022	Activities of Fiscal 2022			Related SDGs
			Targets	Results	Degree of success ¹	
20%	30%	100%	100%	○	Securing and Developing Human Resources to Create New Value	
					Securing and Developing Human Resources to Create New Value	
					Promoting Diversity	
100%	100%	100%	100%	○	Creating a Positive Workplace for Employees	
Year-on-year reduction	Year-on-year reduction	Year-on-year reduction	79.7%	○	Creating a Positive Workplace for Employees	
About 90%	About 90%	About 90%	93.2%	○	Creating a Positive Workplace for Employees	
20%	30%	100%	100%	○	Securing and Developing Human Resources to Create New Value	
					Securing and Developing Human Resources to Create New Value	
					Promoting Diversity	
100%	100%	100%	100%	○	Creating a Positive Workplace for Employees	
Year-on-year reduction	Year-on-year reduction	Year-on-year reduction	79.7%	○	Creating a Positive Workplace for Employees	
At least 20% lower than fiscal 2013 (Fiscal 2022)			34.6%	○	Conserving Energy and Reducing Greenhouse Gas Emissions	
At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	70.9%	○	Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances	
At least 86%	At least 86%	At least 86%	86.8%	○	Initiatives to Reduce Waste	
Usage survey of certified products : 100%	Decision making (Yes/No) of shifting to certified raw materials : 100% (Fiscal 2022)		100%	○	Biodiversity Initiatives	
					Conserving Energy and Reducing Greenhouse Gas Emissions	
					Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances	

Notes : 1 The degree of success is defined as follows: ○ means the target was fully met; △ means the target was 50% met or better; × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

2 : No KPI set in CSR Roadmap 2022

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6 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

7 Volatile organic compounds

8 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

9 The shifting of freight transportation by truck or other vehicle to railways and ships, which have a smaller environmental impact

10 A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers

CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025)

In June 2023, Toray Group established its eighth Medium-Term CSR Plan, CSR Roadmap 2025, covering the period from fiscal 2023 to fiscal 2025.

Taking the Group's 11 material issues into account, CSR Roadmap 2025 outlines the activity targets and main initiatives for each of the ten themes in Toray's CSR Guidelines, as well as key performance indicators (KPIs). The purpose is to systematically promote the Group's CSR activities in an integrated manner with the Medium-Term Management Program.

For more information on the CSR Roadmap 2025, refer to the PDF file below.

CSR Roadmap 2025 (FY 2023 – FY 2025)

The CSR Roadmap 2025 is directly linked to TORAY VISION 2030 and Project AP-G 2025. These management strategies are designed to ensure the Group lives up to its Corporate Philosophy, which includes the principles and values it has upheld since the beginning, and which is also its reason for being and purpose. The new roadmap also aims to achieve sustainable development for the Group and society as a whole, as well as the Toray Group Sustainability Vision, ensuring that Toray Group remains a highly valuable corporate group that is respected by society.

The relationship between CSR, the Toray Group Sustainability Vision, the Toray Philosophy, and our management strategies is illustrated by the following diagram.

The diagram shows a timeline from FY2023 to FY2050. At the bottom, a blue arrow labeled 'Corporate Philosophy' points right, with the text 'Contributing to society through the creation of new value with innovative ideas, technologies and products'. Above it, a large blue arrow labeled 'Long-Term Corporate Vision TORAY VISION 2030' points right, with the subtext 'Achieving sound, sustainable growth and creating social value'. Inside this blue arrow, a smaller blue arrow labeled 'Medium-Term Management Program Project AP-G 2025' points right, with the subtext 'Innovation and Resilience Management – Value Creation for New Momentum'. Inside the AP-G arrow, a yellow arrow labeled 'CSR Roadmap 2025' points right, with the subtext '(Sustainable Development of Toray Group and Society as a Whole)'. To the right of the AP-G arrow, a green arrow labeled 'Toray Group Sustainability Vision' points right, with the subtext '(Four Perspectives of the World as Envisioned in 2050)'. The timeline markers FY2023, FY2025, FY2030, and FY2050 are positioned at the top of the diagram.

(PDF:770KB) [PDF](#)

- Click [here](#) for CSR Roadmap 2022, which covers fiscal 2020-2022 (PDF:2.17MB).

CSR Roadmap 2025 KPI List







Along with listing the main initiatives for each CSR Guidelines theme, the roadmap establishes KPIs to quantitatively monitor yearly progress.

	Key Performance Indicators (KPIs)	Targets			Reporting Scope
		Fiscal 2023	Fiscal 2024	Fiscal 2025	
1 Corporate Governance	① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (times)	8	8	8	※ 1
	② Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)	90%	90%	90%	※ 1
2 Ethics and Compliance	③ Number of major violations of laws or ordinances	0	0	0	※ 1
	④ Group companies implementing internal legal audits (%)	● Toray Industries, Inc.: 100% ● Group companies in and outside Japan: Implemented focusing on high-risk companies			※ 1

(PDF:112KB) [PDF](#)

Relationship between the CSR Guidelines and SDGs/ESG Categories

The relationship between each theme of the Toray Group CSR Guidelines and the SDGs/ESG categories is shown in this comparative table.

	3 GOOD HEALTH AND WELL-BEING		●				●			●
	4 QUALITY EDUCATION							●		●
	5 GENDER EQUALITY							●	●	●
	6 CLEAN WATER AND SANITATION		●				●		●	●
	7 AFFORDABLE AND CLEAN ENERGY		●				●			
	8 DECENT WORK AND ECONOMIC GROWTH		●					●	●	●

(PDF:89.4KB) [PDF](#)

CSR Roadmap 2025 (FY 2023 – FY 2025)

The CSR Roadmap 2025 is directly linked to TORAY VISION 2030 and Project AP-G 2025. These management strategies are designed to ensure the Group lives up to its Corporate Philosophy, which includes the principles and values it has upheld since the beginning, and which is also its reason for being and purpose. The new roadmap also aims to achieve sustainable development for the Group and society as a whole, as well as the Toray Group Sustainability Vision, ensuring that Toray Group remains a highly valuable corporate group that is respected by society.

The relationship between CSR, the Toray Group Sustainability Vision, the Toray Philosophy, and our management strategies is illustrated by the following diagram.

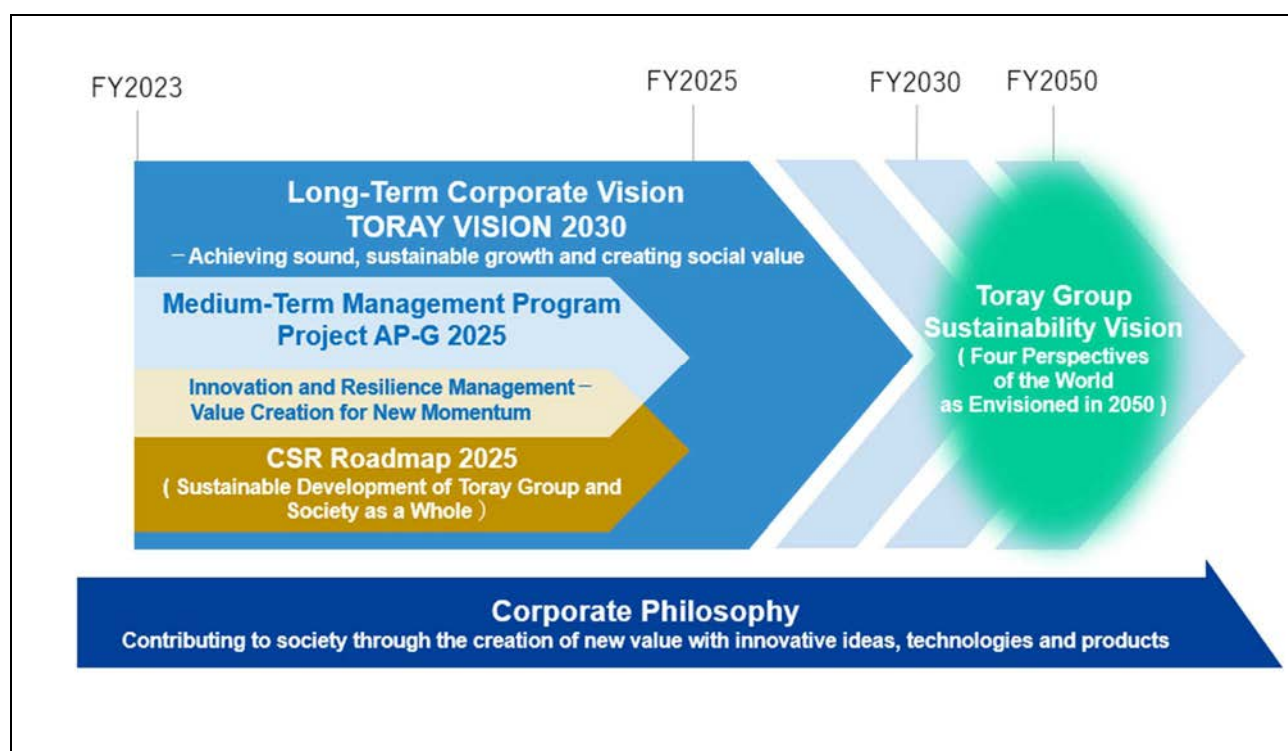


Figure 1. The relationship between CSR, the Toray Group Sustainability Vision, the Toray Philosophy, and our management strategies

In June 2023, Toray Group selected 11 CSR-related material issues: five issues in the category of “Contribution to Society through the Creation of New Value” and six issues in the category of “Management Foundation.” They are shown below.

Contribution to Society through the Creation of New Value

<p>Accelerating Climate Change Mitigation Accelerate the shift to carbon neutrality by contributing to reduction of global greenhouse gas emissions through innovative technologies and advanced materials and by pursuing emissions reduction across the Toray Group.</p>
<p>Promoting a Circular Economy Promote sustainable, circular resource use and production by increasing recycling, using biomass-based raw materials, and converting CO2 into resources.</p>
<p>Taking a Nature-Positive Approach Contribute to restoration of the natural environment by offering products that help provide clean water and air , reduce environmental impact, and otherwise benefit the environment and by working to preserve green spaces and properly manage chemical substances.</p>
<p>Committed to Healthier Lives Contribute to healthy, hygienic lifestyles by providing advanced materials that promote health and longevity, reduce the burden on nursing care and healthcare providers, improve the quality of medical care, and contribute to human safety.</p>
<p>Developing in Collaboration with Stakeholders Focus on sustainable development for both the Group and society by pursuing co-creation with stakeholders and contributing solutions to social issues. Appropriately disclose information and promote dialogue with stakeholders.</p>

Management Foundation

<p>Ensuring Safety and Fire Accident Prevention Protect public safety and the personal safety of employees by pursuing zero accidents, thoroughly practicing disaster and fire prevention, and ensuring safe work environments.</p>
<p>Ensuring Ethics and Compliance Act with fairness, high ethical standards and a strong sense of responsibility while complying with laws, regulations and social norms to earn trust and meet social expectations.</p>
<p>Enhancing Product Quality and Safety Provide safe, high-quality products by further strengthening quality control, quality assurance, and product safety management.</p>
<p>Strengthening Corporate Governance Maintain sound management across the Toray Group by reviewing management systems and programs, strengthening internal controls, and implementing risk management (managing risks related to business activities such as economic security, security trade, and information security).</p>
<p>Establishing Sustainable Supply Chain Focus on building a stable, sustainable supply chain by promoting environmental conservation and respect for human rights throughout the supply chain.</p>
<p>Respecting Human Rights and Promoting Human Resource Diversity Respect internationally recognized human rights and create work environments that allow a diverse pool of human resources to demonstrate their creativity.</p>

To address the material issues for Toray Group’s CSR initiatives, the CSR Roadmap 2025 establishes specific targets, key initiatives, and KPIs for measuring progress on achieving the targets for each of the 10 guidelines shown on the following pages. By systematically implementing the CSR Roadmap 2025, the Group will strive to contribute to society by creating new value and work to enhance its management foundation.

1 Corporate Governance

Implementation leader

General Manager of Corporate Strategic Planning Div. (Department responsible for implementation: Corporate Strategic Planning Div.)

Continually revise management systems, strengthen internal controls as part of efforts to fulfill the company's social responsibilities

Related Material Issues for CSR

CG Strengthening Corporate Governance

CSR Roadmap Goals

- (1) Further improve governance by ensuring that Board of Directors operates in a manner that contributes to the enhancement of corporate value over the medium to long term
- (2) Perform monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Companies Act

Main Initiatives

	Material Issues	KPI
(1) Regularly hold Toray Group Business Strategy Discussion ¹ sessions at Board of Directors meetings	CG	1-①
(2) Consider the appropriate form of Toray head office involvement in the execution of business at each group company from the viewpoint of balancing the effectiveness of group-wide governance with the dynamic decision-making of subsidiaries	CG	—
(3) Expand opportunities for directors and corporate auditors to get the training they need to acquire the knowledge required to fulfill their responsibilities (excluding execution) and to fulfill their roles appropriately, including use of external programs	CG	—
(4) Operate an effective internal control system Related main initiatives: 2-(4), 4-(2), 5-(4)	CG	1-②

¹ Toray Group Business Strategy Discussions are opportunities to check the progress made on medium-term management issues, including initiatives for sustainability, and the direction of business operations.

2 Ethics and Compliance

Implementation leader

General Manager of Legal & Compliance Div.
(Department responsible for implementation:
Compliance Dept.)

Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and act with a keen sense of compliance to maintain the trust of society

Related Material Issues for CSR

EC Ensuring Ethics and Compliance

CSR Roadmap Goals

- (1) No major cases throughout the Toray Group of non-compliance with or violation of bribery regulations, antitrust laws, etc.
- (2) Implement monitoring to raise ethical and compliance awareness throughout Toray Group
- (3) Enhance awareness-raising and educational activities relating to corporate ethics and compliance

Main Initiatives

	Material Issues	KPI
(1) Aim for no major cases of non-compliance with or violations of laws and regulations	EC	2- 1
(2) Practice appropriate transactions based on free, fair, and transparent market competition	EC	—
(3) Prohibit any association with organized criminal groups or other anti-social forces and take a firm stance against them	EC	—
(4) Conduct internal legal audits and improve problems found in the audits Related main initiatives: 1-(4), 4-(2), 5-(4)	EC	2- 2
(5) Appropriately operate a whistle-blowing system Related main initiatives: 8-(3), 9-(2)	EC	—
(6) Thoroughly disseminate the Ethics & Compliance Code of Conduct	EC	—
(7) Provide information and implement education on major laws and regulations and other compliance-related matters Related main initiative: 4-(1)	EC	2- 3

3 Safety, Accident Prevention, and Environmental Preservation

Implementation leaders

General Manager of Manufacturing Div. (Dept. responsible for implementation: Environment & Safety Dept.): Main initiatives (1)-(5), (8)-(10)

General Manager of Engineering Div. (Dept. responsible for implementation: Second Engineering Dept.): Main initiatives (6), (7)

Ensure the safety and health of society and employees, and protect the environment in all business processes, from procuring raw materials and manufacturing to the supply and disposal of products

Related Material Issues for CSR

CC Accelerating Climate Change Mitigation

CE Promoting a Circular Economy

NP Taking a Nature-Positive Approach

SF Ensuring Safety and Fire Accident Prevention

CSR Roadmap Goals

- (1) Place the highest priority on safety, thoroughly uphold the basic rules, and strive to prevent disasters, fires, and environmental accidents
- (2) Based on the Toray Group Sustainability Vision, reduce environmental impact, focusing on addressing climate change, effectively utilizing water resources, and protecting the environment and biodiversity

Main Initiatives

	Material Issues	KPI
Safety		
(1) Aim for zero major accidents	SF	3-①
(2) Achieve world's best standard for safety management	SF	3-②
(3) Create a comfortable working environment to ensure the safety and health of employees and to raise the level of safety and health	SF	—
Accident Prevention		
(4) Aim for zero fire and explosion accidents	SF	3-③
Environmental Prevention		
(5) Aim for zero environmental accidents	SF	3-④
(6) Reduce greenhouse gas emissions per unit of revenue Related main initiatives: 7-(4)(5), 9-(4)	CC CE NP	3-⑤* 3-⑥
(7) Reduce water consumption per unit of revenue Related main initiatives: 7-(3)(5)	CC CE NP	3-⑦*
(8) Aim for a high waste recycling rate Related main initiatives: 7-(4)(5)	CC CE NP	3-⑧
(9) Reduce atmospheric VOC ² emissions	NP	3-⑨
(10) Pursue the greening of each site in consideration of the regulations of each country and region and harmony with the surrounding environment	CC NP	—

² Volatile organic compounds

* KPIs 3-⑤ and 3-⑦ are the same as targets in the Medium-Term Management Program, Project AP-G 2025

4 Product Quality and Safety

Implementation leader

General Manager of Quality Assurance Div.
(Dept. responsible for implementation: Quality Assurance Planning & Administration Dept.)

Provide safe, highly reliable products by striving to enhance management systems for product quality assurance and safety, and disclose appropriate information

Related Material Issues for CSR

QS Enhancing Product Quality and Safety

CSR Roadmap Goals

- (1) Enhance the group-wide frameworks for quality control, quality assurance, and product safety management
- (2) Achieve zero product accidents

Main Initiatives

	Material Issues	KPI
(1) Ensure that quality assurance compliance education is being fully implemented Related main initiative: 2-(7)	QS	4-①
(2) Enhance the auditing function to ensure improvement and continuity of Toray Group's overall quality assurance framework, and conduct auditing to check its effectiveness Related main initiatives: 1-(4), 2-(4), 5-(4)	QS	4-②
(3) Expand the use of the quality-related data management system with fraud prevention features across the entire Group	QS	—
(4) Promote the construction of systems in each business to facilitate deliberation, approval, and management related to quality assurance activities	QS	—
(5) Aim for zero product accidents	QS	4-③

5 Risk Management

Implementation leader

General Manager of Corporate Strategic Planning Div. (Department responsible for implementation: Corporate Strategic Planning Div.)

Under normal conditions, assess and analyze risks, and strive to mitigate and prevent them from materializing; and in the event of a crisis that could have a significant impact on management activities, strive to prevent damage from increasing, by bringing the situation quickly under control and normalizing conditions with a prompt and appropriate response

Related Material Issues for CSR

CG Strengthening Corporate Governance

CSR Roadmap Goals

- (1) Reduce risks by identifying and mitigating risks that affect the resolution of management issues across the Group
- (2) Enhance internal controls across the Group and raise the level of risk mitigation efforts
- (3) Instill greater risk management among employees by rolling out risk management education throughout the Toray Group

Main Initiatives

	Material Issues	KPI
Under normal conditions, manage risks by identifying and addressing two main types of risks:		
(1) Priority risks for Toray Group, which are established based on periodic assessments every three years	CG	—
(2) Specified risks, which are established based on constant monitoring, investigation and analysis of risk trends in and outside Japan		
Related main initiative: 9-(5)		
(2) In the event of an emergency, respond appropriately in accordance with the Risk Management Regulations	CG	—
(3) Follow up on progress made to address Toray Group's priority risks	CG	—
Follow up on the status of internal control implementation at each group		
(4) company concerned	CG	5-①
Related main initiatives: 1-(4), 2-(4), 4-(2)		
(5) Enhance cooperation with crisis management committees at Group sites outside Japan concerning crisis management under normal conditions	CG	—
(6) Implement risk reduction across the Group for information security risks such as cyberattacks and information leaks	CG	5-②
(7) Provide risk management education	CG	—

6 Communication

Implementation leader

General Manager of General Administration & Communications Div. (Department responsible for implementation: Corporate Communication Dept.)

Disclose corporate information in an active, fair and straightforward manner to maintain management transparency; and disclose information appropriately to encourage dialogue and cooperation with stakeholders including customers, employees, stockholders, business partners, consumers, mass media, and other parties

Related Material Issues for CSR

CS Developing in Collaboration with Stakeholders

CSR Roadmap Goals

- (1) In accordance with the Basic Policies to Promote Dialogue with Stakeholders and the Information Disclosure Principles, enhance communication activities with each stakeholder group to improve corporate value
- (2) Promote dialogue and collaboration with each stakeholder group, and reflect information obtained in management decisions in a timely and appropriate manner

Main Initiatives

	Material Issues	KPI
(1) Actively dispatch information on the Toray Philosophy and use education to ensure it is embraced throughout the Group	CS	—
(2) Enhance information dissemination utilizing owned media such as the Group's websites and social media accounts	CS	6-①
(3) Strive to ascertain customer needs and improve customer satisfaction	CS	—
(4) Facilitate exchange of opinions between management and employees, ascertain issues and problems, and reflect them in the Group's CSR initiatives	CS	6-②
(5) Expand opportunities for management to disseminate information and promote communication with stockholders and investors	CS	6-③
(6) Enhance communication with the mass media	CS	6-④

7 Contributing Solutions to Social Issues through Business Activities

Implementation leader

General Manager of Corporate Strategic Planning Div. (Department responsible for implementation: Corporate Strategic Planning Div., Environmental Solutions Dept., Sustainable Technology Dept.)

Leverage innovation to provide solutions to various social issues such as climate change, resource and energy use, water resource and natural environment conservation, improvement of medical care, and promotion of public health, thereby contributing to sustainable development for society

Related Material Issues for CSR

- **CC Accelerating Climate Change Mitigation**
- **CE Promoting a Circular Economy**
- **NP Taking a Nature-Positive Approach**
- **HL Committed to Healthier Lives**
- **CS Developing in Collaboration with Stakeholders**

CSR Roadmap Goals

Leverage Sustainability Innovation Business³ to address social issues by growing businesses based on the provision of innovative technologies and advanced materials, and by creating new technologies

Main Initiatives

	Material Issues	KPI
(1) Expand revenues from Sustainability Innovation Business ³	● ● ● ● ●	7- 1 *
(2) Expand contribution to CO ₂ reduction in the value chain Related main initiative: 9-(4)	● ● ● ●	7- 2 *
(3) Expand water filtration throughput contribution by Toray's water treatment membranes Related main initiative: 3-(7)	● ● ● ●	7- 3 *
(4) Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy Related main initiatives: 3-(6)(8)	● ● ● ●	—
(5) Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources Related main initiatives: 3-(6)(7)(8)	● ● ● ●	—
(6) Contribute to countermeasures to public health risks, including infectious diseases, by developing and upgrading materials and products for personal protective equipment, as well as materials to protect environmental hygiene including of air and water	● ● ●	—

³ Business areas and product lines that can help realize the Toray Group Sustainability Vision

* KPIs 7-**1** to 7-**3** are the same as targets in the Medium-Term Management Program, Project AP-G 2025

8 Human Rights Promotion and Human Resources Development

Implementation leader

General Manager of Human Resources Div.
(Department responsible for implementation: Personnel Dept., Industrial Relations Dept.)

Respect human rights, provide safe and healthy workplaces for employees, secure and train personnel, and diversify while striving to protect employment

Related Material Issues for CSR

HL Committed to Healthier Lives

HR Respecting Human Rights and Promoting Human Resource Diversity

CSR Roadmap Goals

- (1) Respect human rights and ensure fair promotions based on merit throughout the Toray Group by eliminating discrimination based on factors such as race, creed, skin color, gender (including gender identity and sexual orientation), religion, nationality, language, ability/disability, physical attributes, assets, and place of birth
- (2) Ensure work environments take into consideration the health and diversity of employees and build a vibrant and rewarding workplace culture group-wide, working systematically to secure and train personnel

Main Initiatives

Human Rights Promotion	Material Issues	KPI
(1) Implement human rights education and training	HR	8-①
(2) Achieve the legally mandated employment rate of persons with disabilities	HR	8-②
(3) Operate a whistle-blowing system and consultation service at each Toray Group company to promptly and appropriately respond to any problem reported in an effort to prevent or mitigate any negative impact on human rights Related main initiatives: 2-(5), 9-(2)	HR	—
Human Resources Development		
(4) As part of career development initiatives for core staff, enhance the use of the career path worksheets included in the personnel information system	HR	8-③
(5) Systematically hire, develop, and appoint core staff outside Japan	HR	—
(6) Create workplace environments in which women will feel comfortable performing their duties	HL HR	—
(7) Promote the use and improve the operation of measures to support employee work-life balance	HR	8-④ 8-⑤
(8) Reduce overtime work exceeding standard hours	HL HR	8-⑥
(9) Encourage the use of annual paid leave by labor union members	HL HR	8-⑦

9 Establishing Sustainable Supply Chain

Implementation leader

General Manager of Purchasing & Logistics Div. (Department responsible for Implementation: Purchasing & Logistics Planning & Administration Dept.)

To establish a sustainable supply chain, work closely with suppliers, processing vendors, subcontractors, customers and distribution companies to implement socially responsible procurement throughout the supply chain in order to ensure responsible practices with respect to environmental preservation and human rights

Related Material Issues for CSR

- CS** Developing in Collaboration with Stakeholders
- SC** Establishing Sustainable Supply Chain

CSR Roadmap Goals

To ensure socially responsible procurement by the Toray Group, work with suppliers, processing vendors, subcontractors and other business partners to implement CSR initiatives that include compliance with laws and regulations, amelioration of global warming, environmental conservation, and respect for human rights

Main Initiatives

	Material Issues	KPI
(1) Request suppliers to comply with the Toray Group CSR Procurement Guidelines, and strive to ascertain the status of each company's CSR initiatives	CS SC	9-①
(2) Identify high-risk areas that may have a negative impact on the environment and human rights, and promote supply chain due diligence to implement measures to prevent or mitigate the identified risks Related main initiatives: 2-(5), 8-(3)	CS SC	9-②
(3) Promote procurement of responsibly sourced materials such as non-conflict minerals and sustainable palm oil	CS SC	9-③
(4) Reduce CO ₂ emissions intensity from distribution activities Related main initiatives: 3-(6), 7-(2)	CS SC	9-④
(5) Continually investigate and ascertain logistics risks related to natural disasters such as typhoons and heavy rains, and strive to reduce risks Related main initiative: 5-(1)	CS SC	9-⑤
(6) Continually work to reduce the environmental impact and improve the quality of distribution activities	CS SC	—
(7) In accordance with the Declaration of Voluntary Activities for the White Logistics Movement, ⁴ contribute to sustainable logistics, for instance by selecting logistics companies that are engaged in working style reform, etc.	CS SC	—

⁴ A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers

Social Contribution 10 Activities as a Good Corporate Citizen

Implementation leader

General Manager of General Administration & Communications Div. (Department responsible for implementation: CSR Operations Dept.)

Proactively participate in local communities and the larger society in order to contribute to development in a way befitting a good corporate citizen

Related Material Issues for CSR

CS Developing in Collaboration with Stakeholders

CSR Roadmap Goals

- (1) Promote social contribution activities in ways that are unique to Toray, voluntarily and continuously engaging in the priority areas of “science and technology promotion,” “environment and communities,” and “health and welfare”
- (2) As a responsible member of society, implement social contribution activities that help to solve the global issues addressed by the SDGs and other initiatives

Main Initiatives

	Material Issues	KPI
(1) Implement social contribution activities at the appropriate scale	CS	10-①
(2) Actively engage in social contribution activities that are distinctive of Toray Group, focusing on science and technology promotion	CS	—
(3) Promote active planning and implementation of voluntary social contribution activities at each Group site, on an ongoing basis	CS	10-②
(4) Implement a range of educational support activities that capture the interest and curiosity of youngsters through school visits and company tours focusing on areas such as science, the environment, and career opportunities, thereby helping to inspire upcoming generations	CS	10-③
(5) Educate employees at Toray Group in order to instill the significance of social contribution	CS	—
(6) Support the improvement and development of science and technology and the promotion of science education through the activities of Toray science foundations in and outside Japan	CS	—
(7) Share information with internal and external stakeholders on Toray Group’s social contribution activities via websites and other means	CS	—

CSR Roadmap 2025 KPI List

Reporting Scope: ※1: Toray Group Companies, ※2: Toray Industries, Inc.


















	Key Performance Indicators (KPIs)	Targets			Reporting Scope
		Fiscal 2023	Fiscal 2024	Fiscal 2025	
1 Corporate Governance	① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (times)	8	8	8	※ 1
	② Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)	90%	90%	90%	※ 1
2 Ethics and Compliance	① Number of major violations of laws or ordinances	0	0	0	※ 1
	② Group companies implementing internal legal audits (%)	●Toray Industries, Inc.: 100% ●Group companies in and outside Japan: Implemented focusing on high-risk companies			※ 1
	③ Group companies providing information and implementing education on major laws and regulations and other compliance-related matters (%)	100%	100%	100%	※ 1
3 Safety, Accident Prevention, and Environmental Preservation	① Number of major accidents	0	0	0	※ 1
	② Achievement for world's best standard for safety management (not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)	No more than 0.05	No more than 0.05	No more than 0.05	※ 1
	③ Number of fire and explosion accidents	0	0	0	※ 1
	④ Number of environmental accidents	0	0	0	※ 1
	⑤ Reduction of greenhouse gas emissions per unit of revenue (%)	At least 40% lower than fiscal 2013 (Fiscal 2025)			※ 1
	⑥ Increase in solar power generation capacity (%)	At least 10% higher than fiscal 2022 (Fiscal 2025)			※ 1
	⑦ Reduction of water usage per unit of revenue (%)	At least 40% lower than fiscal 2013 (Fiscal 2025)			※ 1
	⑧ Waste recycling rate (%)	At least 86%	At least 87%	At least 87%	※ 1
	⑨ Reduction of atmospheric VOC emissions (%)	At least 70% lower than fiscal 2000	At least 72% lower than fiscal 2000	At least 72% lower than fiscal 2000	※ 1
4 Product Quality and Safety	① Quality assurance compliance education (% of people trained)	100%	100%	100%	※ 1
	② Quality and product safety audit implementation rate (%)	100%	100%	100%	※ 1
	③ Number of product accidents	0	0	0	※ 1
5 Risk Management	① Group companies implementing self-assessment and results follow-up using the internal control checklist (%)	35%	70%	100%	※ 1
	② Group companies implementing information security evaluation and risk reduction (%)	35%	70%	100%	※ 1

	Key Performance Indicators (KPIs)	Targets			Reporting Scope
		Fiscal 2023	Fiscal 2024	Fiscal 2025	
6 Communication	① Number of corporate website page views (per month)	1 million page views	1 million page views	1 million page views	※ 2
	② Interviews conducted to exchange opinions within the company (rate of progress)	(First round) 100% completed	(Second round) 30%	(Second round) 60%	※ 1
	③ Interviews with key investors in which management participates (number)	Cumulative total of 120	Cumulative total of 120	Cumulative total of 120	※ 1
	④ News releases (number)	200	200	200	※ 1
7 Contributing Solutions to Social Issues through Business Activities	① Revenues from Sustainability Innovation Business	1,600 billion yen (Fiscal 2025)			※ 1
	② Contribution to CO ₂ reduction in value chain ³	15 times compared to fiscal 2013 (Fiscal 2025)			※ 1
	③ Contribution of Toray water treatment products ⁴	2.9 times compared to fiscal 2013 (Fiscal 2025)			※ 1
8 Human Rights Promotion and Human Resources Development	① Group companies implementing human rights education and training (%)	100%	100%	100%	※ 1
	② Group companies that have achieved legally mandated employment rate of persons with disabilities (%)	100%	100%	100%	Toray Group (Japan)
	③ Career development initiatives for core staff using the personnel information system (use of career path worksheets) (% of employees)	Year-on-year increase	Year-on-year increase	Year-on-year increase	※ 1
	④ Employees returning to work from childcare leave (%)	100%	100%	100%	Employees of Toray Industries, Inc.
	⑤ Male employees taking childcare leave or other leave for the same reason (%)	Year-on-year increase	Year-on-year increase	Year-on-year increase	Employees of Toray Industries, Inc. (not including those posted outside Japan)
	⑥ Reduction in employees who exceed 45 hours/month of non-statutory working hours	Year-on-year reduction	Year-on-year reduction	Year-on-year reduction	※ 2
	⑦ Available annual paid leave used by labor union members (%)	90%	90%	90%	※ 2
9 Establishing Sustainable Supply Chain	① Suppliers agreeing to the Toray Group CSR Procurement Guidelines (%)	At least 75%	At least 85%	At least 90%	※ 1
	② Implementation of supply chain due diligence (% of cases)	At least 60% (Fiscal 2024)		At least 90%	※ 1
	③ Oil procurement needs met by palm oil sourced in a manner that is environmentally responsible and respectful of human rights (% of oil purchased, by value)	At least 70% (Fiscal 2024)		At least 90%	※ 2
	④ Reduction in CO ₂ emissions per unit of sales from distribution activities (year-on-year)	1%	1%	1%	Toray Group (Only specified consigners, Toray Industries, Inc., TAF)
	⑤ Key external inventory sites that have been assessed for natural disaster risk and have implemented measures to mitigate serious risks (%)	At least 60%	At least 75%	At least 90%	※ 2
10 Social Contribution Activities as a Good Corporate	① Social contribution expenditure (% change from average expenditure over last six years)	100% or higher	100% or higher	100% or higher	※ 1
	② Social contribution activities (number)	2,500 or more	2,500 or more	2,500 or more	※ 1
	③ Beneficiaries of educational support activities such as science classes for schools and career education (number)	15,000 or more	15,000 or more	15,000 or more	※ 1

³ Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, the International Council of Chemical Associations (ICCA), and the World Business Council For Sustainable Development (WBCSD).

⁴ Toray calculates water treated with Toray's water treatment membranes by multiplying the amount of fresh water that its ultrafiltration water treatment membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

Relationship between CSR Guidelines and SDGs and ESG Categories

CSR Guideline		1	2	3	4	5	6	7	8	9	10	
		Corporate Governance	Ethics and Compliance	Safety, Accident Prevention, and Environmental Preservation	Product Quality and Safety	Risk Management	Communication	Contributing Solutions to Social Issues through Business Activities	Human Rights Promotion and Human Resources Development	Establishing Sustainable Supply Chain	Social Contribution Activities as a Good Corporate Citizen	
SDGs	 1 NO POVERTY										●	
	 2 ZERO HUNGER							●			●	
	 3 GOOD HEALTH AND WELL-BEING			●				●			●	
	 4 QUALITY EDUCATION								●		●	
	 5 GENDER EQUALITY								●	●	●	
	 6 CLEAN WATER AND SANITATION			●				●		●	●	
	 7 AFFORDABLE AND CLEAN ENERGY			●				●				
	 8 DECENT WORK AND ECONOMIC GROWTH			●					●	●	●	
	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE			●				●			●	
	 10 REDUCED INEQUALITIES								●	●	●	
	 11 SUSTAINABLE CITIES AND COMMUNITIES			●		●					●	
	 12 RESPONSIBLE CONSUMPTION AND PRODUCTION			●	●		●	●		●	●	
	 13 CLIMATE ACTION			●		●	●	●		●	●	
	 14 LIFE BELOW WATER			●				●		●	●	
	 15 LIFE ON LAND			●				●		●	●	
	 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	●	●	●						●	●	●
	 17 PARTNERSHIPS FOR THE GOALS							●				●
ESG Categories	E Environment			●				●		●	●	
	S Social			●	●		●	●	●	●	●	
	G Governance	●	●		●	●						

External Evaluation

Evaluations from the Perspective of Socially Responsible Investment

Included in Dow Jones Sustainability™ Asia / Pacific Index

Toray Industries is included in the Dow Jones Sustainability™ Asia/Pacific Index. This stock index measures sustainability performance at companies identified by S&P Global.



Listed in The S&P Global Sustainability Yearbook 2024

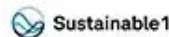
Toray Industries is among the 759 global leaders in sustainability listed in The S&P Global Sustainability Yearbook 2024 published by S&P Global.

Toray Industries, Inc.
Chemicals

Sustainability Yearbook Member

S&P Global Corporate Sustainability
Assessment (CSA) Score 2023

S&P Global CSA Score 2023: 63/100
Score date: February 7, 2024
The S&P Global Corporate Sustainability Assessment (CSA) Score is the S&P Global ESG Score without the inclusion of any modeling approaches.
Position and scores are industry specific and reflect exclusion screening criteria.
Learn more at <https://www.spglobal.com/esg/csa/yearbook/methodology/>



Included in FTSE4Good Index / FTSE Blossom Japan Index / FTSE Blossom Japan Sector Relative Index

Toray Industries is included in the FTSE4Good Index Series, the FTSE Blossom Japan Index Series, and the FTSE Blossom Japan Sector Relative Index, all developed by FTSE Russell, a wholly owned subsidiary of the London Stock Exchange Group.



Received AAA rating in MSCI ESG Ratings / Included in MSCI Japan ESG Select Leaders Index

Toray Industries has received the highest ESG rating of AAA in the MSCI ESG Ratings and is included in the MSCI Japan ESG Select Leaders Index. MSCI provides institutional investors (from pension funds to hedge funds) across the globe with various tools to support investment decisions.



Notes:

- 1 The use by Toray Industries, Inc. of any MSCI ESG Research LLC or its Affiliates ("MSCI") data, and the use of MSCI logos, trademarks, service marks or index names herein, do not constitute a sponsorship, endorsement, recommendation, or promotion of Toray Industries, Inc. by MSCI. MSCI services and data are the property of MSCI or its information providers, and are provided 'as-is' and without warranty. MSCI names and logos are trademarks or service marks of MSCI.
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Recognized as CDP Water Security A List Company

Toray Industries was recognized as a Water Security A List company, the highest rating, by CDP, a global non-profit organization, for the fourth consecutive year. In 2022, the Company was given a A- rating on climate change performance.



External Evaluation of Information Disclosure to Investors

In the "Investor Relations" section of its corporate website, Toray Industries provides information about its management policies, strategies, financial data and results for stockholders and investors. In an effort to disclose information fairly, the Company promptly posts financial data and presentation materials, including English translations, used in its briefings for institutional investors. In fiscal 2022, Toray's publications were evaluated externally by a number of organizations, as shown below.

• Website Evaluations

Organization details	Evaluations
Daiwa Investor Relations Co., Ltd.	2022 Internet IR Awards Award for outstanding website
Nikko Investor Relations Co., Ltd.	2022 All Japanese Listed Companies' Website Ranking (AAA Website in overall ranking and AAA Website in sector ranking (Textiles and Apparels))
GOMEZ	Silver Prize (top in textile sector) in IR Site Ranking 2022

• Annual Report Evaluation

Evaluations
NIKKEI Integrated Report Award 2022 Excellence Award

Toray Group Sustainability Vision



Providing Innovative Technologies and Advanced Materials to Help Address Global Issues

At the Toray Group, we consider sustainability to be the most important global issue of the 21st century. Today, climate change, water scarcity, and resource depletion are just some of the mounting environmental challenges facing the planet. With the global population expected to increase to some ten billion people by 2050 and aging demographics on the increase worldwide, an interlinked web of global issues are posing ever-graver problems.

Since Toray's founding in 1926, we have always believed that materials can change lives, true to our fundamental corporate principle of contributing to society. At the Toray Group, we make it our mission to deliver innovative technologies and advanced materials that provide real solutions to the challenges the world faces with balancing development and sustainability.

We are convinced that Toray can continue to grow without negatively impacting global sustainability. By delivering on our corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products," we will do our utmost to address global issues, including the goals of the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), while working closely with our business partners worldwide.

Four Perspectives of the World as Envisioned by the Toray Group in 2050



**A net zero emissions world,
where greenhouse gas
emissions are completely
offset by absorption**



**A world where resources are
sustainably managed**



**A world with a restored natural
environment, with clean water
and air for everyone**



**A world where everyone
enjoys good health and
hygiene**

Progress against the Commitments for 2030

The Toray Group is striving to achieve the following quantitative targets.

		FY 2013 Actual (Baseline) (J-GAAP)	FY 2022 Actual ⁷	FY 2030 Target ⁷
Supply of Sustainability Innovation products ¹		562.4 billion yen	2.3-fold	4.5-fold
CO ₂ emissions avoided in value chain ²		38 million tons	9.5-fold	25-fold
Water filtration throughput contribution by Toray's water treatment membranes ³		27.23 million tons/day	2.5-fold	3.5-fold
Greenhouse gas emissions in production activities ⁴	Per unit of revenue ⁶ across the Toray Group	337 tons/100 million yen	35% reduction ⁸	50% or more reduction
	Greenhouse gas emissions of Toray Group in Japan ⁵	2.45 million tons	21% reduction ⁸	40% or more reduction
Water usage in production activities	Per unit of revenue ⁶ across the Toray Group	15,200 tons/100 million yen	32% reduction ⁸	50% or more reduction

- (1) Products that accelerate measures to counter climate change; (2) products that facilitate sustainable, recycling-based use of resources and production; (3) products that help provide clean water and air and reduce environmental impact; and (4) products that help deliver better medical care and hygiene for people worldwide
- Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, the International Council of Chemical Associations (ICCA), and the World Business Council for Sustainable Development (WBCSD).
- Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.
- With the use of renewable energies and other zero emission power sources rising worldwide, the Toray Group aims to employ zero-emission power sources at a rate equivalent to or better than the targets in each country by fiscal 2030.
- In Japan, Toray works to surpass the reduction target set for the industrial sector by the Japanese government (absolute emissions reduced by 38%) in its comprehensive plan (Cabinet decision on October 22, 2021) based on Japan's Act on Promotion of Global Warming Countermeasures.
- FY2013 results are based on net sales (J-GAAP)
- Each relative ratio is calculated in comparison to FY 2013.
- The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

Toray Group Sustainability Vision

Download [PDF](#)

History



Companies are Public Institutions

Since our founding, we at Toray have assumed the role of a public institution and have executed our corporate activities with the foremost goal of contributing to society. Below, we introduce initiatives taken throughout Toray's history that anticipated the modern sustainability movement, while examining our insights and the historical context.

Our founder's slogan was "To generate major benefits for the nation and the economy."

Context

The time was between the First and Second World Wars.

Japan was in the process of transforming from an agricultural to an industrial nation but suffered from a lack of foreign exchange reserves and products for export. To complicate matters, on September 1, 1923, the Great Kanto Earthquake struck 1.9 million people in what is still the greatest natural disaster in Japanese history. This ushered in a period of extended stagnation for the Japanese economy.

TORAY'S Episode

Toyo Rayon's founding objective was to spur major development of the nation and the economy.

At the time, Japan relied heavily on imports of wool and raw cotton for its clothing. Yunosuke Yasukawa, Toyo Rayon's first chairman and the managing director of what was then Mitsui & Co., believed that by achieving domestic production of rayon made from locally sourced pulp, Japan would be able to reduce its dependence on foreign imports, provide better clothing for the nation, and secure much-needed foreign currency. Following Toyo Rayon's founding in 1926, newly-hired technicians acquired technical knowledge and skills from foreign engineers, while the company dedicated itself to improving equipment and facilities, and to developing new products.

Toray Insights

1. We will develop the rayon business to become a major contributor to the nation and the economy, both by achieving self-sufficiency in clothing production and in helping secure foreign currency.
2. Through young Japanese technicians' early adoption of technical knowledge from foreign engineers and the in-house development of products, facilities, and equipment, we will establish our own production technology and secure competitive strength internationally.
3. Based on the belief that "the plant should be a place for the cultivation of human character," our first Shiga Plant manager, Asahiko Karashima (later our second chairman) has focused on educating and nurturing the abilities of our employees while creating a model plant that possesses both the latest technology and high moral standards.
4. From establishing a company to scouting for locations, we understand the necessity of examining and paying sufficient attention to labor and waste issues surrounding the manufacturing and chemical industries.



The main office in Toray Shiga Plant (under construction)

Context

After Japan's defeat in the Pacific War, the country set out to rebuild its economy.

Three years and eight months after the outbreak of the Pacific war in December 1941, the Second World War finally ended with Japan's defeat in August 1945. Following the war, the Supreme Commander of the Allied Powers (GHQ) led efforts to democratize Japan, and the Japanese economy, after suffering the devastating ravages of war, set out on the road to recovery.

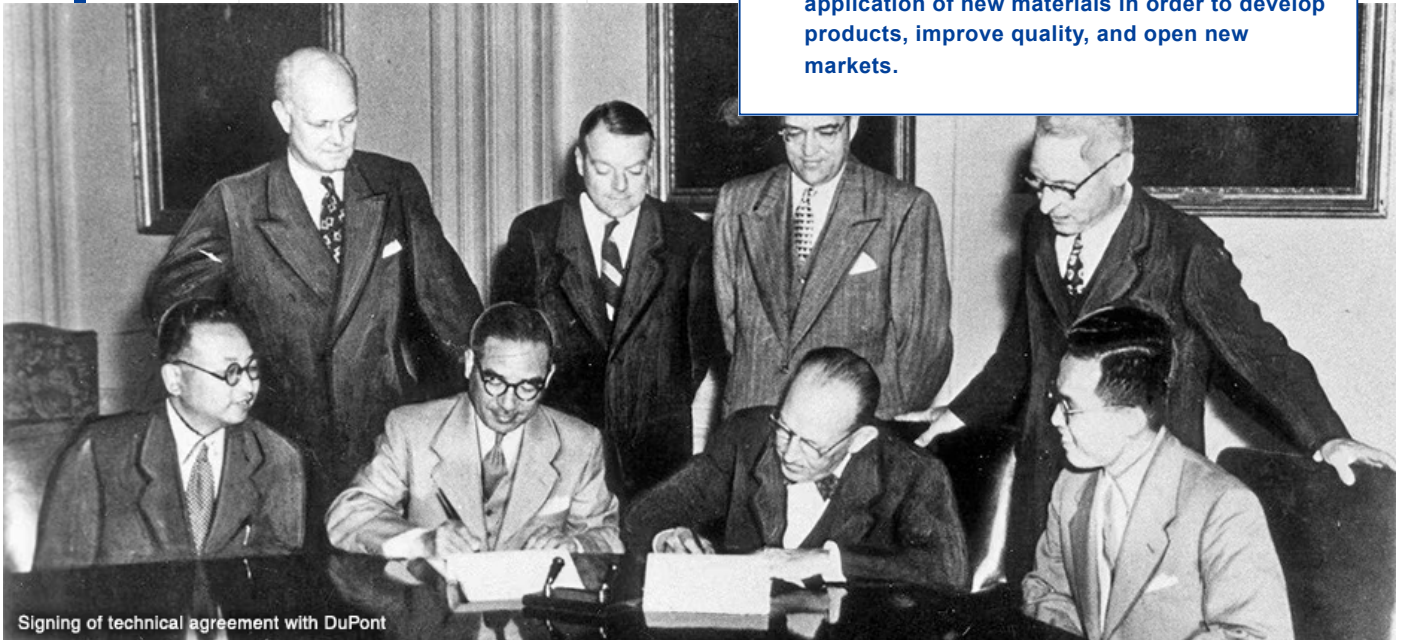
TORAY'S Episode

Began a technology partnership with DuPont following the development of original nylon processing technology.

Toyo Rayon succeeded in the synthesis and melt spinning of nylon 6 fiber in 1941 but did not begin plans for its mass production until after the war. In 1951, Toyo Rayon concluded a patent licensing agreement with America's DuPont and began full-scale production of nylon fiber.

Toray Insights

1. **After getting started with nylon production, we can expand our portfolio to include polyester and other fibers.**
2. **We have entered into a technical partnership with DuPont, as we have both been independently developing Nylon 6, and will begin turning our attention to the export market thanks to the added value achieved through high-order processing.**
3. **We have realized the essential importance of collaborating with customers on each application of new materials in order to develop products, improve quality, and open new markets.**



Signing of technical agreement with DuPont

Established the company motto, "Toyo Rayon contributes to communities"

Context

After making a miraculous recovery, the Japanese economy entered a period of rapid economic growth.

In 1954, the Japanese economy launched into a period of remarkable growth. At the time, people were hungry for prosperity, and economic development became the nation's top priority. Globally, this period saw the beginning of the Cold War, as capitalist and communist nations began their battle for global dominance.

TORAY'S Episode

In 1955, Toyo Rayon expressly laid out a company motto reflecting the management philosophy passed down since its founding. This was revisited in 1986, after which a new corporate motto of "Contributing to society through the creation of new value with innovative ideas, technologies and products." was established. In 1960, Toyo Rayon set up a foundation to promote and support basic science in Japan. In 1993 and 1994, it established independent science foundations in three Southeast Asian nations, where the company had expanded early on.

Toray Insights

1. From the start, Toyo Rayon's main business objective has been to improve people's quality of life by helping develop the nation and the economy; increasing profit has been the means to achieve this.
2. The dramatic expansion of Toray's achievements is due to the support it has received from communities in recognition of its efforts to implement its corporate principle of "contributing to society."
3. As a resource-poor nation, Japan will prosper only if its manufacturing industry is further developed and primary importance is placed on promoting and developing the country's science and technology.



Context

With the rise of mass consumerism, Japan emerged as a dominant economic power.

Companies from developed nations laid the technical foundation of the manufacturing industries that supported Japan's postwar recovery. Furthermore, the manufacturing industry was able to build its export competitiveness under a fixed exchange rate of 360 yen to the dollar. By 1986 Japan had grown to just below the US as the world's second largest economy by nominal GDP.

TORAY'S Episode

A robust R&D infrastructure for developing new products through original technology

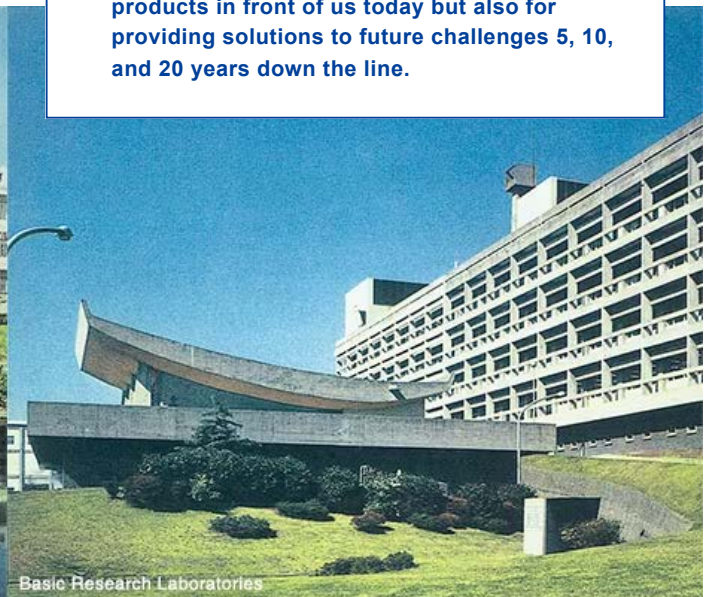
Toray's management understood the essential nature of producing new products and technologies based on the results of its own research and technical developments. To achieve this, the company made sure not to rely on technologies borrowed from the West or other companies and circumvented competition from domestic and international firms by differentiating its products and services. In 1956, Toray established the Central Research Laboratory in Otsu (Shiga Prefecture) and, in 1962, its Basic Research Laboratory in Kamakura (Kanagawa Prefecture). From here, it devoted itself to developing new products. At the Basic Research Laboratory, Toray anticipated strong results from the creative research and technical developments it achieved based on fundamentals in independent research.

Toray Insights

1. We have realized the importance of creating new growth businesses through independent basic research in order for Toray to continue to grow.
2. As a manufacturing company, strengthening core technologies and basic research is a pivotal and ongoing management issue. Japan's national prosperity also depends on its ability to produce industrial products, making R&D vitally important to the country as a whole.
3. We recognize the importance of undertaking ambitious research not only for improving the products in front of us today but also for providing solutions to future challenges 5, 10, and 20 years down the line.



Central Research Laboratories



Basic Research Laboratories

Context

Dramatic economic growth for both the Japanese and global economies.

The global economy during the 1960's experienced a period of remarkable growth that lasted until the Nixon and Oil shocks of 1971 and 1973, respectively. In Japan, household appliances, automobiles and other consumer durables became widespread in society giving birth to an era of mass consumption. Following the Tokyo Olympics in 1964, the Japanese economy temporarily stagnated after a round of investments in infrastructure but rebounded shortly thereafter, leading to a wave of economic prosperity lasting until 1970.

TORAY'S Episode

Toray's plastics business blossoms into the company's 2nd operational pillar.

Along with Toray's original development of nylon and acrylic fibers, the company licensed polyester technology from the U.K. firm ICI in 1957. With this agreement, Toray became one of the world's leading manufacturers of all three major types of synthetic fiber in the 1960's.

This period saw a rapid growth in plastics with the expansion of the household appliance and automotive industries. Against this backdrop, Toray found success with a business model of guaranteed quality backed by constant exploration of new materials and applications.

Toray Insights

1. We recognize that "materials, which form the base of all products, have the power to intrinsically change society."
2. As a materials manufacturer, Toray pioneers new markets and applications alongside its clients, while offering new and innovative materials with a mission to meet the demands of both its customers and society.



Establishing an overseas manufacturing subsidiary through technology transfers

Context

Countries around the world pursued economic growth through the development of their textile industries.

In the 1960's, America pressured the Japanese textile industry - heavily dependent on US exports - to restrict its international output. Conversely, developing nations hoping to achieve economic independence pursued economic growth through the development of their manufacturing industries. Many countries began implementing industrialization policies. Some looked to Japan, hoping to transfer its fiber and textile technologies given the rapid growth the country had displayed over the past several decades.

TORAY'S Episode

Toray's first joint venture in Thailand in 1963 and the transfer of its technology.

Toray established its first joint venture in Thailand with a business that provided integrated spinning, weaving and dyeing of polyester-rayon fabric. Toray's original objective in setting up this venture was to secure a place to export its staple polyester fiber but began overseas production of yarn and raw fiber at about the same time.

Toray Insights

- 1. While considered a sunset industry by some, we believe that globally the fibers and textiles trade is growing and intend to further expand our business.**
- 2. We will continue to create advanced materials through innovative, cutting-edge research and technical developments, while building a business centered on high value-added products. We will also achieve dramatic reductions in costs by developing transformative operational processes.**
- 3. To best address matters such as demand and competitive pricing, we will carry out production at the most suitable overseas locations and develop product applications according to local needs. Profit received through our global operations will be reinvested in the research and development of new innovative processes and the next generation of advanced materials, creating an on-going cycle of development and growth.**
- 4. Concerning its overseas expansion of operations, Toray will focus on contributing to the long-term growth of local communities in all its business activities.**



Thai Toray Textile Mills Public Company Limited



Toray Textiles Central Europe s.r.o.



Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd.

Context

Japan and the world find the limits of economic growth.

Within an ongoing climate of rapid economic growth, Japan faced a financial recession in 1964 and 1965. Among companies in the fibers and textiles industry this was known as the "Nylon shock." In the 1970's the global economy suffered two additional shocks with the Nixon and oil crises that occurred in 1971 and 1973.

TORAY'S Episode

A two-pronged strategy of internationalization and diversification

After surviving the Nylon shock, Toray foresaw the eventual maturation of the domestic textile market and began taking measures to expand and develop its overseas operations. The company further sought to diversify into new businesses. To mark this occasion, Toray rebranded with a new name, Toray Industries, Inc., and accelerated the internationalization of its fibers and textiles operations, while diversifying into plastics and other new ventures.

Toray Insights

1. We are beginning plans to expand our plastics business in addition to our core synthetic fiber business.
2. Toray is gaining wide recognition with its Toray Nylon and Toray Tetoron product lines.
3. As part of our corporate redesign, Toray is launching an internal organization for developing new businesses, while simultaneously accelerating the expansion of our overseas fibers and textiles business.



Expansion of Toray's carbon fiber business for the next generation of aircraft structures.

Context

Fluctuation in exchange rates due to Japan-US trade frictions and international compromise.

In 1980, Japan sunk into its longest recession since World War Two, which lasted for three years. It began with the second oil shock brought on by the Iranian revolution. Domestic demand stagnated, but with a booming American economy, Japan expanded its US-bound exports, helping to rekindle the economy. At the same time, this sparked trade tensions between the US and Japan. At the 1985 G7 summit, the Plaza Accord was signed, further exacerbating the yen's appreciation.

TORAY'S Episode

Developing strong and heat-resistant high-performance carbon fibers.

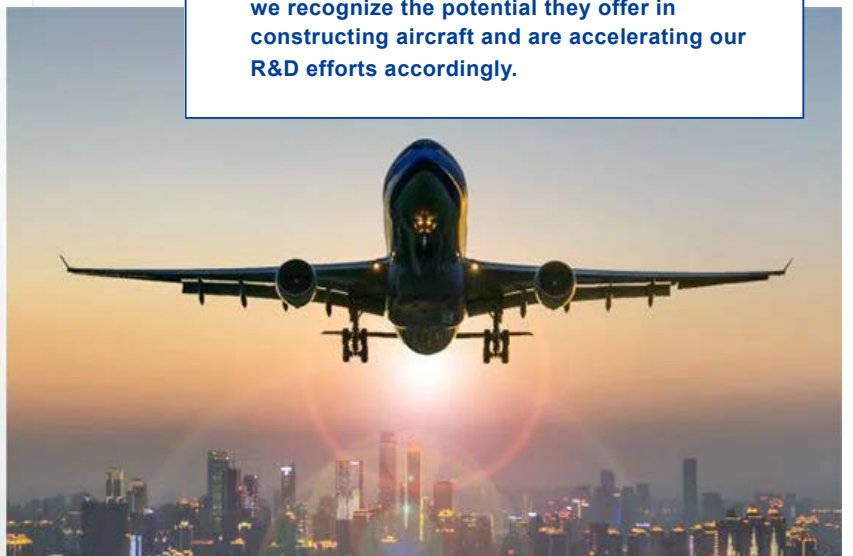
After successfully developing polyacrylonitrile-based carbon fiber, Toray initiated its test production in quantities of a few hundred grams per month in 1970. Thanks to a boost from the "black shaft" revolution, Toray's production saw stable growth early on that translated into the fiber's adoption as a primary structural material in aircraft in the 1980's. Today, the Toray Group manufactures its carbon fiber around the globe in Japan, France, America, and Korea, earning it the number 1 spot globally in terms of both quality and quantity.

Toray Insights

1. Cultivating and expanding a new core business on top of our plastics, fibers, and textiles operations is essential to Toray's long-term ongoing growth.
2. Toray's polyacrylonitrile-based carbon fiber is increasingly being used as a light-weight material with the potential to reduce the environmental burden of textiles.
3. Given the strong, lightweight, and rust-proof qualities of carbon fiber composite materials, we recognize the potential they offer in constructing aircraft and are accelerating our R&D efforts accordingly.



Carbon Fiber TORAYCA™



Increased orders for reverse osmosis (RO) membranes used at water treatment facilities

Context

Many regions still lack access to clean water in the 21st century.

Research and development of membranes for reverse osmosis began in the 1960's, with many envisioning their application in seawater desalination. In recent years, membrane treatment methods have proven to offer much lower treatment costs than conventional evaporation methods, leading to large plants placing constant orders for these transformative membranes. In combination with other functional membranes, reverse osmosis membranes are also helping solve the challenge of wastewater reclamation.

TORAY'S Episode

Toray's functional membranes give around 400 million people access to clean water.

Toray began its research on reverse osmosis membranes in the 1960's and started developing its water treatment membrane business in the 1980's. Today, as part of its integrated system proposals, Toray has developed a lineup of membranes with functions covering reverse osmosis, ultrafiltration, microfiltration, and more. Toray currently supplies membranes to 70 countries worldwide, which collectively are capable of processing 60 million tons of water a day. This is equivalent to the amount of water used by around 400 million people.

Toray Insights

- 1. The dramatic increase in global population has created the threat of water shortages around the world. Recognizing that access to clean water is a pressing issue humanity must address, we have initiated early measures to tackle this challenge.**
- 2. From the start, we have advanced R&D that aims to make seawater desalination a reality and have led comprehensive efforts to improve Toray's manufacturing efficiency. With current bases positioned in Japan, America, Europe, China, Korea, and the Middle East, our seawater desalination plants will begin taking orders on a global scale.**
- 3. Toray will provide pivotal support in national projects to develop large-scale, high-efficiency desalination plants.**



Reverse-osmosis Membrane Elements ROMEMBRA™



Photo provided by Sembcorp Industries

Seawater Desalination Plant

Context

With a long-term plan in place, Toray continues pursuing future challenges.

The 20th century was defined by war. Even today, regional conflicts continue to unfold, trade wars escalate between superpowers, and even talk of conflict in space begins. Against this backdrop, the United Nations has taken the lead in efforts to address global challenges through international collaboration in order to ensure the continued well-being of humanity and the environment. For its part, Toray has established a long-term plan in continuing to pursue new challenges moving forward.

TORAY'S Episode

Believing perseverance is power, Toray maintains a steady management philosophy.

Toray has focused special attention on basic research to create innovative products. While some products take as much as fifty or sixty years to find market success, Toray's tenacious investments in R&D have borne fruit in a rich and broad portfolio. With a management philosophy that perseverance is power, Toray has continued to honor its dividend policy towards its shareholders, while providing consistent support to sports and culture through long-term sponsorships of worldwide women's tennis tournaments, the Shanghai International Marathon, and more.

Toray Insights

- 1. Toray will engage in research activities inspired by the twin slogans of "long-term continuity" and "the deeper, the newer." Centered on its core technologies, Toray will pursue research and technical developments with long-term objectives firmly in mind.**
- 2. We intend to contribute to society directly through our business activities and will work to solve social and environmental issues concerning the planet and the health and longevity of human society through the power of materials.**



New Frontiers Research Laboratories



Toray Pan Pacific Open Tennis Tournament



R&D Innovation Center for the Future

Four Perspectives of the World as Envisioned by the Toray Group in 2050



Towards 2050

A net zero emissions world, where greenhouse gas emissions are completely offset by absorption

ACTIONS

Accelerating measures to counter climate change

In order to keep the air temperature from rising by more than 1.5°C due to global warming, we must become carbon neutral by 2050. Being carbon neutral means that the amount of greenhouse gases such as carbon dioxide that we are emitting is equivalent to the amount being absorbed. In addition to reducing the amount of carbon dioxide emitted during the product manufacturing stage, the Toray Group will utilize materials and technologies associated with energy conservation and new and renewable forms of energy to work toward creating a new-energy society. This can be achieved by reducing product weight in order to reduce fuel consumption, thereby improving carbon dioxide emissions throughout the entire product lifecycle, leveraging renewable energies such as wind power, which does not produce carbon dioxide, and utilizing hydrogen and electric vehicles.



AFFORDABLE AND CLEAN ENERGY



INDUSTRY, INNOVATION AND INFRASTRUCTURE



CLIMATE ACTION



Curbing CO₂ emissions throughout the life cycle of products

Toray provides lightweight and strong carbon fiber that can reduce the weight of aircraft and automobiles, to improve fuel economy and reduce CO₂ emissions.



Building a renewable energy economy

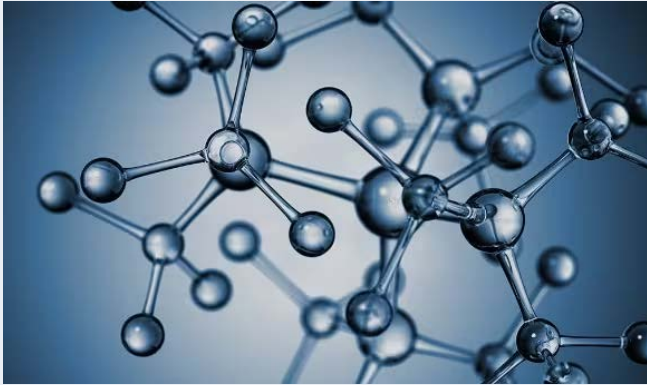
Toray supplies materials for use in renewable energy technologies including wind and solar energy, and in hydrogen conversion, storage, and fuel cells.



Reducing CO₂ emissions in manufacturing

Toray actively strives to reduce CO₂ emissions in manufacturing, through process improvements that conserve energy, use renewable energy and reduce the use of coal.

Related Story



Material benefits: how carbon fiber is reducing our environmental footprint

Carbon fiber is a “wonder” material, adding exceptional strength without weight to aircraft, wind turbines and cars. New technologies devoted to improving its production and recycling mean even greater environmental benefits lie ahead.



The materials that are building a renewable energy economy

To halt the rise of greenhouse gas emissions, we need to convert as many sectors of the economy to renewable energy as quickly as possible. Advanced materials are improving the efficiency of the renewable energy industry while helping other sectors, such as transport, adapt to electrification.

Four Perspectives of the World as Envisioned by the Toray Group in 2050



Towards 2050

A world where resources are sustainably managed

ACTIONS

Realizing sustainable, recycling-based use of resources and production

In order to create a sustainable society, we must transition to a so-called recycling-based society — a society managed in a sustainable manner that makes effective use of, and recycles, our limited resources. Specifically, this involves using our limited resources sustainably by reducing our use of fossil fuels such as oil, reducing and reusing waste plastic, effectively using and reusing water resources, and making effective use of carbon dioxide. This transition to a recycling-based society will also contribute to resolving the issues of global warming and marine plastic waste. The Toray Group will contribute to creating this recycling-based society by developing and commercializing bioplastics that use plants and other biological resources, promoting the recycling of textiles, camera film and resin products, and reducing waste at the production stage.



INDUSTRY, INNOVATION
AND INFRASTRUCTURE



RESPONSIBLE
CONSUMPTION
AND PRODUCTION



LIFE
BELOW WATER



Using non-fossil resources (bioresources)

Toray works to reduce the world's dependency on fossil fuel resources by manufacturing non-edible plant-based fibers and developing materials and fuels using biotechnologies and membrane separation technology.



Promoting product recycling

Toray facilitates recycling of its diverse products including fibers, resins, films, and carbon fiber.



Reducing waste at production sites

Toray implements measures to use resources more effectively, practices recycling, and works to reduce waste.

Related Story



[Moral fiber: sugar cane replaces petroleum to make eco-friendly polyester fabrics](#)

The development of plant-based polyester could help save the earth by changing what we wear, while significant sales figures suggest consumers are all too happy to make the switch to eco-apparel.



[Sweet success for biomass technologies](#)

The need for more sustainable manufacturing processes has led to exciting innovations in the development of new biotechnologies, notably in the global production of sugar.

Four Perspectives of the World as Envisioned by the Toray Group in 2050



Towards 2050

A world with a restored natural environment, with clean water and air for everyone

ACTIONS

Providing clean water and air, and reducing environmental impact

Population growth, the development of the agricultural and livestock industry, and industrialization have led to water and air pollution becoming global issues. We must solve these problems and create a greener world in which everyone has access to safe water and air, and where people can live in harmony with nature while considering natural capital. The Toray Group is committed to bringing about such a world by reducing and controlling the amount of water used in our manufacturing processes, actively preventing air and water pollution, keeping the water supply safe using water treatment membrane technology, and improving the indoor air environment using high-performance air filters. We contribute to reducing the impact on ecosystems through technologies that reduce the use of harmful substances such as organic solvents and materials used as substitutes for natural products such as feathers and leather. We are also focusing on environmental education, to raise awareness around environmental issues in the younger generation.



ZERO HUNGER



GOOD HEALTH AND WELL-BEING



CLEAN WATER AND SANITATION



INDUSTRY, INNOVATION AND INFRASTRUCTURE



RESPONSIBLE CONSUMPTION AND PRODUCTION



LIFE BELOW WATER



LIFE ON LAND



Providing safe water using membrane technologies

Toray supplies water treatment technologies for the desalination, purification, and reuse of water to address water scarcity and reduce environmental impacts.



Managing water usage at plants and preventing air and water pollution

Toray pursues greater reuse of water, purification of exhaust ventilation and wastewater, and appropriate management of chemical substances at its plants. In areas where water resources are particularly scarce, Toray takes additional steps to curb water intake.



Providing ultrafine filter fibers for cleaner air

Toray supplies proprietary ultrafine fiber non-woven fabrics that remove particulates from the air, delivering cleaner air around the world.



Inspiring interest in the environment

Toray supports education to raise awareness of environmental issues such as water scarcity.

Related Story



[Turn of the tide: tackling water scarcity with technology and common purpose](#)

As the world's water crisis intensifies, governments, business and communities are uniting to protect clean water sources, use them more responsibly, and even create new drinking water from the sea.



[Membrane innovation turns seawater into freshwater](#)

The global water crisis is being tackled with new technologies – with encouraging results. Specialized water-purification membranes can separate the salt from seawater and deliver clean water to millions of people worldwide.

Four Perspectives of the World as Envisioned by the Toray Group in 2050



Towards 2050

A world where everyone enjoys good health and hygiene

ACTIONS

Contributing to better medical care and hygiene for people worldwide

Innovative diagnostic technologies and curative medicines are required in both developed and developing countries, but these bring with them the challenges of increased medical costs and an increased burden on healthcare sites. In the 21st century, the most significant challenges facing society are raising the healthcare and public sanitation services required to maintain a healthy and independent way of life, and providing high-quality medical care.

Toray contributes to human health through advanced materials and innovative technologies, focusing on health and longevity, improving the quality of medical care, reducing burdens on medical institutions, and focusing on human safety, in order to create a world in which all people lead healthy and hygienic lives.



ZERO HUNGER



GOOD HEALTH AND WELL-BEING



INDUSTRY, INNOVATION AND INFRASTRUCTURE



CLIMATE ACTION



Improving the quality of medical care with innovative technologies and advanced materials

Toray helps improve the quality of medical care with early diagnosis of diseases and innovative drugs and devices.



Contributing to health and longevity

Toray promotes health, longevity and better quality of life by providing products that enhance physical functions that change with age.



Helping to keep people safe

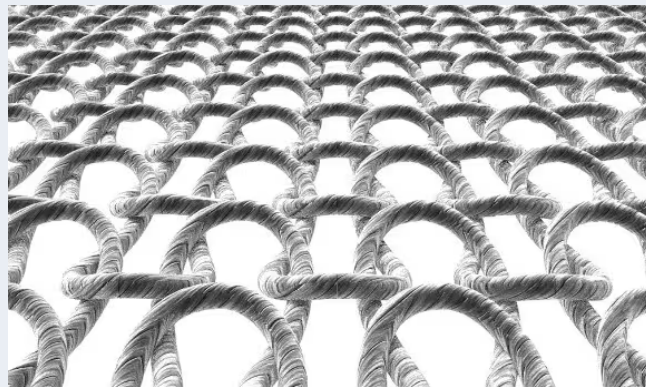
Toray helps protect people from infectious diseases, accidents, disasters, and extreme weather events such as heatwaves.

Related Story



[Synthetic innovation helps translate nature's greatest narrative: our genes](#)

Our genes are the blueprints of life – and advanced technology is enabling experts to analyze them in dynamic new ways. The result: earlier detection of diseases and a healthier outlook for future generations.



[Long-life fabric gains new meaning as wearable tech promotes wellbeing for an aging world](#)

Technologies associated with “performance fabrics” are advancing all the time, meaning a step up in quality of life and health for everyone – from athletes to seniors

CSR Activity Report (CSR Guideline Activity Reports)

Toray Group has established CSR Guidelines to govern its CSR initiatives. Intended to be comprehensive, they cover aspects from corporate governance to social contribution. The CSR Guidelines consist of ten themes, each of which is assigned an implementation leader.

The Group also establishes a CSR roadmap every three years to ensure that all of its efforts to live up to the CSR Guidelines move forward in a systemic and organized manner. Each CSR roadmap defines targets for specific initiatives and establishes key performance indicators (KPIs) to ensure that progress is quantitatively managed each year.

› [Click here for the comparative table of CSR activity report items with ESG topics](#)

CSR Guidelines Revised June 2023	
<p>1 Corporate Governance Continually revise management systems, strengthen internal controls as part of efforts to fulfill the company's social responsibilities.</p>	<p>› Read more</p>
<p>2 Ethics and Compliance Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and act with a keen sense of compliance to maintain the trust of society.</p>	<p>› Read more</p>
<p>3 Safety, Accident Prevention, and Environmental Preservation Ensure the safety and health of society and employees, and protect the environment in all business processes, from procuring raw materials and manufacturing to the supply and disposal of products.</p>	<p>› Read more</p>
<p>4 Product Quality and Safety Provide safe, highly reliable products by striving to enhance management systems for product quality assurance and safety, and disclose appropriate information.</p>	<p>› Read more</p>
<p>5 Risk Management Under normal conditions, assess and analyze risks, and strive to mitigate and prevent them from materializing; and in the event of a crisis that could have a significant impact on management activities, strive to prevent damage from increasing, by bringing the situation quickly under control and normalizing conditions with a prompt and appropriate response.</p>	<p>› Read more</p>

<p>6 Communication</p> <p>Disclose corporate information in an active, fair and straightforward manner to maintain management transparency; and disclose information appropriately to encourage dialogue and cooperation with stakeholders including customers, employees, stockholders, business partners, consumers, mass media, and other parties.</p>	<p>> Read more</p>
<p>7 Contributing Solutions to Social Issues through Business Activities</p> <p>Leverage innovation to provide solutions to various social issues such as climate change, resource and energy use, water resource and natural environment conservation, improvement of medical care, and promotion of public health, thereby contributing to sustainable development for society.</p>	<p>> Read more</p>
<p>8 Human Rights Promotion and Human Resources Development</p> <p>Respect human rights, provide safe and healthy workplaces for employees, secure and train personnel, and diversify while striving to protect employment.</p>	<p>> Read more</p>
<p>9 Establishing Sustainable Supply Chain</p> <p>To establish a sustainable supply chain, work closely with suppliers, processing vendors, subcontractors, customers and distribution companies to implement socially responsible procurement throughout the supply chain in order to ensure responsible practices with respect to environmental preservation and human rights.</p>	<p>> Read more</p>
<p>10 Social Contribution Activities as a Good Corporate Citizen</p> <p>Proactively participate in local communities and the larger society in order to contribute to development in a way betting a good corporate citizen.</p>	<p>> Read more</p>

Progress on CSR Roadmap 2022 KPIs in Fiscal 2022

CSR Roadmap 2022 (Fiscal 2020–2022)

Progress on CSR Roadmap 2022 KPIs in Fiscal 2021

CSR Columns	CSR Roadmap goals	Key performance indicators	Reporting Scope ¹⁾	Targets				Results	Implementation leads ²⁾
				Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2023		
1 Corporate Governance Establishing and strengthening systems, strengthening compliance and ethics to build the company's legal consciousness.	(1) Further request governments to ensure that Board of Directors operates in a manner that contributes to the improvement of corporate value over the medium to long term. (2) Perform one thing based on the basic belief for environmental protection in accordance with Intel's Environmental Policy.	● Eng Group Business Working Committee members hold at least 1 of Director meetings. ● Board of Directors' annual implementation of the implementation of the Basic Policy for Internal Control (Business Policy)	● Eng Group	● 100%	● 100%	● 100%	● 100%	Talent Dept. Senior Vice President Director of the Board Director of Strategic Planning Division Quality Assurance Division HR Business Development Dept. Policy Initiatives Dept.	
				● 100%	● 100%	● 100%	● 100%		
2 Ethics and Compliance Focus on innovation and productivity, uphold respect of individuality, diversity and high ethical standards, and create a new sense of challenge to contribute to the world of people.	(1) No major issues throughout the Fiscal 2021 or other fiscal years with an incidence of 10 or more employees. (2) Implement monitoring to detect ethical and compliance issues and prevent unethical. Take Group. (3) Enhance awareness and educational activities relating to corporate ethics and compliance. Positive Initiatives for CSR ● Corporate ethics and high compliance	● Number of major incidents of 10 or more employees. ● Improvement related to the number of group-related incidents. ● Public Opinion on Intel's Ethics and Compliance (to be measured by the following Fiscal year)	● Eng Group	● 0	● 0	● 0	● 0	Talent Sponsorship Compliance Intel's Compliance System Compliance Board Intel Initiatives Dept.	
				● 100%	● 100%	● 100%	● 100%		

(PDF:64.4KB) [PDF](#)

Progress on CSR Roadmap 2022 KPIs in Fiscal 2022

CSR Guidelines	CSR Roadmap goals	Key performance indicators	Reporting Scope ¹
<p>1 Corporate Governance</p> <p>Continually revise management systems, strengthen internal controls as part of efforts to fulfill the company's social responsibilities.</p>	<p>(1) Further improve governance by ensuring that Board of Directors operates in a manner that contributes to the enhancement of corporate value over the medium to long term.</p> <p>(2) Perform monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Companies Act.</p>	<p>① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (number)</p>	<p>① Toray Group</p>
		<p>② Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)</p>	<p>② Toray Group</p>
<p>2 Ethics and Compliance</p> <p>Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and act with a keen sense of compliance to maintain the trust of society</p>	<p>(1) No major cases throughout the Toray Group of non-compliance with or violation of bribery regulations, antitrust laws, etc</p> <p>(2) Implement monitoring to raise ethical and compliance awareness throughout Toray Group</p> <p>(3) Enhance awareness-raising and educational activities relating to corporate ethics and compliance</p> <p>Related Materiality for CSR</p> <ul style="list-style-type: none"> ● Corporate ethics and legal compliance 	<p>① Number of major violations of laws or ordinances</p>	<p>① Toray Group</p>
		<p>② Implementing internal legal audits of group companies, group companies improving problems found in internal legal audits in the previous year (%)</p>	<p>② Toray Group</p>
		<p>③ Group companies providing information and implementing education on major laws and regulations and other compliance-related matters (%)</p>	<p>③ Toray Group</p>

	Targets			Results		Implementation leader ³
	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2022	Degree of success ²	
	① 8 times	① 8 times	① 8 times	① 8 times	① ○	Yasuo Suga Senior Vice President (Member of the Board), Corporate Strategic Planning Division, Quality Assurance Division, HS Division, Toray Industries, Inc.
	② 90%	② 90%	② 90%	② 95%	② ○	
	① 0	① 0	① 0	① 0	① ○	Yoshio Yamamoto Corporate Vice President, Legal & Compliance Division, Compliance Dept., Toray Industries, Inc.
	② Audits: Conduct at Toray Industries, Inc. and its group companies in and outside Japan Percent that improved: 100% for all audits by the following fiscal year			② 100%	② ○	
	③ 100%	③ 100%	③ 100%	③ 100%	③ ○	

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2 The degree of success is defined as follows : ○ means the target was fully met; △ means the target was 50% met or better; and × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

3 Names and job titles of implementation leaders are current as of March 31 2023.

4 For further detail, see the "Occupational Safety and Accident Prevention Activities" page of the "Safety, Accident Prevention and Environmental Preservation" section of the report.

5 For further detail, see the "Environmental Risk Management" page of the "Safety, Accident Prevention and Environmental Preservation" section of the report.

6 Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, the reduction is 32.7%.

7 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

8 For further detail, see the "Initiatives for Quality Assurance and Product Safety" page of the "Product Quality and Safety" section of this report.

Progress on CSR Roadmap 2022 KPIs in Fiscal 2022

CSR Guidelines	CSR Roadmap goals	Key performance indicators	Reporting Scope ¹
<p>3 Safety, Accident Prevention, and Environmental Preservation</p> <p>Ensure the safety and health of society and employees, and protect the environment in all business processes, from procuring raw materials and manufacturing to the supply and disposal of products</p>	<p>(1) Place the highest priority on safety, thoroughly uphold the basic rules, and strive to prevent disasters and accidents</p> <p>(2) Reduce environmental impact by working to fulfill the Medium-Term Environmental Plan</p> <p>(3) Pursue environmental and biodiversity preservation on the basis of policies on water resources and biodiversity</p> <p>Related Materiality for CSR</p> <ul style="list-style-type: none"> ● Ensuring safety and disaster preparedness ● Reducing greenhouse gas emissions ● Initiatives for managing water resources ● Addressing substances with negative environmental impact ● Addressing resource and energy issues ● Conserving biodiversity 	<p>① Number of major accidents</p>	<p>① Toray Group</p>
		<p>② Achieve world's best standard for safety management (not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)</p>	<p>② Toray Group</p>
		<p>③ Number of fire and explosion accidents</p>	<p>③ Toray Group</p>
		<p>④ Number of environmental accidents</p>	<p>④ Toray Group</p>
		<p>⑤ Reduction of greenhouse gas emissions per unit of revenue (%)</p>	<p>⑤ Toray Group</p>
		<p>⑥ Water usage per unit of revenue (%)</p>	<p>⑥ Toray Group</p>
		<p>⑦ Reduction of atmospheric VOC emissions (%)</p>	<p>⑦ Toray Group</p>
		<p>⑧ Waste recycling rate (%)</p>	<p>⑧ Toray Group</p>
		<p>⑨ Conduct a survey of palm oil contained in raw materials (%)</p>	<p>⑨ Toray Industries, Inc.</p>

	Targets			Results		Implementation leader ³
	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2022	Degree of success ²	
	① 0	① 0	① 0	① 0	① ○	Kazuyuki Adachi Senior Vice President (Member of the Board), Purchasing & Logistics Division, Manufacturing Division, Toray Industries, Inc.
	② No more than 0.05	② No more than 0.05	② No more than 0.05	② 0.37	② ×	
	③ 0	③ 0	③ 0	③ 2 ⁴	③ ×	
	④ 0	④ 0	④ 0	④ 7 ⁵	④ ×	
	⑤ At least 20% lower than fiscal 2013 (Fiscal 2022)			⑤ 34.6% ^{6&7}	⑤ ○	
	⑥ At least 25% lower than fiscal 2013 (Fiscal 2022)			⑥ 31.9% ⁷	⑥ ○	
	⑦ At least 70% lower than fiscal 2000	⑦ At least 70% lower than fiscal 2000	⑦ At least 70% lower than fiscal 2000	⑦ 70.9%	⑦ ○	
	⑧ At least 86%	⑧ At least 86%	⑧ At least 86%	⑧ 86.8%	⑧ ○	
	⑨ Usage survey of certified products : 100%	⑨ Decision making (Yes/No) of shifting to certified raw materials : 100% (Fiscal 2022)		⑨ 100%	⑨ ○	

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3 Names and job titles of implementation leaders are current as of March 31 2023.

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5 For further detail, see the "Environmental Risk Management" page of the "Safety, Accident Prevention and Environmental Preservation" section of the report.

6 Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, the reduction is 32.7%.

7 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

8 For further detail, see the "Initiatives for Quality Assurance and Product Safety" page of the "Product Quality and Safety" section of this report.

Progress on CSR Roadmap 2022 KPIs in Fiscal 2022

CSR Guidelines	CSR Roadmap goals	Key performance indicators	Reporting Scope ¹
4 Product Quality and Safety Provide safe, highly reliable products by striving to enhance management systems for product quality assurance and safety, and disclose	(1) Achieve zero product accidents (2) Enhance the group-wide framework for product safety and quality assurance Related Materiality for CSR ● Ensuring product quality and safety	① Number of product accidents	① Toray Group
		② Group companies implementing product quality assurance and safety education (%)	② Toray Group
5 Risk Management Under normal conditions, assess and analyze risks, and strive to mitigate and prevent them from materializing; and in the event of a crisis that could have a significant impact on management activities, strive to prevent damage from increasing, by bringing the situation quickly under control and normalizing conditions	(1) Strengthen corporate risk management throughout the Toray Group and mitigate risks (2) Instill greater risk management among employees by rolling out risk management education throughout the Toray Group	① Group companies conducting follow-up on the Toray Group's priority risks (%)	① Toray Group
		② Group companies implementing risk management education (% achieved compared to the plan at the beginning of the fiscal year)	② Toray Group
6 Communication Disclose corporate information in an active, fair and straightforward manner to maintain management transparency; and disclose information appropriately to encourage dialogue and cooperation with stakeholders including customers, employees, stockholders, business partners, consumers,	(1) Reflect results of dialogue and collaboration with each stakeholder group in management activities in a timely and appropriate manner (2) Reflect information obtained through dialogue and collaboration with each stakeholder group in management decisions in a timely and appropriate manner	① Number of corporate website page views (per month)	① Toray Industries, Inc.
		② Interviews conducted to exchange opinions within the company (rate of progress)	② Toray Group
		③ Interviews with key investors in which management participates (number)	③ Toray Group
		④ News releases (number)	④ Toray Group

	Targets			Results		Implementation leader ³
	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2022	Degree of success ²	
	① 0	① 0	① 0	① 1 ⁸	① ×	Yasuo Suga Senior Vice President (Member of the Board), Corporate Strategic Planning Division, Quality Assurance Division, HS Division, Toray Industries, Inc.
	② 100%	② 100%	② 100%	② 100%	② ○	
	① 100%	① 100%	① 100%	① 100%	① ○	Yasuo Suga Senior Vice President (Member of the Board), Corporate Strategic Planning Division, Quality Assurance Division, HS Division, Toray Industries, Inc.
	② 100%	② 100%	② 100%	② 100%	② ○	
	① 1 million page views	① 1 million page views	① 1 million page views	① 1.01million page views	① ○	Hideki Hirabayashi Senior Vice President, CSR & Investor Relations, General Administration & Communications Division, Tokyo Head Office, Toray Industries, Inc.
	② 40%	② 60%	② 80%	② 68%	② △	
	③ Cumulative total of 80	③ Cumulative total of 80	③ Cumulative total of 80	③ Cumulative total of 109	③ ○	
	④ 200	④ 200	④ 200	④ 171	④ △	

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Progress on CSR Roadmap 2022 KPIs in Fiscal 2022

CSR Guidelines	CSR Roadmap goals	Key performance indicators	Reporting Scope ¹
<p>7 Contributing Solutions to Social Issues through Business Activities</p> <p>Leverage innovation to address global-scale environmental issues such as climate change and provide solutions for various social issues such as the need to improve the quality of medical care, the need to reduce the burden on medical staff, health maintenance and longevity, and personal safety,</p>	<p>(1) Help address social issues by developing innovative materials and new technologies, focusing on the fields of Green Innovation and Life Innovation</p> <p>Related Materiality for CSR</p> <ul style="list-style-type: none"> ● Contributing to the solution of environmental issues through business activities ● Contributing to health maintenance and longevity through business activities ● Initiatives for managing water resources 	<p>① Revenue of Green Innovation products (IFRS)</p>	<p>① Toray Group</p>
		<p>② Revenue of Life Innovation products (IFRS)</p>	<p>② Toray Group</p>
		<p>③ Contribution to CO₂ reduction in value chain</p>	<p>③ Toray Group</p>
		<p>④ Contribution of Toray water treatment products</p>	<p>④ Toray Group</p>
<p>8 Human Rights Promotion and Human Resources Development</p> <p>Respect human rights, provide safe and healthy workplaces for employees, secure and train personnel, and diversify while striving to protect employment.</p>	<p>(1) Respect for human rights and fair promotion based on ability throughout the Toray Group by eliminating discrimination based on race, gender, education, nationality, religion, and physical attributes</p> <p>(2) Ensure work environments take into consideration employees' health and build a vibrant and rewarding workplace culture group-wide, working systematically to secure and train personnel</p> <p>Related Materiality for CSR</p> <ul style="list-style-type: none"> ● Respecting human rights ● Creating a positive workplace ● Securing and developing human resources 	<p>① Group companies implementing human rights education and training (%)</p>	<p>① Toray Group</p>
		<p>② Group companies that have achieved legally mandated employment rate of persons with disabilities (%)</p>	<p>② Toray Group (Japan)</p>
		<p>③ Career development of core staff using the new personnel information system (% of staff using a career path worksheet)</p>	<p>③ Toray Industries, Inc.</p>
		<p>④ Employees returning to work from childcare leave (%)</p>	<p>④ Employees of Toray Industries, Inc.</p>
		<p>⑤ Reduction in employees who exceed 45 hours/month of non-statutory working hours (%)</p>	<p>⑤ Toray Industries, Inc.</p>
		<p>⑥ Available annual paid leave used by labor union members (%)</p>	<p>⑥ Toray Industries, Inc.</p>

	Targets			Results		Implementation leader ³
	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2022	Degree of success ²	
	① 1,000 billion yen (Fiscal 2022)			① 993.4 billion yen	① △	Satoru Hagiwara Executive Vice President (Representative Member of the Board), Intellectual Property Division, Global Environment Business Strategic Planning Dept., Life Innovation Business Strategic Planning Dept., Technology Center, Toray Industries, Inc.
	② 300 billion yen (Fiscal 2022)			② 369.6 billion yen	② ○	
	③ 5.3 times compared to fiscal 2013 (Fiscal 2022)			③ 9.5 times	③ ○	
	④ 2.4 times compared to fiscal 2013 (Fiscal 2022)			④ 2.5 times	④ ○	
	① 100%	① 100%	① 100%	① 100%	① ○	Shigeki Taniguchi Senior Vice President, Human Resources Division, Toray Human Resources Development Center, Toray Industries, Inc.
	② 100%	② 100%	② 100%	② 53.1%	② △	
	③ 20%	③ 30%	③ 100%	③ 100%	③ ○	
	④ 100%	④ 100%	④ 100%	④ 100%	④ ○	
	⑤ Year-on-year reduction	⑤ Year-on-year reduction	⑤ Year-on-year reduction	⑤ 79.7%	⑤ ○	
	⑥ About 90%	⑥ About 90%	⑥ About 90%	⑥ 93.2%	⑥ ○	

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Progress on CSR Roadmap 2022 KPIs in Fiscal 2022

CSR Guidelines	CSR Roadmap goals	Key performance indicators	Reporting Scope ¹
<p>9 Facilitating CSR Initiatives Throughout the Supply Chain</p> <p>Promote CSR initiatives in areas including environmental preservation and human rights throughout the entire supply chain by working closely with suppliers, processing vendors, customers and distribution</p>	<p>(1) To ensure socially responsible procurement by the Toray Group, request major suppliers and business partners to practice CSR and work with suppliers to promote greater awareness of human rights, social, and environmental issues</p> <p>Related Materiality for CSR</p> <ul style="list-style-type: none"> ● Managing social and environmental impact of suppliers 	<p>① Group companies requesting their suppliers to practice CSR (%)</p> <p>② Suppliers confirming the status of CSR initiatives as requested by Toray Group (%)</p> <p>③ Reduction in CO₂ emissions intensity from distribution activities (year-on-year)</p> <p>④ Modal shift to sea or rail for transport across distances for 500 km or more (%)</p>	<p>① Toray Group</p> <p>② Toray Group</p> <p>③ Toray Group (Only specified consigners)</p> <p>④ Toray Industries, Inc.</p>
<p>10 Social Contribution Activities as a Good Corporate Citizen</p> <p>Proactively participate in local communities and the larger society in order to contribute to development in a way betting a good corporate citizen.</p>	<p>(1) As a member of society, implement social contribution activities that help to solve the global issues addressed by the SDGs and other initiatives</p> <p>(2) Voluntarily and continuously engage in the priority areas of “science and technology promotion,” “environment and communities,” and “health and welfare”</p>	<p>① Social contribution expenditure (% change from average expenditure over last six years)</p> <p>② Social contribution activities (number)</p> <p>③ Beneficiaries of educational support activities such as science classes for schools and career education (number)</p>	<p>① Toray Group</p> <p>② Toray Group</p> <p>③ Toray Group</p>

	Targets			Results		Implementation leader ³
	Fiscal 2020	Fiscal 2021	Fiscal 2022	Fiscal 2022	Degree of success ²	
	① At least 80%	① At least 90%	① At least 95%	① 93%	① △	Osamu Tsuneki Vice President, Purchasing & Logistics Division, Toray Industries, Inc.
	② At least 70%	② At least 70%	② At least 70%	② 88%	② ○	
	③ 1%	③ 1%	③ 1%	③ 15.3%	③ ○	
	④ 40% (Fiscal 2022 target)			④ 27%	④ △	
	① 100% or higher	① 100% or higher	① 100% or higher	① 113%	① ○	Hideki Hirabayashi Senior Vice President, CSR & Investor Relations, General Administration & Communications Division, Tokyo Head Office, Toray Industries, Inc.
	② 2,500 or more	② 2,500 or more	② 2,500 or more	② 1,952	② △	
	③ 15,000 or more	③ 15,000 or more	③ 15,000 or more	③ 15,730	③ ○	

1 "Toray Group" refers to Toray Industries, Inc. and Toray Group companies in and outside Japan. "Toray Group (Japan)" refers to Toray Group companies in Japan. "Toray Group (Outside Japan)" refers to Toray Group companies outside Japan.

2 The degree of success is defined as follows : ○ means the target was fully met; △ means the target was 50% met or better; and × means the target was less than 50% met. "N.A." means no targets were specified for the fiscal year under review.

3 Names and job titles of implementation leaders are current as of March 31 2023.

4 For further detail, see the "Occupational Safety and Accident Prevention Activities" page of the "Safety, Accident Prevention and Environmental Preservation" section of the report.

5 For further detail, see the "Environmental Risk Management" page of the "Safety, Accident Prevention and Environmental Preservation" section of the report.

6 Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, the reduction is 32.7%.

7 The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

8 For further detail, see the "Initiatives for Quality Assurance and Product Safety" page of the "Product Quality and Safety" section of this report.

CSR Activity Report (CSR Guideline Activity Reports)

Corporate Governance

Continually revise management systems, strengthen internal controls as part of efforts to fulfill the company's social responsibilities.



Basic Approach

From the outset, one of Toray Group's managerial principles has been that the purpose of a company is to contribute to society. The Group has developed the Toray Philosophy that incorporates this principle.

The Toray Philosophy is structured with the following components: the Corporate Philosophy, Corporate Missions, and Corporate Guiding Principles. The Corporate Missions specify the Group's commitment "To practice sincere and trustworthy management," and the Corporate Guiding Principles stipulate the Group's commitment to "Acting with fairness, high ethical standards and a strong sense of responsibility while complying with laws, regulations and social norms to earn trust and meet social expectations."

In establishing its corporate governance structure, the Group seeks to fulfill these philosophies as its basic policy.

Related Policies

> [Basic Policy on Corporate Governance](#)

Related Information

> [Corporate Governance](#)

[Corporate Governance Report](#) **PDF**

Structure

Toray Industries, Inc. operates as a company with a Board of Corporate Auditors and Board of Directors. The Board of Directors, which includes outside directors, decides on the business execution and supervises the execution of duties by the directors. The Board of Corporate Auditors includes outside auditors and independently audits the execution of duties by the directors, separately from the Board of Directors and the executing organization. This framework is designed to secure the transparency and fairness of decisions made by the Board of Directors. In addition, there is a Governance Committee, which serves as a voluntary advisory body to the Board of Directors. The Governance Committee deliberates on all matters relating to corporate governance, enhancing the effectiveness of governance by the Board of Directors.

Toray Group operates in a broad spectrum of business fields at a global level. Business management and decision-making, as well as oversight, require assessment of a wide variety of risks from multiple perspectives based on expertise related to the day-to-day operations of the Group's worksites. To that end, the composition of the Board of Directors is designed to ensure that members bring a diverse range of perspectives to management oversight and decision-making based on their expertise in the Group's businesses. Meanwhile, outside directors are elected to the Board to ensure transparency and fairness, to ensure oversight from an even broader perspective, and to obtain appropriate managerial advice from a medium- to long-term perspective.

The Board of Corporate Auditors is entirely independent of the Board of Directors. Based on professional expertise in finance, accounting, and law, as well as an understanding of the Group's businesses, the Board of Corporate Auditors exercises oversight over directors' execution of their duties.

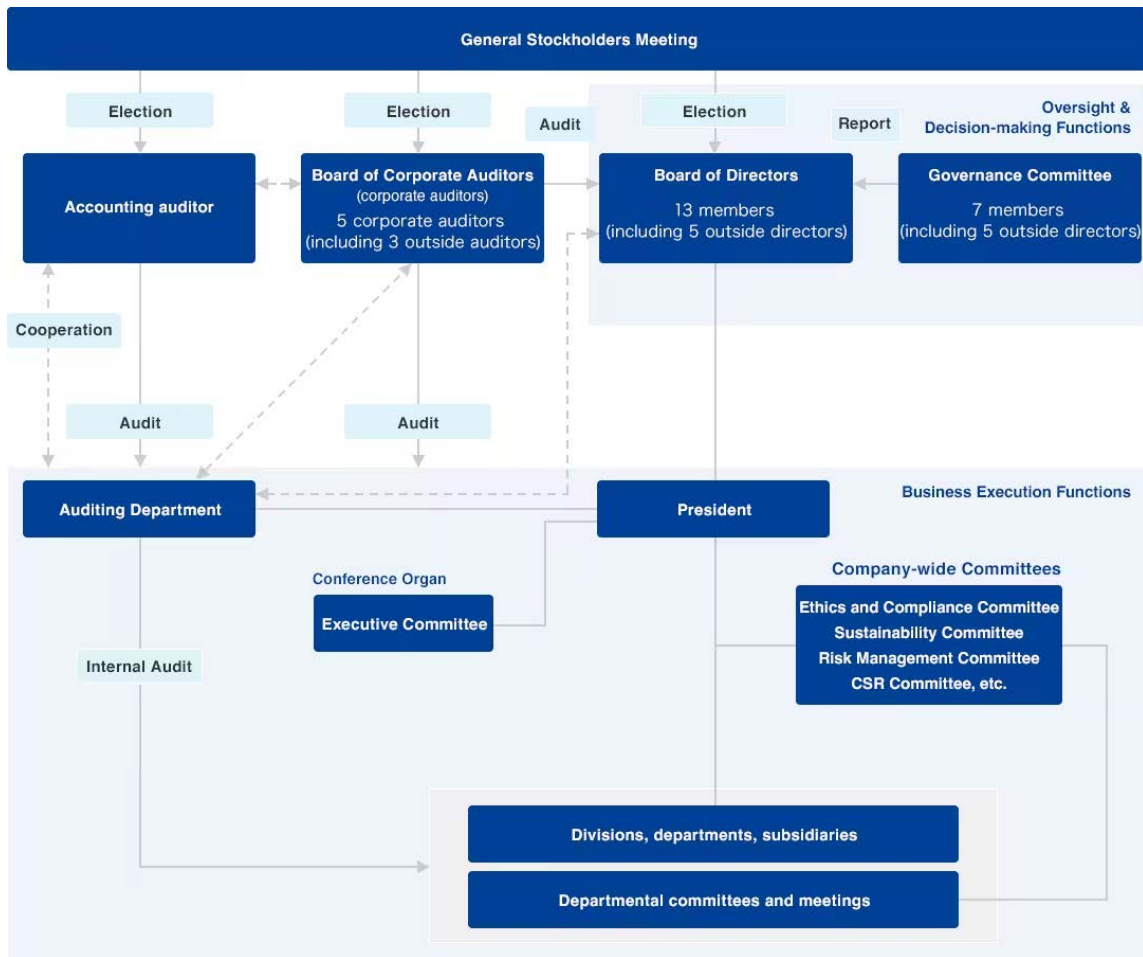
The Governance Committee consists of the chairman, the president, and all outside directors, and an outside director serves as a chairperson.

In fiscal 2022, the Board of Directors held 15 meetings, the Board of Corporate Auditors held 11 meetings, and the Governance Committee held 15 meetings ¹.

¹ For the attendance of each director and corporate auditor, please refer to pages 46, 47, and 57 of the 142nd Annual Securities Report (Report in Japanese) and pages 7, 8, and 23 of the Notice of the 142nd Ordinary General Meeting of Stockholders.

https://www.toray.co.jp/ir/pdf/lib/lib_a612.pdf

https://www.toray.com/global/ir/pdf/sto/sto_056.pdf



Name	Business operations				Corporate		Strategic
	Management experience	Global business	Technology/ Manufacturing/ R&D	Sales and marketing	Legal/Intellectual property/ Risk management	Accounting/ Finance	
Member of the Board	Akihiro Nikkaku	○	○				
	Mitsuo Ohya	○			○		
	Satoru Hagiwara	○		○			
	Kazuyuki Adachi		○	○			
	Kazuhiko Shuto		○		○		
	Tetsuya Tsunekawa			○			○ (DX)
	Masahiko Okamoto		○			○	
	Takashi Yoshiyama		○	○			
	Kunio Ito					○	○ (ESG)
	Ryoji Noyori			○			○ (Science and technology)
	Susumu Kaminaga	○					○ (Business strategies)
	Kazuo Futagawa					○	○ (Policyscience)
	Yuko Harayama						○ (Innovation)
Corporate Auditor	Hideki Hirabayashi		○		○		
	Yoshiyuki Tanaka		○	○			
	Hiroyuki Kumasaka					○	
	Makiko Takabe				○		
	Kozo Ogino					○	

The skill matrix above is not an exhaustive list of all the experience and knowledge possessed by individual, but presents the fields that the Company wishes each individual for promoting strategies.

* For a brief biography of each director and corporate auditor, please refer to pages 9 – 22, 24 – 29, and 31 – 32 of the Notice of the 142nd Ordinary General Meeting of Stockholders.
https://www.toray.com/global/ir/pdf/sto/sto_056.pdf

CSR Roadmap 2022 Targets

CSR Roadmap goals

1. Further improve governance by ensuring that Board of Directors operates in a manner that contributes to the enhancement of corporate value over the medium to long term.
2. Perform monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Companies Act.

Main initiatives and Key Performance Indicators

	KPI
(1) Regularly hold Toray Group Business Strategy Discussion sessions at Board of Directors meetings	1-①
(2) Consider the appropriate form of Toray head office involvement in the execution of business at each group company from the viewpoint of balancing the effectiveness of group-wide governance with the dynamic decision-making of subsidiaries	-
(3) Expand the opportunities for training, etc., needed for directors and corporate auditors to acquire the knowledge necessary for their responsibilities (excluding execution) and to fulfill their roles appropriately	-
(4) Operate an effective internal control system	1-②

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
1-① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (number)	8 times	8 times	8 times	8 times

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
1-2 Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)	90%	90%	90%	95%

Reporting scope : Toray Group

Related Materiality for CSR

- Strengthening Corporate Governance

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB).

[PDF](#)

Looking to the Future

Toray Industries' Board of Directors conducted a "Questionnaire Survey to Evaluate the Effectiveness of the Board of Directors in the Fiscal Year Ended March 31, 2023." The survey had among 17 respondents, comprising all of the Board members and corporate auditors. Additional interviews were also conducted with seven outside directors and outside corporate auditors to hear their opinions in relation to their responses to the questionnaire. In order to ensure transparency and objectivity, the Company contracted a third-party organization to collect and tabulate the questionnaires and conduct the interviews.

Analysis and evaluation of the effectiveness of the Board of Directors based on the above process concluded that the Board had generally fulfilled its roles and responsibilities in fiscal 2022. With regard to the matter of "diversity on the Board of Directors," however, discussions continue to be held on the issue of appointing human resources who will contribute to the realization of the Toray Philosophy, based on the premise of ensuring quality. In terms of "further activating Board of Directors discussions," specific measures for improvement are being taken in fiscal 2023 and beyond, continuing from fiscal 2022, to further improve the effectiveness of the supervisory function of the Board of Directors.

With respect to the opinions, etc., received from the members of the Board and corporate auditors in the course of evaluating the effectiveness of the Board of Directors, the Governance Committee will hold in-depth discussions based on those opinions with a view to further improving the effectiveness of the Board of Directors, as necessary.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 1 "Corporate Governance" during the CSR Roadmap 2025 period (fiscal 2023–2025).

[PDF](#)

Ensuring Proper Business Conduct and Transparency

CSR Roadmap 2022
Main Initiatives (1)(2)(3)(4)

Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (number)

■Reporting scope ■Target in fiscal 2022
Toray Group 8 times

Result in fiscal 2022

8 times

Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)¹

■Reporting scope ■Target in fiscal 2022
Toray Group 90%

Result in fiscal 2022

95 %

¹ To evaluate the effectiveness of internal control relating to the Board of Directors, a questionnaire is given to all 17 directors and corporate auditors. It covers each of the nine items in the Basic Policy on Internal Control System set in accordance with the provisions of the Companies Act of Japan.

In this way, internal control effectiveness is evaluated by all directors and corporate auditors, and then monitored as a KPI of the internal control system to be shared with stakeholders.

The Toray Industries Board of Directors holds regular Toray Group Business Strategy Discussion sessions to confirm the direction of and progress on management strategies for Toray Group sustainable growth and creation of medium- to long-term corporate value. Eight discussion sessions were held in fiscal 2022.

In addition, Toray Industries uses external programs to provide information on Japan's Corporate Governance Code revisions to its directors so that they have all of the knowledge needed to appropriately execute their duties and fulfill their role. Dialogue between outside directors and the Company's vice presidents is also regularly pursued, as well.

Toray Industries operates a Basic Policy on Corporate Governance based on Japan's Corporate Governance Code, and regularly publishes a Corporate Governance Report, which also summarizes the status of internal control systems.

Toray Group maintains and improves group governance by establishing group-wide rules and regulations concerning ethics and compliance, efficient execution of duties, preservation and management of information, risk management, and other matters, in addition to holding regular meetings to receive direct reports on the management status of subsidiaries.

Toray Industries has set a KPI for “Board of Directors’ positive assessment of the implementation of the Basic Policy for Internal Control Systems.” The result for fiscal 2022 was 95%, surpassing the target of 90%.

Related Information

› [Basic Policy on Corporate Governance](#)

[Corporate Governance Report](#) 

› [Basic Policy on Internal Control System](#)

› [Information Disclosure Principles](#)

Click [here](#) for the main initiatives for CSR Guideline 1, “Corporate Governance” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports)

Ethics and Compliance

Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and act with a keen sense of compliance to maintain the trust of society



Basic Approach

Toray Group's corporate philosophy is "Contributing to society through the creation of new value with innovative ideas, technologies and products."

To deliver on this commitment, Toray Group is contributing to society by leveraging innovative technologies and advanced materials to tackle important global issues. This efforts requires that the Group earn and maintain the trust of diverse stakeholders by ensuring that its business activities comply with the laws and regulations of the countries where it does business, and by always acting with integrity.

Top management is taking the initiative by giving the highest priority to securing compliance, and by requiring that the Group and its suppliers facilitate ethics and compliance practices.

Related Policies

Internal Rules for Ethics and Compliance

Toray Industries, Inc. has established a set of internal rules for ethics and compliance, together with related standards and procedures. These internal rules set out the framework for practicing corporate ethics and legal compliance, and they are designed to foster a healthy corporate culture. The rules also outline how to respond to issues, identify causes and prevent recurrence, as well as initiatives to be taken by group companies in and outside Japan.

Ethics & Compliance Code of Conduct

Toray Group has established the Ethics & Compliance Code of Conduct as an important rule which every Toray Group executive and employee must comply with.

> [Ethics & Compliance Code of Conduct](#)

Structure

Toray Industries has established an Ethics and Compliance Committee, which is chaired by the president with membership comprising the Company's vice-presidents. At this committee, management and workers come together to consider and discuss policies related to corporate ethics and compliance. The status of the whistle-blowing system in Toray Group, including number of reports (consultations) received through hotlines and the outline of the cases, are reported to directors by the Ethics and Compliance Committee.

In fiscal 2022, the Ethics and Compliance Committee convened twice to deliberate on and discuss the results of fiscal 2021 initiatives, action plans for fiscal 2022, and the progress of implementation thus far. The committee also discussed individual measures such as the implementation of Compliance Month and collaboration with safety activities.

In each workplace, Toray Group is shifting away from a top-down approach to compliance measures, with the general manager of the division or department taking the lead on initiatives. Instead, a middle-up/middle-down approach starts with mid-level employees, who formulate and carry out the activities deemed necessary in their workplace and then report to top management with feedback based on their experience with the implemented activities.

In initiatives for group companies around the world, Toray Group has established the Affiliate Companies' Compliance Meeting and the Overseas Affiliate Companies' Compliance Meetings under the Ethics and Compliance Committee. Through these committees, the Group is promoting compliance activities in each company, country and region.

CSR Roadmap 2022 Targets

CSR Roadmap goals

1. No major cases throughout the Toray Group of non-compliance with or violation of bribery regulations, antitrust laws, etc
2. Implement monitoring to raise ethical and compliance awareness throughout Toray Group
3. Enhance awareness-raising and educational activities relating to corporate ethics and compliance

Main Initiatives and Key Performance Indicators

	KPI
(1) Aim for no major cases of non-compliance with or violations of laws and regulations	2-①
(2) Practice appropriate transactions based on free, fair, and transparent market competition	-
(3) Prohibit any association with organized criminal groups or other anti-social forces and take a firm stance against them	-
(4) Conduct internal legal audits and improve problems found in the audits	2-②
(5) Appropriately operate a whistle-blowing system	-
(6) Thoroughly disseminate the Ethics & Compliance Code of Conduct	-
(7) Provide information and implement education on major laws and regulations and other compliance-related matters	2-③

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
2-① Number of major violations of laws or ordinances	0	0	0	0
2-② Implementing internal legal audits of group companies, group companies improving problems found in internal legal audits in the previous year (%)	Audits: Conduct at Toray Industries, Inc. and its group companies in and outside Japan Percent that improved: 100% for all audits by the following fiscal year			Improvement rate: 100% ¹
2-③ Group companies providing information and implementing education on major laws and regulations and other compliance-related matters (%)	100%	100%	100%	100%

Reporting scope : Toray Group

¹ No problems found in the previous year's audit

Related Materiality for CSR

- Ensuring Ethics and Compliance

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB). [PDF](#)

* Click [here](#) for a PDF summary of the relationships between materiality, associated CSR Roadmap 2022 main initiatives, KPIs and progress achieved, up to fiscal 2022 (PDF: 1.6MB). [PDF](#)

Looking to the Future

With the slogan “Have the Integrity to Do the Right Thing in the Right Way,” since fiscal 2018, Toray has been promoting initiatives including the following four principles for taking more effective action to ensure compliance.

Compliance Action Principles

- **B** : Be fair, be honest and have Integrity
- **E** : Encourage respect and communication
- **A** : Adopt a genba² approach – Look to the facts!
- **R** : Responsibility as a member of our excellent company



² Genba is the Japanese word for “actual worksite.”

Under the name “Mission BEAR,” taking its acronym from the first word of each principle, Toray Group companies establish action plans and execute initiatives in line with the actual conditions of each company.

Toray Group performs regular follow-up to check the progress of each group company. Outstanding initiatives are shared with other companies in the Group, which are encouraged to independently enhance their compliance activities.

In fiscal 2022, Toray Industries continued to assist compliance initiatives at group companies and actively share compliance-related best practices such as Compliance Month, as well as sharing and utilizing compliance awareness survey results and collaboration with plant safety activities. Through these efforts, the Company strengthens the Group’s overall risk response by emphasizing factors unique to each region and type of business while reinforcing integrity driven corporate culture.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 2 “Ethics and Compliance” during the CSR Roadmap 2025 period (fiscal 2023–2025). [PDF](#)

CSR Activity Report (CSR Guideline Activity Reports) - Ethics and Compliance

Establishing a Corporate Culture of Total Respect for Ethics and Compliance

Toray Group Ethics & Compliance Code of Conduct

CSR Roadmap 2022
Main Initiatives (6)(7)

The Ethics & Compliance Code of Conduct was updated in June 2023, and is an important set of rules that must be followed by every Toray Group executive and employee, including contracted, part-time and dispatched workers. This code of conduct is subject to periodic review by the Ethics and Compliance Committee, which is chaired by the president with membership comprising the Group's vice-presidents, and the results are reported to the directors. All of the employees are fully informed of this code of conduct.



[Download \(472KB\)](#)

[PDF](#)

Distribution rate of the Toray Group Ethics & Compliance Code of Conduct

CSR Roadmap 2022
Main Initiatives (6)(7)

Distribution rate of the Toray Group Ethics & Compliance Code of Conduct

100%

Toray Group

Toray Group translates and distributes its code of conduct in eight languages (English, Chinese, Korean, Thai, Malay, Indonesian, Spanish, and Hungarian) to ensure that Toray Group employees around the world understand the content.

Major Contents of Toray Group Ethics & Compliance Code of Conduct

1. Compliance for safety and the environment

(1) Working environment

We must protect the health and safety of ourselves and our co-workers by maintaining safe equipment, working conditions and working procedures. Besides following related laws and company rules, we should continue to take an active part in safety initiatives, with the aim of reducing workplace accidents to zero. Also, we should be mindful of the importance of close communication in promoting mental health in the workplace. Showing respect for others helps to create a positive and healthy work environment for all.

(2) Caring for the environment

We must follow all laws and company rules that relate to the environment, disaster prevention and the handling of chemical substances, based on the principle that we must leave the environment in a better state.

We should strive to reduce the impact that our business activities, products and services have on the environment, while also promoting diversity and sustainable use of resources.

2. Compliance for quality

(1) Safe and satisfactory products

We must always act according to the law and in the interests and spirit of product safety to ensure that we continue to make safe and satisfactory products in response to requirements of our customers. Also, we must understand the requirements of our customers appropriately, and design, manufacture and provide products in response to such requirements. If a problem should arise, we must respond quickly.

(2) Quality data management

We must obtain, forward, store and confirm quality data in agreed ways, and correctly inform customers of the data as necessary to ensure that we continue to keep our promise to customers. We as a company do not permit quality data falsification.

3. Compliance for human rights

(1) Respect for the character and individuality of employees

We must respect the individuality of every Toray Group employee and must not engage in spiteful treatment or discrimination.

We must respect the privacy of other employees and handle personal information with the utmost care.

(2) Preventing harassment and discrimination

We as Toray Group do not tolerate any form of harassment or discrimination, including sexual harassment and power harassment.

(3) Respect for the human rights of all stakeholders

We will not infringe on human rights or be complicit in infringing on the human rights. We must respect international human rights norms and act consistently with the Toray Group Policy for Human Rights.

4. Compliance for fair business activities

(1) Competing fairly

We must not participate in cartels or other illegal concerted practices, unfair treatment of business partners, or any conduct violating competition laws of each country/region.

We must not give or receive bribes both in relation to public officials and other business partners, or participate in any other form of corrupt practice. We must follow relevant laws and company rules in making political contributions and charitable donations.

We must accurately communicate information about the quality, functions and price of our products and services so as not to mislead our business partners and end users.

(2) Fair transaction and asset management

All transactions including purchase, sales and payment of expense must be done appropriately in accordance with the law and general accounting principles.

All company assets such as inventories and fixed assets must be controlled, used and maintained for business purpose only.

(3) International trade control and security trade administration

We must follow the relevant laws and regulations and comply with appropriate import and export procedures and trade controls when purchasing, exporting or importing products, machines, materials and samples, or when sharing our technology overseas, to avoid violation of sanctions imposed by the United Nations and governments such as the United States.

(4) Compliance with applicable laws in general

We must acknowledge that a violation of laws and regulations could undermine trust in the company, and comply with any and all laws and regulations including those related to;

- Insider trading
- Shut off of any relationship with antisocial forces
- Conflicts of interest

5. Compliance for intellectual property

(1) Respect for intellectual property rights of others

We must ensure that we do not infringe intellectual property rights of others, either intentionally or as the result of insufficient investigation.

6. Compliance for information management

(1) Information management

When we become aware of confidential information owned by either Toray Group or others, we must not disclose, publicize or use such information for unauthorized purposes both during and after our employment at Toray Group.

When handling personal information as part of our work, we must follow company policies for protecting such information and manage such information carefully and appropriately.

(2) Reporting and public disclosures

We must make disclosures as required by law and follow the Toray Group's Information Disclosure Principles with the aim of providing full, fair, accurate and timely reports and public disclosures about our business.

Major violations of laws or ordinances

CSR Roadmap 2022
Main Initiatives (1)

Number of major violations of laws or ordinances

■ Reporting scope
Toray Group

■ Target in fiscal 2022
0

Result in fiscal 2022

0

Group companies providing information and implementing education on major laws and regulations and other compliance-related matters (%)

■Reporting scope	■Target in fiscal 2022
Toray Group	100%

Result in fiscal 2022

100%

Toray Industries posts links to information on CSR and legal compliance on its corporate intranet. Toray Group circulates important information about legal and compliance matters that are highly relevant to its business in Japan and other countries. Group companies implement workshops to examine these matters and study cases of corporate misconduct in an effort to foster discussion in the workplace.

Since fiscal 2012, Toray Industries has provided online training courses on Toray ethics and legal compliance for all executives and employees, including contracted, part-time and dispatched workers. In addition to training designed to instill an understanding of the Ethics and Compliance Code of Conduct and whistleblowing system, the Company sets specific course themes for each year on such topics as anti-corruption/bribery, human rights, and harassment. In fiscal 2022, the Company provided training on the Toray Group Ethics & Compliance Code of Conduct and the Group's whistleblowing system. Participation in this course was 96.4% of targeted employees. In a survey of participants who took part in the online course, 60.8% responded that they "understand" the content of the Ethics and Compliance Code of Conduct, and 38.9% responded that they "understand to some extent." Toray Industries will continue to disseminate information and provide education to ensure that ethics and legal compliance is even more fully understood moving forward. Group companies in Japan are using these materials to implement their own training.

In fiscal 2022, in response to inappropriate actions relating to UL certification, the Company provided thorough company-wide compliance education that included an introduction to the case, analysis of the causes, and countermeasures to address the issue.

> [For more information on the Toray response to this matter, please refer to:](#)

[Response to Inappropriate Actions Relating to UL Certification in the Toray Resins Business](#)

Expanding the Whistleblowing System

Toray Industries established the Corporate Ethics and Legal Compliance Helpline as a whistleblowing system in fiscal 2003 and expanded the system to include all Toray Group companies in Japan in fiscal 2010. In 2022, the Company revised its internal rules in accordance with revisions to the Whistleblower Protection Act that went into effect in June of the same year. Executives, employees who have been retired for a year or less, and business partners were added as users of the whistleblowing system, and a provision regarding the designation of those who respond to reports to the whistleblowing system (whistleblowing report responders) was also added. Further, Toray Industries endeavored to encourage greater use of the whistleblowing system by, for example, providing examples of how to utilize the system.

The Company ensures that employees have access to alternative means of reporting and consulting such as via internal contact points at its offices and plants or directly to the secretariat of the Ethics and Compliance Committee via email or a dedicated form on the corporate intranet.

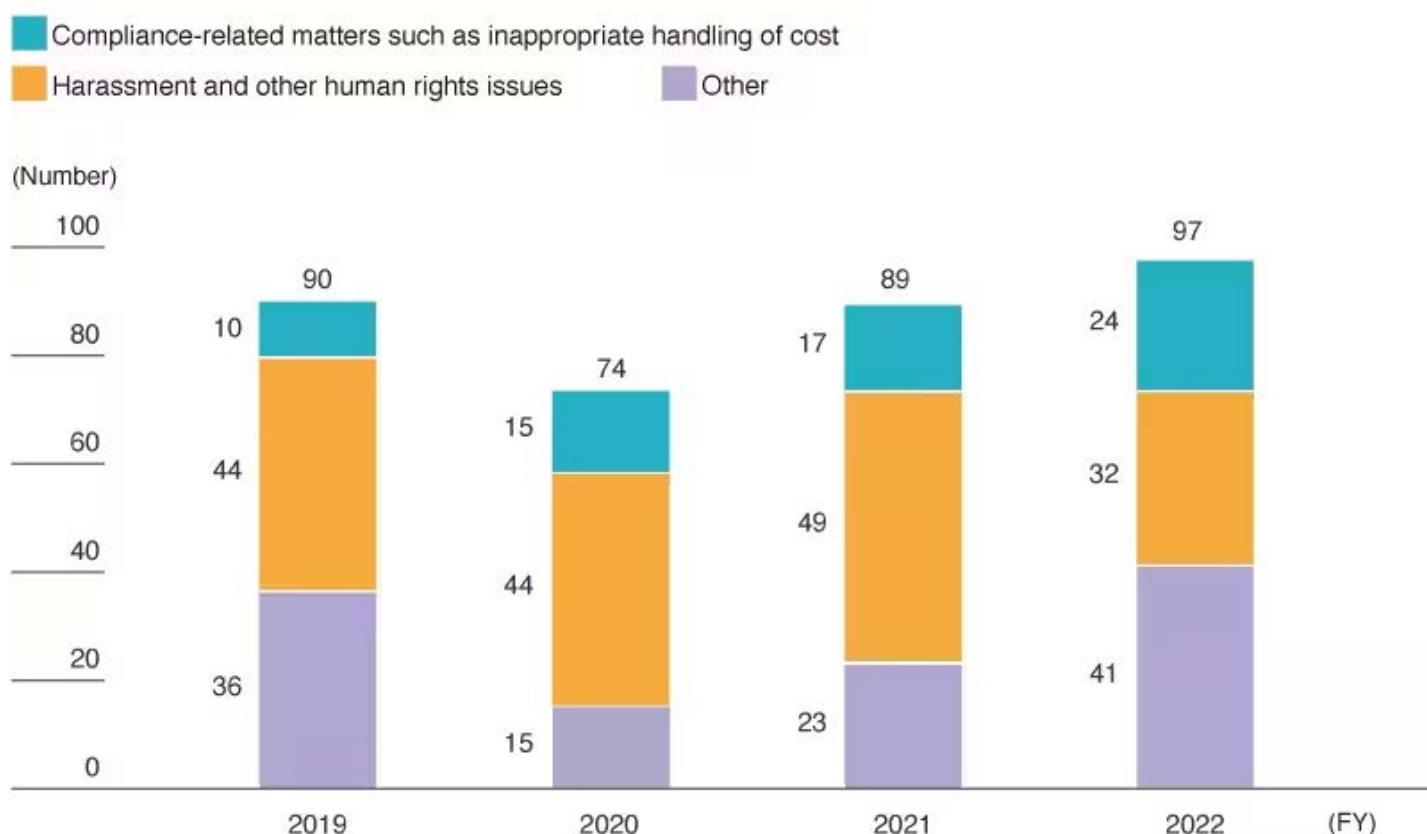
In addition, each Toray Group company in Japan has established a Helpline contact point. Moreover, Toray Industries has also created an external Helpline contact point shared by all group companies in Japan to make it easier for employees to report and consult.

Each group company outside Japan has also established a Helpline contact point (internal, outside, or regional contact points). These Helpline contact points have been in operation at all companies since fiscal 2017. Toray Group has worked to resolve reported issues, while carefully confirming circumstances in interviews and investigations, based on the laws, customs, and other regulations of each country and region.

Since fiscal 2016, Toray Industries has also maintained an additional whistleblowing system for group companies to directly report serious misconduct such as violations of antitrust laws and bribery, and it is working to inform all Toray Group companies about the system.

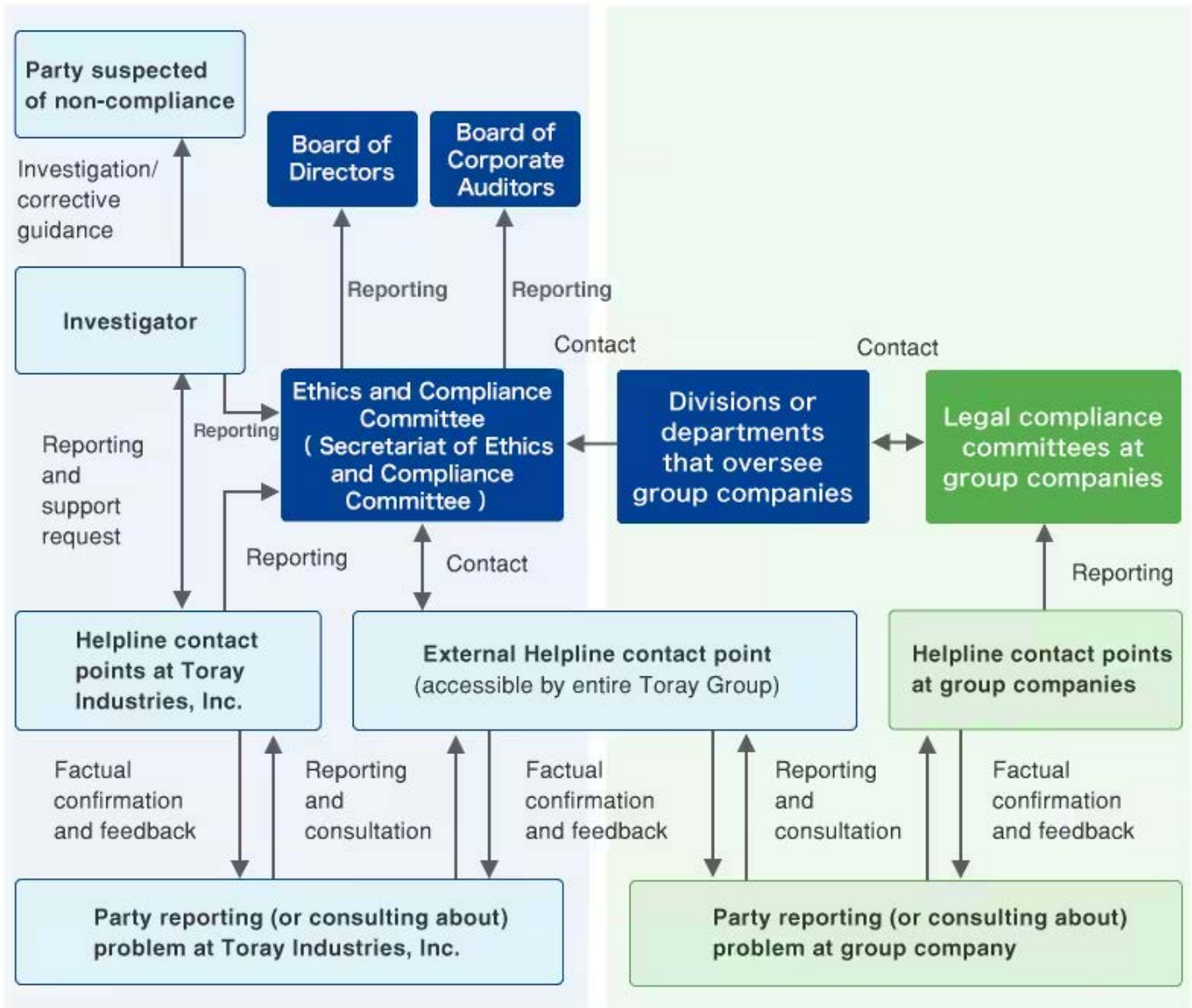
In fiscal 2022, Toray Industries and its group companies received a total of 97 whistleblowing reports and consultations, with seven cases resulting in disciplinary action. The facts were investigated with complete discretion to protect against any risk of negative impact on the individual reporting to or consulting with the hotline. If a problem was identified, efforts were made to solve the problem and measures were taken in accordance with the internal rules of each company, such as employment rules.

Number and Subject of Reports (Consultations) Across Toray Group



The number of reports (consultations) and the details of the cases are reported to the Board of Directors and the Board of Corporate Auditors by the Ethics and Compliance Committee.

Corporate Ethics and Legal Compliance Helpline System (Toray Industries, Inc. and its Group Companies in Japan)¹



¹ In addition to the above avenues, Toray Industries, Inc. receives reports on and addresses serious misconduct at all group companies in and outside Japan.

Implementing internal legal audits of group companies, group companies improving problems found in internal legal audits in the previous year (%)

■Reporting
scope
Toray Group

■Target
Audits: Conduct at Toray Industries, Inc. and its group companies in and outside Japan
Percent that improved: 100% for all audits by the following fiscal year

Result in fiscal 2022

Improvement rate: **100%**

(No problems found in the previous year's audit)

In fiscal 2022, Toray Industries undertook an internal legal and compliance audit of designated divisions of Toray Industries and designated group companies in Japan to ensure compliance with the highly important antitrust laws, anti-bribery regulations, insider trading regulations, and contract signing rules. Although no inappropriate transactions were found under any of the audit items, the Company plans to continue working to ensure thorough awareness of legal compliance through educational activities and the dissemination of information in media such as company magazines.

Click [here](#) for the main initiatives for CSR Guideline 2, "Ethics and Compliance" in CSR Roadmap 2022.

Ensuring Tax Compliance

Toray Group Tax Policy

CSR Roadmap 2022
Main Initiatives (1)

With the release of a policy by the Organisation for Economic Co-operation and Development (OECD) to combat base erosion and profit shifting (BEPS), the complexity of taxation rules worldwide is steadily increasing. Due also to the growing importance of corporate governance related to taxation in Japan, Toray Group recognizes the necessity of highly transparent tax practices and corporate social responsibility. Therefore, the Group has enhanced its tax compliance efforts based on the Toray CSR Guidelines.

To ensure that this initiative can be taken to an even higher level, the Group has once again clarified the basic taxation compliance approach that each employee should take, and established the Toray Group Tax Policy, which was approved by the Board of Directors in April 2020.

Under the responsibility of the general manager of the Finance and Controller's Division¹, Toray Group will continue striving to improve its tax compliance while building its tax governance structure, centered on the Tax Department, to enhance corporate value.

Toray Group operates the Corporate Ethics and Legal Compliance Helpline, a whistleblowing system for group companies in and outside of Japan to report and consult on ethics and compliance issues, including unethical or illegal activities and concerns related to tax matters.

¹ As of July 2023, a senior vice president (member of the board) serves as the general manager of the Finance and Controller's Division.

Toray Group Tax Policy (Established April 2020)

Toray Group will continue to uphold the following tax policy and strive to improve its tax compliance while building its tax governance structure, to enhance corporate value.

Basic Policy

1. Toray Group makes efforts to pay taxes appropriately by complying with the tax laws of each country and international taxation rules.
2. Toray Group makes efforts to enhance corporate value and maximize shareholder value while minimizing tax risks and optimizing tax expenses.
3. Toray Group will not conduct arbitrary tax avoidance using tax havens or other methods.
4. Toray Group establishes good relationships with the tax authorities of each country.

Tax Compliance

Toray Group employees (including executives) recognize that complying with tax laws and rules is the best way to minimize tax risks and enhance corporate value. The Group conducts trainings so that employees can ensure tax compliance.

Tax Governance

Toray Group clarifies and implements tax rules within the Group to manage tax expenses and aim for an appropriate tax burden.

The Group makes efforts to establish good relationships with tax authorities in each country on matters that require cooperation.

Other Initiatives

CSR Roadmap 2022
Main Initiatives (1)

Transfer pricing is becoming more important as global trade increases. Toray Group therefore strives to allocate income appropriately by calculating transfer pricing using the arm's length principle. Moreover, the Group does not carry out tax planning strategies with the intention of inappropriately reducing Group taxes.

Click [here](#) for the main initiatives for CSR Guideline 2, "Ethics and Compliance" in CSR Roadmap 2022.

Improving Security Trade Controls

Watching the Latest Trends and Management Strategies for Security Trade Controls

CSR Roadmap 2022
Main Initiatives (1)

Concerns about the spread of conventional mass weapons of destruction and changes in the international security balance necessitate risk management addressing security trade controls. Toray Industries, Inc. convenes a Security Trade Administration Committee comprising officers of divisions that are involved in exports and technology transfer. In fiscal 2022, the committee decided on measures to implement for the fiscal year after considering pressing risks based on recent international circumstances and regulatory trends. The committee members also convene a Divisional Security Trade Administration Committee that communicates corporate measures and implements supplementary programs, such as precautions to be taken by departments and group companies under its supervision.

Practically Addressing Risks

CSR Roadmap 2022
Main Initiatives (1)(7)

Toray Group performs risk management of security trade controls with regard to the export of all products, devices, materials, and samples, as well as the transfer of technologies outside Japan. Particularly strict management is necessary for TORAYCA™ carbon fiber and its composite materials, semiconductor coating agents, and water treatment membranes, which are listed as restricted items requiring export permission from the Japanese Minister of Economy, Trade and Industry.

The following measures to enhance risk management associated with security trade controls have been implemented based on conditions in and outside of Japan.

(1) Enhanced employees' capacity for accurate judgment within Toray Industries' divisions and group companies

With the implementation of measures to mitigate the risk of COVID-19 infection, Toray Industries utilized web conferencing for highly specialized practical training and e-learning for basic level specialized training. The training programs were improved to provide more effective teaching suitable to these methods. Toray Industries provided the necessary practical knowledge to mid-level employees who play a central role in security trade control. Training was also given to newly appointed managers to promote appropriate management on the front lines. (A total of 15 courses were held with 1,254 employees participating in the web conference courses and 3,752 employees taking part in the e-learning courses.) The Company also conducted a series of advanced courses for employees with specialized expertise to practice classifications. (A total of two courses were held with 403 employees participating in the web conference courses.)

In addition, the Company systematically encourages employees to take the various qualification exams authorized by the Center for Information on Security Trade Controls in Japan. In fiscal 2022, 253 Toray Group employees passed the exam, bringing the cumulative number of Toray Group employees who have passed the exam to 4,585 persons.

Cumulative number of Toray Group employees who have passed the exam authorized by the Center for Information on Security Trade Controls in Japan	4,585 persons
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(2) Conducted regular audits

Toray Industries carried out paper audits and onsite audits of group companies, and provided individualized guidance based on the results to help group companies make improvements.

(3) Enhanced information sharing and reporting

Toray Industries integrated and centralized information on concerns such as suspicious trade inquiries, reported or consulted with the appropriate authorities as required, and took the appropriate measures. The Company also shared suspicious trade information at various company meetings, and took steps to improve its risk management.

(4) Improved inspection systems

Toray Industries has fully linked its security trade control system with its backbone sales system in order to prevent erroneous shipments due to human error. In order to improve management efficiency through use of the linked system, support was given to outstanding initiatives and the successful cases were shared with other departments.

Click [here](#) for the main initiatives for CSR Guideline 2, "Ethics and Compliance" in CSR Roadmap 2022.

Antitrust Compliance and Corruption/Bribery Prevention

1. Compliance with Antitrust Laws

The Toray Group Ethics & Compliance Code of Conduct, revised in June 2022, stipulates the rules that all Toray Group executives and employees must follow regarding antitrust laws. Educational materials on antitrust laws have also been prepared in Japanese and English for all group employees. The Group has an Antitrust Law Compliance Program that is utilized by departments in Japan, along with Antitrust Law Red Cards that can be carried as a guide by employees.

In fiscal 2022, there were no legal actions taken against Toray Group due to anticompetitive activities, antitrust actions, or monopolistic practices.

2. Corruption and Bribery Prevention

In January 2020, the Group issued Anti-Bribery Regulations to clearly prohibit corrupt relationships with public officials and business partners. Approval and reporting rules were also established concerning the provision (or receiving) of money and other items to (from) public officials and business partners. Similar rules have been implemented at group companies worldwide.

The Ethics & Compliance Code of Conduct stipulates the guidelines that all Toray Group executives and employees must follow to avoid involvement in corruption and bribery. Guidelines and educational materials on related corruption and bribery prevention have also been prepared in Japanese and English for all Group employees and shared throughout the Group.

In March 2020, Toray Industries, Inc. conducted e-learning on the anti-bribery guidelines for all executives and employees, including contracted, part-time and dispatched workers, with 6,849 people taking the training. Group companies in Japan use similar teaching materials to provide education. In fiscal 2022, there were no legal actions taken against Toray Group due to corruption and bribery prevention.

Click [here](#) for the main initiatives for CSR Guideline 2, "Ethics and Compliance" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Ethics and Compliance

Protection of Personal Information

CSR Roadmap 2022
Main Initiatives (1)

In order to comply with Japan's Act on the Protection of Personal Information, Toray Industries, Inc. has established Regulations for the Management of Personal Information, together with a management framework and practices to ensure each department manages personal information appropriately. Audits are regularly conducted into the management conditions in each department.

In fiscal 2022, the Company received no complaints concerning personal information and there were no data breaches.

Major Toray Group companies in and outside Japan also appropriately manage personal information in accordance with the management systems and methods set forth in the rules and regulations of each company.

Click [here](#) for the main initiatives for CSR Guideline 2, "Ethics and Compliance" in CSR Roadmap 2022.

Ethics Review Committee on Research Involving Human Biological Subjects

Toray Industries, Inc. has established an ethics review committee to comprehensively review the propriety of research involving human subjects in relation to ethics, science, protection of personal information, and other matters. The committee reviews human genome and genetic research, clinical research, and epidemiological research that uses samples collected from the human body and medical information from donors. The ethics review committee includes members from outside the Company and conducts rigorous reviews in accordance with the Ethical Guidelines for Life Science and Medical Research Involving Human Subjects issued by the Ministry of Education, Culture, Sports, Science and Technology, the Ministry of Health, Labour and Welfare, and the Ministry of Economy, Trade and Industry.

Ethics Review Committee on Research Involving Human Biological Subjects

This committee reviews the objectives of human genome and genetic analysis, epidemiological and clinical research (referred to as research involving human biological subjects including specimens and information acquired from them) conducted at Toray Industries, as well as the medical, scientific, legal, and ethical propriety and the feasibility of plans for such research.

- [Member of Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 90KB\)](#) PDF
- [Minutes of 1st Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 87KB\)](#) PDF
- [Minutes of 2nd Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 83KB\)](#) PDF
- [Minutes of 3rd Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 4th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 5th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 88KB\)](#) PDF
- [Minutes of 6th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 7th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 8th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 9th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 10th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 85KB\)](#) PDF
- [Minutes of 11th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 86KB\)](#) PDF
- [Minutes of 12th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 83KB\)](#) PDF
- [Minutes of 13th Ethics Review Committee on Research Involving Human Biological Subjects \(PDF : 113KB\)](#) PDF

Click [here](#) for the main initiatives for CSR Guideline 2, "Ethics and Compliance" in CSR Roadmap 2022.

Disclosure of Information Regarding the Ethical Treatment of Laboratory Animals

Toray Industries, Inc. aims to contribute to the human development and health enhancement through the creation of pharmaceuticals and medical devices. The Company believes that animal testing is necessary and required for safety and efficacy verification in the development of new pharmaceuticals and medical devices. This testing must be carried out with respect for animal life, considering the 3R principles for animal experiments; Replacement (use of alternatives to animals), Reduction (reducing the number of animals used), and Refinement (minimization of pain). In order to ensure that animal testing is conducted ethically, Toray Industries has established in-house rules in accordance with the Act Concerning Humane Treatment and Management of Animals, the Standard for Care and Management of Laboratory Animals and Alleviation of Pain, the Guidelines for Proper Implementation of Animal Experiments, and other relevant guidelines.

The Company has set up the Animal Care and Use Committee, which carries out ethical and scientific review of the adequacy of plans, potential alternative methods, and details of experimental designs involved in all animal testing conducted at the Company. Through these efforts, the Company strives to conduct appropriate animal experiments based on the 3R principles. Specifically, as an alternative to animal experiments, Toray has adopted *in silico* evaluation¹ using computers and *in vitro* evaluation² using cultured cells.

For pharmacokinetic evaluation, the Company has been able to reduce the number of animals used by adopting a simultaneous analysis method for multiple compounds administered in mixed doses. Humane endpoints (criteria for suspending and discontinuing experiments to avoid causing undue suffering) are also set for all planned experiments.

The committee is working to raise awareness around animal testing by providing all staff involved in animal testing with training in standards of care and biannual training on the ethics of the use of experimental animals.

In addition, the Animal Care and Use Committee carries out periodic self-monitoring and evaluation of the regulations and systems in place, the committee actions, facility maintenance, and animal testing to verify that each test is conducted appropriately. Toray Industries' Basic Research Center has continually received certification from the Assessment and Accreditation Center for Laboratory Animal Care and Use, Japan Pharmaceutical Information Center³ since 2012.

¹ *in silico* evaluation: An evaluation method that uses computers to predict the physiological activity, pharmacokinetics, toxicity, and other characteristics of a compound from existing data.

² *in vitro* evaluation: An evaluation method that detects the physiological activity, pharmacokinetics, toxicity, and other characteristics of a compound using human or animal cells and tissues in test tubes or culture dishes.

³ For a list of facilities certified by the Japan Pharmaceutical Information Center, click [here](#).

CSR Activity Report (CSR Guideline Activity Reports)

Safety, Accident Prevention, and Environmental Preservation

Ensure the safety and health of society and employees, and protect the environment in all business processes, from procuring raw materials and manufacturing to the supply and disposal of products.



Basic Approach to Environmental Preservation

Corporate efforts to help realize a sustainable society have become increasingly vital in recent years. Toray Group established its Medium-Term Environmental Plan in fiscal 2000 to strengthen and enhance initiatives for reducing environmental impact. The Group has set key performance indicators (KPIs) to reduce greenhouse gas emissions per unit of sales in order to fight global warming, as well as to reduce atmospheric emissions of certain chemical substances (PRTR substances and VOCs, etc.) and waste. These efforts have continued during the course of all five Medium-Term Environmental Plans up until fiscal 2020.

Under the Toray Group Sustainability Vision announced in July 2018, the Group aims to achieve two targets per unit of revenue by 2030: a 30% reduction in greenhouse gas emissions from production activities and a 30% reduction in water usage, both compared with fiscal 2013.

Under the medium-term management program Project AP-G 2022, which covers the period from fiscal 2020 to fiscal 2022, the Group promoted the Challenge 30 Project, a company-wide project to tackle specific activities to realize the Toray Group Sustainability Vision of reducing greenhouse gas emissions and water consumption per unit of revenue. To achieve these two targets, three-year KPIs were included in CSR Roadmap 2022, the Group's medium-term CSR plan, and initiatives were implemented to meet the targets. With these efforts, the Group met its targets for fiscal 2030 ahead of schedule in fiscal 2022. Therefore, to further accelerate its activities to realize a sustainable world, the Group significantly raised the numerical targets in the Toray Group Sustainability Vision from the 30% reduction to a more than 50% reduction in both greenhouse gas emissions and water consumption per unit of revenue compared to fiscal 2013. The Group is also accelerating efforts by setting the target of reducing greenhouse gas emissions in Japan by at least 40% compared to fiscal 2013.

To meet the new targets, three-year KPIs have been included in CSR Roadmap 2025, which covers the period from fiscal 2023 to fiscal 2025. The company-wide Challenge 30 Project has also been renamed the Challenge 50+ Project to further promote reduction efforts through routine energy-saving activities, the introduction of renewable energy, elimination of the use of coal, and other means. Moreover, in addition to reducing greenhouse gas emissions and water consumption per unit of revenue, CSR Roadmap 2025 also continues to set KPIs relating to atmospheric VOC emission reduction and waste recycling rate improvement. The Group is taking steps to meet these, including by strengthening its management of priority-focus companies and factories, namely those have a particularly large environmental impact.

* Refer to the following activity reports for more information on basic approaches and policies regarding safety and disaster prevention, as well as for issue awareness and policies regarding individual environmental issues.

Related Policies

Ten Basic Environmental Rules (Established January 2000 and revised June 2011)

1. Prioritize environmental preservation

We shall comply with all laws, regulations, and agreements in all of our business activities. Taking biodiversity into consideration, we shall place the highest priority on environmental preservation in the manufacture, handling, use, sale, transport, and waste disposal of products.

2. Prevent global warming

We shall promote energy conservation and work to reduce our unit energy consumption and our carbon dioxide emissions.

3. Achieve zero emissions of environmental pollutants

We shall strive continuously to reduce our emissions with the ultimate goal of achieving zero emissions of hazardous chemical substances and waste materials into the environment.

4. Use safer chemical substances

We shall collect, maintain, and provide information on the health and environmental effects of the chemical substances we handle while striving to use safer chemical substances.

5. Promoting Recycling

We shall develop recycling technologies for products, containers, and packaging and cooperate with society in promoting the recovery and reuse of such items.

6. Improve the level of environmental management

We shall work to maintain and improve the level of our environmental management while working to upgrade our environmental management technology and skills, performing self auditing, and taking other measures.

7. Contribute to society through environmental improvement technologies and products

We shall meet the challenge of developing new technologies and shall contribute to society through environmental improvement technologies as well as products that place a low burden on the environment.

8. Improve the environmental management of our overseas businesses

In our overseas business activities, we shall place top priority on complying with local laws and regulations, and further, we shall manage those businesses in accordance with the management standards of the Toray Group.

9. Improve employees' environmental awareness

We shall strive to improve our employees' awareness of environmental issues through environmental education, social activities, internal communications activities, and other means.

10. Share environmental information with society

We shall deepen mutual understanding of Toray Group environmental policies and practices by widely publicizing our environmental preservation efforts and their results in environmental reports and other publications directed at local communities, investors, and the media.

Safety, Health, Accident Prevention and Environmental Preservation Management

Action Policy and Main Activities

Toray Group operates a policy for safety, health, accident prevention, and environmental activities. The policy is revised every year to reflect the results from the previous fiscal year, and specifies the main activities to implement in each policy area.

Safety, Health, Accident Prevention, and Environment Activity Policy of Toray Group in 2022

Action policy		Main activities
Safety	Pursue zero occupational accidents	<ul style="list-style-type: none">• Wrap up 3S/5S¹ activities• Thorough elimination of similar accidents
Healthier lives	Emphasize occupational health management	<ul style="list-style-type: none">• Enhance and strengthen mental health management• Rigorous chemical substance management
Accident prevention	Pursue zero fire accidents	<ul style="list-style-type: none">• Strengthen fire accident prevention management
	Enhance crisis management for natural disaster risks	<ul style="list-style-type: none">• Strengthen preparation for and response to large-scale earthquake and water disasters
Environment	Pursue zero environmental accidents	<ul style="list-style-type: none">• Thorough elimination of similar accidents
	Promote Sustainability Vision	<ul style="list-style-type: none">• Promote Challenge 30 Project• Make efforts to reduce environmental impact• Address the problem of marine plastic waste

¹ 3S/5S: 3S stands for *seiri* (sort), *seiton* (set in order), and *seiso* (shine). Adding *seiketsu* (standardize) and *shitsuke* (sustain) to 3S make up 5S.

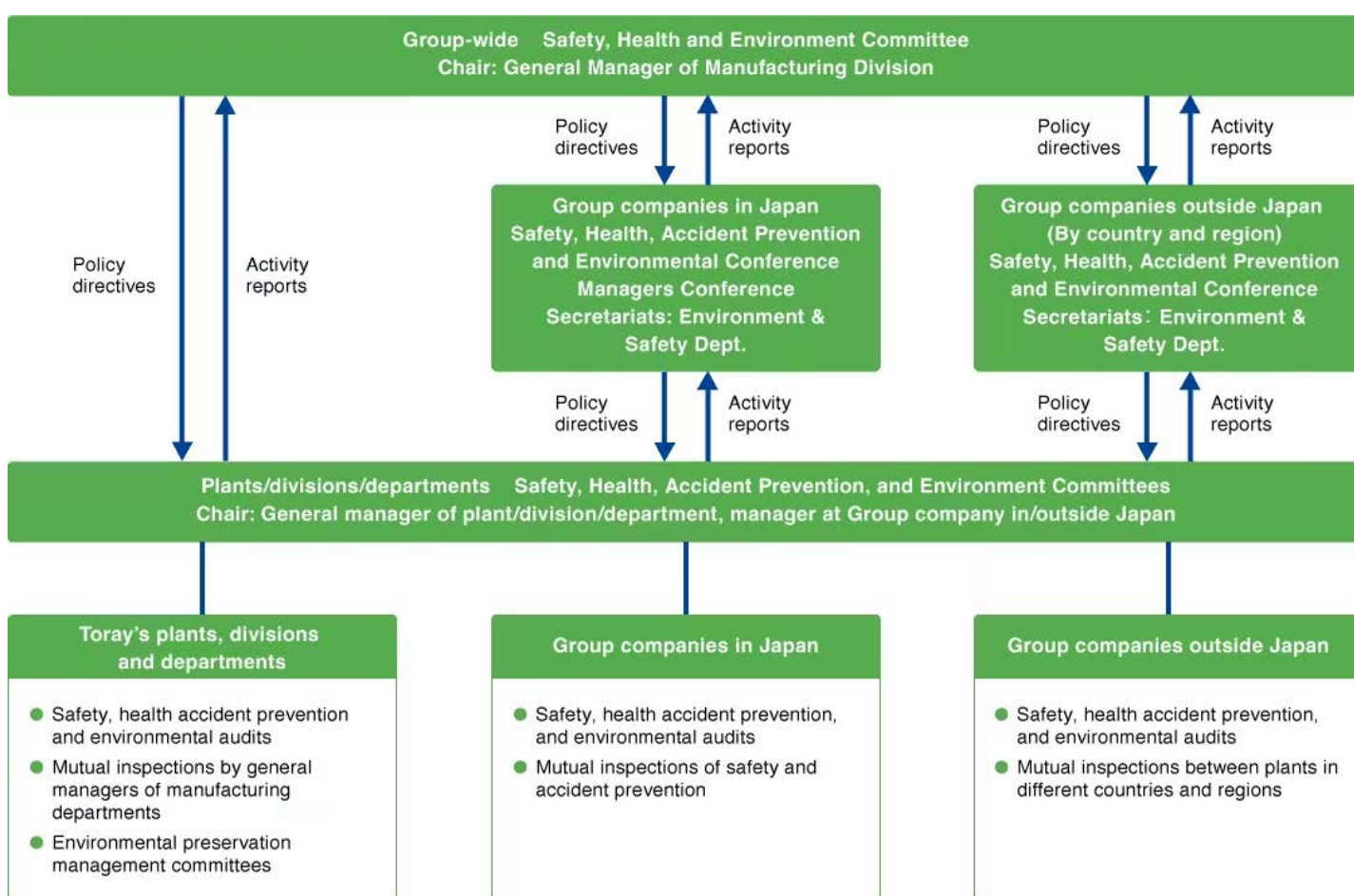
Structure

Safety, Health, Accident Prevention, and Environmental Preservation Promotion System

Toray Industries, Inc. places a group-wide committee, namely the Safety, Health, and Environment Committee, at the top of its system for safety, health, accident prevention, and environmental preservation (see chart below). The committee meets annually.

The committee discusses and sets policies and strategies for the entire Toray Group and its Responsible Care initiatives. The chair of the committee² has absolute responsibility and authority over these matters. Progress on the issues determined by the committees is managed in the business divisions and plants using the PDCA cycle.

Safety, Health, Accident Prevention, and Environmental Preservation Promotion System (Fiscal 2022)



² As of July 2023, the executive vice president (member of the board) serves as chair of the Safety, Health, and Environment Committee.

Audits and Follow-Up Measures

Toray Group conducts annual audits to objectively assess and improve the execution and management of safety, health, accident prevention, and environmental initiatives at offices and plants of group companies. Internal audits are conducted using a standardized audit checklist, and encompass visits and production floor guidance provided by directors and managers from other group companies.

In fiscal 2022, audits were conducted for all 13 plants and one research laboratory at Toray Industries, 27 plants operated by 27 group companies in Japan, and 83 plants operated by 64 group companies outside Japan. The audits focused on the following areas: safety measures for work related to rotating parts; prevention of electrical fires and spontaneous combustion from heat storage with heat insulating materials; and thoroughness of measures to prevent environmental accidents. The audits helped to secure systematic improvements by identifying and addressing facility issues and issues relating to management.

ISO 14001 Certification

Toray Group is pursuing the acquisition of ISO 14001, the certification for environmental management system, by all of its group companies, offices, and plants. Toray Industries had completed accreditation for all 13 of its plants by the end of 2000. By fiscal 2022, 32 plants at 23 group companies in Japan and 68 plants at 49 group companies outside Japan were certified.

In fiscal 2022, Toray Celanese Co. Ltd., a newly established company in Japan, was added to the scope of certification, and Toray Industries (India) Private Limited acquired certification for the first time, increasing the total by two companies and two plants.

Related Information

> [Sites with ISO 14001 Certification](#)

CSR Roadmap 2022 Targets

CSR Roadmap goals

1. Place the highest priority on safety, thoroughly uphold the basic rules, and strive to prevent disasters and accidents
2. Reduce environmental impact by working to fulfill the Medium-Term Environmental Plan
3. Pursue environmental and biodiversity preservation on the basis of policies on water resources and biodiversity

Main Initiatives and Key Performance Indicators

KPI

Safety

- | | |
|---|-----|
| (1) Aim for zero major accidents | 3-① |
| (2) Achieve world's best standard for safety management | 3-② |
| (3) Create a comfortable working environment to ensure the safety and health of employees and to raise the level of safety and health | - |

Accident Prevention

- | | |
|---|-----|
| (4) Aim for zero fire and explosion accidents | 3-③ |
|---|-----|

Environmental Prevention

- | | |
|---|-----|
| (5) Aim for zero environmental accidents | 3-④ |
| (6) Reduce greenhouse gas emissions per unit of revenue | 3-⑤ |
| (7) Reduce water consumption per unit of revenue | 3-⑥ |
| (8) Reduce atmospheric VOC ³ emissions | 3-⑦ |
| (9) Aim for a high waste recycling rate | 3-⑧ |
| (10) Conduct a survey of palm oil contained in raw materials and switch to certified products | 3-⑨ |
| (11) Systematically adopt renewable energy | - |
| (12) Reduce atmospheric emissions of substances subject to the PRTR Act ⁴ | - |
| (13) Pursue the greening of each site in consideration of the regulations of each country and region and harmony with the surrounding environment | - |

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
3-① Number of major accidents	0	0	0	0
3-② Achieve world's best standard for safety management (not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)	No more than 0.05	No more than 0.05	No more than 0.05	0.37
3-③ Number of fire and explosion accidents	0	0	0	2
3-④ Number of environmental accidents	0	0	0	7
3-⑤ Reduction of greenhouse gas emissions per unit of revenue (%)	At least 20% lower than fiscal 2013 (Fiscal 2022)			34.6% ^{5&6}
3-⑥ Water usage per unit of revenue (%)	At least 25% lower than fiscal 2013 (Fiscal 2022)			31.9% ⁶
3-⑦ Reduction of atmospheric VOC emissions (%)	At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	At least 70% lower than fiscal 2000	70.9%
3-⑧ Waste recycling rate (%)	At least 86%	At least 86%	At least 86%	86.8%
3-⑨ Conduct a survey of palm oil contained in raw materials (%)	Usage survey of certified products : 100%	Decision making (Yes/No) of shifting to certified raw materials : 100% (Fiscal 2022)		100%

Reporting scope : Toray Group (3-①, 3-②, 3-③, 3-④, 3-⑤, 3-⑥, 3-⑦ and 3-⑧)
Toray Industries, Inc. (3-⑨)

³ Volatile organic compounds

⁴ Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

⁵ Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, the reduction is 32.7%.

⁶ The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

Related Materiality for CSR

- Accelerating Climate Change Mitigation
- Promoting a Circular Economy
- Taking a Nature-Positive Approach
- Ensuring Safety and Fire Accident prevention

* Click [here](#) for CSR Roadmap 2025 from the perspective of materiality (PDF:392.4KB). [PDF](#)

* Click [here](#) for a PDF summary of the main materiality-related initiatives, KPIs and progress achievements up to fiscal 2022 under the CSR Roadmap 2022 (PDF: 1.6MB). [PDF](#)

Looking to the Future

Toray Group will continue to carry out safety, accident prevention and environmental preservation activities based on international frameworks such as ISO 14001 and Responsible Care as well as the Group's medium- and long-term and single-year goals. The Group is committed to protecting the health and safety of employees and the public and reducing its environmental impact.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 3 "Safety, Accident Prevention, and Environmental Preservation" during the CSR Roadmap 2025 period (fiscal 2023–2025).

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Occupational Safety and Accident Prevention Activities

Toray Group pursues its own safety activities using occupational health and safety management systems (such as OHSAS 18001 and ISO 45001). Toray Group employees take part in an introductory training session immediately after joining the Group to learn and demonstrate their level of understanding of specific procedures and internal rules related to occupational safety. For mid-level employees and managers, the Group provides education on management and supervisory responsibility for occupational safety at every type of group training it holds, as well as studies of more concrete case studies related to the occupational health and safety management systems. In addition, officers in charge of production, as well as production engineering and Environment & Safety Department employees, conduct safety and health, accident prevention, and environment audits of all group companies and plants every year and evaluate and seek improvements in the status of activities from a standardized perspective. In addition, best practices are shared at sites throughout the Group to enhance the entire Group's performance. Employees are key stakeholders of Toray Group. Needless to say, ensuring their safety is the prerequisite to their capacity to make the most of their potential.

Officers and employees work together to implement persistent safety initiatives with the goal of zero accidents, out of respect for humanity and the sanctity of life.

To raise the awareness, every year, Toray Group creates a group-wide safety slogan. In 2022, the aim was once again for each and every employee of Toray Group to come together as a concerted group to raise awareness of safety as the top priority and to uphold this year's slogan—Top Priority is Safety, Pursue “Zero Accidents”—Heighten safety awareness and back to basic all the time—to ensure that basic safety rules and work fundamentals are thoroughly followed on work sites.

Due to the potentially serious impact of an accident not only within the company but on surrounding communities, the Group acts with strong determination to prevent accidents such as fires and explosions, making accident prevention a top priority.

Toray Group sets up safety and health committees and works to ensure the safety and health of its employees through united efforts of labor and management, based on occupational safety and health laws in the countries in which it operates. These efforts help to ensure a pleasant working environment.

2022 Safety Slogan

Safety is Our First Priority. We Pursue Zero Accidents.

—Raise Awareness and Commit to the Basics

Every year, the Toray Industries president, executive vice presidents and other officers, as well as Group company presidents and plant managers meet at the Toray Group Safety Meeting. At the meeting, safety action policies and main activities are shared to set a common course, activities at worksites are reported, and safety awards are given to raise awareness of safety and foster horizontal development for good practices. In 2022, the meeting was held online with Toray plants and its group companies in Japan, with the Tokyo Head Office of Toray Industries serving as the main venue, in order to prevent the spread of COVID-19.



2022 Toray Group Safety Meeting at Tokyo Head Office

Furthermore, the Safety Summit, on-site safety lecture by Toray Industries directors, and other events are held on a national and regional basis, and at each group company and plant of the Group. These efforts promote a common awareness of the Toray Group safety slogan, policies, and main activities, enabling centralized management of safety activities across the Group. In addition, representatives of the senior management and labor unions at Toray Industries hold regular meetings. They discuss issues related to safety and health, establish a shared understanding of the issues, and engage in forward-looking discussions to improve the workplace environment. Safety and health committee meetings are also held at each business site (plant) every month, with the participation of the site head, managers and labor union representatives concerned. They share safety activity policies and give and receive instructions to prevent recurrence of occupational accidents that have recently occurred in Toray Group, while also reporting and discussing other matters related to occupational safety and health.

Examples of Workplace Initiatives in Fiscal 2022

General Safety Summit Held at Toray Mishima Plant

Toray Industries' Mishima Plant holds a safety summit every year with about 60 group companies and subcontractors that operate on its premises. In fiscal 2022, as part of thorough measures to prevent the spread of COVID-19, the number of in-person attendees at the convention venue was limited. Accordingly, approximately 170 people attended, including those who participated through video conferencing.



Participants at Toray Mishima Plant General Safety Summit

In addition to the presentation of awards to various departments and companies for safety performance and to recognize outstanding safety examples, participants reviewed the occupational accidents that had occurred in 2022. Goals and details of the Mishima Plant special safety activities that began in December were shared with subcontractors. Representative departments and subcontractors also presented safety activity case studies of their own. Finally, the participants collectively pledged to intently promote special safety activities under the Mishima Plant special safety slogan, “Visualize Safety, Visualize Focus, Must Achieve Zero Accidents 180!” as part of a formal safety declaration.

Malaysia Toray Group Safety Convention [Toray Industries (Malaysia) Sdn. Berhad]

Toray Industries (Malaysia) [TML] held its 31st Safety Convention virtually with 68 participants from TML, Penfabric (PAB), Toray Plastics (Malaysia) [TPM], Penfibre (PFR), and Toray Malaysia Systems Solution (TMS).

Participants presented and shared safety initiatives and countermeasures, further deepening their knowledge of safety awareness and best practices through a question-and-answer session. In addition, prizes were presented to winners of the safety poster and slogan competitions.



Group photo of participants

Toray Group Safety Record

CSR Roadmap 2022
Main Initiatives (1)(2)(3)(4)

Number of major accidents

■Reporting scope: Toray Group
 ■Target in 2022 (calendar year): 0



Number of fire and explosion accidents

■Reporting scope: Toray Group
 ■Target in 2022 (calendar year): 0



Achieve world’s best standard for safety management

(not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)

■Reporting scope: Toray Group
 ■Target in 2022 (calendar year): No more than 0.05



Toray Industries has collected data on all occupational accidents since 1980, and for Toray Group since 1990. Both the number of occupational accidents and frequency of occupational accidents resulting in lost work time have declined, compared with when the data was first collected. The frequency rate for occupational accidents resulting in lost work time for Toray Group overall in 2022 was 0.37. Although this is a positive result compared with that of Japan's manufacturing industry (1.25), it fell far short of the Group target of achieving the world's highest standard of safety management of 0.05 or lower. One reason for this is that group companies had many accidents resulting in lost work time. Accordingly, the Group is working to strengthen safety management at those group companies with support and guidance from Toray's main plant in Japan.

Toray Group will continue to identify the root cause of each accident to prevent reoccurrence, and avoid similar accidents based on the lessons learned in these accidents. Additionally, the Group will raise employee awareness of the need to practice safety first at all times.

Toray Group believes that safety activities depend upon a repetition of simple things. It is important to commit to the basics of safety and for everyone, without exception, to practice the basics at all times. The first step is to work on the comprehensive implementation of the 5S's—*seiri* (sort), *seiton* (set in order), *seiso* (shine), *seiketsu* (standardize) and *shitsuke* (sustain). Through these activities, all employees learn to adopt *seiketsu* and *shitsuke*. *Seiketsu* fosters employees' motivation to keep the workplace standardized and clean, and *shitsuke* raises employees' awareness to adhere to the rules. They also take the time to reconsider movement pathways to make work safer. Managers repeatedly go around worksites, praising good behavior in an effort to raise workplace morale.

Next, the Group works to eliminate accidents in routine activities. Managers strive to maintain a sense of alertness in the workplace by continually reminding people to act with safety first, considering what the consequences (accidents) could be under any and all circumstances. In addition, if an occupational accident does occur, an accident report is sent out to the entire Toray Group. In an effort to eliminate similar accidents, the unit heads and unit chiefs of each workplace take a leading role in discussing the report with workplace team members, imagining the cause of the accident as a specific danger in their own workplace, in order to raise everyone's safety awareness and ensure commitment to the basics.

While there were no fire or explosion accidents at Toray Industries or Group companies in Japan in 2022, there were two such accidents at Group companies overseas. The cause of the accidents included an electrical fire. As part of measures to help prevent electrical fires, Toray Industries has revised the checklist for preventing fires that it uses and has established a new section for electrical equipment. Toray offices and plants use these checklists to identify and address electrical fire risks and conduct daily inspections.

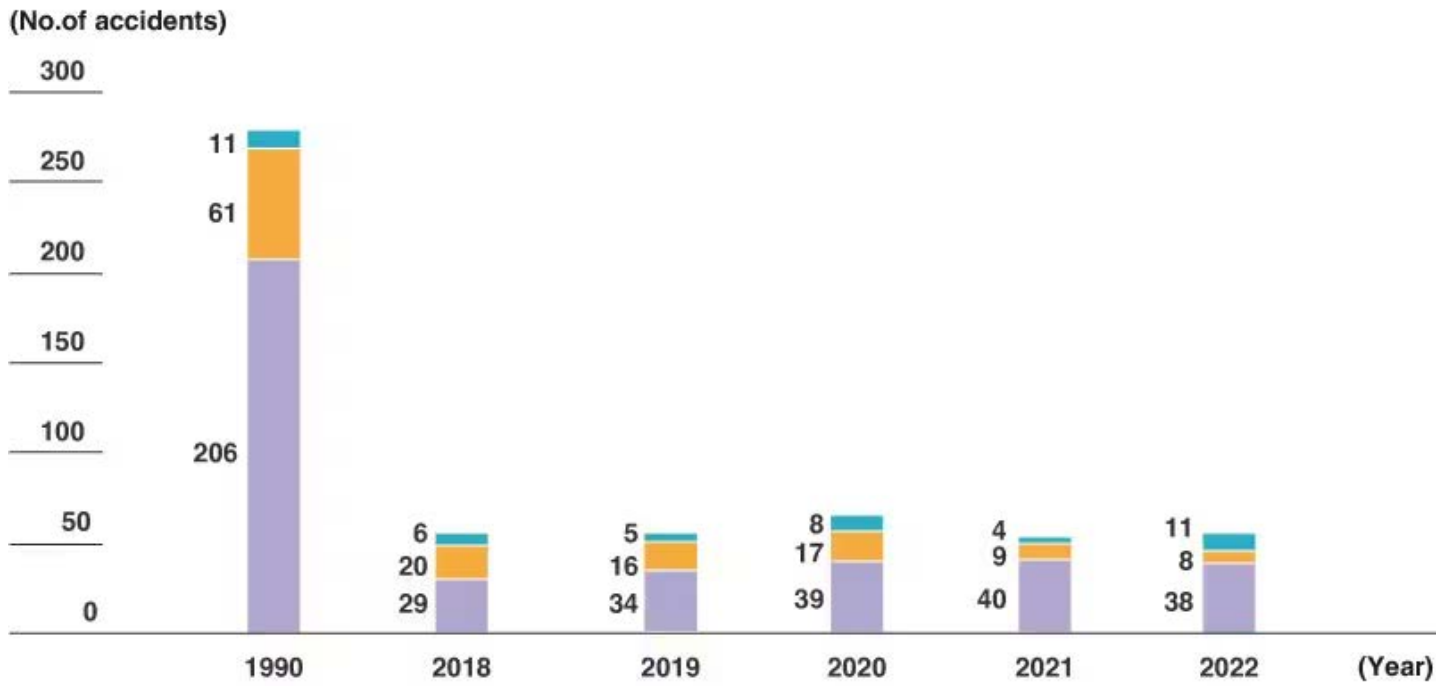
In an effort to eliminate similar fire-related accidents, the Group has a system to enable Group companies to rapidly share critical information on fire-related accidents. The Group uses knowledge gained from previous accidents to adopt effective fire prevention strategies and implement unified accident prevention management standards.



Example of work made safer by improving movement pathways through a change in layout

Number of Occupational Accidents¹: Toray Group (Lost work time and non-lost work time)

■ Toray Industries, Inc.
 ■ Group companies in Japan
 ■ Group companies outside Japan



Occupational Accident Frequency Rate²: Toray Group

● Toray Group (all accidents) ● Toray Group (accidents causing lost work time)
 ● Japanese manufacturing industries (accidents causing lost work time)



¹ Data for Japan includes non-regular employees (part-time employees, contract employees, casual part-timers, and dispatched workers). Data from outside of Japan does not include temporary staff.

² Occupational accident frequency rate: The number of fatalities and injuries at worksites per one million cumulative working hours.

Identifying Danger (Hazards), Evaluating Risk, and Accident Surveys

CSR Roadmap 2022
Main Initiatives (1)(2)(3)

1. Identifying danger (hazards) and evaluating risk

Toray Group has a system whereby employees report any potential risks in the workplace to managers and the managers provide feedback on countermeasures and improvements. Before starting work, hazard prediction information, near miss reports, and safety proposals are shared with employees to confirm and mitigate risks. Company inspectors also carry out audits to review the system for preventing occupational accidents and the status of the implementation of countermeasures. If there are any problems, the inspectors give instructions for improvements.

2. Accident investigation

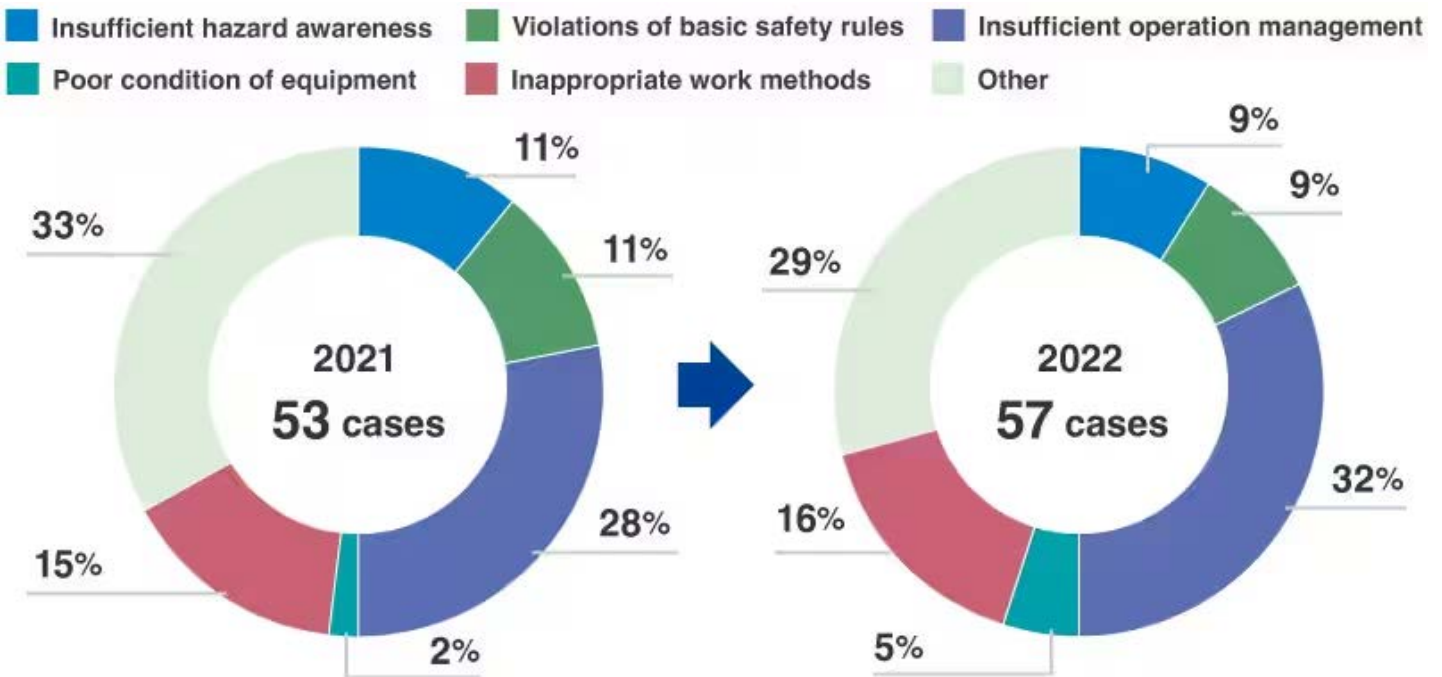
In the event of an occupational accident, the emergency response review meeting and the countermeasure meeting are convened to clarify the chain of events leading up to the accident, identify the cause, and decide on and execute countermeasures. In addition, information about the accident is shared throughout the Group and measures taken to prevent a reoccurrence.

3. Prioritized risk reduction activities

In 2021, 28% of Toray Group occupational accidents were caused by insufficient operation management, such as unclear work methods, ambiguous work instructions, and self-initiated work methods. Of these types of accidents, 15% occurred in situations in which inappropriate work methods were used, including the use of inappropriate tools and the implementation of unsafe work procedures, despite prescribed work methods and procedures being in place. In the first half of 2022, Toray Group worked to eliminate accidents caused by insufficient operation management by developing thorough safety confirmation measures to be taken before starting operations. These measures focus on giving and confirming specific instructions on work methods and procedures before the work is performed. Although such accidents decreased during the period that the measures were implemented, they ultimately increased slightly to 32%. In the second half of 2022, in order to eliminate accidents caused by inappropriate work methods, managers identified risks by conducting on-site patrols to check actual work conditions, and workers themselves conducted risk detection and work improvement activities to identify potential risks in their own specific tasks. Although such accidents saw an initial decline after these activities were conducted, they ultimately remained at 16%, essentially unchanged.

In addition to the remaining issues that have resulted from these outcomes, the Group is also analyzing accident occurrences from various perspectives and promoting the improvements needed to eliminate accidents. It also implements plan-do-check-action (PDCA) cycles to reduce risks.

Causes of Occupational Accidents (Both Requiring and Not Requiring Work Absence) at Toray Group in 2021 / 2022



Enhancing Safety and Accident-Prevention Training

As part of their safety and accident prevention training, Toray Group companies and plants provide workshops and hands-on simulations to sensitize employees to dangers and hazards. Safety simulators enable workers to experience the dangers of electrocution, residual pressure, and getting caught in rollers. Virtual reality (VR) technology is also used to realistically simulate accidents at worksites. In the area of accident prevention, the Group conducts simulation training to teach employees about the risk of fires and explosions, and provides training on the fundamentals of accident prevention.

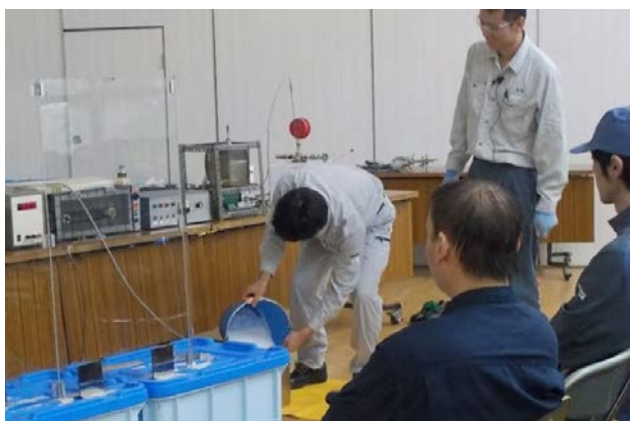
Additionally, the Group publishes on familiar topics regarding safety and accident prevention in its in-house magazine, *People*, in an effort to spread understanding of the fundamentals of accident prevention.



Simulation training at Mishima Plant (Toray Industries, Inc.)



Simulation training at Nagoya Plant (Toray Industries, Inc.)



Demonstrating the danger of fires and explosions at Gifu Plant (Toray Industries, Inc.)

Implementing Safety Management Together with Subcontractors

CSR Roadmap 2022
Main Initiatives (1)(2)(3)

Toray Industries implements uniform safety activities for its own work as well as subcontracted work that is subcontracted to on-site Toray affiliates³ and Group companies. Monthly occupational health and safety committees and regular safety and liaison meetings are used to discuss the implementation status of safety activities and enhance communication with subcontractors, to ensure that all parties are aligned in the implementation of safety activities. Employees conduct on-site monitoring of operations in practice such as those involving forklifts and sharp-edged objects and use the results to generate recommendations for necessary improvements that enhance safety and ease of work. Subcontractors also submit their requests for work and equipment improvements, to increase physical safety.

³ Toray affiliates: Toray Industries' subsidiaries that provide ancillary services for plant operations



On-site monitoring of actual work (Toray Coms Nagoya Co., Ltd.)

Safety Management Implemented by Subcontractors

CSR Roadmap 2022
Main Initiatives (1)(2)(3)

Toray Group recognizes its duty to ensure the safety of the many subcontractors working at its sites. As colleagues working in the same workplace, subcontractors are made aware of, and expected to comply with, Toray Group rules. Subcontractors also participate in monthly meetings of occupational safety and health committees. Regular safety and liaison meetings are conducted to gain input from subcontractors and are used to communicate the Group's policies and to make sure all measures are implemented. In addition, the Group educates subcontractors who work on a short-term basis about Toray Group rules before work commences and manages safety thoroughly. At plants, Toray and subcontractors work together on safety initiatives, including safety posters, slogan contests and safety suggestions.



Safety meeting at Aichi Plant (Toray Industries, Inc.)

Preparing for Accidents through Fire-Prevention Drills

All companies and plants in Toray Group are making efforts to improve their accident-prevention capabilities by carrying out fire-fighting drills specifically intended for fires and explosions. These drills include practice using water hoses, rescuing the injured, responding to a chemical leak, and giving emergency notification to authorities and local residents.

Since 2012, Group companies and plants have been conducting annual drills on setting up a company-wide emergency headquarters in response to a large-scale earthquake. The drills also involve checking on employees and monitoring facilities damage and supply chains. In 2022, online drills were conducted not only for setting up emergency headquarters, but also for implementing the headquarters emergency response over the days following an earthquake. In addition to conducting drills for the initial response to a large-scale earthquake, Group plants in seaside locations conduct drills of the evacuations that would be needed if a tsunami were triggered by a large-scale earthquake.



Fire prevention drill (Toray Precision Co., Ltd.)



Firefighting training (Toray PEF Products, Inc.)

Examples of Workplace Initiatives in Fiscal 2022

Participating in Tokai City Firefighting Ceremony (Toray Industries, Inc. Tokai Plant)

The Accident Prevention Team of the Tokai Plant Environment and Safety Section participated in the Tokai City Firefighting Ceremony held in Tokai City, Aichi Prefecture, alongside a large chemical high-altitude fire truck.

In addition to a procession that included the Tokai City Fire Department, fire brigades, the Waterfront Industrial Zone Security Liaison Council, and corporate firefighting teams from six area companies, nursery school children dressed in firefighting uniforms also walked in procession. The ceremony concluded with water released simultaneously from multiple hoses in a pledge to work for a year free of fire and accidents.

The Tokai Plant will continue to work to prevent fires and accidents on its premises and in the community through active participation in accident prevention activities.



Members of the Environment and Safety Section Accident Prevention Team at the ceremony

Initiatives for Improving Fire-Prevention Capabilities

CSR Roadmap 2022
Main Initiatives (4)

In 2022, as part of the regularly held activities to strengthen fire prevention for the Fire Prevention Project Part II, Toray Group in Japan held lectures on revised checklist contents to upgrade the skills of its FP⁴ key persons, who play a pivotal role on the frontlines by promoting accident prevention inspections and measures. Toray Group's internal accident prevention experts provided support and guidance in identifying the root cause and taking countermeasures to prevent reoccurrence of those fire accidents and near misses for which the experts decided onsite audits and investigations were necessary.

The Group's earthquake measures seek to mitigate damage, while placing utmost priority on saving the lives of employees and preventing impacts on local communities. The Toray Group Business Continuity Plan (BCP) for a Large-Scale Earthquake outlines the emergency response to an earthquake and subsequent activities to maintain and restore business operations, as well as the Group's duties and normal readiness. In particular, for critical products, the Group develops BCPs that encompass supply chains and continually works to reduce risks.

⁴ FP : Fire Prevention

Distribution Safety Initiatives

CSR Roadmap 2022
Main Initiatives (1)(4)

Toray Industries is working to ensure safe distribution in its operations. In an effort to manage safety when transporting hazardous substances, the Company concludes security agreements with certain customers, raw material manufacturers, and shipping companies to designate their specific safety responsibilities and roles with regards to safety.

Initiatives to Reduce Health Effects of Chemical Substances on Employees

CSR Roadmap 2022
Main Initiatives (1)(2)(3)(4)

In consideration of the health risks to the Company's employees and contract employees, Toray Group is implementing the following initiatives for the handling of chemical substances.

1. Study the actual handling of chemical substances

Toray Group collects annual data on the volume of chemical substances handled by offices and plants of Group companies and volume in their possession. Furthermore, the Group clearly indicates the danger of mutagenicity for each chemical substance as stipulated in the Industrial Safety and Health Act, and discloses the risks.

2. Implement chemical substance risk assessments

Toray Group implements risk assessments using working environment measurements for the chemical substances that it handles, as well as using ECETIOC's Targeted Risk Assessment (TRA) tool and control banding. The risk assessment results are used to protect the health of employees by implementing comprehensive measures to prevent worker exposure to organic solvents and dust where it is required.

3. Conduct follow-up through internal audits

Toray Group conducts an annual safety, health, accident prevention, and environmental audit, to objectively evaluate the methods for handling chemical substances and working conditions. The audit is used to identify any oversights or unattended issues and implement necessary improvements.

4. Other

Toray Group endeavors to maintain and improve working conditions by conducting working environment measurements and on-site monitoring of actual work in accordance with the risk level of handled substances. It also conducts medical checkups to continually follow-up on the health status of employees. To prevent health issues among workers, the Group conducts training on the dangerousness of handled chemicals, and prepares and keeps records of the on-site monitoring of actual work.

Health Effects and Response to Asbestos

CSR Roadmap 2022
Main Initiatives (3)

Toray Group has manufactured and imported building materials containing asbestos in the past. In addition, certain buildings and facilities were constructed using such materials and thermal insulation containing asbestos. Starting in 2005, when asbestos-related health hazards became a social concern in Japan, Toray took action to address the issue of its own asbestos-containing facilities. The health program offers medical examinations to current and former employees who handled even small amounts of asbestos and wish to undergo an examination. Toray Group is working in good faith with individuals diagnosed with asbestos-related health issues by assisting with their applications for workers' compensation and providing an ongoing program of medical examinations. The Group has not been contacted about health issues by residents living near affected plants. The cumulative health impacts on former and current Toray Group employees as of March 31, 2023 are as follows.

Certified occupational accidents arising from handling asbestos (Toray Group): 122 (105)*

Certified health victims based on Japan's Act on Asbestos Health Damage Relief (Toray Group): 8 (8)*

Medical examination recipients involving asbestos (Toray Group): 4,041

* Note: Figures in parentheses refer to fatalities as of March 2023.

Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Conserving Energy and Reducing Greenhouse Gas Emissions

Seeking to contribute to a carbon-neutral world, Toray Group pursues initiatives for reducing greenhouse gas emissions. In the Toray Group Sustainability Vision announced in July 2018, the Group set out the target of reducing greenhouse gas emissions¹ from production activities per unit of revenue by 30% compared with the baseline year of fiscal 2013 across the entire Toray Group worldwide as a quantitative target for fiscal 2030. In its CSR Roadmap 2022, the Group set out an interim target of reducing greenhouse gas emissions per unit of revenue¹ Group-wide by 20% by fiscal 2022 compared with fiscal 2013. As a result of efforts to reduce CO₂ emissions during manufacturing by conserving energy with improved manufacturing processes, increasing utilization of renewable energy, and reducing coal consumption, the Group reduced greenhouse gas emissions per unit of revenue by 34.6%² by the end of fiscal 2022.

In March 2023, the target set out in the Toray Group Sustainability Vision for reducing greenhouse gas emissions from production activities per unit of revenue was raised significantly from a 30% reduction compared with the baseline year of fiscal 2013 to a reduction of more than 50%¹. The Group also set a target of reducing absolute greenhouse gas emissions for Toray Group in Japan by at least 40%¹ compared to fiscal 2013, thereby accelerating the Toray response to climate change.

¹ Scope 1 (direct emissions from plants, offices, and vehicles, etc. owned by the Group) and Scope 2 (indirect emissions resulting from the production of electricity and other energy consumed by the Group) emissions.

² Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, the reduction is 32.7%.

Energy Conserving Activities

CSR Roadmap 2022
Main Initiatives (6)

Toray Group sets annual energy-conserving targets for each company and plant and promotes group-wide energy-conserving activities.

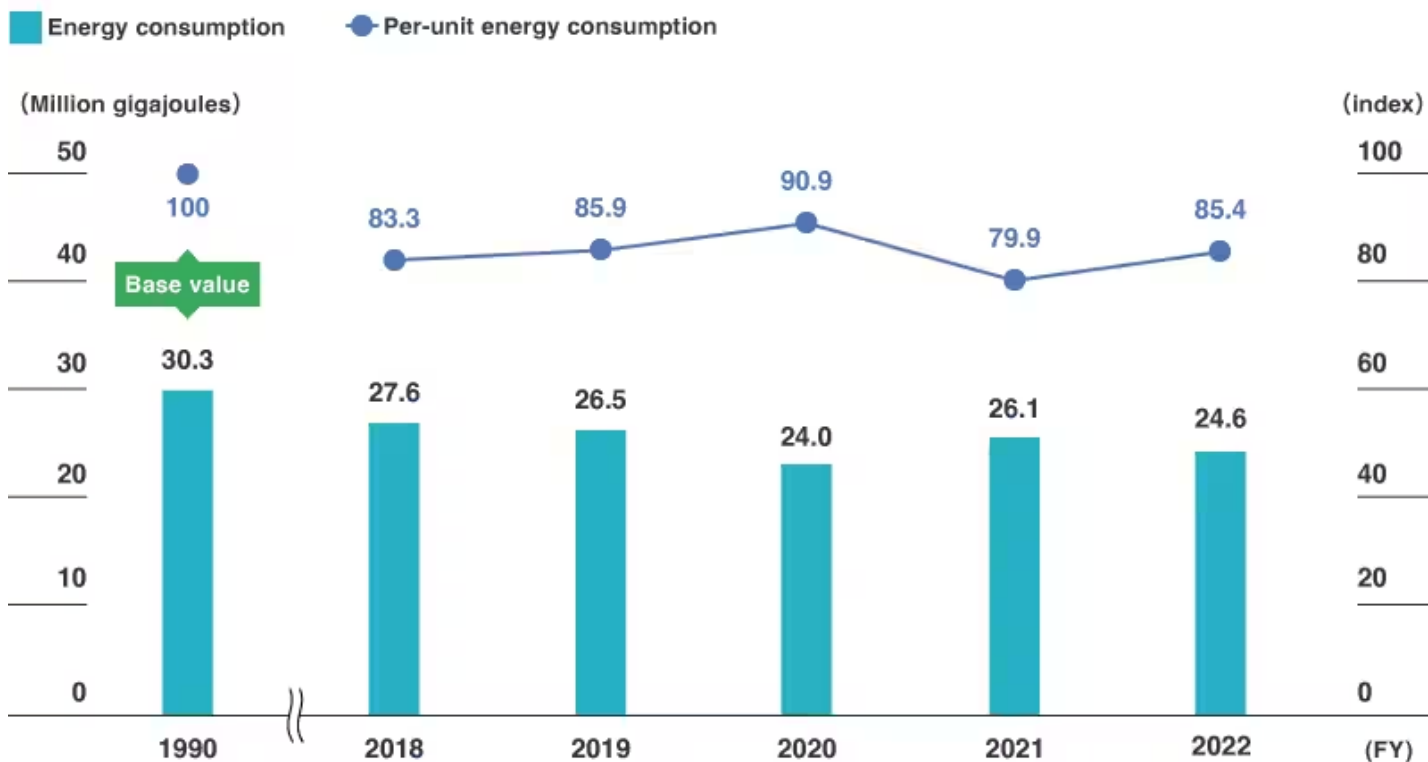
It also checks the progress of its energy-conserving measures on a monthly basis.

Toray Industries is promoting energy-conserving activities with a goal of reducing its per-unit energy consumption³ by 2% annually.

In fiscal 2022, energy consumption decreased by 5.9% year on year due to more efficient use of energy and efforts to reduce energy waste and loss. However, per-unit energy consumption deteriorated 6.9% year on year due to a 12.0% reduction in production volumes, while improved 14.6% compared to the baseline year of fiscal 1990.

³ Energy consumption per converted production volume

Energy Consumption and Per-unit Energy Consumption Index (Toray Industries, Inc.)⁴



⁴ The energy consumption shown in this graph does not include renewable energy.

As part of its proactive energy-conserving activities, Toray Group organizes teams whose members are familiar with manufacturing processes and facilities to help carry out annual energy-conserving diagnostics at plants in Toray Industries and its group companies around the world to come up with ideas for further energy conservation. In fiscal 2022, these activities were conducted at five of Toray Industries' plants, three group company plants in Japan, and four group company plants outside of Japan. As a result, the Group reduced greenhouse gas emissions by about 10,000 tons-CO₂ equivalent.



Review of energy conserving diagnostics via web conference

Toray Group Greenhouse Gas Emissions (Scope 1 and 2)

CSR Roadmap 2022
Main Initiatives (6)

Reduction of greenhouse gas emissions per unit of revenue (%)

■ Reporting scope
Toray Group

■ Target
At least 20% lower than fiscal 2013 (Fiscal 2022)

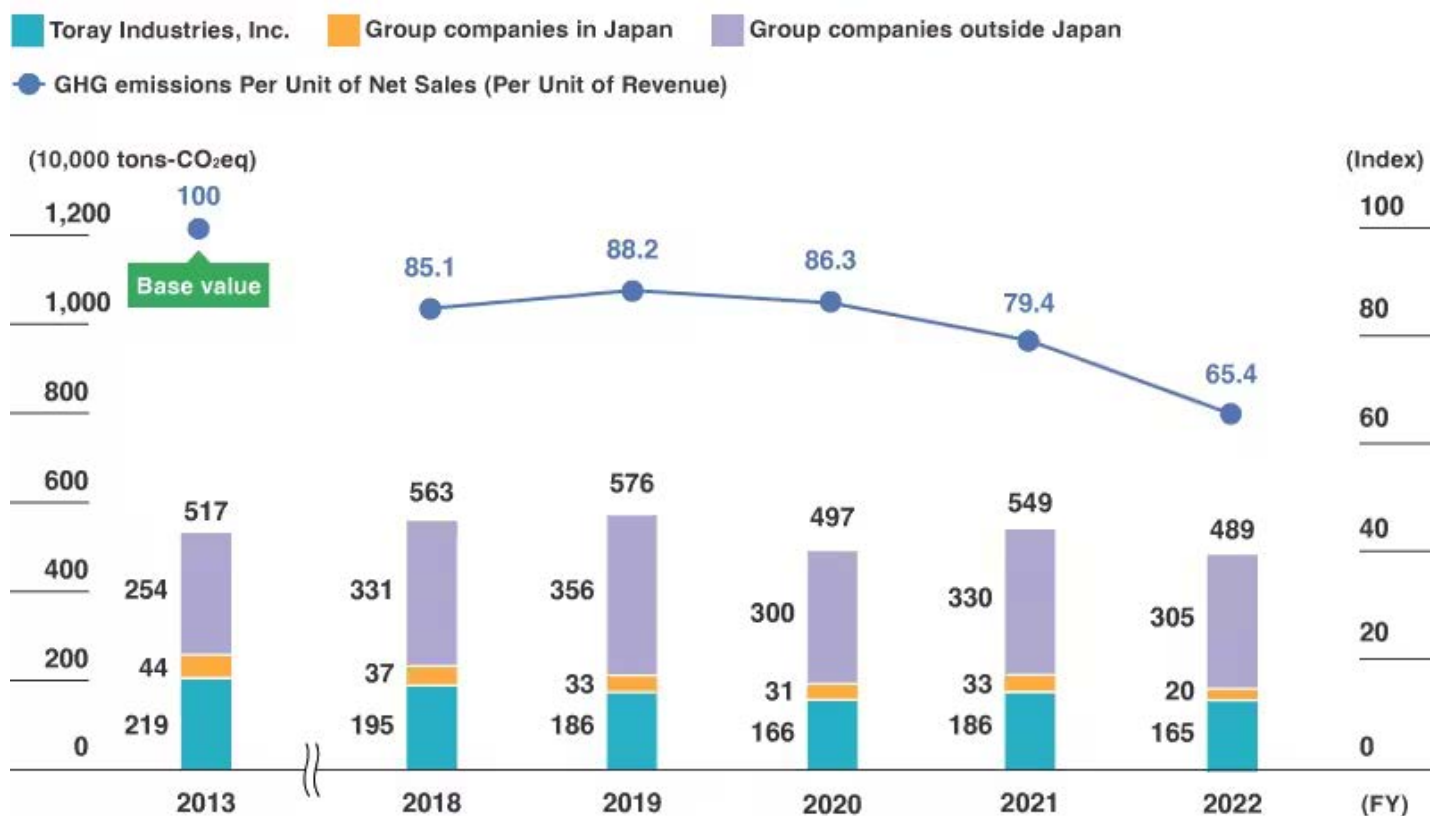
Result in fiscal 2022

34.6%⁵

Toray Group's greenhouse gas emissions (Scope 1 and 2) reduction target was established in the CSR Roadmap 2022. The Group as a whole implemented systematic reduction measures with the goal of achieving a 20% reduction of greenhouse gas emissions per unit of revenue by fiscal 2022, compared to fiscal 2013. Overall greenhouse gas emissions (Scope 1 and 2) for Toray Group in fiscal 2022 decreased by 10.9% year on year to 4.89 million tons-CO₂ equivalent. In terms of per unit of revenue, the Group reduced emissions by 34.6%⁵ compared to the baseline year of fiscal 2013. This reduction was due to efforts to reduce greenhouse gas emissions to the bare minimum (energy-conserving through process improvement, utilization of renewable energy, and reduction of coal use at group plants outside of Japan, etc.), as well as an increase in sales revenue groupwide.

⁵ Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. Under the latter calculation method, greenhouse gas emissions are 5.66 million tons in FY 2013 and 5.12 million tons in FY 2022, which means a 32.7% reduction per unit of revenue in FY 2022 compared to FY 2013.

Greenhouse Gas Emissions (Scope 1 and 2) and Greenhouse Gas Emissions Per Unit of Net Sales (Per Unit of Revenue) (Toray Group)



Note: Per unit of net sales until fiscal 2019, as Japanese GAAP was used until then, and per unit of revenue from fiscal 2020 onwards, as International Financial Reporting Standards (IFRS) have been adopted since then. Figures for the baseline year of fiscal 2013 are recalculated to include companies that joined Toray Group in fiscal 2014 or later.

Reduction of Coal Use at Plants Outside of Japan

P.T. Indonesia Toray Synthetics ceased coal-fired power generation in 2021 and switched to purchased power, reducing CO₂ emissions by 250,000 ton-CO₂ per year.



Transformer substation at P.T. Indonesia Toray Synthetics

Toray Group Greenhouse Gas Emissions (Scope 3)

In addition to Scope 1 (direct emissions from plants, offices, and vehicles, etc. owned by the Group) and Scope 2 (indirect emissions resulting from the production of electricity and other energy consumed by the Group), Toray Group also calculates Scope 3 emissions (other indirect emissions).

Toray Group Scope 3 Emissions

(10,000 tons-CO₂eq)

Category 1: Purchased goods and services	898.0
Category 2: Capital goods	39.6
Category 3: Fuel and energy related activities	94.5
Category 4: Upstream transportation and distribution	21.0
Category 5: Waste generated in operations	1.1
Category 6: Business travel	0.6
Category 7: Employee commuting	2.2
Category 8: Upstream leased assets	0.2
Total	1,057.1

Note: Toray is currently working to identify and calculate Scope 3 emissions for all of Toray Group.

Calculation Method for Scope 3 Categories

Category	Calculation Method
1. Purchased goods and services	Calculated by multiplying the volume of purchased products and services (physical and monetary data) by the emission factor for each item. (See Inventory Database for Environmental Analysis (IDEA) [Ver. 2.3] and Emission Factor Database for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)
2. Capital goods	Calculated by multiplying the amount of payment for purchased capital goods by the emission factor. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)
3. Fuel and energy related activities	<p>Fuel Calculated by multiplying the amount of purchased fuel by the emission factor for the fuel type. (See IDEA [Ver. 2.3].)</p> <p>Electricity and Steam Electricity: Calculated by multiplying the input data of electricity procured from power companies by the average emission factor of all power sources. (See Emission Factors Database for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].) Steam (heat): Calculated by multiplying the input data of procured heat by its emission factor. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)</p>
4. Upstream transportation and distribution	<p>Raw Materials Emissions for transportation are calculated by multiplying weight and distance by emission factors for each type of transportation. (See Shippers' Guide to Energy Conservation Promotion, 7th Edition, Ministry of Economy, Trade and Industry.) * Emission impacts from storage and loading/unloading are minimal and therefore not included.</p> <p>Products Emissions for transportation are calculated by multiplying weight, distance, and loading rate by emission factors for each type of transportation. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].) * Emission impacts from loading/unloading are minimal and therefore not included.</p>
5. Waste generated in operations	Calculated by multiplying the amount of waste for each type of waste by the emission factor applicable to type of waste. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)
6. Business travel	Calculated by multiplying the total number of employees by the emission factor. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)

Category	Calculation Method
7. Employee commuting	Calculated by multiplying the total number of employees and the average number of days of operation by the emission factor. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)
8. Upstream leased assets	Calculated by multiplying floor area of relevant building by the emission factor per unit of floor area. (See Emission Factors for Calculating Greenhouse Gas Emissions of Organizations Through the Supply Chain [Ver. 3.3].)

* The number of companies included in the calculations differs by category.

Related Information

Toray Industries has obtained third-party assurance of its greenhouse gas emissions from LRQA Limited for Scope 1 and 2 emissions for Toray Industries and group companies outside of Japan, as well as for Scope 3 emissions (categories 1, 2, 3, 4, 5, 6, 7, and 8) for the entire Today Group.

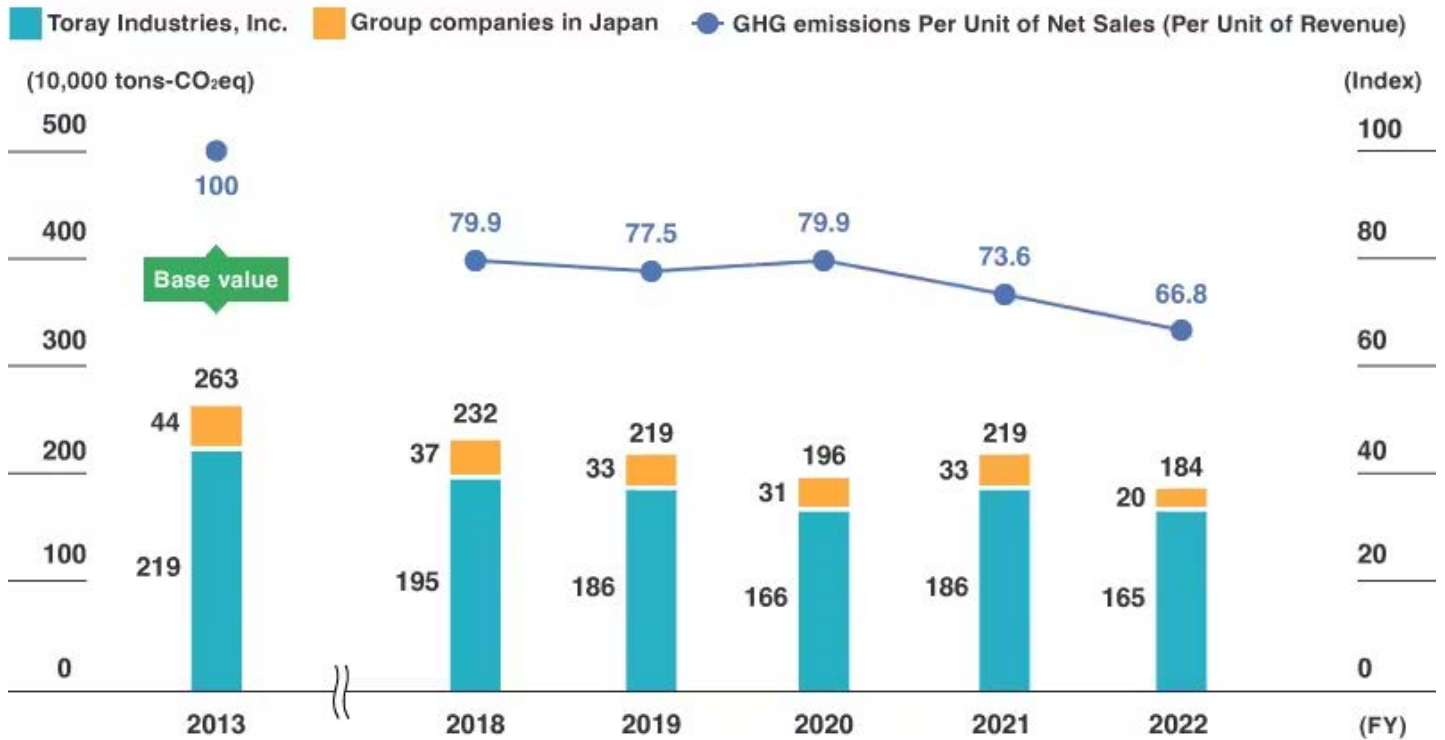
> [Third-Party Assurance](#)

Greenhouse Gas Emissions (Scope 1 and 2) for Toray Industries and Its Group Companies in Japan

CSR Roadmap 2022
Main Initiatives (6)

In fiscal 2022, greenhouse gas emissions (Scope 1 and 2) at Toray Industries and its group companies in Japan decreased by 16.1% compared to the previous fiscal year. Greenhouse gas emissions per unit of revenue improved by 9.2% compared to the previous fiscal year, due to efforts to reduce emissions and an increase in sales revenue. This resulted in a 33.2% reduction compared to fiscal 2013.

Greenhouse Gas Emissions and Greenhouse Gas Emissions Per Unit of Net Sales (Per Unit of Revenue) (Toray Group in Japan)



Note: Per unit of net sales until fiscal 2019, as Japanese GAAP was used until then, and per unit of revenue from fiscal 2020 onwards, as International Financial Reporting Standards (IFRS) have been adopted since then.

Greenhouse Gas Emissions (Scope 1 and 2) (Toray Industries, Inc.)



Toray Group is systematically installing renewable energy systems. It installed and started to operate a solar power generation system at the Basic Research Center (Kamakura) in fiscal 2022. Outside of Japan, Toray Resin Co. (United States) has also begun operation of a solar power generation system, as well.

In addition, the Tokai Plant of Toray Industries began co-combusting sludge fuel, which is carbon neutral, as boiler fuel from fiscal 2017.



Solar power generation system at Toray Industries Basic Research Center (Kamakura)



Solar panels installed on Toray Resin Co. (United States) grounds

Renewable energy generated in fiscal 2022

80,803 MWh

Toray Group has installed solar power generation facilities at the following plants:

Toray Industries, Inc.

- Shiga Plant
- Seta Plant
- Ehime Plant
- Mishima Plant
- Okazaki Plant
- Nasu Plant
- Basic Research Center (Kamakura)

Group companies in Japan

- Toray Construction Co., Ltd.
- Toray Engineering Co., Ltd.
- Toray Precision Co., Ltd.
- Toray Engineering Central Co., Ltd.
- Toray Engineering West Co., Ltd.
- Toray Textiles, Inc.
- Toyo Plastic Precision Co., Ltd.
- Toray Fine Chemicals Co., Ltd.
- Soda Aromatic Co., Ltd.
- Toray Advanced Film Co., Ltd.
- Toray Carbon Magic Co., Ltd.
- Toyo Jitsugyo Co., Ltd.

Group companies outside Japan

- Toray Advanced Materials Korea Inc.
- Thai Toray Synthetics Co., Ltd.
- Penfabric Sdn. Berhad
- Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd.
- Toray Fibers (Nantong) Co., Ltd.
- Toray Plastics Precision (Zhongshan) Ltd.
- Toray Resin Co.
- Toray Plastics (America) , Inc.
- Delta-Tech S.p.A.
- Toray Membrane USA, Inc.

Effective Use of 100% Renewable Electricity at the Headquarters of Toray Industries

Toray Industries signed a green power supply service⁶ agreement with Mitsui Fudosan Co., Ltd. for the Toray head office located in Tokyo's Nihonbashi Mitsui Tower.

By utilizing, through Mitsui Fudosan, the environmental value of the wind power facilities that Electric Power Development Co., Ltd. operates, Toray's head office has effectively used 100% renewable energy since April 2022. On a global basis, the estimated annual reduction in greenhouse gas emissions should be around 1,500 tons-CO₂. In April 2023, the Nagoya Branch of Toray Industries, which is located in the Nagoya Mitsui New Building, introduced a Green Power Supply Service and has switched virtually all of its electricity use to 100% renewable energy.

⁶ Green power supply service: A unique service developed by Mitsui Fudosan that uses non-fossil fuel energy certificates to provide electricity to the tenants of its office buildings, which is effectively generated using 100% renewable energy.

Initiatives to Protect the Ozone Layer

Toray Industries ceased using chlorofluorocarbons (CFCs) in all manufacturing processes and stopped purchasing CFCs for use in refrigeration equipment in 1994. The Company finished upgrading refrigeration equipment using CFCs in fiscal 2019.

Related Information

For disclosure of information related to climate change in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), refer to [Toray Group's Approach to Climate Change](#).

Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Chemical Management

Responsible Care Program

Under Responsible Care programs, chemical companies pursue voluntary management of chemical substances, transparent disclosure, and communication with the public. Companies committed to Responsible Care take safety, health, and environmental measures across the entire product lifecycle—from development, manufacturing, distribution and consumer use to the disposal—and then disclose the results of their efforts.

Toray Industries implements its program in accordance with the Responsible Care Global Charter.¹ In fiscal 2022, the Company promoted the Sustainability Vision and rigorous chemical substance management.

¹ The Responsible Care Global Charter was originally established in 2005 to encourage companies to take concrete action that is understandable to external stakeholders. The Charter was revised in 2014, and Toray Industries was a signatory to both the original and revised Charter.

Compliance Status Regarding Worldwide Chemical Substance Regulations

All business divisions of Toray Industries, as well as its group companies in and outside Japan, have chemical substance management systems in place for securing compliance with relevant regulations worldwide, such as Japan's Chemical Substances Control Law and the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) in Europe. As a part of this compliance effort, the Group registers chemical substances registration in accordance with national laws and regulations. The Group also reports production and import volumes, manages substances of high concern, a category that includes substances of very high concern (SVHC) under REACH, and studies the use of alternative substances.

In 2022, in addition to revising its safety data sheets (SDS) to comply with the revised PRTR Law and JIS requirements, the Group took measures to comply with restrictions on chemical substances (microplastics, bisphenol A, etc.) under consideration for restriction under REACH.

Management of Chemicals in Products (CiP)

Toray Industries has established the Toray Green Procurement Guidelines (established June 2004, latest revision June 2022) with the aim of reducing the impact on the global environment of the entire cycle from product development, manufacturing, distribution, use, to disposal. The guidelines address the following legally regulated substances by identifying them as either banned or controlled substances. In addition, the company identifies and manages controlled substances according to the relevant laws and regulations for each business.

Banned Substances

- Class I specified chemical substances regulated under the Japanese Act on the Regulation of Manufacture and Evaluation of Chemical Substances
- Substances banned under the Japanese Industrial Safety and Health Act

Controlled Substances

- 10 restricted substances under the EU RoHS Directive
- Azo compounds that form specified amines under the Japanese Act on Control of Household Products Containing Harmful Substances
- Ozone depleting substances under the Japanese Act on the Protection of the Ozone Layer
- Radioactive substances

Controlled substances other than those listed above are designated primarily in accordance with the laws and regulations pertaining to chemSHERPA².

² chemSHERPA: Information-sharing scheme for chemical substances, managed by the Joint Article Management Promotion-consortium (JAMP) (<https://chemsherpa.net/english>)

Further Improving Chemical Management in Toray Group

To better respond to increasingly stricter regulations worldwide, Toray Group is working to enhance its chemical management by utilizing IT systems and improving in-house training. The Toray Chemicals Management System (TCMS), which began operating in fiscal 2019, is used to reliably and promptly confirm the registration status of chemical substances and regulations in destination countries, as well as to issue SDS compliance with specific countries' laws and regulations.

In addition, the Group also established a new in-house education system to raise awareness and increase the knowledge levels of employees in charge of chemical management. In fiscal 2022, Toray Industries conducted training for Group employees who wished to participate on eight topics, including chemical management laws in the U.S. and basic knowledge of chemical management for sales representatives. A total of 3,065 employees took part in the training sessions.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances

As a corporate group that does business in the chemicals sector, Toray Group places the highest priority on reducing emissions of chemicals into the atmosphere in order to reduce its environmental impact.

The Group is working to achieve its targets for reducing atmospheric emissions of volatile organic compounds (VOCs) and substances specified under Japan's Pollutant Release and Transfer Register Law (PRTR Law). Under Toray's CSR Roadmap 2022, which covered the period from fiscal 2020 to 2022, the Group aimed to reduce its VOC atmospheric emissions by 70% or more each year compared to fiscal 2000, until fiscal 2022. Starting in fiscal 2020, the Group has been focusing on making reductions at group companies and plants with high atmospheric emissions of PRTR-applicable substances and VOCs, while following up on their progress. Under CSR Roadmap 2025, which covers the period from fiscal 2023 to 2025, the Group aims to reduce its annual VOC atmospheric emissions by 72% or more compared to fiscal 2000, until the end of the period. In order to achieve this goal, group companies with high VOC atmospheric emissions as of the end of fiscal 2022 are being targeted, and efforts are being made to further reduce emissions at these companies.

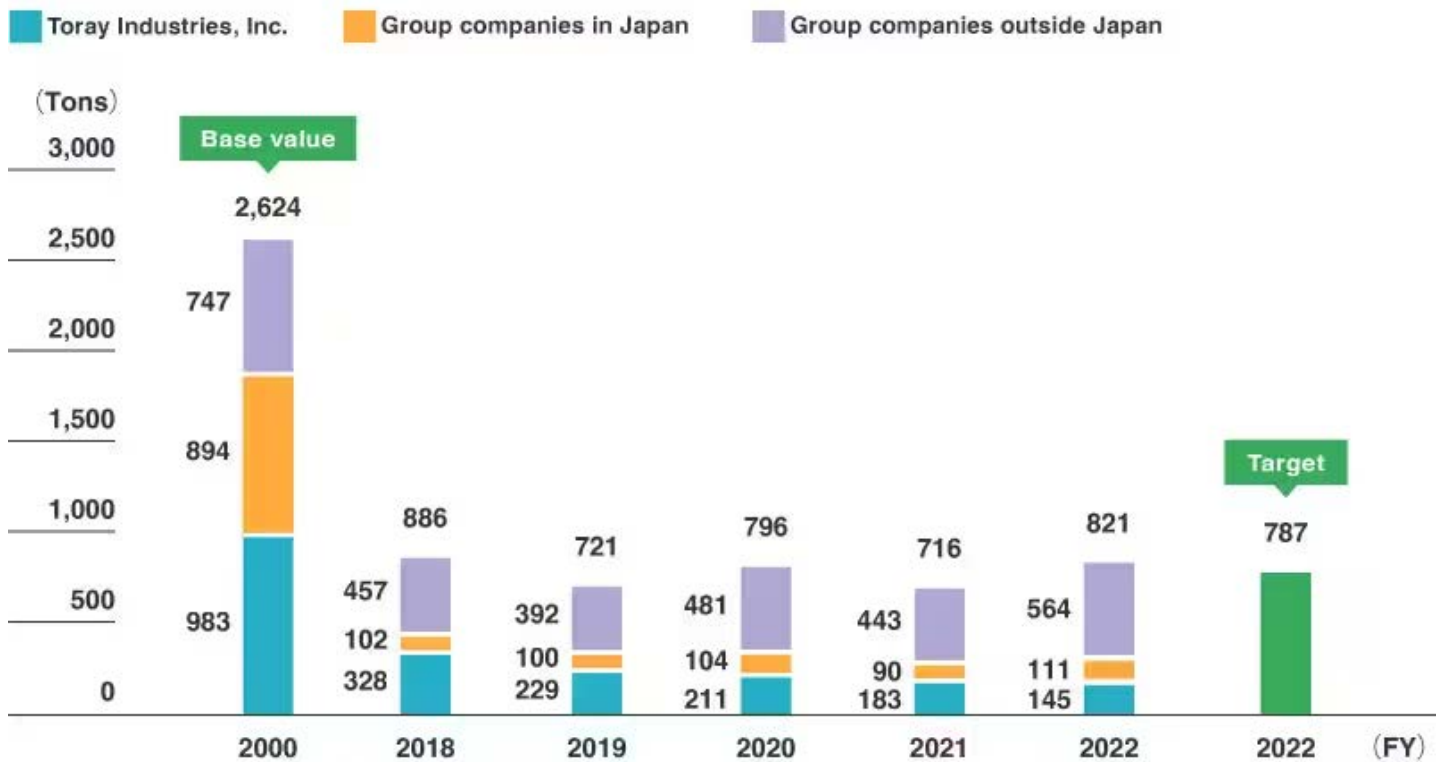
Reducing Atmospheric Emissions of PRTR Law-Specified Substances

CSR Roadmap 2022
Main Initiatives (12)

In fiscal 2022, Toray Group's atmospheric emissions of PRTR Law-specified substances were 821 tons. Although these emissions decreased at Toray Industries, emissions increased by 105 tons compared to the previous year at group companies in and outside of Japan. This was mainly due to increased production to meet demand during the post-pandemic economic recovery, and due to the startup of new factories. As a result, the Group achieved a 68.7% reduction compared to the base year of fiscal 2000, falling just short of the 70% reduction target.

Some substances covered by the PRTR Law pose particular concerns regarding their effects on human health. For these substances, the Group will continue to promote voluntary reductions in atmospheric emissions while paying close attention to legal and regulatory trends in the countries and regions where applicable manufacturing sites are located.

Atmospheric Emissions of PRTR Law-Specified Substances



Reduction of Atmospheric VOC Emissions

CSR Roadmap 2022
Main Initiatives (8)

Reduction of atmospheric VOC emissions (%)

■ Reporting scope
Toray Group

■ Target in fiscal 2022
At least 70% lower than fiscal 2000

Result in fiscal 2022

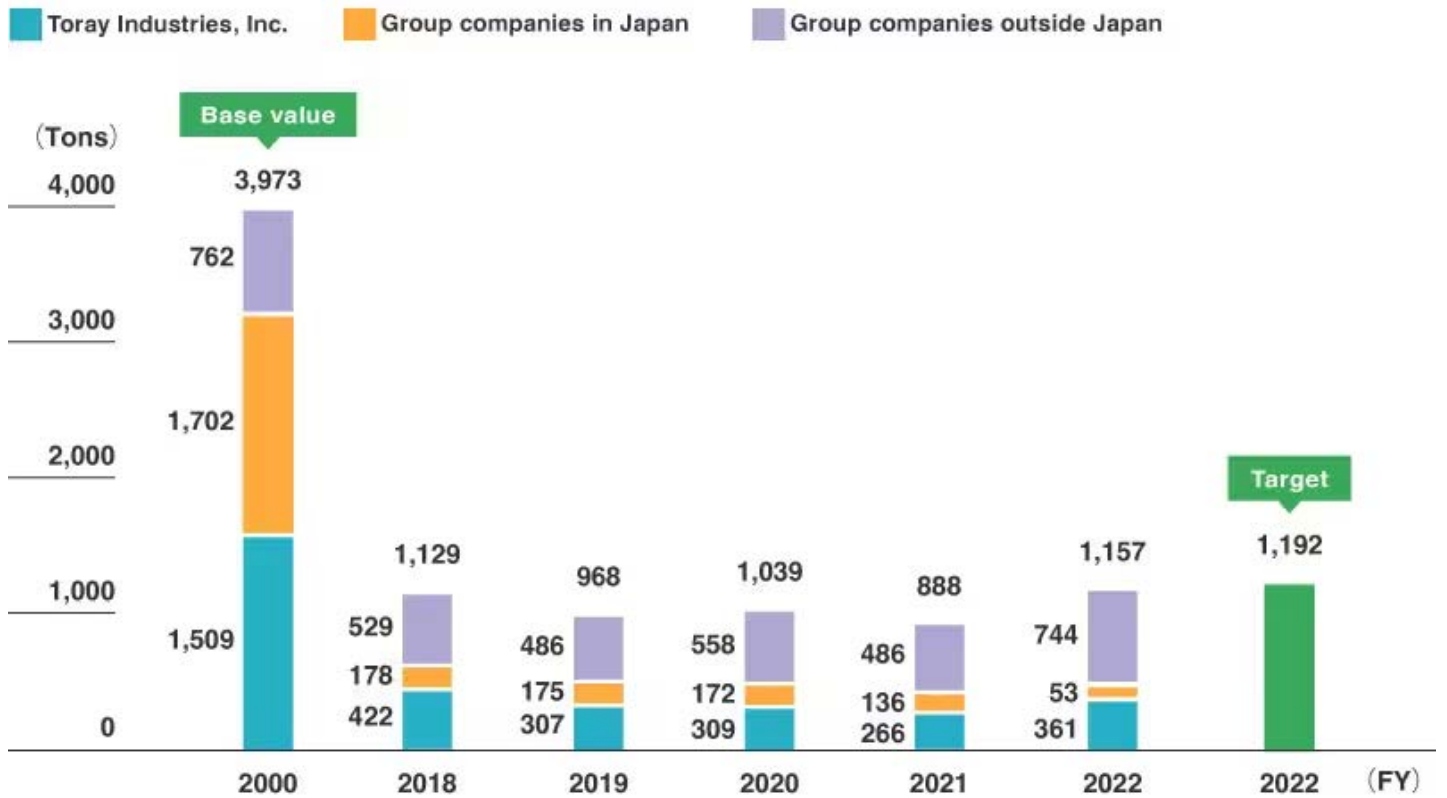
70.9%

In fiscal 2022, Toray Group's atmospheric VOC emissions were 1,157 tons, up 30.3% (269 tons) compared to the previous fiscal year.

The emissions were 70.9% below the base year of fiscal 2000, achieving for the second consecutive year the CSR Roadmap 2022 target of a 70% reduction compared to the base year.

The main reason for the increase in VOC emissions was a recovery in production at group companies outside Japan, and the startup of new plants. Covering the period from fiscal 2023 to 2025, the CSR Roadmap 2025 establishes an annual reduction target of 72% or more compared to fiscal 2000, until the end of the period. To achieve this goal, the Group is targeting companies with high VOC atmospheric emissions as of the end of fiscal 2022 and is working to further reduce emissions.

Atmospheric VOC Emissions



Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

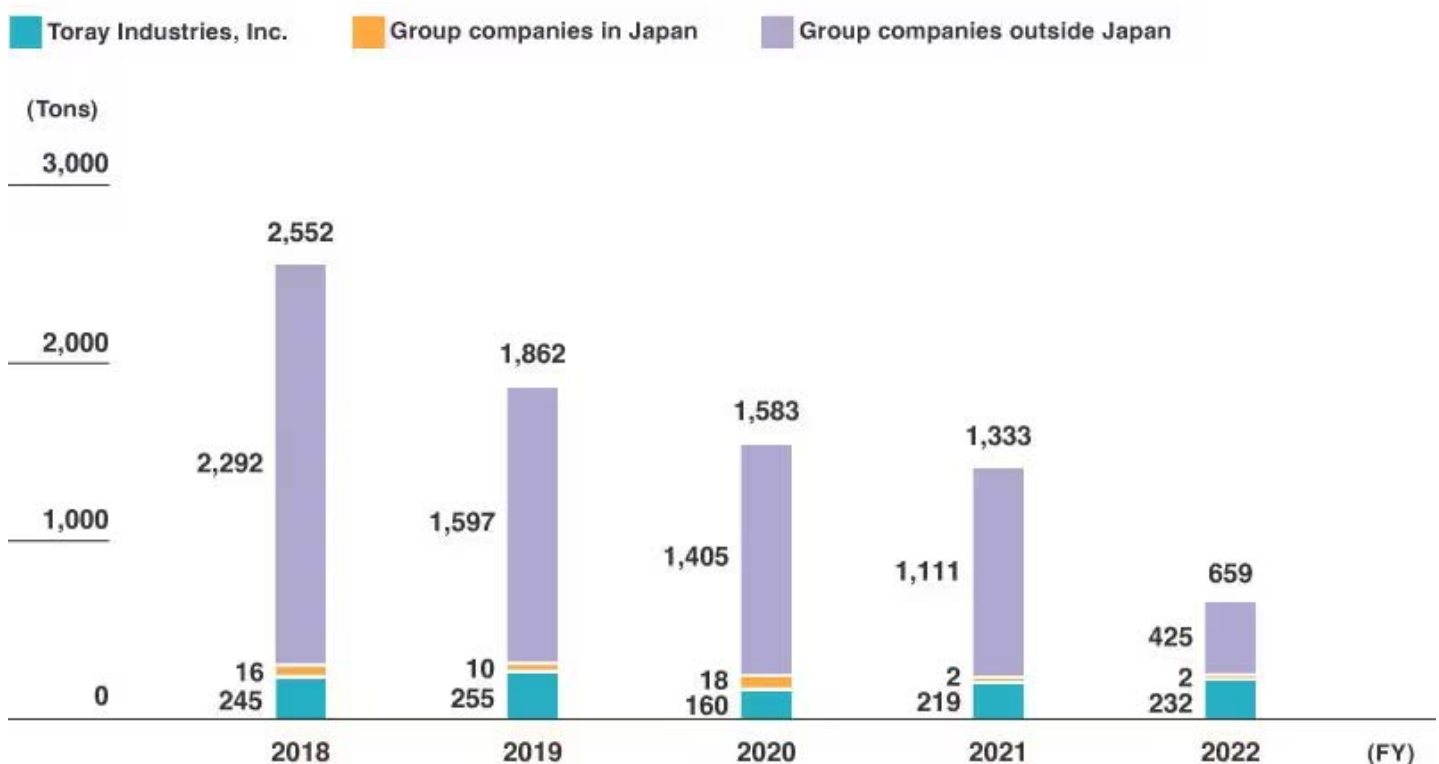
Initiatives to Prevent Air and Water Pollution

Toray Group works continuously on environmental conservation measures at its production sites. Ongoing initiatives that it will continue include reducing sulfur oxide (SOx) emissions by installing desulfurization equipment and switching to cleaner fuels, and reducing biochemical oxygen demand (BOD) and chemical oxygen demand (COD) through stable operation and expansion of wastewater treatment facilities.

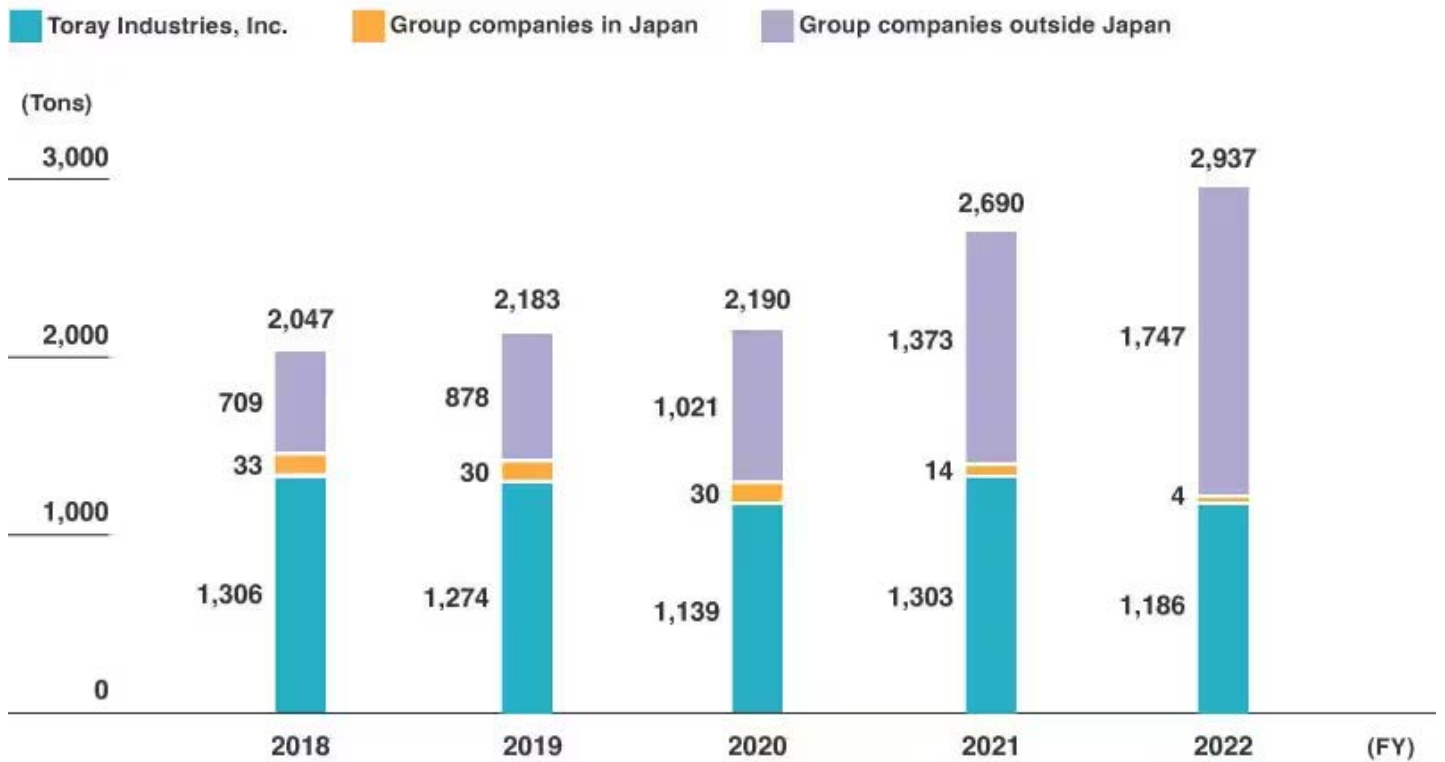
Air Emission Management (Fiscal 2022 Result)

In fiscal 2022, Toray Group recorded 659 tons of SOx emissions (down 51% year on year), 2,937 tons of nitrogen oxide (NOx) emissions (up 9% year on year), and 522 tons of dust emissions (up 66% year on year). The year-on-year reduction in SOx emissions was due to the downsizing of coal-fueled boilers at group companies outside of Japan. The year-on-year increase in the other two air pollutants was due to higher production volumes based on business recovery associated with the COVID-19 pandemic.

Atmospheric Emissions (SOx)



Atmospheric Emissions (NOx)



Atmospheric Emissions (Dust)



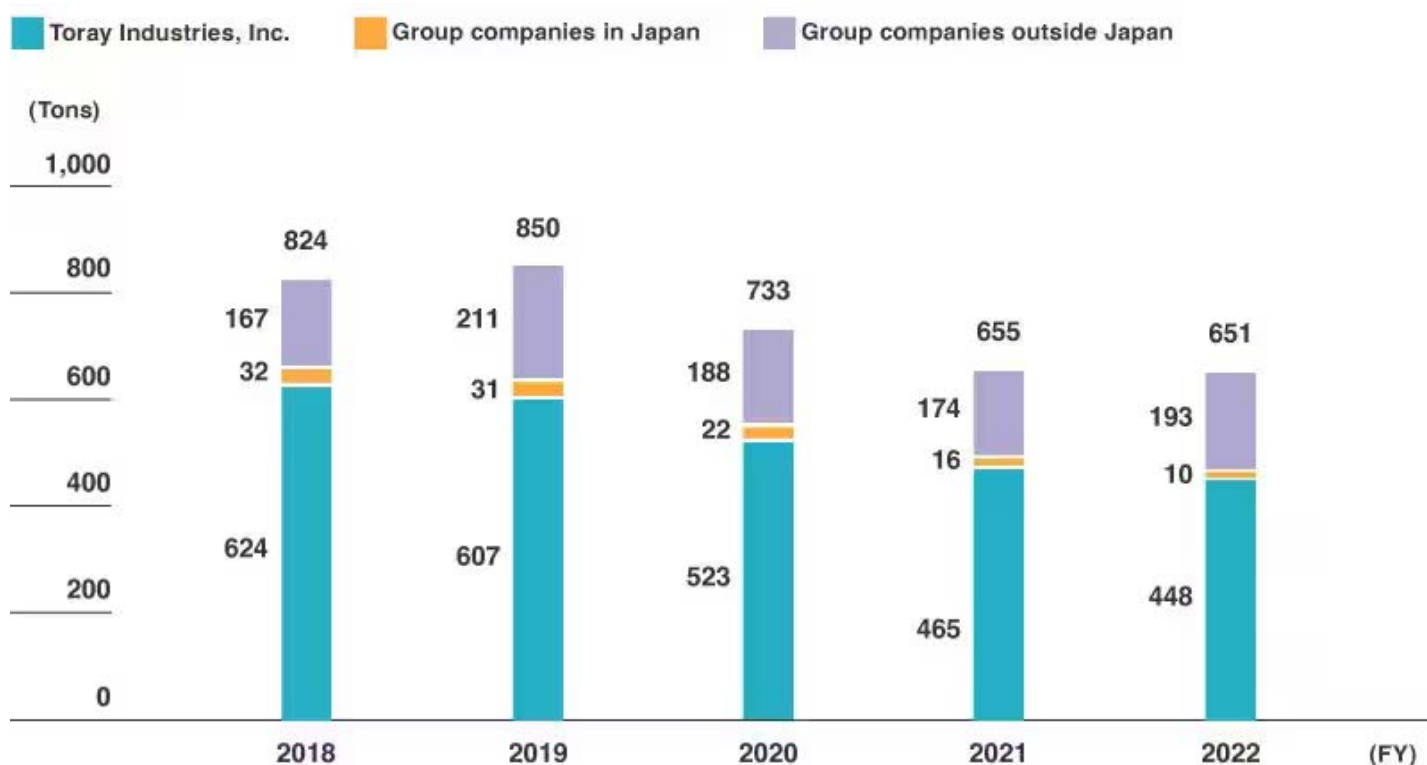
Wastewater Quality Management (Fiscal 2022 Result)

Toray Group monitors and complies with regulations concerning BODs, CODs, and nitrogen in countries and regions where it operates plants and implements water quality management for plant wastewater. Plants with high effluent loads are reducing effluents by installing wastewater treatment facilities (activated sludge method) that utilize the activated sludge method and other techniques. The Group is committed to remaining in compliance with regulations through everyday facilities operation management and regular self-testing of water quality.

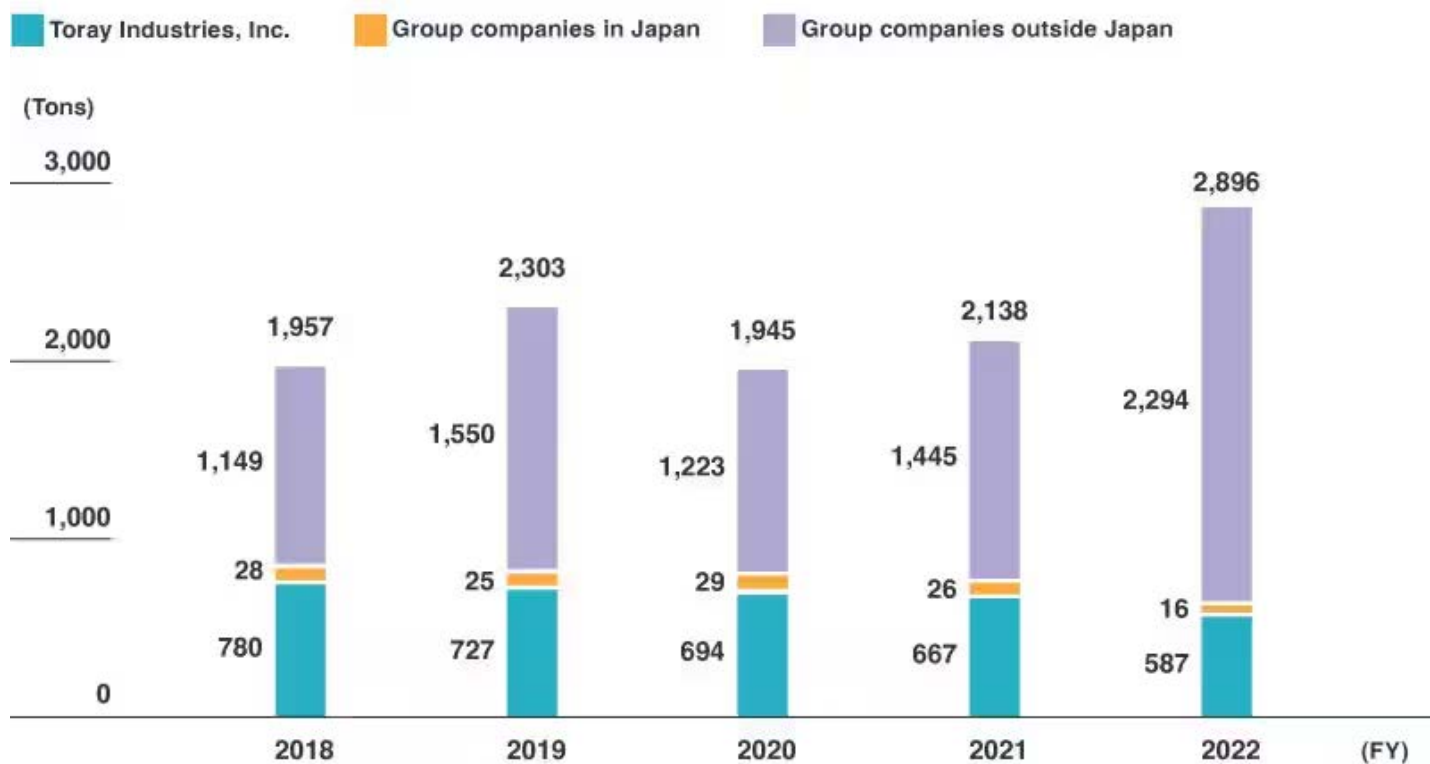
In fiscal 2022, Toray Group recorded 651 tons of BOD emissions (down 1% year on year) and 2,896 tons of COD emissions (up 35% year on year). BOD emissions remained at the same level as the previous year due to stabilization of the wastewater treatment process and other efforts. However, COD emissions increased due to higher production volumes based on business recovery associated with the COVID-19 pandemic, as well as operations at new plants.

Moving forward, Toray Industries will further strengthen the technical support provided to group companies to achieve greater reduction of effluent loads.

Water Emissions (BOD)



Water Emissions (COD)



The Group brings together wastewater managers every year to share and discuss strategies for enhancing wastewater management at production sites. The fiscal 2022 meeting was attended by 37 persons from Toray Industries' plants and 27 persons from group companies in Japan.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Initiatives for Managing Water Resources

Toray Group is working to provide solutions to water resources problems around the world, based on the following policies. In its own operations, the Group effectively uses and recycles water and properly manages water resources.

1. Toray Group recognizes that water is one of the most important resources for humanity, and that people are confronting problems related to water resources in many areas of the world.
2. Toray Group is committed to helping to solve global water resources problems through its products, technologies and services.
3. Toray Group continuously monitors the state of regional water resources, and conducts appropriate management of water resources, such as avoiding excessive water withdrawal so as to share these precious resources with the local communities where the Group operates.

Toray Group operates a variety of businesses around the world, and depending on the location, it may be greatly affected by water withdrawal restrictions. Its assessment, therefore, is that the Group faces a large risk regarding limits on water usage.

Accordingly, Toray Group uses the Aqueduct Water Risk Atlas, a water risk assessment tool provided by the World Resources Institute (WRI), to identify locations of high stress through water stress surveys in regions around the world where the Group's manufacturing sites and offices are located. In addition, the amount of water used in business activities in each region is monitored annually using a questionnaire from Toray Industries. Toray Group has determined that approximately 3.9% of its entire water withdrawals at all sites, including plants and offices, comes from regions where water stress is assessed to be high or extremely high.

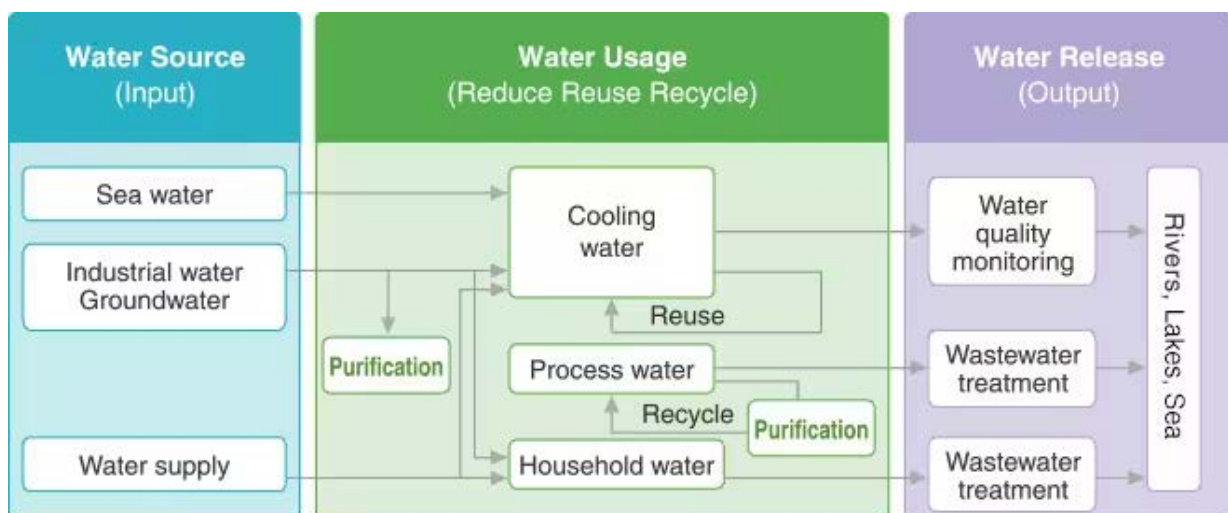
As stated in the Toray Group Sustainability Vision, a target has been set for reducing water usage per-unit of revenue by 2030. The Group understands the effects of water stress and promotes the 3Rs (reduce, reuse, recycle) for water resources through improvement of manufacturing processes, water-saving activities, and utilization of recycled water.

The Group fully understands local regulations regarding effluent and constantly monitors water quality, such as COD, before releasing effluent from its plants into public bodies of water. For example, Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd., located in Nantong, China, recycles all water used for its looms and, additionally, purifies approximately 1,300 tons/day of effluent from the dyeing process using Toray reverse osmosis membrane water treatment technology before the effluent is drained. In this manner, group companies overseas reuse cooling water and recycle wastewater in an effort to reduce the amount of new water withdrawals taken from outside as industrial water.



Dyeing effluent is reused at Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd. utilizing Toray reverse osmosis membranes.

Water Resource Management by Toray Group



Related Information

See the following page for information on how Toray Group handles water hazard risks (floods, storm surges, etc.).

> [Business Continuity Plan Initiatives](#)

Water usage per unit of revenue (%)

■ Reporting scope Toray Group	■ Target At least 25% lower than fiscal 2013 (Fiscal 2022)
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Result in fiscal 2022

31.9%¹

In fiscal 2022, Toray Group used 214 million tons of water, approximately 10 million tons less than the previous fiscal year. Compared to the amount used per unit of revenue in fiscal 2013, set to an index value of 100, usage in fiscal 2022 was 68.1 points, down 3.6 points from the previous fiscal year. In fiscal 2022, the total volume of water used decreased and water usage per unit of revenue improved, thanks to the reuse of cooling water and effluent in the manufacturing process.

¹ The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

Related Information

> [Environmental Data \(Water Usage\)](#)

Comparative Water Usage Per Unit of Net Sales (Per Unit of Revenue)* (Toray Group)

(FY)	2016	2017	2018	2019	2020	2021	2022
Comparative Water Usage Per Unit of Net Sales (Per Unit of Revenue)	90.9	82.5	77.9	77.1	82.4	71.7	68.1

* Per unit of net sales until fiscal 2019, as Japanese GAAP was used until then, and per unit of revenue from fiscal 2020 onwards, as International Financial Reporting Standards (IFRS) have been adopted since then.

Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Initiatives to Reduce Waste

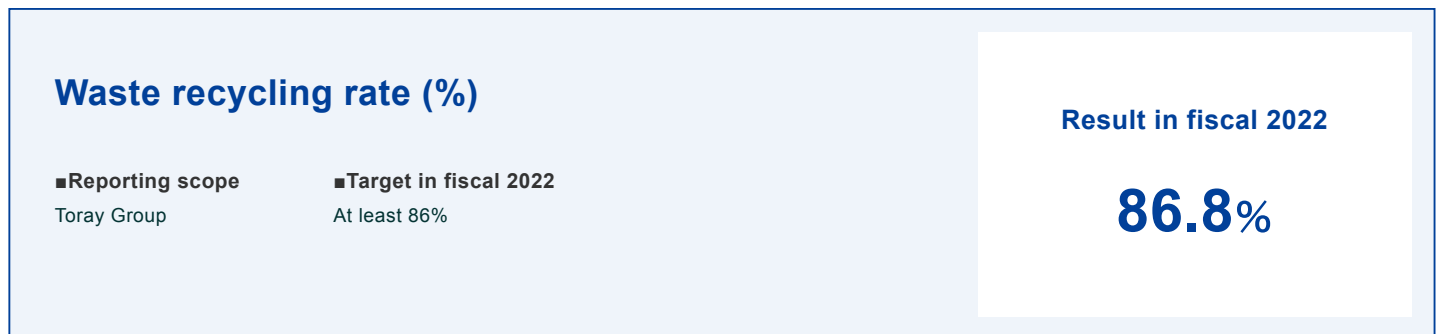
Toray Group is making effective use of resources as it works toward the realization of a sustainable, recycling-based world. Under its CSR Roadmap 2022, which covered fiscal 2020-2022, the Group worked to achieve a waste recycling rate¹ of 86% or higher every year through fiscal 2022. Since fiscal 2020, intensive efforts have been made to reduce the number of group companies and plants with low recycling rates and to follow up on progress being made.

¹ Waste recycling rate = (recycled resources + resources with monetary worth) / (total waste + resources with monetary worth)

Results in Fiscal 2022

CSR Roadmap 2022
Main Initiatives (9)

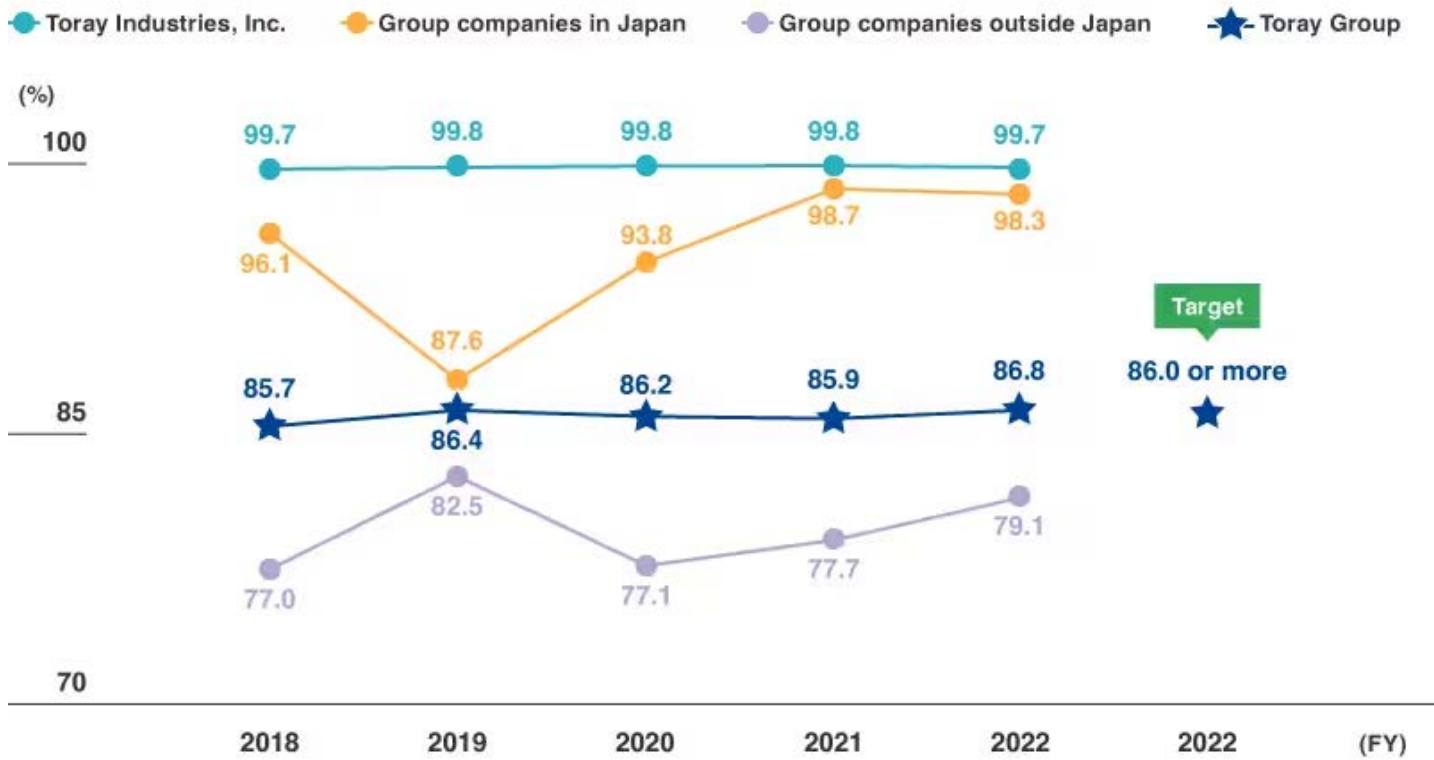
Recycling Rate



The Toray Group recycling rate in fiscal 2022 was 86.8%, up by 0.9 percentage points year on year, thanks to efforts to promote recycling of such items as film waste at group companies. As a result, the Group achieved its target of 86% or higher.

In its CSR Roadmap 2025, which covers fiscal 2023-2025, the Group set a numerical target for a waste recycling rate of 87% or higher in the final year, fiscal 2025. In order to achieve this goal, the Group has designated group companies with low recycling rates as of the end of fiscal 2022 as companies requiring attention and is taking steps to further reduce the rates at these companies.

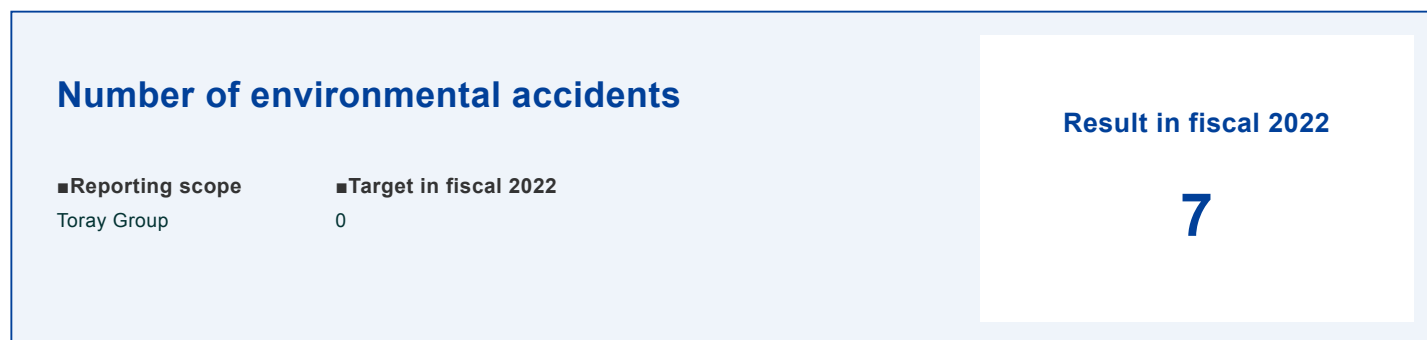
Recycling Rate (Toray Group)



Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Environmental Risk Management



Compliance with Environmental Laws and Accidents in Fiscal 2022

CSR Roadmap 2022
Main Initiatives (5)

In fiscal 2022, seven environmental accidents occurred within Toray Group, some of which were minor.

These were all accidents in which exhaust gas or wastewater emissions exceeded administrative and agreed standards for air or water quality. After promptly contacting the local governments, the plants involved confirmed, through analytical investigations and reviews of the surroundings based on internal rules, that the impact on the environment was extremely minor.

The causes of these accidents included failing to properly treat exhaust gas generated during non-routine work and failure to fully stop detected leaking of wastewater exceeding water quality standards from a plant during the manufacturing process. To prevent recurrences, the Group will take thorough measures such as ensuring the proper treatment of non-routine exhaust gas, and strengthening the management of wastewater within factories. The Group received two complaints from residents near its facilities concerning noise, which were seriously examined and addressed by implementing improvements.

Environmental Accidents in Fiscal 2022 (Toray Group)

Administrative disposition due to violations of laws or ordinances ¹	0
¹ Serious environmental accidents resulting in improvement orders	
Accidents (environmental accidents, etc.) ²	3
² Environmental accidents for which improvement guidance and recommendations are issued	
Slight but temporary exceeding of standard values ³	4
³ Environmental accidents for which improvement guidance and recommendations are not issued by local government	
Complaints/requests (noise, odor, etc.)	2

Toray Industries conducts product safety reviews before launching new products on the market. As part of these reviews, a prescribed checklist is used for environmental assessment. The Environment & Safety Department confirms and evaluates the measures taken for each stage of the new product's life cycle, from raw material procurement, manufacturing, packaging and distribution, to product use, recycling, and disposal.

<Evaluation Checklist Items (excerpt)>

- Does the product comply with the Toray Green Procurement Guidelines? (e.g. Is it free from prohibited substances?)
- To help protect biodiversity, do the operational emissions exceed the standard values for regulated substances?
- Is recycling used within the processes and are waste heat and unused energy utilized effectively?
- Have the amounts of exhaust gas and noise generated during product use been reduced?
- Have measures been taken to reduce the environmental impact, such as by preventing the generation of harmful gases during incineration and by avoiding the leaching of hazardous substances during landfilling?

Preventing Soil and Groundwater Pollution

Toray Group constructs protective embankments around its facilities and storage tanks for hazardous chemicals, and takes precautions to ensure that none of these dangerous substances leak or discharge into the surrounding area or contaminate the soil onsite. In fiscal 2022, remediation using wells to clean up groundwater pollution continued at Toray Monofilament Co., Ltd., and remediation to address soil pollution continued at Toray Industries' Nagoya Plant. Toray Group will continue these ongoing remediation efforts and voluntary surveys to monitor soil and groundwater pollution.

Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Environmental Accounting

Fiscal 2022 Environmental Accounting Report (Toray Industries, Inc.)

Toray Industries, Inc. has been practicing environmental accounting since 1999, to track investments and gauge their cost effectiveness.

In fiscal 2022, the Company's environment-related investment amounted to 1.49 billion yen, down 3.3 billion yen compared to the previous year due to a decrease in large-scale environment investments from the previous year. Cost totaled 9.26 billion yen, up 2.51 billion yen compared to the previous year, due to soaring fuel prices and other factors.

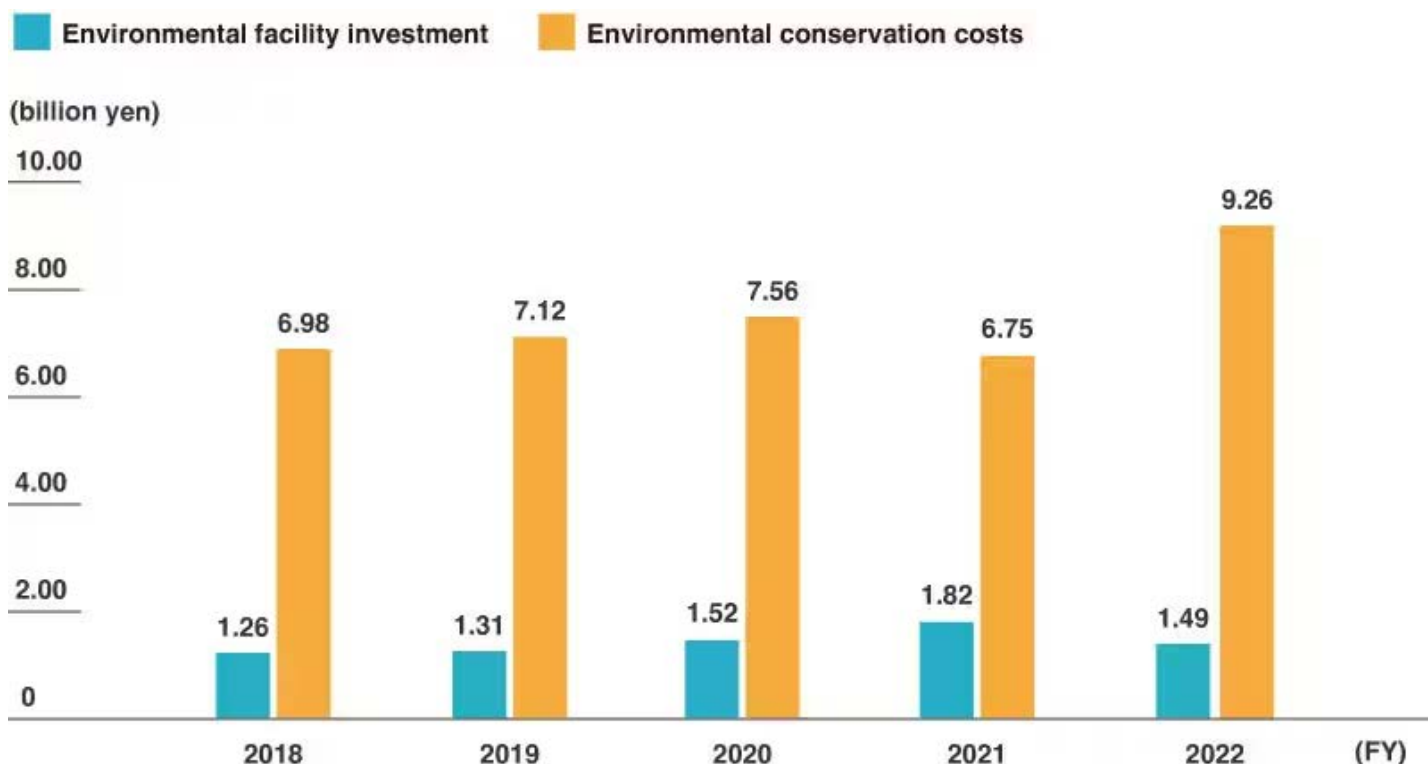
Fiscal 2022 Environmental Accounting Report (Toray Industries, Inc.)

Expenses				
Item		Subcategory and description	Investment (million yen)	Cost (million yen)
Business area costs	Pollution prevention costs	Air (including CFC countermeasures)	148	4,286
		Water quality	565	2,395
		Noise and vibration	33	12
		Greening	0	230
		Odors and other	51	149
	Global environment conservation costs	Energy conservation and combating global warming	57	38
	Resource recycling costs	Industrial waste reduction, recycling, disposal, and PCB waste disposal services	75	1,296
Upstream and downstream costs		Product recycling	561	92
		Container and package recycling	0	0

Expenses			
Item	Subcategory and description	Investment (million yen)	Cost (million yen)
Management activity costs	Indirect labor costs, ISO certification and maintenance, environmental communications, and education	0	551
Social initiative costs	Regional initiatives, support for organizations, etc.	0	55
Environmental remediation costs	SOx fines, soil purification, etc.	0	159
Total		1,489	9,262

Effectiveness		
Item		Amount (million yen)
Financial effects	Reduction in energy costs	38
	Reduction in industrial waste disposal costs	62
	Sale of valuable recycled resources with monetary value	776
Quantitative environmental effects	Reduction of greenhouse gas emissions	2,000 tons- CO ₂ eq

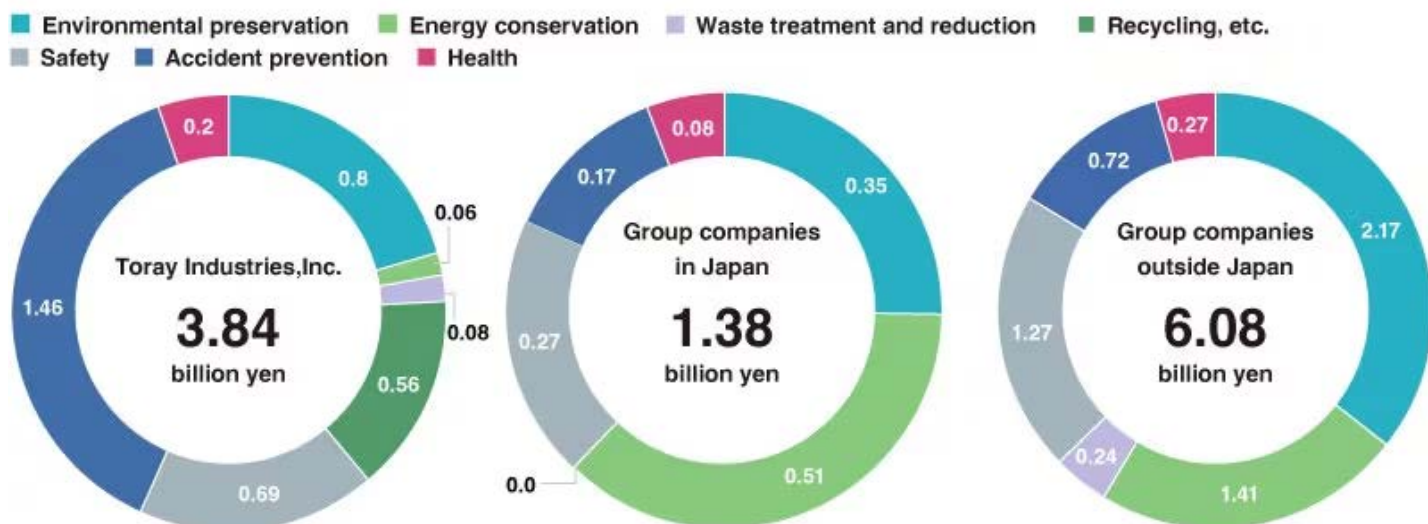
Environmental Facility Investment and Environmental Conservation Costs (Toray Industries, Inc.)



Facility Investment in Safety, Health, Accident Prevention, and Environmental Preservation Projects (Toray Group)

Toray Group reports on facility investments relating to safety, health, accident prevention, and environmental preservation projects. The Group continues to invest in safety improvements to facilities. As part of its environmental conservation efforts, the Group has invested in the expansion of exhaust gas emissions and wastewater treatment facilities and additional instrumentation to enhance wastewater management.

Fiscal 2022 Facility Investment in Safety, Health, Accident Prevention, Environmental Preservation, and Energy Conservation Projects (Toray Group)



Toray Industries Environmental Accounting Standards

- Some categories were changed based on the Ministry of the Environment's Guidelines for FY 2005.
- Only economic effects that can be determined with a high degree of certainty are included in the calculation. Presumed effects are not included.
- Capital investment also includes facility investments for which environmental preservation is not the main objective. Capital investment resulting from leases is also included. Expenses include labor costs and depreciation. However, internal labor costs related to local volunteer activities are not included.
- Energy cost reduction figures show the amount of reduction for the 12 months after the completion of an energy saving facility. Expenses are not recorded as they are deducted when the effect is calculated.
- Waste disposal cost reduction figures show the amount of reduction achieved through waste reduction efforts and resource recycling for 12 months after the measures are undertaken.
- Effects of reducing greenhouse gas emissions are measured over a 12-month period following the completion of measures or facilities to save energy.

CSR Activity Report (CSR Guideline Activity Reports) – Safety, Accident Prevention, and Environmental Preservation

Biodiversity Initiatives

Next to the issue of climate change, the issue of biodiversity preservation has been a major focus of the international community in recent years. Biodiversity forms the basis of natural capital such as water, air, plants, animals, and minerals that are indispensable to human society. Climate change caused by human activities, depletion of natural resources, ecosystem destruction, and species extinction are causing biodiversity loss to occur at an alarming rate, making it a serious problem facing humankind. This has sparked an international discussion about the importance of taking a nature positive approach to stopping and reversing biodiversity loss.

Toray Group views conservation of biodiversity as a critical global environmental issue that is of equal importance to reducing greenhouse gas emissions. Toray is contributing to biodiversity conservation and the nature positive approach through its business activities. This includes water treatment technology to produce reliably safe drinking water, water conservation through the reuse of treated wastewater, and air purification using fiber filter-related materials.

The Group also uses environmental assessment checklists to conduct safety reviews for all products and to carry out environmental risk investigations before making capital investment. The checklists enable the Group to ensure that it is not exceeding legal limits on regulated substances contained in exhaust gas, wastewater, and waste from manufacturing. Before utilizing land for the first time, Toray also uses the checklist to confirm any biodiversity-related factors such as regulations for production sites, the need for surveys of rare organisms, and any concerns from citizen groups. Through these efforts, Toray strives to assess its impact on biodiversity and help build a sustainable world.

Working Group Considers Initiatives for Biodiversity

In 2010, Toray Group launched a cross-organizational working group to develop biodiversity initiatives, which are prioritized and implemented under the guidance of the Toray Group Biodiversity Basic Policy. In 2023, the team was renamed the Nature Positive Working Group.

Toray Group Biodiversity Basic Policy Established December 2010

Basic Approach

Toray Group appreciates the gifts of nature that biodiversity provides and strives to realize the conservation and sustainable use of biodiversity. The Group contributes to society through the development and dissemination of products and technologies which advance conservation of biodiversity.

Action Guidelines

1. We take into consideration the impact of our business activities on biodiversity and strive to realize the conservation and sustainable use of biodiversity.
2. We endeavor to develop environmentally friendly technologies and products and contribute to the conservation of biodiversity by making them available for use.
3. We practice fair use of genetic resources on the basis of relevant international agreements.
4. We recognize the influence of biodiversity within the supply chain and pursue coexistence with nature.
5. We strive to raise employee awareness on biodiversity and contribute to the building of a society that nurtures biodiversity through our communication with stakeholders.

Note: Toray Group respects Nippon Keidanren's Declaration of Biodiversity (Guide to Action Policies) and the Japanese Ministry of the Environment's Guidelines for Private Sector Engagement in Biodiversity.

The Group is a promotion partner of Nippon Keidanren's Declaration of Biodiversity. The policies and details of Toray Group's initiatives are outlined in the Initiative based on the [Declaration of Biodiversity by Keidanren](#).

Toray Industries has also participated in the 30 by 30 Alliance for Biodiversity since its launch by Japan's Ministry of the Environment on April 8, 2022.

With the goal of halting and reversing biodiversity loss (nature positive approach) by 2030, the Alliance was established by the Ministry of the Environment as a voluntary coalition of industry groups, government agencies, and private companies. Its aim is to help achieve the worldwide initiative for conserving 30% or more of Earth's land and ocean area as healthy ecosystems by 2030.

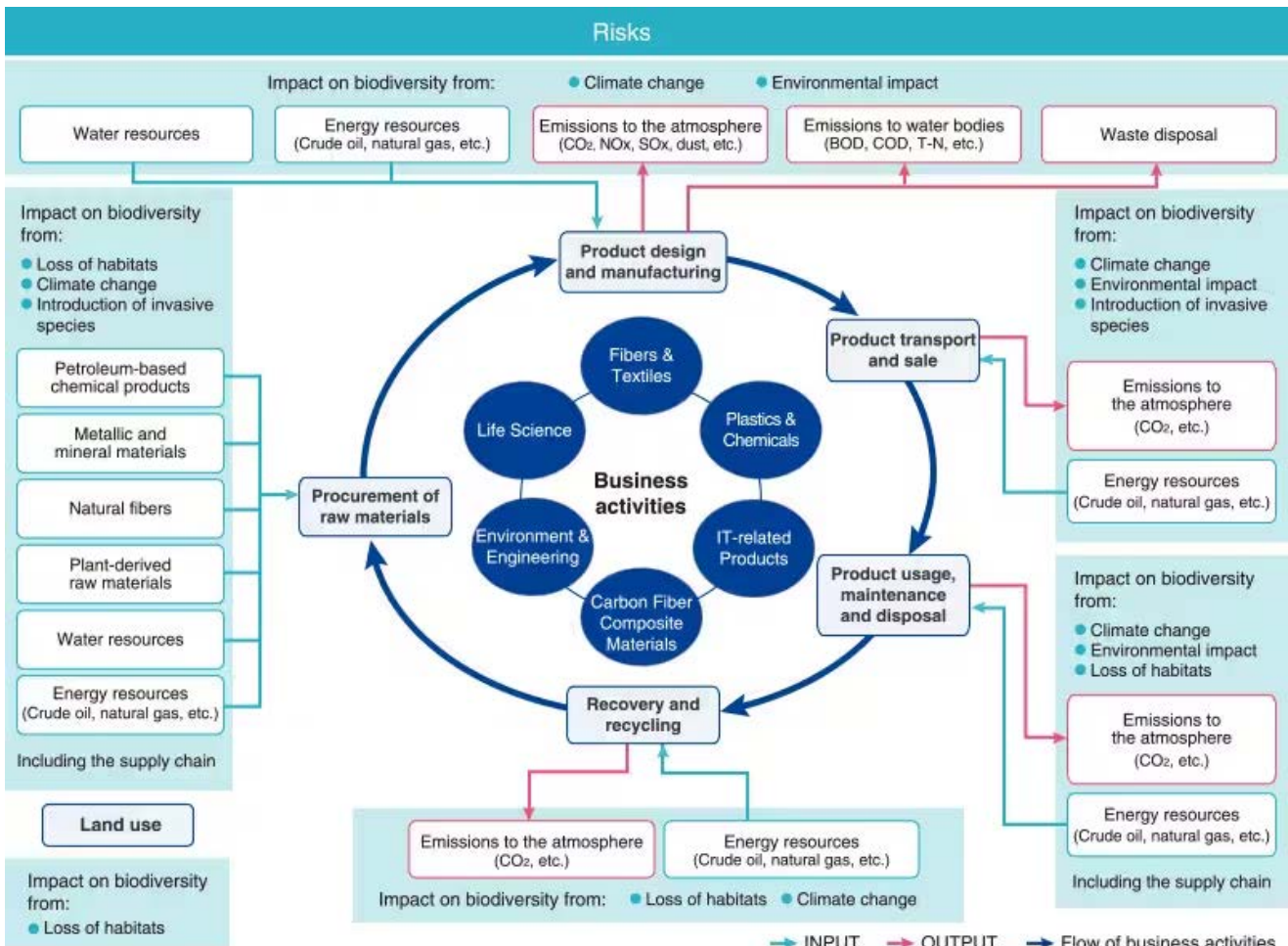
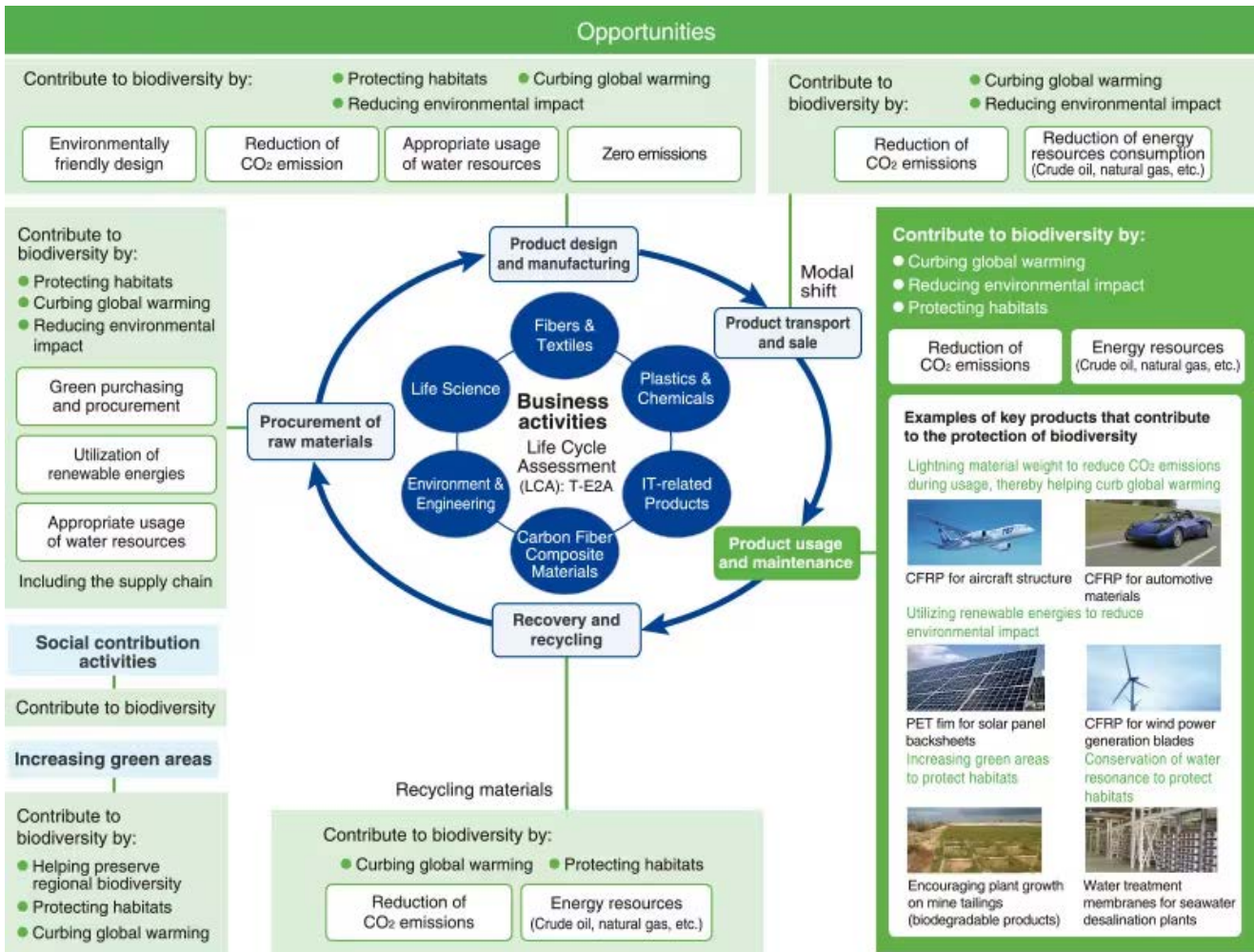


Analysis of Biodiversity-related Opportunities and Risks Across the Toray Group Supply Chain

The Group conducted an analysis of the biodiversity opportunities and risks relating to its business activities, namely, upstream raw material procurement, water and energy resource use, product and service design, operational emissions, and land use for operations, as well as downstream product use, disposal, collection, and recycling.

On the opportunity side, business activity effects on biodiversity include reductions to CO₂ emissions by offering products that reduce the weight of parts for aircraft and other equipment as well as protecting forests and habitats by offering products that maintain green areas and protect water resources. On the risk side, activity effects include the reduction of natural capital due to the use of water and energy resources, as well as climate change promotion and environmental impact resulting from emissions into the atmosphere and water bodies.

The two diagrams below show the biodiversity-related opportunities and risks across Toray Group's supply chain.



Note: These diagrams were produced based on the Map of Corporate Activities and Biodiversity[®] published by the Japan Business Initiative for Biodiversity.

Toray Group Strategy

Established in 2018, the Toray Group Sustainability Vision outlines a range of goals to be achieved by 2050. These include helping to create a net zero emissions world, where greenhouse gas emissions are completely offset by absorption (in other words, a net zero emissions, carbon-neutral world), a world where resources are sustainably managed, and a world with a restored natural environment, with clean water and air for everyone. The Group has been promoting initiatives to achieve these goals.

In May 2020, the Long-Term Corporate Vision TORAY VISION 2030 was announced with the aim of achieving sound, sustainable growth and creating social value by fiscal 2030. Then in March 2023, the three-year Project AP-G 2025 was launched with the title, Innovation and Resilience Management—Value Creation for New Momentum. As part of this effort, the Group has been promoting its Green Innovation businesses, which help solve global environmental problems and resource/energy issues, along with its Life Innovation businesses, which promote better medical care, health maintenance and longevity, public health, and human safety, including disaster and extreme weather response measures. Recently, the Green Innovation businesses and Life Innovation businesses were combined and renamed as Sustainability Innovation businesses. By expanding the products supplied by these businesses, Toray Group aims to provide essential solutions to solve global issues through nature-positive approaches.

Green Initiatives as Part of Business Activities (Products and Technologies)

Business activities that serve as green initiatives include the use of water treatment technology to produce clean and reliable drinking water, water resource conservation through the reuse of sewage and wastewater, and air purification using textile materials for filters. They also include the recycling of plastic products, switching to bio-based raw materials, and transitioning to clean energy and hydrogen fuel. Through its business activities, Toray is working to help preserve biodiversity and adopt a nature positive approach.

Related Information

- > [Webpage: Four Perspectives of the World as Envisioned by the Toray Group in 2050—A world with a restored natural environment, with clean water and air for everyone](#)
- > [Realizing a Circular Economy](#)

Initiatives to reduce the impact of emissions during operations, etc.

Toray is working on the effective use and appropriate management of water resources through water recycling and reuse. While reducing sulfur oxides (SOx) and nitrogen oxides (NOx), the Group is preventing air and water pollution by reducing biological oxygen demand (BOD) and chemical oxygen demand (COD) through reliable operation and enhancement of wastewater treatment facilities. It is also working to reduce waste through recycling and reuse.

Related Information

- > [Initiatives for Managing Water Resources](#)
- > [Initiatives to Prevent Air and Water Pollution](#)
- > [Initiatives to Reduce Waste](#)

Increasing Green Areas

Plants at Toray Industries, Inc. and its group companies in Japan are operating greenery policies and plans, guided by the Toray Group Basic Policy for Increasing Green Areas.¹ The plans encompass initiatives to conserve green areas, including natural forests² that have been protected since the plants began operating. Sustainable greenery conservation initiatives also help to conserve the environment for communities.

Efforts to increase green areas by creating environmental conservation forests around Toray Industries' plants began in the autumn of 1973, when about 4,000 employees went to temples and shrines (which in Japan are usually surrounded by greenery) and mountains to collect tree seeds that had fallen there. Under the guidance of the late Professor Akira Miyawaki, who researched plant ecology at Yokohama National University, the seeds were grown into seedlings at each workplace, and employees painstakingly planted them one by one.

Nearly 50 years have passed since then, and the trees grown from seeds, including laurel, camphor, and oak, now cover over 10,000 m² around the Mishima Plant at Toray Industries.

It is still working to conserve the environment by increasing green areas. Altogether, Toray Industries has created green areas covering approximately 200,000 m² at 12 plants, including Mishima Plant and the Basic Research Laboratories (now the Basic Research Center) through the shrine forest method.³

¹ Toray Group Basic Policy on Increasing Green Areas was established in 2012, evolving out of greenery policies that were first established in 1973.

² Natural groves or forestation by species based on potential native vegetation

³ Modeled after traditional forestry techniques used by Japanese shrines, this greening method reproduces green spaces in a state close to natural forests by using trees that are native to the area. In order to create forests with local genes, Toray employees collected seeds from shrines and forests near plants, grew them into seedlings, and planted the seedlings to create forests at the plants.

Toray Industries, Inc. (Mishima Plant)



Immediately after planting (1973)



Current state (photo taken in 2022)

Toray Industries, Inc. (Tokai Plant)



Tree planting (1976)



Current state (photo taken in 2023)

The Mishima Plant of Toray Industries has been recognized for its facility greening activities. It received the Chairperson's Encouragement Award of the Japan Greenery Research and Development Center as part of the Fiscal 2022 Factory Greening Award Program (commonly called the "National Award for Greenery Factory" program, sponsored by the Ministry of Economy, Trade and Industry). This award program for production facilities with outstanding greening activities is designed to support the Factory Location Act. The program's purpose is to recognize factories, organizations, and individuals responsible for outstanding improvements to the green environment in and around production facilities, and to promote further greening of factories in Japan. The Mishima Plant received its award in recognition of the fact that it has a larger proportion of green space than at the start of its operations, and that the plant's Chinju Forest is thriving.

The Tokai Plant of Toray Industries has also been recognized for its plant greening efforts. It was certified as "Excellent Stage 2" in the MOU (Maintenance, Operation and Utilization) category of the Social and Environmental Green Evaluation System (SEGES), a green certification program provided by Japan's Organization for Landscape and Urban Green Infrastructure.

Toray Group's Basic Policy for Increasing Green Areas Established June 2012

- A. Toray Group contributes to the preservation of the natural environment by promoting tree planting using planting methods suitable for the biodiversity of local habitats.
- B. Toray Group aims to surround its production plants with greenery by giving priority to tree planting in areas at the boundaries of factory sites.
- C. Toray Group sets goals for making each of its production plants greener while considering how to attain harmony with the surrounding environment as well as regulations concerning green space ratios in each respective country or region.

Supply Chain Initiatives

CSR Roadmap 2022
Main Initiatives (10)

Conduct a survey of palm oil contained in raw materials (%)

■Reporting
scope

Toray Industries,
Inc.

■Target in fiscal 2022

Decision making (Yes/No) of shifting to certified raw materials :
100%

Result in fiscal 2022

100%

As one of its biodiversity conservation initiatives, Toray Group conducts a regular survey of products to determine the usage of bio-based raw materials in product manufacturing. The Group has also developed rules for checking the biodiversity impacts of products and applies the rules to all products from the development stage.

Among them, palm oil is a key raw material for follow-up action. Since fiscal 2020, the Group has been surveying relevant suppliers to find out whether raw materials are made with palm oil that uses certified palm nuts. Toray also surveys suppliers about the possibility of switching from non-certified palm oil to certified palm oil.

Going forward, Toray Group will continue to promote the use of palm oil that is environmentally friendly and ensures respect for human rights.

In addition, the Toray Group CSR Procurement Guidelines include requirements for biodiversity conservation and for minimizing environmental impact. Suppliers are asked to comply with these guidelines.

The Group is also promoting the collection and reuse of the packaging materials that come with Toray products.

Related Information

- > [Establishing Sustainable Supply Chain](#)
- > [Toray Group Distribution Initiative](#)

Toray Group carries out biodiversity conservation through social contribution activities as a good corporate citizen. The Group is promoting the creation of a waterside biotope at a group plant with the help of local students. In collaboration with municipalities and NPOs, Toray employees are engaged in volunteer cleanup activities along rivers and beaches, as well as tree planting.

Please see the following page for more information.

Related Information

- > [Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022](#)

Click [here](#) for the main initiatives for CSR Guideline 3, "Safety, Accident Prevention, and Environmental Preservation" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Environmental Impact Overview

Environmental Impact Overview Fiscal 2022

	Toray Industries, Inc.					Group companies in Japan					Group companies outside Japan				
	2019	2020	2021	2022	Compared to previous year (%)	2019	2020	2021	2022	Compared to previous year (%)	2019	2020	2021	2022	Compared to previous year (%)
INPUT															
Energy (1,000,000 gigajoules) ¹	27.8	25.3	27.3	25.6	93.9	5.8	5.3	5.8	5.4	92.8	61.0	50.9	63.4	61.3	96.7
Derived from non-renewable energy sources	26.5	24.0	26.1	24.6	94.1	5.8	5.3	5.8	5.0	86.0	60.9	50.7	63.2	61.1	96.6
Derived from renewable energy sources	1.3	1.2	1.2	1.1	89.5	0.0	0.0	0.0	0.4	—	0.1	0.2	0.1	0.3	262.3
Water usage (1,000,000 tons) ¹	171.8	165.7	171.8	166.2	96.7	13.4	11.5	11.5	8.6	74.9	41.9	37.6	40.5	39.1	96.6
Industrial water	132.1	129.9	130.9	127.1	97.1	4.0	3.5	3.7	1.1	29.5	18.3	16.5	20.4	14.1	69.0
Public water	0.2	0.2	0.2	0.2	80.0	0.2	0.3	0.3	0.4	129.2	10.3	10.3	10.1	16.5	163.7
Seawater	7.7	6.2	9.5	8.2	86.3	1.4	1.3	1.5	0.7	47.7	6.1	4.0	0.0	0.0	—
Groundwater	25.5	23.4	25.2	24.6	97.6	7.6	6.3	5.9	6.4	107.8	0.0	2.0	4.8	4.2	88.4
Others	6.2	6.0	6.0	6.1	101.7	0.2	0.1	0.1	0.1	60.6	7.2	4.8	5.2	4.2	81.6
OUTPUT															
GHG (10,000 tons CO₂eq)^{1,2&3}															
6 gases including CO ₂	186.0	165.7	186.2	164.7	88.4	33.4	30.7	33.3	19.5	58.5	356.3	300.5	329.8	305.1	92.5
Scope1 ⁴	155.9	140.3	157.9	137.3	86.9	4.7	4.1	5.5	3.4	61.7	166.8	137.3	140.9	113.1	80.3
CO ₂	146.9	132.6	148.4	129.3	87.1	4.6	4.1	5.1	3.2	63.0	166.8	137.3	140.9	113.1	80.3
CH ₄	0.4	0.3	0.3	0.3	85.5	0.0	0.0	0.0	0.0	—	—	—	—	—	—
N ₂ O	8.7	7.3	8.9	7.7	86.6	0.0	0.0	0.4	0.2	42.0	—	—	—	—	—
Other gases (HFCs, PFCs, SF ₆)	0.0	0.0	0.3	0.0	5.7	0.0	0.0	0.0	0.0	—	—	—	—	—	—
Scope2	30.1	25.5	28.3	27.4	96.8	28.7	26.6	27.7	16.1	58.1	189.5	163.1	188.8	192.0	101.7
PRTR Law-specified substances (tons)															
Atmospheric emissions	229.1	211.0	183.3	145.1	79.2	99.7	104.4	89.8	111.3	123.9	392.2	480.6	442.8	564.2	127.4
Water emissions	24.2	22.2	26.5	28.0	105.7	0.4	3.1	0.0	0.0	—	0.0	0.7	3.7	3.1	83.8
Waste transfers	1,054.1	577.4	499.1	733.4	146.9	1,674.1	2,468.9	957.4	917.5	95.8	2,140.4	4,276.9	4,611.1	5,287.7	114.7
Air pollutants (tons)¹															
SOx	254.9	160.1	219.4	232.0	105.7	9.7	17.9	2.4	1.6	67.0	1,597.4	1,404.7	1,111.3	425.1	38.3
NOx	1,274.0	1,139.2	1,302.6	1,186.0	91.0	30.2	29.7	14.3	4.2	29.4	878.4	1,020.7	1,372.9	1,746.7	127.2
Dust	121.9	60.9	102.6	77.0	75.0	3.1	1.5	4.7	1.0	20.3	234.1	133.3	207.4	443.5	213.8
VOC	307.4	309.2	266.1	361.0	135.7	175.0	172.2	136.4	52.7	38.6	486.0	557.8	485.9	743.5	153.0

	Toray Industries, Inc.					Group companies in Japan					Group companies outside Japan				
	2019	2020	2021	2022	Compared to previous year (%)	2019	2020	2021	2022	Compared to previous year (%)	2019	2020	2021	2022	Compared to previous year (%)
Industrial wastewater (million tons)¹															
	160.4	150.1	154.4	143.9	93.2	9.3	7.7	8.2	5.6	68.1	25.7	24.3	25.7	29.1	113.3
Total water consumed (million tons)															
Note: Calculated by subtracting industrial wastewater from water withdrawn															
	11.3	15.6	17.4	22.2	127.9	4.1	3.8	3.3	3.0	91.8	16.2	13.2	14.8	10.0	67.4
Water pollutants (tons)															
BOD	606.9	523.5	464.7	447.9	96.4	31.3	21.6	16.3	10.2	62.3	211.4	188.3	174.0	193.0	110.9
COD ¹	727.2	694.0	666.6	586.7	88.0	25.2	28.8	25.9	15.6	60.1	1,550.0	1,222.6	1,445.4	2,294.0	158.7
Nitrogen	341.2	340.4	405.8	389.3	95.9	13.5	8.6	7.6	4.1	53.9	—	—	—	—	—
Phosphorus	24.8	18.7	19.0	31.7	166.8	1.3	0.6	0.7	0.4	55.6	—	—	—	—	—
Waste (1,000 tons)¹															
Recycled	30.0	27.0	27.6	26.7	96.7	15.1	12.3	11.3	10.8	95.6	108.9	84.3	99.7	100.6	100.9
Incinerated and other	0.1	0.1	0.4	0.2	37.5	2.8	2.0	0.3	0.7	233.3	20.2	11.5	15.7	32.0	203.8
Direct landfill Diposal	0.2	0.0	0.0	0.0	—	4.3	0.9	0.3	0.3	100.0	22.7	17.7	19.2	19.1	99.5
Coal ash (1,000 tons)¹															
Recycled	68.1	66.6	69.0	67.5	97.9	—	—	—	—	—	19.0	12.5	15.8	11.6	73.3
Direct landfill Diposal	3.2	1.3	1.5	1.2	82.8	—	—	—	—	—	0.3	0.3	0.3	0.4	133.3
Hazardous waste (1,000 tons)^{1&5}															
Hazardous waste	—	2.1	2.3	0.9	39.1	—	2.8	2.7	2.0	74.1	—	—	0.0	0.0	—
Non-hazardous waste	—	25.0	25.7	26.0	101.0	—	12.5	9.2	9.8	106.5	—	—	134.6	151.7	112.7

¹ Toray Industries' fiscal 2022 energy consumption, water use, greenhouse gas emissions (Scope 1 and 2), air emissions (SOx, NOx, Dust, and VOC), wastewater, chemical oxygen demand (COD) and industrial waste, as well as overseas group companies' energy consumption, greenhouse gas emissions (Scope 1 and 2), and industrial waste, has been verified by a third party, LRQA Limited.

² CO₂-equivalent emissions are calculated from the conversion factor for each gas.

³ Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard.

⁴ CO₂ is aggregated for group companies outside Japan.

⁵ Data corresponding to "industrial waste subject to special control," as defined in Japan's Waste Disposal and Public Cleansing Act, is recorded as hazardous waste generated.

GHG Emissions in Toray's Supply Chain (Scope3)

(10,000 tons CO₂eq)

	Toray Industries, Inc. ⁶			Toray Group ⁷
	2019	2020	2021	2022
Category 1: Purchased goods and services	—	—	231.5	898.0
Category 2: Capital goods ⁶	12.8	10.2	9.2	39.6
Category 3: fuel and energy related activities ⁶	68.9	63.1	19.0	94.5
Category 4: Upstream transportation and distribution ⁶	4.7	3.8	4.3	21.0
Category 5: Waste generated in operations	—	—	2.0	1.1
Category 6: Business travel	—	—	1.3	0.6
Category 7: Employee commuting	—	—	0.2	2.2
Category 8: Upstream leased assets				0.2
Total	86.4	77.1	267.5	1,057.1

⁶ Figures for fiscal 2019-2021 are aggregated for Toray Industries. Figures for categories 2, 3, and 4 have been verified by a third party, LRQA Limited.

⁷ Figures for fiscal 2022 are aggregated for Toray Group. Figures for categories 1, 2, 3, 4, 5, 6, 7, and 8/ Figures for all categories have been verified by a third party, LRQA Limited.

Index of Environmental Impact Per Unit of Sales⁸

	Toray Industries, Inc.					Group companies in Japan					Group companies outside Japan				
	2019	2020	2021	2022	Year-on-year comparison (points)	2019	2020	2021	2022	Year-on-year comparison (points)	2019	2020	2021	2022	Year-on-year comparison (points)
GHG emissions	55.4	59.8	57.0	48.5	-8.5	62.1	74.2	75.1	53.7	-21.4	67.1	58.4	50.1	44.4	-5.7
PRTR atmospheric emissions	20.5	41.0	30.2	22.0	-8.2	24.9	11.0	8.9	12.9	4.0	23.2	34.1	24.4	28.6	4.2
SOx emissions	4.1	3.2	3.7	3.6	-0.1	6.9	38.5	4.8	3.8	-1.0	9.0	6.8	4.2	1.5	-2.7
Water usage volume	70.5	84.3	74.2	66.0	-8.2	37.6	66.4	64.9	93.0	28.1	51.9	37.6	31.7	37.6	5.9
BOD emissions	36.7	40.8	30.7	27.3	-3.4	14.3	22.0	15.5	11.3	-4.2	26.1	14.2	10.3	40.3	30.0
Landfilled waste volume	79.3	0.9	0.9	0.6	-0.3	40.6	31.5	7.0	10.5	3.5	76.3	35.3	29.9	27.2	-2.7

⁸ The amounts per unit of sales shown in the table are referenced to an index value of 100 set for the base year of fiscal 2001.

Aggregate Environmental Impact Data by Company Type and Location

	Toray Industries, Inc.	Group companies in Japan	Group companies outside Japan
GHG	All 13 plants and 1 research laboratory	48 plants at 27 companies	88 plants at 66 companies
PRTR Law-specified substances	All 13 plants and 1 research laboratory	43 plants at 25 companies	86 plants at 66 companies
SOx, NOx, dust	All 13 plants and 1 research laboratory	40 plants at 25 companies	86 plants at 66 companies
BOD	All 13 plants and 1 research laboratory	40 plants at 25 companies	86 plants at 66 companies
COD ⁹	All 13 plants and 1 research laboratory	40 plants at 25 companies	86 plants at 66 companies
Nitrogen and phosphorus	All 13 plants and 1 research laboratory	40 plants at 25 companies	—
Waste	All 13 plants and 1 research laboratory	43 plants at 25 companies	86 plants at 66 companies

⁹ COD figures for Toray, group companies in Japan and Korea are given in COD_{mn} (using the potassium permanganate method). Other group companies outside Japan are given in COD_{cr} (using the potassium dichromate method).

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Chemical Substance Emissions and Transfer Data

PRTR Law-Specified Substance¹ Emissions and Transfer Data for Fiscal 2022

¹ Chemical substances designated Class 1 under the April 2010 revision of Japan's PRTR Law

Toray Industries, Inc.	Tons (dioxins: mg-TEQ)				
	Substance name	Atmospheric emissions	Water emissions	Soil emissions / company landfill	Waste transfers
	Methyl acrylate	0.0	0.0	0.0	0.0
	Acrylonitrile	9.0	6.7	0.0	0.3
	Acetaldehyde	0.9	0.0	0.0	0.0
	Antimony and its compounds	0.0	0.0	0.0	0.0
	Asbestos	0.0	0.0	0.0	0.0
	Ethylbenzene	0.0	0.0	0.0	0.0
	ε-Caprolactam	0.2	11.1	0.0	20.2
	Xylene	3.0	0.0	0.0	0.0
	Chlorobenzene	0.1	0.0	0.0	2.1
	Chloroform	0.4	0.0	0.0	3.1
	Cobalt and its compounds	0.0	0.0	0.0	0.0
	4,4'-diaminodiphenyl ether	0.0	0.0	0.0	0.0
	Inorganic cyanide	0.0	0.0	0.0	0.0
	1,4-Dioxane	0.0	0.0	0.0	0.0
	Diuron	0.0	0.0	0.0	0.0
	Dichlorobenzene	0.0	0.0	0.0	0.0
	Dichloromethane	0.0	0.0	0.0	0.0

Toray Industries, Inc.	Tons (dioxins: mg-TEQ)			
Substance name	Atmospheric emissions	Water emissions	Soil emissions / company landfill	Waste transfers
N, N-dimethylacetamide	0.0	0.0	0.0	0.0
N, N-dimethylformamide	0.0	0.0	0.0	0.0
Styrene	0.0	0.0	0.0	0.0
Terephthalic acid	0.0	0.0	0.0	0.0
Dimethyl terephthalate	0.0	0.0	0.0	0.0
Trichloroethylene	0.0	0.0	0.0	0.0
Toluene	0.0	0.0	0.0	0.0
Nitrobenzene	0.0	0.0	0.0	0.0
O-, m- and p-Phenylenediamine	0.0	0.0	0.0	0.0
Phenol	0.0	0.0	0.0	0.0
Bromomethane	0.0	0.0	0.0	0.0
Benzene	0.0	0.0	0.0	0.0
Poly (oxyethylene) alkyl ether	0.0	0.0	0.0	0.0
Manganese and its compounds	0.0	0.0	0.0	0.0
Methyl methacrylate	0.0	0.0	0.0	0.0
Methylenebis (4,1-phenylene) diisocyanate	0.0	0.0	0.0	0.0
Nickel and its compounds	0.0	0.0	0.0	0.0
Dioxins	0.0	0.0	0.0	0.0
Total	13.6	17.8	0.0	25.7

Note: The list shows emissions and transfers of 34 substances (out of Toray Industries' 70 PRTR Law-specified substances) exceeding 50 kg and dioxins.

Group companies in Japan	Tons (dioxins: mg-TEQ)			
	Atmospheric emissions	Water emissions	Soil emissions / company landfill	Waste transfers
Ethyl acrylate	0.0	0.0	0.0	0.0
Butyl acrylate	0.1	0.0	0.0	0.2
Acrylonitrile	0.0	0.0	0.0	0.0
Acetonitrile	0.1	0.0	0.0	1.4
Allyl alcohol	0.1	0.0	0.0	2.3
Isopropyl alcohol / propyl alcohol	3.7	0.0	0.0	65.4
Ethylbenzene	29.8	0.0	0.0	40.0
Ethylene glycol	0.0	0.0	0.0	0.0
Epichlorohydrin	0.1	0.0	0.0	17.9
Xylene	22.4	0.0	0.0	2.6
1-chloro-2,4-dinitrobenzene	0.0	0.0	0.0	0.2
Dichloromethane	0.0	0.0	0.0	0.0
N, N-dimethylacetamide	15.7	0.0	0.0	427.0
N, N-dimethylformamide	0.0	0.0	0.0	0.0
Styrene	0.0	0.0	0.0	0.0
Triethylamine	0.1	0.0	0.0	1.9
Toluene	0.2	0.0	0.0	0.0
Carbon disulfide	0.0	0.0	0.0	0.0
1-nonanol	0.0	0.0	0.0	0.0
2-Ethoxyethanol	0.0	0.0	0.0	0.0
Hydroquinone	0.0	0.0	0.0	0.0
Pyridine	0.1	0.0	0.0	1.4
n-hexane	1.2	0.0	0.0	58.2
Poly (oxyethylene) alkyl ether	0.0	0.0	0.0	0.0
Formaldehyde	0.1	0.0	0.0	0.1
Maleic anhydride	0.0	0.0	0.0	2.0
Ethyl acetate	2.5	0.0	0.0	99.5

Group companies in Japan	Tons (dioxins: mg-TEQ)			
Substance name	Atmospheric emissions	Water emissions	Soil emissions / company landfill	Waste transfers
Methacrylate acid	0.0	0.0	0.0	0.0
Methyl methacrylate	0.1	0.0	0.0	0.0
3-methylpyridine	0.3	0.0	0.0	20.8
Dioxins	0.0	0.0	0.0	0.0
Total	76.5	0.0	0.0	740.8

Note: The list shows emissions and transfers of 30 substances (out of the 72 PRTR Law-specified substances for group companies in Japan) exceeding 50 kg and dioxins.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Sites with ISO 14001 Certification

Sites with ISO 14001 Certification (as of May 2023)

Toray Industries, Inc. : All 13 plants
Shiga, Seta, Ehime, Nagoya, Tokai, Aichi, Okazaki, Mishima, Chiba, Tsuchiura, Gifu, Ishikawa, Nasu
Group companies in Japan: 32 plants at 23 companies^{1・2}
<ul style="list-style-type: none"> • Du Pont-Toray Co., Ltd. [Tokai] • Toray Opelontex Co., Ltd. • Toray Textiles, Inc. [Tokai] • Toray Coatex Co., Ltd. [Kyoto, Chemical Products] • Toray Hybrid Cord, Inc. • Toray Plastics Precision Co., Ltd. [Mishima, Koriyama] • Toray PEF Products Inc. [Konan] • Toray Monofilament Co., Ltd. • Toray Advanced Film Co., Ltd. [Takatsuki, Fukushima, Nakatsugawa] • Toray KP Films Inc. • Toray Fine Chemicals Co., Ltd. [Moriyama, Matsuyama, Tokai, Chiba] • Toray Engineering Co., Ltd. [Numazu] • Soda Aromatic Co., Ltd. [Noda, Koriyama, Okayama Chemicals] • Toray Building Materials Co., Ltd. [Fukushima] • DuPont Toray Specialty Materials Kabushiki Kaisha • Suido Kiko Kaisha, Ltd. • Toray Medical Co., Ltd. • Ichimura Sangyo Co., Ltd. • Toray International, Inc. • Chori Co., Ltd. • Toray Carbon Magic Co., Ltd. • Sowa Textile Co., Ltd. [Hakui] • Toray Celanese Co., Ltd.

Group companies outside Japan: 68 plants at 49 companies²

USA	<ul style="list-style-type: none"> • Toray Plastics (America), Inc. [Rhode Island, Virginia] • Toray Resin Co. • Toray Fluorofibers (America), Inc. • Toray Composite Materials America, Inc. (Decatur, Tacoma) • Toray Membrane USA, Inc.
Mexico	<ul style="list-style-type: none"> • Toray Advanced Textile Mexico, S.A. de C.V. • Toray Resin Mexico, S.A. de C.V.
UK	<ul style="list-style-type: none"> • Toray Textiles Europe Ltd. • Toray Advanced Composites UK Ltd.
France	<ul style="list-style-type: none"> • Toray Films Europe S.A.S. • Toray Carbon Fibers Europe [Abidos, Lacq]
Germany	<ul style="list-style-type: none"> • Euro Advanced Carbon Fiber Composites GmbH • Greenerity GmbH
Italy	<ul style="list-style-type: none"> • Alcantara S.p.A. • Delta-Tech S.p.A.
Czech Republic	<ul style="list-style-type: none"> • Toray Textiles Central Europe s.r.o.
Hungary	<ul style="list-style-type: none"> • Zoltek Zrt. (ZHU)
Indonesia	<ul style="list-style-type: none"> • P.T. Century Textile Industry Tbk • P.T. Easterntex • P.T. Indonesia Toray Synthetics • P.T. Acryl Textile Mills • P.T. Indonesia Synthetic Textile Mills • P.T. Toray Polytech Jakarta
Thailand	<ul style="list-style-type: none"> • Toray Textiles (Thailand) Public Company Limited [NPT, M1, M2, M3] • Thai Toray Synthetics Co., Ltd. [Bangkok, Ayutthaya, Nakhonpathom]
Malaysia	<ul style="list-style-type: none"> • Penfibre Sdn. Berhad [Fiber, film] • Penfabric Sdn. Berhad [M2, M3, M4] • Toray Plastics (Malaysia) Sdn. Berhad • Toray BASF PBT Resin Sdn. Berhad
India	<ul style="list-style-type: none"> • Toray Industries (India) Private Limited³

China	<ul style="list-style-type: none"> • Toray Fibers (Nantong) Co., Ltd. • Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd. • Toray Plastics (Shenzhen) Ltd. • Toray Film Products (Zhongshan) Ltd. • Toray Plastics Precision (Zhongshan) Ltd. • Toray Plastics (Suzhou) Co., Ltd. • Toray Fibers & Textiles Research Laboratories (China) Co., Ltd. • Toray Advanced Materials Research Laboratories (China) Co., Ltd. • Toray Polytech (Nantong) Co., Ltd. • Toray BlueStar Membrane Co., Ltd. • Toray Plastics (Chengdu) Co., Ltd. • Toray Medical (Qingdao) Co., Ltd. • Cangzhou Toray Fine Chemicals Co., Ltd.
Republic of Korea	<ul style="list-style-type: none"> • Toray Advanced Materials Korea Inc. [M1, M2, M3, M4, M5, Anseong, Yugu, Gunsan, Advanced Materials Research Center] • STEMCO, Ltd. • Toray Battery Separator Film Korea, Limited • Toray BSF Coating Korea Limited
Taiwan	<ul style="list-style-type: none"> • Toray Advanced Film Kaohsiung Co., Ltd.
Saudi Arabia	<ul style="list-style-type: none"> • Toray Membrane Middle East LLC

1 In addition, 12 plants at 10 companies received certification as affiliated companies on Toray Industries' sites.

2 Information in brackets refers to the names of the plants.

3 A company that newly acquired ISO 14001 certification in fiscal 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Environmental Data for Toray Industries and Principal Group Companies

Environmental Data for 13 Toray Industries' Plants and Principal Group Companies

	Emission Volume														Principal manufactured products
	GHG emissions	PRTR				Gas emissions			Water emissions			Waste			
		Emissions			Waste transfers	SOx	NOx	Dust	BOD	COD	Effluent	Recycled	Simple incineration	Landfill disposal	
		Air Water	Water	Soil & landfill	Waste										
		10,000 tons CO ₂ /year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	million m ³ /year	tons/year	tons/year	tons/year	
Shiga Plant	5.7	0.6	0.0	0.0	14.4	0.0	10.6	0.7	21.4	33.8	11.3	2,926.6	7.9	0.0	<ul style="list-style-type: none"> • Base material of Ultrasuede™ man-made suede • TOPTICAL™ color filter • TORAYVINO™ home water purifier
Seta Plant	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	84.5	0.0	0.0	<ul style="list-style-type: none"> • TORAYLON™ acrylic fiber • Medical devices (Inoue Balloon catheters, ANTHRON™ P-U catheters)
Ehime Plant	62.6	38.1	10.7	0.0	97.3	221.4	680.0	70.4	115.5	106.3	30.4	4,967.9	32.2	0.2	<ul style="list-style-type: none"> • TORAY TETORON™ polyester staple fiber • TORAYCA™ carbon fiber • ROMEMBRA™ reverse osmosis membrane module • TORAYCON™ PBT resin
Nagoya Plant	7.4	13.8	0.8	0.0	31.3	0.0	44.7	1.7	42.5	84.7	22.6	2,696.1	5.1	5.1	<ul style="list-style-type: none"> • AMILAN™ nylon resin • TORAYCON™ PBT resin • Various fine chemicals
Tokai Plant	58.9	26.6	16.5	0.0	17.7	7.9	315.0	0.5	217.7	229.8	19.4	6,391.4	35.0	0.0	<ul style="list-style-type: none"> • Caprolactam • Terephthalic acid • TORAY TETORON™ polyester chips • TORELINA™ PPS resin
Aichi Plant	1.9	0.0	0.0	0.0	12.9	0.0	1.4	0.0	0.0	0.0	1.5	159.2	0.6	0.0	<ul style="list-style-type: none"> • Nylon filament yarn • RAYTELA™ plastic optical fiber

	Emission Volume														Principal manufactured products
	GHG emissions	PRTR				Gas emissions			Water emissions			Waste			
		Emissions			Waste transfers	SOx	NOx	Dust	BOD	COD	Effluent	Recycled	Simple incineration	Landfill disposal	
		Air Water	Water	Soil & landfill	Waste										
		10,000 tons CO ₂ /year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	million m ³ /year	tons/year	tons/year	tons/year	
Okazaki Plant	7.4	12.0	0.0	0.0	535.9	0.0	43.4	1.9	12.7	28.6	5.9	3,491.1	2.7	2.7	<ul style="list-style-type: none"> Nylon filament yarn TORAY WATERLESS PLATE™ printing plate Filtryzer™ hemodialyzers TORAYVINO™ home water purifier
Mishima Plant	10.5	1.5	0.0	0.0	7.3	2.4	53.0	0.0	17.8	22.8	36.7	1,125.8	1.3	0.0	<ul style="list-style-type: none"> LUMIRROR™ polyester film TORAY TETORON™ polyester filament yarn DORNER™ oral administration prostacyclin PGI2 derivative FERON™ natural interferon-β preparation
Chiba Plant	1.4	9.7	0.0	0.0	1.3	0.0	8.6	0.0	6.8	72.8	5.2	1,976.8	12.2	4.0	<ul style="list-style-type: none"> TOYOLAC™ ABS resin
Tsuchiura Plant	2.3	0.0	0.0	0.0	0.0	0.0	4.6	0.1	1.3	1.2	0.3	369.2	0.0	0.0	<ul style="list-style-type: none"> TORAYFAN™ BO polypropylene film
Gifu Plant	6.9	1.3	0.0	0.0	8.8	0.0	19.7	0.4	11.0	6.3	10.4	1,224.4	0.3	0.3	<ul style="list-style-type: none"> Ultrasuede™ man-made suede LUMIRROR™ polyester film TORELINA™ PPS film
Ishikawa Plant	4.3	0.8	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	927.6	2.8	1.0	<ul style="list-style-type: none"> TORAY TETORON™ polyester filament yarn Nylon filament yarn TORAYCA™ prepreg
Nasu Plant	2.0	40.7	0.0	0.0	0.0	0.0	3.8	1.6	0.6	0.0	0.1	242.4	46.3	0.5	<ul style="list-style-type: none"> Lithium-ion rechargeable battery
Toray Hybrid Cord, Inc.	1.2	1.7	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	667.0	14.5	14.0	<ul style="list-style-type: none"> Tire cord Carpet pile fiber
Toray Fine Chemicals Co., Ltd. [Chiba]	2.4	1.4	0.0	0.0	47.1	0.0	0.0	0.0	0.0	0.0	0.0	1,651.1	15.5	12.8	<ul style="list-style-type: none"> DMSO and DMS Functional acrylic resin
Malaysia Penfibre Sdn. Berhad [Fibers & Textiles]	2.6	0.0	0.0	0.0	0.0	0.6	18.2	3.2	0.6	6.4	0.2	168.1	66.0	56.1	<ul style="list-style-type: none"> TORAY TETORON™ polyester staple fiber
France Toray Films Europe S.A.S.	3.5	0.0	0.0	0.0	54.0	0.0	14.8	0.0	3.8	18.4	1.4	3,117.6	751.2	576.1	<ul style="list-style-type: none"> LUMIRROR™ polyester film

CSR Activity Report (CSR Guideline Activity Reports) - Safety, Accident Prevention, and Environmental Preservation

Third-Party Assurance

LRQA

LRQA Independent Assurance Statement

Relating to TORAY INDUSTRIES, INC.'s Environmental and Social Data for the fiscal year 2022 within its CSR Report 2023

This Statement has been prepared for TORAY INDUSTRIES, INC. in accordance with our contract.

Terms of Engagement
LRQA Limited ("LRQA") was commissioned by TORAY INDUSTRIES, INC. ("the Company") to provide independent assurance on its environmental and social data for the fiscal year 2022¹ within its CSR Report 2023 ("the report"), against the assurance criteria below to a limited level of assurance and at the materiality of the professional judgement of the verifier using ISAE 3000 (Revised) and ISO 14064-3:2019 for Greenhouse gas ("GHG") emissions.

Our assurance engagement covered the operations and activities relating to the Company, its consolidated subsidiaries, and its affiliated companies in Japan and overseas and specifically the following requirements:

- Verifying conformance with the Company's reporting methodologies;
- Evaluating the accuracy and reliability of data for the selected environmental and social indicator listed below;

Environmental²

- Scope 1 GHG emissions (tCO₂e)³
- Scope 2 GHG emissions [market-based and location-based] (tCO₂e)³
- Scope 3 GHG emissions [Categories 1 ~ 8] (tCO₂e)³
- Energy consumption (GJ)⁴
- The amount of Industrial Waste⁵, Water Use, Waste Water, SO_x, NO_x, Dust, VOC, COD (tonnes)⁶

Social

- Lost Time Injury Frequency Rate⁷
- Tier-1 Process Safety Events⁸

Our assurance engagement excluded the data and information of the Company's suppliers, contractors and any third-parties mentioned in the report.

LRQA's responsibility is only to the Company. LRQA disclaims any liability or responsibility to others as explained in the end footnote. The Company's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of the Company.

LRQA's Opinion
Based on LRQA's approach nothing has come to our attention that would cause us to believe that the Company has not, in all material respects:

- Met the requirements above
- Disclosed accurate and reliable environmental and social data which is summarised in Table 1 below.

The opinion expressed is formed on the basis of a limited level of assurance⁹ and at the materiality of the professional judgement of the verifier.

¹ Environmental data covers 1 April 2022 to 31 March 2023; however, for overseas affiliated companies, from January 1, 2022 to December 31, 2022. Social data covers 1 January 2022 to 31 December 2022.
² GHG quantification is subject to inherent uncertainty.
³ The scope of energy and GHG emissions is covered the head Office of the Company, 13 factories and other 10 operating sites in Japan and overseas affiliate companies. The contractors worked in Japan is also included. Scope 3 also cover domestic affiliate companies.
⁴ Industrial Waste cover breakdown type.
⁵ The scope is covered 13 factories of the Company in Japan.
⁶ The scope is covered the Company, its 42 consolidated subsidiaries, 10 affiliated companies in Japan and overseas 91 affiliate companies. The contractors worked in Japan is also included.
⁷ The scope is covered the Company, its 42 consolidated subsidiaries, 10 affiliated companies in Japan and overseas 91 affiliate companies.
⁸ The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

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(PDF : 524KB) [PDF](#)

LRQA

Table 1. Summary of Toray's Environmental and Social data in 2022

Scope	
Scope 1 GHG emissions ¹	2,810,029 tCO ₂ e
GHG emissions relating supply to external organizations	189,570 tCO ₂ e
GHG emissions after deduction	262,459 tCO ₂ e
Scope 2 GHG emissions ¹ (Market-based)	2414,205 tCO ₂ e
GHG emissions relating supply to external organizations	118,430 tCO ₂ e
GHG emissions after deduction	2,295,775 tCO ₂ e
Scope 2 GHG emissions ¹ (Location-based)	3,138,159 tCO ₂ e
GHG emissions relating supply to external organizations	135,250 tCO ₂ e
GHG emissions after deduction	3,002,909 tCO ₂ e
Scope 3 GHG emissions ¹ (Categories ² , 2, 3, 4, 5, 6, 7, 8)	10,571,405 tCO ₂ e
1. Purchased Goods and Services	8,979,652 tCO ₂ e
2. Capital goods	396,219 tCO ₂ e
3. Fuel- and energy-related activities not included in Scope 1 or Scope 2	944,586 tCO ₂ e
4. Upstream Transportation and Distribution	210,295 tCO ₂ e
5. Waste Generated in Operations	111,300 tCO ₂ e
6. Business Travel	6,039 tCO ₂ e
7. Employee Commuting	21,573 tCO ₂ e
8. Upstream Leased Assets	1,741 tCO ₂ e
Energy consumption ³	86,963,670 GJ
Industrial waste ^{4,5}	
Disposal amount	32,168 tonnes
Recycled amount	127,270 tonnes
Total amount of industrial waste	169,438 tonnes
The amount of industrial hazardous waste	898 tonnes
The amount of coal ash	80,752 tonnes
Water Use	166,167 K-t
Waste Water	143,913 k-t
SO _x	232 tonnes
NO _x	1,186 tonnes
Dust	77 tonnes
VOC	361 tonnes
COD	587 tonnes
Lost Time Injury and Occupational Illness Frequency Rate ⁶	-
TORAY INDUSTRIES, INC.	0.38
Affiliated companies	0.0
Consolidated subsidiaries in Japan	0.17
Overseas consolidated subsidiaries	0.44
Entire the scope	0.37
Contractors in Japan ⁷	0.68
Tier-1 Process Safety Events ⁸	0

LRQA's Approach
LRQA's assurance engagements are carried out in accordance with ISAE3000 (Revised) and ISO14064-3:2019 for GHG emissions. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Auditing the Company's data management systems to confirm that there were no significant errors, omissions or mis-statements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification.
- Interviewing with those key people responsible for compiling the data and drafting the report.
- Sampling datasets and tracing activity data back to aggregated levels;

Page 2 of 3

(PDF : 532KB) [PDF](#)



- Verifying the historical environmental and social data / records for the fiscal year 2022'; and
- Verification for confirming of the effectiveness of its data management system of Toray Ehime Factory was conducted by site visit and P.T. Indonesia Toray Synthetics was conducted by ICT.

Observations

The Company should continue efforts for implementing quality assurance and quality control (QA/QC) systems for the effective management of environmental and social data. This is particular to ensure effective internal verification processes at both the corporate and member company levels.

LRQA's Standards, Competence and Independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021-1 Conformity assessment – Requirements for bodies providing audit and certification of management systems - Part1: Requirements that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LRQA is the certification body of ISO9001 and IATF16949 for the Company and as such does not compromise our independence or impartiality.

Signed

Dated: 23 July 2023

Takahiro Iio

LRQA Lead Verifier

On behalf of LRQA Limited

10th Floor, Queen's Tower A, 2-3-1 Minatomirai, Nishi-ku, Yokohama, JAPAN

LRQA reference: YKA4005148

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Dated: 23 July 2023

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LRQA Lead Verifier

On behalf of LRQA Limited

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LRQA reference: YKA4005148

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CSR Activity Report (CSR Guideline Activity Reports)

Product Quality and Safety

Provide safe, highly reliable products by striving to enhance management systems for product quality assurance and safety, and disclose appropriate information.



Basic Approach

To live up to its “quality first” and “customer first” commitments, Toray Group has established policies on quality assurance and product safety, respectively, and an organizational framework to pursue both in an integrated manner. Specifically, the Quality Assurance Committee deliberates on basic policies and other matters, while the Quality Assurance Planning & Administration Department and the Product Safety Planning & Administration Department of the Quality Assurance Division plan and propose measures.

Additionally, Toray Group supplies product safety information in accordance with the characteristics of the product or service. The Group is fundamentally committed to respecting the Eight Basic Consumer Rights and strives to secure the quality and safety of its products throughout its business activities.

The Medium-Term Management Program, Project AP-G 2025, directs Toray Group to achieve sound, sustainable growth along with innovation and resilience management, and this hinges on securing product safety and quality. Accordingly, the Group continued to address individual areas for improvement and execute product safety measures in fiscal 2022.

In fiscal 2022, the Group also promoted measures to prevent any recurrence of past inappropriate actions related to obtaining certification for certain resin products from Underwriters Laboratories (UL).

- > [For more information on the Toray response to this matter, please refer to:
Response to Inappropriate Actions Relating to UL Certification in the Toray Resins Business](#)

Related Policies

Toray Group Quality Policy Revised June 2007

We give top priority to the product quality offered to our customers as well as to safety and to the environment in our corporate activities. We work on quality assurance with the stance of "Customer First."

1. We make our best efforts to meet our customers' expectations with products and services of high satisfaction.
2. We commit ourselves to abide by the "Quality First" principle, and to improve the quality and reliability of our products, in all our divisions, including sales, manufacturing and research and development.
3. We meet quality requirements at the stage of design and development, and ensure and enhance these in the manufacturing process.
4. We continuously strive to organize, maintain and improve our quality management system.

Product Safety Management Basic Policy Established January 1992

1. We shall place priority on the various measures required to ensure product safety.
2. We shall conduct adequate safety evaluations prior to marketing a new product.
3. For products already on the market, we shall take note of feedback from customers and the general public and always remain attentive to safety.

Related Information

See the following page for information on chemical management.

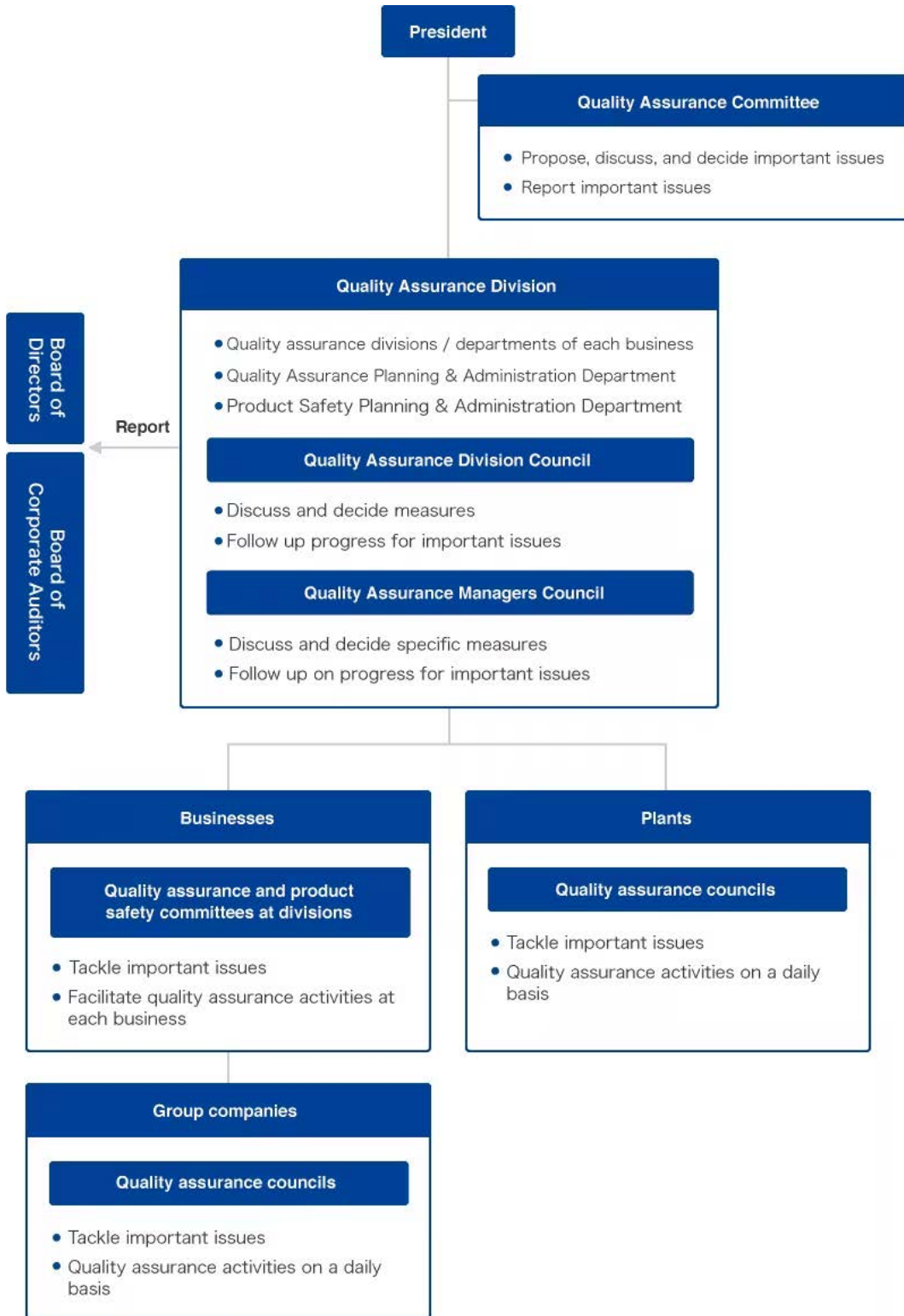
> [Chemical Management](#)

Structure

Framework for Quality Assurance

The quality assurance framework of Toray Industries, Inc. is shown in the diagram below. The Quality Assurance Division Council, which meets monthly, and the Quality Assurance Managers Council, which meets twice a year, raise awareness and promote improvements based on group-wide quality assurance themes established by the Quality Assurance Committee. Quality assurance and product safety committees at divisions further examine the company-wide issues that have been identified by the Quality Assurance Division Council and Quality Assurance Managers Council, breaking them down into action items that are designated every year for implementation. Quality assurance, production, technology, and sales departments cooperate to tackle quality assurance issues and raise the level of activities.

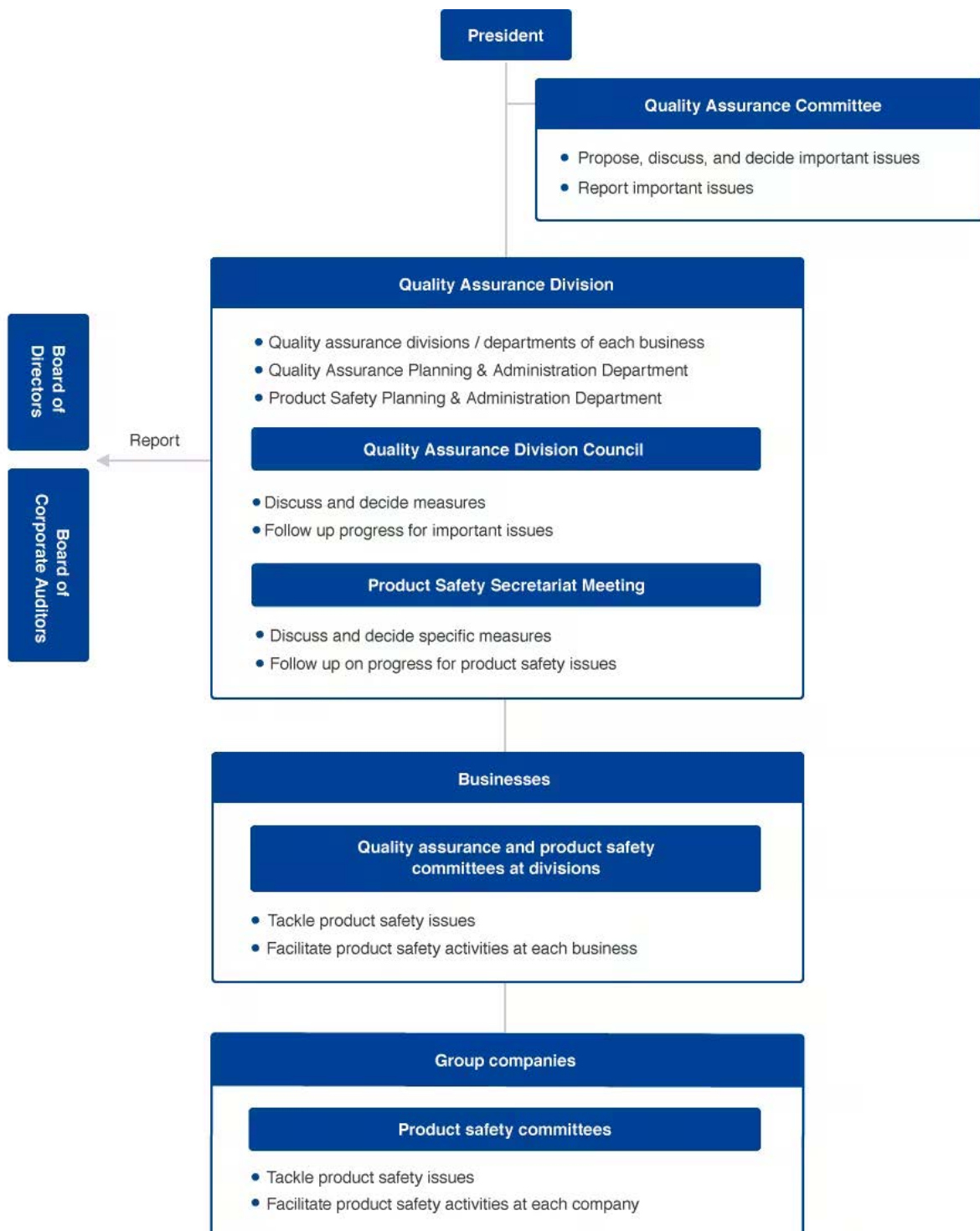
Framework for Quality Assurance



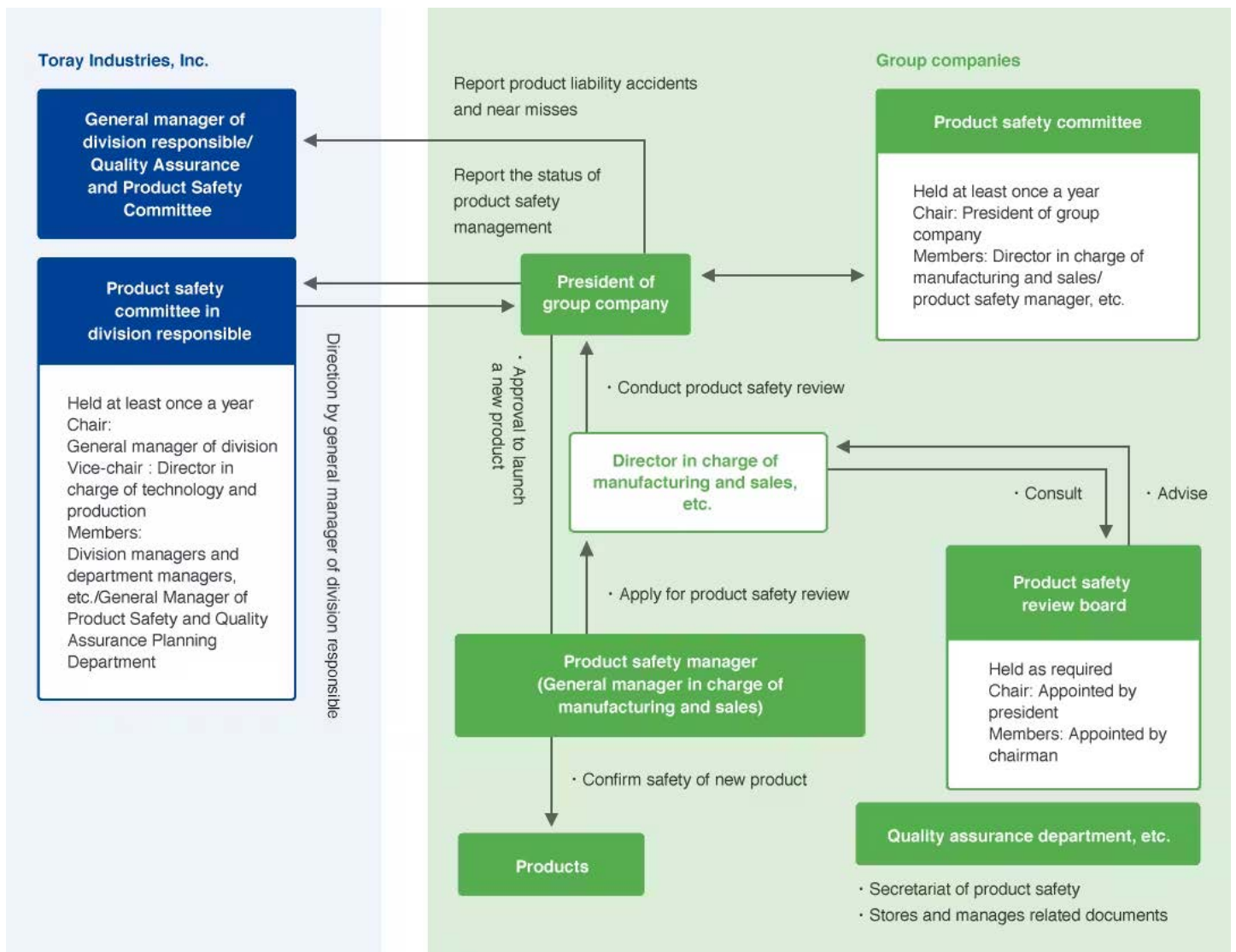
Framework for Product Safety

Toray Industries' product safety framework is shown in the diagram below. The Product Safety Secretariat Meeting promotes and implements the annual company-wide product safety themes that are established by the Quality Assurance Committee. Quality assurance and product safety committees at the divisions further examine the group-wide issues that have been identified by the Product Safety Secretariat Meeting, breaking them down into action items that are designated every year for implementation. The action items are executed in cooperation with quality assurance, production, technology, and sales organizations at the departmental and divisional levels, to ensure thorough management of product safety and continue raising the level of management. Toray Group has been centrally tracking statistics on product accidents and the execution of product safety reviews since fiscal 2011.

Framework for Product Safety



Framework for Product Safety at Group Companies



Self-Inspections to Ensure Quality Assurance and Product Safety

Since fiscal 2016, Toray Group companies have been implementing self-inspections for quality assurance and product safety using the C-MOS internal control monitoring online system. Any issues that are identified through the self-inspections are corrected to ensure that improvements are made. The self-inspections are conducted on a three-year cycle to ensure that the basic frameworks for quality assurance and product safety are in place. For the first three-year cycle, Toray Industries was inspected in fiscal 2016, followed by group companies in Japan in fiscal 2017, and group companies outside Japan in fiscal 2018.

For the second three-year cycle implemented in fiscal 2019, Toray Group assigned inspection items to verify the effectiveness of improvements, and self-inspections were conducted. For the third three-year cycle implemented in fiscal 2022, confirmation items for UL and other certifications were assigned, and Toray Industries conducted self-inspections in the same year.

CSR Roadmap 2022 Targets

CSR Roadmap goals

1. Achieve zero product accidents
2. Enhance the group-wide framework for product safety and quality assurance

Main Initiatives and Key Performance Indicators

	KPI
(1) Aim for zero product accidents	4-①
(2) Establish a system to audit effectiveness of improvement and continuity of Toray Group's overall quality assurance framework	-
(3) Introduce a group-wide quality control system with fraud prevention features	-
(4) Prepare and build a quality assurance system that covers quality assurance and quality control functions in each business	-
(5) Provide quality assurance and product safety education	4-②

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
4-① Number of product accidents	0	0	0	1 ¹
4-② Group companies implementing product quality assurance and safety education (%)	100%	100%	100%	100%

Reporting Scope : Toray Group

¹ An incident occurred in which a customer suffered a finger cut while unpacking processed yarn sold by Toray. The injury was caused by a box cutter blade stuck beneath packaging tape. The hazard originated in the product packaging area of an outsourced manufacturer(sales) site, when an employee failed to notice that a piece of broken cutter blade had become stuck to the tape used to seal the product package for shipping. To prevent this from happening again, Toray has prohibited its outsourced manufacturer(sales) from using this type of box cutter and has instructed them to improve check procedures during packaging.

Related Materiality for CSR

- Enhancing Product Quality and Safety

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB). [PDF](#)

* Click [here](#) for a PDF summary of the relationships between materiality, associated CSR Roadmap 2022 main initiatives, KPIs and progress achieved, up to fiscal 2022 (PDF: 1.6MB). [PDF](#)

Looking to the Future

In fiscal 2023 and beyond, Toray Group will address individual issues related to improving quality assurance and product safety, while continuing to enhance its group-wide management systems for both quality assurance and product safety.

In addition, with respect to the inappropriate actions regarding UL certification in the Toray resins business, Toray Industries has received recommendations in the report by the expert committee that investigated this matter and, guided by these recommendations, is implementing a series of measures to prevent recurrence.

> [For more information on the Toray response to this matter, please refer to:](#)

[Response to Inappropriate Actions Relating to UL Certification in the Toray Resins Business](#)

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 4 “Product Quality and Safety” during the CSR Roadmap 2025 period (fiscal 2023–2025). [PDF](#)

CSR Activity Report (CSR Guideline Activity Reports) - Product Quality and Safety Initiatives for Quality Assurance and Product Safety

Reinforcing Compliance in Product Quality Assurance

CSR Roadmap 2022
Main Initiatives (1)(2)(3)(4)(5)

Toray Group is pursuing five major tasks to reinforce quality assurance compliance throughout the Group.

- 1. Reinforcement of structures related to quality assurance systems of the entire Toray Group**
After clarifying the required quality assurance framework for Toray Industries and its business sites and group companies around the world, the Company is providing guidance to relevant sites for quality assurance framework enhancement while closing the gap between the vision and actual performance.
Furthermore, the Company is working to strengthen its auditing function through audits by the deputy general manager of the Quality Assurance Division and mutual audits by Quality Assurance Departments, in order to better audit the quality assurance framework and its operational effectiveness.
- 2. Development of human resources and creation of workplace culture not allowing any misconduct**
Toray Group started implementing education on compliance in quality assurance during Quality Control month in November in fiscal 2020. Toray Industries provides training materials to its business sites and group companies around the world, while individual departments and companies are responsible for providing education for their employees. (A total of 23,918 employees received training in fiscal 2022.)
- 3. Review and adjustment of actual contracts with customers regarding quality (assurance)**
In accordance with Guidelines for Contracts/Agreements with Customers on Product Quality and Product Quality Assurance set forth at the time contracts are agreed, Toray Industries is promoting ongoing efforts to thoroughly inspect and review agreements at its business sites and group companies around the world and is working to optimize the provisions in these contracts.
- 4. Appropriate maintenance and management of measuring devices**
Based on risk assessment sheets for evaluating the necessity of replacement or maintenance of measuring devices, Toray Industries and its group companies around the world create and implement plans to replace the devices appropriately.
- 5. Improvement of quality data management system to not allow any misconduct**
Toray Industries and its group companies around the world are developing data management systems that minimize human involvement, such as by automating measurement, transfer of measurement data, and issuance of inspection reports.

Education and Training for Quality Assurance and for Product Safety

CSR Roadmap 2022
Main Initiatives (5)

Group companies implementing product quality assurance and safety education

■Reporting scope
Toray Group

■Target in fiscal 2022
100%

Result in fiscal 2022

100%

In addition to quality assurance compliance training conducted during Quality Month (November), Toray Industries promotes quality assurance and product safety training for newly appointed department and section managers at the Company and its group companies in Japan. It also provides education on quality assurance and product safety activities during company-wide technical training, as well as quality control (QC) training for frontline personnel. Toray is working to thoroughly raise awareness of the Group's quality assurance and product safety activities and improve its QC capabilities. Moreover, since fiscal 2013, all group companies around the world have conducted general training related to product safety, training for specific business operations, and internal rules training.

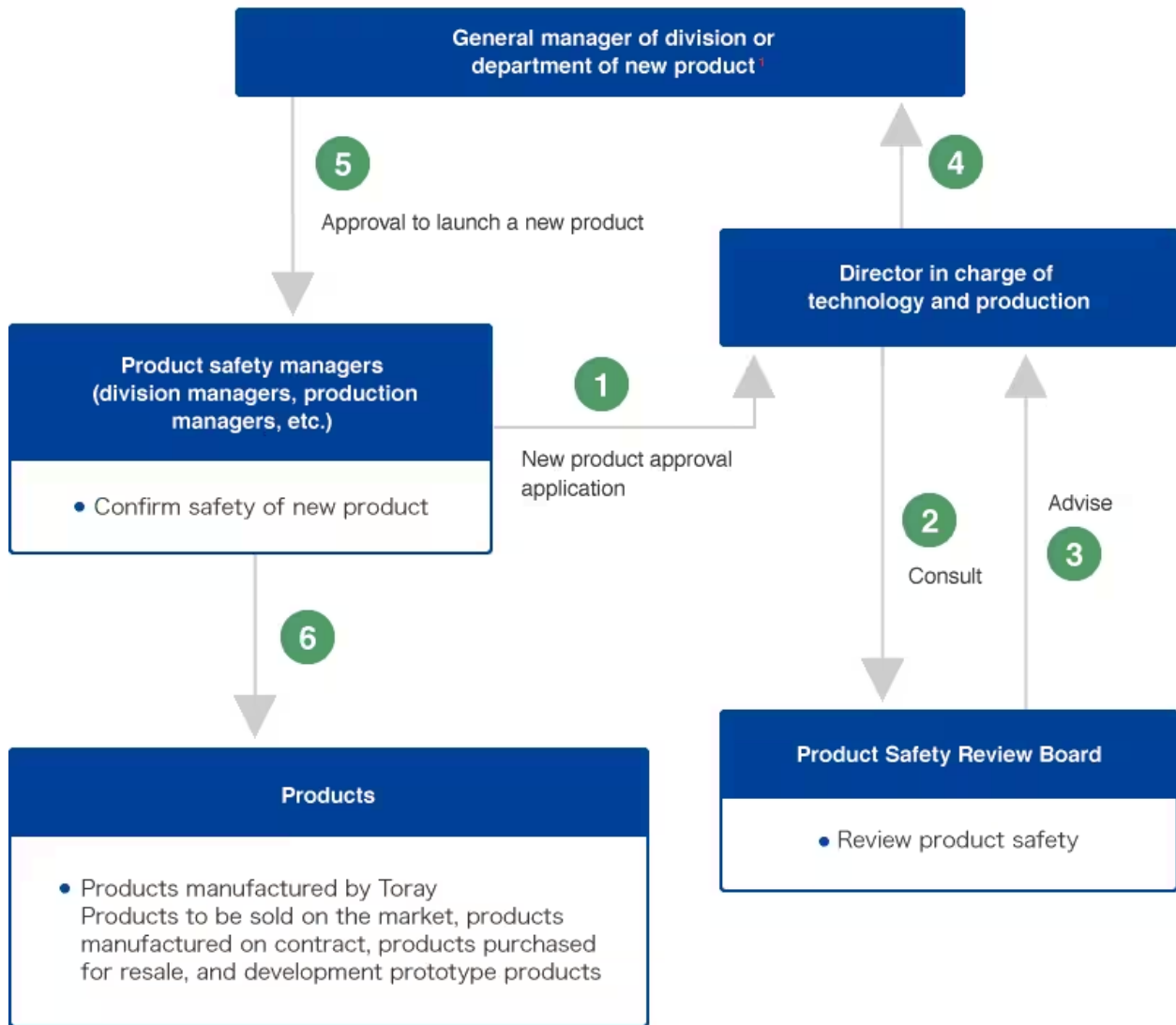
Enhancing Product Safety Reviews

CSR Roadmap 2022
Main Initiatives (1)(2)

Toray Industries and its group companies implement product safety reviews for all products. In addition to addressing product safety, the reviews examine the adequacy of information provided to customers via, for instance, safety data sheets (SDS), labeling, and instructions. Products are also assessed for impact on the global environment. Special precautions are taken for new products that are highly original, as well as for products for which the safety considerations have changed significantly from previous products. For these products, a Product Safety Review Board comprised of neutral assessors with specialized knowledge is assembled to review the safety of the product. Toray Group also ensures that newly established group companies rapidly establish a framework for product safety and implement product safety reviews.

Implementing product safety reviews for all products

Product Safety Review Flow Chart (Toray Industries, Inc.)



¹ At group companies in and outside Japan, this position is held by the president or a director

Preventing Product Accidents

CSR Roadmap 2022
Main Initiatives (1)

Number of product accidents

■ Reporting scope
Toray Group

■ Target in fiscal 2022
0

Result in fiscal 2022

1²

² An incident occurred in which a customer suffered a finger cut while unpacking processed yarn sold by Toray. The injury was caused by a box cutter blade stuck beneath packaging tape. The hazard originated in the product packaging area of an outsourced manufacturer(sales) site, when an employee failed to notice that a piece of broken cutter blade had become stuck to the tape used to seal the product package for shipping. To prevent this from happening again, Toray has prohibited its outsourced manufacturer(sales) from using this type of box cutter and has instructed them to improve check procedures during packaging.

Providing Product Safety Information

Toray Group provides customers with product safety information specifically tailored to the product or service.

1. Customer support lines

In its efforts to create a convenient environment for customers, Toray Industries makes available toll-free numbers for customers to call and inquire about its mainstay consumer products such as home water purifiers and contact lenses.

2. Safety data sheets (SDS)

Toray Group designates the duties, management framework, and procedures for SDS on products that are manufactured or sold by the Group, and provides customers with adequate information on the safe handling of Group products. SDS are disclosed online so that they are readily accessible to customers.

3. Product labeling and instructions

Toray Group creates labels and instruction manuals (including catalogs) and provides them to customers only after clarifying the duties and management framework for product labels and instruction manuals, the procedures from creation to distribution, and other key processes.

Respecting the Eight Basic Consumer Rights

In providing products and services, Toray Group is fundamentally committed to respecting the Eight Basic Consumer Rights and strives to secure safety and quality of its products throughout the Group's business activities.

The Eight Basic Consumer Rights advocated by Consumers International (CI)

- The right to satisfaction of basic needs
- The right to safety
- The right to be informed
- The right to choose
- The right to be heard
- The right to redress
- The right to consumer education
- The right to a healthy environment

Click [here](#) for the main initiatives for CSR Guideline 4, "Product Quality and Safety" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Product Quality and Safety

Sites with ISO 9001 Certification

Toray Group has established an appropriate quality management system at each manufacturing site and is working to strengthen its quality assurance system.

Sites with ISO 9001 certification (as of May 2023)

CSR Roadmap 2022
Main Initiatives (2)

Toray Industries, Inc.: All 13 plants

Shiga, Seta, Ehime, Nagoya, Tokai, Aichi, Okazaki, Mishima, Chiba, Tsuchiura, Gifu, Ishikawa, Nasu

Group companies in Japan: 25 companies

Du Pont-Toray Co., Ltd., Toray Opelontex Co., Ltd., Dow Toray Co., Ltd., DuPont Toray Specialty Materials Kabushiki Kaisha, Toray Construction Co., Ltd., Toray Building Materials Co., Ltd., Toray Engineering Co., Ltd., Toray Precision Co., Ltd., Sowa Textile Co., Ltd., Toray Textiles, Inc., Toray Coatex Co., Ltd., Toray Amtecs Inc., Toray Monofilament Co., Ltd., Toray Hybrid Cord, Inc., Toray Plastics Precision Co., Ltd., Toray PEF Products Inc., Toray Fine Chemicals Co., Ltd., Soda Aromatic Co., Ltd., Toray Celanese Co., Ltd., Toray Advanced Film Co., Ltd., Toray KP Films Inc., Toray Carbon Magic Co., Ltd., Suido Kiko Kaisha, Ltd., Toray Research Center Inc., Toray Techno Co., Ltd.

Group companies outside Japan: 48 companies

USA

Toray Plastics (America), Inc., Toray Fluorofibers (America), Inc., Toray Membrane USA, Inc., Zoltek Companies, Inc.

Mexico

Toray Advanced Textile Mexico, S.A.de C.V.

UK

Toray Textiles Europe Ltd.

France

Toray Films Europe S.A.S., Toray Carbon Fibers Europe S.A.

Hungary

LG Toray Hungary Battery Separator Kft.

Germany

Euro Advanced Carbon Fiber Composites GmbH, Greenerity GmbH

Italy

Alcantara S.p.A., Composite Materials (Italy) s.r.l., Delta-Tech S.p.A., Delta-Preg S.p.A.

Czech Republic

Toray Textiles Central Europe s.r.o.

Netherlands

Toray TCAC Holdings B.V.

India

Toray Industries (India) Private Limited

Indonesia

P.T. Century Textile Industry Tbk, P.T. Easterntex, P.T. Indonesia Toray Synthetics, P.T. Acryl Textile Mills, P.T. Indonesia Synthetic Textile Mills, P.T. Toray Polytech Jakarta

Thailand

Thai Toray Synthetics Co., Ltd., Toray Textiles (Thailand) Public Company Limited

Malaysia

Penfibre Sdn. Berhad, Penfabric Sdn. Berhad, Toray Plastics (Malaysia) Sdn. Berhad, Toray BASF PBT Resin Sdn. Berhad

Saudi Arabia

Toray Membrane Middle East LLC

China

Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd., Toray Fibers (Nantong) Co., Ltd., Toray Polytech (Nantong) Co., Ltd., Toray BlueStar Membrane Co., Ltd., Toray Plastics (Shenzhen) Ltd., Toray Plastics (Suzhou) Co., Ltd., Toray Plastics (Chengdu) Co., Ltd., Yihua Toray Polyester Film Co., Ltd., Toray Plastics Precision (Zhongshan) Ltd., Toray Film Products (Zhongshan) Ltd., Toray Membrane (Foshan) Co.,Ltd., Toray Fibers & Textiles Research Laboratories (China) Co., Ltd., Toray Advanced Materials Research Laboratories (China) Co., Ltd.

Republic of Korea

Toray Advanced Materials Korea Inc., STEMCO, Ltd., Toray Battery Separator Film Korea Limited.

Taiwan

Toray Advanced Film Kaohsiung Co., Ltd.

Click [here](#) for the main initiatives for CSR Guideline 4, "Product Quality and Safety" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports)

Risk Management

Under normal conditions, assess and analyze risks, and strive to mitigate and prevent them from materializing; and in the event of a crisis that could have a significant impact on management activities, strive to prevent damage from increasing, by bringing the situation quickly under control and normalizing conditions with a prompt and appropriate response



Basic Approach

Toray Group regularly identifies potential management risks affecting the Group's management activities in order to mitigate risks and seeks to prevent a crisis. In addition, the Group strives to prevent damage from spreading and to promptly control and normalize the situation by ensuring quick and appropriate responses using the emergency quick response system it has established.

Structure

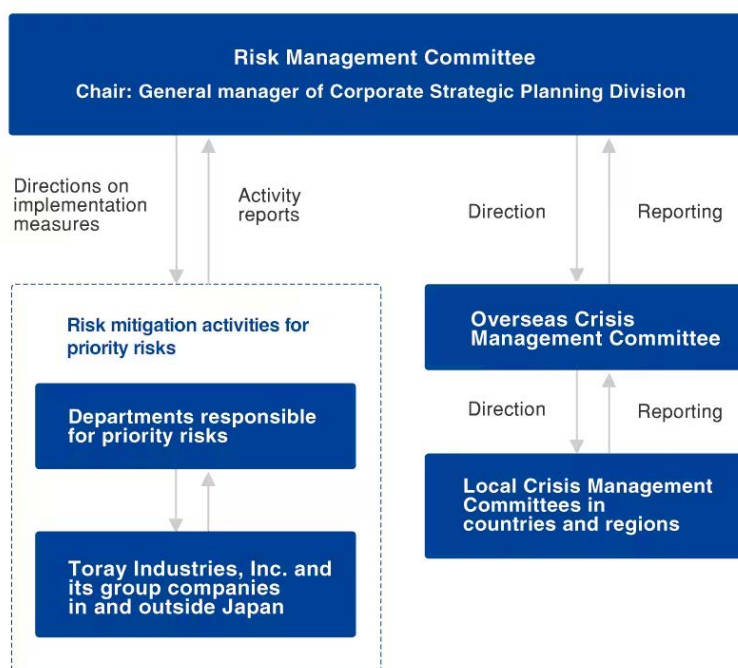
The risks affecting Toray Group are constantly changing, and the Group recognizes the critical importance of reinforcing its system for responding to risks that materialize suddenly due to changes in the surrounding environment and for responding promptly when crises do occur. To this end, Toray Industries, Inc. established a dedicated team within the Corporate Strategic Planning Division to communicate closely with the Board of Directors and top management and to pursue risk management as an integral part of management strategy. This team manages overall risk under normal conditions and ensures a quick response when crises do occur.

The general manager of the Corporate Strategic Planning Division regularly reports on the status of risk management to the Board of Directors and makes certain to inform the Board when a critical issue or emergency arises. In April 2021, a new department to deal with economic security risks was also established within the Corporate Strategic Planning Division. It is working to gather information both in and outside the Company and mitigate risks.

Structure of the Risk Management Committee

Chaired by the general manager of the Corporate Strategic Planning Division,¹ the Risk Management Committee is tasked with reviewing, discussing and promoting shared awareness of risk management across the entire Toray Group. This committee primarily carries out priority risk mitigation activities as part of regular risk management. In addition, the Overseas Crisis Management Committee and local crisis management committees, which manage employees' overseas travel under normal conditions and compile information on overseas risks, have also been made subordinate to the Risk Management Committee. The committee keeps the Board of Directors regularly informed about the contents of its discussions and reporting matters.

Risk Management Committee System

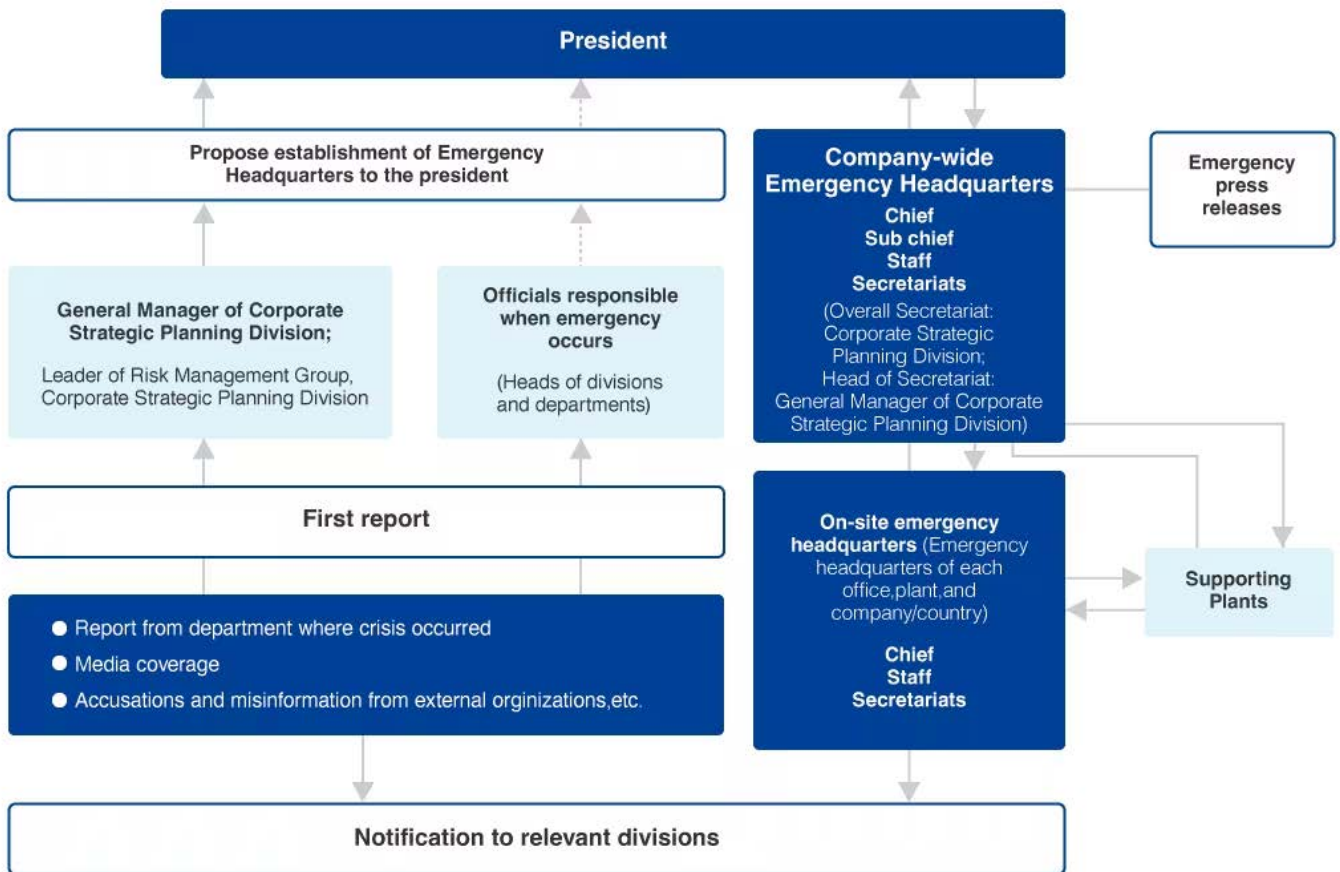


¹ As of July 2023, a senior vice president (member of the board) serves as the Risk Management Committee Chair.

Strengthening the Emergency Quick Response System

Toray Group has established Risk Management Regulations, a set of clear fundamental principles that form the basis of a company-wide response in the event of a major crisis. The Group works to ensure the thorough implementation of these rules when required. Moreover, the Group reviews the rules as appropriate to prepare for new risks that emerge due to changes in the social environment. In order to ensure quick management decisions especially in the event of a crisis, Toray Group has clarified the reporting channel from a department where a crisis has occurred, covering group companies in and outside of Japan.

Emergency Quick Response System



CSR Roadmap 2022 Targets

CSR Roadmap goals

1. Strengthen corporate risk management throughout the Toray Group and mitigate risks
2. Instill greater risk management among employees by rolling out risk management education throughout the Toray Group

Main Initiatives and Key Performance Indicators

KPI

(1) Follow up on Toray's priority risks	5-①
(2) Conduct periodic risk management (priority risk mitigation activities through a three-year cycle) and routine risk management (observing trends in and outside Japan, and establish a group-wide system to respond to risks that may have a significant impact on management, as identified through research and analysis, as "specified risks"); and in the event of a group-wide crisis, respond appropriately in accordance with the Risk Management Regulations	-
(3) Regarding major earthquakes in Japan, prepare and regularly review business continuity plans for key products, and conduct regular drills to establish a group-wide emergency response headquarters	-
(4) Regarding information security risks, monitor and bolster the contents of communications and enhance education and training on the risk of cyberattacks and information leakage	-
(5) Provide risk management education	5-②

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
5-① Group companies conducting follow-up on the Toray Group's priority risks (%)	100%	100%	100%	100%
5-② Group companies implementing risk management education (%) achieved (compared to the plan at the beginning of the fiscal year)	100%	100%	100%	100%

Reporting scope : Toray Group

Related Materiality for CSR

- Strengthening Corporate Governance

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB).

[PDF](#)

Looking to the Future

Under its CSR Roadmap 2025, Toray Group set the following new goals:

1. Reduce risks by identifying and mitigating risks that affect the resolution of management issues across the Group
2. Enhance internal controls across the Group and raise the level of risk mitigation efforts
3. Instill greater risk management among employees by rolling out risk management education throughout the Toray Group

To achieve these goals, Toray Group will continue to periodically and routinely identify potential risks in management activities, prevent and mitigate risks, and prevent crises from ever occurring.

As part of its group-wide priority risk mitigation activities, Toray Group listed its fifth three-year set of priority risks in fiscal 2021, and has since promoted initiatives to address these priority risks, namely information security, global CSR procurement, and business continuity risks from water hazards. Toray Group completed confirmation of the current situation and established mitigation measures for business continuity risks from water hazards, thereby finishing the activities for that priority risk in fiscal 2021.

Although priority risk mitigation activities have in principle been carried out in three-year periods, in order to promote risk management that can help achieve management goals, the fifth three-year set of priority risks was ended one year ahead of schedule in fiscal 2022, at the same time as Project AP-G 2022, the Medium-Term Management Program covering the period from fiscal 2020 to fiscal 2022.

The risks listed under the fifth set of priority risks will still continue to be managed appropriately by relevant departments.

The sixth three-year set of priority risks is now in place for the period from fiscal 2023 to fiscal 2025, which coincides with the Group's current Medium-Term Management Program, Project AP-G 2025. Having specified the two priority risks, namely, crisis response risks based on the possibility of war and product supply disruption risk, Toray Group is working to mitigate these risks to help achieve the Management Program.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 5 "Risk Management" during the CSR Roadmap 2025 period (fiscal 2023–2025).

[PDF](#)

Risk Management Initiatives

Basic System for Group-Wide Risk Management

CSR Roadmap 2022
Main Initiatives (1)(2)

Description of Activities

1. Periodic risk management (priority risk mitigation activities)

- (1) Toray Industries, Inc. exhaustively identifies group-wide risks (climate change, natural disasters, legal violations, scandals, etc.) and then pinpoints significant risks to address in a group-wide system. It does this by taking each risk identified and conducting quantitative analysis and assessment in a process of mapping based on the possibility of occurrence, degree of impact on the Company's management, and indicators of whether sufficient measures are already in place as well as qualitative analysis based on interviews with each department. Ultimately, priority risks are determined after consulting with the Risk Management Committee, which is chaired by the general manager of the Corporate Strategic Planning Division.
- (2) Priority risks are addressed with risk mitigation activities following the PDCA cycle over a three-year period.
- (3) In the fifth three-year set of priority risks (fiscal 2021–2023), information security, global CSR procurement, and business continuity risks from water hazard risks were selected. In order to promote risk management that can help achieve management goals, Toray Group terminated the fifth set of priority risks one year ahead of schedule in fiscal 2022 after establishing a system to promote risk mitigation and working out the details of relevant activities.
Currently, the sixth three-year set of priority risks is being implemented for the period from fiscal 2023 to fiscal 2025. Toray Group has set out the two priority risks—crisis response risks based on the possibility of war and product supply disruption risks—to help achieve the Group's current Medium-Term Management Program.
- (4) Toray Industries assigns a department responsible for each priority risk and integrates group-wide activities using a three-year road map for risk mitigation activities as well as an annual activity plan.
- (5) In addition, progress of the risk mitigation activities is monitored and the results of the annual activities for Toray Group overall are reported to the Risk Management Committee every year. Toray Industries discusses and establishes an annual activity plan for the next fiscal year that addresses the monitoring results and any new risks that have materialized due to changes in the environment.

Group companies conducting follow-up on the Toray Group's priority risks (%)

■Reporting scope
Toray Group

■Target in fiscal 2022
100%

Result in fiscal 2022

100%

2. Routine risk management (monitoring trends in and outside Japan, identifying, assessing and monitoring risks)

Toray Industries routinely monitors domestic and overseas trends and identifies risks that could have a major impact on Toray Group's management. When such risks are identified, the Company promptly develops a company-wide system to address them and takes the necessary group-wide countermeasures.

3. Response in the event of a crisis

Based on the Risk Management Regulations, a company-wide quick response system (Company-Wide Emergency Headquarters) is formed to respond to the crisis that has occurred.

Business and Other Risks

Toray Group has identified the following business and other risks, as noted in its annual securities reports.

- Crisis response risks based on the possibility of war
- Product supply disruption risk
- Risks related to product demand, market trends, and business plans
- Risks related to global business development
- Risks related to foreign currency, interest rate and securities market fluctuations
- Risks related to environmental issues such as climate change, water shortages, and resource depletion
- Risks related to natural disasters and accidents
- Risks related to human resource strategies
- Risk related to compliance
- Risks related to information security and cyber threats

Related Information

See the following page for information on each risk.

> [Business Risks](#)

Initiatives to Mitigate Global CSR Procurement Risk

CSR Roadmap 2022
Main Initiatives (1)(2)

Investigating a Survey Process Prioritizing High-risk Issues

The Toray Group CSR Procurement Policies were established as the Group's CSR policies related to procurement. Meanwhile, the Toray Group CSR Procurement Guidelines were implemented as activity guidelines for the entire supply chain, with which suppliers need to comply. In addition, the Group conducts the CSR Procurement Survey regularly with major suppliers and confirms that CSR initiatives are being implemented throughout the supply chain. After evaluating and analyzing the survey responses, Toray Industries asks suppliers with low scores to make improvements and follows up with such measures as facility visits.

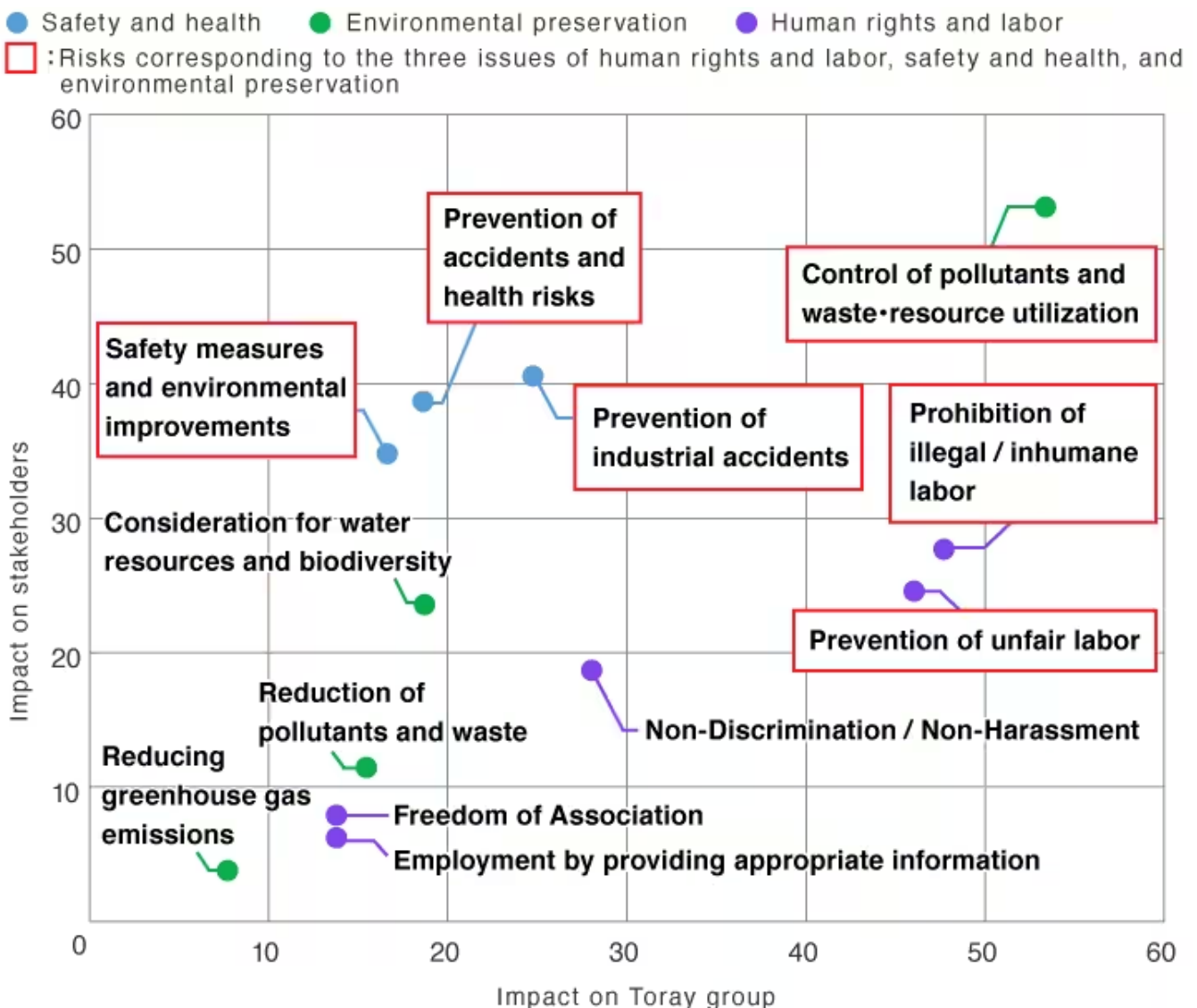
Moreover, in order to mitigate CSR procurement risk for the entire Group, Toray Industries has been investigating the adoption of a certain process. This process involves identifying important CSR procurement risk types corresponding to specific countries, regions, and industries, and those suppliers deemed to require risk investigation, auditing, and/or mitigation measure implementation.

This initiative was promoted in fiscal 2021 and fiscal 2022 as one of Toray Group's priority risks. In fiscal 2021, after identifying and prioritizing its CSR procurement risks, Toray Industries decided to focus on the three issues of human rights and labor, safety and health, and environmental preservation. Supplier survey questionnaires and an audit procedure manual were prepared for investigating suppliers.

In fiscal 2022, in order to verify the usability of the prepared questionnaires and audit procedure manual, Toray Industries conducted tests with the help of affiliated companies in Japan and overseas, and carried out investigations to establish the survey process. In order to identify the suppliers to be surveyed, a process was devised to narrow down the list based on factors such as supplier country (or region) and industry, using supplier information gathered from affiliated companies worldwide.

Going forward, Toray Industries will establish risk identification and investigation processes and conduct risk investigations of the selected suppliers. Whenever a risk is identified, the Company will conduct an audit and follow-up, in an effort to reduce CSR procurement risks for the entire Group.

CSR Procurement Risk Map



In order to foster employee awareness of risk management, Toray Group has set a KPI in its CSR Roadmap 2022 of the number of Group companies implementing risk management education. In fiscal 2022, the Group conducted risk management education, which included crisis response, for its new employees, newly appointed managers, and general managers. To prevent the spread of COVID-19, some training sessions were held remotely.

Group companies implementing risk management education (%) achieved (compared to the plan at the beginning of the fiscal year)

■Reporting scope	■Target in fiscal 2022
Toray Group	100%

Result in fiscal 2022

100%

Click [here](#) for the main initiatives for CSR Guideline 5, "Risk Management" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Risk Management

Business Continuity Plan Initiatives

Ensuring Preparedness for Major Earthquakes

CSR Roadmap 2022
Main Initiatives (3)

Toray Group maintains a business continuity plan (BCP) in case of a major earthquake which was included in its fourth three-year set of priority risks (fiscal 2018–2020).

Toray Group's basic policy when ensuring business continuity in the event of a major earthquake is to meet its social responsibility to continue supplying products. The top priority of the plan is to confirm employees' safety and prevent any impact on the local community. In addition to striving to prevent the damage from expanding and to prevent any secondary damage, the Group works to continue the supply of key products and to restore business quickly. In line with this, the Group consistently carries out evacuation drills based on a scenario involving an earthquake, systematically renovates plant buildings for better seismic resistance, and devises business continuity plans.

In fiscal 2018, Toray Industries, Inc. created and began administering BCPs for key products selected from each business in accordance with the Procedures for Developing BCPs for Designated Key Products in the event of an earthquake. Group companies in and outside Japan did the same in fiscal 2019.

In addition, since fiscal 2012, Toray Group has continued to conduct company-wide drills on setting up an emergency response headquarters. In fiscal 2022, as in the previous year, in light of Toray Industries' enhanced network environment and the improved reliability of public network infrastructure, the Company conducted initial response drills online, on the assumption that a large number of employees could be working from home due to the suspension of transportation services and the outbreak of COVID-19. Toray Group will continue to strengthen its capacity to respond to earthquakes with training and other measures.

Handling Water Hazard Risks (Floods, Storm Surges, Etc.)

CSR Roadmap 2022
Main Initiatives (1)

In recent years, there has been an increasing trend of storm and flood disasters, such as typhoons and heavy rain, causing devastating damage. In light of this, business continuity risks from water hazard risks were included as part of the fifth three-year set of priority risks (fiscal 2021–2023).

With the aim of checking water hazard risks, starting in Japan, in fiscal 2020, Toray Industries developed its own Wind and Flood Damage Control Checklist based on the Wind and Flood Damage Control Guidelines for Hazardous Materials Facilities published by the Fire and Disaster Management Agency at the Ministry of Internal Affairs and Communications. Toray Industries and its group companies have been reinspecting wind and flood damage control measures at their manufacturing sites and have confirmed flooding areas and flood depths. In fiscal 2021, the Group proceeded to investigate water hazard risks at manufacturing sites outside Japan. Based on a survey targeting the worldwide production facilities of Toray Industries and its group companies (146 factories belonging to 89 companies), 40 of the plants surveyed (belonging 19 companies) were found to be in flood risk zones.

In response to the risks identified at these plants, the Group formulated a plan in fiscal 2021 to ensure the safety of human life and prevent secondary damage at the sites in flood risk zones, and is systematically promoting mitigation measures. These include moving evacuation sites to higher locations, raising the height of emergency generators, and conducting tsunami evacuation drills. Regarding Toray products deemed critical in the event of a large-scale earthquake, to help ensure their supply continuity, the BCP promotion department for each product concerned investigated water hazard risks at Group manufacturing sites and across the entire supply chain. Based on the results, the Group revised its BCP for critical products (earthquakes) and created a BCP for critical products (earthquakes and water hazards) that reflects new measures to mitigate flood risk. Based on the results of these activities, a decision was made to complete in 2021 the activities for the identified priority risk – business continuity risks from water hazards.

From fiscal 2022 to the end of fiscal 2024, Toray Industries is conducting a wind and flood disaster risk survey using an external program. The survey covers 13 plants in Japan, and the Company is promoting the program to further reduce these risks.

Related Information

See the following page for information on water stress areas and water resource management.

> [Initiatives for Managing Water Resources](#)

Click [here](#) for the main initiatives for CSR Guideline 5, “Risk Management” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Risk Management

Addressing Information Security Risks

Addressing Information Security Risks

CSR Roadmap 2022
Main Initiatives (4)

Toray Group strives to protect and appropriately manage important technical information, confidential sales and marketing information, personal information, hardware and software in its possession. Accordingly, the Group has positioned information security as one of its priority risks, and is promoting increasingly comprehensive initiatives group-wide.

The Toray Group Information Security Steering Committee was established in fiscal 2022, chaired by the General Manager of the General Administration & Communications Division at Toray Industries.¹ This committee performs central management of information security across the Group, marking a change from security optimization on a company basis to a group-wide basis. In fiscal 2022, the Toray Group Information Security Basic Policy was also established by resolution of the Board of Directors. Under the supervision and management of this committee, Toray Industries ascertains the risk situation for the entire Group as well as the global trends, establishes group-wide security management standards, conducts follow-up on their adoption, and performs regular diagnostic security checks and monitoring, thereby ensuring and enhancing information security across Toray Group. In the event of an incident such as an information leak or a system outage due to a cyberattack, any department of Toray Industries or affiliated company that becomes aware of such an incident must report it to the General Manager of the General Administration & Communications Division within 24 hours. Toray Industries has systems and response procedures in place for contacting relevant parties in and outside the Company, depending on the scale of potential or actual damage, and for preventing the damage from spreading.

¹ As of July 2023, a senior vice president serves as general manager of the General Administration & Communications Division.

Toray Group Information Security Basic Policy: Established in April 2022

Toray Group prioritizes information security as an important management issue. In order to fulfill the Group's social responsibility, all officers and employees (including contract, part-time, and dispatched employees) take thorough measures based on the Information Security Basic Policy.

1. Ethics and compliance

We will prohibit ourselves from collecting, moving or using any information assets illegally in violation of the regulation or law where Toray group engages their duties.

2. Development and operation of systems and rules

In order to promote information security measures and to respond promptly to information leaks, we have established an information security system. We will establish a system and rules for security and apply them appropriately.

3. Protection of information

We will protect the information of our customers and the Toray group companies in accordance with the significance of risk. From the perspective of the protection of personal information, we will protect the personal information of our employees, customers, and Toray group companies from being used for any purpose other than its original intent.

4. Availability of information assets in support of business continuity

We will secure the availability of information assets necessary to pursue and fulfill our social responsibility.

5. Continuous Improvement and Maintenance of Information Security

We will continuously improve the information security management system by prioritizing identified issues, by continuously conducting risk analysis of emerging threats, changes to the business, and or the evolution of information technology.

Combating Cyber Attacks

CSR Roadmap 2022
Main Initiatives (4)

Toray Group is taking the following initiatives to respond to today's increasingly sophisticated cyberattacks.

1. Thoroughly implementing and enhancing existing initiatives

Standardizing and automating the settings and security measures for computers, servers, and communication equipment owned by the Group

2. Enhancing network security

(1) Constant monitoring and analysis of communications between the outside (Internet) and the corporate network, and within the corporate network

(2) Periodic external expert vulnerability assessments of connections with the outside (Internet) and reviews of appropriate responses

3. Enhancing education and training

Because IT measures alone may not be sufficient to address today's increasingly sophisticated cyberattacks, the Group also conducts education through regular e-learning (once a year) and several unannounced rounds of suspicious e-mail response training for all employees.

Prevent Employees from Leaking Confidential Information

CSR Roadmap 2022
Main Initiatives (4)

In addition to providing information security education for all employees on an annual basis, Toray Group conducts level-specific training for employees, including new employees and newly appointed managers. The aim is to improve security awareness and skills, while also thoroughly disseminating the Information Security Basic Policy. At the same time, an e-mail magazine is sent out regularly and a series on information security is carried in an in-house magazine to encourage the improvement of information security literacy among all employees.

Before removing a computer or smartphone from an office, for example, employees must receive permission from a manager. In addition, the actual device must be inspected monthly, and an inventory of assets is taken once every six months. Moreover, the Group has established approaches to dealing with the loss of such devices and other similar incidents, and has built channels for reporting and other mechanisms to minimize damage thereof.

Click [here](#) for the main initiatives for CSR Guideline 5, "Risk Management" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports)

Communication

Disclose corporate information in an active, fair and straightforward manner to maintain management transparency; and disclose information appropriately to encourage dialogue and cooperation with stakeholders including customers, employees, stockholders, business partners, consumers, mass media, and other parties



Basic Approach

Toray Group communicates with diverse stakeholders throughout its business activities in accordance with its Basic Policies to Promote Dialogue with Stakeholders and its Information Disclosure Principles. The senior management team regularly receives reports on communication activities and provides advice.

Toray Group's goal of achieving sustainable growth globally and into the future is about much more than just expanding the Group's business. The aim is to practice Toray-style management, contribute to society, and remain a corporate entity respected by society. Toray-style management is all about living up to the corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products," and this is done by executing the corporate missions of serving customers, employees, shareholders, and society. In 2020, Toray Group organized its management principles — the principles that it has upheld since the beginning — in the form of the Toray Philosophy. Over the two years between fiscal 2020 and 2021, Toray Group implemented the Toray Philosophy Project as one of its group-wide projects under Project AP-G 2022, seeking to enhance understanding of Toray-style management both inside and outside the Group. Issues involving organizational culture and the gaps that have been detected between the Toray Philosophy and the workplace over the duration of these two years of activities will be taken over by the Corporate Brand Meeting, which was established in September 2021 under the Brand Management Committee chaired by the president. This committee will continue to formulate and implement measures to activate internal communication.

Basic Policies to Promote Dialogue with Stakeholders Established September 2005

1. Toray Group will promote dialogue and collaboration with all stakeholders, including customers, stockholders and investors, business partners, employees, government, local communities, NPOs, citizens, the global community and the media.
2. Each company in Toray Group, through dialogue and collaboration with stakeholders, will take steps to carry out reforms designed to increase the satisfaction level of everyone.
3. All Toray Group employees, in their respective workplaces, shall identify and strive to solve issues affecting stakeholder satisfaction as part of their CSR activities.

Information Disclosure Principles Established January 2004

1. Information Disclosure Principle:
Strive to communicate with various stakeholders associated with the Company by actively disclosing pertinent information.
2. Voluntary Disclosure Principle:
Comply with statutory disclosure and timely disclosure requirements and voluntarily disclose information that can be disclosed.
3. Timely Disclosure Principle:
Strictly comply with the appropriate disclosure timing for statutory disclosure and timely disclosure, and disclose information on facts that can be disclosed as quickly as possible for voluntary disclosure as well.
4. Fair Disclosure Principle:
Disseminate information to all stakeholders in a fair and unbiased manner.
5. Information Management Principle:
Officers and employees associated with the content of information to be disclosed shall strive to maintain thorough information management until disclosure.

Structure

The General Administration & Communications Division works with divisions and departments of Toray Industries and its group companies in and outside Japan to devise the best methods for collecting and disseminating information. The Group's business sites regularly engage and maintain lines of communication with local residents and governments. Additionally, the Group is always open to inquiries and feedback from stakeholders, which are fielded through its corporate websites.

Opinions obtained from stakeholder communication processes are used to provide feedback to the related divisions and departments. They are encouraged to act on the feedback received in order to maintain good relationships with stakeholders. For example, matters related to safety, health, accident prevention, and environmental conservation are suitably handled by the Group's business sites. The CSR Operations Department in the General Administration & Communications Division guides the implementation of social initiatives that contribute to the advancement of local communities, which are carried out by the business sites.

CSR Roadmap 2022 Targets

CSR Roadmap goals

1. Reflect results of dialogue and collaboration with each stakeholder group in management activities in a timely and appropriate manner
2. Reflect information obtained through dialogue and collaboration with each stakeholder group in management decisions in a timely and appropriate manner

Main Initiatives and Key Performance Indicators

	KPI
(1) Actively dispatch information on the Toray Philosophy and use education to ensure it is embraced throughout the Group	-
(2) Strengthen the dissemination of information via websites	6-①
(3) Facilitate exchange of opinions between management and employees	6-②
(4) Facilitate communication between management and stockholders and investors	6-③
(5) Encourage communication with mass media	6-④
(6) Work to utilize various tools and strengthen systems in order to effectively disseminate information and promote dialogue in response to digitalization and globalization	-

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
6-① Number of corporate website page views (per month)	1 million page views	1 million page views	1 million page views	1.01 million page views
6-② Interviews conducted to exchange opinions within the company (rate of progress)	40%	60%	80%	68%
6-③ Interviews with key investors in which management participates (number)	Cumulative total of 80	Cumulative total of 80	Cumulative total of 80	Cumulative total of 109
6-④ News releases (number)	200	200	200	171

Reporting scope : Toray Industries, Inc. (6-①)
Toray Group (6-②, 6-③ and 6-④)

Related Materiality for CSR

- Developing in Collaboration with Stakeholders

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB). [PDF](#)

Looking to the Future

With the diversification of social issues in recent years, careful dialogue with stakeholders has become increasingly important. Toray Group brand value lies in its business portfolio, which has grown from Toray's original textile business and which cannot be easily duplicated by competitors. The Group treats requests from stakeholders, including the global demand for sustainability, as opportunities for growth. By contributing to society through its businesses and other efforts, Toray Group will continue to promote social progress and help to resolve global issues, thereby enhancing its corporate value and continuing to serve as a corporate group of high value to all stakeholders.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 6 "Communication" during the CSR Roadmap 2025 period (fiscal 2023–2025). [PDF](#)

CSR Activity Report (CSR Guideline Activity Reports) - Communication
Communication via Corporate Websites

CSR Roadmap 2022
Main Initiatives (2)/(6)



On the Toray Group website, information is provided to a wide range of stakeholders to give them an accurate perspective on Toray, with information in menu categories such as “About Us,” “Our Businesses,” “Sustainability,” “Research and Development,” “Investor Relations” and “Career.”

In fiscal 2022, in addition to updating the contents in accordance with the new Medium-term Management Program that launched in fiscal 2023, the Sustainability Vision page of the Group website was enhanced to help stakeholders gain an even better understanding by illustrating relationships to SDGs in ways that are easy to understand at a glance and improving searchability for related products.

Portal sites for individual countries and regions (10 sites, 8 languages in total) were also redesigned for the more effective appeal of a globally unified image and to enhance usability.

In addition to the corporate website, Toray Group business websites for customers (a total of 25 websites) are also being redesigned and content expanded to better provide the information that meets customer needs.

TORAY
Innovation by Chemistry

CONTACT US

About Us Sustainability Our Businesses Research and Development Investor Relations Newsroom

SDG 13 Climate Action

Toray Group Sustainability Vision

Providing Innovative Technologies and Advanced Materials to Help Address Global Issues

At the Toray Group, we consider sustainability to be the most important global issue of the 21st century. Today, climate change, water scarcity, and resource depletion are just some of the mounting environmental challenges facing the planet. With the global population expected to increase to some ten billion people by 2050 and aging demographics on the increase worldwide, an interlinked web of global issues are posing ever-graver problems.

Since Toray's founding in 1926, we have always believed that materials can change lives. True to our fundamental corporate principle of contributing to society. At the Toray Group, we make it our mission to deliver innovative technologies and advanced materials that provide real solutions to the challenges the world faces with balancing development and sustainability.

We are convinced that Toray can continue to grow without negatively impacting global sustainability. By delivering on our corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products," we will do our utmost to address global issues, including the goals of the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), while working closely with our business partners worldwide.

Four Perspectives of the World as Envisioned by the Toray Group in 2050

A net zero emissions world, where greenhouse gas emissions are completely offset by absorption

A world where resources are sustainably managed

A world with a restored natural environment, with clean water and air for everyone

A world where everyone enjoys good health and hygiene

Progress against the Commitments for 2030

The Toray Group is striving to achieve the following quantitative targets.

	FY 2019 Actual (Baseline) (L-GAAP)	FY 2022 Actual ¹	FY 2030 Target ²	
Supply of Sustainability Innovation products ³	562.4 billion yen	2.3-fold	4.5-fold	
CO ₂ emissions avoided in value chain ⁴	28 million tons	9.5-fold	25-fold	
Water filtration throughput contribution by Toray's water treatment membranes ⁵	27.33 million tons/day	2.6-fold	3.5-fold	
Greenhouse gas emissions in production activities ⁶	Per unit of revenue ⁷ across the Toray Group	337 tons/100 million yen	35% reduction ⁸	50% or more reduction
	Greenhouse gas emissions of Toray Group in Japan ⁶	2.45 million tons	21% reduction ⁸	40% or more reduction
Water usage in production activities	Per unit of revenue ⁷ across the Toray Group	15,200 tons/100 million yen	32% reduction ⁸	50% or more reduction

1. (1) Products that accelerate measures to counter climate change; (2) products that facilitate sustainable, recycling-based use of resources and production; (3) products that help provide clean water and air and reduce environmental impact; and (4) products that help deliver better medical care and hygiene for people worldwide.

2. Toray calculates the CO₂ emissions reduced throughout the value chain of products in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, the International Council of Chemical Associations (ICCA), and the World Business Council for Sustainable Development (WBCSD).

3. Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MSBR), by the number of membrane elements used.

4. With the use of renewable energies and other zero-emission power sources being worldwide, the Toray Group aims to employ zero-emission power sources at a rate equivalent to or better than the targets in each country by fiscal 2030.

5. In Japan, Toray seeks to surpass the reduction target set for the industrial sector by the Japanese government (absolute emissions reduced by 38%) in its comprehensive plan (Cabinet Decision on October 27, 2023) based on Japan's Act on Promotion of Global Warming Countermeasures.

6. FY2019 results are based on net sales (L-GAAP).

7. Each relative ratio is calculated in comparison to FY 2019.

8. The calculation of the figure for the baseline of FY 2019 includes data for companies that joined the Toray Group in FY 2014 or later.

Toray Group Sustainability Vision

Download PDF

Toray Group Sustainability Vision

TORAY
Innovation by Chemistry

CONTACT US

About Us Sustainability Our Businesses Research and Development Investor Relations Newsroom

SDG 13 Climate Action

Four Perspectives of the World as Envisioned by the Toray Group in 2050

A net zero emissions world, where greenhouse gas emissions are completely offset by absorption

A world where resources are sustainably managed

A world with a restored natural environment, with clean water and air for everyone

A world where everyone enjoys good health and hygiene

Towards 2050

A net zero emissions world, where greenhouse gas emissions are completely offset by absorption

ACTIONS

Accelerating measures to counter climate change

In order to keep the air temperature from rising by more than 1.8°C due to global warming, we must become carbon neutral by 2050. Being carbon neutral means that the amount of greenhouse gases such as carbon dioxide that we are emitting is equivalent to the amount being absorbed. In addition to reducing the amount of carbon dioxide emitted during the product manufacturing stage, the Toray Group will utilize materials and technologies associated with energy conservation and use and renewable forms of energy to work toward creating a net-zero society. This can be achieved by reducing product weight in order to reduce fuel consumption, thereby improving carbon dioxide emissions throughout the entire product lifecycle, leveraging renewable energies such as wind power, which does not produce carbon dioxide, and utilizing hydrogen and electric vehicles.

AFFORDABLE AND CLEAN ENERGY

INDUSTRY, INNOVATION AND INFRASTRUCTURE

CLIMATE ACTION

Curbing CO₂ emissions throughout the life cycle of products

Toray provides lightweight and strong carbon fiber that can reduce the weight of aircraft and automobiles, to improve fuel economy and reduce CO₂ emissions.

Building a renewable energy economy

Toray supplies materials for use in renewable energy technologies including wind and solar energy, and in hydrogen conversion, storage, and fuel cells.

Reducing CO₂ emissions in manufacturing

Toray actively strives to reduce CO₂ emissions in manufacturing, through process improvements that conserve energy, use renewable energy and reduce the use of coal.

Related Story

Material benefits: how carbon fiber is reducing our environmental footprint

Carbon fiber is a "brandy" material, adding exceptional strength without weight to aircraft, wind turbines and cars. New technologies devoted to improving its production and recycling mean even greater environmental benefits lie ahead.

The materials that are building a renewable energy economy footprint

To halt the rise of greenhouse gas emissions, we need to convert as many sectors of the economy to renewable energy as quickly as possible. Advanced materials are improving the efficiency of the renewable energy industry while helping other sectors, such as transport, adapt to electrification.

Toray products contributing to this sector

Energy Conservation

Renewable Energy

Biomass-based

Water Treatment

Recycling

Low Environmental Impact

"A net zero emissions world" section of the Four Perspectives of the World as Envisioned by the Toray Group in 2050 page of the Toray website.

Related Information

- > [Toray Group Sustainability Vision](#)
- > [Medium-Term Management Program](#)

Click [here](#) for the main initiatives for CSR Guideline 6, "Communication" in CSR Roadmap 2022.

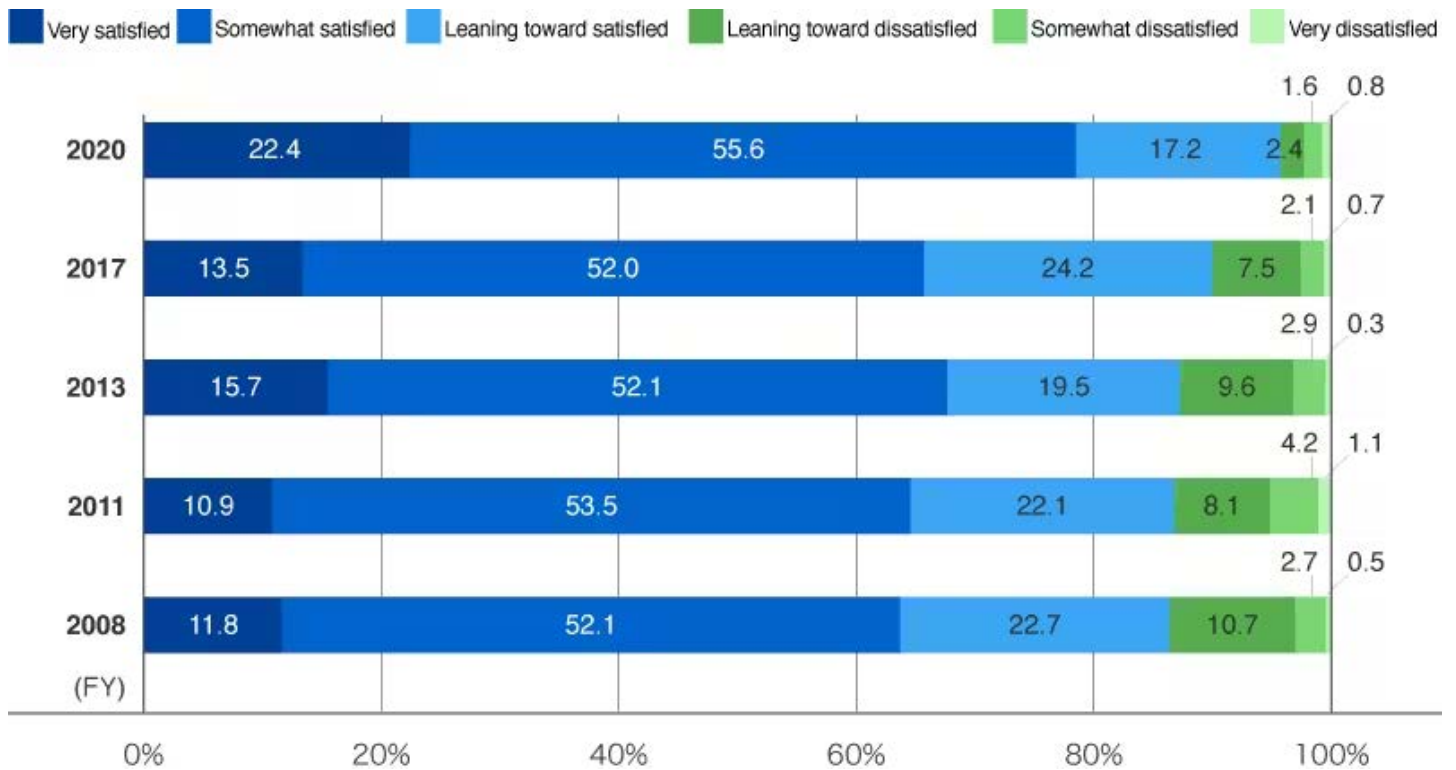
CSR Activity Report (CSR Guideline Activity Reports) - Communication

Communication with Customers

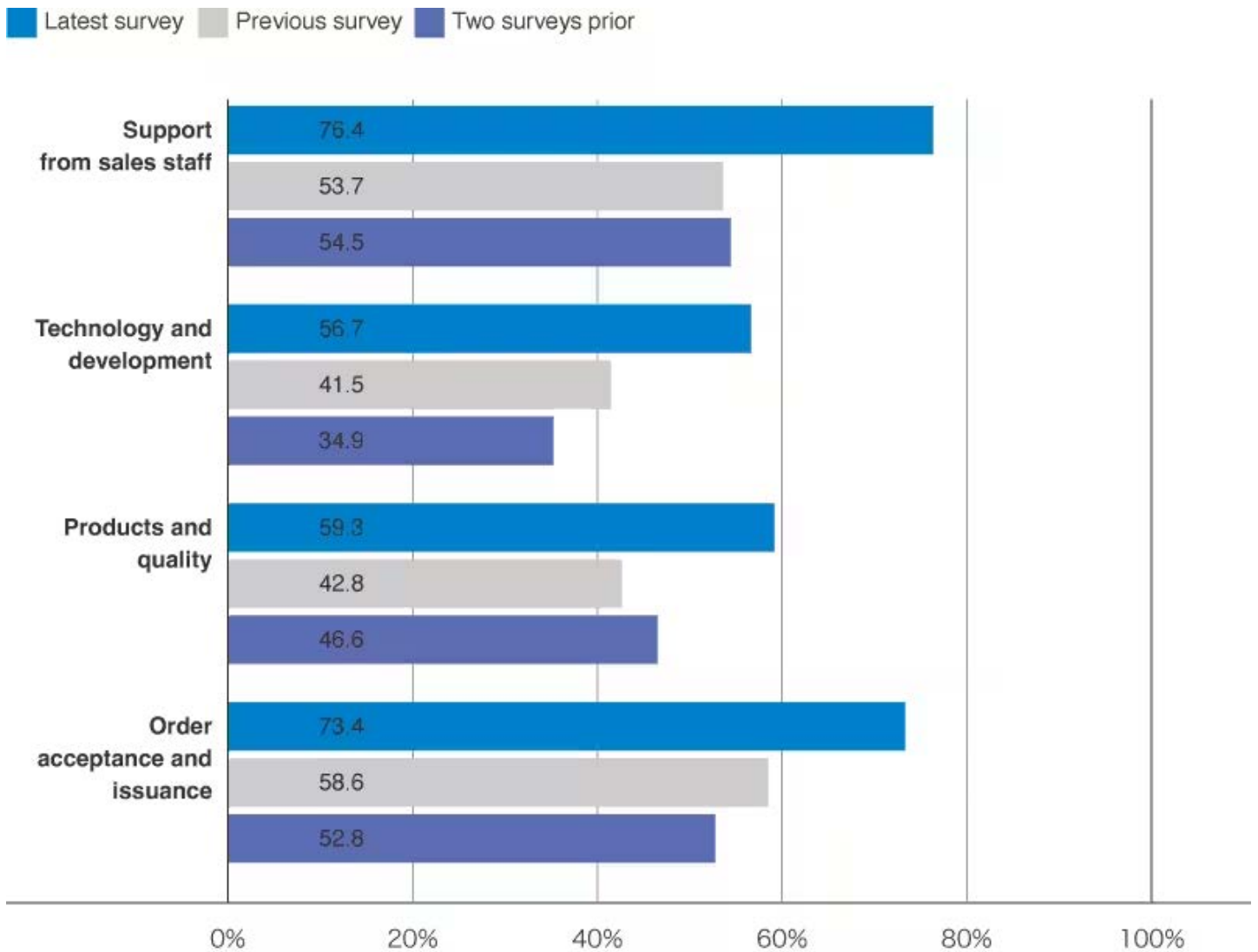
Customer Satisfaction Survey

True to its “customer first” commitments, Toray Group regularly conducts customer satisfaction surveys. The survey results are shared within the Group at the officers’ meeting and via the in-house magazine to facilitate business improvement at worksites and motivate employees. From executives and managers to general staff, every employee works to achieve even higher quality customer service, by engaging in an iterative cycle of understanding and improving issues.

Overall Customer Satisfaction (%)



Customer Satisfaction (%) by Category



Note: Percentage of customers who chose "Very satisfied" or "Somewhat satisfied" on a six-point scale of "Very satisfied," "Somewhat satisfied," "Leaning toward satisfied," "Leaning toward dissatisfied," "Somewhat dissatisfied" and "Very dissatisfied."

Showrooms

Toray has set up showrooms in Mishima (at the Toray Human Resources Development Center), at the Shiga Plant, and at other major Toray sites as space for communicating with customers. These showrooms feature accessible displays of Toray's business and product applications. The goal is to deepen understanding of the Toray Group Sustainability Vision and Toray Group's commitment to leverage its innovative technologies and advanced materials to contribute solutions on a host of issues. Toward this end, the exhibit space on the corporate culture floor of the Toray Human Resources Development Center in Mishima was also renovated in fiscal 2022.

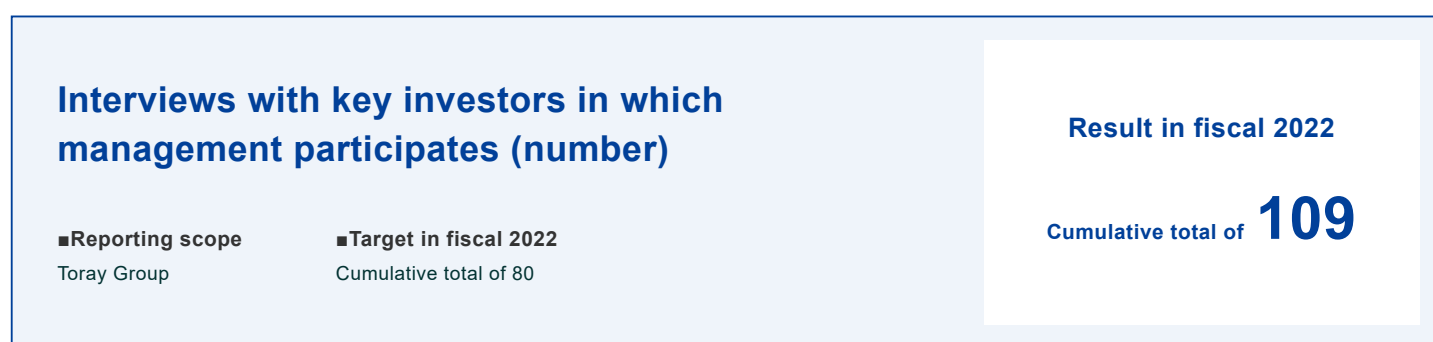


Exhibit space at Toray Human Resources Development Center in Mishima

CSR Activity Report (CSR Guideline Activity Reports) - Communication

Communication with Stockholders and Investors

In accordance with its Information Disclosure Policy, Toray Industries, Inc. makes sure to disclose information required under laws and regulations in an accurate, timely and appropriate manner, as well as a broad range of additional information beyond these requirements. The Company's Investor Relations Department was established to liaise with stockholders and investors, aiming to create as many communication opportunities as possible.



Holding Investor Relations Events to Communicate with Stockholders and Investors and Giving Feedback to Top Management

CSR Roadmap 2022
Main Initiatives (4)

Toray Industries conducts same-day briefing sessions with the release of quarterly and annual earnings results, and holds interviews, for institutional investors and securities analysts. The Company also conducts briefing sessions for individual investors. Feedback received at investor briefing sessions and through communication with investors and stockholders is regularly reported to the Board of Directors, helping to guide management and business activities.

Activities	Number of events	Number of meetings/participants
Meetings with investors and analysts	As required	565 meetings
Briefing sessions for individual investors	Yearly	310 participants

External Evaluation of Information Disclosure to Investors

In the “Investor Relations” section of its corporate website, Toray Industries provides information about its financial results and management policies and strategies for stockholders and investors. In an effort to disclose information fairly, the Company promptly posts financial data and presentation materials, including English translations, used in its briefings for institutional investors. In fiscal 2022, the Company’s publications were evaluated externally by a number of organizations, as shown below.

• Website Evaluations

Organization details	Evaluations
Daiwa Investor Relations Co., Ltd.	2022 Internet IR Awards Award for outstanding website
Nikko Investor Relations Co., Ltd.	2022 All Japanese Listed Companies' Website Ranking (AAA Website in overall ranking and AAA Website in sector ranking (Textiles and Apparels))
GOMEZ	Silver Prize (top in textile sector) in IR Site Ranking 2022

• Annual Report Evaluation

Evaluations
NIKKEI Integrated Report Award 2022 Excellence Award

Evaluations from the Perspective of Socially Responsible Investment

- Included in Dow Jones Sustainability™ Asia / Pacific Index
- Listed in The S&P Global Sustainability Yearbook 2023
- Included in FTSE4Good Index / FTSE Blossom Japan Index / FTSE Blossom Japan Sector Relative Index
- Received AAA rating in MSCI ESG Ratings / Included in MSCI Japan ESG Select Leaders Index
- Recognized as CDP Water Security A List Company

Convenient General Stockholders Meetings

For the convenience of its stockholders, Toray Industries avoids holding its general meeting of stockholders on a date when many other companies in Japan hold their meetings. Toray Industries implemented strict COVID-19 prevention measures for the general meeting of stockholders it held on June 23, 2022, live-streaming a hybrid in-person/online meeting to accommodate stockholders who were unable to attend and/or were in remote locations. Every year, the general stockholders' meeting notice is posted on the website approximately four weeks in advance of the meeting to give stockholders extra time to review the agenda items. The meeting notice is also translated into English, and voting enhancements include smartphone-based electronic proxy voting and an electronic voting platform for institutional investors.

In 2023, the general meeting of stockholders was held on June 27. In accordance with the electronic provision of general stockholders' meeting materials required under the revised Companies Act, the meeting notice sent out was summarized.

Click [here](#) for the main initiatives for CSR Guideline 6, "Communication" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Communication

Communication with Business Partners

Toray Group holds policy briefings and carries out CSR procurement surveys for business partners to foster mutual understanding and closer collaboration.

Related Information

- [Socially Responsible Procurement Initiatives at Toray Group](#)
- [Toray Group Distribution Initiatives](#)

CSR Activity Report (CSR Guideline Activity Reports) - Communication

Communication with Employees

Internal Branding

CSR Roadmap 2022
Main Initiatives (1)(3)

Over the two years between fiscal 2020 and 2021, Toray Group has implemented the Toray Philosophy Project as one of its group-wide projects under the Medium-Term Management Program, Project AP-G 2022. The Group has gained significant new insights and identified future issues. In order to further instill the Toray Philosophy and encourage every employee to conduct themselves and make decisions in accordance, continued activities designed to instill the philosophy are necessary, and the Group has been expanding informational tools, holding regular events, and working on other measures to involve employees in instilling the management philosophy.

In the general survey for employees on the Toray Philosophy Project, many respondents indicated that, with regard to the organizational culture, there is a need to create an open workplace environment where employees are able to easily demonstrate their desire to take on new challenges. Toray Group continues to work to improve the organizational culture so that it provides a foundation for putting the Toray Philosophy into practice and increases employee motivation.

The Group has specified five guidelines to set the course for internal branding efforts: (1) develop methods of communicating management's intentions that convey "humanity" and "appeal"; (2) conduct activities that promote mutual understanding between employees at different levels and in different organizations; (3) create external points of contact that motivate employees and generate innovation; (4) instill an understanding internally and externally that Toray corporate activities contribute to solving social issues and help people live better lives; and (5) develop a variety of easily understandable tools to instill the Toray Philosophy among employees. The Group has introduced a new opportunity for open, two-way communication between the management team and employees with one of its new activities, the video live stream, "Real Talk – Everyone's Voice," which it introduced in January 2023. In fiscal 2022, the live stream was hosted twice at the head office, and a total of six live streams are planned in fiscal 2023, including live streams to be hosted at plants. These events have elicited many positive comments from employees who say they gained insight into the president, were able to better understand his vision and personality, and enjoyed the free and open atmosphere.

Toray Group will continue to formulate and implement various measures encouraging different avenues for internal communication to ensure that all employees conduct themselves in accordance with the Toray Philosophy and foster an attachment to the Toray Group.



Employees take part in video live stream, "Real Talk – Everyone's Voice."

Toray Group employs various forms of media such as printed in-house magazines, intranet, and company-wide bulletin boards to provide information on the Group's management policies and issues, as well as to promote dynamic communication that will strengthen the Toray brand and foster a sense of belonging among Group employees. Messages from the president appear in all of these media. The printed in-house magazine is published in two languages (Japanese and English) to keep employees informed about management and business topics as well as corporate projects.

The Group has launched an intranet called TORAYNAVI in Japanese and English for group companies both in and outside Japan to share timely information.

Circulation of Toray Group's publications

Japanese edition of *People* in-house magazine :

Around 16,000 copies per issue (published six times per year)

English edition of *People* in-house magazine :

Around 3,000 copies per issue (published four times per year)

Toray Management magazine for managers :

About 7,000 copies per issue (published four times per year)



Employee Survey

Toray Industries, Inc. regularly conducts an employee attitude survey of Toray Group employees in and outside Japan. The survey is designed to assess employee engagement and motivation, and to gauge the level of progress in implementing the long-term vision and medium-term management program. It is conducted in six languages, including Japanese, English, Chinese, Indonesian, Thai, and Korean. The fiscal 2020 survey yielded encouraging results, with many respondents indicating a positive view of Toray and expressing a desire to continue working at Toray Group in the long term. The survey also shed light on issues and highlighted requests from employees. These are relayed to the relevant departments so that they can address them and raise employee satisfaction. The survey results are used to identify gaps that may exist between employee attitudes and customer assessments from customer satisfaction surveys, and to analyze the level of communication between managers and staff. The results of the employee attitude survey are circulated within the company as feedback and are utilized to make improvements.

Promoting CSR Initiatives in Every Workplace

CSR Roadmap 2022
Main Initiatives (3)

A special characteristic of Toray Group's approach to corporate social responsibility is its “CSR line activities,” an employee participation system that emphasizes putting CSR into practice on the job. Each workplace implements activities suited to its own circumstances, such as holding discussions on CSR issues.

Related Information

> [Toray Group Corporate Social Responsibility Initiatives](#)

Facilitating Internal Exchange of Opinions on CSR Issues and Enhancing Awareness

CSR Roadmap 2022
Main Initiatives (3)

Interviews conducted to exchange opinions within the company (rate of progress)

■Reporting scope Toray Group	■Target in fiscal 2022 80%
---------------------------------	-------------------------------

Result in fiscal 2022

68%

Toray Group strives to ensure that social responsibility is firmly rooted in its culture by providing employees with various opportunities.

Since fiscal 2019, the CSR Operations Department of Toray Industries has visited departments as well as group companies worldwide to conduct interviews to exchange opinions. The aims are to ascertain the status of CSR initiatives in each workplace and to instill CSR awareness. The progress rate of the initiative for fiscal 2022 was 68%, falling short of the target of 80% of all targeted departments and group companies to be visited. The rate of

progress was affected by the period of time in fiscal 2020 when the department was unable to conduct in-person interviews due to the COVID-19 pandemic. The issues for CSR activity implementation identified during the interviews to exchange opinions will be reflected in Toray Group's CSR promotion measures.

Toray Group communicates CSR information through a variety of internal publications (including the *People* and *Toray Management* magazines and an internal CSR newsletter) to help employees understand the necessity of implementing CSR in each workplace. In addition, the Group also strives to increase CSR awareness with an e-learning course covering the fundamentals of CSR, CSR webinars designed to promote understanding and awareness of global environmental issues, and other programs.



CSR web seminar

Communicating with Employees' Families

Toray Group organizes workplace tours for employees and their families to help employees' families get to know more about Toray. The tours at individual business sites and plants involved a variety of different programs.



Interactive science experiment class (making stamps)
Toray Okazaki Plant
21 people from six families



Tour of water treatment membrane plant
Toray Ehime Plant
26 people from 10 families



Group photo
Toray Nagoya Plant
49 people from 15 families



Touring a film manufacturing site
Toray Gifu Plant
10 people from three families



Science experiment
Toray Ehime Plant
20 people from eight families



Viewing wind turbine blades
Toray Seta Plant
23 people from seven families



Tour of Innovation Plaza
Toray Shiga Plant
45 people from 18 families

Click [here](#) for the main initiatives for CSR Guideline 6, “Communication” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Communication

Communication with the Media

CSR Roadmap 2022
Main Initiatives (5)

Number of news releases

■Reporting Scope	■Target in fiscal 2022
Toray Group	200

Result in fiscal 2022

171

Toray Industries, Inc. recognizes that public relations and corporate communication activities have a role in fulfilling responsibilities for information disclosure as well as influencing public opinion. Accordingly, the Company's Corporate Communications Department actively engages with a wide range of media organizations, linking the Company with the public.

Based on Toray's Information Disclosure Principles, the department provides fair and impartial information, even if it may cast the Company in a bad light, in a timely and appropriate manner. In fiscal 2022, Toray Group issued 171 press releases and carried out 182 interviews in response to media requests.

Related Information

> [Toray's Information Disclosure Principles](#)

Click [here](#) for the main initiatives for CSR Guideline 6, "Communication" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Communication

Communication with Local Communities

Toray Group creates various opportunities for communication with people who live near its business sites. In fiscal 2022, the impact of COVID-19 stabilized, and Toray Group worked actively to [contribute to local communities](#).



At a lecture to foster safety awareness at a local elementary and junior high school, students formed letters spelling out Safety First Toray.

[Toray Industries (India) Private Limited]



A joint disaster drill with local residents
(Toray Industries, Inc. Seta Plant)



Picture books were donated to a local hospital, and employees read aloud to the children.

[Toray Industries (H.K.) Ltd., Vietnam]



Supplying hygiene products to local residents
(Toray Plastics (America), Inc.)

CSR Activity Report (CSR Guideline Activity Reports)

Contributing Solutions to Social Issues through Business Activities

Leverage innovation to provide solutions to various social issues such as climate change, resource and energy use, water resource and natural environment conservation, improvement of medical care, and promotion of public health, thereby contributing to sustainable development for society.



Basic Approach

Global environmental issues continue to become increasingly severe, marked by global warming, water scarcity, marine pollution, resource depletion, and loss of biodiversity. The world population is approximately eight billion, a number that is expected to surpass 10 billion by 2050. Meanwhile, developed countries as well as many emerging countries are expected to face rapid population aging, as average lifespans increase and birthrates decline. In the world of the 21st century, the most critical shared challenges are to resolve global-scale environmental issues and to provide healthcare that helps people lead healthy, independent lives, which involves delivering high-quality medical care that reduces the burden on both patients and medical staff.

Toray Group has been implementing the Green Innovation Business Expansion Project (Green Innovation Project) since 2011 and the Life Innovation Business Expansion Project (Life Innovation Project) since 2014, and the progress of these projects has been monitored by the Sustainability Committee and other committees. To strengthen the initiatives, in 2018 and 2020 respectively, the Group established and announced the Toray Group Sustainability Vision followed by the Long-Term Corporate Vision, TORAY VISION 2030 to clearly outline the world as envisioned by the Toray Group in 2050. The Group also set KPIs to be achieved by 2030 as long-term milestone targets. Under the Medium-Term Management Program, Project AP-G 2025, announced in March 2023, Toray integrated the Green Innovation and Life Innovation businesses, creating a Sustainability Innovation (SI) Business¹ to better meet diversifying sustainability needs. The Group is now promoting initiatives aimed at expanding the SI Business together with the Digital Innovation (DI) Business², as part of an SI & DI Project.

Through the SI & DI Project, Toray Group aims to help achieve “a net-zero-emissions world, where greenhouse gas emissions are completely offset by absorption” (in other words, a net zero emissions, carbon-neutral world), “a world where resources are sustainably managed,” “a world with a restored natural environment, with clean water and air for everyone,” and “a world where everyone enjoys good health and hygiene” as outlined in the Toray Group Sustainability Vision. The project seeks to do this by expanding Toray’s businesses in areas that contribute to these goals. Here are some specific examples of Toray initiatives under this vision. To accelerate efforts to combat climate change, the Group will expand aircraft and automobile applications for its advanced materials and help reduce CO₂ emissions by improving fuel efficiency through vehicle weight reduction. It will also work to help society transition to renewable energy by supplying materials for wind and hydrogen power applications. For the sustainable, circular use of resources, the Group will also promote initiatives for resource recycling and bio-technology. To help ensure safe water and air, it will proceed with initiatives in areas such as water treatment membranes and air filters. Finally, Toray will expand its products that support health, longevity, improved quality of medical care, and human safety, as well as help the elderly and home-care recipients to live more independent lives.

¹ Sustainability Innovation (SI) business: Businesses or material lines that can help realize the Toray Group Sustainability Vision.

² Digital Innovation (DI) business: Materials, equipment, technologies, and services, etc., based on advanced digital technology.

Structure

To promote activities designed to achieve the Toray Group Sustainability Vision, the Group established the Sustainability Committee headed by the president to serve as a group-wide committee. The committee is tasked with managing and promoting efforts to achieve the Toray Group Sustainability Vision. Toward this end, the committee draws up overall medium- and long-term roadmaps and action plans, deliberates on the yearly action plans for the two group-wide projects—the SI Business Expansion Project and the Climate Change Project—and oversees and manages implementation issues and the status of activities. The Sustainability Committee also collaborates with the CSR Committee, Risk Management Committee, Safety, Health and Environment Committee, and Technology Committee to address climate change-related issues for the entire Toray Group.

Through these projects, Toray Group is contributing to the reduction of greenhouse gas emissions to help achieve a carbon neutral world, as well as promoting the reduction of Toray Group greenhouse gas emissions to become carbon neutral itself. The Group is also accelerating its resource recycling efforts, including recycling and the conversion of key polymers to biomass-based polymers, by developing and promoting group-wide strategies for the implementation of sustainable, circular use of resources.

For more information on the Toray Group governance structure related to the issue of climate change, please refer to the [Toray Group TCFD Report VER. 2](#).

CSR Roadmap 2022 Targets

CSR Roadmap goals

Help address social issues by developing innovative materials and new technologies, focusing on the fields of Green Innovation and Life Innovation

Main Initiatives and Key Performance Indicators

	KPI
(1) Increase revenue from Green Innovation products	7-①
(2) Increase revenue from Life Innovation products	7-②
(3) Expand contribution to CO ₂ reduction in the value chain ³	7-③
(4) Expand water filtration throughput contribution by Toray's water treatment membranes ⁴	7-④
(5) Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy	-
(6) Contribute to the utilization of biomass in and recycling of plastic products, the spread of renewable energy and hydrogen, and the reuse of water resources	-
(7) Contribute to countermeasures to public health risks, including infectious diseases, by developing and upgrading materials and products for protective clothing and personal protective equipment, as well as materials to protect environmental hygiene including of air and water	-

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
7-① Revenue of Green Innovation products (IFRS)	1,000 billion yen (Fiscal 2022)			993.4 billion yen
7-② Revenue of Life Innovation products (IFRS)	300.0 billion yen (Fiscal 2022)			369.6 billion yen
7-③ Contribution to CO ₂ reduction in value chain	5.3 times compared to fiscal 2013 (Fiscal 2022)			9.5 times compared to fiscal 2013
7-④ Contribution of Toray water treatment products	2.4 times compared to fiscal 2013 (Fiscal 2022)			2.5 times compared to fiscal 2013

Reporting scope : Toray Group

3 Toray calculates the value chain CO₂ emissions reduced throughout the entire product lifecycle in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, and the International Council of Chemical Associations (ICCA).

4 Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

Related Materiality for CSR

- Accelerating Climate Change Mitigation
- Promoting a Circular Economy
- Taking a Nature-Positive Approach
- Committed to Healthier Lives
- Developing in Collaboration with Stakeholders

* Click [here](#) for CSR Roadmap 2025 from the perspective of materiality (PDF:392.4KB). [PDF](#)

* Click [here](#) for a PDF summary of the main materiality-related initiatives, KPIs and progress achievements up to fiscal 2022 under the CSR Roadmap 2022 (PDF: 1.6MB). [PDF](#)

Looking to the Future

The consolidated revenue generated by the Green Innovation Project in fiscal 2022 was 993.4 billion yen, an increase of 161.2 billion yen from the previous year. Although sales of resin products were sluggish due to a slump in the automobile markets in Japan and China, sales of carbon fiber for aircraft and wind turbine blades, as well as water treatment membranes were strong.

The contribution to the reduction of CO₂ emissions and the expansion of water treatment from the use of Toray Group products throughout the value chain increased due to business expansion. The Group will continue to help address resource, energy, and global environmental issues through its businesses.

The consolidated revenue generated by the Life Innovation Project in fiscal 2022 was 369.6 billion yen, an increase of 61.2 billion yen from the previous year. This was due to increased sales of textiles for sports fabrics and automotive airbags, as well as carbon fiber for sporting-related applications. Toray Group will continue to leverage its strengths in advanced materials, while accelerating activities in the Pharmaceuticals & Medical Products Business.

Worldwide, a range of issues are becoming increasingly interconnected and serious. These include population growth and aging in many countries, as well as climate change, water shortages, and resource depletion. This is inducing a transition to more sustainable modes of production and consumption. Initiatives will be implemented for moving to a circular economy where used products are recovered and regenerated to make new ones. This will enable a further transition from a mass production/mass consumption linear business scheme to business models such as PaaS (products as a service), sharing, product life extension, resource collection and recycling, and circulated supply chains.

In order to better respond to diversifying sustainability needs, in fiscal 2023 Toray Group integrated its Green Innovation and Life Innovation businesses to create the Sustainability Innovation (SI) business. Under the SI & DI Project, the Group is now enhancing its strength by expanding products that meet the aims of the Toray Group Sustainability Vision. These include aims to achieve “a net-zero-emissions world, where greenhouse gas emissions are completely offset by absorption,” (in other words, a net zero emissions, carbon-neutral world), “a world where resources are sustainably managed,” and “a world with a restored natural environment, with clean water and air for everyone,” and “a world where everyone enjoys good health and hygiene.”

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 7 “Contributing Solutions to Social Issues through Business Activities” during the CSR Roadmap 2025 period (fiscal 2023–2025).

CSR Activity Report (CSR Guideline Activity Reports) - Contributing Solutions to Social Issues through Business Activities

Green Innovation Business Expansion Project

CSR Roadmap 2022
Main Initiatives (1)(3)(4)(5)(6)

Revenue of Green Innovation products (IFRS)

■Reporting scope	■Target
Toray Group	1,000 billion yen (Fiscal 2022)

Fiscal 2022 Result

993.4
billion yen

Toray Group embraces the thinking that all business strategies must prioritize responsibility for the global environment in an effort to help build a more sustainable world with a small carbon footprint. The Group is endeavoring to realize this vision by addressing global environmental, resource, and energy issues through the continued implementation of the Green Innovation Business Expansion Project. Under the Medium-Term Management Program, Project AP-G 2022, which began in fiscal 2020, the Group promoted the expansion of environment-related businesses and a challenging target of 1 trillion yen in consolidated revenue by fiscal 2022 based on International Financial Reporting Standards (IFRS). Despite the further challenges created by the COVID-19 pandemic, the Group achieved 993.4 billion yen, which is slightly below the target. Green Innovation businesses have steadily grown since the start in 2011, reaching 40% of the Group's consolidated revenue by the end of fiscal 2022¹. Under the Medium-Term Management Program, Project AP-G 2025, which began in fiscal 2023, the Group has combined its Green and Life Innovation businesses to create the Sustainability Innovation (SI) business, which it aims to further expand.

In fiscal 2022, Toray Group products helped to reduce CO₂ emissions² in the value chain by 365.72 million tons (9.5 times higher than in fiscal 2013) and added 67.00 million tons of water filtration³ (2.5 times higher than in fiscal 2013).

Contribution to CO₂ reduction² in value chain in fiscal 2022

365.72 million tons-CO₂
(9.5 times compared to fiscal 2013)

Contribution of Toray water treatment products³ in fiscal 2022

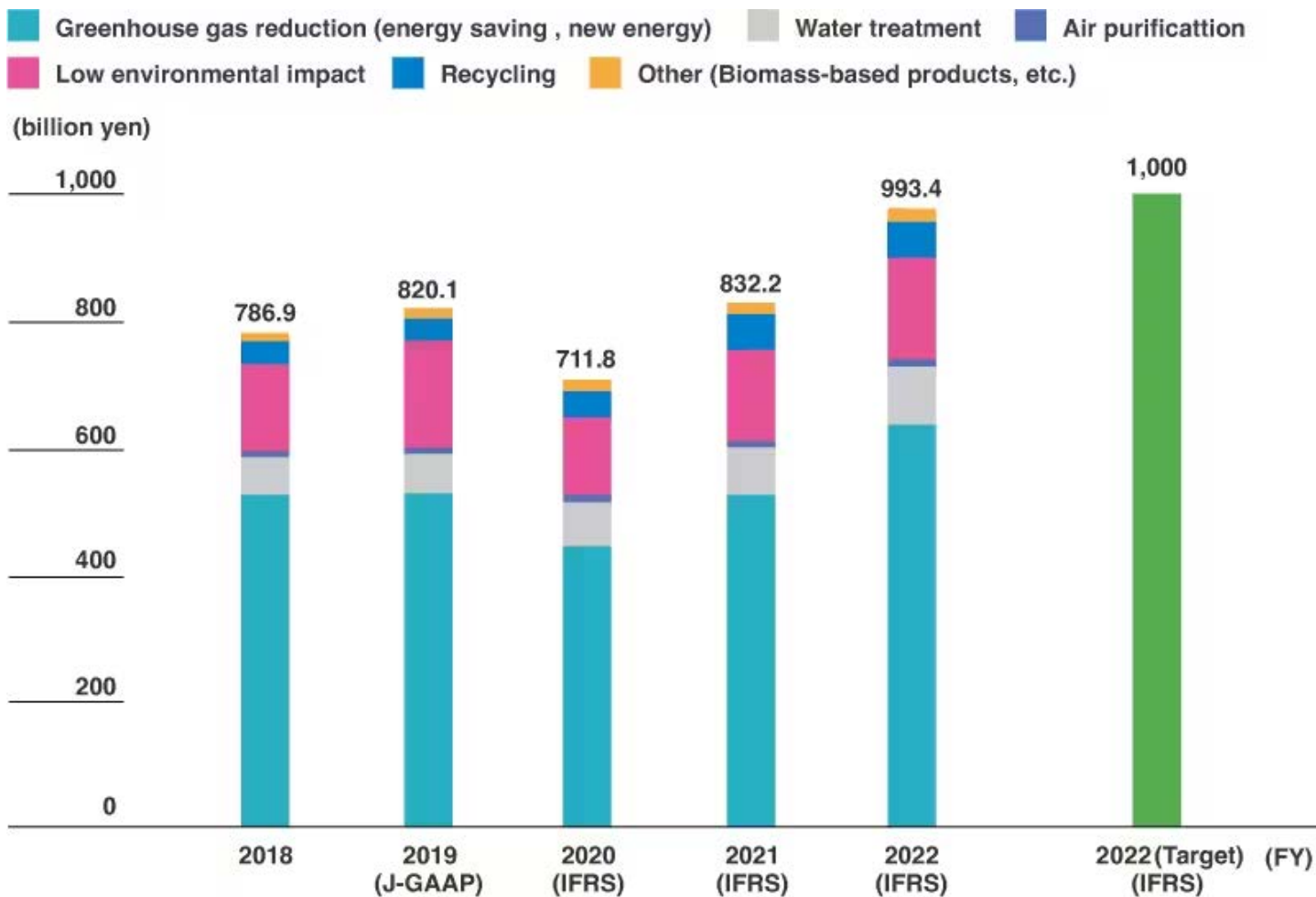
67.00 million tons
(2.5 times compared to fiscal 2013)

1 Some Green Innovation results are also included in the Life Innovation results.

2 Toray calculates the value chain CO₂ emissions reduced throughout the entire product lifecycle in accordance with the chemical sector guidelines of the Japan Chemical Industry Association, and the International Council of Chemical Associations (ICCA).

3 Water treated annually with Toray water treatment membranes. It is calculated by multiplying the amount of fresh water that the Toray membranes can produce per day, including reverse osmosis (RO), ultrafiltration (UF) and membrane separation bioreactors (MBR), by the number of membrane elements sold.

Net Sales (Revenue) from Green Innovation Businesses (Toray Group)



Note: FY 2020-22 performance and FY 2022 target are revenue based on International Financial Reporting Standards (IFRS).

Click [here](#) for the main initiatives for CSR Guideline 7, “Contributing Solutions to Social Issues through Business Activities” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Contributing Solutions to Social Issues through Business Activities

Promoting Life Cycle Management and Initiatives to Reduce GHG Emissions Across Toray Group and its Supply Chain

CSR Roadmap 2022
Main Initiatives (1)(3)(5)(6)

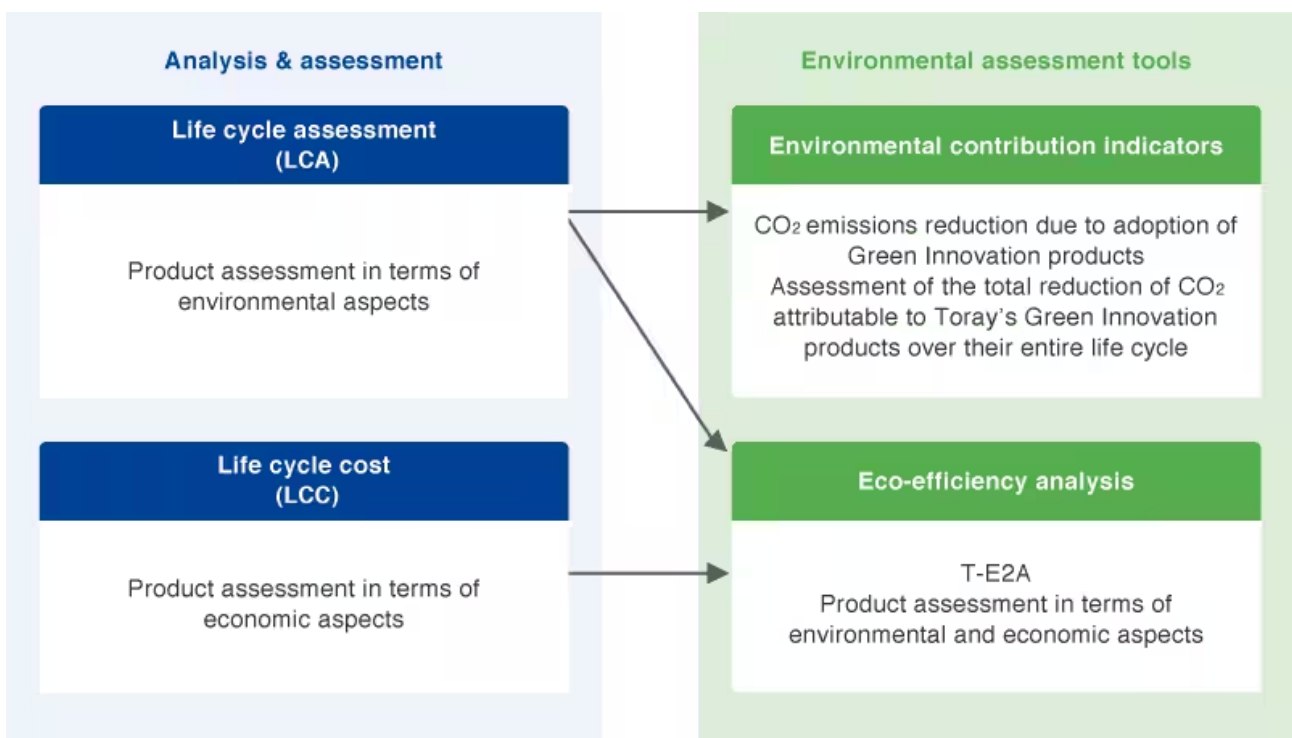
In addressing global environmental issues, it is vital to consider the entire life cycle of products and services in order to reduce environmental impact while also delivering improved economic and social value. In this respect, Toray Group has been promoting life cycle management for some time, while working to reduce greenhouse gas (GHG) emissions throughout the supply chain.

Life cycle management is the basis for Green Innovation products, and the Group has adopted life cycle assessment¹ and the Toray Eco-Efficiency Analysis (T-E2A)² tool.

In an effort to reduce GHG emissions and become carbon neutral, the Group will strive to become carbon neutral in its own business activities, while helping to realize a carbon neutral society by reducing GHG emissions throughout the supply chain.

- ¹ Life cycle assessment is a method for quantitatively assessing the resources that have gone into a product and the impact the product will have on the environment and ecosystems over its life cycle.
- ² T-E2A is an environmental analysis tool developed by Toray Industries, Inc. It produces a map of multiple products plotted along the axes of environmental impact and economic performance, enabling users to select the most environmentally friendly and economical products.

Toray Industries' Life Cycle Management Approach



Click [here](#) for the main initiatives for CSR Guideline 7, "Contributing Solutions to Social Issues through Business Activities" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Contributing Solutions to Social Issues through Business Activities

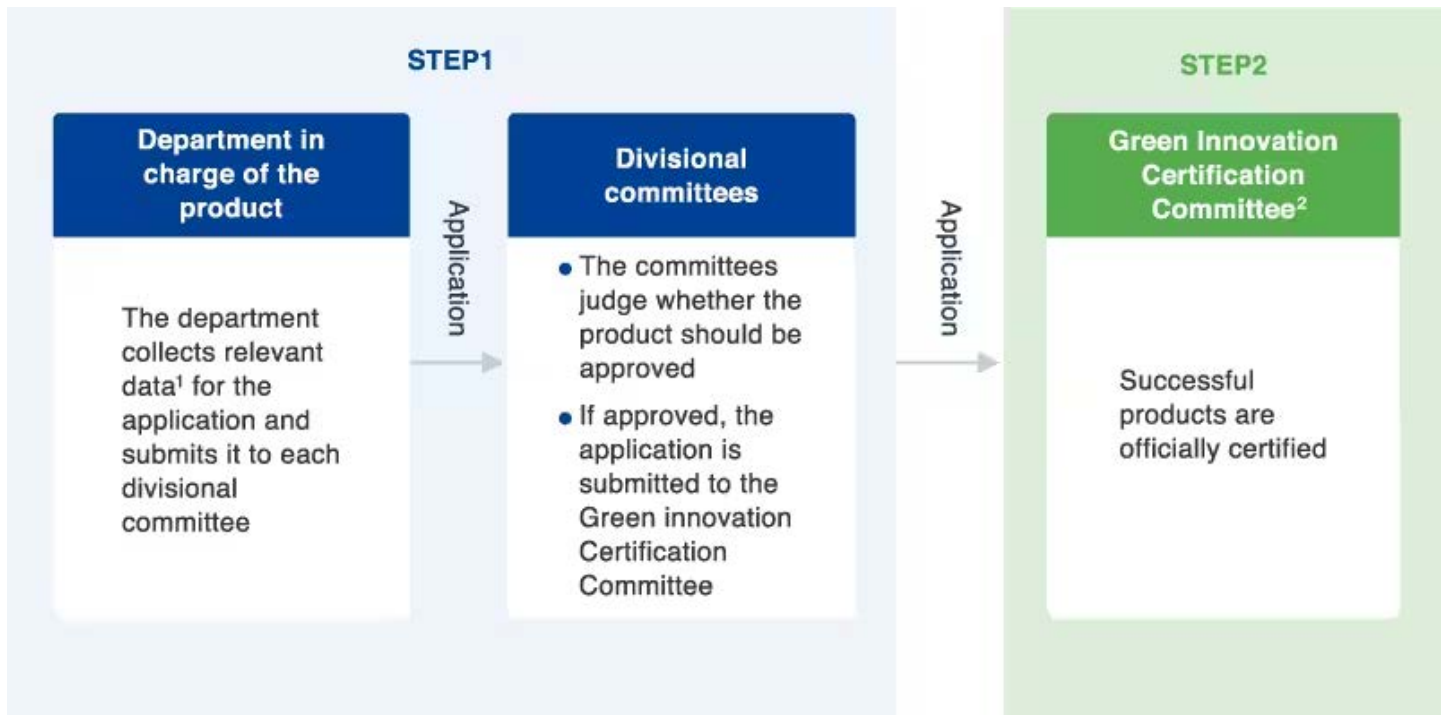
Approach to Green Innovation Products

CSR Roadmap 2022
Main Initiatives (1)(3)(4)(5)(6)

The following diagram outlines Toray Group's process and procedures up until fiscal 2022 for certifying Green Innovation products. Products were subjected to a two-stage screening process conducted by the divisional committees and by the group-wide Green Innovation Certification Committee. Those able to demonstrate objective evidence of providing an effective solution for global environmental issues were certified as Green Innovation products.

As of fiscal 2023, Green Innovation and Life Innovation products have been combined and renamed Sustainability Innovation (SI) products. These are screened by the Sustainability Innovation Certifying Committee (tentative name), which maintains the same certifying system as was used for Green Innovation products.

Green Innovation Product Certification Process



¹ This includes LCA data, T-E2A data, and estimates of CO₂ emissions reduction attributable to the product.

² Comprised of members of Toray Industries' Global Environment Business Strategic Planning Department, Corporate Marketing Planning Department, and Technology Center Planning Department, as well as experts when necessary.

Green Innovation-Related Products and R&D Announced in Fiscal 2022

Toray to Domestically Sell Chemical Recycled Fiber Products Derived from Fishing Nets Expansion of Recovery and Recycling Systems in Japan

Toray Industries plans to begin selling nylon 6 chemically recycled fiber (N6CR) yarns, textiles, and other products in Japan. These offerings apply Toray's depolymerization and repolymerization technology³ to recycled plastics and other materials that Refineverse Group, Inc., makes from recovered fishing nets.

This year, the Company set up a new production system at its Nagoya Plant that identifies virgin raw materials from fossil sources. This setup comprises a raw materials input facility for recycled fishing net-derived resin and recycled lactam storage tanks. This setup will recycle nylon 6 fiber products, accelerate efforts to develop an advanced fiber to fiber recycling business, and contributing to a circular economy.

Toray's new N6CR facility will enable it to overcome technical challenges and reinforce its range of high-performance, high-value-added nylon fibers for apparel. The company looks particularly to expand sales of thin, eco-friendly fabrics for sports and outdoor wear, innerwear, and legwear.

Common applications for industrial nylon fiber are automotive parts, ropes, fishing nets, carpets, and other general industrial materials. Toray's endeavor will help cut environmental impacts across an array of industrial fields and drive uptakes of sustainable resources.

Toray Industries will expand its advanced fiber to fiber recycling business by collaborating with customers in initiatives to sell products incorporating its N6CR materials.



Discarded fishing nets

³ Depolymerization and repolymerization is a process involving the initial breakdown of a polymer into its individual monomer units and removal of any impurities, followed by polymerization of the new monomers to create a new polymer.

Toray Invents 100% Bio-Based Adipic Acid from Sugars Derived from Inedible Biomass, Scaling Up for Application to Eco-Friendly Nylon 66

Toray Industries has developed the world's first 100% bio-based adipic acid, a raw material for nylon 66 (polyamide 66), from sugars derived from inedible biomass. This achievement came from using a proprietary synthesis technique combining the company's microbial fermentation technology and chemical purification technology that harnesses the power of separation membranes.

The Company has started to scale up this process. It will conduct polymerization trials, develop production technology, and conduct market research to commercialize nylon 66 applications by around 2030.

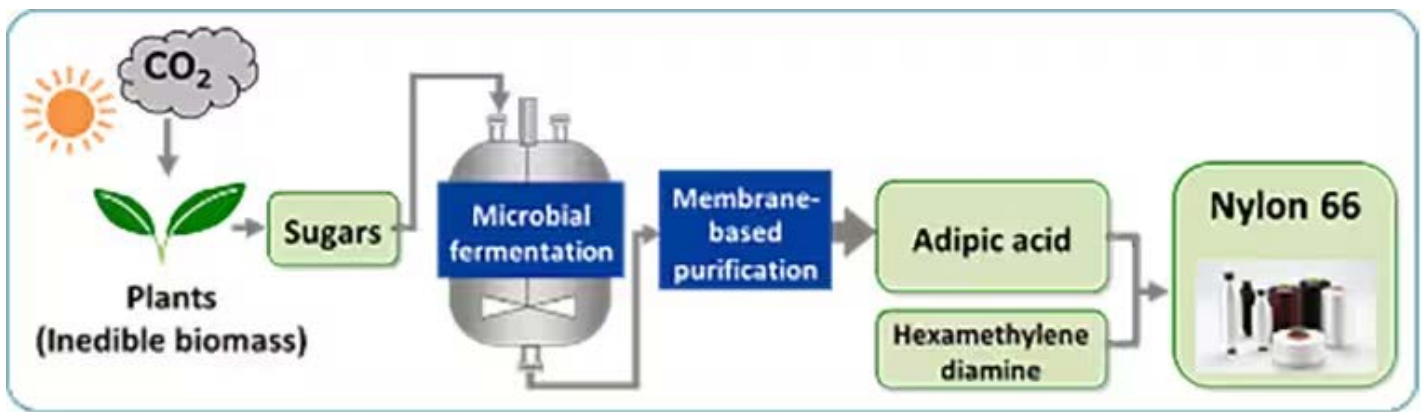
Nylon 66 has been used for many years in fibers, resins, and other applications due to its exceptionally durable, strong, and rigid properties. However, there has been increasing pressure to develop eco-friendly nylon 66. One challenge is that conventional chemical synthesis for producing adipic acid, the raw material of nylon 66, generates a greenhouse gas called dinitrogen monoxide.

Toray Industries was the first in the world to discover microorganisms that produce an adipic acid intermediate from sugars. The company reconfigured metabolic pathways within microorganisms to enhance production efficiency by applying genetic engineering technology, which artificially recombines genes to streamline synthesis in microorganisms. It also employed bioinformatics technologies to design optimal microbial fermentation pathways for synthesis. Quantity of the intermediate synthesized by microorganisms has increased more than 1,000-fold since the initial discovery, and the efficiency of synthesis has improved dramatically.

The Company is using reverse osmosis separation membranes to concentrate the intermediate in the purification process. This approach is more energy efficient than other methods that do not use these membranes.

This bio-adipic acid production technique is free of dinitrogen monoxide emissions, unlike the manufacturing processes for petroleum-derived adipic acid, and is expected to help combat global warming.

Overview of process, from inedible biomass-derived sugars to nylon 66

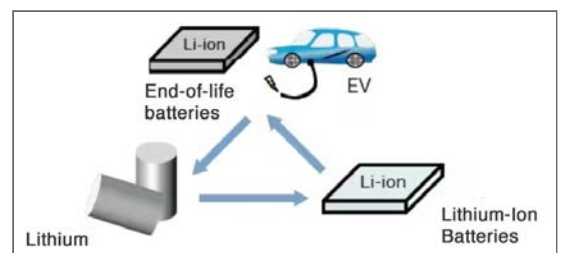


Toray's achievement is partly based on funding from the New Energy and Industrial Technology Development Organization (NEDO), Japan's national research and development agency.

Toray Creates Membrane Separators to Recover Lithium from End-of-Life Lithium-Ion Batteries. A new highly lithium-selective nanofiltration membrane vastly improves acid resistance.

Toray Industries has created a new nanofiltration membrane to recover lithium from end-of-life (EOL) automotive lithium-ion batteries (LIBs) which are expected to be generated in large quantities in the future and are currently largely disposed of. The Company is already starting to evaluate recovery using actual leachate from EOL LIBs and will accelerate research and technological development to commercialize its approach.

Demand for lithium resources should surge with electric vehicle uptake. The challenge with the mainstream evaporation pond process⁴ for lithium production is that the number of high-output locations is limited. The alternative to this is the ore process⁵ which has issues with its lengthy production process and high-temperature heat treatment, generating high carbon dioxide emissions and increased costs which could drive lithium-ion battery prices even higher.



Lithium recovery from end-of-life lithium-ion batteries



Lithium separation using nanofiltration membranes

Nanofiltration membranes can selectively separate dissolved multivalent ions and organic matter. Prime uses of these membranes are to filter ground and river water hardness and agricultural chemicals. They also desalinate and purify in food and biotechnology applications. One downside of conventional nanofiltration membranes is their vulnerability to highly acidic solutions, limiting their application to neutral solutions. Another is insufficient selectivity for multivalent ions, hampering separation efficiency. Prevailing membranes thus cannot be used to recover valuable metals from potent acid EOL LIB leachates.

Toray Industries created a new cross-linked polymer membrane with high acid resistance and a precision pore structure smaller than 1 nanometer. This success is the result of using organic synthesis, polymer chemistry, and nanotechnology after analyzing membrane degradation by acids and optimal membrane pore structures for selective separation. The acid-resistance of this membrane is around five-fold higher than conventional offerings, with the selectivity being 50% greater.

Toray's technology will streamline the recovery of valuable metals and make it possible to recover high-purity lithium in high yields. Carbon dioxide emissions from recovering 1kg of lithium compound using Toray's nanofiltration membrane process are nearly two-thirds lower than from the ore process.

Going forward, the Company will collaborate with automakers, battery and battery material manufacturers, recyclers, and other partners to establish a lithium recycling process. Toray Industries stands to help realize a carbon-neutral economy by eliminating the shortages of lithium that will become a significant concern amid the penetration of electric vehicles.

4 Evaporation pond process: Lithium compounds are produced by pumping brine from a salt lake, concentrating it under the sun for six to twelve months, and refining it.

5 The ore process: Lithium compounds are produced by dressing, roasting, leaching, and refining ore after mining.

Click [here](#) for the main initiatives for CSR Guideline 7, "Contributing Solutions to Social Issues through Business Activities" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Contributing Solutions to Social Issues through Business Activities

Realizing a Circular Economy

CSR Roadmap 2022
Main Initiatives (1)(3)(5)(6)

As a manufacturer of a wide range of materials, Toray Group has been promoting various recycling initiatives to ensure that the earth's resources are efficiently utilized.

In the Toray Group Sustainability Vision, the Group outlines “a world where resources are sustainably managed,” as one of the perspectives of the world as envisioned in 2050. Conventional societies face a variety of problems, including the depletion of resources, marine pollution caused by large amounts of waste, and CO₂ emissions. In order to solve these problems and realize a sustainable, circular economy that makes effective use of resources, the Group facilitates recycling of plastic products, switching to biomass for raw material, adopting renewable energy and hydrogen, and reusing water, across its various technologies.

In its Medium-Term Management Program, Project AP-G 2022, Toray Group identified helping to build a circular economy as a key issue. An initiative example in this area is material recycling¹, which enables the reuse of products such as fibers/textiles, resins, and films. In addition, chemical recycling,² which converts products that are difficult to mechanically recycle back into basic chemicals such as monomers and gases, is already implemented for nylon fiber/textile products.

Toray Group is also working to develop materials that use bio-based instead of fossil resources, and membrane-integrated bioprocess technology, which efficiently produces these raw materials. Moreover, the Group is promoting carbon recycling, the use of CO₂ as a resource with our gas separation membranes. Toray technology is also used in the materials for the wind turbine blades and hydrogen production equipment that utilize renewable energy sources to generate electricity and hydrogen used in manufacturing processes, as well as in the water treatment membranes for the reuse of wastewater.

Under the Medium-Term Management Program, Project AP-G 2025, launched in fiscal 2023, Toray Group has set out helping to build a circular economy as an important objective. Accordingly, the Group aims to improve the value of its products and businesses by promoting further R&D. Additionally, Toray has identified the risks and opportunities associated with the transition to a circular economy as follows.

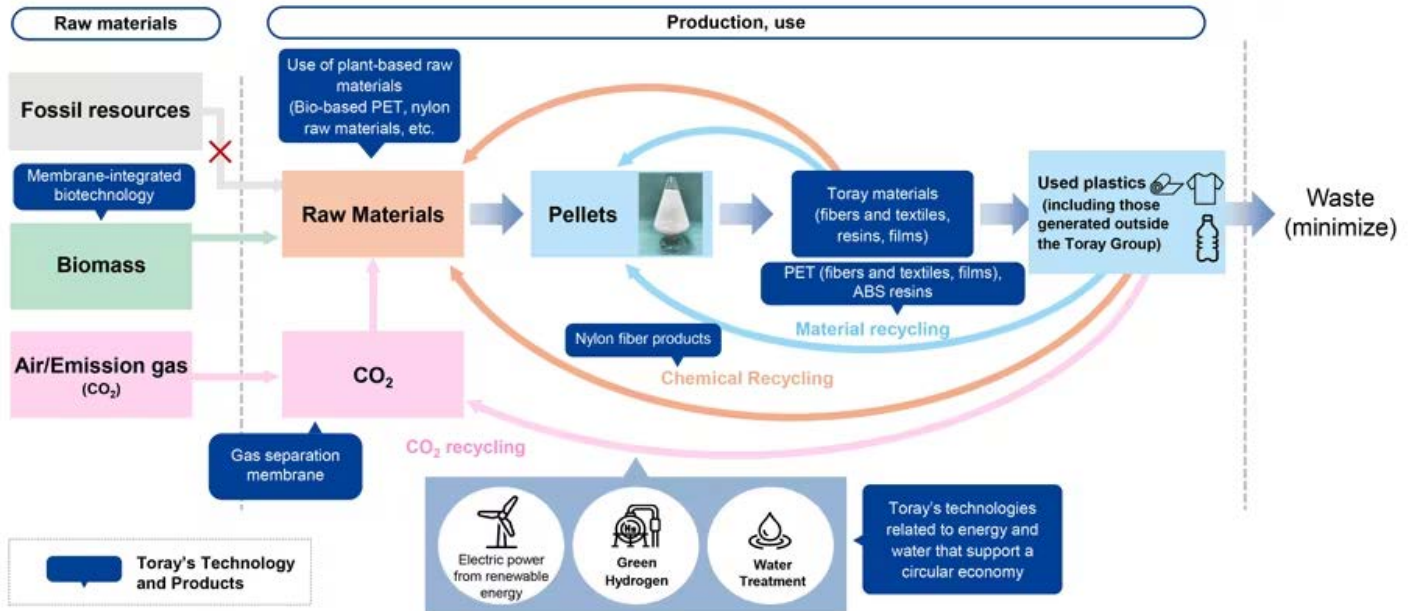
Risks

- Increased cost of waste processing
- Contraction of the materials market due to a shift away from mass production and consumption
- Lost opportunities due to any delay in adapting to the circular economy

Opportunities

- Growth of biomaterials business
- Growth of recycled materials business
- Growth of businesses that help reduce waste (waste reduction, and product durability)

In order to reduce the risks and maximize the opportunities, the Group intends to promote its biomaterials business and recycling as outlined below. In promoting these, Toray is also helping to create systems that can lay the foundation of a circular economy. These efforts include not only Toray Group's own activities, but also collaboration with recyclers (e.g. PET bottle recycling with Kyoei Industry Co., Ltd., and discarded fishing net recycling with Refineverse Group, Inc.), and collaboration with customers (e.g. fishing net-to-net recycling with Nitto Seimo Co., Ltd. and Maruha Nichiro Corporation).



- 1 Material recycling is a recycling process that uses heat to convert discarded plastic bottles and remnants produced during manufacturing processes into yarn, staple fiber, and other materials.
- 2 Chemical recycling is a recycling process that breaks down through depolymerization used products and remnants produced during manufacturing processes into monomers that are manufactured back into chips and then recycled into yarn, staple fiber and other materials.

Toray Group's target percentage of raw materials sourced from biomass and other recycled is 20% to be achieved by fiscal 2030 for core polymers (polyester and nylon). The actual rate in fiscal 2021 was only a few percent, and to achieve the 2030 target the Group will continue to promote recycling and the switch to biomass for raw materials.

Related Information

For more information on Toray Group waste reduction, chemical management, energy conservation, and climate change measures, please visit the website below.

> [Safety, Accident Prevention, and Environmental Preservation](#)

Recycling Activity Principles Established in March 2004

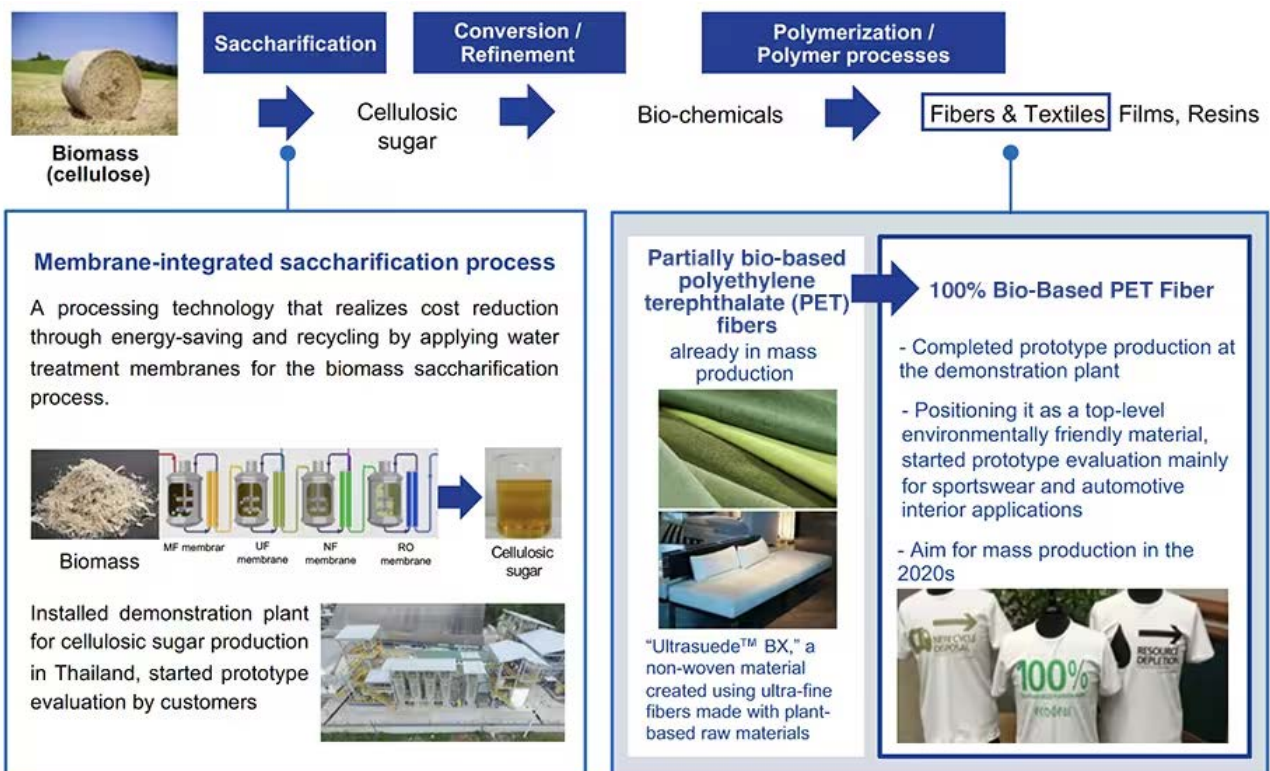
1. We shall design, produce, and sell products that reduce our impact on the environment.
2. We shall purchase and use materials and products which will help reduce our impact on the environment.
3. We shall disclose information related to recycling programs and recycled goods.
4. We shall voluntarily cooperate with customers to recycle or otherwise appropriately dispose of our products.

Toray Group is promoting initiatives related to biomaterials under a unified brand, Ecodear™. It is developing these products using raw materials derived from biomass-based resources rather than fossil resources. For example, Toray Group mass produces partially bio-based polyethylene terephthalate (PET) fibers that are made from plant-based ethylene glycol, derived from molasses byproducts. These fibers are also used to make Ultrasuede™ PX and Ultrasuede™ BX synthetic suede texture fabrics. Toray Group is also proceeding with trial sales of 100% bio-based PET fiber, while developing membrane-integrated bioprocesses for the in-house production of biomass-based raw materials. The Group has recently developed and launched Ecodear™ N510, a nylon fiber made from 100% plant-based raw materials.

100% Bio-Based PET Fiber, Membrane-Integrated Bioprocesses

Toray Group is positioning its 100% bio-based PET material made from molasses-derived ethylene glycol and bio-para-xylene produced at its pilot plant, as one of its top environmentally conscious products. Toray Group seeks to launch mass production of these materials for sportswear and automotive interior applications as early in the 2020s as possible.

Toray Group is also developing a membrane-integrated bioprocess to enable bio-based raw materials to be manufactured with greater efficiency. This membrane-integrated bioprocess combines membrane separation technology and biotechnology to create new applications for water treatment membranes in processes such as saccharification, fermentation, and purification. The technology significantly improves the manufacturing of raw sugar from non-edible biomass and increases fermentation efficiency, thereby contributing to realizing biomaterials made from biomass-based raw materials. Toray Group is currently operating a technology demonstration project for a saccharification process that produces sugars from nonedible biomass. Toray Group will work to commercialize the technology, in order to build a supply chain that produces materials and chemicals from non-edible biomass.



At Toray Group, Ecouse™ is the unified brand for recycling-related initiatives across a wide range of business segments including fibers & textiles, plastics, and films. These products include fibers made by recovering and recycling discarded PET bottles and scrap ends generated from manufacturing processes, recycled resin made from scrap ends generated during manufacturing and collected used products, as well as films made by recovering and recycling films that have been used in customer processes.

In the fiber/textile segment, Toray Group uses discarded plastic (PET) bottles as raw materials, along with filtering and cleaning technologies to remove foreign matter, making it possible to develop a wide variety of recycled products. In 2019, Toray Group introduced the &+™ (“And plus”) brand of recycled fibers that include Toray’s original traceability function. After rebranding in April 2023, the Group added recycled fiber products made using nylon recovered from discarded fishing nets to the &+™ brand. Through initiatives to encourage the recovery of recyclable items, the brand is promoting support for and participation in Toray’s recycling efforts.

By utilizing waste fibers, resin, and film, the Group is promoting initiatives to create systems that recycle materials for various uses.

Fiber and Textile Recycling

&+™ Fiber Brand Derived from Recycled Plastic Bottles

Previously, fibers derived from recycled plastic bottles were limited in variety due to contaminants mixed into raw materials, which made it difficult to produce special cross-sections and fine fibers. In response, Toray together with Kyoei Industry Co., Ltd. developed contaminant filtering technology and advanced plastic bottle cleaning techniques to stabilize the supply of high-quality raw materials. Combining these technologies with Toray’s fiber production technology, it is possible to achieve the same level of diversity in fabric applications as with fiber materials made directly from fossil resources. Moreover, Toray has commercialized its highly reliable polyester fiber under the &+™ brand by incorporating its proprietary traceability technology that can detect special additives premixed in with plastic bottle-based raw materials. In January 2020, Toray Industries began full-scale sales of &+™ brand products. Going forward, the goal is to expand the scale of the brand by utilizing a diverse supply chain that includes textiles and sewn products, as well as fibers, and involves production sites around the world. The Group is also creating a unique recovery scheme for discarded fishing nets in collaboration with a recycling company and a fishing net manufacturer. The nylon in the recovered nets will be used for a newly released recycled nylon fiber material sold under the &+™ brand. Through the production and sale of high-value-added recycled nylon fiber based on Toray’s chemical recycling technology, the Group aims to raise awareness of the need to help recover discarded fishing nets and is working to further promote the activity. The Group also intends to expand its recycled fiber material lineup to enable product planning that will further satisfy the needs of consumers.

> [&+™ \(product site\)](#)

PET Bottle Recycling Process to Make &+™ Products



³ &+™ fiber can be made into a wide variety of textiles. It is therefore used in a wide range of clothing including fashion garments and sportswear, by meeting diverse needs for functionality and texture.

Clean PET bottles that have been properly sorted are transformed using various recycling processes into high-quality &+™ PET fiber.

Promoting Recycling with UNIQLO

Together with UNIQLO, Toray is promoting new initiatives for sustainable products, with Toray supplying fibers made from recycled plastic bottles for UNIQLO's quick-drying wear DRY-EX brand polo shirts starting in 2020. In addition, UNIQLO stores are collecting used down items from customers to recycle the feathers. Conventionally, the stuffing in duvets and other objects incorporating down is manually removed. Such processes are arduous with Ultra Light Down items because of their thin outer fabric and complex construction. By developing special extraction machinery, Toray has fully automated cutting, stirring and separating, and recovery, for 50-fold the process capacity of manual processes, thus greatly alleviating workloads. Toray and UNIQLO are jointly developing new recycling-based down products from recycled feathers.

Resin Recycling

CSR Roadmap 2022
Main Initiatives (1)(3)(5)(6)

Toray Group is developing sustainable resin materials through recycling and the use of bio-based raw materials. In the area of resin recycling, the Group is developing and distributing recycled resins based on a proprietary formulation design using material and chemical recycling (depolymerization chemical recycling), which breaks down polymers into monomer raw materials before re-polymerizing them.

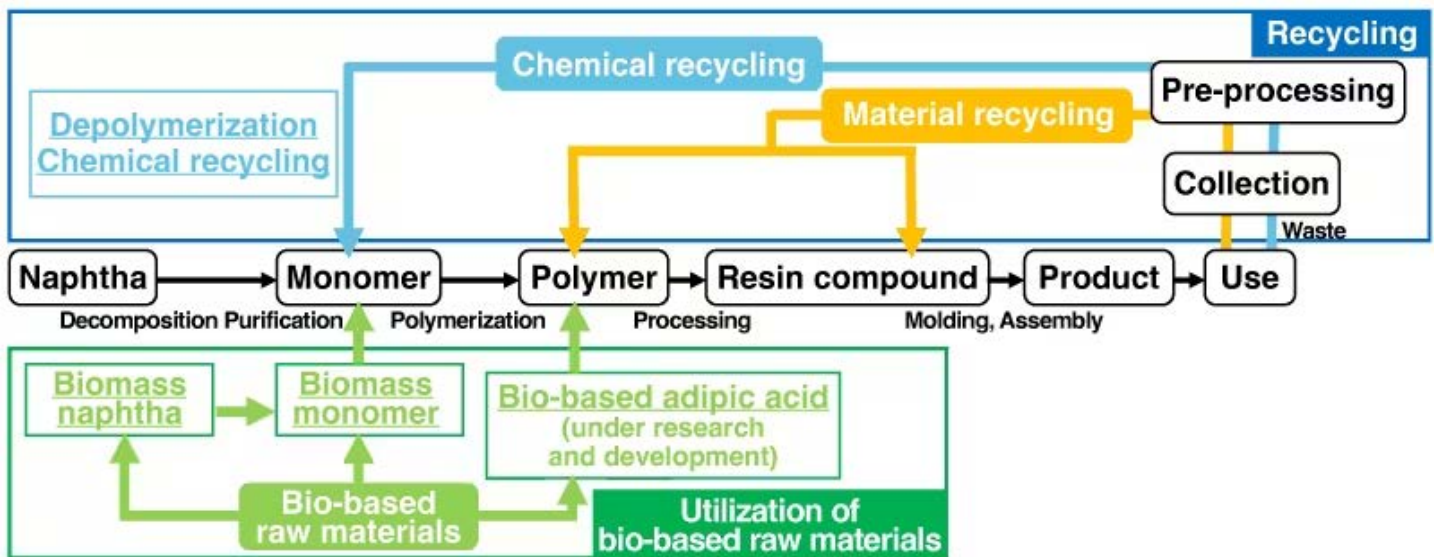
Going forward, Toray will actively work to recycle resin using post-consumer material for recycling, thereby promoting sustainable resource utilization.

Furthermore, Ecouse™, a group-wide unified brand for recycled materials and products, will be expanded to include resins, and the development of the Ecouse™ series of environmentally friendly resin materials will be accelerated.

1. Recycled nylon 66 “Ecouse”AMILAN™: Toray has developed a recycled nylon 66 resin compound that is made by removing silicone from airbag fabric scrap cuttings, and then washing the remaining material. With Toray’s proprietary additive compounding technology, residual silicone resin is prevented from migrating to the surface of molded products, and mold adhesion is also significantly reduced. Accordingly, the flowability and mechanical properties of recycled nylon 66 “Ecouse”AMILAN™ are on par with injection molding grades derived from virgin raw materials.
2. Recycled PBT resin (polybutylene terephthalate) “Ecouse”TORAYCON™: Toray has launched a recycled PBT resin, “Ecouse”TORAYCON™, as a chemically recycled resin with physical properties comparable to virgin materials.
3. Recycled PPS (polyphenylene sulfide) resin “Ecouse”TORELINA™: Toray has developed a material recycling technology for glass fiber reinforced PPS resin.

In the area of bio-based raw material use, in 2023 Toray plans to launch biomass-based acrylonitrile butadiene styrene (ABS) resin made using the mass balance method (after ISCC Plus certification) by employing styrene monomer derived from biomass naphtha (biomass styrene monomer made using the mass balance method).

Resin Resource Recycling Initiatives

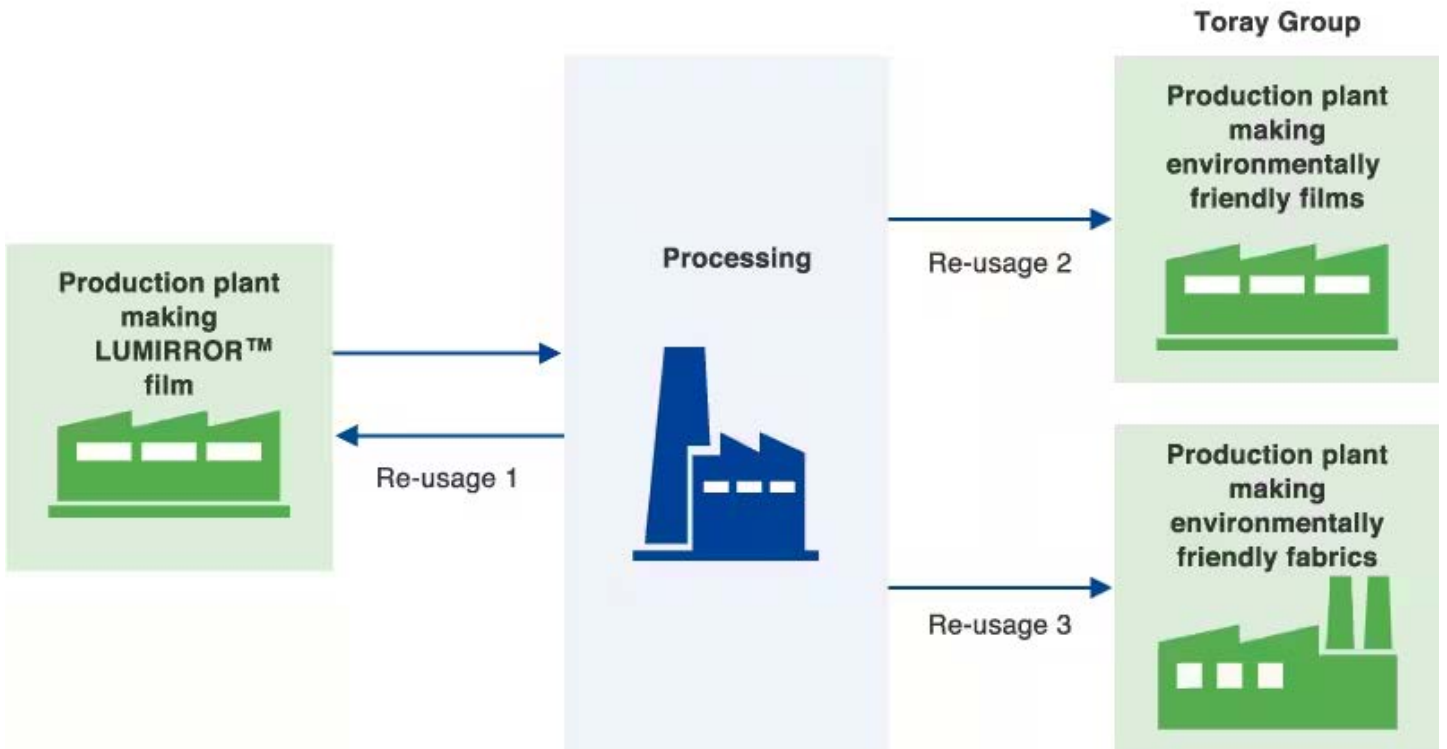


Film Recycling

CSR Roadmap 2022
Main Initiatives (1)(3)(5)(6)

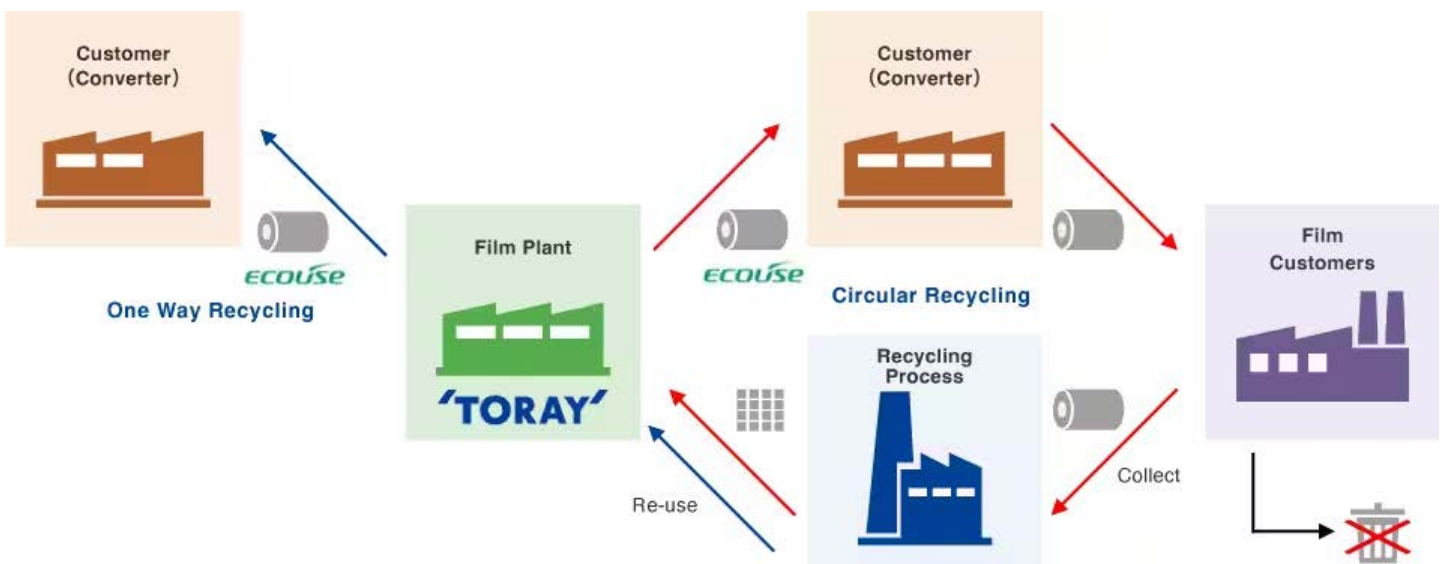
Toray Industries is promoting production activities that use resources carefully by using PET in such forms as waste from the PET film LUMIRROR™ manufacturing process to make eco-friendly textile and resin products and film. In addition, the Company operates a recycling system for collecting used PET film from customer manufacturing processes to be recycled and reused as raw material for film.

Processing and Re-using Recovered Raw Materials Generated from Manufacturing Processes



Reusing waste PET film from customer manufacturing processes

Toray Industries has established a recycling system to collect used films from electronic component applications and recover them for use in producing films, launching the Ecouse™ series, which is helping to create a world where resources are managed sustainably. The company combined mechanical recycling process technology, which removes coating materials and resins from film surfaces, with foreign matter removal techniques for each manufacturing process to enable reuse of the recovered materials in films without impairing mechanical characteristics or reliability. These PET films have reduced the amount of fossil-based resin used as a raw material and can therefore lower CO₂ emissions by up to 50% compared to conventional films. The Company will continue to make use of this system to help build a circular economy.

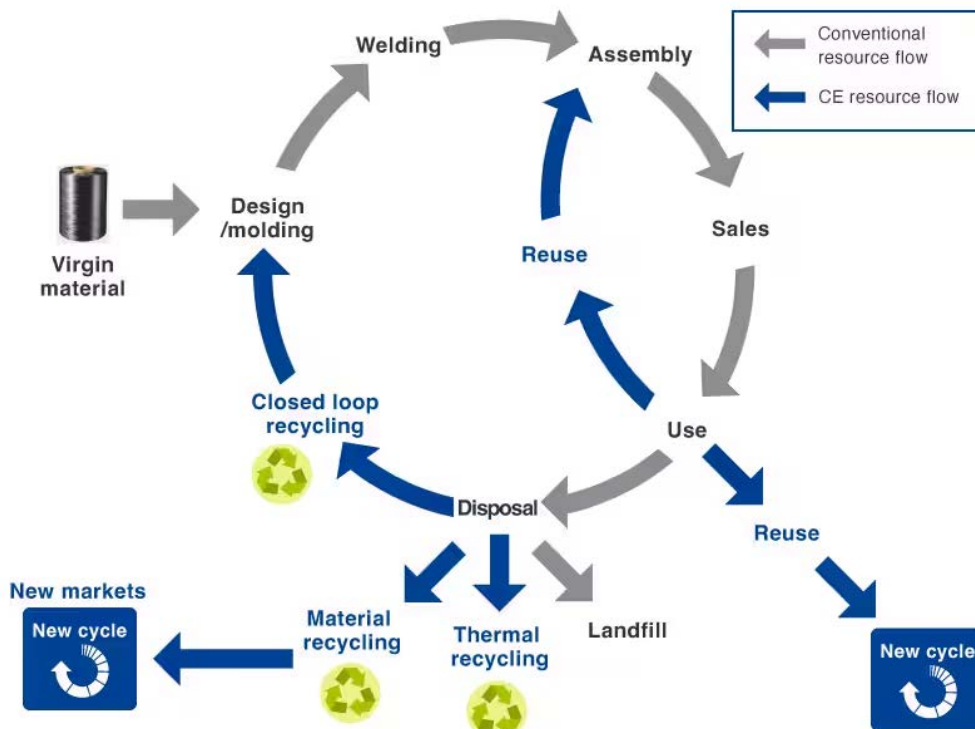


Due to its excellent mechanical properties, carbon fiber allows products to be lighter and last longer. Therefore, it is a material that significantly curbs CO₂ emissions over the entire lifecycle of the products, including their operation, contributing to solutions for global environmental issues. In particular, the use of carbon fiber in environmental products such as large wind turbines, aircraft, and hydrogen tanks significantly reduces CO₂ emissions during their operation. As demand grows, market expectations for the development of carbon fiber recycling technologies are also on the rise.

The successful development of recycled carbon fiber and associated applications requires collaboration with a wide range of customers to explore various possibilities for use in specific parts and materials. Toray Industries collaborated with Toyota Tsusho Corporation in a program of the New Energy and Industrial Technology Development Organization (NEDO) for the development of a highly efficient recycled carbon fiber manufacturing technology that uses an innovative and energy-efficient thermal decomposition method⁴, and completed the project in 2017. This new technology uses combustible gas from matrix resin as the energy source for the thermal decomposition process, which is the process that consumes the most energy in this type of carbon fiber recycling. As a result, the companies have significantly reduced the amount of energy consumed in the recycling process. As a result, the companies have significantly reduced energy consumption and CO₂ emissions in the recycling process to less than one-tenth of the energy consumption and CO₂ emissions of virgin carbon fiber production. With an eye towards future commercialization, Toray Industries constructed and began to operate a pilot plant to test energy-efficient recycled carbon fiber manufacturing technologies. In addition, Toray Group will work with its customers to promote the development of new applications for recycled carbon fiber.

Through these efforts, the Group aims to establish a circular flow of carbon fiber that will help drive a circular economy. (See chart below.)

Establishing a Circular Economy (CE) That Uses Recycled Carbon Fiber

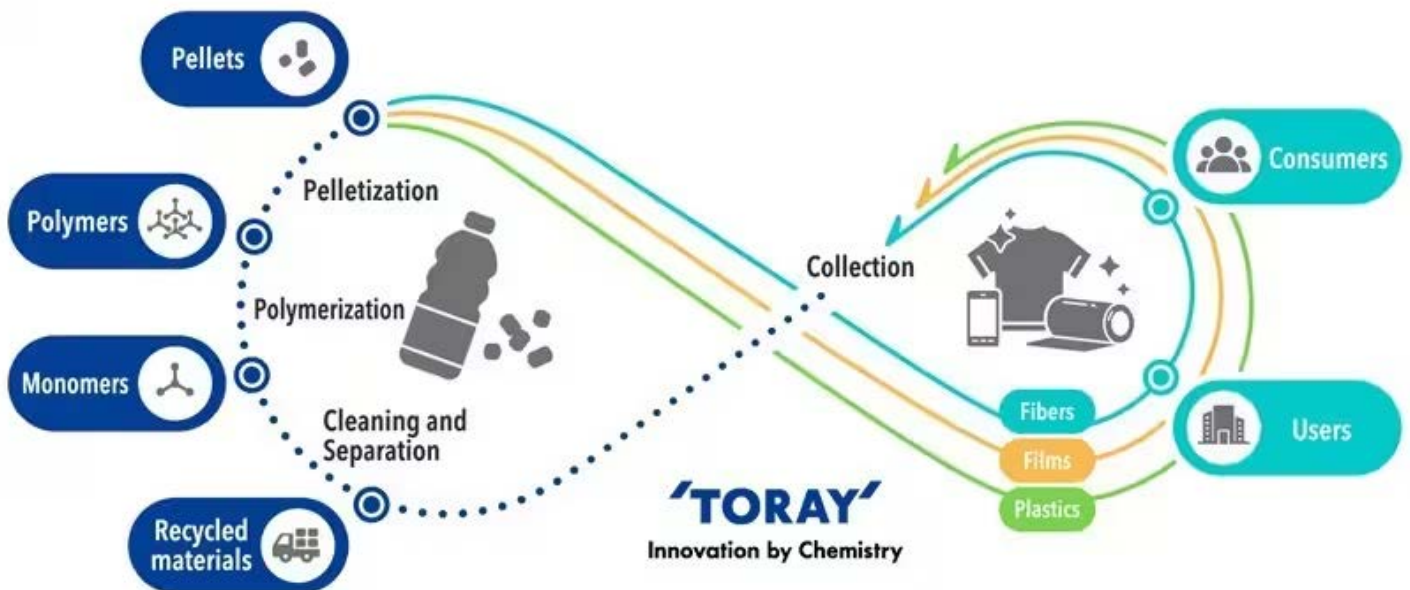


⁴ Thermal decomposition method: A recycling method in which carbon fiber is recovered by heating carbon fiber composite materials and thermally decomposing the matrix resins.

Blockchain-based Traceability

Since recycled materials basically have the same physical properties as virgin materials derived from fossil resources, traceability is important for assuring customers that the material has actually been recycled. Therefore, Toray is using blockchain technology to create a traceability system based on manufacturing and transport data from the supply chains of Toray Group products. The technology prevents input data from being tampered with.

Blockchain-based Traceability System



Click [here](#) for the main initiatives for CSR Guideline 7, “Contributing Solutions to Social Issues through Business Activities” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Contributing Solutions to Social Issues through Business Activities

Life Innovation Business Expansion Project

CSR Roadmap 2022
Main Initiatives (2)

Revenue of Life Innovation products (IFRS)

■Reporting scope	■Target
Toray Group	300.0 billion yen (Fiscal 2022)

Fiscal 2022 Result

369.6
billion yen

In the field of health and medical care, the world has entered a period of historic change. The threats posed by the COVID-19 pandemic and the impact of climate change on healthcare have been added to the existing challenges of declining birthrates and aging populations in developed countries, climbing social security costs, and global healthcare disparities.

Toray Group's life science business helps to support health and medical care, especially through polymer material research, which Toray Group has pursued since its establishment.

The Life Innovation Business Expansion Project started in fiscal 2014 with the launch of the Medium-Term Management Program, Project AP-G 2016. Life Innovation is a group-wide project aimed at improving health by making the most of Toray Group's advanced materials, core and elemental technologies, and business platforms. The project focuses on businesses that can improve the quality of medical care, reduce the burden on medical staff, and support people's health maintenance and longevity.

Furthermore, under the Medium-Term Management Program, Project AP-G 2022, which was initiated in fiscal 2020, Toray Group has been adding businesses related to personal safety products, including ones that help protect people from infectious diseases, extreme weather (heat waves, etc.), disasters, and accidents, while strengthening these businesses.

Product Definitions and Guidelines

Improving the quality of medical care and reducing burden on medical staff

- Products used in medical treatment, products used in medical testing and diagnosis, supplies/products used in medical institutions

Supporting a society where people everywhere can live long, healthy lives

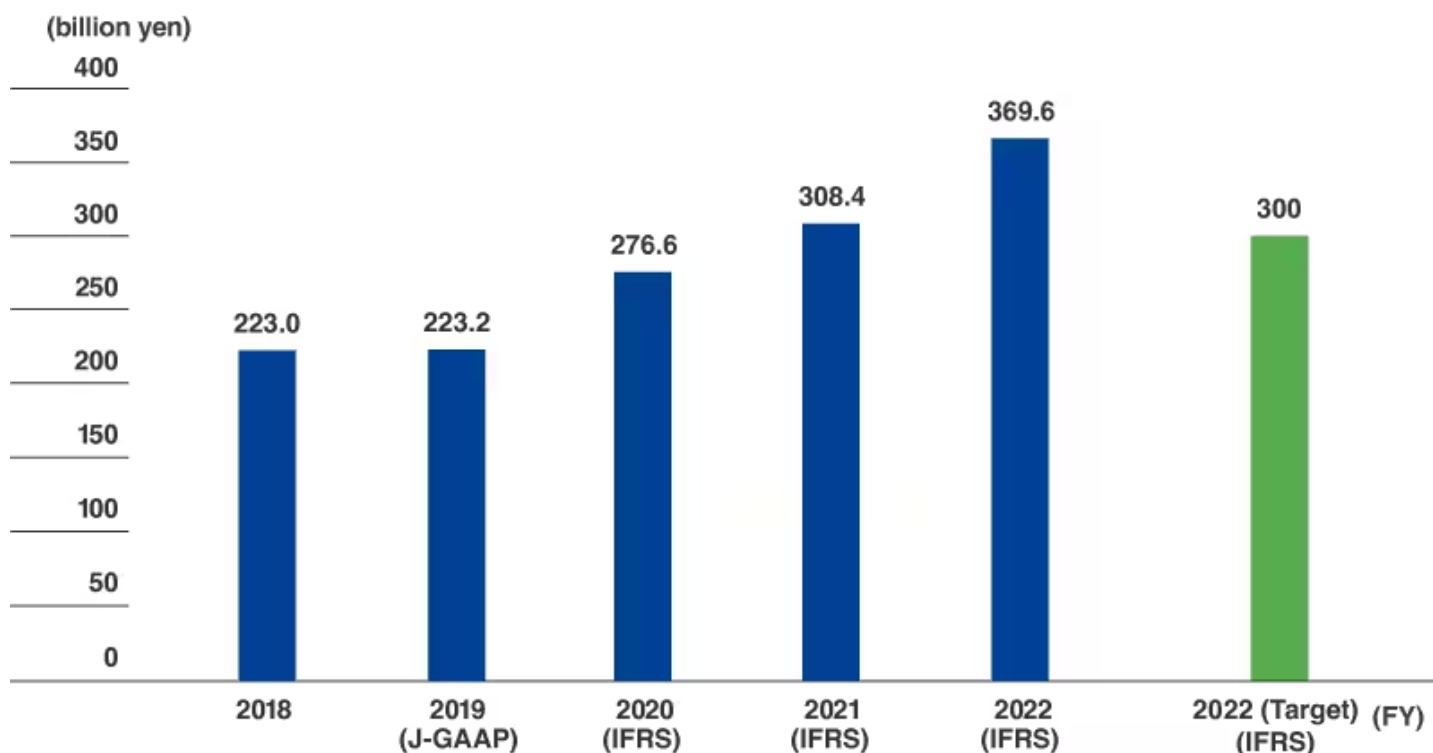
- Maintaining wellness, health, and independent living, improving activities of daily living (ADLs) for the elderly and home-care recipients, reducing the burden on care givers (nursing staff and families), and addressing public health issues

Supporting personal safety

- Leveraging materials to protect people from disasters, extreme weather (heat waves, etc.), accidents, and infectious diseases

With the addition of personal safety products to the Life Innovation business area in fiscal 2020, net sales (“revenue” from fiscal 2020) for these businesses have steadily increased from 142.2 billion yen in fiscal 2014 to 369.6 billion yen in fiscal 2022, surpassing the target of 300 billion yen for that year. The level has reached 15% of Toray Group's consolidated revenue.

Net Sales (Revenue) of Life Innovation Businesses (Toray Group)



Note: FY2020-22 performance and FY2022 target are revenue based on International Financial Reporting Standards (IFRS).

Under the Medium-Term Management Program, Project AP-G 2025, launched in fiscal 2023, the Life Innovation business has been combined with the Green Innovation business to create the Sustainability Innovation (SI) business, with the aim of further business expansion.

Toray Launches LIVMOA™ 4500AS Disposable Personal Protective Clothing Conforming with Japanese Standard for Chemical Spray Resistance

Toray Industries, Inc. has developed LIVMOA™ 4500AS disposable personal protective clothing. The new offering conforms with the JIS T 8115 Type 4 standard for the chemical spray resistance of chemical protective clothing. It also offers excellent dust protection and breathability and outstanding water resistance from the addition of seam tape.

Toray developed the fabric for this product in 2021. It employs a highly durable SMS (spunbond + dense, water-resistant meltblown + spunbond) nonwoven, antistatic fabric. This fabric protects against dust and can withstand a water pressure of 1,000mm H₂O (where the water pressure resistance at seams is less than 1,000 mm H₂O¹), which is hard to achieve with regular SMS fabric. Toray believes that LIVMOA™ 4500AS is the world's first clothing to be Type 4-compliant while delivering an air permeability of around 7 cc/cm² per second². This new product can provide protection in a variety of tasks in which water resistance is vital. They include controlling dioxin levels at waste incineration facilities and performing major regular factory repairs. They also encompass work at chemical plants, maintenance, working in dirty areas, or removing asbestos.

Since debuting the LIVMOA™ series in 2017, Toray has broadened the lineup to cater to diverse applications, including dust protection, infection control, and clean rooms. It will keep developing offerings that combine comfort and functionality for various needs.



LIVMOA™ 4500AS

¹ Seams are resistant to under 1,000mm H₂O water pressure.

² Based on Toray research

Toray Develops Antiviral Particles³ that Deactivate Viruses Almost Immediately

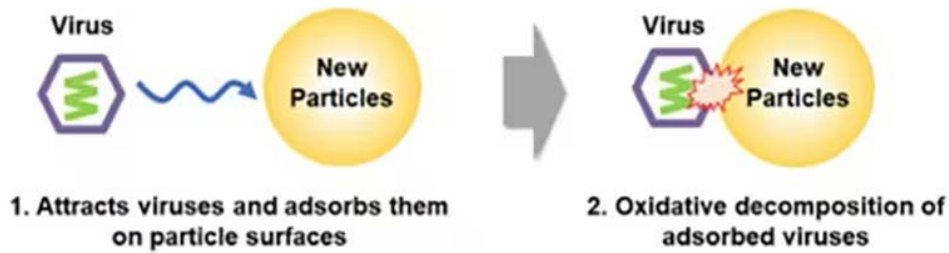
Conventional disinfection with antiseptic solutions and other chemicals is effective and fast-acting on viral infections. The downside, however, is short volatilization, necessitating regular disinfections. While non-volatile metal-based antivirals offer generally lasting protection, the issue is that many of them take at least an hour to deactivate 99.9% of viruses.

Toray responded to that situation by developing antiviral particles that deactivate 99.9% or more of SARS-CoV-2 virus (the cause of COVID-19) strains in just 15 seconds and 99.99% or more of the strains within 5 minutes. The company achieved this by adding virus adsorption and oxidative degradation capabilities to cerium oxide particles through proprietary synthesis and surface treatment techniques. Toray drew on functional particle design, synthesis, and surface control technologies that it has developed over the years. The new particles deactivate viruses around 100 times faster than conventional metal-based antiviral agents. They are thus among the world's quickest deactivation delivery vehicles.

Another benefit is that the particles do not volatilize and are lasting protection. That is because they do not use the virus deactivation principle of slow releases with drugs, metal ions, or other active ingredients. The particles also offer excellent safety and resist discoloration and corrosion.

Prospective media for the particles include building materials, paints, and packaging materials. They could thus be deployed in diverse products, including in public spaces in which numerous people might gather, necessitating measures to safeguard from virus infection. Other targets could be public transportation facilities, restaurants, medical and eldercare facilities, interior walls and railings at schools, and regular appliances and food packaging. Antiviral particles could coat or be kneaded into diverse items. These could include non-woven fabrics for Toray's masks and medical gowns, air filters, car seats, and other products that could benefit from these particles to prevent droplet and contact infections. Toray will gradually roll out test samples of the particles to customers.

Viral inactivation principles for Toray's particle



3 The creation of these particles stemmed partly from a joint research effort with Professor Satoshi Taharaguchi of the School of Veterinary Medicine at Azabu University under the New Energy and Industrial Technology Development Organization's Feasibility Study Program on Materials and Biotechnology.

Toray HotBallooTM Ablation Catheter Qualifies for Insurance to Treat Persistent Atrial Fibrillation

Toray has secured insurance coverage for the SATAKE · HotBallooTM ablation catheter currently sold by Toray Medical Co., Ltd. to treat drug refractory recurrent symptomatic persistent atrial fibrillation in Japan. The company is authorized domestically to manufacture and sell this product.

Atrial fibrillation is an irregular and often very rapid heart rhythm from abnormal electrical signal in the atria. There are four main types of such fibrillation; paroxysmal (terminates within 7 days), persistent (sustained beyond 7 days), long-standing persistent (sustained for at least 12 months) and permanent atrial fibrillation.

Around 70,000 ablations for atrial fibrillation are performed in Japan each year. An estimated 20% of those procedures are for the persistent type.

Toray secured marketing approval in 2015 for the SATAKE · HotBallooTM ablation catheter to treat drug refractory recurrent symptomatic paroxysmal atrial fibrillation. There has been a growing need in recent years to also use this product for persistent atrial fibrillation.

The company accordingly obtained marketing approval in October 2021 to add HotBallooTM to indications for treating drug refractory recurrent symptomatic persistent atrial fibrillation, with insurance coverage beginning in May 2022. Toray expects this additional indication can be a new treatment option for persistent atrial fibrillation patients.



SATAKE · HotBallooTM ablation catheter

Toray Files Manufacturing and Marketing Approval for In Vitro Diagnostic Test of Changing Apolipoprotein A2 Isoform Concentrations in Blood of Pancreatic Cancer Patients

On June 27, 2022, Toray filed a manufacturing and marketing approval with the Ministry of Health, Labour and Welfare for an in vitro diagnostic test to measure apolipoprotein A2 (APOA2) isoform concentrations in blood. APOA2 is a major component of high-density lipoprotein (HDL), and comprises a 77-amino acid chain. There is a carboxyl (C)-terminal amino acid sequence of alanine (A), threonine (T), and glutamine (Q). The APOA2-ATQ full-length protein and APOA2-AT C-terminal degraded isoform coexist in blood.

Professor Kazufumi Honda of the Graduate School of Medicine of Nippon Medical School discovered that the quantitative ratios of APOA2-AT and APOA2-ATQ change in the blood of pancreatic cancer patients (see four references below). He previously led the Department of Biomarkers for Early Detection of Cancer at the National Cancer Center Japan.

Toray has furthered on his research in developing a reagent to measure APOA2 isoform as an in vitro diagnostic test. The company is collaborating with the Nippon Medical School, leveraging research findings from the National Cancer Center and Japan Agency for Medical Research and Development.

This reagent measures both APOA2-AT and APOA2-ATQ levels in the blood of individuals with suspected pancreatic cancer. The reagent uses a proprietary Toray antibody in a sandwich enzyme-linked immunosorbent assay.

Click [here](#) for the main initiatives for CSR Guideline 7, “Contributing Solutions to Social Issues through Business Activities” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports)

Human Rights Promotion and Human Resources Development

Respect human rights, provide safe and healthy workplaces for employees, secure and train personnel, and diversify while striving to protect employment.



Basic Approach

Committed to Human Rights

At Toray Group, respect for human rights is a mandatory management principle for ensuring the continuity of corporate activities and building positive relationships with all of the Group's stakeholders. The Group works to promote and raise awareness of human rights, for instance by declaring its commitment to the respect of human rights in its Corporate Guiding Principles and Ethics & Compliance Code of Conduct. In the Code, discrimination of any kind based on race, creed, skin color, gender, religion, nationality, language, physical characteristics, disability, socioeconomic status, place of birth, or any other personal characteristic is strictly forbidden in every process from recruiting and hiring to work placement, compensation, training, and retirement.

Moreover, Toray Group has selected "respecting human rights and promoting human resource diversity" as a material CSR issue. The Group respects internationally recognized human rights and works to create workplaces where diverse human resources can demonstrate their creativity and thrive.

The Ethics & Compliance Code of Conduct stipulates that harassment must never be tolerated in the workplace, including sexual, and power harassment. In addition, Toray Industries has established Guidelines for Preventing Harassment in the workplace and informs officers and employees of the policy and prevention management system that does not allow sexual harassment, pregnancy-based harassment, and power harassment.

Toray Group has been tackling the issue of discrimination based on self-acknowledged gender and sexual orientation. In January 2017, the Group established an employee hotline specifically for LGBTQ issues, which is operated by the Human Rights Promotion Section of the Industrial Relations Department of Toray Industries.

The Group also addresses global human rights issues in accordance with the Toray Group Policy for Human Rights, considering the diverse cultures, customs and social norms of the countries and regions where it operates.

Related Policies

Policies on Human Rights

Toray Group declares fulfilling our responsibility to respect human rights as a good corporate citizen in its Corporate Guiding Principles and specifies its respect for human rights in its Ethics & Compliance Code of Conduct and strives to prevent any human rights violations through education and awareness activities within the Group.

In addition, as a global enterprise, the Group respects international norms such as the Universal Declaration of Human Rights, the International Labor Organization's conventions, and the UN Guiding Principles on Business and Human Rights. Based on approval by the Board of Directors, the Group has also established the Toray Group Policy for Human Rights, which lays out the Group's commitment to ensuring that it is not complicit in any human rights violations in the overall supply chain, including at suppliers or contract manufacturers, and to promptly and appropriately addressing issues if and when they arise.

Toray Group Policy for Human Rights (Established December 2017)

We at Toray Group believe that respect for human rights is a mandatory principle for corporate management. Therefore, we respect international standards such as the United Nations Universal Declaration of Human Rights and the International Labor Organization's standards in compliance with the laws and regulations of countries and regions where we operate, and will endeavor to fulfill our duty of respect for human rights as a good corporate citizen.

1. We will respect human rights, character and individuality of employees and eliminate harassment and discrimination in workplaces. Furthermore, we will prohibit child labor, forced labor and unfair low-wage labor.
2. We will strive to promote respect for human rights throughout the entire supply chain related to our business activities. In addition, we will not be complicit in infringing on the human rights.
3. We will endeavor to understand adverse human rights impacts associated with our business activities and to avoid or reduce such influences.
4. If it becomes evident that we have caused or contributed to adverse human rights impacts, we will promptly take appropriate actions.
5. We will promote educational activities about issues of human rights for every employee and foster a proper understanding of issues among them.

Securing and Developing Human Resources

The success or failure of a company is decided by its people—employees shape its destiny. Guided by this concept, Toray Group considers securing and developing outstanding human resources as one of its most important tasks and a fundamental management priority. Based on the following four goals, Toray Group is promoting human resource development.

- Development of fair-minded individuals who act with high ethical standards and a sense of responsibility
- Training of professionals with advanced expertise, technical skills and originality in problem solving
- Development of leaders who act with foresight and a sense of balance
- Development of individuals, professionals, and leaders who can play an active role in global business

Related Policies

Toray Global HR Management (“G-HRM”) Fundamental Policy

Toray Group established its [Global HR Management \(“G-HRM”\) Fundamental Policy](#), with the goal of managing human resources from a common perspective shared by the entire Group, thereby surmounting differences between countries, regions, cultures, customs, and individual companies.

Under the policy, Toray Group practices a united approach to human resources management of each group company.

Structure

Human Rights Promotion System at Toray Group

Under the Ethics and Compliance Committee chaired by the president of Toray Industries, Toray Group operates the Human Rights Promotion Committee in Japan and the Global Human Rights Promotion Committee.

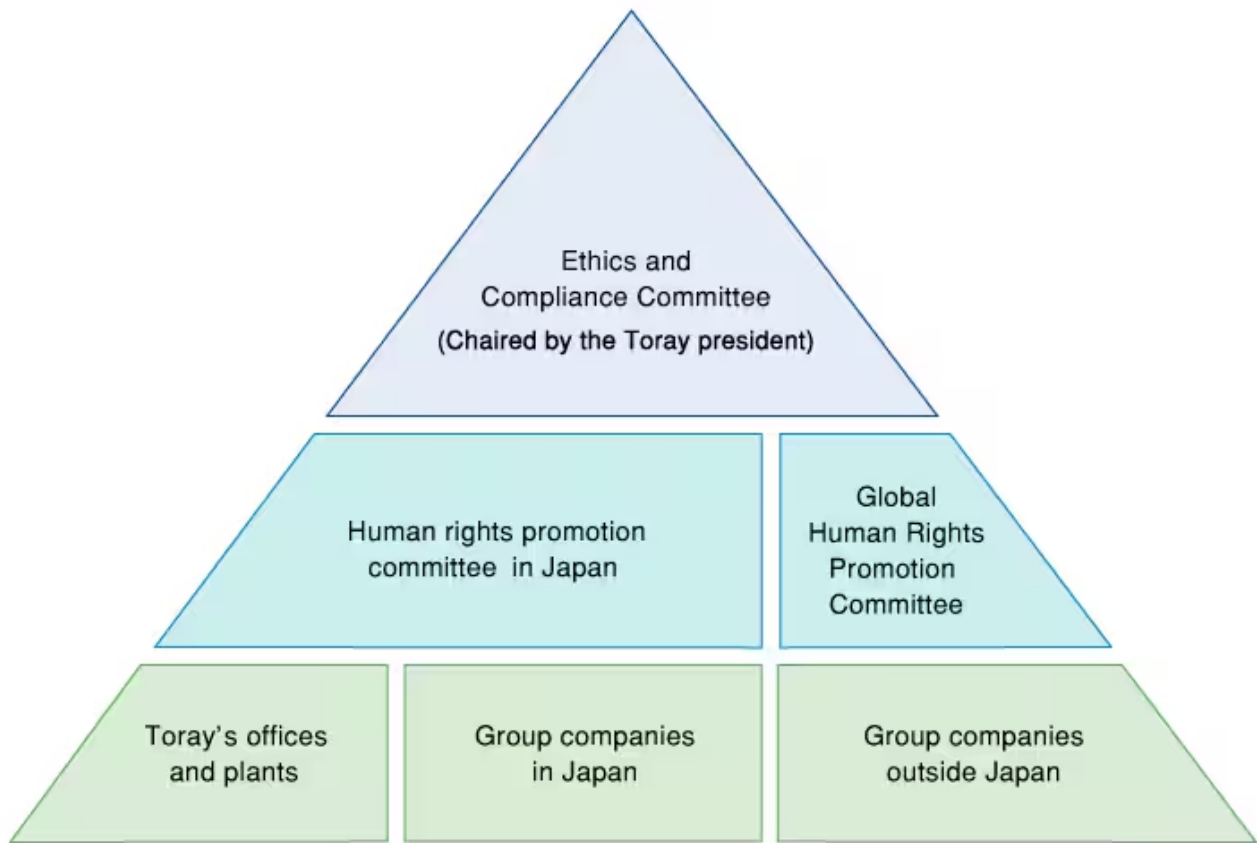
The Human Rights Promotion Committee in Japan determines the human rights activity policy to be carried out in the offices and plants of Toray Industries. Activities are implemented accordingly, with the aim of ensuring that working environments are positive and supportive throughout the Company.

Group companies in Japan use the activity policy of Toray Industries as a reference, and then implement their own human rights programs with the support of the parent company.

Meanwhile, the Global Human Rights Promotion Committee aims to minimize human rights risks outside Japan.

Each group company takes its own specific human rights initiatives based on circumstances in the country or region concerned.

Toray Group's Human Rights Promotion System



At group companies, each group company works on its own human rights initiatives with support from Toray Industries, Inc.

Securing and Developing Human Resources

Toray Group employs talented human resources who can play an active role in global business, inclusive of gender and whether employees were hired out of university or mid-career. The Group's approach to human resources development uses well-designed, systematic training programs.

CSR Roadmap 2022 Targets

CSR Roadmap goals

1. Respect for human rights and fair promotion based on ability throughout the Toray Group by eliminating discrimination based on race, gender, education, nationality, religion, and physical attributes
2. Ensure work environments take into consideration employees' health and build a vibrant and rewarding workplace culture group-wide, working systematically to secure and train personnel

Main Initiatives and Key Performance Indicators

	KPI
Human Rights Promotion	
(1) Implement human rights education and training	8-①
(2) Achieve the legally mandated employment rate of persons with disabilities	8-②
(3) Operate a whistle-blowing system and consultation service at each Toray Group company to promptly and appropriately respond to problems in an effort to reduce human rights risks	-
Human Resources Development	
(4) As part of career develop initiatives for core staff, use the career path worksheets included in the new personnel information system	8-③
(5) Systematically hire, develop, and core staff outside Japan	-
(6) Create workplace environments in which women will feel comfortable performing their duties	-
(7) Support the return to work from long-term childcare leave	8-④
(8) Reduce the number of employees who exceed non-statutory working hours	8-⑤
(9) Encourage the use of annual paid leave by labor union members	8-⑥

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
8-① Group companies implementing human rights education and training (%)	100%	100%	100%	100%
8-② Group companies that have achieved legally mandated employment rate of persons with disabilities (%)	100%	100%	100%	53.1%
8-③ Career development of core staff using the new personnel information system (% of staff using a career path worksheet)	20%	30%	100%	100% (Expanded to all eligible employees ahead of schedule in March 2022)
8-④ Employees returning to work from childcare leave (%)	100%	100%	100%	100%
8-⑤ Reduction in employees who exceed 45 hours/month of non-statutory working hours (%)	Year-on-year reduction	Year-on-year reduction	Year-on-year reduction	79.7%
8-⑥ Available annual paid leave used by labor union members (%)	About 90%	About 90%	About 90%	93.2%

Reporting scope : Toray Group (8-①)

Toray Group (Japan) (8-②)

Toray Industries, Inc. (8-③, 8-⑤ and 8-⑥)

Employees of Toray Industries, Inc. (8-④)

Related Materiality for CSR

- Committed to Healthier Lives
- Respecting Human Rights and Promoting Human Resource Diversity

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB). [PDF](#)

* Click [here](#) for a PDF summary of the relationships between materiality, associated CSR Roadmap 2022 main initiatives, KPIs and progress achieved, up to fiscal 2022 (PDF: 1.6MB). [PDF](#)

Looking to the Future

Committed to Human Rights

During the CSR Roadmap 2025 period (fiscal 2023–2025), efforts are being made throughout Toray Group to improve awareness of the need to protect human rights. These efforts are carried out via ongoing campaigns and training highlighting the Toray Group Policy for Human Rights.

In addition to identifying human rights issues within Toray Group and responding promptly and appropriately, the Group is augmenting its internal education at Toray Industries, Inc. and its group companies and striving to improve human rights awareness among officers and employees in fiscal 2023.

Securing and Developing Human Resources

Toray Group pursues a range of initiatives to build workplace environments that are considerate of employee health and a workplace culture characterized by pride and motivation. To secure the future management talent needed to lead the Group in coming years, Toray Group hires systematically, continually improves its grade-specific management training to strengthen frontline capacity, and regularly upgrades its selective training to foster managerial candidates.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 8 “Human Rights Promotion and Human Resources Development” during the CSR Roadmap 2025 period (fiscal 2023–2025). [PDF](#)

CSR Activity Report (CSR Guideline Activity Reports) - Human Rights Promotion and Human Resources Development

Human Rights Activity Report

Human Rights Training

CSR Roadmap 2022
Main Initiatives (1)

Group companies implementing human rights education and training (%)

■Reporting scope	■Target in fiscal 2022
Toray Group	100%

Result in fiscal 2022

100%

Toray Industries, Inc. holds human rights promotion campaigns annually to help increase awareness and understanding of human rights issues. In fiscal 2022, the campaign focused on the human rights sensitivity of every person, harmony in the workplace, and mutual communication that enhances consideration and understanding of others. Educational pamphlets were handed out to all employees. Through the campaign, the Company communicated to employees that it is important to create a workplace culture that respects the dignity of others, prevents sexual harassment, pregnancy-based harassment, and power harassment, and understands LGBTQ issues. The Company also sought to deepen understanding in each workplace that global interest in respect for human rights is increasing.

To raise awareness of human rights among employees, the Company holds management training and workplace-based study sessions at Toray Industries' offices and plants. In fiscal 2022, the Human Rights Promotion Section Manager conducted remote and in-person group training sessions for members of the Human Rights Promotion Committee as part of the human rights awareness campaign. Online training courses on Toray ethics and legal compliance are also held every year targeting all executives and employees (including contracted, part-time, and dispatched employees). In addition to reviewing the code of conduct and promoting awareness of the whistleblower hotlines, the program focuses on a different theme each year, looking at case studies of such issues as bribery prevention, or human rights and workplace harassment prevention. The fiscal 2022 program was held in March 2023, and 96.4% of eligible participants completed the activity. The theme was promoting understanding of the Ethics & Compliance Code of Conduct and Toray Group's whistleblowing system.

For group companies in Japan, the manager of Toray Industries' Human Rights Promotion Section held training sessions on human rights for labor managers and members of their staff (58 group companies participated). In addition, the Company provided teaching materials, educational pamphlets and e-learning materials—the same ones used in the human rights promotion activities of Toray Industries. In this way, Toray Industries supported efforts by group companies to promote human rights.

For group companies outside Japan, Toray Industries provided educational materials reflecting the Toray Group Policy for Human Rights, Toray Group’s human rights promotion system and international codes such as the Universal Declaration of Human Rights and the UN Guiding Principles on Business and Human Rights. Overall, Toray Group promoted education tailored to the conditions of each country or region as it disseminated the Toray Group Policy for Human Rights.

Fiscal 2022 Human Rights Training and Seminar

Type of training		Number of sessions	Number of participants
Toray Industries, Inc.	Training at head office	25	1,565
	Training at offices and plants	2,099	18,755
	Training at outside company	28	39
Group companies in Japan	Training at companies	1,424	24,102
	Training at outside company	164	3,221

Total amount of time dedicated to training

1,794 hours

Identifying, Assessing and Mitigating Human Rights Risks for Toray Group

CSR Roadmap 2022
Main Initiatives (1)(3)

Toray Group carries out an annual survey of all of Toray Industries’ offices and plants as well as its main group companies in and outside Japan, asking about their human rights promotion activities, including awareness and education efforts. The results are confirmed at the Human Rights Promotion Committee in Japan and the Global Human Rights Promotion Committee. Using this process, issues, problems and concerns are identified as human rights risks, and initiatives are considered and implemented in line via the human rights promotion system. Toray Group has set up a system that enables everyone working for the Group to report and consult on human rights issues. In Japan, the Corporate Ethics and Legal Compliance Helpline has been set up, and each group company outside Japan also has established a Helpline contact point. All these services can be used anonymously, and there is also an externally operated helpline available. Toray Group strives to mitigate human rights risks and to respond promptly and appropriately if and when any issues arise. Information concerning the use of the Helpline contact points in Japan, such as the number of contacts and their content, is reported to the semiannual Ethics and Compliance Committee meetings chaired by the president of Toray Industries, Inc.

In order to also promote respect for human rights in the supply chain, compliance-related communications can always be submitted through the Toray website. The system for ensuring human rights are protected in the supply chain is described under “Establishing Sustainable Supply Chain.”

Related Information

- > [Inquiries concerning CSR initiatives by Toray Group and its business partners](#)
- > [Socially Responsible Procurement Initiatives at Toray Group](#)

Response to Reports and Consultations on Human Rights

CSR Roadmap 2022
Main Initiatives (3)

In fiscal 2022, 32 hotline reports and consultations related to human rights (workplace harassment and inappropriate behavior, etc.) were received across the Toray Group. Investigations were conducted to check facts for all these cases, based on coordination between the department (person) in charge of the investigation, relevant department (person) involved in the incident, and the internal consultation offices set up at each company of Toray Group. In cases where a problem was verified, corrective measures were taken based on the group company's internal rules, such as the employment regulations.

The number of reports and consultations received, an overview of the cases, and the results of measures taken in response were reported to the Ethics and Compliance Committee, the Board of Directors, and the Board of Corporate Auditors as part of updates on the operational status of the whistleblowing system as a whole. Detailed reports were also submitted to the Human Rights Promotion Committee in Japan, and the Global Human Rights Promotion Committee.

In addition, through its human rights education in Japan, Toray Group introduced examples of issues reported to employees in a way that makes it impossible to identify the workplace or individuals to promote understanding and alerting to workplace harassment and other issues.

Click [here](#) for more information on the establishment and operation of the whistleblowing system relating to CSR Guideline 2, "Ethics and Compliance".

Click [here](#) for the main initiatives for CSR Guideline 8, "Human Rights Promotion and Human Resources Development" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Human Rights Promotion and Human Resources Development

Securing and Developing Human Resources to Create New Value

Employing a Diverse Workforce

Toray Group employs talented human resources with high aspirations who can play an active role in global business, inclusive of gender and whether employees were hired out of university or mid-career. Since 1998, Toray Industries, Inc. has been expanding its efforts to recruit a diverse human resource population and has hired 113 non-Japanese as regular employees as of fiscal 2022. The Company actively recruits non-Japanese students who are studying in Japan, and Japanese students who graduate from universities abroad. Then, it seeks to build a work environment where all employees are able to fully demonstrate their individual abilities and perform to their utmost potential. In addition, Toray is actively pursuing mid-career hiring, while providing follow-up support for these hires, including additional training after joining the company.

Number of Employees Hired in Fiscal 2018-2022 (Toray Industries, Inc.)

Result		2018	2019	2020	2021	2022
New graduates	Men	224	244	176	123	110
	Women	41	44	36	38	20
	Total	265	288	212	161	130
Mid-career hires	Men	55	37	9	13	53
	Women	17	8	2	6	7
	Total	72	45	11	19	60

Systematic and Effective Training

CSR Roadmap 2022
Main Initiatives (4)/(5)

Toray Industries develops well-designed training programs and systematically executes diverse training programs to enhance management, sales, production technology, and specialized skills, and to better equip employees to address globalization. These programs cover all levels of employees and fields, aiming to develop future management candidates while expanding and educating the base of core staff ready to employ their strong capabilities to lead on the front lines.

In recent years, Toray Industries has focused on reorganizing its training system to further enhance the Company's human resource development. Management Training for Executive Candidates was created as a new program with the aim of developing senior management successors. Two other new programs, Management Training for General Managers and Management Training for Managers, were established in order to enhance organizational management capabilities. At the same time, the Company has launched multiple programs to train personnel involved in digital transformation (DX) initiatives, as part of specialized field-specific training for technology and sales personnel. In fiscal 2022, practical skills training and discussion-based training sessions were held in-person, while lecture-based training was held online. For all in-person sessions, thorough measures were taken to prevent the spread of COVID-19. Training expenditures per employee at Toray Industries stood at 65,017 yen in fiscal 2022, compared to 58,899 yen in the previous fiscal year.

Moreover, to allow everyone regardless of age to regularly update their abilities and skills, Toray is working to enhance its professional development programs for employees, including the creation of new Challenge Courses (subscription-based e-learning). In addition to training, the Group is adopting various personnel programs to develop an organization in which human resources who are ready for new challenges can play a greater and more active part in the Company.

Fiscal 2022 Training Programs at Toray Industries

	Management	Technical	Sales, marketing, and administration	Global	General
Directors	Director Training			Toray Group Executive Seminar	
Division and department managers	Management Training for Executive Candidates Department manager training			Toray Group Senior Management Seminar	
Section managers	Toray Management School Management skills development seminar for section managers Management Training for New Managers	Training to Become Leaders in Technology Development	Training to Become Leaders in Sales/Marketing	Toray Trainee Program	Study programs for employees (at university and other institutes in and outside Japan) and overseas training for young employees Outside Training, Outside Seminars, Seminars to Exchange Information with Different Business Fields
Non-Managerial Senior Level	Management Training for Supervisors	Training to Become Leaders in Technology Development Mid-Level Engineer Training	Marketing and Merchandising Strategy Training	TES Toray Management and Technology Training	
Non-Managerial Junior Level	Toray School of Technology and Business Administration	Second Technical Training First Technical Training	Second Sales/Marketing Training First Sales/Marketing Training	Senior/Junior Accounting Seminar Sales/Marketing Practical Seminars Global Diversity Seminar	
Newly-Hired Employees	Introductory Training for Newly-Hired Employees	Practical Plant Training	Plant assignment	Intensive English Conversation Training for Newly-Hired Employees	

Training also open to employees of group companies in Japan

Training for "national staff" of group companies outside Japan, held in Japan

Company-Wide Training Course Enrollment in Fiscal 2022 (Toray Industries, Inc.)

Training category	Persons enrolled			Time dedicated to training per employee (hour) ¹
	Men	Women	Total	
Management	699	59	758	44.8
Technical	620	84	704	29.0
Sales, marketing, and administration	262	74	336	20.2
Global	74	12	86	50.2
Total	1,655	229	1,884	34.7

¹ Time dedicated to group training at the Toray Human Resources Development Center. It does not include time for correspondence learning or study abroad, etc.

Toray School of Technology and Business Administration Develops Leaders to Improve Frontline Capabilities Across the Toray Group

Toray Industries is dedicated to improving the capabilities of frontline employees across Toray Group. It opened the Toray School of Technology and Business Administration in September 1994 as a training facility for young group employees in Japan. The aim is to develop human resources who can think and act without being micromanaged. As of the 28th session in 2022, the school has produced 815 graduates.

Classes include general subjects such as mathematics and English, along with specialized subjects including polymer chemistry, engineering basics, and robotics, as well as more practical group problem-solving exercises and chemical experiments. By having employees participate in hands-on learning experiences, they get a deeper understanding of the theory taught in class. During the one-year period of enrollment, each student aims to develop the skills to become a frontline leader who can think and act without being micromanaged, by utilizing every opportunity for their own professional development.

In October 2022, the Toray School of Technology and Business Administration opened a new Frontline Skills Enhancement School to develop unit manager candidates. Students learn soft skills such as leadership, team building, followership, and motivation by solving problems in their own departments. The curriculum features a new method that involves having students form teams and share a vision, before carrying out activities. They are taught to consider even activities that do not bring the desired results to have achieved something positive and to see this as a valuable process. Toray Group is developing frontline leaders who have acquired the basic skills needed by working members of society in order to succeed in a changing world.

Personnel System (Toray Industries, Inc.)

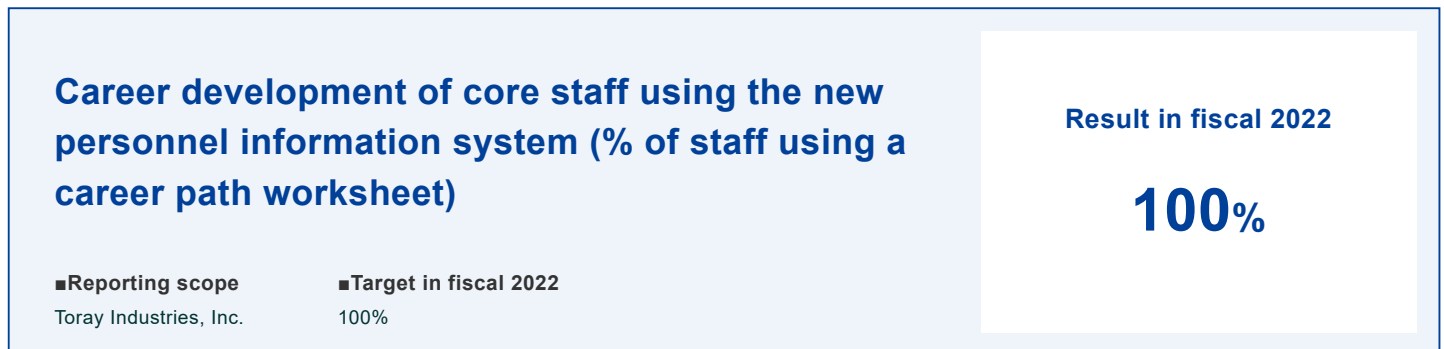
Management-by-objectives system ²	Each employee establishes annual objectives. At the end of the fiscal year, employees and their supervisors meet to review accomplishments and the extent to which they were able to meet their objectives.
Personnel appraisal system ²	Designed to facilitate a fair appraisal of employee contributions in terms of duties, responsibilities, capabilities, and performance ³ .
Individual meeting system ²	Employees meet with their supervisors twice a year in a one-on-one setting. Supervisors provide consultation on employee performance and new objectives.
Self-assessment system for managers, occupational specialists, and G-Course employees	Employees are surveyed annually on topics concerning work experience and desires for interdepartmental transfer. Surveys can then be linked to individual personnel transfers and placement.
Career assessment system for G-Course employees	Employees participate in a regular review consisting of presentations of daily operations and personnel interviews in order to focus on the direction of their future growth.
Job opening system	Employees are given an opportunity to apply for jobs inside the Company and proactively develop their career, while ensuring optimal staff assignment.

² Applies to 100% of managers, occupational specialists, and employees pursuing G-Course and S-Course career paths.

G-Course: A career path for Toray Group executive or upper-level professional candidates

S-Course: A career path for manager, supervisor, or specialist candidates

³ Including CSR initiatives



Toray Industries has introduced career path worksheets as a human resource development tool designed to promote employee growth. These worksheets encourage employees to reflect on their past work experience and the level of skill required in their field, as well as facilitate career-related discussions through interviews with supervisors and subordinates.

The career path worksheets were first introduced in fiscal 2020 for employees pursuing G-Course career paths in sales and corporate administration. In fiscal 2021, their use was extended to technical G-course employees and, as of March 2022, has been expanded to all G-Course employees.

Development of Future Management Candidates for Toray Group

Toray Group implements training in order to systematically develop future management candidates. Numerous employees who have undergone the training are already active in management positions. In fiscal 2021, Management Training for Executive Candidates was created as a new program with the aim of developing senior management successors. In fiscal 2022, as well, the Group continued to hold various training sessions, while taking the necessary measures to prevent the spread of COVID-19.

Strategies for Developing Future Management Candidates

Program	Participants	Purpose	Year started	Total participants through FY2022
Management Training for Executive Candidates	Department managers of Toray Industries	Develop management leaders at Toray Industries and group companies	2021	22
Toray Management School	Section managers of Toray Industries	Develop future management candidates at Toray Industries and group companies	1991	600
Toray Group Management School	Department managers of group companies in Japan	Develop management candidates focusing on group companies in Japan	2006	328
Toray Group Executive Seminar	Board members/officers of group companies outside Japan	Develop core staff at group companies outside Japan	2004	98

Number of employees who participated in programs to develop future management candidates (cumulative total) 1,048

The Toray Global HR Management (“G-HRM”) Fundamental Policy was established through a resolution of the Board of Directors. The goal of the policy is to manage human resources from a common perspective shared by the entire Group, thereby surmounting differences between countries, regions, cultures, customs, and individual companies.

Toray Global HR Management (“G-HRM”) Fundamental Policy Revised December 2021

True to its corporate philosophy, “Contributing to society through the creation of new value with innovative ideas, technologies and products” and its embodiment through “Innovation,” and in order to continue being a highly valuable corporate group for every stakeholder, Toray Group focuses on recruiting, retaining, and developing employees with high aspirations, with the understanding that “Human Resources” are the most important asset in management.

As Toray Group continues to promote further business growth and expansion globally, we set the following four principles as the Toray G-HRM Fundamental Policy, despite all differences between countries, regions, cultures, customs, and companies in order to facilitate HR management with a common basis for all Toray Group companies around the world.

Step by step, each company is encouraged to implement and maintain a concrete HR management system in line with the following Toray G-HRM Fundamental Policy. However, at the same time, it is essential to value the merits of local HR management in each company based on the individual circumstances of country, region, culture, custom and company. Thus, it is necessary to promote the policy while integrating both approaches properly.

- 1. Consistently recruit and retain core staff and promote long-term HR development programs**
 - (1) Consistently recruit core staff based on mid/long-term HR management views.**
 - (2) Sustain long-term HR development through emphasizing individual career development, promoting career interviews on development progress between supervisors and staff, and carrying out on-the-job training (OJT), together with training programs (Off-JT) and self-development.**
 - (3) Promote HR development by following up on each individual through MBO (Management by Objectives) and performance appraisal systems.**
- 2. Select and develop core staff who can win a place in the global competition**
 - (1) Recruit, retain and develop diverse and capable staff globally who understand and support the Toray Philosophy.**
 - (2) Provide selected staff with opportunities for sophisticated high-level training and global careers.**
 - (3) Promote staff, who have skills to assume management responsibility for Toray Group companies, to top management positions of each company, and also give them opportunities for selection to executive positions as well as core positions of Toray Industries, Inc.**
- 3. Pursue a "placing the right people to the right jobs" policy while enhancing fairness, understanding (by employees) through convincing explanations, and transparency**
 - (1) Make the best assignment for each employee and assigned organization by focusing on his/her ability and performance.**
 - (2) Place importance on fairness, understanding (by employees) through convincing explanations, and transparency when determining individual compensation, such as salary and bonus, by appropriately taking account all of the roles and responsibilities of the position, the employee's ability, as well as performance appraisal results based on the MBO (Management by Objectives).**

- (3) Enhance the HR development system and the compensation system to value challenges as well as contributions to the team.**
- 4. Continue various management methods to further strengthen the company's business structure**
 - (1) Conduct and continue head-count management and labor cost management as an entire company in a well-balanced way appropriate for business environments.**
 - (2) Always sustain a flat, effective organizational structure and control the appropriate proportion of managerial staff.**
 - (3) Build a resilient organization through the appropriate management of diverse work styles.**

Systematically Securing, Developing, and Promoting Core Staff Outside Japan at Group Companies

CSR Roadmap 2022
Main Initiatives (5)

Toray Group regards the development of core staff at its group companies outside Japan as one of its priority management objectives. The Group makes active efforts to promote employees locally hired at these companies (national staff) to executive management positions, as well as to key posts and management positions at Toray Industries' head office. In fiscal 2022, a total of eight core staff outside Japan help manage Toray Group, with two serving as vice presidents of Toray Industries and six serving as director (*riji*), a position that is equivalent in scope and level of responsibility to senior management.

In terms of human resource development and promotions, Toray Group has been working on a succession plan and personnel development plan based on a medium- and long-term perspective and drawing up its Medium-Term Human Resources Plan with the goal of implementing systematic personnel assignments to ensure that core staff can tackle important business issues. The Group implements human resources strategies designed to support business strategies by verifying the availability of successor candidates for core positions and developing individualized development plans for future management candidates, including for core staff outside Japan. In addition, the Group is systematically fostering human resources by offering career development opportunities such as domestic and international job rotations.

Human resource development is systematically implemented using both on-the-job and off-the-job training. Off-the-job training consists of training implemented by each group company outside Japan. This is combined with grade-specific training programs held in Japan to ensure understanding of management principles and policies. These are linked with personalized long-term development plans. Toray Group, with direct involvement from the head office, is developing and regularly providing management training courses outside Japan specially designed for the particular circumstances and needs of group companies in each respective country.

FY2022 Training Courses Held for Core Staff Outside Japan

Japan-based courses

Training program	Managerial category	Participants
Toray Group Senior Management Seminar	Department managers	18
Toray Trainee Program	Section managers	15
Total participants		33

Courses held outside Japan

Training program	Managerial category	Participants
Toray Group U.S. Management Training	Section managers	17
Toray Group Malaysia Management Seminar	Department managers / section managers	15
Toray Group East and North China Management Seminar	Department managers / section managers	25
Toray Group South China Management Seminar	Department managers / section managers	29
Total participants		86

Toray Group Senior Management Seminar (Toray Industries)

The Toray Group Senior Management Seminar was established to develop executive human resources (mainly general managers) working at Toray Group companies outside Japan. It allows participants to improve their understanding of Toray management policies and strategies and Toray-style management, as well as to demonstrate leadership as a driving force for overseas companies. Since its inception in 1996, more than 300 employees hired outside Japan have taken the course.

In 2023, in-person training was held at the Toray Human Resources Development Center in Japan, the first such event since the COVID-19 travel restrictions were lifted, and thorough infection control measures were taken. The 2022 Toray Group Senior Management Seminar was held for five days, from March 6 to 10. The participants included 18 employees from 14 group companies located in 9 countries, namely, the United States, Mexico, the United Kingdom, France, Germany, Switzerland, the Czech Republic, Hungary, and Malaysia.

During the seminar, the participants deepened their understanding of Toray and Toray-style management (the Toray Philosophy and management strategies, as well as compliance and quality assurance activities, etc.). In sessions provided by external lecturers, the participants learned about developing their own management style, how to approach specific regional cultures, and how to recognize their own cultural biases. In addition to learning how to demonstrate effective leadership in various situations, as well as deepening their understanding of Toray's corporate culture, each participant created an action plan to strengthen their own group company in a way that is consistent with Toray's corporate culture. As the 2022 seminar was conducted in person, it also provided an opportunity for dynamic interaction between the participants and became a meaningful way for them to enhance their personal networks.

Toray Group U.S. Management Training [Toray Industries (America), Inc.]

With the cooperation of Toray Composite Materials America (CMA), Toray Industries America (TAM) held the 14th US Management Training at CMA's Tacoma Plant from January 31 to February 2, 2023. The participants included 17 employees from six Toray Group companies in the United States, namely, Toray Resin (TREC), Toray Plastics (America) (TPA), CMA, Zoltek Companies (ZOLTEK), Toray Advanced Composites USA (TACUS), and Performance Materials (PMC).

The seminar was a three-day training course for section managers and unit chiefs. The first aim was for participants to gain an understanding of Toray-style management (safety management, corporate ethics and legal compliance, cost management, and personnel and labor management), while the second aim was for them to improve their human resources and organizational management skills. In addition to lectures, there were group discussions and presentations by internal instructors from various fields, along with a leadership lecture and a tour of the Tacoma factory. It was also a great opportunity for participants to enhance their personal networks.



Management Seminar

Click [here](#) for the main initiatives for CSR Guideline 8, "Human Rights Promotion and Human Resources Development" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Human Rights Promotion and Human Resources Development

Promoting Diversity

Toray Group is committed to promoting employee diversity to help build thriving workplaces where each individual's abilities can flourish.

Fostering an Organizational Culture Conducive to the Career Advancement of Women

CSR Roadmap 2022
Main Initiatives (6)

Toray Industries, Inc. has long encouraged women in the workplace and implemented policies to support women to build fulfilling careers. The Company promoted its first female manager in 1958 and introduced employee provisions for taking parenting leave nearly 20 years before parenting leave became mandatory in Japan. In 2003, a woman became president of a Toray Group company. Then, in 2004, the Company launched the Advancement of Women Project. As of April 2023, women held 10.0% of unit manager or higher positions and 6.1% of section manager or higher positions. In June 2015, the Company welcomed its first female director (*riji*), a position that is equivalent in scope and level of responsibility to senior management. (One female director [*riji*] as of March 2023.)

In March 2021, Toray Industries formulated and publicly released its five-year action plan (April 2021–March 2026) for increasing the retention rate of women employees and the ratio of women employees in management positions by promoting initiatives for individual skill development and career building.

The action plan sets out the following goals and initiatives.

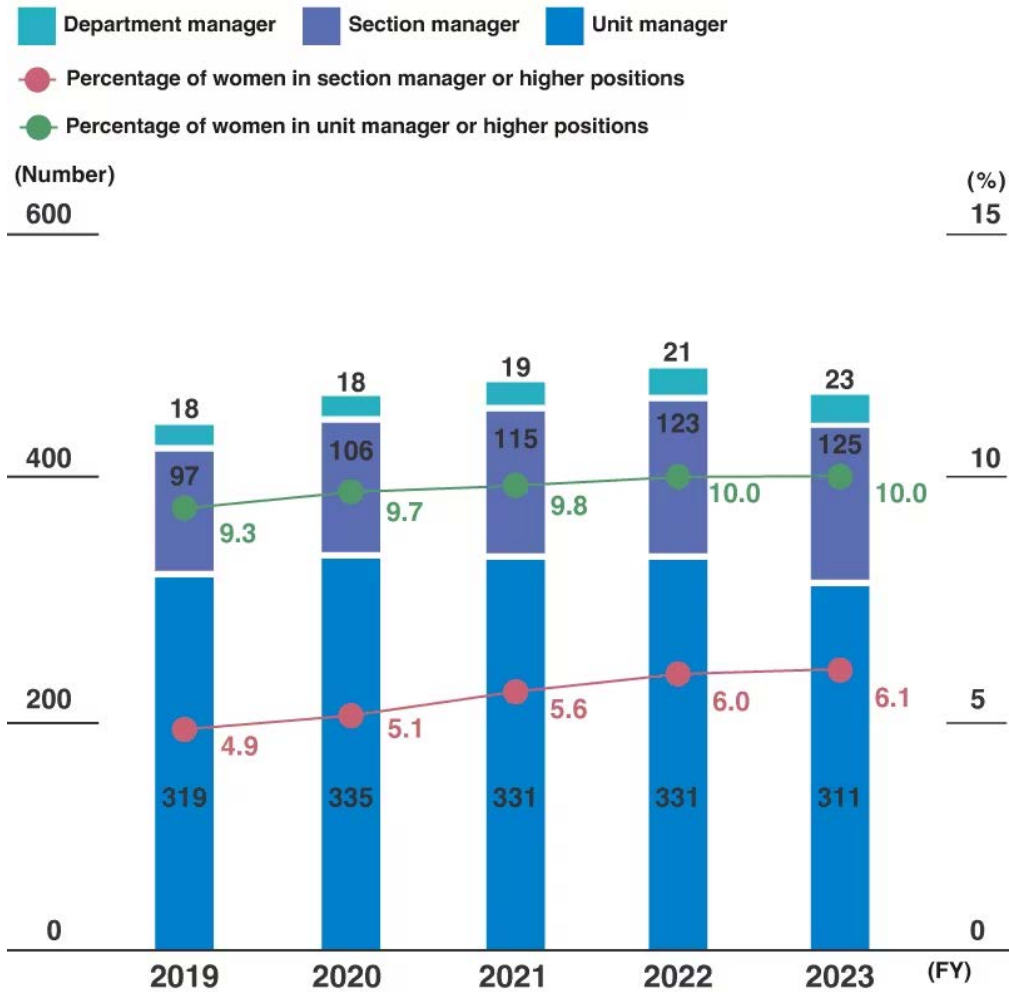
Goals:

1. Increase the percentage of management positions held by women each year, with a specific initial target of raising this percentage from the 5.1% in fiscal 2020 to 6.5%
2. Achieve a 1:1 ratio of men and women employees continuously employed for each employment management category (among those who have been employed for ten years or less)

Initiatives:

- (1) Use career path worksheets to enhance opportunities for discussion with supervisors and subordinates regarding careers and other topics and share content with directors in charge of each business and Personnel Department to follow up on status of implementation.
- (2) Narrow the gap between the percentage of women selected for company-wide leadership training and the percentage of women in the target group for this training.
- (3) Provide continuous training and other means of raising awareness of career development among women employees.
- (4) Enhance systems to enable diverse work styles and create an even better environment for balancing work and life events.
- (5) Conduct morale survey (measuring effectiveness of initiatives) to ascertain status of above initiatives, analyze results, and identify measures for improvement.

Number of Women in Management Positions and Women as a Percentage of Total Management (Toray Industries, Inc.)



Note: As of April each year

Gender Pay Gap

Toray Industries calculates the difference in earnings between men and women according to the provisions of Japan's Act on Promotion of Women's Participation and Advancement in the Workplace (Act No. 64, 2015). For regular employees, there is not a major gap in the earnings of women compared to men in managerial and non-managerial positions. However, the overall gap between female and male compensation is due to the relatively lower proportion of female employees in managerial positions compared to male employees in these positions.

Gender Pay Gap (Female Earnings as a Percentage of Male Earnings)

All employee types	71.2%
Regular employees	83.1%
Part-time and fixed-term workers	56.7%

Toray Group supports the voluntary initiatives of women in the workplace to create venues for communication about ways to resolve the issues and difficulties that they may face when trying to balance work and family life.

The outcomes of these communication events give the Group a glimpse into the current conditions facing women at work and their own opinions. Toray Group believes that resolving these issues one at a time will foster greater participation by women at work, and will steadily continue its efforts.

Holding Career Advancement Seminars for Women Serving as Managers and Occupational Specialists, and Discussion Meetings

In fiscal 2014, women serving as general managers at Toray Group developed and initiated a career advancement seminar for women serving as managers and occupational specialists, and it has now been held six times as of fiscal 2020.

These seminars were developed and launched with the hope that they would help women learn about diverse career paths and leadership and the importance of forming personal networks and learning from one another, particularly now. Participants in past seminars have been encouraged by this chance to hear about the wide range of conditions in which women in management and occupational specialties work and to interact with diverse role models. Each of the seminars is attended by the president of Toray Industries and the Senior Vice President of the Human Resources Division who engage in dialogue with the participants.

In fiscal 2016, the second seminar was held in January, and subsequently the seminar participants organized discussion meetings for women at all of Toray Industries' offices and plants in Japan to more broadly ascertain the views of women in non-management positions and younger workers at all plants. (In 2017, an additional discussion meeting was also held at the newly established Nasu Plant.)

The meetings offer an opportunity for women in workplaces of various ages and at various stages of life to talk honestly about balancing work and home life, sharing and educating each other about the challenges and issues they face. Men are also included in the conversations at some of these discussion meetings.

In fiscal 2017, follow-up meetings were held in 16 locations (plants), and women employees held group discussions on several themes chosen in the discussion meetings for women. In session one (information sharing), 1,039 employees participated, including 426 men, and 439 women participated in session two (group discussion). At session two (group discussion), a theme that fit the situation at each plant was chosen for discussion from among the themes compiled at the discussion meetings. Talking about a theme of interest to the participants allowed the discussion to go deeper, and issues that should be addressed at plants were identified. There have been several cases in which, based on the views obtained in the follow-up meetings, these discussions have led to improvements in the workplace environment or to facilities that enhanced working conditions for both men and women. In some cases, the discussions sparked the start of regular lunch meetings. These discussion meetings, led by women, have been held at all Toray offices and plants since fiscal 2019.

In fiscal 2021, an online discussion meeting was held for female G-Course employees in Toray Group. The facilitators were female managers and occupational specialists who are able to serve as role models. It was a valuable opportunity for many G-Course employees to share their work motivations, concerns, and issues, and to hear the opinions and stories of the facilitators and their peers from various generations and workplaces. Through past conferences, participants have identified issues such as the fact that female G-Course employees, who represent the future of the Company, are often burdened with anxiety about future career development.

In fiscal 2022, in order to respond to issues such as these, training was held not only for female managers and occupational specialists, but also for male managers and occupational specialists who have female subordinates. Through this training, male and female managers and specialists shared their viewpoints, deepened their understanding of the current situation, and decided to make their own action declarations aimed at resolving the issues concerned.

Career Advancement Seminars for Women Serving as Managers and Occupational Specialists, and Discussion Meetings

Fiscal 2015

First career advancement seminar for women serving as managers and occupational specialists

Dates February 13 – 14, 2015

Purpose Build networks among participants, and share their diverse situations. Help participants to recognize what they need to do in order to further advance their careers, and foster a perspective that develops leaders who will manage organizations. In addition, discuss the direction of future seminars.

Second career advancement seminar for women serving as managers and occupational specialists

Dates January 29 – 30, 2016

Purpose Enable participants to examine their career plans integrating career and personal life, by studying the experiences of accessible role models. Encourage each participant to draft a statement of intent about what she needs to do now and in the future to realize her career plan and help her organization achieve its medium-term goals.

Discussion meetings for women

Dates From August through December 2016¹

Purpose The meetings were held at plants; women shared their opinions on work situations and the issues they face, and these were summarized.

¹ With the Nasu Plant's incorporation, a discussion meeting was also held there in September 2017.

Fiscal 2016

Third career advancement seminar for women serving as managers and occupational specialists

Dates February 28 and March 1, 2017

Purpose Problems faced at work were analyzed and recommended solutions provided, based on opinions from the discussion meetings for women and the results of a questionnaire given to all women in the workforce at Toray Industries before the meetings. This series of initiatives is intended to reinforce the problem-solving skills required for managers and occupational specialists. Participants followed up on the progress on the statements of intent they each made at the second seminar.

Fiscal 2017

Follow-up discussion meetings

- Dates** From December through March 2017 (22 meetings at 16 sites)
- Purpose** Held as a follow-up to the discussion meetings for women. Of the themes discussed at these meetings, group discussions were held on: (1) the need for female advisors in balance work and personal life; (2) the need for seminars on systems for childrearing and caregiving; (3) the ease of use of the telecommuting program; and (4) the need for women's training for employees on the S-Course² track and for raising interest in participating. Measures to improve these issues were considered and proposed in line with conditions at each plant.

² An abbreviation for Specified Assignment Course, the S-Course is the career path for employees who wish to pursue a career as a manager, supervisor or expert in a specified occupation.



Group discussion

Fiscal 2018

Fourth career advancement seminar for women serving as managers and occupational specialists

- Dates** July 13– 14, 2018
- Purpose** Before the meeting, men in management positions and male occupational specialists were interviewed about their thoughts on the issue of promoting career advancement for employees regardless of gender. Using results of the analysis, major issues facing the career advancement of diverse employees were identified, in order to enhance their ability to arrive at and implement solutions. Using assessment tools, employees learned about their own strengths and weaknesses and become more aware of their leadership styles.
(This seminar was held for women who had been promoted to managerial and occupational specialist positions after the third seminar, as well as women who were not able to participate in the past three seminars.)



Analysis and discussion of questionnaire results



Comments by the Senior Vice President of the Human Resources Division



Comments by Harumi Horinouchi, director (riji)

Fiscal 2019

Fifth career advancement seminar for women serving as managers and occupational specialists

Dates October 18– 19, 2019

Purpose Based on an analysis of the current situation given by organizers of the seminar, the participants were divided into groups to discuss three challenges for achieving the empowerment of women in Toray Group workplaces and to come up with action plans. The challenges to be tackled are: the promotion of women to managerial and specialist positions, the retention of young female employees, and the realization of long-term career development. Since the seminar, the participants continue to engage in group work. The aim is to further ascertain the current situation and dig deeper into the root causes, and to make recommendations for overcoming the challenges.



Seminar participants



Welcome from the Senior Vice President of the Human Resources Division



Comments by Harumi Horinouchi, director (*riji*)

The Company set up a babysitting space in the training center during the career advancement seminars for women serving as managers and occupational specialists so that women who are also raising children could participate with peace of mind.

Fiscal 2020

Sixth career advancement seminar for women serving as managers and occupational specialists

Dates September 3– 4, 2020 (held online)

Purpose With regard to the three issues defined in the fifth seminar (the promotion to managerial/specialist positions, retention of young employees, and the realization of long-term career development), the participants divided into 11 groups to report and discuss the activities undertaken, the results achieved, and recommendations for future action.

Due to the COVID-19 pandemic, the seminar was held as a virtual meeting in fiscal 2020, rather than in-person as it has been in the past.

Fiscal 2021

Online Discussion Meeting for Female G-Course Employees

Dates	November and December 2021 (participants divided into groups for a total of 62 sessions)
Purpose	The discussion meeting was divided into two parts. Part one consisted of the viewing of three videos: the president's message, an explanation of the purpose of the discussion meeting, and a lecture by an outside speaker. Part two provided the opportunity for participants to share their opinions with each other online. In this second part, female managers and occupational specialists (section managers) served as facilitators to create an atmosphere where participants could speak candidly without concern. The facilitators prompted discussion of and carefully listened to individual cases of female G-Course employees, their actual situations, and thoughts on work-life balance and sources of motivation. By helping to create networks among participants, including their role-model female managers and occupational specialists, workplace environments can be developed that enable female employees to pursue careers over longer terms. This includes being able to increase their motivation, access more information and reduce their anxiety about future career development, as well as finding appropriate support for career continuation while balancing childcare or family care responsibilities.

Fiscal 2022

Online Training for Male and Female Section Managers with G-Course Female Subordinates

Dates	July and August 2022 (participants divided into 39 groups for discussion)
Purpose	Based on a prior questionnaire survey of G-Course female employees, participants engaged in discussions and shared opinions on the topic of “workplaces where diverse human resources can thrive.” The aim was to foster workplaces and a corporate culture in which staff can play a more active role by helping managers gain insight in their day-to-day management activities, and at the same time, identify the direction for appropriate measures, including support for balancing family and work responsibilities.

Sharing Stories via the Women's Empowerment Intranet

The Company gives specific examples on its corporate intranet of how employees who have given birth to and raised children, or provided caregiving for other family members, did so while still working. This intranet site was set up in January 2016, and since March 2019 it has been accessible via smartphone or tablet.

In order to provide helpful advice to young employees for enriching both their professional and personal lives, experienced employees have been posting on this website under the title of “Does This Help? My Story.” As of the end of fiscal 2022, 36 employees have shared their work-life balance experiences in this way.

By publishing not only examples of work-life balance achievement amid major life events, but also personal experiences relating to overseas posting and other career stages, the intranet site is helping employees of every age and gender to make their professional and personal lives more fulfilling.



Toray web page featuring cases of women employees' empowerment and working while raising young children

Examples of Workplace Initiatives in fiscal 2022

Course for S-Course Female Employees and Their Superiors to Promote Greater Workplace Empowerment for Women at the Ehime Plant (Toray Industries, Inc.)

In February 2023, the Ehime Plant of Toray Industries held a training session for female S-Course employees and their section manager superiors (55 participants).

Under the slogan of “Mindset Enhancement: Stepping Up to the Next Level,” the participants reviewed relevant issues to help both superiors and subordinates to work more successfully, and learned how to better communicate with people that have different standpoints using the group work approach.



Interaction during pair work

Women's Networking at the Tokai Plant (Toray Industries, Inc.)

The Tokai Plant of Toray Industries held a networking event for female employees in December 2022. Because the factory has few female employees and they are scattered among different workplaces, the women have not had sufficient opportunities for open interaction with each other. The event was planned by the Women's Empowerment Promotion Team in response to requests for more opportunities for female employees to network.

With total of 22 women in attendance, they shared examples of initiatives to promote women's empowerment and also spent time networking.



Participant interaction

Employment of Persons with Disabilities

CSR Roadmap 2022
Main Initiatives (2)

Group companies that have achieved legally mandated employment rate of persons with disabilities (%)

■Reporting scope
Toray Group (Japan)

■Target in fiscal 2022
100%

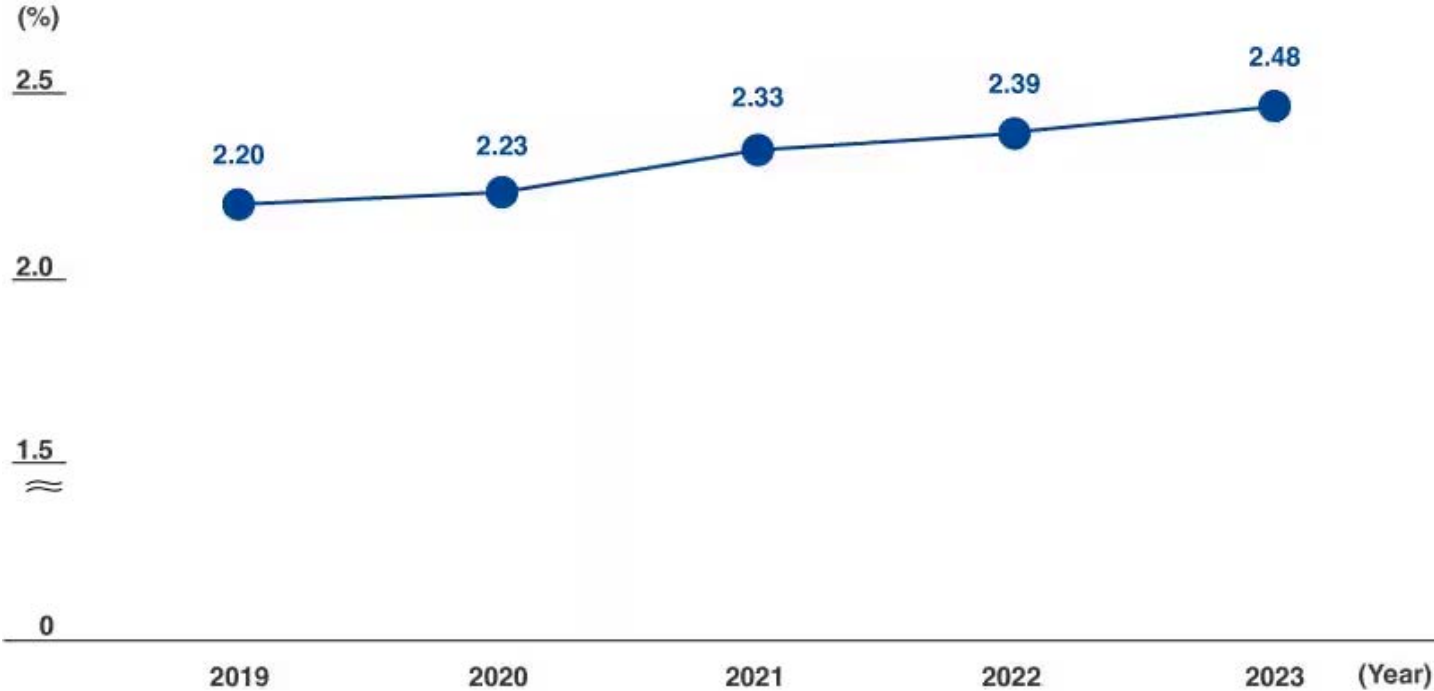
Result in fiscal 2022

53.1%

Toray Group hires and employs persons with disabilities, from those with physical challenges to persons with intellectual and mental challenges. The Group is making workplace improvements to remove physical barriers for persons with handicaps as well as instituting safety measures. Additionally, the Group provides comprehensive training upon work placement and gathers feedback from persons with disabilities to make workplace improvements.

Further, in fiscal 2022, Toray Industries met Japan’s legally mandated employment rate of persons with disabilities, as did 53.1% of Toray Group companies in Japan. Group companies actively seek to hire persons with disabilities through public organizations and job placement agencies. However, some individual group companies do not meet the mandated legal requirement. Toray Industries and group companies will continue to work together to actively focus on this issue moving forward.

Employment Rate of Persons with Disabilities (Toray Industries, Inc.)



Note: As of June 1 each year

Re-employment System

As part of Toray Industries’ initiatives to encourage full utilization of skilled individuals over 60 years of age, in fiscal 2001 the Company introduced a re-employment system open to all of its unionized employees who wish to continue working. In fiscal 2005, the scope of the re-employment system was expanded to include managers and occupational specialists who wish to continue working.

Click [here](#) for the main initiatives for CSR Guideline 8, “Human Rights Promotion and Human Resources Development” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Human Rights Promotion and Human Resources Development

Creating a Positive Workplace for Employees

CSR Roadmap 2022
Main Initiatives (6)(7)(8)(9)

Toray Industries, Inc. has been working to further improve systems that help employees achieve a harmonious balance between work and family life, by offering a wider variety of lifestyle options for men and women. Support systems that exceed those legally mandated for childcare, family care, and maternity protection are provided, the result of the company's commitment to making them accessible and responsive for a diverse range of employee needs.



In 2007, the company was granted certification as a general corporate entity meeting the requirements for supporting the development of the next generation by Japan's Ministry of Health, Labour and Welfare.

Since then, Toray has continued to expand its support system as follows.

Jun 2010	Revamped child care support systems in an effort to encourage male employees to make use of them
Apr 2011	Launched the Toray Smile Support Program, a point-based system that lets employees choose from various programs that provide financial assistance mainly for childcare and purchasing homes
Apr 2012	Initiated a telecommuting program aimed at making it easier for employees to work while raising children or caring for family members
Oct 2012	Expanded the scope of the commuting allowance for taking the bullet train
Apr 2013	Improved support systems once again, offering special leave for parents to prepare children for nursery school, and extending eligibility for leave to care for sick children or family members
Jul 2013	Revised lower-hour work schedule systems for those raising children or caring for family members
Jul 2016	Expanded leave provisions for employees requiring special consideration as caregivers
Jan 2017	Eliminated restrictions on the number of times that employees can use long-term family care leave and lower-hour work schedule systems for caregivers
Jul 2017	Started a flextime system without core-hour requirements for employees at the Tokyo and Osaka head offices

Oct 2019	Expanded the scope of the telecommuting program to those raising children or caring for family members
Apr 2020	Began allowing the use of paid annual leave on an hourly basis
Apr 2020	Introduced a working-hour interval system
Jul 2020	Eliminated the requirement of raising children or caring for family members in order to utilize the telecommuting program
Jan 2021	Introduced hourly leave systems for caring for sick children or other family members
Jul 2022	Expanded family-care programs

Major Support Systems for Employee Work and Family Life Balance

Category	Description
Prenatal and postnatal leave	<ul style="list-style-type: none"> • Prenatal leave can be taken starting eight weeks before the expected delivery date (14 weeks before a multiple pregnancy). • Postnatal leave is available for eight weeks after childbirth.
Long-term childcare leave	<ul style="list-style-type: none"> • Available for employees using child care center services up to the end of the month in which the child turns two years of age
Postnatal paternity leave	<ul style="list-style-type: none"> • Fathers of newborns can take up to four weeks leave within eight weeks of the child's delivery date or expected delivery date, whichever is later
Lower-hour work schedules for childcare	<ul style="list-style-type: none"> • A maximum reduction of two hours per day, calculated in 15-minute increments, available until the end of the fiscal year in which the child is in third grade of elementary school • May be used concurrently with flextime system
Long-term family care leave	<ul style="list-style-type: none"> • Available for a total of 365 days per situation requiring leave to provide care • May be split up
Spouse's childbirth leave	<ul style="list-style-type: none"> • Available for three days in the event that an employee's spouse gives birth

Category	Description
Lower-hour work schedules for caregivers	<ul style="list-style-type: none"> • May be taken multiple times per situation in the five-year period following the first day of use • May be split up • May be used concurrently with flextime system
Leave to care for sick children	<ul style="list-style-type: none"> • Five days per year of leave per child available until the end of the fiscal year in which the child is in third grade of elementary school • Can be used on hourly basis
Family care leave	<ul style="list-style-type: none"> • Five days per year of leave available per family member • Can be used on hourly basis • At maximum 10 additional days per year available when no other appropriate caregiver is available
Toray Smile Support Program	<ul style="list-style-type: none"> • Welfare point system offering a selection of programs with an emphasis on providing support for childcare and home acquisition
Childcare services payment assistance	<ul style="list-style-type: none"> • Childcare coupons offering a 70% discount on services provided by participating companies issued as an additional Toray Smile Support Program service • No restrictions on number of coupons or age of participating employee's child
Telecommuting program	<ul style="list-style-type: none"> • Available for employees who are proficient in their assigned duties, can perform these duties self-sufficiently, and meet certain requirements. • Available up to three days (22.5 hours) per week and no more than a maximum of ten days (75 hours) per month for approved employees, who may use the program on a full-day or hourly basis. If an employee requests more than the maximum hours/days due to special circumstances, and it is deemed not to interfere with workplace management, the employee may telecommute for more than the maximum allowed under the program. <p>Note: In addition to the conditions above, since 2020, the program has also been used to address the COVID-19 pandemic.</p>

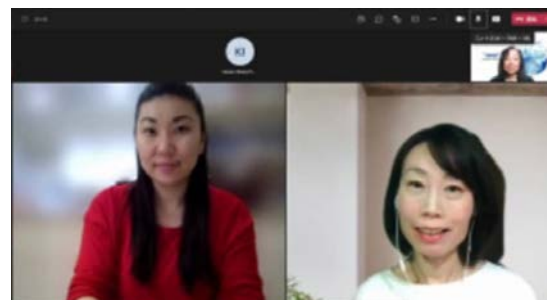
Category	Description
Registration system for reemployment	<ul style="list-style-type: none"> • Registration system providing reemployment opportunities to former employees who resigned due to personal matters such as marriage, childbirth and childcare, nursing care for family members, or a spouse's work transfer • The registration period is ten years. Registrants may be immediately eligible for regular employee positions depending on the content of their jobs, expectations of their role in the company, and their personal situations.
Commuting allowance for bullet train or other limited express travel	<ul style="list-style-type: none"> • Allowance for tickets for applicable distances on bullet trains or other limited express trains available for employees who wish to avoid (cease) living apart from their families due to job transfers or employees who bear personal responsibilities such as caring for family members • In certain cases, employees may be required to pay a part of the commuting expenses out of pocket.

Note: Toray Group employees working near Nihonbashi in Tokyo can use a local consortium-based child care center (Kids Square Nihonbashi Muromachi).

Examples of Workplace Initiatives in fiscal 2022

Online Discussion Meeting Held Concerning Support for Balancing Work and Family Lives

Toray Group has set up a section on its employee welfare site called WELBOX to provide information on various work-life balance support programs. WELBOX also shares examples of work-life balance achieved by Toray Group employees. The WELBOX Online Salone has been held since fiscal 2021 as an online discussion meeting for those interested in the cases featured on the site. As of the end of fiscal 2022, there have been four such meetings. Reflecting on the themes of “balancing work and childcare” and “examples of career struggles,” the participants share their daily struggles, and use it as an opportunity for communication that goes beyond the usual workplace boundaries. Going forward, the plan is to continue holding this meeting about twice a year.



WELBOX online discussion meeting

Utilization of Childcare and Family Care Leave Systems (Toray Industries, Inc.)

FY		2018	2019	2020	2021	2022
Employees taking childcare leave	Women	58	60	66	56	46
	Men	4	10	22	40	82
Employees taking family care leave	Women	5	3	1	2	2
	Men	1	1	0	1	1

Note: Figures show the number of employees taking leave in each year.

Number of Employees Who Returned to Work after Childcare Leave and Family Care Leave (Toray Industries, Inc.)



		FY2021		FY2022	
		Number of employees who returned to work	Percentage of employees who returned to work	Number of employees who returned to work	Percentage of employees who returned to work
Childcare Leave	Women	59	98.3%	52	100%
	Men	38	100%	77	100%
Family Care Leave	Women	2	100%	2	100%
	Men	1	100%	1	100%

Note: Number/percentage of employees returning to work per fiscal year

Employees taking leave for spouse's childbirth (Toray Industries, Inc.)

FY	2020	2021	2022
Number of employees	230	220	233

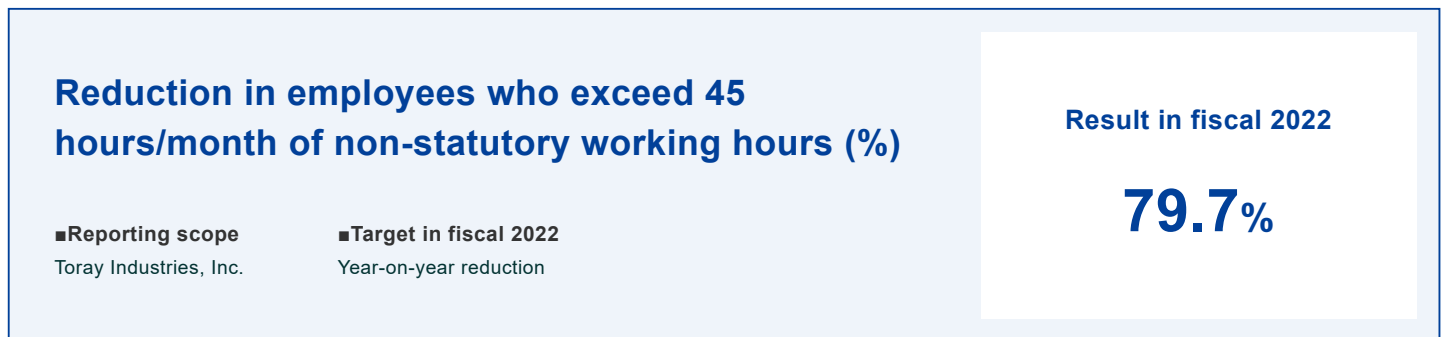
Male employees taking childcare leave (%) (Toray Industries, Inc.)

FY	2022
Male employees taking childcare leave (%)	81%

* Childcare leave includes postnatal paternity leave

* Childcare leave includes spouse's childbirth leave

Initiatives to Reduce Overtime and Encourage Use of Annual Paid Leave (Toray Industries, Inc.)



Employee Health

Toray Industries sees employee health management as a management priority, and is taking strategic initiatives in this area. The group-wide Safety, Health, and Environment Committee reports on the results of health management initiatives, determines action plans, and promotes them in each workplace. Working in collaboration with the employee health insurance association, the Company actively promotes employee health by sharing health information via internal communication tools, holding participatory events using health information sites, and providing lifestyle disease prevention seminars.

Toray Industries is also addressing mental health, and since fiscal 2011 has been implementing employee stress check-ups through an external provider. This helps employees recognize their own stress levels and learn how to manage stress, which leads to an improved workplace environment. The stress check-ups are also carried out at group companies in Japan.

In recognition of these efforts, in March 2023, Toray Industries was again listed as a White 500 Company in the Certified Health and Productivity Management Organization Recognition Program.

Examples of Workplace Initiatives in fiscal 2022

Third Women's Health Seminar at the Okazaki Plant (Toray Industries, Inc.)

Toray Industries' Okazaki Plant held its third Women's Health Seminar over three days, with a total of 17 female employees participating.

This year, the theme was “Stay healthy and beautiful by doing warm-up stretches!”

The seminar stressed that regularly warming up muscles can help maintain health. The activity is also important for beauty care.

Accordingly, the participants learned simple stretches to warm up their bodies.



Women's Health Seminar

Physical Function Evaluations at the Mishima Plant (Toray Industries, Inc.)

At the Mishima Plant of Toray Industries, a comprehensive health campaign (Health Promotion Plant - Mishima) is being promoted to ensure that employees work safely and in good health.

Following last year, the plant conducted a second physical function evaluation as recommended by the Japan Industrial Safety and Health Association. Some participants indicated an interest in the results of others in the same age group. So the participants analyzed their results, including comparisons with the previous year's results, and will utilize them as a reference for their activities. Going forward, Mishima Plant will continue to engage in activities to maintain and improve employee health through a variety of activities.



Double step test: Measuring the maximum distance the employee can cover by taking only two large steps

Dialogue with Labor Unions

Toray Industries holds meetings of the Central Labor and Management Council twice a year with the attendance of directors at the senior vice president level and higher and labor representatives at the union head level and higher. In addition to briefing the union on management information about Toray Group, the meetings facilitate ongoing dialogue with the union. In fiscal 2022, the number of meeting participants was limited in order to reduce the risk of COVID-19 infection.

Resolution of labor issues is undertaken at separate Labor and Management Council meetings.

Based on the union shop system, all regular employees, excluding those at the management level or accepted as exempted from labor-management consultations, are members of the Toray Workers' Union. As of March 2023, Toray Workers' Union membership stood at 7,858 workers.

Click [here](#) for the main initiatives for CSR Guideline 8, “Human Rights Promotion and Human Resources Development” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports)

Establishing Sustainable Supply Chain

To establish a sustainable supply chain, work closely with suppliers, processing vendors, subcontractors, customers and distribution companies to implement socially responsible procurement throughout the supply chain in order to ensure responsible practices with respect to environmental preservation and human rights.



Basic Approach

Toray Group operates a wide range of businesses in countries and regions around the world. As a result, its procurement of raw materials and supplies and the locations and industries of its contractors and suppliers are diverse. At the same time, CSR initiatives in today's global society are increasingly important. They have become more diverse and advanced in the effort to address climate change, environmental protection, respect for human rights and improvements to the labor environment. These initiatives can no longer focus solely on a single company and are being extended to encompass its entire supply chain.

To address this issue and ensure stable and sustainable procurement, Toray Group has established the Toray Group CSR Procurement Policies. The policies specify the Group's commitment to building a supply chain that not only ensures quality and supply stability, but also incorporates ethical, environmental, social and human rights considerations. Accompanying the policies, the Group has also formulated Toray Group CSR Procurement Guidelines to provide specific, detailed guidelines for action to further promote CSR throughout the supply chain. Suppliers are required to comply with the guidelines.

Related Policies

Toray Group CSR Procurement Policies Revised March 2022¹

1. Establish an internal CSR organization to facilitate CSR initiatives throughout the supply chain and sincerely committed to it.
2. Promote fair transactions grounded in corporate ethics, and comply fully with all laws and regulations, as well as social norms inside and outside Japan, when making purchases.
3. Take into account the impacts that purchasing activities have on the labor environment and health and safety. Also, engage in risk management through, for example, responding swiftly to unexpected situations and disclosing accurate information.
4. While appropriately managing chemical substances, pursue raw materials procurement that takes into account impacts on the environment such as green procurement and green purchasing.
5. Promote dialogue and cooperation with business partners and other stakeholders.
6. Maintain and strive to improve product quality and safety.
7. Respect human rights, eliminate all forms of discrimination, and strive to improve workplace environments. Additionally, do not be complicit in the infringement of human rights in the supply chain, such as through forced labor, slave labor, child labor, and unjust low-wage labor.
8. Do not use minerals from conflict regions or high risk regions, nor minerals that clearly contribute to conflicts or infringe upon human rights.
9. Prevent leaks of confidential information and respect intellectual property rights.
10. In selecting business partners, take into account their CSR initiatives, such as compliance with laws and regulations, respect for human rights, environmental preservation, and the like, while seeking strict adherence to the Toray Group CSR Procurement Guidelines and facilitating CSR initiatives throughout the supply chain.

¹ Approved by a resolution of the Board of Directors, the Toray Group CSR Procurement Policies are the new and revised version of the earlier CSR Procurement Guidelines, which were formulated in 2004.

Toray Group CSR Procurement Guidelines Formulated March 2022

The major contents of the new CSR Procurement Guidelines formulated in March 2022 are as follows.

1. Ethics and Compliance

(1) Legal Compliance

Strictly adhere to the laws and regulations of each country and region, and carry out business activities grounded in corporate ethics. Establish compliance policies and build a framework and training system in order to ensure thorough compliance.

(2) Strict Adherence to Competition Laws

Refrain from conduct that obstructs fair competition, such as unjust transaction restrictions (private monopolies, cartels, bid rigging, etc.), as well as unfair trade practices or abusing a dominant bargaining position.

(3) Preventing Corruption and Prohibiting Bribery

Do not, for the purpose of obtaining improper advantage, provide to or solicit money or goods (including facilitation payments) from parties concerned, and do not provide or accept gifts or hospitality exceeding the acceptable range of social norms. Furthermore, do not engage in illegal political donations and the like.

(4) Prohibition against Behavior that Presents a Conflict of Interest

Do not engage in behavior that is against the interest of the Company and in the interest of yourself, a business partner, or a third party, and do not accept inappropriate demands from Company customers or employees of business partners.

(5) Protecting Confidential Information and Personal Information

Strictly adhere to each country and region's laws and regulations on business partner, third party, and Company employee personal information, as well as business partner and third party confidential information. Obtain said information, strictly manage and protect it, and use it within an appropriate scope of business.

(6) Whistle-blowing System and Whistle-blower Protections

Establish a system for Company employees and business partners to report legal and statutory violations, as well as matters of concern related to the business. Safeguard whistle-blowers to ensure that they are not subject to termination, threats, harassment, or other disadvantages, nor are they subject to retaliation.

(7) Appropriate Import/Export Management

Follow appropriate import/export procedures and properly manage the import/export of technologies and goods subject to the laws and regulations of each country and region.

(8) Respect for and Safeguarding of Intellectual Property

While appropriately safeguarding the Company's intellectual property, demonstrate respect for the intellectual property of third parties and do not infringe upon their intellectual property rights.

(9) Appropriate Information Disclosure

Engage in the timely and appropriate disclosure to stakeholders of management, financial, business activity, and other information stipulated for disclosure in the laws and regulations of each country and region. Also, strive for mutual understanding and the maintenance and enhancement of relationships of trust with stakeholders through communication.

(10) Responsible Procurement of Mineral

Carry out procurement activities with due consideration to ensure that raw materials, such as minerals, contained in our products are not contributing to human rights violations, environmental destruction, or conflicts in the areas in which they are produced. If there are materials of concern, carry out measures to avoid the use of these materials.

2. Safety, Accident Prevention, and Risk Management

(1) Occupational Safety Management

In order to protect the safety and health of employees, ensure that equipment, working conditions, and working procedures are safe. While adhering to the labor laws and regulations of each country and region, strive to avoid occupational accidents by establishing educational programs and safety measures to prevent incidents.

(2) Occupational Health Management

Assess the work environments of each workplace, including chemical substance control, noise, odors, etc., and, while establishing measures to avoid injuries to health, strive to manage employee health through regular health exams and the like.

(3) Responding in Times of Emergency

In order to protect lives and physical well-being, anticipate potential disasters, diseases, etc. and prepare and disseminate response measures for times of emergency.

(4) Business Continuity Plan (BCP) Initiatives

In order to maintain the continuity of business activities, identify risks that may interfere with the activities and carry out initiatives for preventing and mitigating those risks.

3. Environmental Preservation

(1) Environmental Management

While strictly adhering to the environmental laws and regulations of each country and region, build a company-wide management framework for promoting environmental activities and strive to continually utilize and improve those frameworks.

(2) Reduce Emissions of Greenhouse Gases

Control greenhouse gas emissions in business activities and promote activities that continually reduce those emissions, while striving to effectively utilize energy.

(3) Minimize Impacts on the Environment

Manage and reduce emissions of substances that have an impact on the environment, and strive to prevent air, water, and soil pollution.

(4) Resource Reduction and Waste Product Management

Appropriately handle waste products, mitigate waste production, promote recycling, and strive to effectively utilize resources.

(5) Chemical Substance Management

While endeavoring to keep products free of chemical substances legally prohibited by each country and region, appropriately manage and handle chemical and other substances released into the outside environment.

(6) Concern for Biodiversity

While preserving biodiversity and striving for its sustainable use, engage in raw materials procurement that takes biodiversity into account.

4. Product Quality and Safety

(1) Maintain and Improve Quality

Strive to improve quality while building frameworks for appropriate quality control and quality assurance, and maintaining quality that meets expectations.

(2) Product Safety

Strictly adhere to the laws, regulations, and standards of each country and strive to ensure product quality and safety. In the event that a quality issue does arise, handle it promptly and appropriately.

5. Human Rights Promotion

(1) Respect for Fundamental Human Rights and Elimination of Discrimination and Harassment

Respect fundamental human rights and, in all aspects of employment, including recruiting, hiring, placement, compensation, training, and resignation, do not engage in any discriminatory treatment on grounds of race, creed, color, sexuality (including gender identify and sexual orientation), religion, nationality, language, physical characteristics, economic status, place of origin, etc., and do not engage in any form of harassment.

(2) Prohibition of Child Labor and Due Consideration toward Young Workers

Do not hire workers who do not meet the eligible working age stipulated by the laws and regulations of each country and region. Additionally, exercise particular consideration for the health and safety of employees under the age of 18, based on the laws and regulations of each country and region.

(3) Prohibition of Forced Labor and Slave Labor

Do not utilize forced, compulsory, involuntary, exploitative, or slave labor, nor labor obtain through human trafficking. Additionally, no forms of work shall be forced and employees shall be assured the ability to voluntarily end their employment.

(4) Wages and Benefits

Make payments appropriately and strictly adhere to the laws and regulations of each country and region regarding minimum wage, overtime work, payroll deductions, piecework payments, and other allowances. Additionally, do not carry out any unjust wage reductions.

(5) Working Hours

Strictly adhere to the laws and regulations of each country and region regarding the determination of employee work hours and holidays, and the granting of annual paid leave.

(6) Dialogue and Cooperation with Employees

6. Facilitating CSR initiatives throughout the Supply Chain

(1) Request for Initiatives to Business Partners

While requesting that suppliers, contracted processors, and other business partners strictly adhere to the provisions of these Guidelines or their equivalent, work to thoroughly promote these Guidelines through regular surveys and inquiries on the status of implementation by business partners.

Policies on Purchasing and Distribution

As a manufacturer of advanced materials that supplies a wide range of materials and products, Toray Group must expand CSR initiatives into upstream management, including production facilities and the procurement of raw materials and products. It has therefore established Basic Purchasing Policies together with Basic Distribution Policies. The entire Group works to fulfill its social responsibilities relating to procurement, purchasing, and distribution. These include measures to ensure fair and equitable transactions, quality improvement, legal compliance, environmental protection, and respect for human rights.

Related Policies

Basic Purchasing Policies Revised March 2022

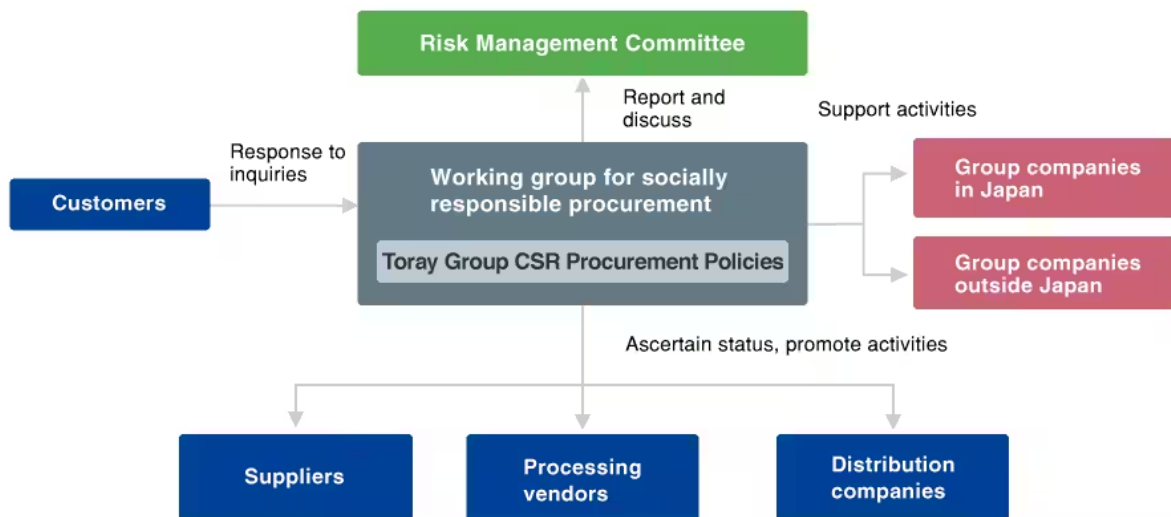
1. Toray does its utmost to select suppliers and determine actual purchases fairly and on the basis of economic rationality, with consideration for price, quality, capability to provide stable supplies, technological capabilities, reliability, and other factors.
2. In selecting suppliers, Toray opens its doors to a wide range of companies inside and outside Japan. Toray does not rely solely on vendors it has existing or past relationships with, or on members of its corporate group.
3. Toray works to maintain and improve the quality of purchased products through cooperation with its suppliers.
4. Toray strictly adheres to its Toray Group CSR Procurement Policies and Toray Group CSR Procurement Guidelines, and works to promote purchasing that upholds Toray's corporate social responsibilities on a company-wide basis.

Basic Distribution Policies Revised March 2022

1. Toray does its utmost to select transport and warehousing providers and determine individual agreements impartially and based on factors such as economic rationality with consideration given to price, quality, supply stability, technological capabilities, reliability, and efforts to reduce environmental impact.
2. In selecting transport and warehousing providers, Toray opens its doors to a wide range of companies, rather than relying exclusively on companies with which we have done business in the past or companies affiliated with Toray Group.
3. Toray works to cooperate with our transport and warehousing providers in gauging and reducing the environmental impact of our transport and warehousing operations.
4. Toray strictly adheres to its Toray Group CSR Procurement Policies and Toray Group CSR Procurement Guidelines, and works to promote distribution activities that uphold Toray’s corporate social responsibilities on a company-wide basis.

Structure

To ensure socially responsible procurement across the Group and address today’s increasingly globalized procurement risks, Toray Industries, Inc. has established a working group to lead a group-wide risk management initiative. The working group strives to ascertain the status of CSR practices at suppliers, responds to customer inquiries about Toray Industries’ CSR practices, and supports group companies in this area. The working group also regularly reports on the progress of socially responsible procurement and related risk mitigation initiatives across the Group to the Risk Management Committee, which oversees overall risks. The issues reported are discussed by the committee members.



Requesting That Suppliers Promote CSR Measures and Ascertaining Progress

Toray Group CSR Procurement Guidelines

CSR Procurement Survey

Ethics and Compliance

Safety, Accident Prevention, and Risk Management

Environmental Preservation

Product Quality and Safety

Human Rights Promotion

Facilitating CSR Initiatives Throughout the Supply Chain

Further, initiatives are taken to ensure that the concept of socially responsible procurement permeates and is upheld throughout the entire Toray Group. Toray Industries, Inc. provided e-learning on CSR, including content on socially responsible procurement, for every executive and employee, including contracted, part-time, and dispatched workers, in November 2020 and February 2021. The training was taken a total of 13,947 times. In addition, special articles on CSR procurement are regularly included in Toray Group's in-house newsletters to further raise awareness within the Company, and this continued in fiscal 2022.

Toray Industries is also engaged in activities to spread awareness to group companies in and outside Japan by distributing internal educational materials that describe the necessity of socially responsible procurement, required activities, and examples of risks.

Initiatives for Human Rights and Environmental Due Diligence² in the Supply Chain

Due diligence concerning the human rights and environmental activities of suppliers is used to identify and evaluate human rights and environmental risks in the supply chain. It allows risk prevention and mitigation measures to be taken. Toray Group carries out this due diligence in accordance with the process stipulated in the “OECD Due Diligence Guidance for Responsible Business Conduct” issued by the Organisation for Economic Co-operation and Development (OECD).

Toray Group has established policies related to this activity. It has implemented the [Toray Group Policy for Human Rights](#), which prohibits child labor, forced labor, and unfair low-wage labor, and requires the respect for human rights throughout the entire supply chain. In the area of environmental preservation, the Group has also established [Ten Basic Environmental Rules](#), [Recycling Activity Principles](#), [Toray Group Biodiversity Basic Policy](#), and the [Toray Group's Basic Policy for Increasing Green Areas](#). The [Toray Group CSR Procurement Policies](#) and [Toray Group CSR Procurement Guidelines](#) have also been created to promote respect for human rights and environmental preservation throughout the supply chain.

Specific initiatives include regular implementation and analysis of the [CSR Procurement Survey](#) for business partners, establishment of the whistleblowing hotline system, surveys of high-risk issues related to CSR procurement, confirmation of business partner risks using a company search system, and identification of any negative impacts on human rights and the environment. Negative impacts are handled through measures such as requesting improvements from companies with low scores based on the CSR Procurement Survey, and conducting follow-up visits and confirmation.

Information about these activities is shared both in and outside the Company using the Group website and other means.

Toray Group will continue to promote initiatives to prevent and reduce any negative impacts on human rights and the environment that might occur in the supply chain.

² To prevent or reduce the negative impacts that a company may have on society, a continuous due diligence process is used. It involves proactively investigating and identifying problems, correcting them through appropriate measures, and publicly disclosing these activities.

Related Information

- > [Socially Responsible Procurement Initiatives at Toray Group](#)
- > [Initiatives to Mitigate Global CSR Procurement Risk](#)
- > [Statement on the UK's Modern Slavery Act](#)

CSR Roadmap 2022 Targets

CSR Roadmap goals

To ensure socially responsible procurement by the Toray Group, request major suppliers and business partners to practice CSR and work with suppliers to promote greater awareness of human rights, social, and environmental issues

Main Initiatives and Key Performance Indicators

	KPI
(1) Request suppliers to practice CSR, including by conducting CSR surveys and audits, and having them make pledges, and strive to understand the status of each company's CSR initiatives	9-①②
(2) Address issues in the supply chain such as human rights challenges and conflict mineral issues	-
(3) Reduce CO ₂ emissions intensity from distribution activities	9-③
(4) Promote modal shift ³ across distances of 500 km or more	9-④
(5) Continually work to reduce the environmental impact and improve the quality of distribution activities	-
(6) In accordance with the Declaration of Voluntary Activities for the White Logistics Movement, ⁴ contribute to sustainable logistics, for instance by selecting logistics companies that are engaged in working style reform, etc.	-

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
9-① Group companies requesting their suppliers to practice CSR (%)	At least 80%	At least 90%	At least 95%	93%
9-② Suppliers confirming the status of CSR initiatives as requested by Toray Group (%)	At least 70%	At least 70%	At least 70%	88%
9-③ Reduction in CO ₂ emissions intensity from distribution activities (year-on-year)	1%	1%	1%	15.3%
9-④ Modal shift to sea or rail for transport across distances for 500 km or more (%)	40% (Fiscal 2022 target)			27%

Reporting scope : Toray Group (9-① and 9-②)

Toray Group (Only specified consigners) (9-③)

Toray Industries, Inc. (9-④)

3 The shifting of freight transportation by truck or other vehicle to railways and ships, which have a smaller environmental impact

4 A movement aimed at ensuring stable logistics function necessary for people's lives and for industrial activities while also contributing to economic growth in response to the shortage of truck drivers

Related Materiality for CSR

- Developing in Collaboration with Stakeholders
- Establishing Sustainable Supply Chain

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB).

[PDF](#)

* Click [here](#) for a PDF summary of the relationships between materiality, associated CSR Roadmap 2022 main initiatives, KPIs and progress achieved, up to fiscal 2022 (PDF: 1.6MB).

[PDF](#)

Looking to the Future

In recent years, there has been an increasing demand for companies to address social issues such as human rights and environmental problems throughout the supply chain. Toray Group believes that socially responsible procurement must be pursued together with all suppliers. The Group will continue to identify and evaluate progress on CSR practices in all processes, including the procurement of raw materials and supplies across the entire Group, as well as production activities by contractors and processing vendors. Toray Group will continue to promote CSR initiatives across its network of suppliers in order to build an even more sustainable supply chain.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 9 “Establishing Sustainable Supply Chain” during the CSR Roadmap 2025 period (fiscal 2023–2025). [PDF](#)

CSR Activity Report (CSR Guideline Activity Reports) - Establishing Sustainable Supply Chain
Socially Responsible Procurement Initiatives at Toray Group

Toray Group's Socially Responsible Procurement

CSR Roadmap 2022
Main Initiatives (1)(2)

Group companies requesting their suppliers to practice CSR (%)

■Reporting scope: Toray Group
 ■Target in fiscal 2022: At least 95%

Result in fiscal 2022

93%

Suppliers confirming the status of CSR initiatives as requested by Toray Group (%)

■Reporting scope: Toray Group
 ■Target in fiscal 2022: At least 70%

Result in fiscal 2022

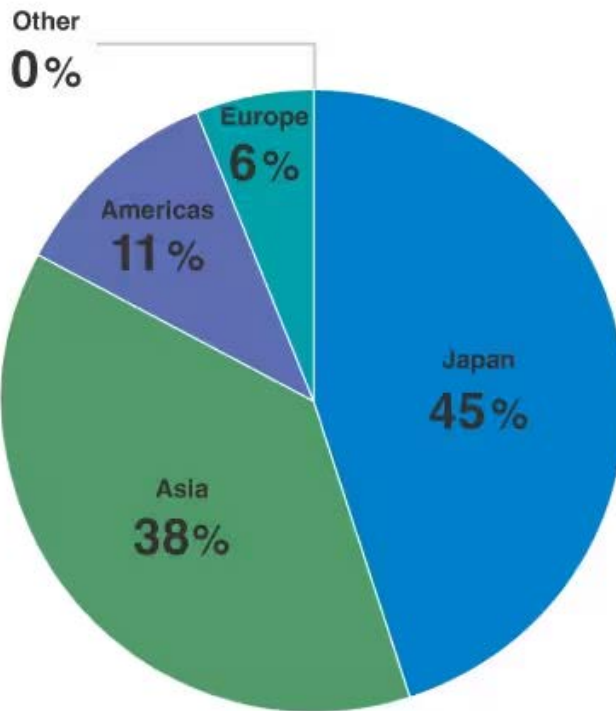
88%

Toray Group Supply Chain

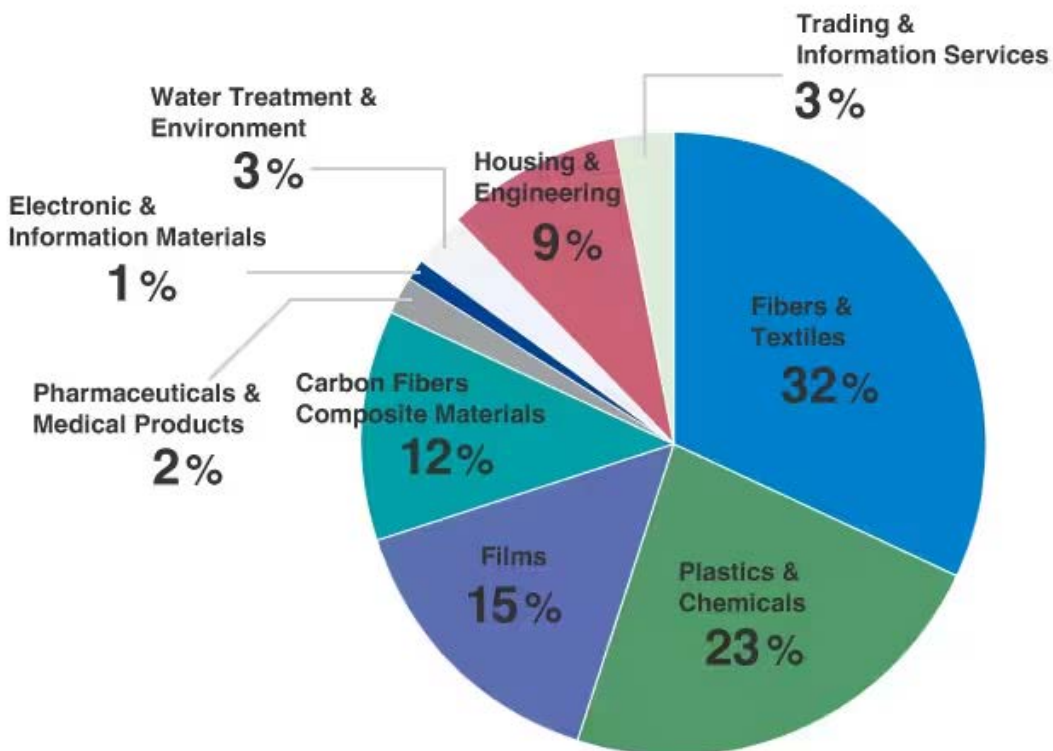
Toray Group's supply chain extends to diverse countries and regions around the world. In fiscal 2022, the Group's purchasing by region was 45% in Japan, 38% in the rest of Asia, 11% in the Americas, and 6% in Europe. Purchasing by business segment was 32% for Fibers & Textiles, 23% for Plastics & Chemicals, 15% for Films, 12% for Carbon Fibers Composite Materials, and 18% for others.

Fiscal 2022 Purchasing Breakdowns by Region and Business Segment (Based on Transaction Value)

Purchasing Breakdown by Region



Purchasing Breakdown by Business Segment



Socially Responsible Procurement Initiatives at Toray Group

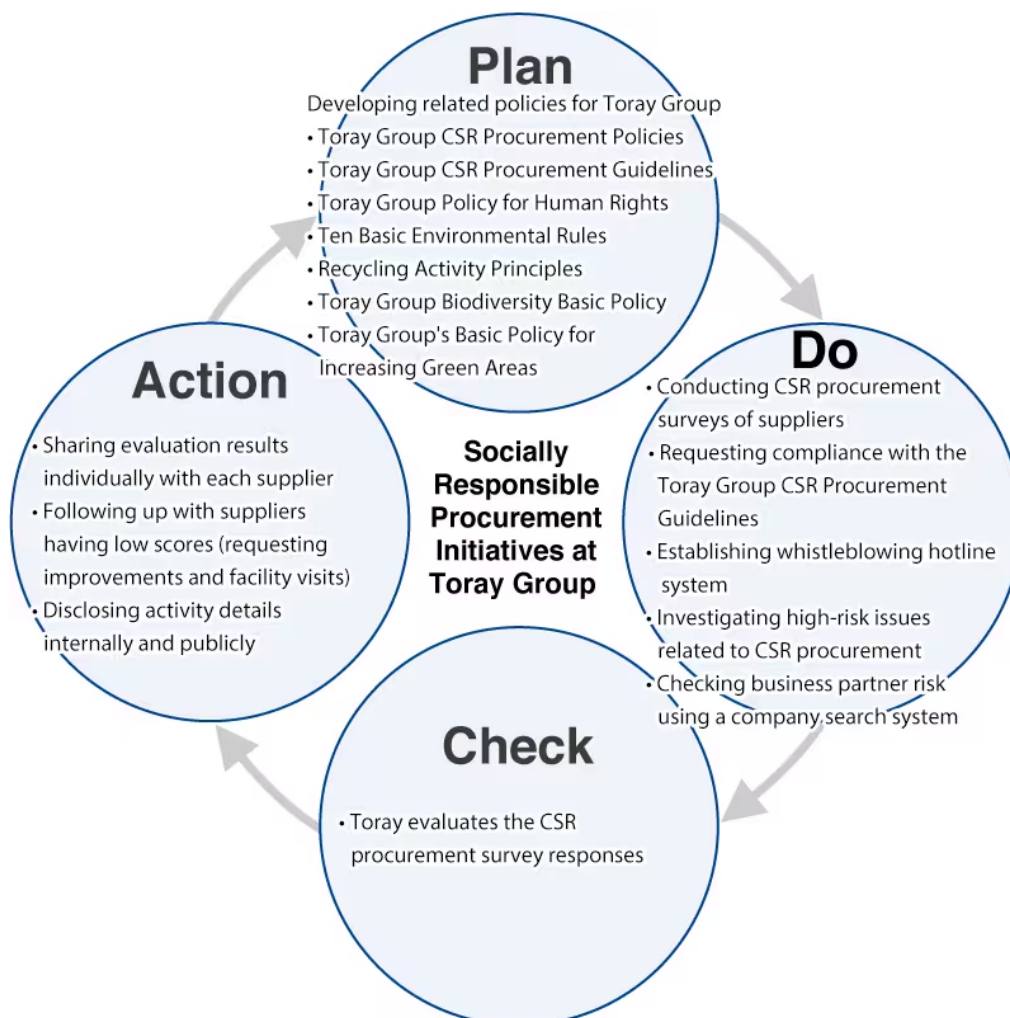
With its global supply chain, Toray Group places top priority on ascertaining suppliers' CSR activities and requesting them to implement the necessary initiatives. Toray Group is facilitating CSR initiatives across its supply chains, including at group companies in Japan and around the world. These efforts include developing a socially responsible procurement system, responding to customers' requests for CSR practices, ascertaining supplier CSR initiatives, educating suppliers, carrying out CSR surveys of suppliers, requesting compliance with the Toray Group CSR Procurement Guidelines, and conducting activities to obtain written agreements on these guidelines.

In fiscal 2022, the number of group companies requesting their suppliers to practice CSR was 148 (93%) out of the 160 applicable companies (group companies whose production activities include purchasing and/or outsourcing production).

In addition, Toray Group uses its own questionnaire survey system to conduct CSR surveys of suppliers. The Group has established a plan-do-check-action (PDCA) cycle by regularly monitoring suppliers' CSR initiatives, assessing suppliers based on uniform group standards, providing feedback on the results to suppliers, and following up on poor-performing suppliers. In this way, the Group endeavors to raise suppliers' awareness and efficiently and effectively ascertain, prevent, and lower CSR risks across the supply chain. Moreover, Toray Group has created its own Supply Chain CSR Promotion Guidebook, which is regularly distributed to suppliers as a reference material, along with feedback concerning the periodic CSR procurement surveys.

Through these initiatives, in fiscal 2022, of major suppliers that Toray Group identified as in need of confirmation of their CSR practices, 88% were confirmed to be meeting Toray Group's standards in their work on CSR.

PDCA Cycle for Supply Chain Management



Main Items of CSR Surveys of Suppliers

I. CSR promotion system

- Establishment of and familiarity with policies and guidelines
- Establishment of internal system and selection of responsible parties
- Establishment of goals and plans, review of activity results

II. Corporate ethics and compliance

- Anti-corruption and bribery prevention
- Prevention of misuse of advantageous position and bid-rigging
- Thorough legal and ethical compliance
- Prevention of conflicts of interest
- Protection of confidential information and personal information
- Respect for and protection of intellectual property rights
- Avoidance of all involvement with organized criminal groups
- Prevention of use of technology barred under regulations and illegal exports
- Identification of use of conflict minerals and cobalt and country of origin

III. Occupational safety and health

- Safety measures in workplace and improvements to working environment
- Prevention of occupational accidents
- Prevention of accidents and health risks
- Adoption of management system related to occupational safety

IV. Disaster prevention and risk management

- Development of education, training and manuals for disasters
- Establishment of business continuity plan (BCP) for large-scale disasters
- Establishment of BCP for pandemic
- Defense against threats on computer network

V. Environmental conservation

- Obtaining and maintaining authorizations and registrations
- Prevention of pollutants and waste, promotion of resource use (3Rs: reduce, reuse, recycle)
- Appropriate management of chemical substances and pollutants in line with laws and regulations
- Greenhouse gas emissions management and reduction
- Green procurement, green purchasing, energy conservation activities
- Consideration for water resources and biodiversity and implementation of assessments
- Introduction of environmental conservation management system

VI. Interaction with stakeholders

- Disclosure of financial information and non-financial information
- Setting up hotlines for consultation and reporting, protection of whistleblowers
- Support for community activities and activities contributing to society, and encouragement of participation in such activities

VII. Product safety and quality assurance activities

- Assessment of product safety, management of substances contained in products
- Provision of information on specifications, quality and handling

VIII. Human rights and labor

- Prevention of child labor and measures for young workers
- Prevention of forced labor, slave labor, and other forms of illegal or inhumane labor practices
- Provision of appropriate information to foreign workers and employment
- Prevention of undue low wages and wage reductions, as well as labor that exceeds statutory limits
- Ban on harassment, physical punishment, abuse, etc.
- Protection for freedom of association and collective bargaining, etc.
- Responding to the impact of COVID-19

IX. CSR initiatives in supplier's own supply chain

- Requests for promotion of CSR along supply chain

Every two years, in principle, Toray Industries carries out a CSR survey of major suppliers, business partners and distribution companies which together are responsible for 90% of the Company's total procurement value. Questions are established based on the Toray Group CSR Procurement Policies and the Toray Group CSR Procurement Guidelines. The surveys exhaustively confirm the extent to which suppliers are addressing CSR, requesting actions on a variety of social issues such as respect for human rights, reduction of greenhouse gas emissions, consideration for water resources and biodiversity, and implementation of environmental assessments. In fiscal 2022, Toray Industries carried out CSR surveys of major suppliers and received 448 responses (137 raw material suppliers, 157 equipment and material suppliers, 40 logistics companies, as well as 114 production and processing contractors). The results indicated that about 99% of companies surveyed were rated S, A or B¹ for CSR practices, thus meeting the Company's standards for business partners. The companies surveyed rated C or D, requiring further investigation of their CSR practices, accounted for just 1%. Analysis revealed that the average scores for the 448 companies improved compared to the previous survey with respect to most survey items such as environmental conservation, product safety and quality assurance activities, and human rights and labor. The results have reaffirmed that each company is promoting CSR initiatives. In addition, 80% of the companies that were rated C or D in the previous survey, visited to confirm actual conditions, and requested to make improvements earned to a B or higher rating in the current survey. The assessment results from the current survey have been shared with each company along with the contents of the analysis. In fiscal 2023, the Company will individually visit all six suppliers that were rated C or D to confirm actual conditions, discuss measures for improvement, and check the status of measure implementation.

In addition, suppliers that received low scores in the fiscal 2020 survey have made various improvements. These include establishing a corporate CSR policy and sharing it on the company's website and with their own suppliers, reviewing employment rules to allow considerations for individual employee health conditions, family circumstances, and social conditions, as well as diversifying suppliers to help mitigate disaster risks.

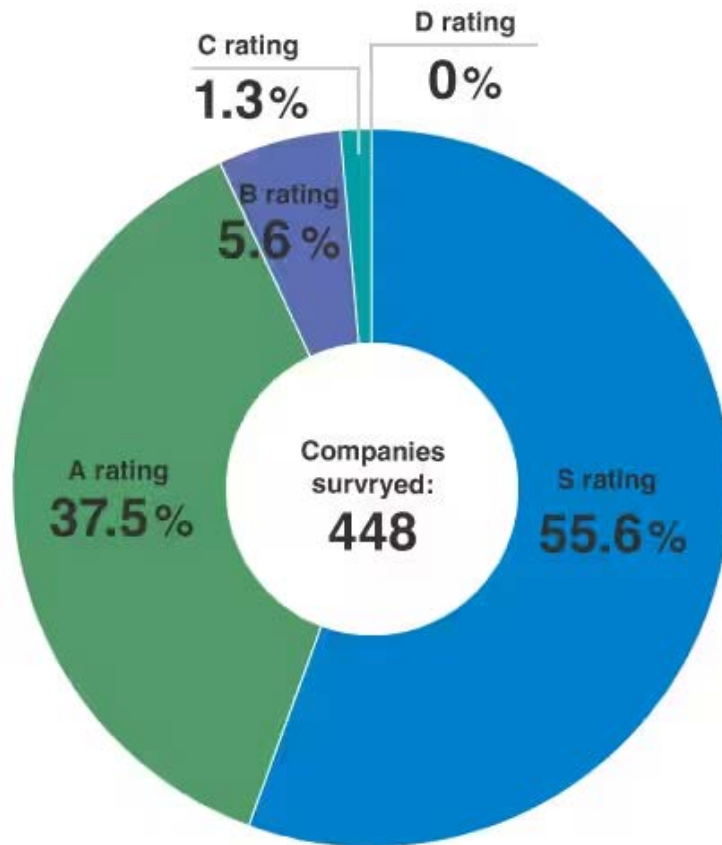
In parallel with those efforts, Toray Industries is mitigating CSR-related risks by asking its suppliers to understand and comply with the Toray Group CSR Procurement Guidelines, as part of efforts to further enhance CSR activities throughout the entire supply chain. These guidelines outline specific and detailed requirements for areas such as ethics, compliance, safety, accident prevention, risk management, environmental preservation, product quality and safety, and human rights promotion. In fiscal 2022, the Company sent the Toray Group CSR Procurement Guidelines to the 476 major suppliers surveyed and requested their understanding and compliance. Efforts are underway to obtain written agreements from suppliers stating that they will adhere to the guidelines.

In addition, rules for responses to CSR surveys from customers are set and a system is in place to facilitate prompt and accurate responses.

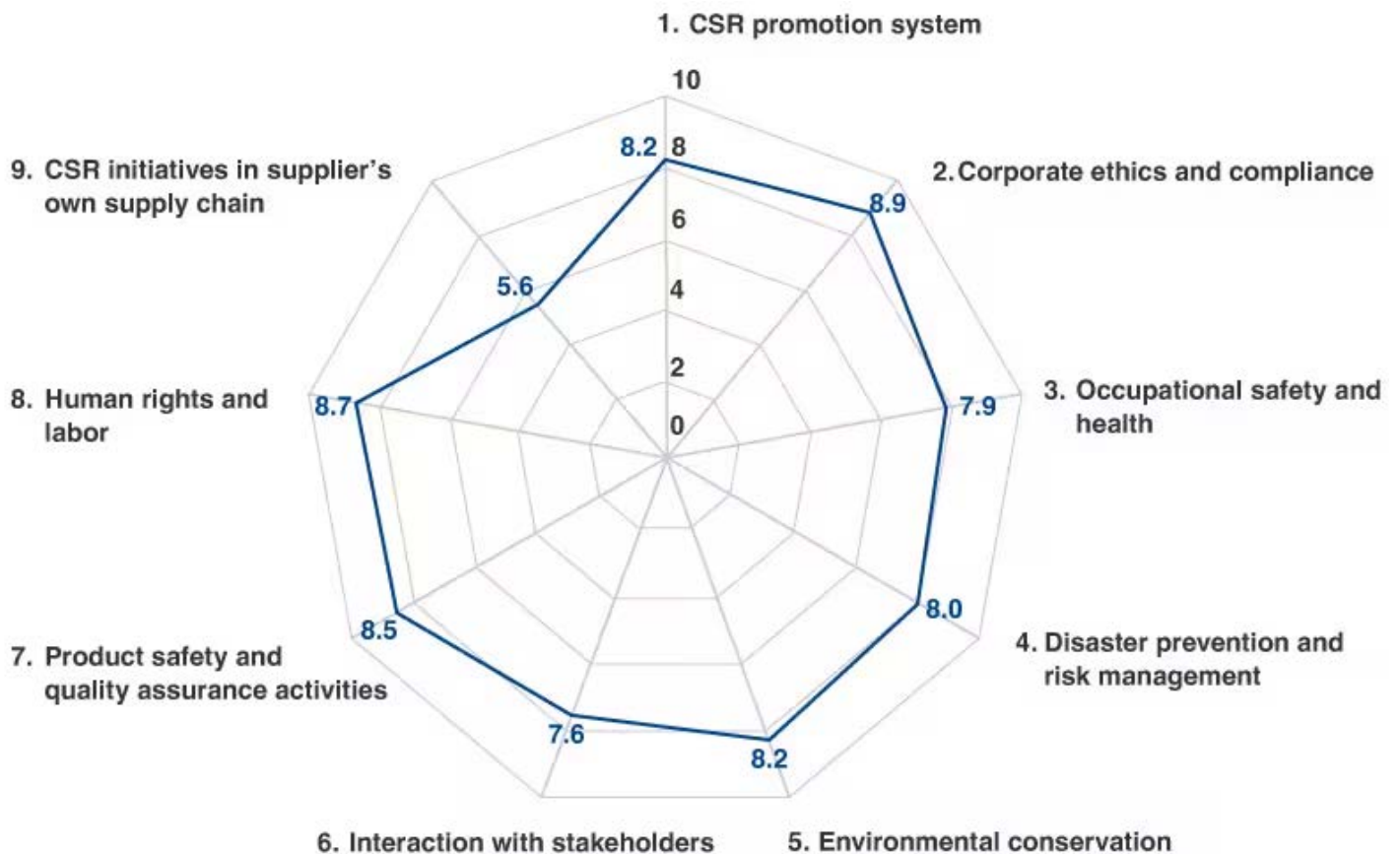
¹ Survey responses are assessed on a 10-point scale for each of the nine survey items. Taking the average score for the nine items as the overall score, 8 or more points is rated as S, 6 or more points but less than 8 is rated as A, 5 or more points but less than 6 is rated as B, 3 or more points but less than 5 is rated as C, and less than 3 points is rated as D.

Percentage of suppliers with the level of efforts required by the Company (Rated as S, A, or B) 99%

Fiscal 2022 CSR Status of Suppliers (Toray Industries, Inc.)



Fiscal 2022 Analysis of CSR Survey of Suppliers (Toray Industries, Inc.)



Socially Responsible Procurement Initiatives at Toray Group Companies in and outside Japan

CSR Roadmap 2022
Main Initiatives (1)(2)

Toray Group Companies in and outside Japan have also established their own internal systems and rules and are conducting CSR procurement surveys of their suppliers. They also ask suppliers to comply with the Toray Group CSR Procurement Guidelines, while conducting audits and other measures to continually ascertain the status of supplier CSR initiatives and to request improvements. Group companies outside Japan ask their suppliers to implement CSR initiatives. For suppliers that have not received such requests, Toray Industries conducts CSR procurement surveys and other measures to support CSR procurement at overseas group companies.

In fiscal 2022, 80 group companies outside Japan sent the Toray Group CSR Procurement Guidelines to 2,212 of their major suppliers. In addition to requesting cooperation and compliance, the group companies are working to obtain written agreements from them on adherence to the guidelines. With the support of Toray Industries, overseas affiliates will continue to obtain written agreements from existing and new suppliers. Group companies in Japan also continued to request CSR procurement measures from their suppliers. In fiscal 2022, these companies conducted a CSR procurement survey among their major suppliers and received 466 responses. In addition to checking the CSR promotion situation at each supplier using the questionnaire, the relevant evaluation results were shared with each supplier as feedback. The suppliers requiring further investigation of their CSR practices were subject to such investigation, and Toray Group companies in Japan requested that suppliers requiring further investigation of their CSR practices make improvements. In fiscal 2022, 41 group companies in Japan sent the Toray Group CSR Procurement Guidelines to 1,539 major suppliers and requested their cooperation and compliance. The affiliates will continue to carry out activities to obtain written agreements from suppliers on adherence to the guidelines.

Human Rights in the Supply Chain

CSR Roadmap 2022
Main Initiatives (1)(2)

Toray Group believes that respect for human rights and environmental preservation are especially crucial elements in ensuring that the supply chain is stable and sustainable.

The Toray Group CSR Procurement Policies state that Toray will work to build a supply chain that promotes human rights and preserves the environment. The Group requests that suppliers comply with the Toray Group CSR Procurement Guidelines and take measures to respect human rights; prohibit forced labor, slave labor, child labor, and unfair low-wage labor; and to protect the environment, including by reducing GHG emissions and conserving biodiversity.

With the CSR procurement questionnaire, the Company strives to understand and evaluate suppliers' initiatives related to human rights, labor practices, and environmental preservation. It also ascertains and prevents issues from arising in the supply chain.

Results of Fiscal 2022 CSR Survey of Suppliers Regarding Respect for Human Rights

The survey conducted by Toray Industries in fiscal 2022 confirmed a high rate of implementation of initiatives on 12 survey items, excluding those related to requests to secondary suppliers, out of 13 items related to human rights and labor. In fiscal 2023, the Company will again conduct individual status checks and request responses from those suppliers who answered "Will address in one year" ([1] in the table below) and "Not addressed" ([0] in the table below).

In addition, CSR procurement surveys have been used since fiscal 2020 to investigate whether suppliers had been responding appropriately to various issues related to human rights, such as employment and labor issues that could have arisen due to the pandemic, and to identify and prevent issues within the supply chain.

Survey Questions	Implementation rate	Survey results (The results are ranked from 0 to 4. 0 and 1 mean that the company has not addressed the issues.)												
1. Have policies and guidelines been set and employees educated about respect for human rights, eliminating discrimination and improving the work environment?	99.2%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>51%</td></tr> <tr><td>[3]</td><td>31%</td></tr> <tr><td>[2]</td><td>17%</td></tr> <tr><td>[1]</td><td>0%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[4]	51%	[3]	31%	[2]	17%	[1]	0%	[0]	0%
Rank	Percentage													
[4]	51%													
[3]	31%													
[2]	17%													
[1]	0%													
[0]	0%													
2. Has an internal system been set up and people responsible for its promotion been designated in regards to respect for human rights, eliminating discrimination and improving the work environment?	98.6%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>52%</td></tr> <tr><td>[3]</td><td>26%</td></tr> <tr><td>[2]</td><td>21%</td></tr> <tr><td>[1]</td><td>0%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[4]	52%	[3]	26%	[2]	21%	[1]	0%	[0]	1%
Rank	Percentage													
[4]	52%													
[3]	26%													
[2]	21%													
[1]	0%													
[0]	1%													
3. Have goals and plans been set, activity results reviewed and mechanisms for making improvements and corrections devised in regards to respect for human rights, eliminating discrimination and improving the work environment?	98.4%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>41%</td></tr> <tr><td>[3]</td><td>25%</td></tr> <tr><td>[2]</td><td>33%</td></tr> <tr><td>[1]</td><td>1%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[4]	41%	[3]	25%	[2]	33%	[1]	1%	[0]	1%
Rank	Percentage													
[4]	41%													
[3]	25%													
[2]	33%													
[1]	1%													
[0]	1%													
4. Do you employ anyone under the working age stipulated by applicable laws and regulations? In the case of employees under the age of 18, are the working hours and health and safety of those employees given special consideration in accordance with relevant laws and regulations?	99.5%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>100%</td></tr> <tr><td>[1]</td><td>0%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[3]	100%	[1]	0%	[0]	0%				
Rank	Percentage													
[3]	100%													
[1]	0%													
[0]	0%													
5. Do you use any form of labor that is, or is similar to, forced and bonded labor, involuntary or exploitative prison labor, or modern slavery, or that is linked to human trafficking? Do you guarantee that all your employees are free to leave their employment at any time they wish?	99.3%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>99%</td></tr> <tr><td>[1]</td><td>0%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[3]	99%	[1]	0%	[0]	0%				
Rank	Percentage													
[3]	99%													
[1]	0%													
[0]	0%													
6. Do you provide each foreign worker with an employment contract, employment rules, and other relevant documents in a language the individual can understand? Also, do you ever confiscate, conceal, or destroy any identification documents, passports, work permits, or other similar documents belonging to such workers, or prevent them from using those documents?	96.2%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>96%</td></tr> <tr><td>[1]</td><td>3%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[3]	96%	[1]	3%	[0]	1%				
Rank	Percentage													
[3]	96%													
[1]	3%													
[0]	1%													
7. Do you pay appropriate wages in accordance with relevant laws and regulations when it comes to minimum wages, overtime, wage deductions, piecework wages, and other benefits? Are unfair pay cuts ever used?	99.5%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>100%</td></tr> <tr><td>[1]</td><td>0%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[3]	100%	[1]	0%	[0]	0%				
Rank	Percentage													
[3]	100%													
[1]	0%													
[0]	0%													
8. Are conditions appropriately managed and operated to ensure that sexual harassment, power harassment, physical punishment, emotion or physical abuse, pressure and other inhuman treatment and actions do not occur?	99.3%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>99%</td></tr> <tr><td>[1]</td><td>0%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[3]	99%	[1]	0%	[0]	0%				
Rank	Percentage													
[3]	99%													
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[0]	0%													
9. Are conditions appropriately managed and operated to ensure that in recruiting, hiring and employing people, race, the color of one's skin, age, gender, sexual orientation, nationality, religion and other factors do not result in discriminatory action?	98.8%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>99%</td></tr> <tr><td>[1]</td><td>1%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[3]	99%	[1]	1%	[0]	0%				
Rank	Percentage													
[3]	99%													
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10. In all employment activities, including recruitment, hiring, compensation, and retirement, do you have policies and rules in place to prohibit any discrimination based on race, creed, skin color, sex, religion, nationality, language, physical characteristics, wealth, or place of birth, etc.?	95.6%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>96%</td></tr> <tr><td>[1]</td><td>3%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[3]	96%	[1]	3%	[0]	1%				
Rank	Percentage													
[3]	96%													
[1]	3%													
[0]	1%													
11. Do you recognize the rights of employees to freedom of association, in accordance with the laws and regulations of each country and region? Are arrangements made for employee representatives and employees to engage in dialogue and consultation with management without fear of retaliation, intimidation, or harassment?	97.0%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>97%</td></tr> <tr><td>[1]</td><td>2%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[3]	97%	[1]	2%	[0]	1%				
Rank	Percentage													
[3]	97%													
[1]	2%													
[0]	1%													
12. Is due consideration given to various employment, human rights, and labor issues that may arise due to the spread of COVID-19 and appropriate responses taken?	98.8%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>99%</td></tr> <tr><td>[1]</td><td>1%</td></tr> <tr><td>[0]</td><td>0%</td></tr> </table>	Rank	Percentage	[3]	99%	[1]	1%	[0]	0%				
Rank	Percentage													
[3]	99%													
[1]	1%													
[0]	0%													
13. Do you ask your suppliers to make improvements in regard to respect for human rights, the eradication of discrimination and improvement of the labor environment?	69.8%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>18%</td></tr> <tr><td>[3]</td><td>24%</td></tr> <tr><td>[2]</td><td>29%</td></tr> <tr><td>[1]</td><td>8%</td></tr> <tr><td>[0]</td><td>22%</td></tr> </table>	Rank	Percentage	[4]	18%	[3]	24%	[2]	29%	[1]	8%	[0]	22%
Rank	Percentage													
[4]	18%													
[3]	24%													
[2]	29%													
[1]	8%													
[0]	22%													

Supplemental information:

[4] Addressed well

[3] Addressed

[2] Addressed at minimum level

[1] Will address in one year

[0] Not addressed

For questions 4 to 12, only [3], [1], and [0] are used; no value has been set for [4] or [2].

Results of Fiscal 2022 CSR Survey of Suppliers Regarding Environmental Preservation

Toray Group considers the reduction of greenhouse gas emissions and biodiversity conservation to be important issues for preserving the global environment. Using CSR procurement surveys, the Group also checks the situation for supplier compliance with environmental laws, as well as supplier efforts to reduce GHG emissions and preserve biodiversity. The survey conducted by Toray Industries in fiscal 2022 confirmed a high rate of implementation of initiatives on 11 survey items, excluding those related to requests to secondary suppliers, out of 12 items related to environmental preservation. For example, the Company confirmed that 84% of its major suppliers are taking steps to reduce GHG emissions. Each supplier is provided with feedback on their questionnaire results, and those with insufficient CSR measures are asked to improve their compliance efforts.

In fiscal 2023, the Company will conduct individual status checks of those suppliers who answered “Will address in one year” ([1] in the table below) and “Not addressed” ([0] in the table below) in the fiscal 2022 questionnaire on questions concerning compliance with environmental laws, GHG emissions reduction, and biodiversity conservation initiatives. In this way, the Company will continue to promote environmental preservation efforts throughout its supply chain and procure environmentally friendly raw materials.

Survey Questions	Implementation rate	Survey results (The results are ranked from 0 to 4. 0 and 1 mean that the company has not addressed the issues.)												
1. Have you stipulated the policies or guidelines for promote environmental preservation and familiarized them with your employees?	97.9%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>68%</td></tr> <tr><td>[3]</td><td>11%</td></tr> <tr><td>[2]</td><td>20%</td></tr> <tr><td>[1]</td><td>1%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[4]	68%	[3]	11%	[2]	20%	[1]	1%	[0]	1%
Rank	Percentage													
[4]	68%													
[3]	11%													
[2]	20%													
[1]	1%													
[0]	1%													
2. Have you prepared the internal system and designated the responsible person to promote environmental preservation?	97.2%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>65%</td></tr> <tr><td>[3]</td><td>14%</td></tr> <tr><td>[2]</td><td>18%</td></tr> <tr><td>[1]</td><td>1%</td></tr> <tr><td>[0]</td><td>2%</td></tr> </table>	Rank	Percentage	[4]	65%	[3]	14%	[2]	18%	[1]	1%	[0]	2%
Rank	Percentage													
[4]	65%													
[3]	14%													
[2]	18%													
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3. Do you have any mechanism to identify risks, institute the goals / plans, verify and improve / correct results of the activities in relation to environmental preservation?	97.7%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>61%</td></tr> <tr><td>[3]</td><td>14%</td></tr> <tr><td>[2]</td><td>22%</td></tr> <tr><td>[1]</td><td>1%</td></tr> <tr><td>[0]</td><td>2%</td></tr> </table>	Rank	Percentage	[4]	61%	[3]	14%	[2]	22%	[1]	1%	[0]	2%
Rank	Percentage													
[4]	61%													
[3]	14%													
[2]	22%													
[1]	1%													
[0]	2%													
4. Have you acquired and maintained, and kept up to date all permissions and registrations to be required by the laws and public administration, etc. for the environment?	94.4%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>94%</td></tr> <tr><td>[1]</td><td>4%</td></tr> <tr><td>[0]</td><td>2%</td></tr> </table>	Rank	Percentage	[3]	94%	[1]	4%	[0]	2%				
Rank	Percentage													
[3]	94%													
[1]	4%													
[0]	2%													
5. Do you control discharge of pollutant and generation of waste and perform the efforts of saving resource and energy including reduction / reuse / recycle (3R) , etc.?	95.7%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>96%</td></tr> <tr><td>[1]</td><td>3%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[3]	96%	[1]	3%	[0]	1%				
Rank	Percentage													
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[1]	3%													
[0]	1%													
6. Do you comply with the applicable laws / regulations, (REACH, ROHS, etc.) for, and appropriately manage the procured chemical substances?	97.1%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>97%</td></tr> <tr><td>[1]</td><td>2%</td></tr> <tr><td>[0]</td><td>1%</td></tr> </table>	Rank	Percentage	[3]	97%	[1]	2%	[0]	1%				
Rank	Percentage													
[3]	97%													
[1]	2%													
[0]	1%													
7. Do you appropriately manage discharge of chemical substances into environment including air pollutant and water pollutant and perform the efforts for reduction?	94.0%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>94%</td></tr> <tr><td>[1]</td><td>5%</td></tr> <tr><td>[0]</td><td>2%</td></tr> </table>	Rank	Percentage	[3]	94%	[1]	5%	[0]	2%				
Rank	Percentage													
[3]	94%													
[1]	5%													
[0]	2%													
8. Do you appropriately manage emission of greenhouse gas and perform the efforts for reduction (prevention of global warming)?	84.1%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[3]</td><td>84%</td></tr> <tr><td>[1]</td><td>10%</td></tr> <tr><td>[0]</td><td>6%</td></tr> </table>	Rank	Percentage	[3]	84%	[1]	10%	[0]	6%				
Rank	Percentage													
[3]	84%													
[1]	10%													
[0]	6%													
9. Do you perform the activities concerning reduction of environmental load and energy saving including green procurement of raw materials and packing materials, green purchasing of office supplies office machinery, power saving of offices, use of EV cars?	95.8%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>48%</td></tr> <tr><td>[3]</td><td>47%</td></tr> <tr><td>[1]</td><td>2%</td></tr> <tr><td>[0]</td><td>3%</td></tr> </table>	Rank	Percentage	[4]	48%	[3]	47%	[1]	2%	[0]	3%		
Rank	Percentage													
[4]	48%													
[3]	47%													
[1]	2%													
[0]	3%													
10. Do you understand your business activities which may cause an impact on water resources and biodiversity, consider sustainable use of resources and perform the activities to minimize the impact for preservation of biodiversity?	91.0%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>43%</td></tr> <tr><td>[3]</td><td>48%</td></tr> <tr><td>[1]</td><td>2%</td></tr> <tr><td>[0]</td><td>7%</td></tr> </table>	Rank	Percentage	[4]	43%	[3]	48%	[1]	2%	[0]	7%		
Rank	Percentage													
[4]	43%													
[3]	48%													
[1]	2%													
[0]	7%													
11. Do you perform the environmental assessment regarding the products (assessment of the products' impact on the environment)?	84.8%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>45%</td></tr> <tr><td>[3]</td><td>40%</td></tr> <tr><td>[1]</td><td>3%</td></tr> <tr><td>[0]</td><td>12%</td></tr> </table>	Rank	Percentage	[4]	45%	[3]	40%	[1]	3%	[0]	12%		
Rank	Percentage													
[4]	45%													
[3]	40%													
[1]	3%													
[0]	12%													
12. Do you request the suppliers for promotion of environmental preservation?	76.4%	<table border="1"> <tr><th>Rank</th><th>Percentage</th></tr> <tr><td>[4]</td><td>20%</td></tr> <tr><td>[3]</td><td>30%</td></tr> <tr><td>[2]</td><td>27%</td></tr> <tr><td>[1]</td><td>8%</td></tr> <tr><td>[0]</td><td>16%</td></tr> </table>	Rank	Percentage	[4]	20%	[3]	30%	[2]	27%	[1]	8%	[0]	16%
Rank	Percentage													
[4]	20%													
[3]	30%													
[2]	27%													
[1]	8%													
[0]	16%													

Supplemental information:

[4] Addressed well

[3] Addressed

[2] Addressed at minimum level

[1] Will address in one year

[0] Not addressed

For questions 4 to 8, only [3], [1], and [0] are used; no value has been set for [4] or [2].

For questions 9 to 11, only [4] [3], [1], and [0] are used; no value has been set for [2]."

As part of efforts to promote human rights protections and environmental conservation in the supply chain, the Company enables individuals to report relevant issues at any time via the Toray website. Out of a total of 279 inquiries and consultations received in fiscal 2022 via the CSR inquiry form on the Toray website, none were related to human rights in the supply chain.

Related Information

> [Inquiries concerning CSR initiatives by Toray Group and its business partners](#)

Human Rights Training for Contracted Security Companies

CSR Roadmap 2022
Main Initiatives (2)

Toray Group outsources security services to companies specialized in that field, depending on the situation in the area where a business site is located.

In addition to training on the guard services required, the Group also provides training on human rights as necessary when contracting services.

Addressing Conflict Minerals

CSR Roadmap 2022
Main Initiatives (2)

The Toray Group CSR Procurement Policies prohibit the use of minerals that come from conflict zones or high-risk areas, as well as those that are clearly tied to armed conflict or human rights violations.

To comply with the rules, Toray Industries investigates whether conflict minerals are used in any of the raw materials and production equipment used for its products. If conflict minerals are used, the Company investigates the suppliers to determine the locations of smelters and mines.

In fiscal 2022, the Company also investigated products made with four raw materials: tin, tantalum, tungsten, and gold. It confirmed that none of the raw materials used were from conflict areas. Toray Industries has also set up an internal system for surveys and responses so that it can respond promptly and appropriately to requests from customers in regard to surveys on conflict minerals.

Click [here](#) for the main initiatives for CSR Guideline 9, “Establishing Sustainable Supply Chain” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Establishing Sustainable Supply Chain Toray Group Distribution Initiatives

Working Together with Business Partners

CSR Roadmap 2022
Main Initiatives (3)/(5)/(6)

Holding Basic Distribution Policy Briefings

Toray Industries, Inc. promotes understanding of Toray Group's distribution policies and works to improve distribution performance with annual Basic Distribution Policy Briefings for logistics companies as part of its ongoing effort to improve quality and reduce the environmental impact of its distribution process. In fiscal 2022, the briefing was held both online and in person, and 65 logistics companies participated.



Basic Distribution Policy Briefing (fiscal 2022)

Participation in White Logistics Movement and Efforts to Improve the Logistics Environment

Toray Industries participates in the White Logistics Movement,¹ an initiative designed to ensure the provision of the stable logistics necessary for consumers' lives and for industrial activities, while also contributing to economic growth. In line with the declaration of voluntary activities given below, the Company is actively working to improve the logistics environment based on mutual understanding and cooperation with business partners and logistics companies.

¹ In response to the growing shortage of truck drivers in Japan, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Ministry of Economy, Trade and Industry (METI) and Ministry of Agriculture, Forestry and Fisheries (MAFF) are working together to encourage the participation of shipping and logistics companies. The aim is to improve the productivity of truck transportation and raise logistical efficiency, while looking to realize a fairer labor environment, thereby making it easier for women and drivers over the age of 60 to work in the industry.

Initiative	Details
Cooperate with the logistics improvement and proposals	Seriously work on eliminating incidental work, etc. that leads to increased duty hours of truck drivers.
Use pallets, etc.	Expand use of packing styles (pallets, etc.) that enables loading using forklifts to reduce cargo loading time.
Extend lead time	Secure sufficient lead time corresponding to the transportation distance.

Initiative	Details
Take legal compliance status into account	Give utmost priority to assess compliance status with relevant laws upon selecting logistics companies for signing agreements.
Actively utilize logistics vendors engaged in working style reforms, etc.	Actively utilize logistics companies engaged in work-style reforms, improvement of transportation safety and logistics quality.
Suspend, discontinue, etc. of operation in case of adverse weather, etc.	Give utmost priority to the truck driver's safety in the event of adverse weather, earthquake, etc.

Improving Loading Operations Through Plant Logistics Innovation

The Mishima Plant of Toray Industries has faced the issue of trucks waiting for excessive periods of time at the plant's film warehouse before being able to load. As part of Japan's White Logistics Movement to enhance logistics efficiency, Toray Industries decided to resolve this issue by creating a new digital system to shorten waiting times. The drivers can now check the waiting times online before heading to the warehouse and reserve an appropriate time slot.

Also, shipping forms that used to be printed out are now handled in electronic form using tablet devices. The elimination of paper forms has reduced the burden on workers and drivers, while also helping to create a paperless society. These internal logistics reforms are now being expanded to other Toray plants.

Initiative	Effect
· Reduction of average truck waiting times	56 minutes per vehicle before implementation 15 minutes per vehicle after implementation (73% reduction)
· Digitization of shipping documents	Before implementation: 120 sheets of paper per day After implementation: 0 sheets of paper per day

Improving Logistics Productivity by Using Smart Pallets

Toray Industries, Inc. is the first in the industry to use smart pallets equipped with active tags developed by UPR Co., Ltd. Typically, pallets must be replaced with different pallets during transportation and storage to prevent their loss or outflow, and the loaded products must be reloaded each time. Smart pallets, on the other hand, do not need to be replaced, since the coming, going, and inventory of pallets can be managed from a distance with the embedded active tags. Adoption of these smart pallets allows Toray's products to go on the same pallet from production to storage, transportation, and use by the customer. This has eliminated cargo handling work by truck drivers and warehouse personnel, shortened loading and unloading time, improved the working environment, and increased logistics productivity. Moreover, the Company is reducing CO₂ emissions related to pallet recovery by using its packaging materials recovery system to recover empty pallets.

In recognition of the Company's contribution to reducing the environmental impact and the burden on transportation companies, Toray Industries jointly received, with UPR Co., Ltd., the Special Award in the Fiscal 2020 Green Logistics Partnership Conference Award for Excellent Business Operators.² In fiscal 2021, Toray Industries and UPR jointly received the Sustainable Activity Award in the 22nd Logistics Environment Award³.

- 2 An award, presented by the Ministry of Economy, Trade and Industry, the Ministry of Land, Infrastructure, Transport and Tourism, and others, that recognizes businesses for their remarkable contributions to the establishment of sustainable logistics systems by reducing environmental burdens in the logistics sector or improving productivity in terms of distribution.
- 3 An award, presented by the Japan Association for Logistics and Transport, that recognizes groups, companies, and individuals who are contributing to the development of the logistics industry by reducing environmental impact. This includes conducting outstanding environmental preservation or awareness-raising activities or pioneering technological development in the logistics field.

Various Effects of Toray Industries' Use of Smart Pallets (Fiscal 2021)

Initiative	Effect
· Reduce CO ₂ emissions related to pallet recovery	83% reduction (by 197 t-CO ₂ /year)
· Reduce product loading and unloading time	75% reduction (by 23,788 hours/year)
· Improve efficiency of office work	100% reduction in work time (by 1,584 hours/year)
· Reduce truck standby time	38% reduction (by 5,947 hours/year)
· Reduce distribution accidents (broken bags)	35% reduction (by 148 incidents/year)

Reducing the Environmental Impact of Distribution

CSR Roadmap 2022
Main Initiatives (3)(4)(5)



Toray Group is working hard to reduce CO₂ emissions in transport. These initiatives include reducing transport distances, shifting modes of transport to those which have less environmental impact such as sea and rail (modal shift), and raising transportation efficiency.

In fiscal 2022, at Toray Group (only specified consigners⁴ in Japan), CO₂ emissions from distribution activities⁵ were 27,300 tons, down 3,100 tons (10.3%) from the previous fiscal year, due primarily to a decrease in transport volume.

Due to an increase in net sales, which is the denominator, at Toray Industries and other group companies, CO₂ emissions intensity⁶ decreased significantly for Toray Group. With the fiscal 2014 level (set at 100) as the base, the change in the Group's CO₂ emissions intensity was 77.0 in fiscal 2022, representing a decrease of 15.3% from the previous fiscal year (fiscal 2021).

In fiscal 2022, Toray Industries' CO₂ emissions from distribution activities totaled 24,000 tons, down 226 tons from the previous fiscal year. This was primarily due to efforts for full-load transport, increased loading rates and reductions in inefficient transport. In addition, transport volume fell for resin and film products in particular, resulting in an emissions decrease of 2,800 tons (10.3%) from the previous year.

Toray Industries' CO₂ emissions intensity from distribution activities decreased by 17.4% year on year (from fiscal 2021) because, CO₂ emissions decreased, while net sales, the base unit denominator, increased. Over the past five years, however, CO₂ emissions intensity decreased an average of 3.5% per year. As a result, Toray Industries is reliably meeting its legal mandate to reduce CO₂ emissions intensity by an average of at least 1% every year. Toray Group will continue to seek CO₂ emissions reductions by pursuing environmentally responsible distribution.

4 Toray Industries, Inc. and Toray Advanced Film Co., Ltd., which have annual cargo transport totaling 30 million ton-kilometers or more, are "specified consigners" under Japanese law.

5 CO₂ emissions from distribution activities refers to "CO₂ emissions related to the transportation of cargo entrusted to freight carriers" stipulated in the Act on Rationalizing Energy Use (Revised Energy Conservation Act)

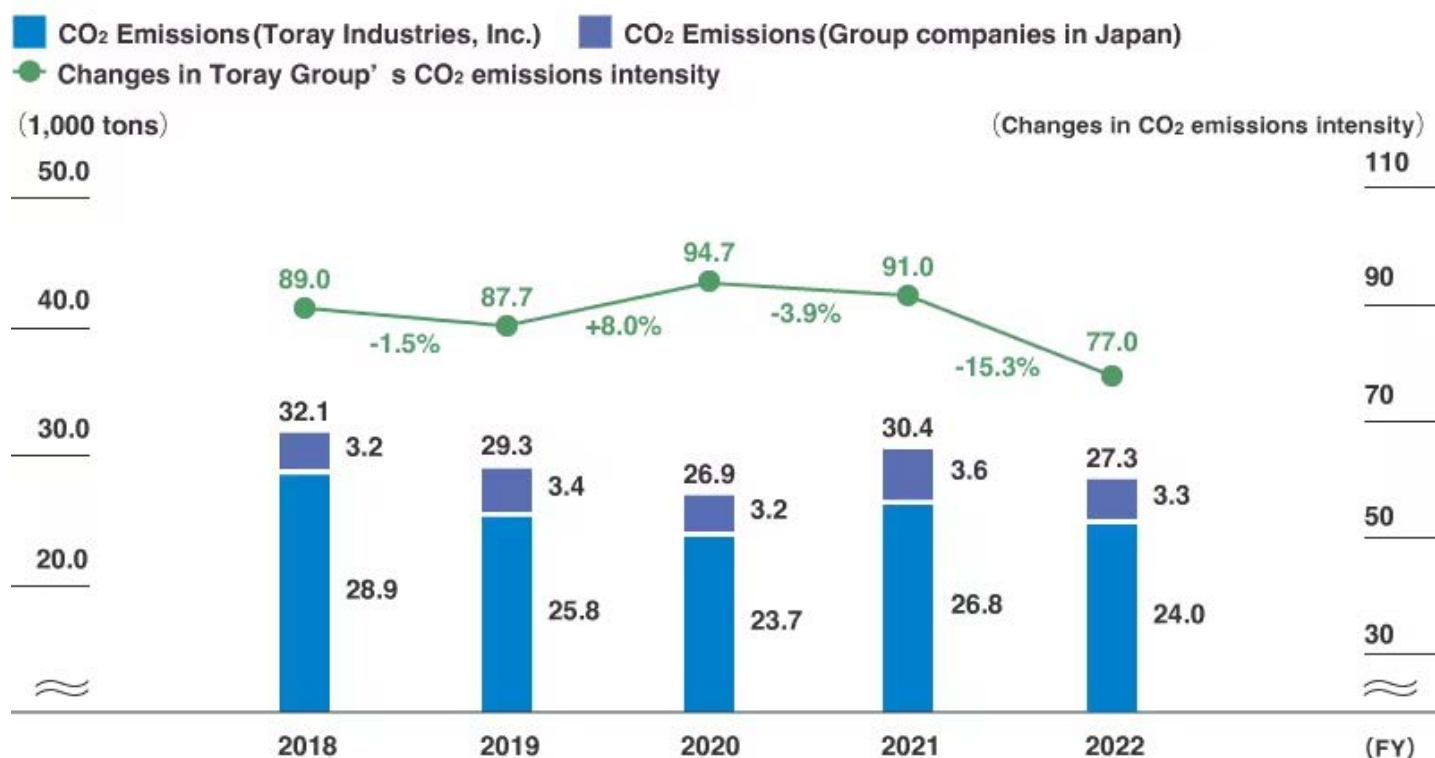
6 CO₂ emissions from distribution activities ÷ the following transport-related indexes

Toray Industries, Inc. = Net sales

Toray Advanced Film Co., Ltd. = Shipping volume

Specified consigners are required to endeavor to meet the legal mandate to reduce CO₂ emissions intensity by an average of at least 1% every year over the medium- and long-term.

CO₂ Emissions Resulting from Distribution Activities and CO₂ emissions intensity (Toray Group's Specified Consigners in Japan)



Notes:

1 Changes in Toray Group's CO₂ emissions intensity = Change in CO₂ emissions intensity at each specified consigner group company × Each group company's CO₂ emissions / Total Toray Group CO₂ emissions

2 Change in CO₂ emissions intensity at each group company = CO₂ emissions / Change in transport-related indexes (Fiscal 2014 = 100)

3 This shows the emissions level and intensity for specified consignors Toray Industries, Inc. and Toray Advanced Film Co., Ltd. in fiscal 2022.

CO₂ Emissions Reduction in Distribution Activities (Toray Industries, Inc.)

Details of initiatives	CO ₂ Reduction (1,000 tons)
Full-load transport, increased loading rates, and strategic positioning of warehouses, etc.	0.103
Reduction of inefficient transport, revision of inventory storage locations, and loading at the nearest port, etc.	0.070
Improved calculation accuracy (maximum loading capacity, average loading rate review, and fuel efficiency review, etc.)	0.054
Total	0.226

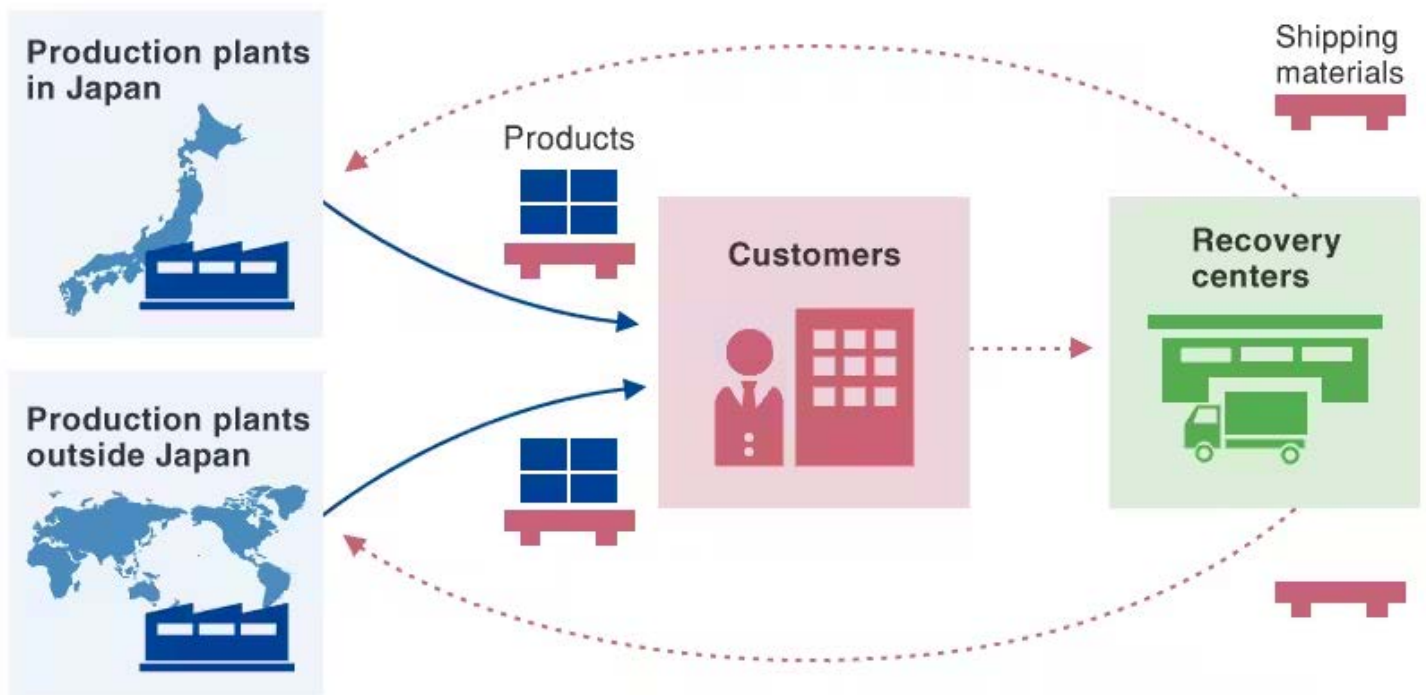
Expanding Collection and Reuse of Packaging Materials

Toray Group is establishing a global framework to collect and recycle packaging and shipping materials that are included with products used by customers.

The value of these materials collected by Toray Industries in fiscal 2022 was 650 million yen, a decrease of 70 million yen (9.8%) from the previous fiscal year.

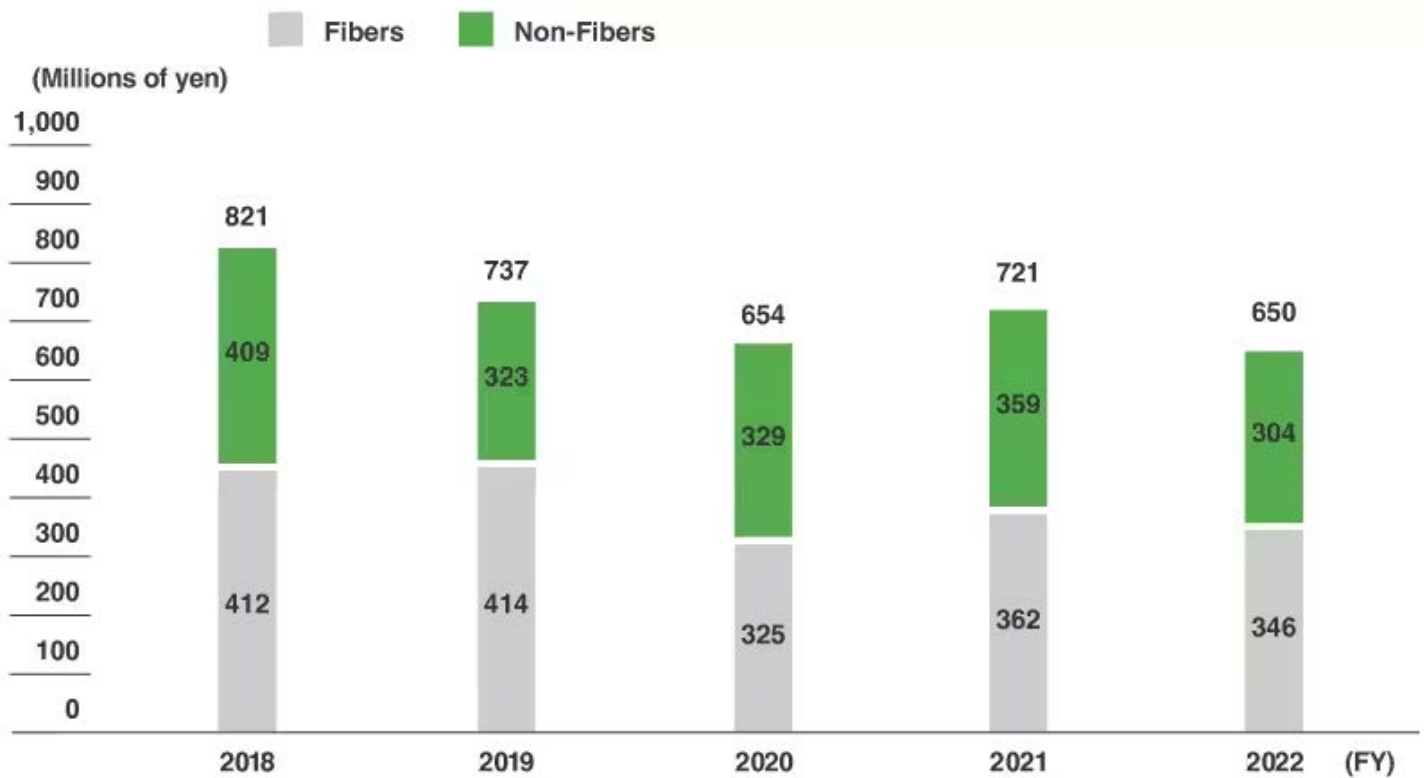
The volume of the materials collected also decreased due to a drop in shipment volumes for films. In order to reduce the amount of new material purchasing, the Group internally shares information on the inventories of used shipping materials being collected, such as temporary inventories at collection centers.

System for Reusing Shipping Materials (Toray Industries, Inc.)



More packaging materials are reused, including at plants outside Japan

Monetary Amounts Recovered for Packaging Materials (Toray Industries, Inc.)



Related Information

> [Recycling of Film Packing Materials](#)

Promoting a Modal Shift

CSR Roadmap 2022
Main Initiatives (4)

Modal shift to sea or rail for transport across distances for 500 km or more (%)

■ Reporting scope
Toray Industries, Inc.

■ Target
40% (2022 target) (Calendar year)

Result in 2022 (Calendar year)

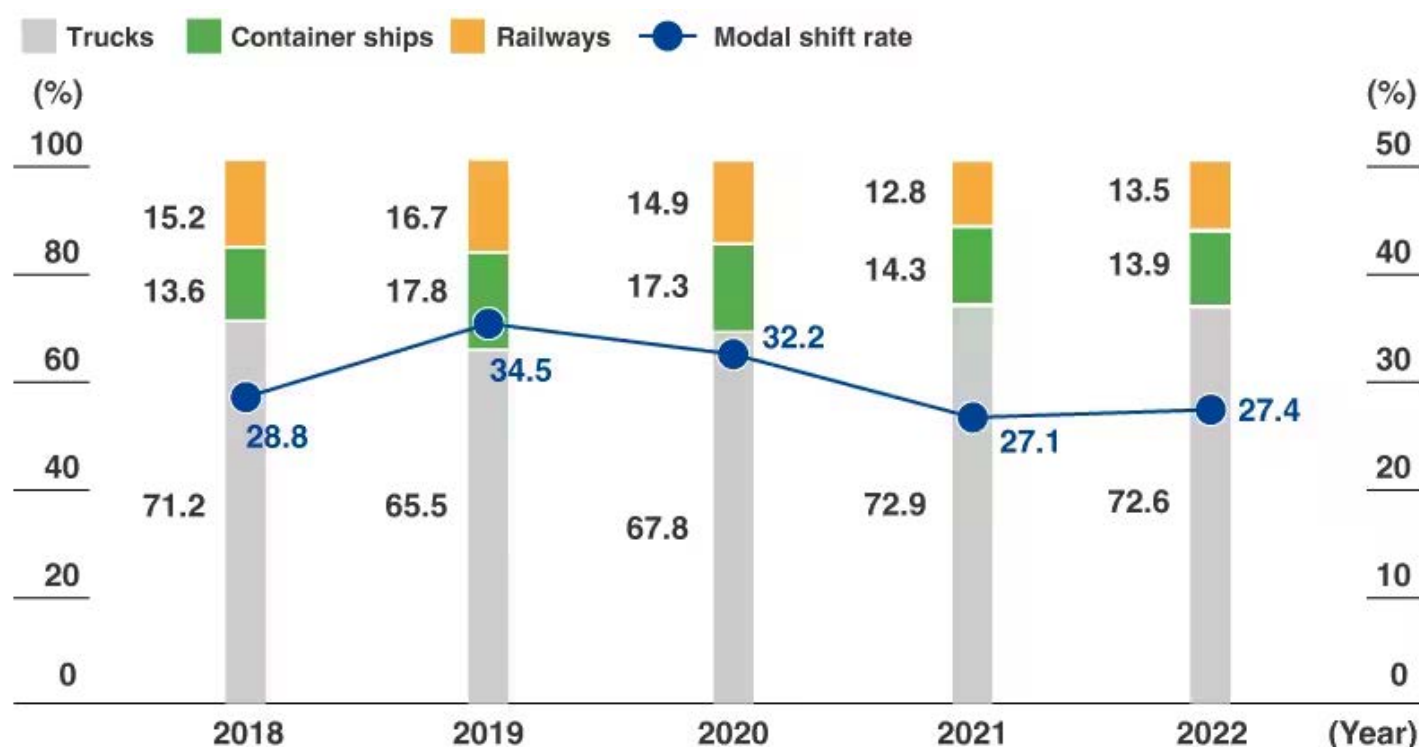
27%

Toray Industries laid out its commitment to environmentally friendly distribution in its Basic Distribution Policies (Revised in March 2022), in which it aimed to balance consideration for the environment in the distribution process with better competition achieved by cost-cutting. Toward this end, the Company has actively pursued modal shift (switching from trucks to rail and ship transport). In addition, modal shift is also effective as a measure to address the recent vulnerabilities in truck transport caused by a shortage of drivers. Toray Industries set a modal shift target of 40% to be achieved by 2022 and actively promoted initiatives to achieve this goal.

The modal shift rate for January to December 2022 increased by 0.3 points from the previous year to 27.4% due to efforts to expand the use of rail transport. This was supported by investigating a shift to rail for transport distances of less than 500 kilometers, which were not previously under consideration. However, with the increase in rail transport demand in Japan in 2022, transport by truck increased due to the difficulty of securing containers for rail transportation and the increase in the number of cases where lead times for rail transportation were unacceptable. As a result, the Company fell short of its 2022 modal shift rate target of 40%.

Toray Group will continue pursuing modal shift in diverse product and materials transport and will work more closely with distribution partners. Through these efforts, the Group will promote environmentally responsible distribution while taking into consideration the environmental impact of the distribution process.

Modal Shift Rate (Toray Industries, Inc.)



Acquisition of Eco Rail Mark and Eco Ship Mark

Toray Industries has certified as an Eco Rail Mark Company by Japan's Ministry of Land, Infrastructure, Transport and Tourism and the Railway Freight Association. This recognizes Toray's active efforts to use rail freight transport, a relatively environmentally friendly means of transportation. The Company also obtained Eco Rail Mark Product certifications for its TORAY TETORON™ fiber and TORAYCON™ polybutylene terephthalate (PBT) resin. Moreover, in fiscal 2017 Toray Industries achieved the Eco Ship Mark certification related to its film products, which are difficult to ship by rail. This program recognizes companies that are switching to ship transport and use maritime transport, which has a low environmental impact, to a certain extent.



Toray Industries implements measures to prevent or minimize the damage caused by natural disasters such as typhoons and heavy rains, which have been increasing in frequency in recent years. It does this by continually investigating and identifying natural disaster risks at external warehouse sites in Japan, and by implementing response measures together with warehouse operators.

In fiscal 2022, the Company ascertained the natural disaster risks at 67 main external warehouse sites. This was determined based on the structure of the warehouse buildings and the site environments, using tools such as hazard maps issued by the national and local governments. Eight sites were determined to be at high risk, and on-site inspections were conducted to confirm the actual situations. Based on the results of the investigation, tangible and intangible mitigation measures were discussed with the warehouse operators and improvements are being made. Specifically, disaster prevention manuals were created based on flood risk information released by the Japan Meteorological Agency, while portable water dams were prepared and pallets were raised off of warehouse floors. In fiscal 2021 and 2022, Toray completed on-site inspections at 16 locations and discussed countermeasures. In fiscal 2023, further on-site inspections and discussions will be carried out to better mitigate risks.



Portable water dam (measure example)



Pallets raised above the floor level (measure example)

Toray Industries is working on a project to improve transport quality. The Company works with distribution partners to improve distribution quality and safety and to reduce the incidence of problems by sharing accident analysis data and distribution quality enhancement reports, conducting on-site inspections and holding quality control meetings with partners. Partners that make outstanding contributions to improving quality are recognized through annual awards⁷. These initiatives are aimed at reducing the number of problems such as those involving breakage, and reducing transport delays and incorrect shipments of Toray products.

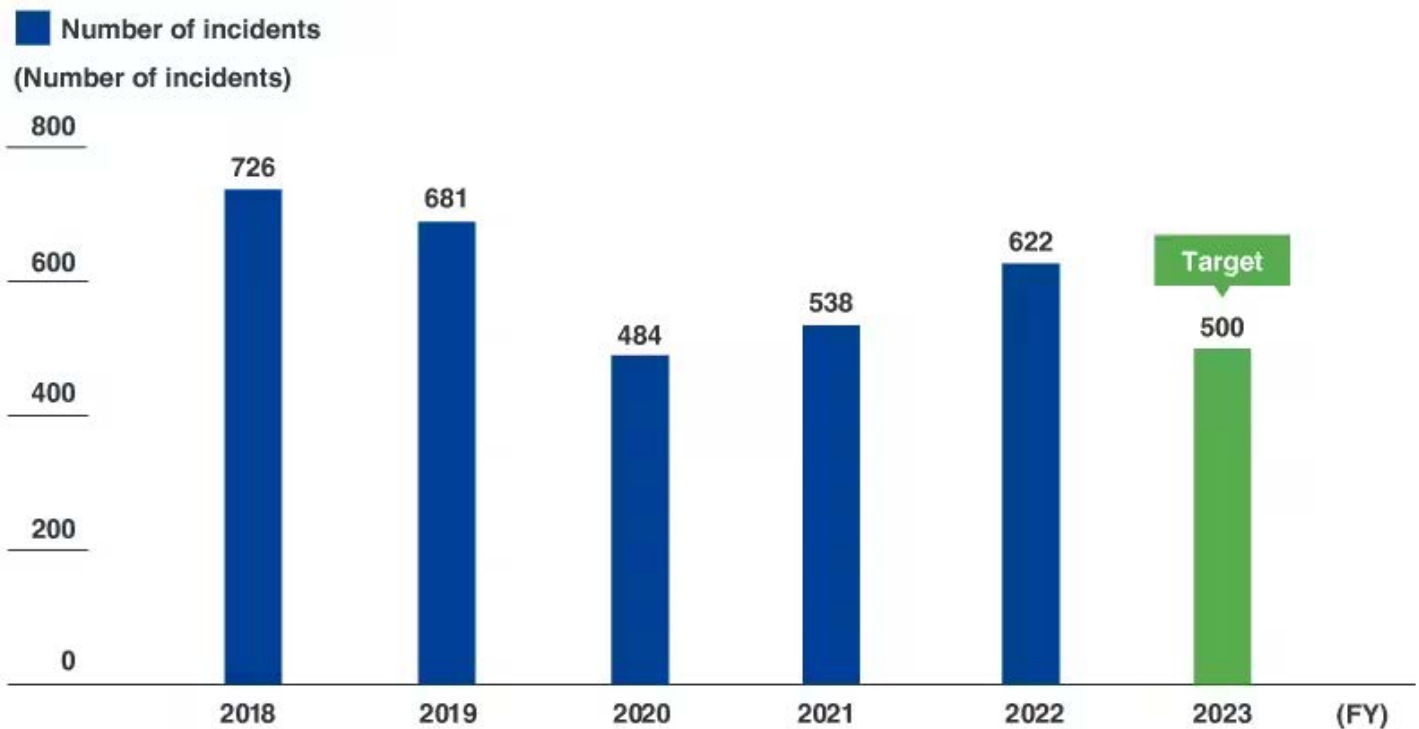
⁷ Distribution-partner companies receiving awards in fiscal 2022 (alphabetical order):

Iyoshoun Inc., Shikoku Meitetsu Transportation Co., Ltd., Sukagawa Tobu Logistics Co., Ltd., Daisei Warehousing & Transportation Co., Ltd., Nagahama-Reizou, Japan Transcity Corporation, Meitetsu Transportation Co., Ltd.

Distribution Incidents

Recently, transport and warehousing companies in Japan have experienced a labor shortage, and incidents during transport have become more common.

Consequently, Toray Industries has seen an increase in product damage during transport on routes for smaller packages. In order to reduce this kind of damage as well as misdelivery, the Company approached distribution partners with high incident rates, in an effort to improve distribution quality. Discussions were held on improvement measures, on-site visits were made, and educational activities were carried out. Despite this, the number of distribution incidents in fiscal 2022 was 622, an increase of 16% compared to the previous year. The Company will continue working with partner companies to improve distribution quality.



Logistics Efforts for Security Trade Control

In order to ensure thorough compliance with security trade controls relating to the export of its products, Toray Industries provides ongoing security trade control training to external warehouses where regulated items are stored. In fiscal 2022, in addition to explaining security trade control measures to seven sites belonging to six companies, important points were highlighted regarding the handling of regulated items, based on past near-miss incidents. Through this training, Toray once again stressed the importance of managing and handling regulated products appropriately.

Recommending that Distribution Partners Acquire Third Party Certification

Toray Industries recommends that its distribution partner acquire external certifications such as ISO 9001, ISO 14001, Green Management Certification⁸ and G Mark.⁹ These certifications require companies to achieve legal compliance, improve quality, and practice environmental conservation in distribution processes. Toray Industries also pursues CSR initiatives in collaboration with distribution partners.

⁸ Certification is awarded by the Foundation for Promoting Personal Mobility and Ecological Transportation to companies that demonstrate a certain level of environmental improvement activities based on a manual for implementing green management (business management with a low environmental impact)

⁹ A system that recognizes companies that meet certain criteria and demonstrate excellent safety, based on an assessment by the Safety Evaluation Committee established by the Japan Trucking Association of proactive initiatives for legal compliance and safety recommended by the Ministry of Land, Infrastructure, Transport and Tourism

Yellow Card Emergency Response Measures

Drivers of shipping vehicles carry a yellow card¹⁰ detailing emergency measures to be taken to minimize damage in the event of an accident. Toray Industries has also established an emergency communication system and carries out emergency training. In the unlikely event of such an accident, the Company has procedures in place enabling the necessary staff to be dispatched as swiftly as possible to the accident site for assistance.

¹⁰ A Card listing the names of any hazardous substances, applicable laws and regulations, hazardous properties, procedures in case of accident, emergency reporting and contact information, methods for minimizing the spread of damage, and other relevant information.

Initiatives to Prevent Overloading

The overloading of trucks causes vibration, noise, damage to roads and facilities, and also creates driving hazards. Consequently, Toray Industries is putting considerable effort into the prevention of overloading.

Compliance and Security Measures for Importing and Exporting

As a measure to ensure the legality and safety of imports and exports as part of Toray Group's expanding global operations, a US subsidiary of Toray International, Inc. enrolled in the Customs-Trade Partnership Against Terrorism (C-TPAT)¹¹ with the aim of strengthening global supply chain compliance. In order to realize more efficient imports and exports of materials and to strengthen supply chain compliance and security measures, Toray Group is also encouraging its worldwide distribution partners to obtain Authorized Economic Operator (AEO)¹² status.

- 11 A voluntary program introduced by United States Customs and Border Protection in November 2004. The aim of the program is ensure and strengthen security through the global supply chain, based on international cooperation with private operators importing goods into the US.
- 12 A status implemented by the EU in December 2006 that gives priority in customs procedures to importers and exporters with a high level of compliance for cargo security. The Japanese Customs Act was also revised in 2007, and a similar qualification system was established to provide priority in customs procedures to highly compliant operators.

Click [here](#) for the main initiatives for CSR Guideline 9, “Establishing Sustainable Supply Chain” in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports)

Social Contribution Activities as a Good Corporate Citizen

Proactively participate in local communities and the larger society in order to contribute to development in a way befitting a good corporate citizen.



Basic Approach

As the foundation of its business activities, Toray Group works to build ties with local communities and contribute to society through its core businesses. Embracing a corporate philosophy of contributing to society as the ultimate objective of its corporate activities, Toray Industries, Inc. has worked to foster social development since its founding. The Group's Corporate Missions were set out in 1995 and include "For society: To establish ties and develop mutual trust as a responsible corporate citizen." Social contribution activities were included in Toray Group's CSR Guidelines established in 2004, and these activities have been a part of the Group's CSR activities ever since.

Today, the Group is working to achieve the Toray Group Sustainability Vision, which calls for solving social issues by expanding its Sustainability Innovation Business. These efforts are driven by the Medium-Term Management Program, Project AP-G 2025, and the Long-Term Corporate Vision, TORAY VISION 2030.

While contributing to society through these business activities, the Group also aims with its CSR Roadmap 2025 to promote social contribution activities uniquely suited to the Toray Group as a materials manufacturer and to implement activities that help solve global issues such as those addressed by the United Nations Sustainable Development Goals (SDGs).¹ The focus for these social contribution activities has been set on three priority areas, namely "science and technology promotion," "environment and communities," and "health and welfare." As indicated in the Toray Group Sustainability Vision, the Group works to increase people's interest in the environment. Toward this end, Toray develops educational support activities in such areas as science, the environment, and career education. The Group contributes to the development of future generations and actively supports the improvement and development of science and technology and promotion of science education through the activities of Toray science foundations around the world.

Established by resolution of the Board of Directors, the Toray Group Social Initiative Policies state, "Using company awards and other measures, we will create a culture that encourages employees to participate in society in constructive ways such as engaging in voluntary activities with an eye to local needs." Accordingly, employees who wish to engage in volunteer work may take advantage of internal support systems such as absence from work and leave. Those who engage in volunteer activities are also eligible for special awards presented by each business site and plant. In fiscal 2022, awards were presented to the department that most actively promoted social contribution activities, employees who donated blood more than 30 times, and an employee who coaches a local youth soccer team.

¹ The Sustainable Development Goals (SDGs) were adopted in September 2015 at the UN Sustainable Development Summit attended by more than 150 Heads of State. These 17 goals and 169 targets are worldwide objectives to be reached by 2030.

Related Policies

Toray Group Social Initiative Policies Revised Sep 2020

- 1. Based on its Corporate Philosophy of "Contributing to society through the creation of new value with innovative ideas, technologies, and products," we will contribute to sustainable development of local and global society as a good corporate citizen, while continuously supporting social initiatives among employees.
- 2. We will pursue original programs dedicated to the improvement of social welfare in local communities, international exchange through traditional culture, sports promotion, and especially the advancement of science.
- 3. Using company awards and other measures, we will create a culture that encourages employees to participate in society in constructive ways such as engaging in voluntary activities with an eye to local needs.
- 4. We will examine all marketing and advertising activities from the perspective of social contribution before finalizing them.

Priority Areas for Social Contribution



Science and Technology Promotion: Toray Group strives to live up to its corporate philosophy of “Contributing to society through the creation of new value with innovative ideas, technologies and products” by providing innovative technologies and advanced materials. The Group is committed to taking on the challenge of innovation across all of its corporate activities. That is why the Group must develop and retain human resources who can generate this continual innovation. Also, via the Toray science foundations around the world, the Group is providing research grants, promoting science education, and fostering public interest in science, looking to make a long-term contribution.

Environment and Communities: Toray Group is pursuing the Sustainability Innovation Business that help solve global issues relating to the environment, resources and energy. Utilizing its expertise and human resources, the Group is continuously engaged in environmental conservation activities while collaborating with local communities.

Health and Welfare: Toray Group’s Sustainability Innovation Business contribute to better medical care and longevity, foster public health, and support personal safety. To help build a world where people everywhere can live long, healthy lives, the Group promotes sports and cancer screening awareness. Individual business sites support education programs for children and social welfare initiatives.

Social Contribution and the Sustainable Development Goals

Toray Industries has from the beginning engaged in corporate activities with the ultimate purpose of contributing to society, viewing itself as a public entity. The Company considers the growth of its business as an indication that it has earned the recognition and support of society as a corporation that is endeavoring to practice its philosophy of contributing to society.

In 1955, Toray Industries established the company principle that “Toyo Rayon contributes to communities” as an explicit statement of its founding principles. From around that time, everyone at Toray Industries, from management to employees, began pursuing diverse initiatives to realize the philosophy of contributing to society. These activities ranged from making donations to various organizations and institutions, providing humanitarian assistance and financial aid to disaster-stricken areas, and inviting students to visit Toray’s manufacturing sites and providing them with informational materials.

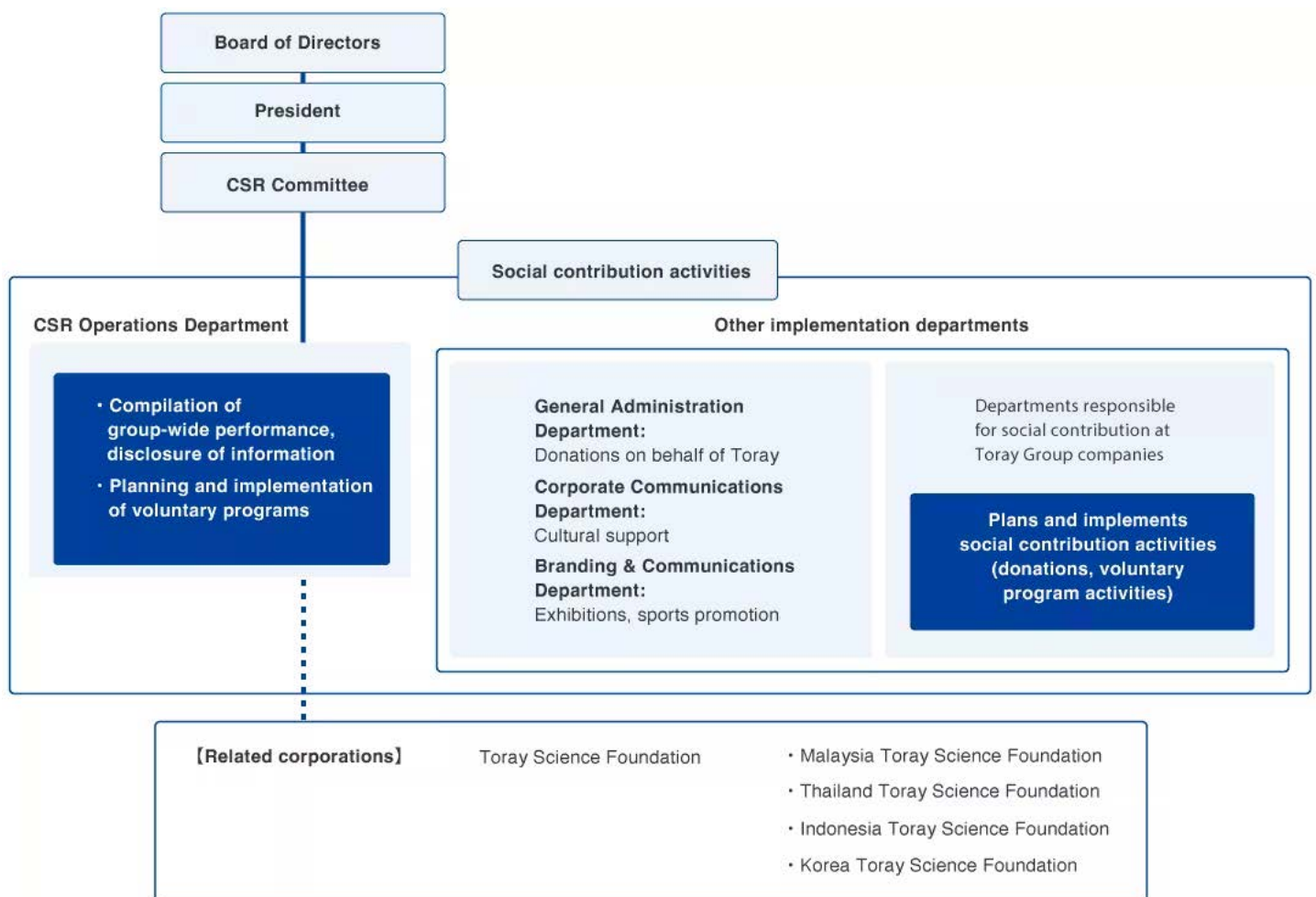
In 1986, Toray Industries established the corporate philosophy of “Contributing to society through the creation of new value with innovative ideas, technologies and products,” which carries on the core concept of the previous company principle. Toray Group pursues this corporate philosophy by emphasizing the social contributions of its businesses in making business decisions. The Group considers every aspect of its corporate conduct and the conduct of its employees through the lens of contributing to society. It is for this reason that Toray Group’s core businesses naturally align with the United Nations Sustainable Development Goals (SDGs), whose themes include resolving global environmental issues and contributing to health and longevity.

While the SDGs have recently become the focus of international development efforts, Toray Group has been working since the beginning to resolve global social issues like these, as it strives to live up to its corporate philosophy.

Structure

Since April 2012, Toray Industries has positioned the CSR Operations Department as a specialized department focusing on social contribution activities. The department is responsible for planning and promoting its own voluntary programs implemented independently, as well as aggregating CSR performance across Toray Group. Policy related to CSR activities and major CSR initiatives are discussed by the CSR Committee. Policy is communicated to Toray Group sites in and outside Japan through CSR discussion meetings held with each company and department, as well as at meetings attended by representatives from each country where the Group operates outside Japan that are held to promote activities suitable for the particular circumstances of each country and company.

Social Contribution Activities Operational Structure



CSR Roadmap 2022 Targets

CSR Roadmap goals

1. As a member of society, implement social contribution activities that help to solve the global issues addressed by the SDGs and other initiatives
2. Voluntarily and continuously engage in the priority areas of “science and technology promotion,” “environment and communities,” and “health and welfare”

Main Initiatives and Key Performance Indicators

	KPI
(1) Implement social contribution activities at the appropriate scale	10-①
(2) Actively engage in social contribution activities that are distinctive of Toray Group, focusing on science and technology promotion	-
(3) Promote social contribution activities in collaboration with stakeholders such as local communities and non-profit organizations	-
(4) Educate employees in Toray Group in order to instill the significance of social contribution, and encourage each site to continually participate voluntarily and actively in social contribution activities	10-②
(5) Develop a wide range of educational support activities such as sending employees to teach science, environmental, and career education classes at schools	10-③
(6) Support the improvement and development of science and technology and the promotion of science education through the activities of Toray science foundations in and outside Japan	-
(7) Share information with internal and external stakeholders on Toray Group’s social contribution activities via websites and other means	-

Key Performance Indicator (KPI)	Target			Fiscal 2022 Result
	Fiscal 2020	Fiscal 2021	Fiscal 2022	
10-① Social contribution expenditure (% change from average expenditure over last six years)	100% or higher	100% or higher	100% or higher	113%
10-② Social contribution activities (number)	2,500 or more	2,500 or more	2,500 or more	1,952
10-③ Beneficiaries of educational support activities such as science classes for schools and career education (number)	15,000 or more	15,000 or more	15,000 or more	15,730

Reporting scope : Toray Group

Related Materiality for CSR

- Developing in Collaboration with Stakeholders

* Click [here](#) for the Materiality View of CSR Roadmap 2025 (PDF:392.4KB).

[PDF](#)

Looking to the Future

Toray Group was founded with a commitment to contribute to society. With the CSR Roadmap 2022, the Group worked to build relationships of trust with local communities by taking initiatives in the priority areas of “science and technology promotion,” “environment and communities,” and “health and welfare.” The unprecedented circumstances, however, presented by the COVID-19 pandemic limited the implementation of the Group’s regular social contribution activities. With the CSR Roadmap 2025, the Group reinstates its designated scale of social contribution activities over the long term and continues to voluntarily implement its ongoing efforts, while educating Group employees to promote an understanding of the significance of contributing to society. As a good corporate citizen, Toray will continue to actively participate in and contribute to the development of society and local communities.

Click [here](#) for the main initiatives and KPIs for CSR Guideline No. 10 “Social Contribution Activities as a Good Corporate Citizen” during the CSR Roadmap 2025 period (fiscal 2023–2025).

[PDF](#)

CSR Activity Report (CSR Guideline Activity Reports) - Social Contribution Activities as a Good Corporate Citizen

Fiscal 2022 Results (Data edition)

CSR Roadmap 2022
Main Initiatives (1)(2)(3)(4)(5)(6)(7)

Social contribution expenditure (% change from average expenditure over last six years)

■Reporting scope ■Target in fiscal 2022
Toray Group 100% or higher

Result in fiscal 2022

113%

Social contribution activities (number)

■Reporting scope ■Target in fiscal 2022
Toray Group 2,500 or more

Result in fiscal 2022

1,952

Beneficiaries of educational support activities such as science classes for schools and career education (number)

■Reporting scope ■Target in fiscal 2022
Toray Group 15,000 or more

Result in fiscal 2022

15,730

As a good corporate citizen, Toray Group is helping to promote the sustainable development of local and international communities based on its corporate philosophy. The Group also supports the social contribution activities of its employees under the Toray Group Social Initiative Policies.

The CSR Roadmap 2022 sets KPIs for social contribution expenditures, such as donations and personnel expenses associated with social contribution activities, and Toray Group maintains initiatives at the designated scale. Consolidated social contribution expenditures in fiscal 2022 were 1.86 billion yen, while such expenditures were approximately 1.07 billion yen at Toray Industries alone. This figure is 113% of average expenditures over the last six years (fiscal 2016-2021, 1.64 billion yen), surpassing the target of 100% or higher set in the CSR Roadmap 2022.

In fiscal 2022, the main beneficiaries were Toray Science Foundation, Toray science foundations in Malaysia, Thailand, Indonesia, and the Republic of Korea, and sponsorship of the Shanghai International Marathon. In fiscal 2022, Toray Industries Inc., on behalf of Toray Group, donated approximately 220million yen to Toray Science Foundation. Toray Group companies outside Japan donated approximately 260 million yen to Toray science foundations around the world.

In its CSR Roadmap 2022, Toray Group sets KPIs for the number of social contribution activities to be implemented in order to ensure that the Group continues to actively contribute to society. In addition, the roadmap sets KPIs for the number of beneficiaries of educational support activities, such as science classes for schools and career education, with the aim of developing a solid educational support program, which has been a long-term Toray Group focus.

The number of social contribution activities implemented in fiscal 2022 was 1,952, short of the target of 2,500 or more.

Due to the prolonged impact of the COVID-19 pandemic, which led to restrictions on social activities both in and outside of Japan, the number of social contribution activities decreased over the three years (fiscal 2020 – fiscal 2022) of the CSR Roadmap 2022. While limiting social activities, the Group has identified regions and timeframes in which activities could be resumed in order to gradually increase its social contribution activities. This resulted in a greater number of activities implemented in fiscal 2022 than in fiscal 2020 (1,625) and fiscal 2021 (1,710), although these activities did not return to pre-pandemic numbers.

With the number of COVID-19 cases declining, the beneficiaries of educational support activities numbered 15,730 (4,399 more than the previous year), higher than the Group target of 15,000 or more. This was due to the return of Toray science classes for schools and plant tours in various locations.

Related Information

[> Toray Science Foundations around the World](#)

Breakdown of Expenditure in Fiscal 2022

Culture, art, and other

8 %

Environment, communities

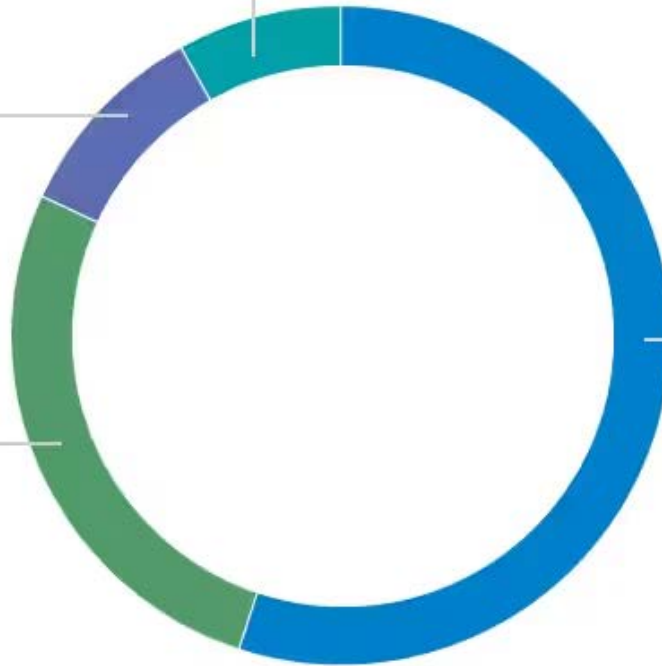
10 %

Health, welfare, sports

27 %

Academics,
science research,
education

55 %



Click [here](#) for the main initiatives for CSR Guideline 10, "Social Contribution Activities as a Good Corporate Citizen" in CSR Roadmap 2022.

CSR Activity Report (CSR Guideline Activity Reports) - Social Contribution Activities as a Good Corporate Citizen

Activities Carried Out in Fiscal 2022

Toray Group's Educational Support Activities

CSR Roadmap 2022
Main Initiatives (1)(2)(3)(4)(5)(7)



Toray Group conducts educational support activities to guide those who will become the leaders of a sustainable world. These activities include science and environmental programs to spark more interest in science among elementary and junior high school students, as well as career education and Toray plant tours.

Supporting Science Education in Schools (Sending Employees to Teach Classes, Providing Educational Materials)

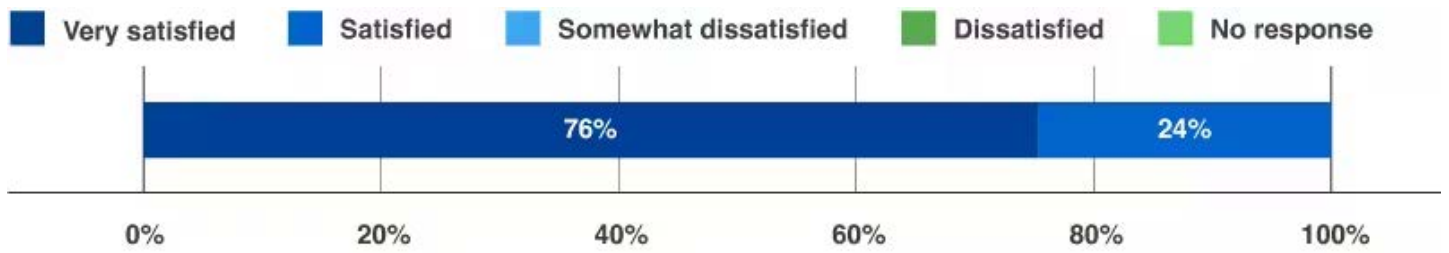
In order to raise awareness of the environment and interest in the sciences, Toray Group has developed environmental education and science experiment programs that employ some of its products. Delivering these programs, Toray Group employees teach classes at local elementary, junior and senior high schools. In fiscal 2020 and 2021, in-person classes conducted by Toray instructors at schools were limited by strict measures to prevent the spread of COVID-19. In fiscal 2022 however, as the general number of cases decreased, the Group expanded its science classes for schools while maintaining an adequate level of pandemic safety measures.

The teachers who hosted school visits by Toray instructors completed a survey, which revealed an extremely high level of satisfaction with the program. One teacher noted that during the pandemic, it was not possible to invite guest instructors, so the students and teachers really looked forward to the Toray science class. The same teacher said that, as a working member of society, the lesson's message resonated. Another host teacher indicated that the Toray instructor explained not only advanced materials but also the nature of their work, and many students remained engaged and asked questions after the lesson. A third teacher noted that it is difficult for teachers to educate their students about real-world efforts to help achieve the SDGs, so the lesson was a valuable learning opportunity. A similar survey of Toray employees who taught classes at schools revealed that they were extremely satisfied with the program. They indicated that it increased their motivation and provided a good opportunity to renew their appreciation of Toray Group initiatives.

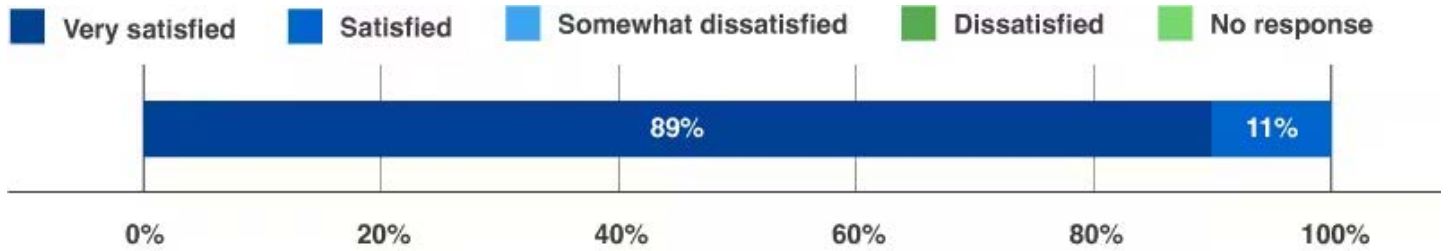
The Group also provided teaching materials and lent laboratory equipment made with Toray advanced materials to 58 elementary, junior high, and senior high schools across Japan that the Group was unable to visit, for their use in lessons on science, chemistry, and the SDGs. Toray's educational programs have been well received by many teachers for the fact that they help students understand through experiments how science and technology contribute to solving global environment problems.

Results of Questionnaire on Science Classes and Teaching Materials Provided by Toray Group

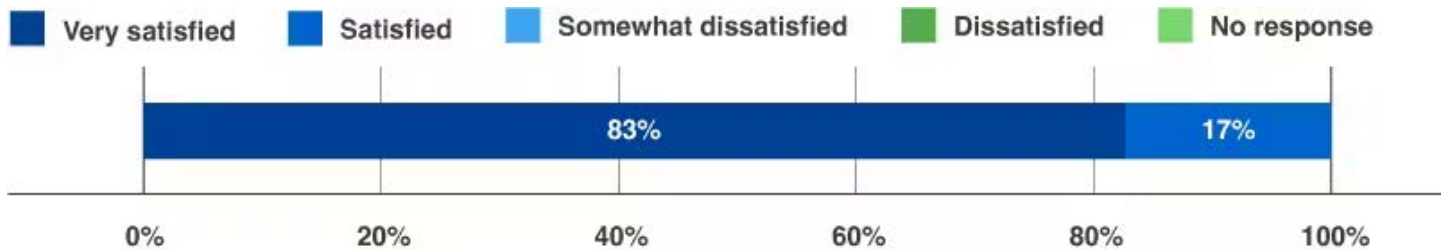
Satisfaction level among teachers



Satisfaction level among Toray Group instructors



Satisfaction with classes using materials provided by Toray



Education Support Activities for Career Education, Company Tours, and Other Programs

In addition to science experiment lessons and environmental education programs, Toray Group collaborates on career education and hosts office and plant tours in response to requests from local schools, boards of education, and non-profit organizations. Along with lessons that feature Toray Group's SDG initiatives, Toray Industries provided career-related talks to junior high and high school students by explaining job descriptions at Toray. The instructors also shared stories from their own school days, and covered other topics that would be useful for students when considering their future career paths. The company also welcomed local elementary, junior high, and senior high school students for company visits and plant tours. The use of web-based tools also expanded, and the company assisted junior high and senior high school students in their exploratory learning and career interviews. Among group companies in Japan, Toray Research Center Inc. collaborated with an active learning program at a technical college, providing online lectures and technical advice for group work. Other group companies in Japan carried out a range of activities such as career-related talks and plant tours for young people.

Group companies outside Japan also give career-related talks and plant tours to local students and provide education to foster awareness of safety, disaster prevention, and the environment. For example, in Malaysia, Toray Industries (Malaysia) Sdn. Bhd held a lecture on the current corporate culture of Japanese companies for university students studying business or the cultures of East Asian countries (Japan, South Korea, and China). Toray Textiles Central Europe s.r.o. in the Czech Republic also actively welcomed local students for plant tours.

The Toray Industries volleyball team, Toray Arrows, has been involved in supporting children's physical development through volleyball clinics and on-site instruction at elementary school physical education classes.



To help with exploratory learning programs at junior high schools in Tokyo, employees conducted face-to-face and online interviews with students. (Toray Industries, Inc.)



Local elementary school tour the Shiga Plant. The students asked many questions, such as, "What kind of things do you make at the plant?" and "What is your company concerned about when it comes to the environment?" (Toray Industries, Inc. Shiga Plant)



Plant tour for students from a nearby high school. After the tour, the students interacted with senior employees. (Toray Industries, Inc. Okazaki Plant)



Lecture event featuring women from the manufacturing industry, hosted by a nearby technical high school. The Toray employee spoke about her own experiences, including the nature of her work and its rewards. (Toray Industries, Inc. Okazaki Plant)



An educational event for elementary school students organized by Wanpaku Daigaku at a local community center. Toray employees helped students conduct filtration experiments using hollow fiber membranes in order to learn how to purify water. (Toray Industries, Inc. Nasu Plant)



Local high school students on a plant tour. The students also got a chance to actually see and touch products made from Toray materials, such as wigs and tennis rackets. (Toray Monofilament Co., Ltd.)



Career-related talk at a nearby junior high school. To help the students imagine their future careers, the Toray employee shared specific anecdotes about her work and how she approaches her job. (Toray Engineering Co., Ltd.)



Toray Group employee lectures on Japanese corporate culture. [Toray Industries (Malaysia) Sdn. Berhad]



Vocational talk at a local junior high school. The Toray employee talked about having a career as an athlete and the significance of work. (Toray Arrows men's volleyball team)



Volleyball clinic for a youth organization in Mishima City. Toray employees worked to bring out the individuality of each child while conveying the joy of volleyball. (Toray Arrows men's volleyball team)



In response to a request from the local board of education and the Shiga Prefecture Volleyball Association, the Toray Arrows women's volleyball team held volleyball classes at elementary schools. Through volleyball, growing children learned how to think and move their bodies, and promote teamwork. This involves not giving up, cooperating with each other, covering each other, and connecting. (Toray Arrows women's volleyball team)

Related Information

> [Developing the Next Generation of Talent](#)

Promoting Communication Between Education and Business Worlds

Through its participation in the Business Training for Japanese School Teachers program offered by the Keizai Koho Center, Toray Industries' Mishima Plant in Shizuoka Prefecture has welcomed some 10 teachers each year since 1994. The business-related training includes lectures on safety and environmental conservation at the plant, as well as a plant tour to provide an understanding of Toray's corporate activities as a manufacturer. Moreover, there are lectures and discussions on management and human resources development based on the approach that "The success or failure of a company is decided by its people—employees shape its destiny." The knowledge that these teachers gain allows them to help broaden their students' education.

(Toray Industries, Inc. Toray Human Resources Development Center, Mishima Plant)



Teacher Training

Workshops at the Science Museum

Since 2012, Toray Industries has been conducting two workshops, which use filtration experiments to examine the importance of the Earth's water, and the amazing properties of fibers, at the Science Museum located in Kitanomaru Park in Tokyo, every day that the museum is open. In fiscal 2022, approximately 6,300 people, from young children to adults, attended the workshops.

Supporting the Biology Olympiad

Since 2007, Toray Industries has helped to send students to the International Biology Olympiad (IBO) through the Japan Science Foundation. The Company's aim is to help develop the next generation of leaders in the life sciences. The 33rd IBO was hosted by Yerevan, Armenia. The four high school students chosen as the representatives for Japan all won medals (1 gold, 1 silver and 1 bronze medal, as well as an award of excellence).



The four students representing Japan and the local guide who assisted them during their stay (Photo courtesy of the Japan Biology Olympiad Committee)

Aozora Science School

Since 2015, Toray Industries has organized the Aozora Science School,¹ a hands-on learning program to foster children's interest in and an affinity for science by offering fun activities to learn about science in the natural environment. In fiscal 2022, 270 elementary school students, the largest number to date, participated in the program. The activities included a daytrip to an outdoor classroom at Okutama Field, on the site of a closed school in Okutama (greater Tokyo), as well as online classes that were popular the previous year.

In the outdoor classroom, the children learned about the wonder of trees by observing and experiencing the forest, while listening to a talk by a forest expert. They also created natural dyes using plants from the forest and made their own original model airplanes while learning how they fly and the characteristics of materials used to make them. By enjoying themselves in a thriving natural habitat, the students learned about the importance of protecting the richness of life on land, which is one of the SDGs, and the fact that forests are also connected to the rich ecosystems of the ocean. Aozora Science School helps students realize the importance of creating a sustainable world, while also helping them develop a love for science.

In the online classroom, students learned using experiment kits sent to them in advance. In addition to learning about the wonder of trees with the kit, they also conducted a "water dance experiment," which was popular the previous year. This involved dripping water on a Toray water-repellent textile and observing how water drops roll around on the fabric surface. There was also a "seed plane experiment," in which they used knowledge about plant growth as inspiration to make model airplanes.

In both the outdoor and online classrooms, the children were full of questions and lively opinions. They demonstrated a high level of awareness, a natural sense of wonder, and were amazed by their learning discoveries.

¹ Aozora Science School is a hands-on educational camp designed by Toray Industries, supervised by Leave a Nest Co., Ltd. and provided by JTB Corporation.



Learning about the wonder of trees from a forest expert





Students participating online



Smiling participants gather outdoors.

Related Information

- > [Aozora Science School official website \(Japanese site\)](#) 
- > [Aozora Science School Facebook page \(Japanese site\)](#) 

Toray Science Foundations around the World

CSR Roadmap 2022
Main Initiatives (1)(2)(6)(7)



Toray Group has outlined a corporate philosophy of “contributing to society through the creation of new value with innovative ideas, technologies and products,” which the Group delivers on by practicing innovation. In order to continuously deliver innovation, the Group must secure and develop talented human resources. For this reason, the Group takes a long-term perspective on human resource development. One way it does this is by contributing to the promotion and support of basic science and science education in society, which is one of the main social contribution activities of the Group, through the activities of Toray Science Foundation and Toray science foundations in Malaysia, Indonesia, Thailand, and the Republic of Korea.

Related Information

> [Toray Science Foundations around the World](#)

Toray Science Foundation

Toray Science Foundation was established way back in 1960 to help advance science, technology and culture. The Foundation created quite a stir when it was first established, as it was a pioneering foundation of its kind, and its activities continue to win high praise today. Its support activities include grants and prizes in the fields of basic science and science education that are offered by no other similar organizations. The Foundation celebrated the 60th anniversary of its founding in June 2020.

60th Anniversary Event and 2022 Presentation Ceremony

In February 2023, the Toray Science Foundation chose the latest recipients of the 63rd Toray Science and Technology Prizes, Toray Science and Technology Grants and the 54th Toray Science Education Prizes. In March 2023, in addition to the 2022 presentation ceremony, a 60th anniversary commemorative event was also held, after being postponed in an effort to prevent the spread of COVID-19 infections. At the 60th anniversary event, congratulatory speeches were made by Kyoto University professors Dr. Tasuku Honjo and Dr. Shinya Yamanaka, who are both Nobel Prize winners and previous recipients of Toray Science and Technology Grants. At the presentation ceremony, the Minister of Education, Culture, Sports, Science and Technology and the President of the Japan Academy gave congratulatory remarks. Toray Science and Technology Prizes were awarded to Dr. Toshio Ando (Distinguished Professor, Kanazawa University) and Dr. Ikue Mori (Director and Professor, Neuroscience Institute, Graduate School of Science, Nagoya University). They and the science educators who were awarded Toray Science Education Prizes, including the Minister of Education, Culture, Sports, Science and Technology Prize, received certificates, medals, and prize money. Grants totaling 130 million yen were awarded to 11 recipients of Science and Technology Grants.



Speech by Toray Industries President and Toray Science Foundation Chairman Akihiro Nikkaku



Dr. Tasuku Honjo (left, pre-recorded video) and Dr. Shinya Yamanaka (right, online) gave congratulatory speeches at the anniversary event.



Presentation ceremony



Dr. Toshio Ando

Development of high-speed atomic force microscopy and its application to protein research

Dr. Ando developed a high-speed atomic force microscope and succeeded in capturing video images of the movements of individual proteins and their interactions with other molecules. This achievement has been globally acclaimed as contributing an essential technology for biophysical research at the molecular level of proteins and nucleic acids.



Dr. Ikue Mori

Fundamental principles of the neural circuit regulating animal behavior

Using *C. elegans*, Dr. Mori clarified the operating principles of animal neural circuits and information processing from sensory input to behavioral output and constructed mathematical modeling of neural circuit activity. This achievement has been recognized internationally and has become an important foundation for current brain science research.

Junior and senior high school science education is a particular focus of the Toray Science Foundation. Mr. Takahiro Suzuki, a teacher at Otsuma Ranzan Junior and Senior High School, received the Toray Science Education Award in the name of the Minister of Education, Culture, Sports, Science and Technology. This award recognizes teachers who have achieved remarkable educational results through creativity and ingenuity.



Mr. Takahiro Suzuki

Brass plating method for beautiful copper plates using aluminum foil and surfactants

Mr. Suzuki succeeded in creating beautiful brass plating on a copper plate by employing a unique method using aluminum foil and surfactants. The method can be used as an excellent and safe plating experiment and has been recognized as an outstanding teaching tool.

Related Information

> [Toray Science Foundation](#) 

Malaysia Toray Science Foundation (MTSF)

In November 2022, MTSF held the 29th Malaysia Toray Science Foundation Presentation Ceremony in Kuala Lumpur. MTSF awarded a total of 341,000 ringgit (equivalent to approx. 10.38 million yen) in prize money and grants to a total of 30 Malaysian recipients, including two scientists, 13 young researchers, and 15 science educators.

It was the first in-person Presentation Ceremony in three years and was hosted by MTSF Chairman Omar and Teh Hock Soon, Chief Representative for Malaysia. Katsuhiko Takahashi, Japanese Ambassador to Malaysia, and Hideki Hirabayashi, Senior Vice President at Toray Industries, were also in attendance.

In his congratulatory speech, Ambassador Takahashi warmly congratulated the award recipients and praised MTSF for its significant contribution to the development of science and technology in Malaysia over the past 29 years. Senior Vice President Hirabayashi also gave an address on behalf of President Nikkaku, who is honorary chairman of MTSF. He talked about how the COVID-19 pandemic has rapidly changed people's lives; reminded the audience of the importance of continual innovation; and expressed his belief that science, technology, and innovation will continue to be important for the well-being and long-term survival of humankind.



Senior Vice President Hirabayashi giving his congratulatory speech



Commemorative photo with award winners

Related Information

> [Malaysia Toray Science Foundation](#) 

Indonesia Toray Science Foundation (ITSF)

The 29th Indonesia Toray Science Foundation Presentation Ceremony was held in March 2023. ITSF awarded one Science and Technology Prize, 18 Science and Technology Research Grants, and 10 Science Education Prizes totaling 1.055 billion rupiah (equivalent to approx. 9.5 million yen).

Mitsuo Ohya, Executive Vice President at Toray Industries, was in attendance, and the event began with an address from ITSF Chairman Dr. Laksana Tri Handoko, who also serves as Chairman of Indonesia's National Research and Innovation Agency. Congratulatory video messages were presented from Kenji Kanasugi, the Japanese ambassador to Indonesia, and Nadiem Makarim, Indonesia's Minister of Education, Culture, Research, and Technology.



Mitsuo Ohya, Executive Vice President at Toray Industries, delivering a congratulatory address



Commemorative photo with award winners

Related Information

> [Indonesia Toray Science Foundation](#) 

Thailand Toray Science Foundation (TTSF)

The 29th Thailand Toray Science Foundation Presentation Ceremony was held in March 2023. TTSF awarded two Science and Technology Prizes, 20 Science and Technology Research Grants, and seven Science Education Prizes totaling 5.42 million baht (equivalent to approx. 20.81 million yen) in prize money and grants.

At the Presentation Ceremony, Toray Industries President and TTSF Honorary Chairman Akihiro Nikkaku delivered a congratulatory message to the award winners and expressed his support for the promotion of science and technology in Thailand through TTSF's activities. He expressed his desire for TTSF to contribute to the country's development and to work with the Thai people to help realize a more sustainable world. As guest of honor, Japanese Ambassador to Thailand Kazuya Nashida indicated that he was impressed by the efforts of the TTSF over the past 29 years. The ceremony concluded with a speech from the President of the Privy Council, General Surayud Chulanont, who, as the Chairman of the Ceremony Committee, expressed his deep appreciation for Toray's business activities in Thailand over the years and for TTSF's contribution to the development of science and technology in Thailand.



Toray Industries President and TTSF Honorary Chairman Akihiro Nikkaku presents his remarks.



Commemorative photo of Science and Technology Prize winners

Related Information

> [Thailand Toray Science Foundation](#) 

Korea Toray Science Foundation (KTSF)

The 5th Korea Toray Science Foundation Presentation Ceremony was held in October 2022. KTSF awarded Science and Technology Prizes to two researchers for their outstanding research results and three-year Research Fund Grants to four young researchers to pursue new research projects. For the first time in three years, the invitees included award winners and their families, as well as politicians, academics, and business partner representatives from in and outside of South Korea. The event was a great success, and included a special lecture by Dr. Morinobu Endo, special honorary professor of Shinshu University, entitled “Material innovation through creative cooperation between Korea and Japan.” Ryoji Noyori, Outside Director at Toray Industries, sent a video message from Japan to congratulate the award winners. He emphasized the importance of collaboration among young researchers and engineers for solving problems facing humankind, such as climate change and energy resource depletion. Toray Industries President Akihiro Nikkaku attended the ceremony in person and gave the welcome address. He expressed his hope that the Foundation will help promote science and technology and nurture scientists and contribute to mutual understanding, friendship and goodwill between the Republic of Korea and Japan.



Toray Industries President and KTSF Honorary Chairman Akihiro Nikkaku gives his speech.



Commemorative photo with award winners

Related Information

> [Korea Toray Science Foundation](#) 



In addition to implementing initiatives to conserve the environment around its production sites, Toray Group companies collaborate with non-profits and municipal governments on ongoing efforts to clean up rivers and shorelines and maintain forests.

7th Toray Group Arakawa Clean Aid

Since 2014, the Toray Industries Tokyo Head Office has partnered with the non-profit Arakawa Clean Aid Forum to hold the Toray Group Arakawa Clean Aid event. This activity involves cleaning up litter along the banks of the Arakawa River, while learning about the impact of rubbish in rivers on the global environment and local ecosystems. However, this activity is not just about picking up trash, but rather gathering and identifying each piece of litter by type on a River Rubbish Survey Card, and then sorting it accordingly. Before the day of the clean-up, participants attended an environmental lecture by the Arakawa Clean Aid Forum. By learning about the current situation for river and marine debris, the impact of garbage on living things, and how living things are connected to our lives, the participants realized the significance of clean-up activities and became more interested in the nature and biodiversity around them. This event is a meaningful way to learn how the problem of plastic waste is connected to our daily lives. At the 7th Arakawa Clean Aid event held in April 2023, 46 participants, including Toray Group employees and their families, carried out clean-up work. During the one-hour activity, they picked up a total of 68 bags of trash (approx. 110 kg), including 27 bags of combustible garbage, one bag of non-combustible garbage, 26 bags of plastic bottles, and 14 bags of cans and bottles. In a questionnaire filled out after the event, the participants expressed their positive feelings about the experience. Comments included: “By participating in the Arakawa clean-up activity after attending the environmental lecture, I gained a more concrete appreciation of the issue,” “I think those who participated in this activity will never litter again,” “I felt a sense of accomplishment when I saw the number of garbage bags we had filled,” and “The children really enjoyed the nature observation activity.”



Plastic bottles and other waste were easy to find.



The nature observation activity enabled participants to observe the various types of crabs that live in the Arakawa River and to think about the importance of preserving biodiversity.



An abundance of microplastics were particularly noticeable during the clean-up.



Group photo of the clean-up participants

Biodiversity Conservation Activities in Green Spaces at Toray Facilities

The Tokai Plant of Toray Industries is promoting activities based on the Toray Group Greening Guidelines in order to maintain and nurture the green space that it has preserved since the start of operations in 1971. The plant's activities include working to protect the rare southern Japanese rice fish (*Oryzias latipes*) that lives in a waterside biotope created on the facility grounds. Employees are also focused on protecting an herbaceous plant called Fujibakama (*Eupatorium japonicum*), as it helps provide a network of ecosystems for the chestnut tiger butterfly (*Parantica sita*), a member of the Danaini subfamily. Based on a deep awareness of the importance of social contribution, the Tokai Plant is expanding its initiatives for biodiversity conservation and ecosystem preservation. As part of these efforts, the plant joined Project Linking Life with One Another,² which aims to form an ecological network of corporate greenbelts along the coast of the Chita Peninsula and foster the next generation of leadership. The project works with students, companies, government agencies, and experts from the local community to engage in activities that promote the coexistence of people and nature and the preservation of biodiversity. The plant is working to develop human resources using its green space, such as giving students access to these spaces for environmental research fieldwork. This also plays an important role as a tool for communicating with the local community. In September 2022, the plant participated in an event called LOVE! GREEN DAY 2022, sponsored by the Project Linking Life with One Another, which allows the public to experience the green spaces of participating companies. The facility welcomed local elementary school students and their parents, who participated in fieldwork activities such as observing living things in the waterside biotope, becoming familiar with the plant's biodiversity initiatives, and learning about the problem of the invasive species, Moso bamboo. The participants were also shown how to make water guns using bamboo that had been removed from the ecosystem. In a survey conducted after the event, the participants provided positive comments such as "Knowing that many companies on the Chita Peninsula are actively protecting the environment makes me feel good about living here" and "I was surprised to see that nature and living creatures are being nurtured with such care on a factory's property." Additionally, the Tokai Plant has been recognized for the purposes its green space activities serve, which are to conserve biodiversity and help develop the next generation of human resources. The plant was certified as Excellent Stage 2 in the MOU (Maintenance, Operation and Utilization) category of the Social and Environmental Green Evaluation System³ (SEGES), a green certification program provided by Japan's Organization for Landscape and Urban Green Infrastructure.

Furthermore, Aichi Prefecture, where the Tokai Plant is located, adopted the Aichi Biodiversity Strategy 2030 in February 2021. This strategy aims to promote initiatives related to biodiversity conservation through collaboration among a variety of entities such as companies, universities, environmental organizations, and government agencies. Companies are expected to play a central role in local communities by contributing to biodiversity conservation through activities such as developing biotopes on company premises and having employees participate in conservation activities. Therefore, in order to promote corporate initiatives related to biodiversity conservation, in 2022, Aichi Prefecture established the Aichi Biodiversity Company Certification Program to recognize companies that are implementing outstanding initiatives in this area. The Tokai Plant is collaborating with university students to conserve the rare southern Japanese rice fish that lives in the plant biotope, along with an herbaceous plant Fujibakama that helps provide a network of ecosystems for the chestnut tiger butterfly. As a result, Toray Industries has been recognized as an Aichi Biodiversity Certified Company.



LOVE! GREEN DAY 2022 participants



Participants making water guns using the invasive species Moso bamboo during LOVE! GREEN DAY 2022



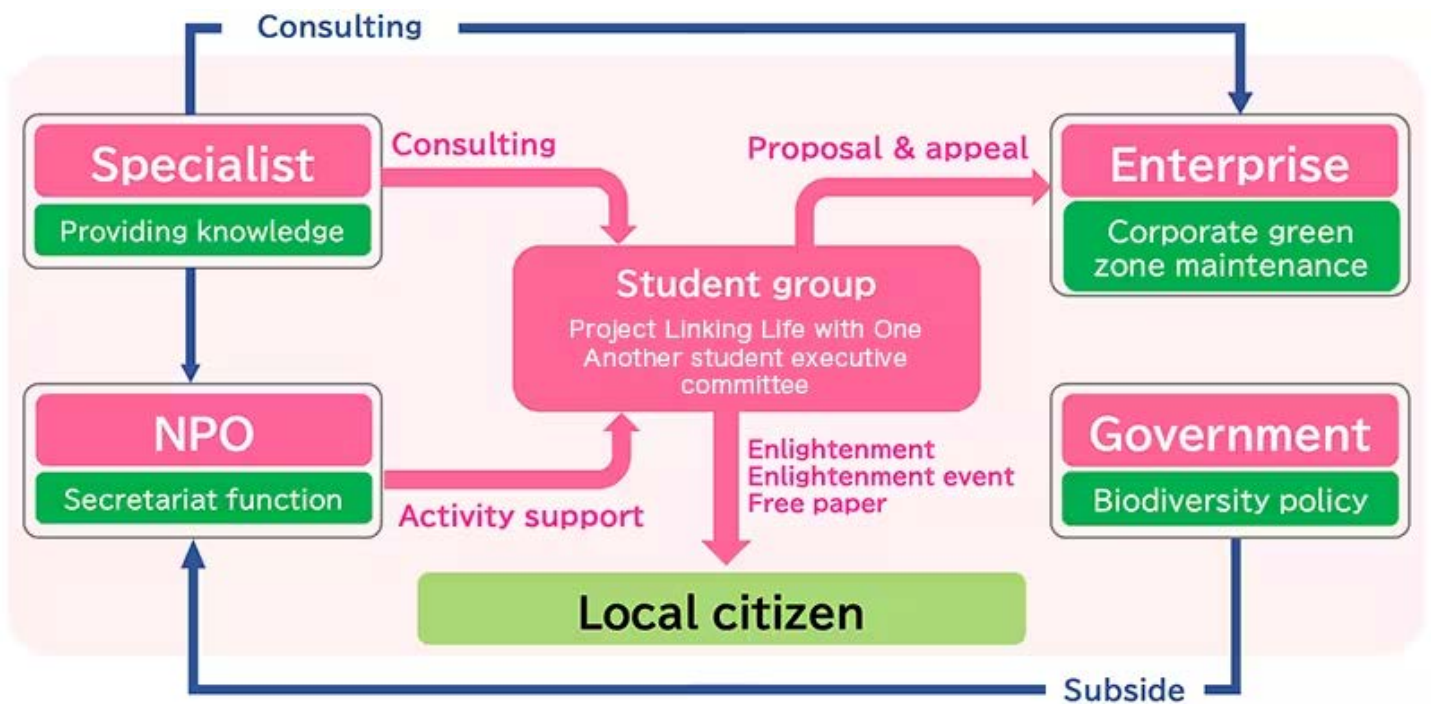
SEGES Excellent Stage 2 certification



Aichi Biodiversity Certified Company logo

2 A project based primarily in the corporate greenbelt along the coast of the Chita Peninsula that aims to form a network of ecosystems and nurture the next generation of leadership. Led by the student members of the Project Linking Life with One Another student executive committee, the project involves the collaboration of 12 companies, local government agencies, non-profit organizations, and experts who work together on a variety of activities to boost biodiversity in corporate green spaces and raise environmental awareness among local residents. The Project Linking Life with One Another student executive committee received the Prime Minister's Award for the 2020 Greening Promotion Movement, which is awarded to individuals and groups that have made outstanding contributions to the greening promotion movement.

Conceptual schematic of Project Linking Life with One Another



3 The Social and Environmental Green Evaluation System (SEGES) evaluates and certifies outstanding corporate green space initiatives that contribute to society and the environment. These initiatives include daily activities and efforts to help alleviate global warming and the heat island phenomenon, as well as conservation of local ecosystems, preservation and creation of good landscapes, building relationships with local communities, and safe and secure urban development. After being evaluated by a third-party review committee, successful candidates are certified by the Organization for Landscape and Urban Green Infrastructure. SEGES consists of three categories. In the SEGES MOU (Maintenance, Operation and Utilization) category, companies are evaluated and certified for outstanding activities to create or conserve their own green spaces. In the SEGES PDC (Planning, Designing and Construction) category, companies are evaluated and certified for outstanding green space environmental planning relating to property development and construction. In the SEGES ESW (Environmental Friendliness, Safety and Well-Being) category, companies are evaluated and certified for their efforts to provide comfortable and safe urban green spaces. As of April 2023, 147 corporate green spaces have been certified.

Environmental Activities at Offices and Plants



Afforestation on the slopes of Mt. Fuji fores is being carried out through a joint labor-management activity in collaboration with the non-profit Mt. Fuji National Trust. The participants first attended a talk on the reasons why it is necessary to plant trees to get a better understanding of the importance of this activity. (Toray Industries, Inc. and Toray Worker's Union)



Employees conducted a clean-up activity along the Kanori River drainage canal near the plant. They performed the work in appreciation of the local people who support the plant on a daily basis. (Toray Industries, Inc. Okazaki Plant)



As part of a clean-up campaign, managers removed litter outside the facility. (Toray Industries, Inc. Ehime Plant)



On the anniversary of the death of Imai Kanehira (a famous Japanese military commander who died in 1184), employees cleaned up around the historic Yoroikake-no-Matsu pine tree (on the plant grounds) and at the commander's grave (offsite). (Toray Industries, Inc. Shiga Plant)



As a practical way to think globally and act locally, employees participated in the Love Earth Clean-up campaign, which was started by local citizens, companies, and government agencies working together. (Toray Industries, Inc. Kyushu Branch)



As part of efforts to welcome visitors to Osaka's Nakanoshima district and beautify the area, employees participated in a clean-up of the district's greenways and sidewalks, working together with other Nakanoshima Mitsui Building tenants, neighboring companies, and local residents. (Toray Alphart Co., Ltd.)



A beach clean-up event was held to help protect the local environment on California's coastline, where trash left behind by visitors or washed ashore by the tide has become a problem. (Toray Membrane USA, Inc.)



In collaboration with the Mexican city of El Salto, employees planted trees along an industrial road near the plant. Planting trees helps to stabilize temperatures in the area, promote rainwater absorption, and maintain water quantity and quality. In addition to enhancing the landscape, trees can also help with ecosystem conservation. (Toray Resin Mexico, S.A. de C.V.)



In collaboration with the Rotary Yoneyama Memorial Foundation, an organization that supports international students studying in Japan, employees conducted a clean-up activity along Karpal Singh Drive, a beach promenade on the east side of Penang Island. [Toray Group (Malaysia)]



Together with the Penang Green Council, the company held Toray &+™ Recycle Competition 2023 Penang, a plastic bottle recycling contest— for elementary and junior high school students in Penang state. [Toray Group (Malaysia)]



The company provided plant seeds to local organizations and community groups in Tangerang to support a local greening campaign, Go Green. (P.T. Indonesia Toray Synthetics)



In order to help reduce marine waste and protect natural resources on the Bang Pu coast, employees participated with government agencies, industrial organizations, and local residents in the Bang Pu Marine Conservation Project. [Toray Textiles (Thailand) Public Company Limited]





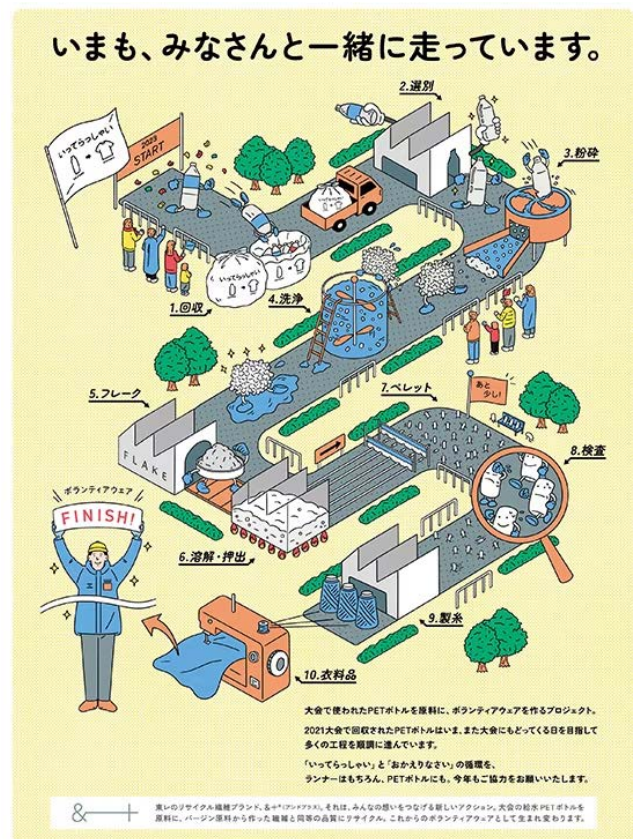
Sponsorship of the Tokyo Marathon and Initiatives for Sustainability

Toray Industries has sponsored the Tokyo Marathon since 2011 as a way to contribute to society through the promotion of sporting events.

The Tokyo Marathon also promotes sustainability initiatives as part of its activities. As an ongoing joint sustainability initiative with the Tokyo Marathon, Toray Industries provides its Ecodear™ plant-based polyester fiber to produce eco-friendly volunteer clothing, as well as carrier bags distributed to runners. At the Tokyo Marathon 2021, held in March 2022, a project was launched to recycle the PET plastic bottles from the water provided to runners on the day of the race for the purpose of making Toray's recycled fiber &+™ for the clothing distributed to marathon volunteers. The plastic bottles collected during the marathon are being turned into &+™ recycled fiber and upcycled as volunteer clothing for the Tokyo Marathon 2024.



Collecting plastic bottles that will be turned into volunteer clothing for future marathons.



東レは、素材で東京マラソン2023を応援しています。

Illustration from the official souvenir program depicts the Tokyo Marathon's &+™ recycling initiative.

Related Information

> &+™ (product site) 

> Realizing a Circular Economy

Promoting Sports Participation by Sponsoring the Shanghai Marathon

Toray Industries and Toray Industries (China) Co., Ltd. are helping to promote sports in China by sponsoring the Shanghai Marathon. The event is designated as a Platinum Label Road Race by World Athletics, a classification reserved for the leading road races around the world. Toray Group has sponsored the event since its second year and currently provides support as a Founding Sponsor, the highest level of sponsorship.

The 2022 Shanghai Marathon, the 26th such event, saw 18,000 participants run through the streets of Shanghai. The event was held with comprehensive COVID-19 prevention measures, including a requirement for all runners and staff to take a PCR test.



Runners at the start of the race



Medal ceremony for the men's full marathon. Toru Kutsuzawa, chairman of Toray Industries (China) Co., Ltd. (second from left), presented the medals.

Supporting Fureai Concerts

CSR Roadmap 2022
Main Initiatives (1)(3)(7)



To support culture, education, and welfare, Toray Industries co-sponsors Fureai Concerts. These concerts at venues across Japan, including elementary schools and social welfare facilities, bring music to the people through music instruction, concerts, and audience participation.

In fiscal 2022, Toray Industries marked the 20th year of these concerts with an invitation-only performance for people with disabilities, which is an annual part of the Fureai Concert program. Volunteers were on hand to assist attendees at the nearest train station and to help guide attendees inside the venue. The concert was thoroughly enjoyed by the many people who came.



Concert performance



Performers and volunteers

Community Contribution Activities as a Good Corporate Citizen

CSR Roadmap 2022
Main Initiatives (1)(3)(4)(7)



Environment
and Communities



Health and
Welfare

Based on the corporate philosophy of “contributing to society through the creation of new value with innovative ideas, technologies and products,” Toray Group contributes to society through its business activities, and in other ways as well.

As a good corporate citizen, the Group supports local Volleyball Clinic to Support Great East Japan Earthquake Recovery

Since 2013, the Tohoku Branch of Toray Industries has used volleyball as a means of providing support for local reconstruction efforts. In June 2022, a volleyball clinic was held for sixth graders at Yamotohigashi Elementary School in Higashi Matsushima City, Miyagi Prefecture. A former member of the Japanese national volleyball team and the Toray Arrows team, Kana Oyama, gave a talk to the sixth graders, and a practical training was provided by fellow former Arrows Azusa Futami, who now works at Toray Engineering Co., Ltd.

During the training, the students enjoyed creative games and practiced tosses and serves using soft volleyballs. The venue was filled with smiles and excited voices. During her talk, Kana Oyama skillfully conveyed to the students the importance of being considerate toward others and using the resulting positive feeling as a way to connect with them.



Ms. Oyama (left) and Ms. Futami (right) answer students' questions.

Support for Regions Flooded by Torrential Rains



To help support recovery after the heavy rains and flooding that occurred in Japan's Hokuriku and Tohoku regions in August 2022, Toray donated 500 units of its LIVMOA™ dust protective clothing, which is both dust-proof and breathable. The presentation was made in Nagai City, Yamagata Prefecture, where Suiki Technos, Ltd., a group company of Suido Kiko Kaisha, Ltd. was contracted to perform maintenance and management work. (Toray Industries, Inc, Suido Kiko Kaisha, Ltd.)

Support for Local Community Development



Toray Group donated a total of 100,000 yuan to a local charity association for community development in Nantong, China. This annual activity began in 2012 and the 11th such donation was made in fiscal 2022. (Five Toray Group companies in the Nantong area[China])



Toray provided Christmas presents for children in need through CASA for Kids' Voice, a volunteer group that advocates in court for children who have experienced abuse or neglect. (Toray Resin Co.)

Toray Group's Approach to Climate Change

Toray Group is committed to its current corporate philosophy of “contributing to society through the creation of new value.” This is in keeping with a principle since Toray's foundation in 1926 that corporations are public institutions that should contribute to society through business. Based on this corporate philosophy, Toray Group has for many decades focused on creating innovative technologies and advanced materials that provide solutions to various social challenges, including global environmental issues, and has helped to build a sustainable world.

Based on this approach, the Toray Group Sustainability Vision was established in 2018. As part of vision objectives to be achieved by 2050, the Group is aiming to help achieve a net zero emissions world, where greenhouse gas emissions are completely offset by absorption—in other words, a net zero emissions, carbon-neutral world.

The Group will help to reduce global greenhouse gas emissions and help to realize a carbon neutral world by 2050 by expanding the Sustainability Innovation (SI) Business¹ that have long been a Toray focus, including renewable energy, hydrogen, and materials for electrification, and by developing products that help with greenhouse gas absorption, such as CO₂ separation membranes.

In addition, Toray Group aims to reduce its own greenhouse gas emissions (Scope 1 and 2) and become carbon neutral by 2050. It will do this by expanding the Sustainability Innovation Business, which in return will provide Toray Group with sustainable energy and raw materials, as well as by developing and introducing innovative processes and CO₂ recycling technology that utilize CO₂ as a resource. Moreover, by promoting initiatives such as bio-based raw materials and recycling, the Group is also committed to promoting the reduction of Scope 3 emissions that will reduce greenhouse gas emissions throughout the entire supply chain.

¹ Sustainability Innovation (SI) Business : Business areas and product lines that can help realize the Toray Group Sustainability Vision

To accelerate initiatives to address climate change, in April 2021 the Group established the Sustainability Committee, chaired by the president, as an organization that oversees measures to combat climate change, as well as the Climate Change Subcommittee.

In April 2022, the Circular Economy Subcommittee was added to further accelerate efforts to address climate change. In fiscal 2022, the Climate Change Subcommittee reviewed Toray Group's reduction targets for greenhouse gas emissions (Scope 1 and 2) to be achieved by fiscal 2030. The subcommittee also discussed a number of topics including the basic policy for ascertaining and reducing GHG emissions (Scope 3) throughout the supply chain, a digitalization promotion plan for calculating and visualizing product carbon footprints, and the 2023 internal carbon price (10,000 yen per ton of CO₂) and how it should be used. Based on this, the Sustainability Committee deliberated and decided on the appropriate policies.

In addition, the Group partially revised its implementation system in 2023 and promotes initiatives by focusing on the following two projects: (1) the Sustainability Innovation Business Expansion Project (SI Business Expansion PJ below), which will contribute to reducing the GHG emissions of society in general through its business, and (2) the Climate Change Action Project (Climate Change Project below), which aims to reduce GHG emissions in its own business activities.

The SI Business Expansion PJ is primarily promoted by each of the business divisions. Meanwhile, subcommittees have been established separately in cross-business areas such as mobility, circular economy, and hydrogen, working together to expand the SI business.

The Climate Change Project promotes group-wide initiatives aimed at achieving the fiscal 2030 targets for Scope 1 and Scope 2 GHG emissions reductions as the Challenge 50+ Project. The project's GHG Reduction Subcommittee (formerly the Climate Change Subcommittee) discusses overall strategy for making further reductions in GHG emissions, reductions in Scope 3 emissions, external communications, carbon pricing, and other topics.

Progress on these activities is regularly reported to the Board of Directors, which appropriately monitors the Group's climate change prevention measures. The Board also considers opportunities and risks related to climate change as part of important factors when making business decisions and conducts appropriate oversight and comprehensive decision-making.

Further, in order to achieve carbon neutrality in 2050, Toray Group recognizes the need to make changes and take a leap in technological innovation based on non-conventional ideas, as well as the need for efforts that are not limited to single corporations, but involve industry, government, and broader society working together to achieve this goal. The Group holds discussions and pursues dialogue with affiliated economic organizations, industry associations, and government, working with these entities to achieve the goals of carbon neutrality and the Paris Agreement by 2050.

Through this dialogue, the Group collects information released by the government, and conducts interviews with the relevant ministries. Toray shares its opinions and make recommendations as part of efforts to understand, confirm, and apply the relevant information to its internal policies.

Toray Group also participates in relevant industry organizations, which make recommendations to the government based on the consensus regarding initiatives needed to promote carbon neutrality.

Toray also participates in the GX League, a collaborative industry-government initiative to promote carbon neutrality. Accordingly, the Group discloses information related to its carbon neutrality activities, which includes the setting of GHG emission reduction targets and follow-up on the results achieved.

Major Affiliations: Organizations / Initiatives / Committees / Subcommittees (partial list)

- [Nippon Keidanren \(Japan Business Federation\): Sub-Committee on Global Environment, Committee on Environment](#)
- [Japan Association of Corporate Executives: Environment and Energy Committee \(Report in Japanese\)](#)
- [Japan Chemical Industry Association: Technical Affairs Committee](#)
- [Japan Chemical Fibers Association](#)
- [Japan Environmental Management Association for Industry](#)
- [GX League](#)

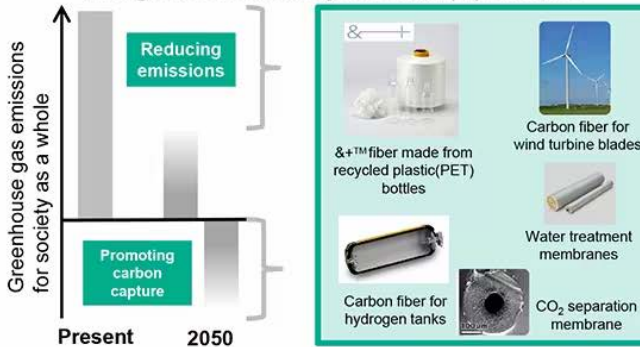
In order to reduce Category 1 emissions (from purchased goods and services), which account for the largest share of the Group's Scope 3 emissions, Toray is promoting engagement with major suppliers in an effort to reduce the carbon footprint of purchased raw materials. This involves confirming their basic policies, reduction plans and targets, as well as relevant issues, while establishing constructive dialogues with the suppliers.

Carbon Neutrality Initiatives

Helping the broader society to reduce overall greenhouse gas emissions through the Sustainability Innovation (SI) Business. Also reducing Toray Group greenhouse gas emissions* by maximizing the use of renewable electricity, hydrogen, and low carbon-footprint raw materials, based on expansion of the SI Business. (*Scope 1, 2, 3)

Contributing to build a carbon neutral world

Increasing the Volume of Greenhouse Gas Emissions Avoided through the Sustainability Innovation(SI) Business



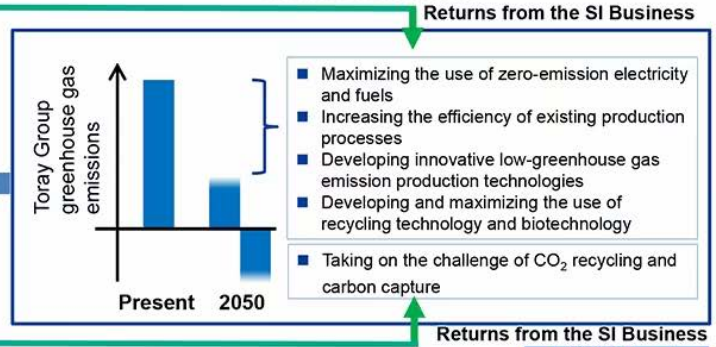
- &+™ fiber made from recycled plastic(PET) bottles
- Carbon fiber for wind turbine blades
- Carbon fiber for hydrogen tanks
- Water treatment membranes
- CO₂ separation membrane

(Corresponding KPIs)

	FY2030 Target [Compared to FY2013]
Supply of Sustainability Innovation products	4.5-fold
CO ₂ emissions avoided in value chain	25-fold

Achieving carbon neutrality for the Toray Group by 2050

Adopting greenhouse gas emissions reduction technology in business activities

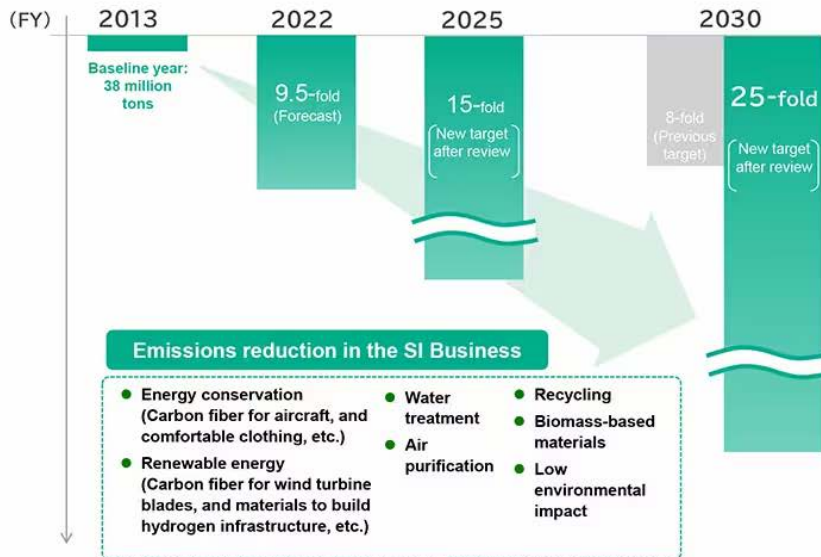


(Corresponding KPIs)

	FY2030 Target [Compared to FY2013]
GHG emissions in production activities	Over 50% reduction
GHG emissions per unit of revenue for the entire Toray Group	Over 40% reduction
GHG emissions of Toray Group in Japan	Over 40% reduction

Promote carbon neutrality for the planet CO₂ emissions avoided in value chain

CO₂ emissions avoided in value chain(Baseline: FY 2013)



Volume of CO₂ emissions avoided through use of Toray products

- CO₂ emissions avoided by lowering life cycle emissions with materials that reduce aircraft weight^{*1}



- CO₂ emissions avoided by using RO membranes for seawater desalination^{*1}



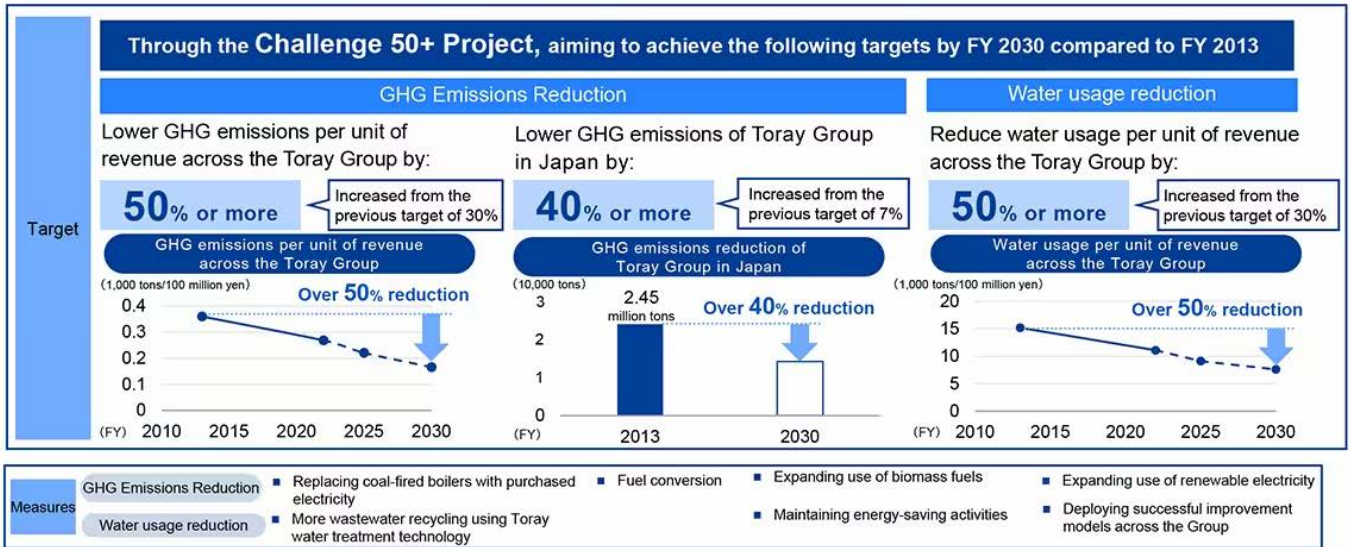
*1 Figures in the circles above represent CO₂ emissions for the entire product life cycle

Source: *Innovations for Greenhouse Gas Reductions*, Japan Chemical Industry Association (JCIA)

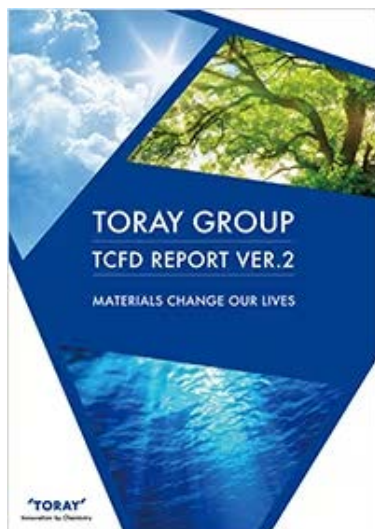
Achieving Carbon Neutrality across the Toray Group

Emission Reductions in Production Activities

Toray Group will reduce greenhouse gas emissions in the production stage by switching to cleaner fuels and leveraging the Group's proprietary knowledge and technologies. We have raised our emissions reduction target for FY 2030 because our own carbon neutralization and sustainability initiatives are progressing ahead of plan.



In May 2019, Toray Group declared its support for the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. In April 2021, the Toray Group TCFD Report 2021 was released in accordance with these TCFD recommendations. Toray analyzed its opportunities and risks associated with climate change and disclosed the results. The analysis covered activities not only within the Group, but also across its supply chain and product life cycles, from upstream raw material procurement to downstream processing, product use, and disposal. Subsequently, in November 2023, the Toray Group TCFD Report VER. 2 was released. The latest version includes new quantitative analysis of major climate change-related risks around the 2040 timeframe, as well as information on efforts to combat climate change in business activities, engagement with external partners, and other matters.



Toray Group TCFD Report VER.2 [PDF](#)

(2.88MB)

Toray Group will continue to accelerate its pursuit of sustainable growth for the Group and initiatives to address climate change, as well as actively disclose information in accordance with the TCFD recommendations.

Related Information

[Toray Group Sustainability Vision](#) 

- > [Conserving Energy and Reducing Greenhouse Gas Emissions](#)
- > [Risk Management](#)
- > [Contributing Solutions to Social Issues through Business Activities](#)
- > [Establishing Sustainable Supply Chain](#)

Click [here \(PDF:2.43MB\)](#)  for Toray answers to the CDP Climate Change 2022 questionnaire.

Click [here \(PDF:980KB\)](#)  for Toray answers to the CDP Water Security 2022 questionnaire.

<Toray Group Efforts to Date>

One of the corporate commitments presented in Toray Group's Long-Term Corporate Vision, AP-G 2000, introduced in 1991, was to play an active role in protecting the global environment, and in the same year, the Group established the Global Environment Research Laboratory. In the following year (1992), the management of Toray Group affirmed its determination to take active steps to address global environmental issues, one of which was the formation of the company-wide Global Environment Committee.

In 2000, Toray Group formulated its Three-Year Environmental Plan of medium-term environmental preservation goals, which included targets for reducing greenhouse gas emissions. The Group continued to pursue activities in line with this plan through its Fifth Medium-Term Environmental Plan (targets set for FY2020).

In 2009, Toray Group established its Global Environment Business Strategic Planning Department under the direct control of the president for the purpose of promoting and supporting company-wide plans, development, and business integration of Toray Group global environment business strategies. Since 2011, under the Group's Long-Term Corporate Vision AP-Growth Toray 2020, this department has been central in efforts to expand the Group's Green Innovation businesses and promote Toray products and services that provide solutions to global environmental challenges and issues related to resources and energy.

Moreover, in the face of the increasing severity of such global environmental challenges as climate change, in July 2018 Toray Group announced the Toray Group Sustainability Vision, which sets out Toray Group initiatives and quantitative targets for fiscal 2030 with a view to realizing the World as Envisioned by Toray Group in 2050. The Group has continued to focus on promoting efforts to achieve this vision. In May 2020, Toray Group announced its Long-Term Corporate Vision, TORAY VISION 2030 – Achieving sound, sustainable growth and creating social value, which runs through the end of fiscal 2030. At the same time, the Group released its Medium-Term Management Program, Project AP-G 2022 “Resilience and Proactive Management” – Sustainable Growth and New Development, which covers the three-year period starting in fiscal 2020.

As part of this effort, the Group's Green Innovation businesses, which help solve global environmental problems and resource- and energy-related issues, and its Life Innovation businesses, which contribute to better medical care and long, healthy lives and promote public health and human safety, including measures to counter disasters and abnormal weather, were integrated and redefined as the Sustainability Innovation (SI) Business. The Group is expanding the SI Business while strengthening its sustainability efforts, as shown by the integration of the Global Environment Business Strategic Planning Department into the Corporate Strategic Planning Division. By expanding the products supplied by the SI Business, Toray Group aims to promote Group growth and will contribute to the sustainable development of society through means such as greater CO₂ emissions avoided in the value chain. Moreover, based on its core values of contributing to society through its business activities, people-centric management, and management from a long-term perspective, Toray Group has established TORAY VISION 2030 with the aim of providing new value to society and focusing on the four perspectives of the world envisioned under the Toray Group Sustainability Vision. This will be achieved by sharing Toray's management strengths in R&D, sales & marketing, and production, and by pursuing co-creation with the customers and business partners that make up the supply chain, all with a materials-oriented approach.

<Progress on Project AP-G 2025 Sustainability Goals and on the Fiscal 2030 Goals of the Toray Group Sustainability Vision>

	FY 2022 Actual ²	FY 2025 Target ²	FY 2030 Target ²
Revenue from Sustainability Innovation (SI) Business	1,282.8 billion yen (2.3-fold)	1,600.0 billion yen (2.8-fold)	4.5-fold
CO ₂ emissions avoided in value chain	9.5-fold	15.0-fold	25-fold
Water filtration throughput contribution by Toray's water treatment membranes	2.5-fold	2.9-fold	3.5-fold
Greenhouse gas emissions per unit of revenue in production activities	233 tons/100 million yen (35% reduction ³)	40% reduction	50% or more reduction
Greenhouse gas emissions of Toray Group in Japan	1.93 million tons (21% reduction ³)	20% reduction	40% or more reduction
Water usage per unit of revenue in production activities	10,000 tons/100 million yen (32% reduction ³)	40% reduction	50% or more reduction

² Each relative ratio is calculated in comparison to FY 2013.

³ The calculation of the figure for the baseline of FY 2013 includes data for companies that joined the Toray Group in FY 2014 or later.

In 2022, Toray Group newly established the Environmental Solutions Department within the Corporate Marketing Planning Division for the purpose of promoting and supporting Group-wide plans, development, and business integration of Toray Group circular economy strategies.

<Cross-Industry Metrics from the 2021 TCFD Annex “Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures”>

<p>1. GHG emissions: Absolute Scope 1, Scope 2, and Scope 3 emissions intensity <tons-CO₂, basic unit></p>	<ul style="list-style-type: none"> • Scope 1 and 2 reduction targets Medium-Term Management Program Project AP-G 2025 (p.18, 42, 43, 45)
<p>2. Transition Risks: Amount and extent of assets or business activities vulnerable to transition risks <Percentage></p>	<ul style="list-style-type: none"> • Opportunities and risks Toray Group TCFD Report VER.2 (P.11~15) • Reducing coal use at factories outside Japan Conserving Energy and Reducing Greenhouse Gas Emissions
<p>3. Physical Risks: Amount and extent of assets or business activities vulnerable to physical risks <Percentage></p>	<ul style="list-style-type: none"> • Opportunities and risks Toray Group TCFD Report VER.2 (P.11~15) • Handling Water Hazard Risks (Floods, Storm Surges, Etc.) Business Continuity Plan Initiatives
<p>4. Climate-Related Opportunities: Proportion of revenue, assets, or other business activities aligned with climate-related opportunities <Percentage></p>	<ul style="list-style-type: none"> • Revenue from Sustainability Innovation (SI) Business Medium-Term Management Program Project AP-G 2025 (p.20, 21)
<p>5. Capital Deployment: Amount of capital expenditure, financing, or investment deployed toward climate-related risks and opportunities <Yen></p>	<ul style="list-style-type: none"> • Capital investment and R&D expenses Toray Group TCFD Report VER.2 (P.26~28) Medium-Term Management Program Project AP-G 2025 (p.40)
<p>6. Internal Carbon Prices: Price on each ton of GHG emissions used internally by an organization <Yen/ton-CO₂></p>	<ul style="list-style-type: none"> • Internal carbon pricing Toray Group TCFD Report VER.2 (p.32)

7. Remuneration: Proportion of executive management remuneration linked to climate considerations
<Percentage, weighting, description, or amount in reporting currency>

- Remuneration for Members of the Board
[Integrated Annual Report 2023 \(p.84\)](#)

Comments from Thought Leaders

Comments are made on the basis of information publicly available as of October 2023.



Sachiko Kishimoto

Representative Director and Managing Director
Public Resources Foundation

Profile of Sachiko Kishimoto

Graduated from, College of Arts and Sciences, The University of Tokyo. After working for a trading company and think tank, she pursued studies outside Japan and then in 2000 joined the Public Resource Center, which later became the Public Resource Foundation she established in 2013. She has served as the foundation's Representative Director and Managing Director since it was established. The foundation promotes philanthropy by matching private and corporate endowments with exemplary non-profits and social entrepreneurs, as well as helping companies to pursue CSR and assess the impacts. Her recent published works include *Giving Japan 2021*.

These comments focus on the three sections of the Toray Group CSR Report 2023 entitled “Contributing Solutions to Social Issues through Business Activities” “Social Contribution Activities as a Good Corporate Citizen,” and “Human Rights Promotion and Human Resources Development.”

The section “Contributing Solutions to Social Issues through Business Activities” describes how Toray Group is responding to diversifying sustainability needs. Under the Medium-Term Management Program, Project AP-G 2025, announced by the Group in March 2023, the Green Innovation (GR) and Life Innovation (LI) businesses are combined to form its Sustainability Innovation (SI) business. In conjunction with its Digital Innovation (DI) business, the Group will pursue business expansion initiatives under a new SI & DI Project. In June 2023, Toray released its CSR Roadmap 2025, which defines new initiatives and specific KPIs to be achieved under the medium-term CSR plan. This systematic and planned promotion of CSR activities is highly commendable. In fiscal 2022, the GR business accounted for 40% of the Group's consolidated revenue, while the LI business accounted for 15%. I have high expectations for Toray's continued efforts to develop new businesses with the aim of helping to solve social issues.

The section “Social Contribution Activities as a Good Corporate Citizen” shows that Toray Group has established specific policies to achieve two main CSR objectives under its CSR Roadmap 2025. One objective is the promotion of social contribution activities in three priority areas: science and technology promotion, environment and communities, and health and welfare. The other is carrying out social contribution activities that help solve global issues highlighted by the SDGs. In particular, the ongoing efforts of the Toray Science Foundations operating in Japan and abroad, as well as the Group's environmental and science education initiatives in which employees participate as instructors, resonate as social contribution activities deserving of the Toray Group name. Going forward, in addition to adding the percentage of employees taking volunteer and similar leave to its KPIs, I hope that Toray will expand its efforts to meet employee needs for autonomy and participation in society. This could

include the promotion of pro bono social contribution activities that utilize the professional skills and experience of employees.

Finally, I was impressed with the section “Human Rights Promotion and Human Resources Development” as the Group has quickly established a human rights policy, along with clear policies for securing and developing human resources. However, a remaining challenge for Toray is how to take a more proactive approach to career advancement for its female employees. In fiscal 2022, relevant training was held not only for female managers and occupational specialists, but also for male managers and occupational specialists who have female subordinates. This can be considered a step forward, and I expect additional progress with future initiatives. These should include increasing the representation of women in management positions and expanding the proportion of women chosen for the selective training to foster managerial candidates.



Shunsuke Managi

Distinguished Professor
Kyushu University

Profile of Shunsuke Managi

Distinguished Professor of Technology and Policy, Director of the Urban Institute, Professor of the Department of Civil Engineering, and Assistant to the President at Kyushu University since 2015. Awarded the Japan Society for the Promotion of Science Prize, and chair of the Science Council of Japan's Industrial Impact of Sustainable Investment Committee. Director for the UN Environment Programme's *Inclusive Wealth Report 2018*, lead author for Intergovernmental Panel on Climate Change (IPCC), coordinating lead author for Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), and reviewer for the UN Global Sustainable Development Report 2013. Expert on global and national Inclusive Wealth Indexes and promotes development and natural capital for sustainability assessment. Written works include *Implementing ESG Management*, *Sustainable Community Development and Inclusive Wealth Theory*.

In March 2023, Toray Group announced its Medium-Term Management Program, Project AP-G 2025, covering the period from fiscal 2023 to 2025. The Group is aiming to achieve sound, sustainable growth and has clearly indicated financial and sustainability goals based on numerical targets to be achieved by fiscal 2025. One of the sustainability KPIs, namely contribution to CO₂ reduction in the value chain, encompasses the entire value chain in its scope. While the KPI for fiscal 2022 was 9.5 times the base year (fiscal 2013) level, the KPI for fiscal 2025 is 15 times that level, an ambitious target. The Group is also emphasizing targets related to water, such as increasing the water filtration throughput contribution by Toray's water treatment products and reducing water usage in production activities per unit of revenue. Reducing water usage is generally more difficult than lowering CO₂ emissions and energy use. Nevertheless, the fiscal 2025 target for water filtration throughput contribution by Toray's water treatment products is 2.9 times the level in fiscal 2013, and the water usage per unit of revenue is set at 40% below the fiscal 2013 level. Consequently, Toray appears to be moving forward with ever more challenging targets. While CO₂ emissions are a global issue, water is a local issue. It is great to see that Toray Group is embracing both of these aspects and is considering a wide range of stakeholders as it strives to achieve sound, sustainable growth. By gathering data on water usage across the value chain, the Group can achieve comprehensive improvements in resource efficiency moving forward.

In June 2023, Toray Group announced its medium-term CSR plan, CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025), which sets out a clear program of Toray Group CSR activities. Looking at the KPI achievement results for the previous CSR Roadmap 2022 (Fiscal 2020 – Fiscal 2022), we can see how well Toray Group has performed on each CSR guideline point. These include corporate governance, ethics and compliance, safety, accident prevention, and environmental preservation, risk management, human rights promotion and human resource development, CSR initiatives throughout the supply chain, and social contribution activities as a good corporate citizen. Since it will be increasingly necessary to obtain data related to environmental and human rights issues across the supply chain, I encourage Toray to continue promoting such efforts. Turning to Toray's social contribution activities, the Group carries out more than 1,500 activities annually. The number of beneficiaries of its educational support activities, such as science classes for schools and career education, is over 10,000 people a year, which is very commendable. Toray Group should continue to raise the visibility of its social contribution activities and demonstrate that it is a global company active in local communities. Ongoing contributions at the community level can lead to positive global impact, and Toray Group is in a great position to make this happen. I hope the Group will continue to implement leading examples of such activities and aim to achieve sound, sustainable growth by helping to solve global issues.

CSR-Related Policies and Guidelines

Policies and guidelines related to Toray Group CSR are listed below.

Management

[Toray Philosophy](#) >

Governance

[Basic Policy on Corporate Governance](#) >

[Basic Policy on Internal Control System](#) >

[CSR Activity Report \(CSR Guideline Activity Reports\)](#) >

[Information Disclosure Principles](#) >

[Toray Group Information Security Basic Policy](#) >

Ethics and Compliance

[Ethics & Compliance Code of Conduct](#) >

[Toray Group Tax Policy](#) >

[Toray Group Policy for Human Rights](#) >

Safety and Environment

[Ten Basic Environmental Rules](#) >

[Recycling Activity Principles](#) >

[Toray Group's Basic Policy for Increasing Green Areas](#) >

[Toray Group Biodiversity Basic Policy](#) >

Quality Assurance and Product Safety

[Product Safety Management Basic Policy](#) >

[Toray Group Quality Policy](#) >

Purchasing and Procurement

[Basic Purchasing Policies](#) >

[Basic Distribution Policies](#) >

[Toray Group CSR Procurement Policies](#) >

Others

[Basic Policies to Promote Dialogue with Stakeholders](#) >

[Toray Global HR Management \("G-HRM"\) Fundamental Policy](#) >

[Toray Group Social Initiative Policies](#) >

[Statement on the UK's Modern Slavery Act](#) >

ESG Data

Environment-Related

		Scope	Period	2019	2020	2021	2022	Unit
Environment conservation costs	Investment	Toray Industries, Inc.	FY	1.31	1.52	1.82	1.49	billion Yen
	Cost			7.12	7.56	6.75	9.26	
Economic impact of environmental initiatives		Toray Industries, Inc.	FY	0.88	0.60	0.73	0.88	billion Yen
Energy consumption	Total energy consumption	Toray Group total	FY	94.6	81.5	96.4	92.3	million gigajoules
	Consumption from non-renewable energy sources		FY	93.2	80.1	95.1	90.6	
	Consumption from renewable energy sources		FY	1.4	1.4	1.3	1.7	
	Total energy consumption	Toray Industries, Inc.	FY	27.8	25.3	27.3	25.6	
	Consumption from non-renewable energy sources		FY	26.5	24.0	26.1	24.6	
	Consumption from renewable energy sources		FY	1.3	1.2	1.2	1.1	
	Total energy consumption	Group companies in Japan	FY	5.8	5.3	5.8	5.4	
	Consumption from non-renewable energy sources		FY	5.8	5.3	5.8	5.0	
	Consumption from renewable energy sources		FY	0.0	0.0	0.0	0.4	
	Total energy consumption	Group companies outside Japan	FY	61.0	50.9	63.4	61.3	
	Consumption from non-renewable energy sources		FY	60.9	50.7	63.2	61.1	
	Consumption from renewable energy sources		FY	0.1	0.2	0.1	0.3	

		Scope	Period	2019	2020	2021	2022	Unit
Unit energy consumption index (% compared to fiscal 1990)		Toray Industries, Inc.	FY	85.9	90.9	79.9	85.4	—
Water	Toray Group total	FY	227.1	214.7	223.8	213.9	million tons	
	Toray Industries, Inc.	FY	171.8	165.7	171.8	166.2		
	Group companies in Japan	FY	13.4	11.5	11.5	8.6		
	Group companies outside Japan	FY	41.9	37.6	40.5	39.1		
Industrial wastewater	Toray Group total	FY	195.5	182.1	188.2	178.6	million tons	
	Toray Industries, Inc.	FY	160.4	150.1	154.4	143.9		
	Group companies in Japan	FY	9.3	7.7	8.2	5.6		
	Group companies outside Japan	FY	25.7	24.3	25.7	29.1		
Greenhouse gas emissions ¹	Scope1	Toray Group total	FY	327.4	281.7	304.4	253.8	10,000 tons-CO ₂ eq
	Scope2		FY	248.3	215.2	244.9	235.5	
	Scope1+Scope2		FY	575.7	496.9	549.2	489.3 ²	
	Scope1	Toray Industries, Inc.	FY	155.9	140.3	157.9	137.3	
	Scope2		FY	30.1	25.5	28.3	27.4	
	Scope1+Scope2		FY	186.0	165.7	186.2	164.7	
	Scope1	Group companies in Japan	FY	4.7	4.1	5.5	3.4	
	Scope2		FY	28.7	26.6	27.7	16.1	
	Scope1+Scope2		FY	33.4	30.7	33.3	19.5	
	Scope1	Group companies outside Japan	FY	166.8	137.3	140.9	113.1	
	Scope2		FY	189.5	163.1	188.8	192.0	
	Scope1+Scope2		FY	356.3	300.5	329.8	305.1	

		Scope	Period	2019	2020	2021	2022	Unit
Greenhouse gas emissions (Scope3)	Category 1: Purchased goods and services Category 2: Capital goods Category 3: fuel and energy related activities Category 4: Upstream transportation and distribution Category 5: Waste generated in operations Category 6: Business travel Category 7: Employee commuting Category 8: Upstream Leased Assets	Up to FY2021: Toray Industries, Inc. FY2022: Toray Group	FY	86.4	77.1	267.5	1,057.1	10,000 tons-CO ₂ eq
			FY	—	—	231.5	898.0	
			FY	12.8	10.2	9.2	39.6	
			FY	68.9	63.1	19.0	94.5	
			FY	4.7	3.8	4.3	21.0	
			FY	—	—	2.0	1.1	
			FY	—	—	1.3	0.6	
			FY	—	—	0.2	2.2	
			FY	—	—	—	0.2	
Atmospheric emissions (NOx)	Toray Group total		FY	2,182.6	2,189.5	2,689.9	2,936.9	tons
	Toray Industries, Inc.		FY	1,274.0	1,139.2	1,302.6	1,186.0	
	Group companies in Japan		FY	30.2	29.7	14.3	4.2	
	Group companies outside Japan		FY	878.4	1,020.7	1,372.9	1,746.7	
Atmospheric emissions (SOx)	Toray Group total		FY	1,862.0	1,582.7	1,333.1	658.7	tons
	Toray Industries, Inc.		FY	254.9	160.1	219.4	232.0	
	Group companies in Japan		FY	9.7	17.9	2.4	1.6	
	Group companies outside Japan		FY	1,597.4	1,404.7	1,111.3	425.1	

	Scope	Period	2019	2020	2021	2022	Unit
Emissions of substances subject to the PRTR Act (Atmospheric Emissions)	Toray Group total	FY	721.0	796.1	715.9	820.6	tons
	Toray Industries, Inc.	FY	229.1	211.0	183.3	145.1	
	Group companies in Japan	FY	99.7	104.4	89.8	111.3	
	Group companies outside Japan	FY	392.2	480.6	442.8	564.2	
Emissions of substances subject to the PRTR Act (Water Emissions)	Toray Group total	FY	24.6	26.0	30.2	31.1	tons
	Toray Industries, Inc.	FY	24.2	22.2	26.5	28.0	
	Group companies in Japan	FY	0.4	3.1	0.0	0.0	
	Group companies outside Japan	FY	0.0	0.7	3.7	3.1	
Emissions of substances subject to the PRTR Act (transfers)	Toray Group total	FY	4,868.6	7,323.2	6,067.7	6,938.6	tons
	Toray Industries, Inc.	FY	1,054.1	577.4	499.1	733.4	
	Group companies in Japan	FY	1,674.1	2,468.9	957.4	917.5	
	Group companies outside Japan	FY	2,140.4	4,276.9	4,611.1	5,287.7	
VOC atmospheric emissions	Toray Group total	FY	968.3	1,039.2	888.4	1,157.3	tons
	Toray Industries, Inc.	FY	307.4	309.2	266.1	361.0	
	Group companies in Japan	FY	175.0	172.2	136.4	52.7	
	Group companies outside Japan	FY	486.0	557.8	485.9	743.5	

	Scope	Period	2019	2020	2021	2022	Unit
Atmospheric emissions (Dust)	Toray Group total	FY	359.0	195.8	314.7	521.5	tons
	Toray Industries, Inc.	FY	121.9	60.9	102.6	77.0	
	Group companies in Japan	FY	3.1	1.5	4.7	1.0	
	Group companies outside Japan	FY	234.1	133.3	207.4	443.5	
Coal ash (recycled)	Toray Industries, Inc.	FY	68.1	66.6	69.0	67.5	1,000 tons
	Group companies in Japan	FY	—	—	—	—	
	Group companies outside Japan	FY	19.0	12.5	15.8	11.6	
Waste (direct landfill disposal)	Toray Group total	FY	27.2	18.6	19.5	19.4	1,000 tons
	Toray Industries, Inc.	FY	0.2	0.0	0.0	0.0	
	Group companies in Japan	FY	4.3	0.9	0.3	0.3	
	Group companies outside Japan	FY	22.7	17.7	19.2	19.1	
Waste (hazardous)	Toray Group total	FY	—	—	5.1	2.9	1,000 tons
	Toray Industries, Inc.	FY	—	2.1	2.3	0.9	
	Group companies in Japan	FY	—	2.8	2.7	2.0	
	Group companies outside Japan	FY	—	—	0.0	0.0	

	Scope	Period	2019	2020	2021	2022	Unit
Waste (non-hazardous)	Toray Group total	FY	—	—	169.5	187.5	1,000 tons
	Toray Industries, Inc.	FY	—	25.0	25.7	26.0	
	Group companies in Japan	FY	—	12.5	9.2	9.8	
	Group companies outside Japan	FY	—	—	134.6	151.7	
Water emissions (BOD)	Toray Group total	FY	849.6	733.4	655.0	651.1	tons
	Toray Industries, Inc.	FY	606.9	523.5	464.7	447.9	
	Group companies in Japan	FY	31.3	21.6	16.3	10.2	
	Group companies outside Japan	FY	211.4	188.3	174.0	193.0	
Water emissions (COD)	Toray Group total	FY	2,302.5	1,945.4	2,137.9	2,896.3	tons
	Toray Industries, Inc.	FY	727.2	694.0	666.6	586.7	
	Group companies in Japan	FY	25.2	28.8	25.9	15.6	
	Group companies outside Japan	FY	1,550.0	1,222.6	1,445.4	2,294.0	
Wastewater: Total nitrogen emissions	Toray Industries, Inc.	FY	341.2	340.4	405.8	389.3	tons
	Group companies in Japan	FY	13.5	8.6	7.6	4.1	
	Group companies outside Japan	FY	—	—	—	—	

	Scope	Period	2019	2020	2021	2022	Unit
Wastewater: Total phosphorous emissions	Toray Industries, Inc.	FY	24.8	18.7	19.0	31.7	tons
	Group companies in Japan	FY	1.3	0.6	0.7	0.4	
	Group companies outside Japan	FY	—	—	—	—	
Administrative penalties for violations of environmental laws or ordinances (serious environmental accidents resulting in improvement orders)	Toray Group	FY	0	0	0	0	violation

¹ Emissions of CO₂ equivalents for six gases (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆) are calculated according to conversion factors for each gas. There are no NF₃ emissions. For Scope-1 group companies outside Japan, only CO₂ emissions are calculated.

² Until FY 2022, this was calculated by multiplying the GHG emissions and revenue of individual subsidiaries worldwide by the applicable Toray Industries' equity share. Starting in FY 2023 however, the calculation method will change, and the degree of financial control Toray Industries has over the individual subsidiary (not the equity share) will be used, in accordance with the GHG Protocol, the international standard. GHG emissions in fiscal 2022 using this calculation method were 5.12 million tons.

For information on such matters as the breakdown and types of greenhouse gas emissions, waste volume (recycled materials, incinerated materials, and other), breakdown of water usage and total water consumption, and amount of coal ash disposed of (direct landfill disposal), please refer to the [Environmental Impact Overview](#).

Society-Related

		Scope	Period	2019	2020	2021	2022	Unit
Number of employees	Total	Toray Industries, Inc.	As of the end of each fiscal year	7,568	7,420	7,175	6,992	persons
	Male			6,708	6,552	6,314	6,160	
	Female			860	868	861	832	
Percentage of women in unit manager or higher positions		Toray Industries, Inc.	As of April each year	9.7	9.8	10.0	10.0	%
Women in management positions (%)	Management staff (Section manager or higher positions)			5.1	5.6	6.0	6.1	
Employment rate of persons with disabilities		Toray Industries, Inc.	Year	2.20	2.23	2.39	2.48	%
Average time on the job	Total	Toray Industries, Inc.	FY	15.4	15.9	16.6	17.2	years
	Male			15.3	15.8	16.5	17.2	
	Female			16.1	16.7	17.2	17.5	
Percentage of available annual paid leave used by employees	Toray Industries' employees (non-managerial)	Toray Industries, Inc.	FY	96.0	83.4	89.6	93.2	%
Number of employees taking childcare leave	Total	Toray Industries, Inc.	FY	70	88	96	128	persons
	Male			10	22	40	82	
	Female			60	66	56	46	
Number of employees taking family care leave		Toray Industries, Inc.	FY	4	1	3	3	persons
Number of employees hired	Total	Toray Industries, Inc.	FY	333	223	180	190	persons
	Male			281	185	136	163	
	Female			52	38	44	27	
Education and Training	Training expenditures per employee	Toray Industries, Inc.	FY	96,821	36,092 ³	58,899	65,017	Yen
	Time dedicated to training per employee			35.0	26.9	33.7	34.7	Hours

Occupational accident frequency rate	Toray Group (all accidents)	Year	0.59	0.71	0.60	0.67	—
	Toray Group (accidents causing lost work time)	Year	0.34	0.39	0.38	0.37	—
	Toray Industries' onsite contractors (accidents causing lost work time)	Year	—	0.68	0.69	0.68	—
Process Safety Events -Tier 1-	Toray Group	Year	—	0	0	0	Events

		Scope	Period	2019	2020	2021	2022	Unit
Total social contribution expenditures		Toray Group	FY	1.85	1.54	1.43	1.86	billion yen
Percentage by type	Academics, science research, education	Toray Group	FY	51	59	66	55	%
	Environment, communities			11	9	13	10	
	Health, welfare, sports			28	22	10	27	
	Culture, arts, other			10	10	11	8	

3 In 2020, to help prevent the spread of COVID-19, Toray did not conduct various group training sessions except for those that were still effective when conducted online. As a result, the education-related expenditure level was affected.

Governance-Related

	Scope	Period	2019	2020	2021	2022	Unit	
Number of members of the Board	Toray Industries, Inc.	FY	19	12	12	12	persons	
Number of outside directors (independent officers)	Toray Industries, Inc.	FY	2	4	4	4	persons	
Number of female directors	Toray Industries, Inc.	FY	0	0	0	0	persons	
Ratio of female members of the Board	Toray Industries, Inc.	FY	0	0	0	0	%	
R&D expenses	Toray Group	FY	66.9	62.8	62.1	68.9	billion yen	
Ratio of R&D expenses to net sales	Toray Group	FY	3.0	3.3	2.8	2.8	%	
Number of major violations of laws or ordinances	Toray Group	FY	1	1	1	0	violation	
Number of whistleblowing reports and consultations received	Total	Toray Group	FY	90	74	89	97	Reports/ consultations
	Compliance related			10	15	17	24	
	Harassment related			44	44	49	32	
	Other			36	15	23	41	
Monetary contribution to Political fund-raising organization (The People's Political Association)	Toray Industries, Inc.	FY	30	30	30	30	million yen	
Ratio between the total annual compensation of the CEO and the mean employee compensation	Toray Industries, Inc.	FY	21.25	22.18	20.97	16.79	times	

Comparative Tables with GRI Standards, SASB Standards, ISO 26000 Subjects, and ESG Topics

Comparative Table with GRI Standards

GRI content index

Statement of use

Toray Industries, Inc. has reported the information covered in this index in accordance with the GRI Standards for the period April 1, 2022 to March 31, 2023. The report also includes some information on subsequent events after the reporting period.

GRI 1 used: GRI 1: Foundation 2021

GRI 2: General Disclosures 2021

GRI Standard		Location
The organization and its reporting practices		
2-1	Organizational details	> Corporate Outline
2-2	Entities included in the organization's sustainability reporting	> Editorial Policy
2-3	Reporting period, frequency and contact point	> Editorial Policy
2-4	Restatements of information	N/A
2-5	External assurance	> Third-Party Assurance
Activities and workers		
2-6	Activities, value chain and other business relationships	> Establishing Sustainable Supply Chain > Socially Responsible Procurement Initiatives at Toray Group
2-7	Employees	> ESG Data
2-8	Workers who are not employees	
Governance		
2-9	Governance structure and composition	> Corporate Governance > Corporate Governance Report PDF
2-10	Nomination and selection of the highest governance body	> Corporate Governance Report PDF

GRI Standard		Location
2-11	Chair of the highest governance body	> Corporate Governance Report PDF
2-12	Role of the highest governance body in overseeing the management of impacts	> Toray Group Corporate Social Responsibility Initiatives > CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025)
2-13	Delegation of responsibility for managing impacts	> Toray Group Corporate Social Responsibility Initiatives > CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025)
2-14	Role of the highest governance body in sustainability reporting	
2-15	Conflicts of interest	> Corporate Governance Report PDF
2-16	Communication of critical concerns	> Corporate Governance Report PDF > Ethics and Compliance > Establishing a Corporate Culture of Total Respect for Ethics and Compliance > Risk Management
2-17	Collective knowledge of the highest governance body	
2-18	Evaluation of the performance of the highest governance body	> Corporate Governance Report PDF
2-19	Remuneration policies	> Corporate Governance Report PDF
2-20	Process to determine remuneration	> Corporate Governance Report PDF
2-21	Annual total compensation ratio	> ESG Data
Strategy, policies and practices		
2-22	Statement on sustainable development strategy	> Message from the President
2-23	Policy commitments	> CSR-Related Policies and Guidelines
2-24	Embedding policy commitments	> Toray Group Corporate Social Responsibility Initiatives > CSR Activity Report (CSR Guideline Activity Reports) > CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025) > Corporate Governance > Ethics and Compliance > Safety, Accident Prevention, and Environmental Preservation > Product Quality and Safety > Risk Management > Communication > Contributing Solutions to Social Issues through Business Activities > Human Rights Promotion and Human Resources Development > Establishing Sustainable Supply Chain > Social Contribution Activities as a Good Corporate Citizen
2-25	Processes to remediate negative impacts	> Human Rights Activity Report > Establishing Sustainable Supply Chain > Socially Responsible Procurement Initiatives at Toray Group

GRI Standard		Location
2-26	Mechanisms for seeking advice and raising concerns	<ul style="list-style-type: none"> > Ethics and Compliance > Establishing a Corporate Culture of Total Respect for Ethics and Compliance > Risk Management
2-27	Compliance with laws and regulations	> ESG Data
2-28	Membership associations	> Toray Group's Approach to Climate Change
Stakeholder engagement		
2-29	Approach to stakeholder engagement	> Communication
2-30	Collective bargaining agreements	> Creating a Positive Workplace for Employees

GRI 3: Material Topics 2021

GRI Standard		Location
Disclosures on material topics		
3-1	Process to determine material topics	> Materiality
3-2	List of material topics	> Materiality
3-3	Management of material topics	<ul style="list-style-type: none"> > Toray Group Corporate Social Responsibility Initiatives > CSR Activity Report (CSR Guideline Activity Reports) > CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025) > Corporate Governance > Ethics and Compliance > Safety, Accident Prevention, and Environmental Preservation > Product Quality and Safety > Risk Management > Communication > Contributing Solutions to Social Issues through Business Activities > Human Rights Promotion and Human Resources Development > Establishing Sustainable Supply Chain > Social Contribution Activities as a Good Corporate Citizen

Topic Standards

Economic topics

GRI Standard		Location
GRI 201: Economic Performance 2016		
201-1	Direct economic value generated and distributed	<ul style="list-style-type: none"> > Securities Report (available only in Japanese) > Financial Data > Social Contribution Activities as a Good Corporate Citizen Fiscal 2022 Results (Data edition)
201-2	Financial implications and other risks and opportunities due to climate change	<ul style="list-style-type: none"> > Toray Group's Approach to Climate Change
201-3	Defined benefit plan obligations and other retirement plans	<ul style="list-style-type: none"> > Securities Report (available only in Japanese) > Financial Data
201-4	Financial assistance received from government	Restrictions related to confidentiality and/or information difficult to obtain
GRI 202: Market Presence 2016		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	<ul style="list-style-type: none"> > Information on hiring new graduates (available only in Japanese)
202-2	Proportion of senior management hired from the local community	
GRI 203: Indirect Economic Impacts 2016		
203-1	Infrastructure investments and services supported	
203-2	Significant indirect economic impacts	
GRI 204: Procurement Practices 2016		
204-1	Proportion of spending on local suppliers	<ul style="list-style-type: none"> > Socially Responsible Procurement Initiatives at Toray Group
GRI 205: Anti-corruption 2016		
205-1	Operations assessed for risks related to corruption	<ul style="list-style-type: none"> > Establishing a Corporate Culture of Total Respect for Ethics and Compliance > Antitrust Compliance and Corruption/Bribery Prevention
205-2	Communication and training about anti-corruption policies and procedures	<ul style="list-style-type: none"> > Establishing a Corporate Culture of Total Respect for Ethics and Compliance > Antitrust Compliance and Corruption/Bribery Prevention > Socially Responsible Procurement Initiatives at Toray Group
205-3	Confirmed incidents of corruption and actions taken	<ul style="list-style-type: none"> > Antitrust Compliance and Corruption/Bribery Prevention

GRI Standard		Location
GRI 206: Anti-competitive Behavior 2016		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	> Antitrust Compliance and Corruption/Bribery Prevention
GRI 207: Tax 2019		
207-1	Approach to tax	> Ensuring Tax Compliance
207-2	Tax governance, control, and risk management	> Ensuring Tax Compliance
207-3	Stakeholder engagement and management of concerns related to tax	> Ensuring Tax Compliance
207-4	Country-by-country reporting	

Environmental topics

GRI Standard		Location
GRI 301: Materials 2016		
301-1	Materials used by weight or volume	
301-2	Recycled input materials used	> Realizing a Circular Economy
301-3	Reclaimed products and their packaging materials	> Initiatives to Reduce Waste > Toray Group Distribution Initiatives (Expanding Collection and Reuse of Packaging Materials)
GRI 302: Energy 2016		
302-1	Energy consumption within the organization	> Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview
302-2	Energy consumption outside of the organization	> Third-Party Assurance
302-3	Energy intensity	> Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview
302-4	Reduction of energy consumption	> Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview
302-5	Reductions in energy requirements of products and services	> Green Innovation Business Expansion Project
GRI 303: Water and Effluents 2018		
303-1	Interactions with water as a shared resource	> Initiatives for Managing Water Resources
303-2	Management of water discharge-related impacts	> Initiatives to Prevent Air and Water Pollution
303-3	Water withdrawal	> Environmental Impact Overview > Comparative Table with SASB Standards

GRI Standard		Location
303-4	Water discharge	<ul style="list-style-type: none"> > Initiatives to Prevent Air and Water Pollution > Environmental Impact Overview
303-5	Water consumption	<ul style="list-style-type: none"> > Environmental Impact Overview > Comparative Table with SASB Standards
GRI 304: Biodiversity 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<ul style="list-style-type: none"> > Biodiversity Initiatives
304-2	Significant impacts of activities, products and services on biodiversity	<ul style="list-style-type: none"> > Biodiversity Initiatives
304-3	Habitats protected or restored	<ul style="list-style-type: none"> > Biodiversity Initiatives > Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022 (Environmental Conservation in Communities)
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Information difficult to obtain
GRI 305: Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	<ul style="list-style-type: none"> > Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview > Third-Party Assurance
305-2	Energy indirect (Scope 2) GHG emissions	<ul style="list-style-type: none"> > Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview > Third-Party Assurance
305-3	Other indirect (Scope 3) GHG emissions	<ul style="list-style-type: none"> > Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview > Third-Party Assurance
305-4	GHG emissions intensity	<ul style="list-style-type: none"> > Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview
305-5	Reduction of GHG emissions	<ul style="list-style-type: none"> > Conserving Energy and Reducing Greenhouse Gas Emissions > Environmental Impact Overview
305-6	Emissions of ozone-depleting substances (ODS)	<ul style="list-style-type: none"> > Conserving Energy and Reducing Greenhouse Gas Emissions (Initiatives to Protect the Ozone Layer)
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	<ul style="list-style-type: none"> > Initiatives to Prevent Air and Water Pollution > Environmental Impact Overview > Chemical Substance Emissions and Transfer Data
GRI 306: Waste 2020		
306-1	Waste generation and significant waste-related impacts	<ul style="list-style-type: none"> > Initiatives to Reduce Waste > Realizing a Circular Economy

GRI Standard		Location
306-2	Management of significant waste-related impacts	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation > Initiatives to Reduce Waste > Realizing a Circular Economy
306-3	Waste generated	> Environmental Impact Overview
306-4	Waste diverted from disposal	<ul style="list-style-type: none"> > Environmental Impact Overview > Initiatives to Reduce Waste
306-5	Waste directed to disposal	<ul style="list-style-type: none"> > Environmental Impact Overview > Initiatives to Reduce Waste
GRI 308: Supplier Environmental Assessment 2016		
308-1	New suppliers that were screened using environmental criteria	> Socially Responsible Procurement Initiatives at Toray Group
308-2	Negative environmental impacts in the supply chain and actions taken	<ul style="list-style-type: none"> > Socially Responsible Procurement Initiatives at Toray Group > Risk Management Initiatives

Social topics

GRI Standard		Location
GRI 401: Employment 2016		
401-1	New employee hires and employee turnover	<ul style="list-style-type: none"> > Securing and Developing Human Resources to Create New Value > ESG Data
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	> Creating a Positive Workplace for Employees
401-3	Parental leave	> Creating a Positive Workplace for Employees
GRI 402: Labor/Management Relations 2016		
402-1	Minimum notice periods regarding operational changes	In principle, cases involving the transfer of multiple personnel in the same month are submitted to the labor union at least 30 days in advance. The period of advanced notice may, however, vary depending on the details of the specific case.
GRI 403: Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	> Safety, Accident Prevention, and Environmental Preservation
403-2	Hazard identification, risk assessment, and incident investigation	> Safety, Accident Prevention, and Environmental Preservation
403-3	Occupational health services	> Safety, Accident Prevention, and Environmental Preservation

GRI Standard		Location
403-4	Worker participation, consultation, and communication on occupational health and safety	> Occupational Safety and Accident Prevention Activities
403-5	Worker training on occupational health and safety	> Occupational Safety and Accident Prevention Activities
403-6	Promotion of worker health	> Creating a Positive Workplace for Employees
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	> Occupational Safety and Accident Prevention Activities
403-8	Workers covered by an occupational health and safety management system	> Occupational Safety and Accident Prevention Activities
403-9	Work-related injuries	> Occupational Safety and Accident Prevention Activities
403-10	Work-related ill health	> Occupational Safety and Accident Prevention Activities
GRI 404: Training and Education 2016		
404-1	Average hours of training per year per employee	> Securing and Developing Human Resources to Create New Value
404-2	Programs for upgrading employee skills and transition assistance programs	> Securing and Developing Human Resources to Create New Value > Promoting Diversity
404-3	Percentage of employees receiving regular performance and career development reviews	> Securing and Developing Human Resources to Create New Value
GRI 405: Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	> Promoting Diversity > ESG Data
405-2	Ratio of basic salary and remuneration of women to men	> Promoting Diversity
GRI 406: Non-discrimination 2016		
406-1	Incidents of discrimination and corrective actions taken	> Human Rights Activity Report > Establishing a Corporate Culture of Total Respect for Ethics and Compliance
GRI 407: Freedom of Association and Collective Bargaining 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	> Socially Responsible Procurement Initiatives at Toray Group
GRI 408: Child Labor 2016		
408-1	Operations and suppliers at significant risk for incidents of child labor	> Human Rights Promotion and Human Resources Development > Socially Responsible Procurement Initiatives at Toray Group
GRI 409: Forced or Compulsory Labor 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	> Human Rights Promotion and Human Resources Development > Socially Responsible Procurement Initiatives at Toray Group

GRI Standard		Location
GRI 410: Security Practices 2016		
410-1	Security personnel trained in human rights policies or procedures	> Socially Responsible Procurement Initiatives at Toray Group
GRI 411: Rights of Indigenous Peoples 2016		
411-1	Incidents of violations involving rights of indigenous peoples	
GRI 413: Local Communities 2016		
413-1	Operations with local community engagement, impact assessments, and development programs	> Environmental Accounting > Social Contribution Activities as a Good Corporate Citizen
413-2	Operations with significant actual and potential negative impacts on local communities	N/A
GRI 414: Supplier Social Assessment 2016		
414-1	New suppliers that were screened using social criteria	> Socially Responsible Procurement Initiatives at Toray Group
414-2	Negative social impacts in the supply chain and actions taken	> Socially Responsible Procurement Initiatives at Toray Group > Risk Management Initiatives
GRI 415: Public Policy 2016		
415-1	Political contributions	> ESG Data
GRI 416: Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	> Initiatives for Quality Assurance and Product Safety
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	> Initiatives for Quality Assurance and Product Safety
GRI 417: Marketing and Labeling 2016		
417-1	Requirements for product and service information and labeling	> Product Quality and Safety > Our Businesses > Initiatives for Quality Assurance and Product Safety
417-2	Incidents of non-compliance concerning product and service information and labeling	N/A
417-3	Incidents of non-compliance concerning marketing communications	N/A
GRI 418: Customer Privacy 2016		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	> Protection of Personal Information

Comparative Tables with GRI Standards, SASB Standards, ISO 26000 Subjects, and ESG Topics

Comparative Table with SASB Standards

Chemicals

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
Greenhouse Gas Emissions	RT-CH-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Metric tons (t) CO ₂ -e, Percentage (%)	Gross global Scope 1 emissions: 2.54 million tons-CO ₂ ¹ Percentage subject to emissions limits : 78% ² Notes: ¹ CO ₂ -equivalent emissions for six gases (CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆) are calculated according to conversion factors for each gas. There are no NF3 emissions. Data is compiled for Toray Industries, Inc. and its group companies in and outside Japan. Only CO ₂ emissions are calculated for group companies outside Japan. See the following page for a breakdown of figures for each category. > Environmental Impact Overview ² The numerator is the sum of the Group's emissions in the regions listed in the World Bank's Carbon Pricing Dashboard as having a carbon tax and/or emissions trading scheme (ETS) in place as of 2020; specifically, Japan, the Republic of Korea, European countries, Mexico, U.S. (California, Rhode Island, and Virginia) and China (Guangdong Province, Beijing, and Shanghai).
	RT-CH-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	n/a	> Conserving Energy and Reducing Greenhouse Gas Emissions > Toray Group's Approach to Climate Change
Air Quality	RT-CH-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	Metric tons (t)	(1) NO _x (2) SO _x > Initiatives to Prevent Air and Water Pollution (3) VOC (4) hazardous air pollutants (HAPs) > Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances Note: (4) applies to atmospheric emissions of PRTR Law-specified substances

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
Energy Management	RT-CH-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	Gigajoules (GJ), Percentage (%)	(1) Total energy consumed > Environmental Impact Overview (2) Percentage grid electricity: 26.0% (3) Percentage renewable energy: 1.88% Notes: Percentage of renewable energy represents the ratio of solar power, wind power, biomass fuel, and electricity procured from renewable energy sources to total Toray Group fuel consumption. (4) Total self-generated energy > Conserving Energy and Reducing Greenhouse Gas Emissions
Water Management	RT-CH-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (m ³), Percentage (%)	(1) Total water withdrawn: 232,819 thousand tons Of which, percentage of water withdrawn in regions with High Baseline Water Stress: 2.1% Of which, percentage of water withdrawn in regions with Extremely High Baseline Water Stress: 1.8% (2) Total water consumed: 54,193 thousand tons Of which, percentage of water consumed in regions with High or Extremely High Baseline Water Stress: 8.5% Of which, percentage of water consumed in regions with Extremely High Baseline Water Stress: 2.2% Note: Total water consumed is calculated by subtracting water discharged from water withdrawn. Water stress is surveyed for each Toray Group business site based on the World Resources Institute's Aqueduct Water Risk Atlas. The amount of water withdrawn and the amount of water consumed by business sites located in regions with High or Extremely High Baseline Water Stress are summed up, respectively, yielding the percentages shown above.
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Number	4 > Environmental Risk Management
	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	n/a	> Initiatives for Managing Water Resources
Hazardous Waste Management	RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	Metric tons (t), Percentage (%)	(1) Amount of hazardous waste generated: 2,919 tons (2) Percentage recycled: 93% Note: The scope of aggregation for waste generated is Toray Industries, Inc. and its group companies in Japan. Data corresponding to "industrial waste subject to special control," as defined in Japan's Waste Disposal and Public Cleansing Act, is recorded as hazardous waste generated.

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	n/a	> Communication
Workforce Health & Safety	RT-CH-320a.1	(1) Total recordable incident rate (TRIR) and (2) fatality rate for (a) direct employees and (b) contract employees	Rate	<p>(1) TRIR</p> <p>(a) Toray Group (Calculated by actual working hours of employees including temporary staff): 0.67</p> <p>(b) Onsite business partner companies (Only staff stationed at Toray Industries plants; working hours used in the calculations are estimates): 1.36</p> <p>(2) Fatality rate</p> <p>(a) Toray Group: 0</p> <p>(b) Onsite business partner companies: 0</p> <p>Note: Because Toray Group's safety record includes data on temporary staff, they are calculated using the definition above.</p>
	RT-CH-320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	n/a	> Occupational Safety and Accident Prevention Activities
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	Yen	<p>> Green Innovation Business Expansion Project</p> <p>Note: Products that contribute to solving global environmental, resource and energy issues are internally certified as Green Innovation products based on life cycle management and other criteria, and the net sales of those products are monitored. Certification of Green Innovation products are done according to subcategories that include energy-saving, water treatment, air purification, low environmental impact, recycling, new energy, and biomass-derived.</p>
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.1	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	Percentage (%) by revenue, Percentage (%)	<p>Not disclosed</p> <p>Note: At Toray Industries, Inc. and its group companies, safety reviews are conducted for all products. For more information, please visit the webpage</p> <p>> Initiatives for Quality Assurance and Product Safety</p>
	RT-CH-410b.2	Discussion of strategy to (1) manage chemicals of concern and (2) develop alternatives with reduced human and/or environmental impact	n/a	<p>(1) Discussion of strategy to manage chemicals of concern</p> <p>> Safety, Accident Prevention, and Environmental Preservation</p> <p>> Product Quality and Safety</p> <p>> Initiatives for Quality Assurance and Product Safety</p> <p>(2) Discussion of strategy to develop alternatives with reduced human and/or environmental impact</p> <p>> Safety, Accident Prevention, and Environmental Preservation</p>

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Percentage (%) by revenue	Not disclosed
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	n/a	> Toray Group's Approach to Climate Change
Operational Safety, Emergency Preparedness & Response	RT-CH-540a.1	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Number, Rate	<ul style="list-style-type: none"> • PSIC¹: 0 • PSTIR²: 0 • PSISR³: 0 <p>All figures are for the 2022 calendar year.</p> <p>Notes:</p> <p>1 PSIC is defined as the total annual count of all incidents that meet the definition of a Tier 1 Process Safety Incidents (PSI) per ANSI/API RP 754.</p> <p>2 PSTIR is calculated as the total number of PSI multiplied by 200,000 and divided by the total annual hours worked by employees, contractors, and subcontractors.</p> <p>3 PSISR is calculated as the Total Severity Score for all Process Safety Incidents multiplied by 200,000 and divided by the total annual hours worked by employees, contractors, and subcontractors.</p>
	RT-CH-540a.2	Number of transport incidents	Number	No accidents fall within the definition of "serious transport incident" in International Council of Chemical Associations (ICCA) Information Guidance

Activity Metrics

Activity Metrics	CODE	UNIT OF MEASURE	Progress/CSR Report Coverage
Production by reportable segment	RT-CH-000.A	Cubic meters (m ³) and/or metric tons (t)	Not disclosed

Comparative Tables with GRI Standards, SASB Standards, ISO 26000 Subjects, and ESG Topics
Comparative Table with ISO 26000 Subjects

Organizational governance

Issues	Toray's initiatives
1.Organizational governance	Toray Philosophy and CSR
	Message from the President
	Management Strategies and CSR
	Toray Group Corporate Social Responsibility
	Toray Group Corporate Social Responsibility Initiatives
	Materiality
	CSR Activity Report (CSR Guideline Activity Reports)
	CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025)
	Corporate Governance
	Communication with Employees
	Ethics and Compliance
	Promoting Diversity
	Communication

Human rights

Issues	Toray's initiatives
1. Due diligence	Human Rights Activity Report
	Risk Management Initiatives
	Establishing Sustainable Supply Chain
	Socially Responsible Procurement Initiatives at Toray Group
2. Human rights risk situations	Human Rights Activity Report
	Socially Responsible Procurement Initiatives at Toray Group
3. Avoidance of complicity	Human Rights Activity Report
	Establishing Sustainable Supply Chain
	Socially Responsible Procurement Initiatives at Toray Group
4. Resolving grievances	Establishing a Corporate Culture of Total Respect for Ethics and Compliance
	Human Rights Activity Report
	Establishing Sustainable Supply Chain
5. Discrimination and vulnerable groups	Human Rights Promotion and Human Resources Development
	Promoting Diversity
6. Civil and political rights	Ethics and Compliance
	Human Rights Promotion and Human Resources Development
7. Economic, social and cultural rights	Human Rights Promotion and Human Resources Development
	Securing and Developing Human Resources to Create New Value
	Social Contribution Activities as a Good Corporate Citizen
8. Fundamental principles and rights at work	Human Rights Promotion and Human Resources Development

Labor practices

Issues	Toray's initiatives
1. Employment and employment relationship	Human Rights Promotion and Human Resources Development
	Securing and Developing Human Resources to Create New Value
	Promoting Diversity
2. Conditions of work and social protection	Creating a Positive Workplace for Employees
3. Social dialogue	Creating a Positive Workplace for Employees
	Communication with Employees
4. Health and safety at work	Occupational Safety and Accident Prevention Activities
5. Human development and training in the workplace	Securing and Developing Human Resources to Create New Value

The environment

Issues	Toray's initiatives
1. Prevention of pollution	Safety, Accident Prevention and Environmental Preservation (Safety, Health, Accident Prevention and Environmental Preservation Management)
	Chemical Management
	Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances
	Initiatives to Prevent Air and Water Pollution
	Initiatives to Reduce Waste
	Environmental Risk Management
	Environmental Impact Overview
	Risk Management Initiatives
	Establishing Sustainable Supply Chain
	Socially Responsible Procurement Initiatives at Toray Group
2. Sustainable resource use	Approach to Green Innovation Products
	Realizing a Circular Economy
	Toray Group Distribution Initiatives
	Conserving Energy and Reducing Greenhouse Gas Emissions
	Initiatives for Managing Water Resources
	Initiatives to Reduce Waste
	Environmental Impact Overview

3. Climate change mitigation and adaptation	Toray Group's Approach to Climate Change
	Contributing Solutions to Social Issues through Business Activities
	Green Innovation Business Expansion Project
	Toray Group Distribution Initiatives
	Conserving Energy and Reducing Greenhouse Gas Emissions
	Environmental Impact Overview
4. Protection of the environment, biodiversity and restoration of natural habitats	Biodiversity Initiatives
	Environmental Risk Management
	Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022 (Environmental Conservation in Communities)

Fair operating practices

Issues	Toray's initiatives
1. Anti-corruption	Ethics and Compliance
	Establishing a Corporate Culture of Total Respect for Ethics and Compliance
	Antitrust Compliance and Corruption/Bribery Prevention
2. Responsible political involvement	Establishing a Corporate Culture of Total Respect for Ethics and Compliance
3. Fair competition	Establishing a Corporate Culture of Total Respect for Ethics and Compliance
	Antitrust Compliance and Corruption/Bribery Prevention
4. Promoting social responsibility in the value chain	Risk Management Initiatives
	Socially Responsible Procurement Initiatives at Toray Group
	Toray Group Distribution Initiatives
	Occupational Safety and Accident Prevention Activities
	Communication with Stockholders and Investors
5. Respect for property rights	Communication with Stockholders and Investors
	Human Rights Promotion and Human Resources Development

Consumer issues

Issues	Toray's initiatives
1. Fair marketing, factual and unbiased information and fair contractual practices	Communication with Customers
2. Protecting consumers' health and safety	Initiatives for Quality Assurance and Product Safety
3. Sustainable consumption	Contributing Solutions to Social Issues through Business Activities
	Green Innovation Business Expansion Project
	Promoting Life Cycle Management and Initiatives to Reduce GHG Emissions Across Toray Group and its Supply Chain
	Approach to Green Innovation Products
	Realizing a Circular Economy
4. Consumer service, support, and complaint and dispute resolution	Initiatives for Quality Assurance and Product Safety
5. Consumer data protection and privacy	Protection of Personal Information
	Addressing Information Security Risks
6. Access to essential services	Business Continuity Plan Initiatives
7. Education and awareness	Initiatives for Quality Assurance and Product Safety

Community involvement and development

Issues	Toray's initiatives
1. Community involvement	Communication with Local Communities
	Social Contribution Activities as a Good Corporate Citizen
	Toray Group Sustainability Vision
2. Education and culture	Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022
3. Employment creation and skills development	Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022
4. Technology development and access	Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022
5. Wealth and income creation	Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022
	Ensuring Tax Compliance
6. Health	Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022
7. Social investment	Social Contribution Activities as a Good Corporate Citizen Fiscal 2022 Results (Data edition)

Comparative Tables with GRI Standards, SASB Standards, ISO 26000 Subjects, and ESG Topics

Comparative Table with ESG Topics

Topic		Basic Approach/Policy	Structure	Initiatives/Results/Other
E:Environment	Climate change/energy	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Conserving Energy and Reducing Greenhouse Gas Emissions > Risk Management Initiatives > Environmental Impact Overview > Third-Party Assurance > Green Innovation Business Expansion Project > Approach to Green Innovation Products > Realizing a Circular Economy > Toray Group Distribution Initiatives > Environmental Accounting
	Water resource management	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Initiatives to Prevent Air and Water Pollution > Initiatives for Managing Water Resources > Environmental Impact Overview > Risk Management Initiatives > Business Continuity Plan Initiatives > Approach to Green Innovation Products > Environmental Accounting
	Biodiversity	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Safety, Accident Prevention, and Environmental Preservation > Biodiversity Initiatives 	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Biodiversity Initiatives > Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022 > Environmental Accounting

Topic		Basic Approach/Policy	Structure	Initiatives/Results/Other
E:Environment	Use of resources/waste	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation 	<ul style="list-style-type: none"> > Toray Group's Approach to Climate Change > Toray Group TCFD Report VER.2 PDF > Initiatives to Reduce Waste > Environmental Impact Overview > Realizing a Circular Economy > Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022 > Environmental Accounting
	Pollution prevention/chemical substance management	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Safety, Accident Prevention, and Environmental Preservation > Chemical Management 	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation > Chemical Management 	<ul style="list-style-type: none"> > Chemical Management > Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances > Initiatives to Prevent Air and Water Pollution > Environmental Impact Overview > Chemical Substance Emissions and Transfer Data > Environmental Accounting
	Supply chain (environment)	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Promoting Life Cycle Management and Initiatives to Reduce GHG Emissions Across Toray Group and its Supply Chain > Realizing a Circular Economy > Establishing Sustainable Supply Chain 	<ul style="list-style-type: none"> > Establishing Sustainable Supply Chain 	<ul style="list-style-type: none"> > Risk Management Initiatives > Promoting Life Cycle Management and Initiatives to Reduce GHG Emissions Across Toray Group and its Supply Chain > Realizing a Circular Economy > Socially Responsible Procurement Initiatives at Toray Group > Toray Group Distribution Initiatives
	Green Innovation	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Contributing Solutions to Social Issues through Business Activities 	<ul style="list-style-type: none"> > Contributing Solutions to Social Issues through Business Activities 	<ul style="list-style-type: none"> > Green Innovation Business Expansion Project > Approach to Green Innovation Products > Realizing a Circular Economy

Topic	Basic Approach/Policy	Structure	Initiatives/Results/Other
S:Social Initiatives	<ul style="list-style-type: none"> > Human Rights Promotion and Human Resources Development > Establishing Sustainable Supply Chain 	<ul style="list-style-type: none"> > Human Rights Promotion and Human Resources Development > Human Rights Activity Report > Establishing Sustainable Supply Chain 	<ul style="list-style-type: none"> > Risk Management Initiatives > Human Rights Activity Report > Statement on the UK's Modern Slavery Act > Socially Responsible Procurement Initiatives at Toray Group
Securing/developing human resources	<ul style="list-style-type: none"> > Human Rights Promotion and Human Resources Development 	<ul style="list-style-type: none"> > Human Rights Promotion and Human Resources Development 	<ul style="list-style-type: none"> > Securing and Developing Human Resources to Create New Value > Communication with Employees > ESG Data
Promoting diversity			<ul style="list-style-type: none"> > Securing and Developing Human Resources to Create New Value > Promoting Diversity > ESG Data
Creating comfortable workplace environments			<ul style="list-style-type: none"> > Creating a Positive Workplace for Employees > Establishing a Corporate Culture of Total Respect for Ethics and Compliance > ESG Data
Ensuring occupational health and safety and employee healthcare	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation > Creating a Positive Workplace for Employees (Employee Health) 	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation > Creating a Positive Workplace for Employees (Employee Health) 	<ul style="list-style-type: none"> > Occupational Safety and Accident Prevention Activities > Third-Party Assurance > Creating a Positive Workplace for Employees (Employee Health) > ESG Data
Accident Prevention	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation > Risk Management 	<ul style="list-style-type: none"> > Safety, Accident Prevention, and Environmental Preservation > Risk Management 	<ul style="list-style-type: none"> > Occupational Safety and Accident Prevention Activities > Risk Management Initiatives > Business Continuity Plan Initiatives
Quality Assurance	<ul style="list-style-type: none"> > Product Quality and Safety 	<ul style="list-style-type: none"> > Product Quality and Safety 	<ul style="list-style-type: none"> > Initiatives for Quality Assurance and Product Safety > Sites with ISO 9001 Certification
Supply chain (social)	<ul style="list-style-type: none"> > Establishing Sustainable Supply Chain 	<ul style="list-style-type: none"> > Establishing Sustainable Supply Chain 	<ul style="list-style-type: none"> > Risk Management Initiatives > Socially Responsible Procurement Initiatives at Toray Group > Toray Group Distribution Initiatives > Statement on the UK's Modern Slavery Act

	Topic	Basic Approach/Policy	Structure	Initiatives/Results/Other
S:Social Initiatives	Life Innovation	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Contributing Solutions to Social Issues through Business Activities 	<ul style="list-style-type: none"> > Contributing Solutions to Social Issues through Business Activities 	<ul style="list-style-type: none"> > Life Innovation Business Expansion Project
	Social Contribution Activities	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Social Contribution Activities as a Good Corporate Citizen 	<ul style="list-style-type: none"> > Social Contribution Activities as a Good Corporate Citizen 	<ul style="list-style-type: none"> > Social Contribution Activities as a Good Corporate Citizen Fiscal 2022 Results (Data edition) > Social Contribution Activities as a Good Corporate Citizen Activities Carried Out in Fiscal 2022 > Communication with Local Communities
	Stakeholder engagement	<ul style="list-style-type: none"> > Communication 	<ul style="list-style-type: none"> > Communication 	<ul style="list-style-type: none"> > Materiality > Comments from Thought Leaders > Communication via Corporate Websites > Communication with Customers > Communication with Stockholders and Investors > Communication with Business Partners > Communication with Employees > Communication with the Media > Communication with Local Communities > Creating a Positive Workplace for Employees
G:Governance	Corporate Governance	<ul style="list-style-type: none"> > Corporate Governance (Overall Policy) > Basic Policy on Corporate Governance 	<ul style="list-style-type: none"> > Corporate Governance Structures > Basic Policy on Corporate Governance 	<ul style="list-style-type: none"> > Corporate Governance > Corporate Governance Report PDF > ESG Data
	Risk Management	<ul style="list-style-type: none"> > Risk Management 	<ul style="list-style-type: none"> > Risk Management 	<ul style="list-style-type: none"> > Risk Management Initiatives > Business Continuity Plan Initiatives > Addressing Information Security Risks

Topic		Basic Approach/Policy	Structure	Initiatives/Results/Other
G:Governance	Compliance/preventing corruption and bribery	<ul style="list-style-type: none"> > Ethics and Compliance > Ethics & Compliance Code of Conduct PDF 	<ul style="list-style-type: none"> > Ethics and Compliance 	<ul style="list-style-type: none"> > Establishing a Corporate Culture of Total Respect for Ethics and Compliance > Ensuring Tax Compliance > Environmental Risk Management > Improving Security Trade Controls > Antitrust Compliance and Corruption/Bribery Prevention > Protection of Personal Information > Ethics Review Committee on Research Involving Human Biological Subjects > Disclosure of Information Regarding the Ethical Treatment of Laboratory Animals
	Promoting CSR	<ul style="list-style-type: none"> > Toray Group Sustainability Vision PDF > Toray Group Corporate Social Responsibility > Toray Philosophy and CSR > Management Strategies and CSR > Toray Group Corporate Social Responsibility Initiatives (CSR Guidelines, CSR Roadmap) > CSR Roadmap 2025 (Fiscal 2023 – Fiscal 2025) > Materiality 	<ul style="list-style-type: none"> > Toray Group Corporate Social Responsibility Initiatives (Organizational Structure for Social Responsibility) 	<ul style="list-style-type: none"> > CSR Activity Report (CSR Guideline Activity Reports) > Progress on CSR Roadmap 2022 KPIs in Fiscal 2022 PDF > Materiality View of CSR Roadmap 2022 PDF

Editorial Policy

Toray Group issues an annual corporate social responsibility (CSR) report in order to communicate its CSR initiatives to stakeholders. The latest report, the content of which is available here in web format, focuses primarily on the Group's efforts in fiscal 2022 based on the Toray Group CSR Guidelines, which spell out the overarching policy governing the Group's CSR initiatives.

The information provided here on this website is also available for download in a PDF report format at the CSR report download page.

Period Covered by this Report

This report covers fiscal 2022, the period from April 1, 2022 to March 31, 2023. Contents may include efforts underway after this period.

Scope of this Report

Environmental Data

Covers Toray Industries, Inc. and the following 93 manufacturing subsidiaries (94 companies in all).

Notes:

1. For group companies newly covered under the scope of environmental data, results are published using performance data for fiscal years since joining Toray Group.
2. Environmental data used in this report concerning greenhouse gas emissions (Scopes 1 & 2 and some Scope 3), energy consumption, industrial waste, water use, wastewater, air emissions (SO_x, NO_x, dust, and VOC), and chemical oxygen demand (COD) at Toray Industries has been verified by a third party, LRQA Limited.
3. Environmental data used in this report concerning some Scope 3 greenhouse gas emissions by Toray Group companies in Japan, as well as data concerning greenhouse gas emissions (Scopes 1 & 2, and some Scope 3), energy consumption, and industrial waste by Toray Group companies outside Japan have been verified by a third party, LRQA Limited.
4. In general, this report covers Toray Industries and Toray Group companies, mainly manufacturers (27 in Japan and 66 outside Japan). However, the scope of the reported information may vary depending on the topic.

Group companies in Japan: 27

Toray Opelontex Co., Ltd., Ogaki Fuso Spinning Co., Ltd., Toray Textiles, Inc., Toray Coatex Co., Ltd., Toray Amtecs Inc., Toray Monofilament Co., Ltd., Toray Hybrid Cord, Inc., Maruichi Fiber Co., Ltd., Sowa Textile Co., Ltd., Du Pont-Toray Co., Ltd., Toray Plastics Precision Co., Ltd., Toray PEF Products Inc., Toray Advanced Film Co., Ltd., Toray KP Films Inc., Dow Toray Co., Ltd., DuPont Toray Specialty Materials Kabushiki Kaisha, Toray Fine Chemicals Co., Ltd., Soda Aromatic Co., Ltd., Toray Building Materials Co., Ltd., Toray Engineering Co., Ltd., Toray Precision Co., Ltd., Suido Kiko Kaisha, Ltd., Toray Medical Co., Ltd., Toray Research Center, Inc., Toyo Jitsugyo Co., Ltd., Toray Carbon Magic Co., Ltd., Toray Cleanese Co., Ltd.

Group companies outside Japan: 66

North America

Toray Fluorofibers (America), Inc., Toray Plastics (America), Inc., Toray Resin Co., Toray Membrane USA, Inc., Toray Composite Materials America, Inc., Zoltek Corporation, Engineering Technology Corp., Zoltek de Mexico, S.A. de C.V., Toray Resin Mexico, S.A. de C.V., Toray Advanced Textile Mexico, S.A. de C.V., Performance Materials Corp., Toray Advanced Composites USA Inc., Toray Advanced Composites ADS LLC

Europe

Toray Textiles Europe Ltd., Toray Advanced Composites UK Ltd, Euro Advanced Carbon Fiber Composite GmbH, Toray Films Europe S.A.S., Toray Carbon Fibers Europe S.A., Alcantara S.p.A., Toray Textiles Central Europe s.r.o, Zoltek Zrt., Greenerity GmbH, Composite Materials (Italy) s.r.l, Delta-Tech S.p.A., Delta-Preg S.p.A., LG Toray Hungary Battery Separator Kft., Toray Advanced Composites Netherlands B.V.

Middle East

Toray Membrane Middle East LLC

Africa

Alva Tunisia S.A.

Asia

P.T. Acryl Textile Mills, P.T. Century Textile Industry Tbk, P.T. Easterntex, P.T. Indonesia Synthetic Textile Mills, P.T. Indonesia Toray Synthetics, P.T. Toray Polytech Jakarta, Toray Textiles (Thailand) Public Company Limited, Thai Toray Synthetics Co., Ltd., Penfabric Sdn. Berhad, Penfibre Sdn. Berhad, Toray Plastics (Malaysia) Sdn. Berhad, Toray BASF PBT Resin Sdn. Berhad, Toray Fibers (Nantong) Co., Ltd., Toray Polytech (Nantong) Co., Ltd., Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd., Toray WBD Membrane Technology (JS) Co., Ltd., Toray Plastics (Suzhou) Co., Ltd., Toray BlueStar Membrane Co., Ltd., Toray Fibers & Textiles Research Laboratories (China) Co., Ltd., Toray Advanced Materials Research Laboratories (China) Co., Ltd., PMC Performance Materials (Guangzhou) Ltd., Toray Plastics (Shenzhen) Ltd., Toray Plastics Precision (Zhongshan) Ltd., Toray Film Products (Zhongshan) Ltd., Toray Medical (Qingdao) Co., Ltd., Cangzhou Toray Fine Chemicals Co., Ltd., Toray Plastics (Chengdu) Co., Ltd., Toray Polytech (Foshan) Co., Ltd., Yihua Toray Polyester Film Co., Ltd., Toray Advanced Film Kaohsiung Co., Ltd., Toray Advanced Materials Korea Inc., STEMCO, Ltd., Toray Kusumgar Advanced Textile Private Limited, Toray Industries (India) Private Limited, Toray Battery Separator Film Korea Limited, Toray BSF Coating Korea Limited

Safety Data

Covers Toray Industries, Inc. and 52 group companies in Japan and 91 group companies outside of Japan, including the major manufacturers listed in environmental data above and non-manufacturing companies such as Toray International, Inc., Toray Systems Center, Inc., and Toray Industries (America), Inc. (144 companies in all)

Note: The occupational accident frequency rates at Toray Industries and its group companies in and outside Japan and the occupational accident frequency rate for subcontractors working at Toray Industries have been verified by a third party, LRQA Limited

Social Data

Covers Toray Industries, Inc. and its 192 consolidated subsidiaries, but scope of reporting may differ for some items.

Economic Data

Covers Toray Industries, Inc. and its 284 consolidated companies (285 companies in all).

Disclaimer

This report contains forward-looking statements in addition to historical and current facts. These forward-looking statements are assertions or assumptions that were prepared on the basis of available information at the time of publication. Actual future social conditions and results of business activities may differ from any forecasts contained in this report, as a result of changing circumstances.

Reference Guidelines

- GRI Standards
Note: The comparative table referencing the GRI Standards is available at the Toray website.
- Responsible Care Code issued by the Responsible Care Council of the Japan Chemical Industry Association
- Sustainable Accounting Standards Board (SASB): Chemicals Sustainability Standard, 2018
Note: The comparative table referencing this standard is available at the Toray website.
- Environmental Accounting Guidelines 2005 issued by the Ministry of the Environment, Japan
- ISO 26000:2010 (Guidance on social responsibility)
Note: The comparative table referencing ISO 26000:2010 is available at the Toray website.

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