

# TORAY GROUP CSR REPORT 2020



**Materials change our lives**



# CONTENTS

---

<b>Message from the President</b>	<b>03</b>
<b>Toray Group Corporate Social Responsibility</b>	<b>04</b>
TORAY Philosophy and CSR	05
Management Strategies and CSR	10
Long-Term Corporate Vision	11
Medium-Term Management Program	14
Toray Group Corporate Social Responsibility Initiatives	17
Sixth CSR Road Map and Progress on Key Performance Indicators in Fiscal 2019	20
CSR Roadmap 2022(Fiscal 2020 - Fiscal 2022)	24
Materiality	38
External Evaluation	40
<b>Sustainability Vision</b>	<b>43</b>
Our Story	44
The Future	56
SDGs in Action	59
<b>Fiscal 2019 CSR Activity Report</b>	<b>65</b>
Contributing Solutions to Social Issues through Business Activities	68
Corporate Governance and Management Transparency	86
Corporate Ethics and Legal Compliance	93
Risk Management	109
Human Rights Promotion and Human Resources Development	118
Product Safety and Quality	146
Facilitating CSR Initiatives Throughout the Supply Chain	158
Communication	179
Social Contribution Activities	194
Safety, Accident Prevention, and Environmental Preservation	232
<b>The Toray Group's Response to the COVID-19 Pandemic</b>	<b>293</b>
<b>Toray Group's Approach to Climate Change</b>	<b>296</b>
<b>Comments from Thought Leaders</b>	<b>304</b>
<b>CSR-Related Policies and Guidelines / ESG Data</b>	<b>307</b>
CSR-Related Policies and Guidelines	307
ESG Data	309
<b>Comparative Tables with GRI Standards, SASB Standards, and ISO 26000 Subjects</b>	<b>314</b>
Comparative Table with GRI Standards	314
Comparative Table with SASB Standards	324
Comparative Table with ISO 26000 Subjects	328
<b>Editorial Policy</b>	<b>335</b>

## Message from the President

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

President, Toray Industries, Inc.

*Akihiko Nishikubo*



First of all, I would like to begin by offering my sincerest condolences to all of those who have been affected by COVID-19. And I would like to express my respect for all of those fighting day and night on the frontlines to prevent spread of the infection. Along with taking the necessary steps to prevent COVID-19 from escalating, Toray Group will spare no effort in bringing about an early end to the crisis and in supporting the development of society and the economy thereafter.

Many challenges confront the world today, including climate change, food and water shortages driven by population growth, issues with resource and energy sustainability, and concerns over health and safety. They all must be resolved if we are to build a sustainable world. Corporations, as members of society, are more than ever required to fulfill their social responsibilities and conduct operations to broadly contribute to society in order to help solve international issues such as those targeted by the United Nations Sustainable Development Goals (SDGs) and the Paris Agreement.

Toray Group, since its founding in 1926, has aimed to be a corporate entity respected by society, based on the principle of “realizing that corporations are public institutions of society and contributing to society through our business.” In 1986, we established the corporate philosophy of “Contributing to society through the creation of new value with innovative ideas, technologies and products.” In May 2020, we organized the corporate philosophy and other management principles, which have been upheld since the beginning, in the form of the Toray Philosophy.

Guided by the principles from our founding and our strong conviction that materials, as the foundation of all products, can fundamentally change lives, the mission of Toray Group remains unchanged. That is to provide fundamental solutions to various global-scale issues by creating innovative, advanced materials. This mission shapes the Toray Group Sustainability Vision, announced in 2018, which outlines the world envisioned by Toray Group in 2050 and the initiatives we will take to achieve it.

In May 2020, we announced the Long-Term Corporate Vision, TORAY VISION 2030 and the Medium-Term Management Program, Project AP-G 2022. TORAY VISION 2030 sets milestones for the Toray Group Sustainability Vision, and Project AP-G 2022 drives basic strategies to achieve “sound, sustainable growth” under the TORAY VISION 2030. In September 2020, we published the CSR Roadmap 2022, which we will execute over the same period as Project AP-G 2022. The roadmap is a plan to drive our initiatives on CSR, which is one of the Group’s highest management priorities.

Toray Group’s business activities and CSR realize the corporate philosophy positioned at the highest tier of the Toray Philosophy. We seek to ensure the sustainable development of Toray Group and society as a whole by steadily executing our management strategies and moving forward with our CSR initiatives.

This report systematically presents Toray Group’s social responsibility initiatives and results for fiscal 2019 and is designed for all of our stakeholders. I invite you to get better acquainted with Toray Group by spending some time with this report.

# Toray Group Corporate Social Responsibility

Toray Group strategically practices social responsibility guided by its three-year CSR Road Map, aiming to achieve sustainable growth while helping to build a more sustainable world.



## Report from the Chief CSR Officer

**As Chief CSR Officer, I make every effort to promote systematic, organization-wide CSR initiatives in order to ensure the sustainable development of Toray Group and society as a whole.**

### Hideki Hirabayashi

Corporate Vice President,  
Chief CSR Officer,  
Toray Industries, Inc.



Toray Group has from the beginning lived up to the management principle of “realizing that corporations are public institutions of society and contributing to society through our business.” In 2020, this and other management principles, which we have upheld since the beginning, were organized in the form of the Toray Philosophy.

Toray Group implements its management strategies and CSR initiatives in an integrated manner, striving to realize the corporate philosophy positioned at the highest tier of the Toray Philosophy, and works to ensure the sustainable development of Toray Group and help build a sustainable world.

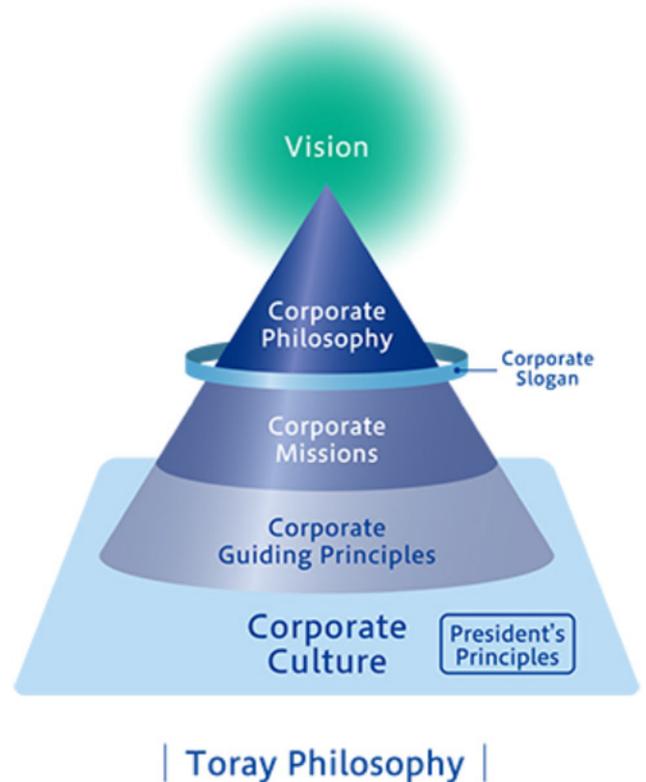
Toray Group’s CSR Guidelines, our guiding principles for delivering on our social responsibilities, lay out such broad themes as: corporate governance; ethics and compliance; safety, accident prevention, and environmental preservation; human rights promotion and human resources development. An implementation leader is assigned for each guideline theme.

Based on the guidelines, we establish a three-year CSR Roadmap mandating specific initiatives and KPIs. We implement all CSR initiatives systematically using the plan-do-check-action (PDCA) cycle. In September 2020, we announced the CSR Roadmap 2022, which covers fiscal 2020–2022. We make every effort to promote systematic, organization-wide CSR initiatives in order to live up to our corporate philosophy and ensure the sustainable development of Toray Group and society as a whole.

## 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.



### 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

## 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.

**Sustainability Vision**

### **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.



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

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.

Toray Group also announced the Medium-Term Management Program, Project AP-G 2022 “Resilience and Proactive Management” —Sustainable Growth and New Development. The program covers the three years from fiscal 2020 through fiscal 2022. While maintaining the Group’s basic strategy of business expansion through active investment, the program also includes new initiatives to promote structural reforms and reinforce the Group’s financial structure, which are designed to facilitate the growth strategy. 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 September 2020, the Group announced the new CSR Roadmap 2022. 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](#)
- > [Long-Term Corporate Vision](#)
- > [Medium-Term Management Program](#)

# Long-Term Corporate Vision

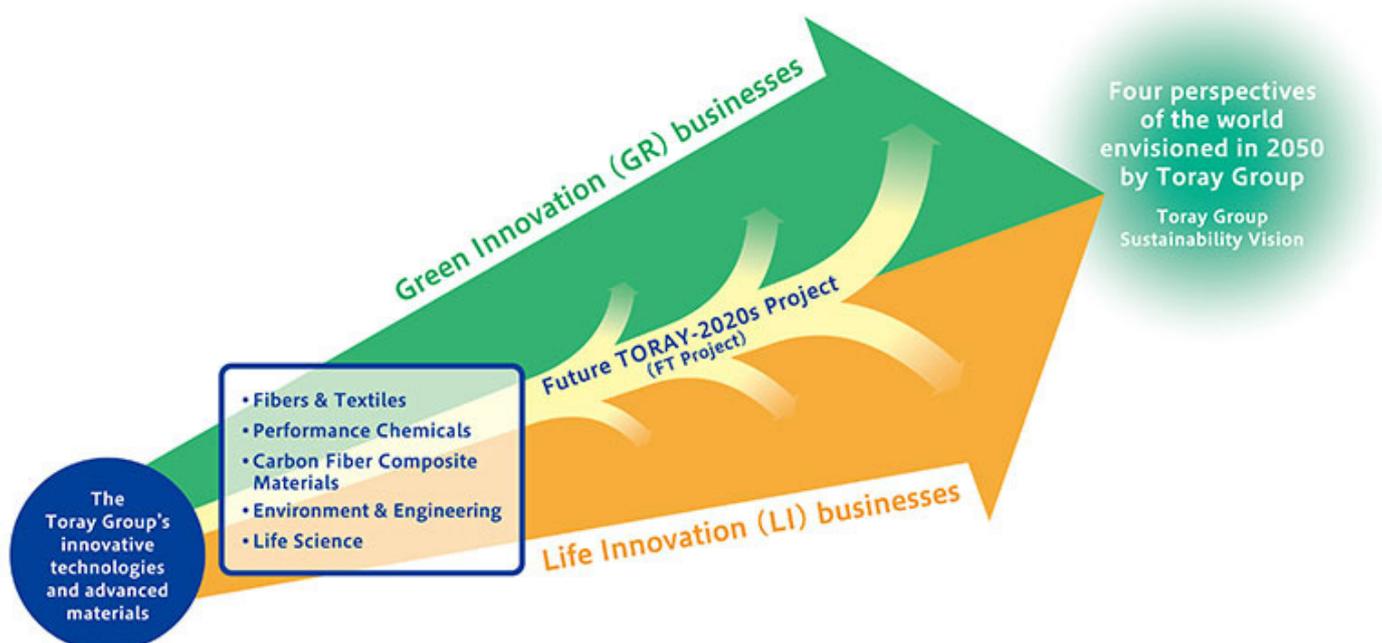
## TORAY VISION 2030

### —Achieving sound, sustainable growth and creating social value

Since its foundation, Toray Industries, Inc. has been driven by its core values of contributing to society through business activities, management from a long-term perspective, and people-centric management. 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 priorities to build the world envisioned by the Toray Group as 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 Model for Achieving 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. The Toray Group will expand its business in all segments not only by meeting rising demand, but also by creating new demand, especially in Green Innovation (GR) businesses, which help solve global environmental, resource and energy issues, and Life Innovation (LI) businesses, which enhance healthcare and hygiene. 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

- Promote GR businesses that help solve global environmental issues as well as resource and energy issues
- Promote LI businesses that contribute to better medical care and hygiene for people worldwide and support a society where people everywhere can 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 year) (J-GAAP)	FY 2030 Targets (compared to FY 2013) (IFRS)
Sales of Green Innovation (GR) products	463.1 billion yen	4-fold
Sales of Life Innovation (LI) products	119.6 billion yen	6-fold
Contribution to CO <sub>2</sub> reduction in value chain	40 million tons	8-fold
Water filtration throughput contribution of Toray's water treatment membranes	27.23 million tons/day	3-fold
Greenhouse gas emissions per unit of sales in production activities	337 tons/100 million yen	30% reduction
Water usage per unit of sales in production activities	15,200 tons/100 million yen	30% reduction

> Long-Term Corporate Vision, TORAY VISION 2030  
 Medium-Term Management Program, Project AP-G 2022  
 (IR Seminar Materials)

# Medium-Term Management Program

## Project AP-G 2022

### “Resilience and Proactive Management”

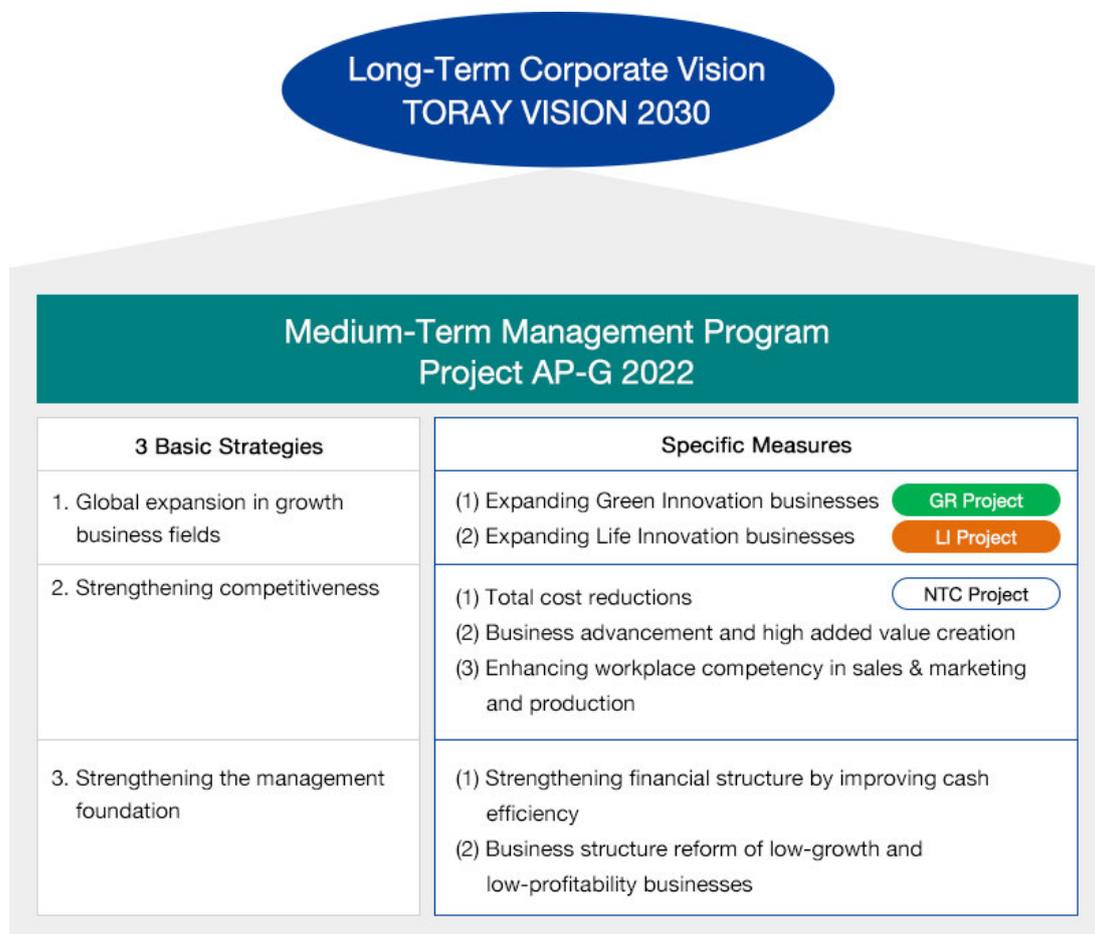
### —Sustainable Growth and New Development

Under the Medium-Term Management Program, Project AP-G 2022 (AP-G 2022), a three-year business plan for fiscal 2020 to fiscal 2022, the Toray Group will maintain the basic strategy of business expansion through active investment. The Group will maximize the value it creates over the medium to long term by promoting structural reforms while also reinforcing its financial structure, which will facilitate its growth strategy. It will also build a resilient business foundation that will drive sustainable growth into the future. The aim is to achieve sound, sustainable growth as set out in the Long-Term Corporate Vision, TORAY VISION 2030.

Regarding the anticipated business environment over the coming years, major changes are expected due to aging populations, environmental issues, and technological innovation which create business opportunities. However, there is a risk that existing business areas will contract. For this reason, the Toray Group will strive to accurately grasp changes in industrial trends and to achieve sustainable growth by pursuing business model transformation.

Addressing these trends, AP-G 2022 calls for global expansion in growth business fields, strengthening competitiveness, and strengthening the management foundation as basic strategies. The Toray Group will continue to expand Green Innovation (GR) and Life Innovation (LI) businesses and strengthen competitiveness, while increasing awareness of the balance among profit, cash flow, and asset efficiency in business operations to ensure financial soundness. We will also work on business structure reform for low-growth and low-profitability businesses to formulate a new growth track.

The Toray Group will promote the Green Innovation Business Expansion Project (GR Project), the Life Innovation Business Expansion Project (LI Project), and the New Total Cost Reduction Project (NTC Project) as group-wide projects to ensure execution of these strategies.



## KPIs for Fiscal 2022

### 1. Financial KPIs

	FY 2019 Actual		FY 2022 Target (IFRS)
	(J-GAAP)	(IFRS)	
Net Sales / Revenue	2,214.6 billion yen	2,091.2 billion yen	2,600.0 billion yen
Operating Income / Core Operating Income	131.2 billion yen	125.5 billion yen	180.0 billion yen
Operating Income to Net Sales / Core Operating Income to Revenue	5.9%	6.0%	7%
ROA	4.8%	-	About 7%
ROE	5.0%	-	About 9%
Free Cash Flow (over 3 years)	-58.1 billion yen	-	120 billion yen or more
D/E ratio	0.86	0.89	Around 0.8 (guideline)
Dividend Payout Ratio	-	-	About 30%

Exchange rate for AP-G 2022 target: 105 yen / US\$

ROA = Operating Income / Total Assets, Core Operating Income / Total Assets

ROE = Net Income Attributable to Owners of Parent, Profit Attributable to Owners of Parent / Owners' Equity

## 2. Sustainability KPIs

	FY 2013 Actual (baseline year) (J-GAAP)	FY 2019 Actual (compared to FY 2013) (J-GAAP)	FY 2022 Target (compared to FY 2013) (IFRS)
Sales of Green Innovation (GR) products	463.1 billion yen	820.1 billion yen	1,000.0 billion yen
Sales of Life Innovation (LI) products	119.6 billion yen	223.2 billion yen	300.0 billion yen
Contribution to CO <sub>2</sub> reduction in value chain	40 million tons	5.1-fold	5.3-fold
Water filtration throughput contribution of Toray's water treatment membranes	27.23 million tons /day	1.9-fold	2.4-fold
Greenhouse gas emissions per unit of sales in production activities	337 tons /100 million yen	12% reduction	20% reduction
Water usage per unit of sales in production activities	15,200 tons /100 million yen	23% reduction	25% reduction

> Long-Term Corporate Vision, TORAY VISION 2030  
 Medium-Term Management Program, Project AP-G 2022  
 (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
<p><b>1. Corporate Governance</b> Continually revise management systems, strengthen internal controls as part of efforts to fulfill the company's social responsibilities.</p>
<p><b>2. Ethics and Compliance</b> 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><b>3. Safety, Accident Prevention, and Environmental Preservation</b> 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><b>4. Product Quality and Safety</b> Provide safe, highly reliable products by striving to enhance management systems for product quality assurance and safety, and disclose appropriate information.</p>
<p><b>5. Risk Management</b> 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><b>6. Communication</b> 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><b>7. Contributing Solutions to Social Issues through Business Activities</b> 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, thereby helping to build a more sustainable world.</p>
<p><b>8. Human Rights Promotion and Human Resources Development</b> Respect human rights, provide safe and healthy workplaces for employees, secure and train personnel, and diversify while striving to protect employment.</p>
<p><b>9. Facilitating CSR Initiatives Throughout the Supply Chain</b> 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 companies.</p>
<p><b>10. Social Contribution Activities as a Good Corporate Citizen</b> Proactively participate in local communities and the larger society in order to contribute to development in a way betting a good corporate citizen.</p>

## CSR Roadmap

---

Every three years Toray Group draws up a CSR roadmap based on its CSR Guidelines. This serves as the Group's medium-term plan for executing CSR initiatives. Under this roadmap, specific action goals as well as key performance indicators (KPIs) are set to quantitatively monitor yearly progress.

## Sixth CSR Roadmap Results and Establishment of CSR Roadmap 2022 (Seventh Roadmap)

---

The Sixth CSR Roadmap was implemented from fiscal 2017 through fiscal 2019. Material issues for CSR were initially identified in fiscal 2015. New ones were added based on recommendations from external thought leaders, and were reflected in the roadmap. KPIs were set for the entire Toray Group in principle, the direction of group-wide CSR promotion activities was also established, and results were steadily achieved. →[Fiscal 2019 Activity Report](#)

The seventh roadmap covering the period fiscal 2020 through 2022 has been named CSR Roadmap 2022 in order to better clarify its connection with the Medium-Term Management Program, Project AP-G 2022.

This new roadmap lists not only initiatives based on the KPIs, but also other important initiatives under each of the CSR Guidelines theme in order to ensure progress on CSR initiatives.

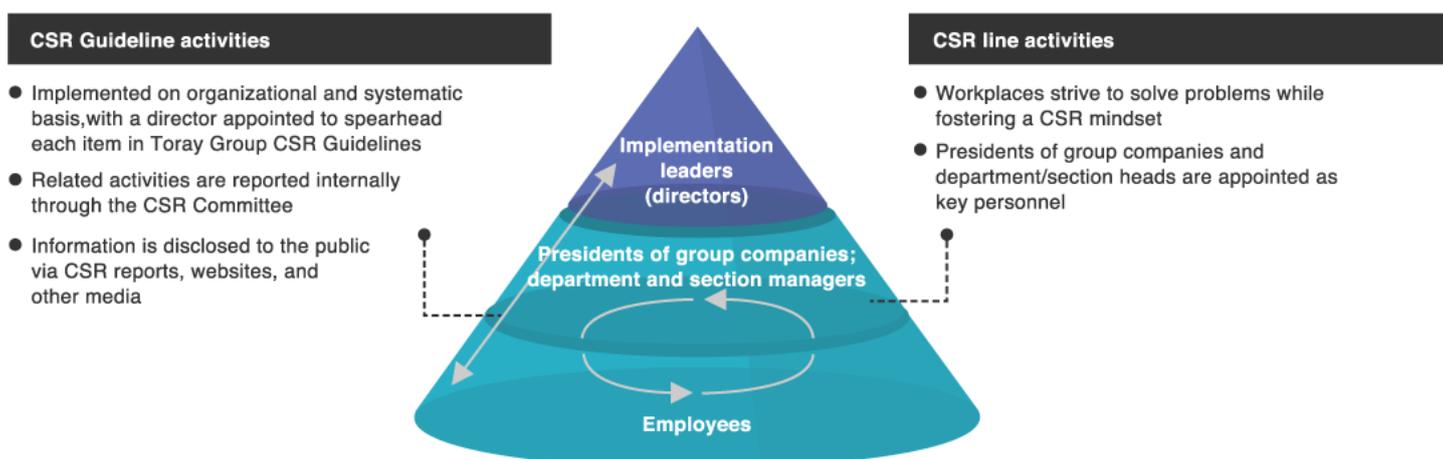
The Group will continue to disclose its progress in executing the CSR Roadmap 2022 every year in its CSR Report.

→[CSR Roadmap 2022](#)

## "CSR Guideline Activities" and "CSR Line Activities"

---

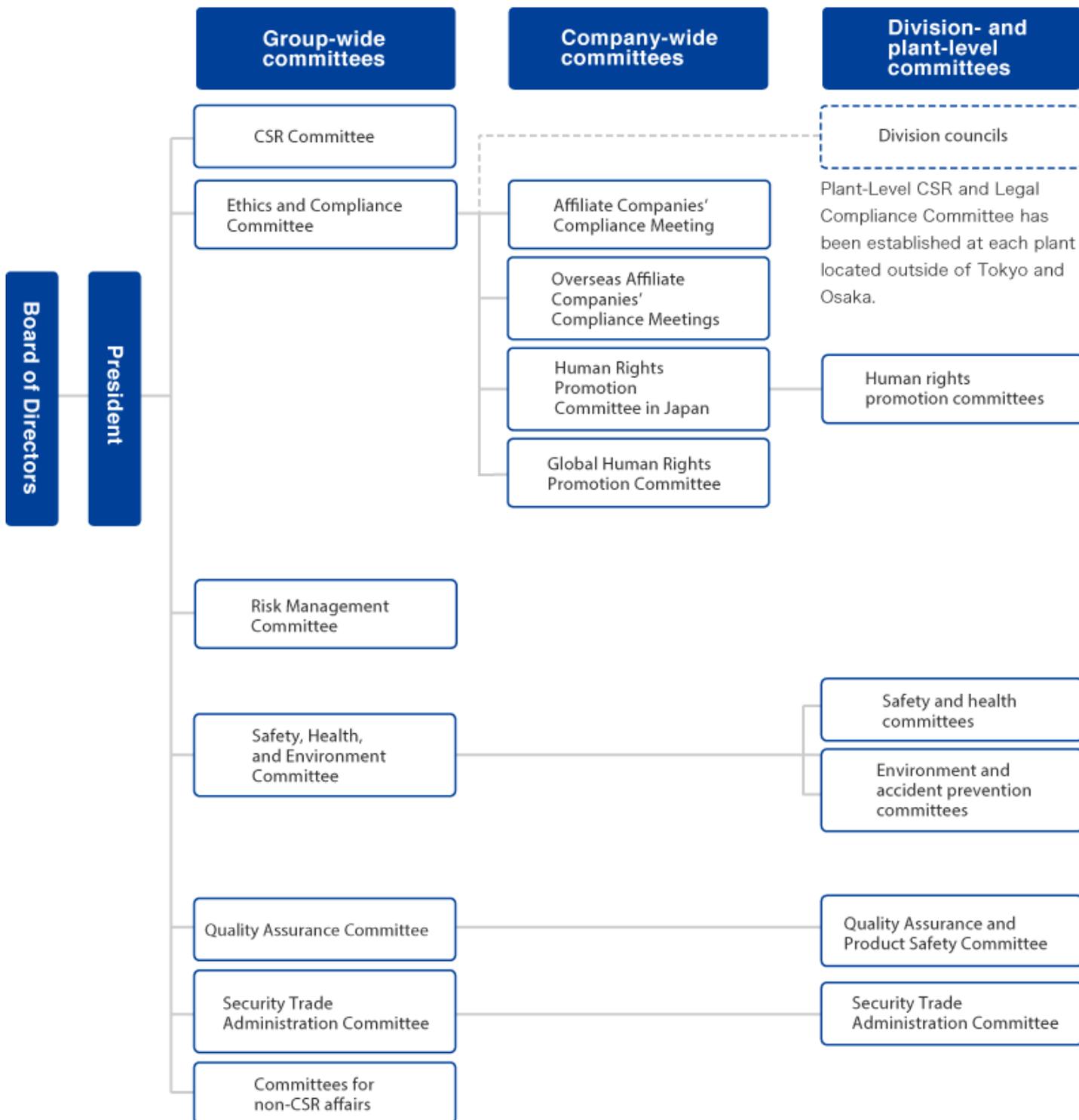
Toray Group implements "CSR Guideline activities" (group-wide CSR activities) and "CSR line activities" (workplace-driven CSR activities) in parallel. The former are driven by the entire organization based on the CSR Guidelines, while the latter are pursued by individual divisions.



# Organizational Structure for Social Responsibility

Toray Group's CSR Committee serves as a group-wide deliberative organization for important issues concerning social responsibility. The committee is aligned with five other group-wide committees and works to accomplish tasks based on the themes in the CSR Guidelines. The issues discussed by the CSR Committee are reported to the Board of Directors.

## Committee and Implementation Organization



	CSR Guidelines	CSR Road Map goals	Key performance indicators
Value Creation	<p><b>7 Contributing Solutions to Social Issues through Business Activities</b></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, and health maintenance and longevity, thereby helping to build a more sustainable world.</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 material issues for CSR]</p> <ul style="list-style-type: none"> <li>• Contributing to the solution of environmental issues through business activities</li> <li>• Contributing to health maintenance and longevity through business activities</li> <li>• Initiatives for managing water resources</li> </ul>	<p>① Sales of Green Innovation products (billion yen)</p> <p>② Sales of Life Innovation products (billion yen)</p> <p>③ Contribution of Toray water treatment products (converted to treated water amount) (tons/day)</p>
Governance	<p><b>1 Corporate Governance and Management Transparency</b></p> <p>Continually revise management systems, strengthen internal controls and strive for timely and appropriate information disclosure as part of efforts to fulfill the company's social responsibilities</p>	<p>① Enhance management transparency, continually reflect stakeholder feedback in management, and fulfill responsibilities to explain corporate activities</p>	<p>① Number of dialogue meetings with stakeholders</p>
		<p>② Perform monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Companies Act</p>	<p>② Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems (%)</p>
		<p>③ Expand CSR education throughout the Toray Group to facilitate CSR activities</p>	<p>③ Group companies implementing CSR education (%)</p>
Governance	<p><b>2 Corporate Ethics and Legal Compliance</b></p> <p>Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and always act in accordance with the law 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>[Related material issue for CSR]</p> <ul style="list-style-type: none"> <li>• Corporate ethics and legal compliance</li> </ul>	<p>① Number of major violations of laws or ordinances</p>
		<p>② Promote compliance activities in accordance with the conditions of each country or region</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>③ Enhance awareness-raising and educational activities relating to corporate ethics and legal compliance</p>	<p>③ Group companies providing information and implementing education on major laws and regulations (%)</p>
Governance	<p><b>5 Risk Management</b></p> <p>Under normal conditions, the Toray Group focuses on mitigating risk and preventing crises from occurring. In the event of a crisis, the Group strives to prevent damage from increasing, by bringing the situation quickly under control and normalizing conditions with a prompt and appropriate response.</p>	<p>① Strengthen corporate risk management throughout the Toray Group and mitigate risks</p>	<p>① Group companies implementing continuous review of risk management (%)</p>
		<p>② Instill greater risk management among employees by rolling out risk management education throughout the Toray Group</p>	<p>② Group companies implementing risk management education (%)</p>
Social Initiatives	<p><b>8 Human Rights Promotion and Human Resources Development</b></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>[Related material issue for CSR]</p> <ul style="list-style-type: none"> <li>• Respecting for human rights</li> </ul>	<p>① Group companies implementing human rights education and training (%)</p> <p>② Group companies that have achieved legally mandated employment rate of persons with disabilities (%)</p> <p>③ Women in management positions (%)</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 material issues for CSR]</p> <ul style="list-style-type: none"> <li>• Creating a positive workplace</li> <li>• Securing and developing human resources</li> </ul>	<p>④ Group companies that have adopted a medium-term human resource plan (%)</p> <p>⑤ Number of core staff outside Japan who participate in training courses</p>
			<p>⑥ Training expenditures per employee (yen)</p>
			<p>⑦ Available annual paid leave used by employees (%)</p>

	Reporting scope <sup>1</sup>	Targets <sup>2</sup>			Results		Implementation leader <sup>4</sup>
		Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2019	Degree of success <sup>3</sup>	
	1 Toray Group	1 900 billion yen (fiscal 2019 target)			1 820.1 billion yen	1 △	<b>Koichi Abe</b> Executive Vice President, General Manager of Intellectual Property Division, Global Environment Business Strategic Planning Department, Life Innovation Business Strategic Planning Department, Technology Center, Toray Human Resources Development Center, Toray Industries, Inc.
	2 Toray Group	2 270 billion yen (fiscal 2019 target)			2 223.2 billion yen	2 △	
	3 Toray Group	3 59 million tons/day (fiscal 2019 target)			3 50.95 million tons/day	3 △	
	1 Toray Group	1 8 times	1 8 times	1 8 times	1 8 times	1 ○	<b>Yukichi Deguchi</b> Executive Vice President, General Manager of Corporate Strategic Planning Division, Quality Assurance Division, Legal & Compliance Division (Security Trade Administration Department), HS Business Development Department, Toray Industries, Inc.
	2 Toray Group	2 90%	2 90%	2 90%	2 95%	2 ○	
	3 Toray Group	3 100%	3 100%	3 100%	3 100%	3 ○	
	1 Toray Group	1 0	1 0	1 0	1 1	1 ×	<b>Yoshio Yamamoto</b> Senior Director, General Manager of Legal & Compliance Division, Toray Industries, Inc.
	2 Toray Group	2 Audits: In fiscal 2018 at Toray and its group companies in Japan; in fiscal 2017 and 2019 at group companies outside Japan Percent that improved: 100% for all audits by the following fiscal year			2 100%	2 ○	
	3 Toray Group	3 100%	3 100%	3 100%	3 100%	3 ○	
	1 Toray Group	1 100%	1 100%	1 100%	1 100%	1 ○	<b>Yukichi Deguchi</b> Executive Vice President, General Manager of Corporate Strategic Planning Division, Quality Assurance Division, Legal & Compliance Division (Security Trade Administration Department), HS Business Development Department, Toray Industries, Inc.
	2 Toray Group	2 60%	2 80%	3 100%	3 100%	2 ○	
	1 Toray Group	1 100%	1 100%	1 100%	1 100%	1 ○	<b>Shigeki Taniguchi</b> Vice President, General Manager of Personnel & Industrial Relations Division, Toray Industries, Inc.
	2 Toray Group (Japan)	2 100%	2 100%	2 100%	2 61.3%	2 △	
	3 Toray	3 N.A.	3 N.A.	3 N.A.	3 5.1%	3 N.A.	
	4 Toray Group	4 100%	4 100%	4 100%	4 100%	4 ○	
	5 Toray Group (Outside Japan)	5 N.A.	5 N.A.	5 N.A.	5 212	5 N.A.	
	6 Toray	6 N.A.	6 N.A.	6 N.A.	6 96,821 yen	6 N.A.	
	7 Toray	7 N.A.	7 N.A.	7 N.A.	7 96%	7 N.A.	

<sup>1</sup> "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.

<sup>2</sup> For key performance indicators with no numerical targets, the results will not be categorized by degree of success but will be disclosed and monitored.

<sup>3</sup> 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.

<sup>4</sup> Names and job titles of implementation leaders are current as of March 31 2020.

	CSR Guidelines	CSR Road Map goals	Key performance indicators
Social Initiatives	<p><b>4 Product Safety and Quality</b></p> <p>Provide safe, highly reliable products by striving to enhance management systems for product safety and quality assurance, and disclose appropriate information.</p>	<p><b>1</b> Achieve zero product accidents                      [Related material issue for CSR]                      • Ensuring product safety and quality</p> <p><b>2</b> Enhance the group-wide framework for product safety and quality assurance</p>	<p><b>1</b> Number of product accidents</p> <p><b>2</b> Group companies implementing product safety and quality assurance education (%)</p>
	<p><b>9 Facilitating CSR Initiatives Throughout the Supply Chain</b></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 companies.</p>	<p><b>1</b> 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                      [Related material issue for CSR]                      • Managing social and environmental impact of suppliers</p>	<p><b>1</b> Number of group companies that have requested their suppliers to practice CSR</p> <p><b>2</b> Number of business partners that Toray Group companies have requested to practice CSR (cumulative)</p> <p><b>3</b> Reduction in CO<sub>2</sub> emissions per unit of sales from distribution activities (year-on-year)</p> <p><b>4</b> Modal shift to sea or rail for transport across distances for 500 km or more (%)</p>
	<p><b>6 Communication</b></p> <p>Disclose corporate information in an active, fair and straightforward manner, and encourage dialogue and cooperation with stakeholders including employees, stockholders, investors, business partners, consumers, local communities, non-profit organizations, government and administrative agencies, mass media, analysts, and other parties.</p>	<p><b>1</b> Promote dialogue and collaboration with stakeholders in accordance with the Basic Policies to Promote Dialogue with Stakeholders</p> <p><b>2</b> Reflect results of dialogue and collaboration with each stakeholder group in management activities in a timely and appropriate manner</p>	<p><b>1</b> Number of corporate website page views (per month)</p> <p><b>2</b> Group companies that have their own websites (%)</p> <p><b>3</b> Number of news releases</p> <p><b>4</b> Number of responses to investor inquiries</p> <p><b>5</b> Number of meetings with employees or labor unions</p>
	<p><b>10 Social Contribution Activities</b></p> <p>Proactively participate in local communities and the larger society in order to contribute to development in a way befitting a good corporate citizen.</p>	<p><b>1</b> Pursue ongoing social initiatives throughout the Toray Group in the priority areas of “science and technology promotion,” “environment and communities,” and “health and welfare.”</p>	<p><b>1</b> Social contribution expenditure (% compared with fiscal 2011–2016 average)</p> <p><b>2</b> Number of persons reached through educational initiatives in these key fields</p>
Environment	<p><b>3 Safety, Accident Prevention, and Environmental Preservation</b></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><b>1</b> Clarify and fully comply with essential safety guidelines, and encourage employees to think carefully before taking action to prevent accidents                      [Related material issue for CSR]                      • Ensuring safety and disaster preparedness</p> <p><b>2</b> Reduce environmental impact by working to fulfill the Fifth Medium-Term Environmental Plan (achieve targets by fiscal 2020)                      [Related material issues for CSR]                      • Addressing substances with negative environmental impact                      • Addressing resource and energy issues                      • Reducing greenhouse gas emissions</p> <p><b>3</b> Pursue environmental preservation on the basis of policies on water resources and biodiversity                      [Related material issues for CSR]                      • Initiatives for managing water resources                      • Conserving biodiversity</p>	<p><b>1</b> Number of major accidents</p> <p><b>2</b> Achieve world’s best standard for safety management (not exceeding 0.05 frequency rate for occupational accidents resulting in lost work time)</p> <p><b>3</b> Number of fire and explosion accidents</p> <p><b>4</b> Number of environmental accidents</p> <p><b>5</b> Reduction of atmospheric VOC emissions (%)</p> <p><b>6</b> Waste recycling rate (%)</p> <p><b>7</b> Reduction of greenhouse gas emissions per unit of sales (%)</p> <p><b>8</b> Water usage per unit of sales (%)</p> <p><b>9</b> Number of companies and plants developing greenery policy and plan</p>

Reporting scope <sup>1</sup>	Targets <sup>2</sup>			Results		Implementation leader <sup>4</sup>
	Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2019	Degree of success <sup>3</sup>	
1 Toray Group	1 0	1 0	1 0	1 0	1 ○	<b>Yukichi Deguchi</b> Executive Vice President, General Manager of Corporate Strategic Planning Division, Quality Assurance Division, Legal & Compliance Division (Security Trade Administration Department), HS Business Development Department, Toray Industries, Inc.
2 Toray Group	2 100%	2 100%	2 100%	2 100%	2 ○	
1 Toray Group	1 40 or more (fiscal 2019 target)			1 155	1 ○	<b>Osamu Tsuneki</b> Senior Director, General Manager of Purchasing & Logistics Division, Toray Industries, Inc.
2 Toray Group	2 N.A.	2 N.A.	2 N.A.	2 7,438	2 N.A.	
3 Toray Group (Only specified consigners in Japan)	3 1%	3 1%	3 1%	3 -4.7%	3 ×	
4 Toray	4 40% (fiscal 2019 target)			3 35%	4 △	
1 Toray Group	1 1.5 million page views	1 1.5 million page views	1 1.5 million page views	1 1.58 million page views	1 ○	<b>Hideki Hirabayashi</b> Vice President, Chief CSR Officer, Chief Legal & Compliance Officer, Director, General Administration & Communications Division; and General Manager, Tokyo Head Office, Toray Industries, Inc.
2 Toray Group	2 Japan: 70%, outside Japan: 100%	2 Japan: 80%, outside Japan: 100%	2 Japan: 90%, outside Japan: 100%	2 Japan: 100%, outside Japan: 100%	2 ○	
3 Toray Group	3 200	3 200	3 200	3 160	3 △	
4 Toray Group	4 N.A.	4 N.A.	4 N.A.	4 543	4 N.A.	
5 Toray Group	5 N.A.	5 N.A.	5 N.A.	5 14	5 N.A.	
1 Toray Group	1 At least as much as fiscal 2011-2016 average	1 At least as much as fiscal 2011-2016 average	1 At least as much as fiscal 2011-2016 average	1 123%	1 ○	<b>Hideki Hirabayashi</b> Vice President, Chief CSR Officer, Chief Legal & Compliance Officer, Director, General Administration & Communications Division; and General Manager, Tokyo Head Office, Toray Industries, Inc.
2 Toray Group	2 15,000 or more	2 15,000 or more	2 15,000 or more	2 16,600	2 ○	
1 Toray Group	1 0	1 0	1 0	1 0	1 ○	<b>Kazuyuki Adachi</b> Senior Vice President, General Manager of Manufacturing Division, Textile Technology & Production Division, Toray Industries, Inc.
2 Toray Group	2 No more than 0.05	2 No more than 0.05	2 No more than 0.05	2 0.34	2 ×	
3 Toray Group	3 0	3 0	3 0	3 2	3 ×	
4 Toray Group	4 0	4 0	4 0	4 0	4 ○	
5 Toray Group	5 At least 70% lower than fiscal 2000	5 At least 70% lower than fiscal 2000	5 At least 70% lower than fiscal 2000	5 76%	5 ○	
6 Toray Group	6 At least 86%	6 At least 86%	6 At least 86%	6 86.4%	6 ○	
7 Toray Group (Japan)	7 At least 15% lower than fiscal 1990	7 At least 15% lower than fiscal 1990	7 At least 15% lower than fiscal 1990	7 32%	7 ○	
8 Toray Group	8 No more than 61% of 2001 level	8 No more than 61% of 2001 level	8 No more than 61% of 2001 level	8 52%	8 ○	
9 Toray Group	9 At least 45	9 At least 50	9 At least 55	9 56	9 ○	

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 For key performance indicators with no numerical targets, the results will not be categorized by degree of success but will be disclosed and monitored.

3 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.

4 Names and job titles of implementation leaders are current as of March 31 2020.

## CSR Roadmap 2022 (Fiscal 2020 – Fiscal 2022)

In 2020, Toray Group released its new CSR roadmap for fiscal 2020 through 2022. Instead of calling it the “Seventh CSR Roadmap,” the Group named it the “CSR Roadmap 2022” to better clarify its connection with the Medium-Term Management Program, Project AP-G 2022.

The CSR Roadmap 2022 includes three perspectives: (1) Achieving the Toray Group Sustainability Vision, (2) Remaining a highly valuable corporate group, and (3) Enhancing the Toray Group’s CSR activities. Based on these three perspectives, the Group has set action goals, mapped out major initiatives, and determined key performance indicators (KPIs) for each of the ten themes in its CSR Guidelines. Toray Group is committed to making constant progress in the area of CSR.

For more information on the CSR Roadmap 2022, refer to the PDF file below.

[PDF](#)

### CSR Roadmap 2022 KPI List

Toray Group sets KPIs and quantitatively manages annual progress on its main initiatives for each of the ten themes in its CSR Guidelines.

	KPI (Key Performance Indicators)	Targets			Reporting Scope
		Fiscal 2020	Fiscal 2021	Fiscal 2022	
1 Corporate Governance	① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (number)	8 times	8 times	8 times	※ 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 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			※ 1

(PDF:82KB) [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:87KB) [PDF](#)

# 1 Corporate Governance

【Implementation leader】  
General Manager of Corporate Strategic Planning  
Division  
(Department responsible for implementation:  
Corporate Strategic Planning Division)

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

## 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

	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

## 2 Ethics and Compliance

【Implementation leader】  
 General Manager of  
 Legal & Compliance Division  
 (Department responsible for  
 implementation: Compliance Department)

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

### 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

	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 [Related Main initiative] 8-(3)	—
(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

### Related Materiality for CSR

- Corporate ethics and legal compliance

### 3 Safety, Accident Prevention, and Environmental Preservation

**【Implementation leader】**

General Manager of Manufacturing Division  
 (Dept. responsible for implementation:  
 Environment & Safety Dept.) : Main initiatives (1)-(5),  
 (8)-(13)、 General Manager of Engineering  
 Division (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

#### 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

Safety	KPI
(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 [Related initiatives] 7-(3)(5)(6), 9-(3)(4)	3-⑤
(7) Reduce water consumption per unit of revenue	3-⑥
(8) Reduce atmospheric VOC <sup>1</sup> emissions	3-⑦
(9) Aim for a high waste recycling rate [Related main initiatives] 7-(5)(6)	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 [Related main initiatives] 7-(6)	—
(12) Reduce atmospheric emissions of substances subject to the PRTR Act <sup>2</sup>	—
(13) Pursue the greening of each site in consideration of the regulations of each country and region and harmony with the surrounding environment [Related main initiatives] 10-(4)	—

<sup>1</sup> Volatile organic compounds

<sup>2</sup> Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

#### Related Materiality for CSR

- 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

## 4 Product Quality and Safety

【Implementation leader】  
 General Manager of Quality Assurance Div.  
 (Dept. responsible for implementation:  
 Quality Assurance Planning & Administration Dept.,  
 Product Safety Planning & Administration Dept.)

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

### CSR Roadmap goals

- (1) Achieve zero product accidents
- (2) Enhance the group-wide framework for product safety and quality assurance

### Main initiatives

	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

### Related Materiality for CSR

- Ensuring product quality and safety

## 5 Risk Management

【Implementation leader】  
 General Manager of Corporate Strategic  
 Planning Division  
 (Department responsible for implementation:  
 Corporate Strategic Planning Division)

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

### 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

	KPI
(1) Follow up on Toray's priority risks	5-①
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

## 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

### 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

	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	—

## 7 Contributing Solutions to Social Issues through Business Activities

【Implementation leader】

Director in charge of Global Environment Business Strategic Planning Dept. and Life Innovation Business Strategic Planning Dept.

(Department responsible for implementation: Global Environment Business Strategic Planning Dept., Life Innovation Business Strategic Planning Dept.)

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, thereby helping to build a more sustainable world.

### 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

	KPI
(1) Increase revenue from Green Innovation products	7-①
(2) Increase revenue from Life Innovation products	7-②
(3) Expand contribution to CO <sub>2</sub> reduction in the value chain [Related main initiatives] 3-(6)、9-(3)(4)	7-③
(4) Expand water filtration throughput contribution by Toray's water treatment membranes [Related main initiatives]3-(7)	7-④
(5) Conduct a wide variety of product research and technology development to help build a low-carbon, circular economy [Related main initiatives]3-(6)(7)(9)	—
(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 [Related main initiatives]3-(6)(7)(9)(11)	—
(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	—

### Related Materiality for CSR

- Contributing to the solution of environmental issues through business activities
- Contributing to health maintenance and longevity through business activities
- Initiatives for managing water resources

## 8 Human Rights Promotion and Human Resources Development

【Implementation leader】  
 General Manager of  
 Personnel & Industrial Relations Division  
 (Department responsible for implementation:  
 Personnel Dept., Life Industrial Relations Dept.)

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

### 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

Human Rights Promotion	KPI
(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 [Related main initiatives]2-(5)、9-(2)	—
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 appoint key national staff members 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

### Related Materiality for CSR

- Respecting human rights
- Creating a positive workplace
- Securing and developing human resources

## 9 Facilitating CSR Initiatives Throughout the Supply Chain

【Implementation leader】  
General Manager of Purchasing & Logistics  
Division (Department responsible for  
Implementation: Purchasing &  
Logistics Planning & Administration Dept.)

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 companies.

### 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

#### 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 [Related main initiatives] 8-(3)	—
(3)	Reduce CO <sub>2</sub> emissions per unit of sales from distribution activities [Related main initiatives]3-(6)、 7-(3)	9-③
(4)	Promote modal shift <sup>3</sup> across distances of 500 km or more [Related main initiatives]3-(6)、 7-(3)	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, <sup>4</sup> contribute to sustainable logistics, for instance by selecting logistics companies that are engaged in working style reform, etc.	—

<sup>3</sup> The shifting of freight transportation by truck or other automobile to railways and ships, which have a smaller environmental impact

<sup>4</sup> 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

- Managing social and environmental impact of suppliers

## 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 betting a good corporate citizen.

### 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

	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 [Related main initiatives]3-(13)	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	—

# CSR Roadmap 2022 KPI List

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

	KPI (Key Performance Indicators)	Targets			Reporting Scope
		Fiscal 2020	Fiscal 2021	Fiscal 2022	
1 Corporate Governance	① Toray Group Business Strategy Discussion sessions held at Board of Directors meetings (number)	8 times	8 times	8 times	※ 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 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			※ 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 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	※ 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 20% lower than fiscal 2013 (Fiscal 2022)			※ 1
	⑥ Water usage per unit of revenue (%)	At least 25% lower than fiscal 2013 (Fiscal 2022)			※ 1
	⑦ Reduction of atmospheric VOC emissions (%)	At least 70% lower than fiscal 2020	At least 70% lower than fiscal 2020	At least 70% lower than fiscal 2020	※ 1
	⑧ Waste recycling rate (%)	At least 86% compared with fiscal 2000	At least 86% compared with fiscal 2000	At least 86% compared with fiscal 2000	※ 1
	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)		※ 2
4 Product Quality and Safety	① Number of product accidents	0	0	0	※ 1
	② Group companies implementing product quality assurance and safety education (%)	100%	100%	100%	※ 1
5 Risk Management	① Group companies conducting follow-up on the Toray Group's priority risks (%)	100%	100%	100%	※ 1
	② Group companies implementing risk management education (% achieved compared to the plan at the beginning of the fiscal year)	100%	100%	100%	※ 1

	KPI (Key Performance Indicators)	Targets			Reporting Scope
		Fiscal 2020	Fiscal 2021	Fiscal 2022	
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)	40%	60%	80%	※ 1
	③ Interviews with key investors in which management participates (number)	Cumulative total of 80	Cumulative total of 80	Cumulative total of 80	※ 1
	④ News releases (number)	200	200	200	※ 1
7 Contributing Solutions to Social Issues through Business Activities	① Revenue of Green Innovation products (IFRS)	1,000 billion yen (Fiscal 2022)			※ 1
	② Revenue of Life Innovation products (IFRS)	300 billion yen (Fiscal 2022)			※ 1
	③ Contribution to CO <sub>2</sub> reduction in value chain <sup>3</sup>	Approx. 5.3 times compared to fiscal 2013 (Fiscal 2022)			※ 1
	④ Contribution of Toray water treatment products <sup>4</sup>	Approx. 2.4 times compared to fiscal 2013 (Fiscal 2022)			※ 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 of core staff using the new personnel information system (% of staff using a career path worksheet)	20%	30%	100%	※ 2
	④ Employees returning to work from childcare leave (%)	100%	100%	100%	Employees of Toray Industries, Inc.
	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	※ 2
	⑥ Available annual paid leave used by labor union members (%)	About 90%	About 90%	About 90%	※ 2
9 Facilitating CSR Initiatives throughout the Supply Chain	① Group companies requesting their suppliers to practice CSR (%)	At least 80%	At least 90%	At least 95%	※ 1
	② Suppliers confirming the status of CSR initiatives as requested by Toray Group (%)	At least 70%	At least 70%	At least 70%	※ 1
	③ Reduction in CO <sub>2</sub> emissions per unit of sales from distribution activities (year-on-year)	1%	1%	1%	Toray Group (Only specified consigners)
	④ Modal shift to sea or rail for transport across distances for 500 km or more (%)	40% (Fiscal 2022 target)			※ 2
10 Social Contribution Activities as a Good Corporate Citizen	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

<sup>3</sup> Toray calculates the CO<sub>2</sub> 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).

<sup>4</sup> 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

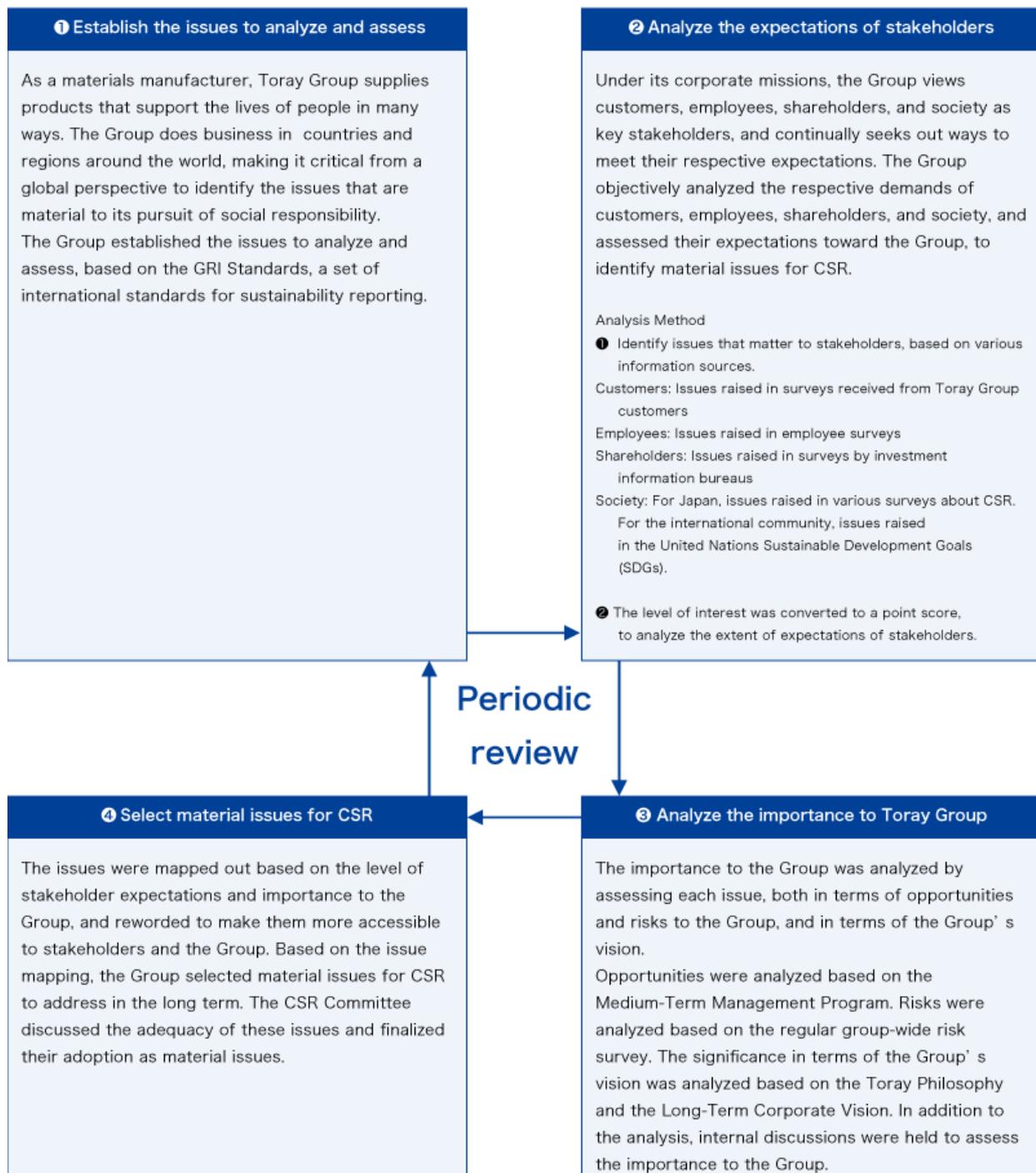
CSR Guideline		1	2	3	4	5	6	7	8	9	10
		Corporate Governance	Ethics and Compliance	Safety/Accident Prevention, and Environmental Preservation	Product Quality and Safety	Risk Management	Communication	Contributing Solutions to Social Issues through Business Activities	Human Rights Promotion and Human Resources Development	Facilitating CSR Initiatives Throughout the 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	<b>E</b> Environment			●				●		●	●
	<b>S</b> Social			●	●		●	●	●	●	●
	<b>G</b> Governance	●	●		●	●					

## Toray Group Corporate Social Responsibility Materiality

In fiscal 2015, Toray Group selected material issues for CSR based on the GRI G4 Guidelines, which are a set of international sustainability reporting guidelines. In fiscal 2017, the Group reevaluated the material issues before launching its Sixth CSR Roadmap.

### Materiality Assessment Cycle

Toray Group regularly implements the following process to reevaluate its material issues for CSR, while incorporating recommendations from external thought leaders.





## External Evaluation

### Evaluations from the Perspective of Socially Responsible Investment

#### Dow Jones Sustainability Index Asia Pacific

Toray Industries is included in the Asia Pacific Index of the Dow Jones Sustainability Indices (DJSI). The DJSI are float-adjusted market capitalization weighted indices, that measure the performance of companies selected with environmental, social and governance (ESG) criteria, provided by S&P Dow Jones Indices.



#### FTSE4Good Index and FTSE Blossom Japan Index

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



#### MSCI ESG Indexes

Toray Industries is included in the MSCI ESG Indexes. MSCI provides institutional investors (from pension funds to hedge funds) across the globe with various tools to support investment decisions.

Note: The inclusion of Toray Industries in any MSCI Index, and the use of MSCI logos, trademarks, service marks or index names on this page is not an indication that MSCI or its affiliates endorse, warrant or promote Toray Industries. MSCI, MSCI Index names, and logos are trademarks or service marks and are the exclusive property of MSCI or its affiliates.

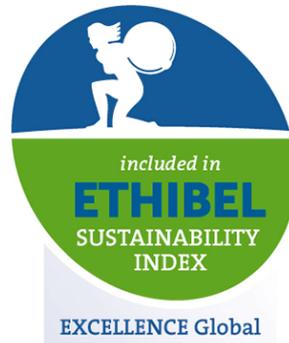


**2020** CONSTITUENT MSCI JAPAN  
ESG SELECT LEADERS INDEX

**2020** CONSTITUENT MSCI JAPAN  
EMPOWERING WOMEN INDEX (WIN)

### **Ethibel Pioneer & Excellence**

Toray Industries is included in the Ethibel Pioneer and Ethibel Excellence investment registers of Forum Ethibel, a Belgian non-profit organization that promotes socially responsible investment.



### **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.



### **Sompo Sustainability Index**

Toray Industries has been selected for inclusion in the Sompo Sustainability Index, which is independently maintained by Sompo Asset Management Co., Ltd. The index is a socially responsible investment (SRI) product for pension funds and institutional investors which invest broadly in companies highly regarded for their environmental, social and governance initiatives.



## 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 2019, Toray's publications were evaluated externally by a number of organizations, as shown below.

Organization details	Evaluations
Daiwa Investor Relations Co., Ltd.	Award for outstanding website in 2019
Nikko Investor Relations Co., Ltd.	2019 All Japanese Listed Companies' Website Ranking (AAA Website in overall ranking and AA Website in sector ranking)
GOMEZ	Silver Prize (top in textile sector) in IR Site Ranking 2019 First place in environment category, ESG Site Ranking 2020

# 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.

# Our Story



## 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.

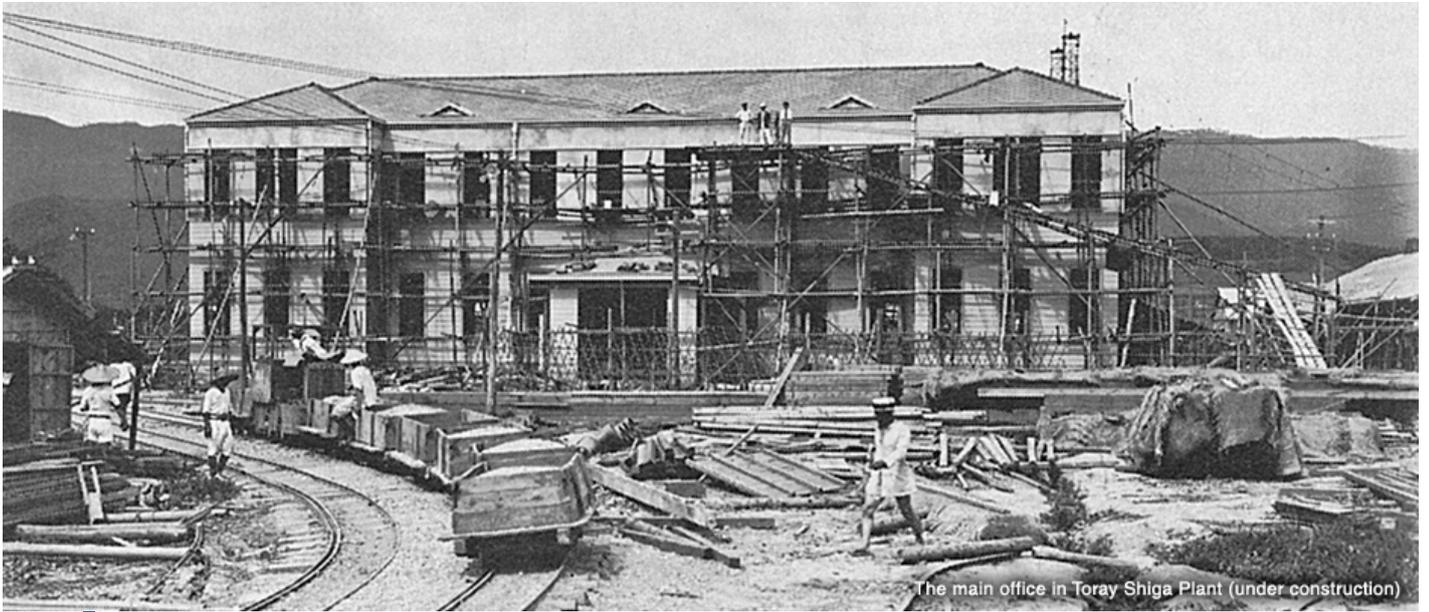
### TORAY'S Episode

#### 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.

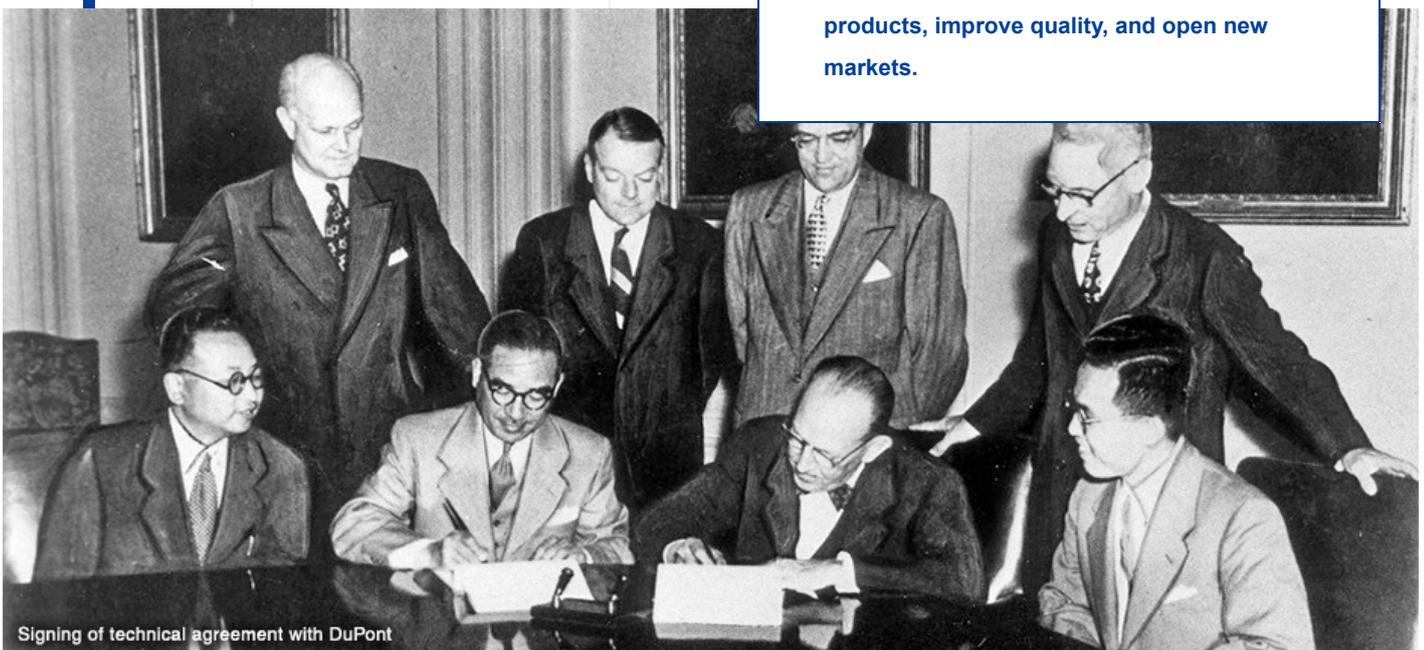
## TORAY'S Episode

**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.**



Toyo Rayon Science Foundation First Award Presentation Ceremony (Mar. 1961)



Malaysia Toray Science Foundation Inaugural Ceremony (Nov. 1993)

## 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.

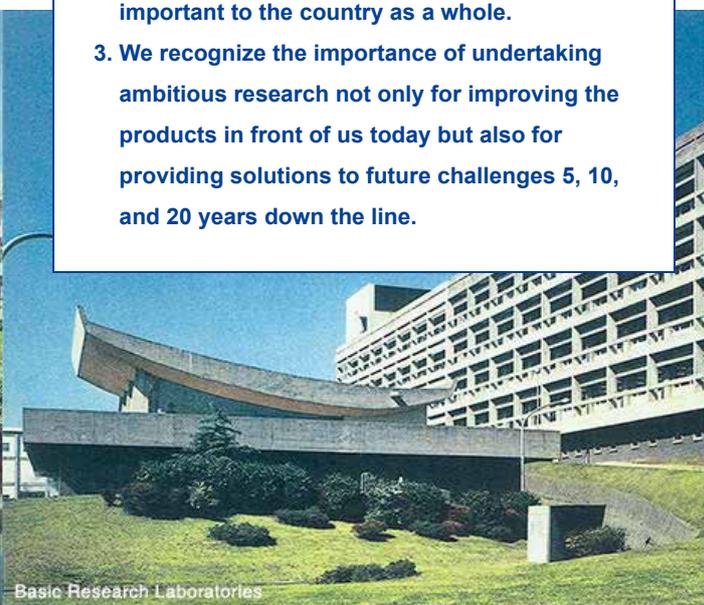
In 1956, Toray established the Central Research Laboratory in Otsu (Shiga Prefecture) and, in 1962, its Basic Research Laboratory in Kamakura (Kanagawa Prefecture). From here, it devoted itself to developing new products. At the Basic Research Laboratory, Toray anticipated strong results from the creative 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.



Signing of technical agreement about polyester with ICI (Feb. 1957)



Polyester Film Lumirror™

## 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 Teton 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.



P.T. Indonesia Toray Synthetics

## 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

# A century since Toray's founding: looking ahead to the next hundred years

## 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

# The Future



## Goals : A Better World in 2050



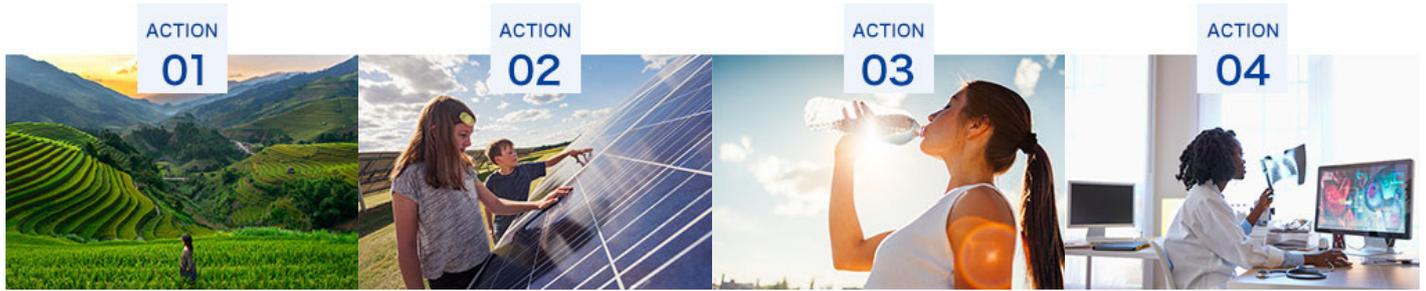
**A net zero emissions world, where greenhouse gas emissions are completely offset by absorption**

**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**

# Taking Action : Today's Challenges



**Accelerating measures to counter climate change**

**Realizing sustainable, recycling-based use of resources and production**

**Providing clean water and air**

**Contributing to better medical care and hygiene for people worldwide**

## 5 Commitments for 2030

### Supplying Green Innovation Products



**4fold**

Supply four times more Green Innovation products (products that help to solve issues related to the global environment, resources, and energy). This will avoid eight times more CO<sub>2</sub> emissions in the value chain. ※1

### Supplying Life Innovation Products



**6fold**

Supply six times more Life Innovation products (products that enhance public health, improve the quality of medical care, and contribute to health maintenance, longevity, and personal safety).

### Annual Water Filtration Throughput



**3fold**

Triple the total annual volume of water treated using Toray's water treatment membranes. ※2

### Reducing GHG Emissions



**30% Reduction**

Reduce greenhouse gas emissions in production activities by 30% per unit of sales across the entire Toray Group by introducing renewable energy or taking other initiatives. ※3

### Reducing Water Consumption per Unit of Sales



**30% Reduction**

Reduce water usage in production activities by 30% per unit of sales across the entire Toray Group.

## Progress against the Commitments for 2030

	Achieved FY2013	Achieved FY2019		Target FY2030 (Compared to FY2013)
			Compared to FY2013	
<b>Green Innovation product sales</b>	463.1 billion yen	820.1 billion yen	1.8 times	4 times
<b>Contribution to CO<sub>2</sub> reduction in value chain</b>	38.45 million tons	196.0 million tons	5.1 times	8 times
<b>Life Innovation product sales</b>	119.6 billion yen	223.2 billion yen	1.9 times	6 times
<b>Contribution to water treatment (conversion to water volume)</b>	27.23 million tons	50.95 million tons	1.9 times	3 times
<b>Greenhouse gas emission per unit of sales</b>	3.37 thousand tons /billion yen	2.97 thousand tons /billion yen	12 % reduction	30 % reduction
<b>Water usage per unit of sales</b>	152 thousand tons /billion yen	117 thousand tons /billion yen	23 % reduction	30 % reduction

The baseline year for quantitative targets is fiscal 2013.

- ※1 For CO<sub>2</sub> emissions avoided in the value chain, Toray calculates the CO<sub>2</sub> 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).
- ※2 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.
- ※3 In Japan, Toray works to surpass the reduction target set for the industrial sector by the Japanese government (absolute emissions reduced by 7%), which is based on the Paris Agreement. 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 2030.

# SDGs in Action



**SUSTAINABLE  
DEVELOPMENT  
GOALS**

# Sustainable Development Goals for Humanity

The SDGs are the successor to the Millennium Development Goals from 2000, a global effort to eliminate extreme poverty and promote human dignity. They are a powerful commitment to tackle 17 of the most urgent issues facing the world today. The goals are also inextricably interlinked, in that achieving one of them helps ensure the success of the others. For example, our efforts toward Climate Action impact our Responsible Production and Consumption goal. Gender Equality and Good Health and Well-Being help further the goal of No Poverty and promote Peaceful and Inclusive Societies, as reduced inequality and illness encourage economic prosperity.

Now is the time for action; a unique opportunity to greatly impact future society. In this respect the SDGs are without parallel, as they target issues of a sufficiently broad scope that affect all humanity. They are about striving for the creation of a more peaceful and inclusive society and making sure no-one gets left behind. They are about making the world safer and more sustainable, while at the same time promoting economic development and increased prosperity. To realize such challenging yet vital goals, we are all asked to devote our efforts to contributing toward achieving the SDGs.

## 17 GOALS TO TRANSFORM OUR WORLD



---

## Toray's SDG Initiatives: Realizing our Sustainability Vision

---



**AFFORDABLE AND CLEAN ENERGY**



**CLIMATE ACTION**

### - Accelerating measures to counter climate change -



#### **Curbing CO<sub>2</sub> 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 CO<sub>2</sub> emissions.



#### **Reducing CO<sub>2</sub> emissions in manufacturing**

Toray actively strives to reduce CO<sub>2</sub> emissions in manufacturing, through process improvements that conserve energy, use renewable energy and reduce the use of coal.



#### **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.



## RESPONSIBLE CONSUMPTION AND PRODUCTION

### - Realizing sustainable, recycling-based use of resources and production -



#### 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.



#### Reducing waste at production sites

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



#### Promoting product recycling

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



## CLEAN WATER AND SANITATION



## LIFE BELOW WATER



## LIFE ON LAND

### - Providing clean water and air -



#### 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.



#### 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.



#### 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.



#### Inspiring interest in the environment

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



## GOOD HEALTH AND WELL-BEING

### - Contributing to better medical care and hygiene for people worldwide -



#### Contributing to better public health by preventing infection, and more

Toray supplies advanced material products such as protective clothing to help secure human health.



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

Toray supplies DNA microarrays for early diagnosis of diseases and innovative drugs that support people's health.



#### Contributing to longevity

Toray manufactures advanced clothing that can monitor biological information and aging assistive products that support longevity and enhance the quality of life.

## Fiscal 2019 CSR Activity Report

The 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.

In line with the Medium-Term Management Program, Project AP-G 2019, the Sixth CSR Roadmap covered the period from fiscal 2017 through fiscal 2019 and facilitated CSR activities based on the ten themes of the CSR Guidelines, listed below.

In fiscal 2017, the Group incorporated recommendations from external thought leaders and updated the material issues for CSR that were selected in fiscal 2015, reflecting them in the CSR roadmap. The roadmap defines, in principle, KPIs for the entire Toray Group and charts the course for everything Toray Group does to fulfill its social responsibilities.

---

### Value Creation



#### Contributing Solutions to Social Issues through Business Activities

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, and health maintenance and longevity, thereby helping to build a more sustainable world.

---

### Governance



#### Corporate Governance and Management Transparency

Continually revise management systems, strengthen internal controls and strive for timely and appropriate information disclosure as part of efforts to fulfill the company's social responsibilities.

#### Corporate Ethics and Legal Compliance

Ensure all executives and employees uphold a sense of responsibility, fairness and high ethical standards, and always act in accordance with the law to maintain the trust of society.

#### Risk Management

Enhance group-wide risk management systems including those pertaining to information security. Build systems capable of rapidly responding to unexpected circumstances and distribution companies.

---

## Social Initiatives



### 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.

### Product Safety and Quality

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

### Facilitating CSR Initiatives Throughout the Supply Chain

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 companies.

### Communication

Disclose corporate information in an active, fair and straightforward manner, and encourage dialogue and cooperation with stakeholders including employees, stockholders, investors, business partners, consumers, local communities, non-profit organizations, government and administrative agencies, mass media, analysts, and other parties.

### Social Contribution Activities

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

---

## Environment



### 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.

# Sixth CSR Road Map and Progress on Key Performance Indicators in Fiscal 2019

## Sixth CSR Road Map (Fiscal 2017–2019)

Sixth CSR Road Map

CSR Sub-domain	CSR Road Map goal	Key performance indicators	Reporting scope	Targets <sup>1)</sup>			Results		Implementation leader <sup>2)</sup>	
				Fiscal 2017	Fiscal 2018	Fiscal 2019	Fiscal 2019	Target		
Value Creation	7. Leveraging Solutions to Social Issues through Business Activities	<ul style="list-style-type: none"> <li>① Help address social issues by developing research on materials and new technologies, focusing on the field of Carbon Recycle and L&amp;L Innovation</li> <li>② Sales of L&amp;L Innovation products (Billion yen)</li> <li>③ Sales of L&amp;L Innovation products (Billion yen)</li> <li>④ Contribution to the reduction of environmental issues through business activities</li> <li>⑤ Contribution to the advancement and longevity through business activities</li> <li>⑥ Initiative for creating energy-related resources</li> <li>⑦ Contribution of Tokyo water treatment products (concerned to treated water amount) (Scale: Bp)</li> </ul>	<ul style="list-style-type: none"> <li>① Tokyo Group</li> <li>② Tokyo Group</li> <li>③ Tokyo Group</li> </ul>	<ul style="list-style-type: none"> <li>① 980 billion yen (Fiscal 2019 target)</li> <li>② 270 billion yen (Fiscal 2019 target)</li> <li>③ 50 million tons (Fiscal 2019 target)</li> </ul>	<ul style="list-style-type: none"> <li>① 104 billion yen</li> <li>② 222 billion yen</li> <li>③ 48 billion tons</li> </ul>	<ul style="list-style-type: none"> <li>① N/A</li> <li>② N/A</li> <li>③ N/A</li> </ul>	<ul style="list-style-type: none"> <li>① N/A</li> <li>② N/A</li> <li>③ N/A</li> </ul>	<ul style="list-style-type: none"> <li>① N/A</li> <li>② N/A</li> <li>③ N/A</li> </ul>	<ul style="list-style-type: none"> <li>① Kazuhiko Kato, Executive Vice President, General Manager of Industrial Property Division, Global Environment Division, Strategic Planning Department, Life Innovation Business, Strategic Technology Center, Tokyo Research &amp; Development Center, Green Team Initiatives, Inc.</li> </ul>	
	1. Corporate Governance and Employee Transparency	<ul style="list-style-type: none"> <li>① Enhance management transparency, continuously effect anti-corruption framework in management and full responsibilities to explore corporate activities</li> <li>② Enhance monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan Companies Act</li> <li>③ Expand CSR education throughout the Tokyo Group to build on CSR activities</li> </ul>	<ul style="list-style-type: none"> <li>① Number of dialogue meetings with stakeholders</li> <li>② Board of Directors' opinion assessment of the Corporation status of the Basic Policy for Internal Control Systems (%)</li> <li>③ Group compliance implementation CSR education (%)</li> </ul>	<ul style="list-style-type: none"> <li>① Tokyo Group</li> <li>② Tokyo Group</li> <li>③ Tokyo Group</li> </ul>	<ul style="list-style-type: none"> <li>① 80 times</li> <li>② 80%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 87 times</li> <li>② 90%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 87 times</li> <li>② 94%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 87 times</li> <li>② 94%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① N/A</li> <li>② N/A</li> <li>③ N/A</li> </ul>	<ul style="list-style-type: none"> <li>① Takahiro Deguchi, Executive Vice President, General Manager of Corporate Strategic Planning Division, Quality Assurance Division, Legal &amp; Compliance Division, Group-wide Administration Department, HR Business Development Department, Tokyo Industries, Inc.</li> </ul>
	2. Corporate Ethics and Legal Compliance	<ul style="list-style-type: none"> <li>① No major cases throughout the Tokyo Group of non-compliance with applicable laws, regulations, standards, etc.</li> <li>② No major cases throughout the Tokyo Group of non-compliance with applicable laws, regulations, standards, etc.</li> <li>③ Provide compliance education, in accordance with the conditions of each country or region</li> <li>④ Enhance awareness raising and educational activities relating to corporate ethics and legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>① Number of major violations of laws or ordinances</li> <li>② Implementing internal audit results of group companies, Group-wide compliance program based on internal legal audit/investigation year (%)</li> <li>③ Group compliance training and educational activities relating to corporate ethics and legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>① Tokyo Group</li> <li>② Tokyo Group</li> <li>③ Tokyo Group</li> </ul>	<ul style="list-style-type: none"> <li>① 0</li> <li>② 100%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 0</li> <li>② 100%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 0</li> <li>② 100%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 0</li> <li>② 100%</li> <li>③ 100%</li> </ul>	<ul style="list-style-type: none"> <li>① N/A</li> <li>② N/A</li> <li>③ N/A</li> </ul>	<ul style="list-style-type: none"> <li>① Takahiro Yamamoto, Director, General Manager of Legal Compliance Division, Tokyo Industries, Inc.</li> </ul>
Social Contribution	5. Risk Management	<ul style="list-style-type: none"> <li>① Strengthen corporate risk management throughout the Tokyo Group and mitigate risk</li> <li>② Expand global risk management among employees by rolling out risk management education throughout the Tokyo Group</li> </ul>	<ul style="list-style-type: none"> <li>① Tokyo Group</li> <li>② Tokyo Group</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> </ul>	<ul style="list-style-type: none"> <li>① N/A</li> <li>② N/A</li> </ul>	<ul style="list-style-type: none"> <li>① Takahiro Deguchi, Executive Vice President, General Manager of Corporate Strategic Planning Division, Quality Assurance Division, Legal &amp; Compliance Division, Group-wide Administration Department, HR Business Development Department, Tokyo Industries, Inc.</li> </ul>	
	8. Human Rights Promotion and Labor Relations	<ul style="list-style-type: none"> <li>① Expand labor rights and fair practices based on ability throughout the Tokyo Group by enhancing diversification of labor force, gender equality, nationality, religion, and physical abilities</li> <li>② Enhance work environments like into combination employee needs and build a vibrant and healthy workplace culture through working system able to accept a fair pay system</li> <li>③ Enhance work environments like into combination employee needs and build a vibrant and healthy workplace culture through working system able to accept a fair pay system</li> <li>④ Enhance work environments like into combination employee needs and build a vibrant and healthy workplace culture through working system able to accept a fair pay system</li> <li>⑤ Enhance work environments like into combination employee needs and build a vibrant and healthy workplace culture through working system able to accept a fair pay system</li> </ul>	<ul style="list-style-type: none"> <li>① Group compliance in Japan implementing human rights education and training (%)</li> <li>② Group compliance that have achieved a medium-term business success rate (%)</li> <li>③ Number of non-staff resident Japan who participate in training courses</li> <li>④ Training expenditures per employee (yen)</li> <li>⑤ Available annual paid leave used by employees (%)</li> </ul>	<ul style="list-style-type: none"> <li>① Tokyo Group</li> <li>② Tokyo Group (Japan)</li> <li>③ Tokyo</li> <li>④ Tokyo Group</li> <li>⑤ Tokyo Group (Detailed Japan)</li> <li>⑥ Tokyo</li> <li>⑦ Tokyo</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> <li>③ N/A</li> <li>④ 100%</li> <li>⑤ N/A</li> <li>⑥ N/A</li> <li>⑦ N/A</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> <li>③ N/A</li> <li>④ 100%</li> <li>⑤ 100%</li> <li>⑥ 4.3%</li> <li>⑦ 96,201 yen</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> <li>③ N/A</li> <li>④ 100%</li> <li>⑤ 100%</li> <li>⑥ 4.3%</li> <li>⑦ 96,201 yen</li> </ul>	<ul style="list-style-type: none"> <li>① 100%</li> <li>② 100%</li> <li>③ N/A</li> <li>④ 100%</li> <li>⑤ 100%</li> <li>⑥ 4.3%</li> <li>⑦ 96,201 yen</li> </ul>	<ul style="list-style-type: none"> <li>① Shigeo Taniguchi, Executive Vice President, General Manager of Personnel &amp; Industrial Relations Division, Tokyo Industries, Inc.</li> </ul>	

<sup>1)</sup> "Tokyo Group" refers to Tokyo Industries, Inc. and Tokyo Group companies in each of the Japan, "Tokyo Group (Japan)" refers to Tokyo Group companies in Japan, "Tokyo Group (Detailed Japan)" refers to Tokyo Group companies and subsidiaries in the Japanese market. "Tokyo Group (Detailed Japan)" refers to Tokyo Group companies and subsidiaries in the Japanese market. "Tokyo Group (Detailed Japan)" refers to Tokyo Group companies and subsidiaries in the Japanese market. "Tokyo Group (Detailed Japan)" refers to Tokyo Group companies and subsidiaries in the Japanese market.

Fiscal 2019 CSR Activity Report

# Contributing Solutions to Social Issues through Business Activities

Value Creation

**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, and health maintenance and longevity, thereby helping to build a more sustainable world.**



## Basic Approach

---

Global environmental issues continue to escalate, marked by climate change, rising CO<sub>2</sub> concentrations, and population growth-induced water shortages and resource depletion. More than seven billion people live on Earth, 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.

As basic strategies of the medium-term management program, Project AP-G 2019, Toray Group has implemented the Green Innovation Business Expansion Project (Green Innovation Project) and the Life Innovation Business Expansion Project (Life Innovation Project) to expand business in growth sectors. These efforts are directed by the Global Environment Business Strategic Planning Department and the Life Innovation Business Strategic Planning Department, respectively. The progress on the projects has been followed up by company-wide management committees and other bodies. To strengthen the initiatives, in 2018, the Group established and announced the Toray Group Sustainability Vision to clearly outline the world as envisioned by the Toray Group in 2050, and also set KPIs to be achieved by 2030 as long-term targets. To help ensure the achievement of the Sustainability Vision, the Group has made the Green Innovation Project and Life Innovation Project group-wide projects led by the president of Toray Industries under the Long-Term Corporate Vision, TORAY VISION 2030, and the Medium-Term Management Program, Project AP-G 2022, which were announced in May 2020.

In the Green Innovation Project, Toray Group works to achieve “a net-zero-emissions world, where greenhouse gas emissions are completely offset by absorption,” “a world where resources are sustainably managed,” and “a world with a restored natural environment, with clean water and air for everyone,” as outlined in the Toray Group Sustainability Vision. Here are some specific examples of Toray initiatives under this vision. To accelerate efforts to fight climate change, the Group will expand aircraft and automobile applications for its advanced materials and help reduce CO<sub>2</sub> 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, solar and hydrogen power applications. To enhance the sustainable use of recycled resources, the Group will promote initiatives for resource recycling and biotechnology. To help ensure safe water and air, it will proceed with initiatives in areas such as water treatment membranes and air filters.

In the Life Innovation Project, Toray Group seeks to build “a world where everyone enjoys good health and hygiene,” as set out in the Toray Group Sustainability Vision, and accelerate its initiative of “contributing to better medical care and hygiene for people worldwide.” Life Innovation products have so far been defined as those that improve the quality of medical care, reduce the burden on medical staff, and support people’s health maintenance and longevity. Now, the definition has been broadened to include products that support personal safety and help the elderly and home-care recipients to live more independent lives (improvement of activities of daily living [ADLs]).

## Structure

---

For more information on the structure for implementing the Green Innovation and Life Innovation projects, please visit the links for the related topics in the Activity Reports below.

# CSR Road Map Targets and Results

## Help address social issues by developing innovative materials and new technologies, focusing on the fields of Green Innovation and Life Innovation

### CSR-related materiality

- Contributing to the solution of environmental issues through business activities
- Contributing to health maintenance and longevity through business activities
- Initiatives for managing water resources

01

#### ■KPI

Sales of Green Innovation products

#### ■Reporting scope

Toray Group

#### ■Fiscal 2019 Target

900.0 billion yen

Fiscal 2019 Result

**820.1 billion yen**

02

#### ■KPI

Sales of Life Innovation products

#### ■Reporting scope

Toray Group

#### ■Fiscal 2019 Target

270.0 billion yen

Fiscal 2019 Result

**223.2 billion yen**

03

#### ■KPI

Contribution of Toray water treatment products (converted to treated water amount) (tons/day)

#### ■Reporting scope

Toray Group

#### ■Fiscal 2019 Target

59.0 million tons/day

Fiscal 2019 Result

**50.95 million tons/day**

## Looking to the Future

---

In fiscal 2019, the Green Innovation Project generated consolidated net sales of 820.1 billion yen against a target of 900 billion yen. The main reason for this shortfall was a greater-than-expected drop in demand for lithium-ion battery separators and resins for automobiles and motorcycles. On the other hand, the CO2 emissions avoided by 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.

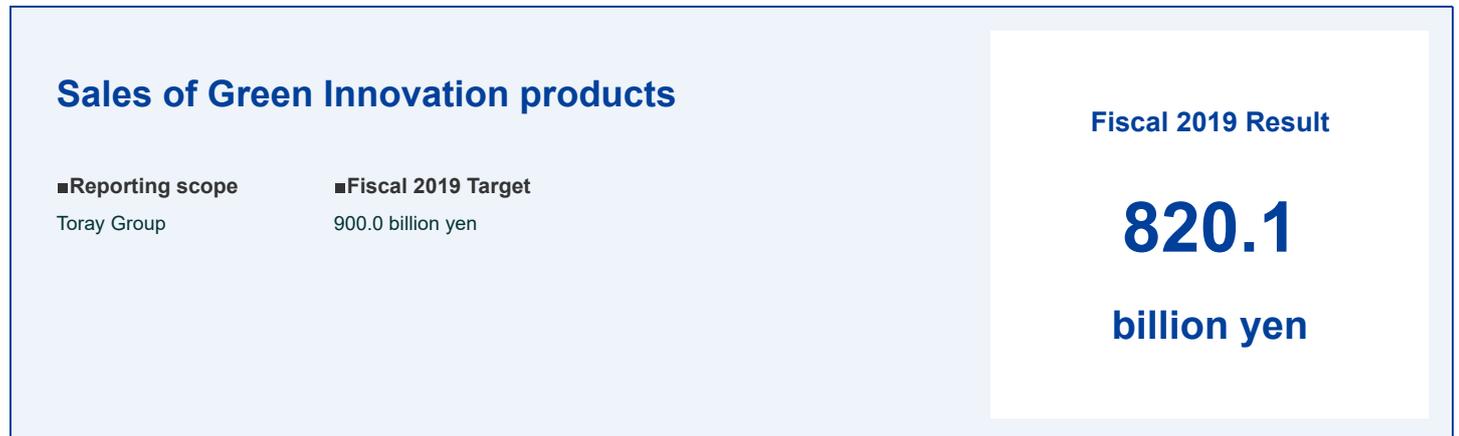
Worldwide issues such as climate change, water scarcity, and resource depletion will become more serious, inducing a transition to more sustainable modes of production and consumption. Initiatives will be implemented for moving to a circular economy where used products are recovered and regenerated to 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. The Green Innovation Project will take advantage of this transition to create new business opportunities and development.

In fiscal 2019, the Life Innovation Project generated consolidated net sales of 223.2 billion yen. Moving forward, Toray Group will continue to leverage its strengths in advanced materials in Life Innovation fields. In the Pharmaceuticals & Medical Products Business, the Group will accelerate its entry into new fields such as diagnostic medicines.

# Green Innovation Business Expansion Project

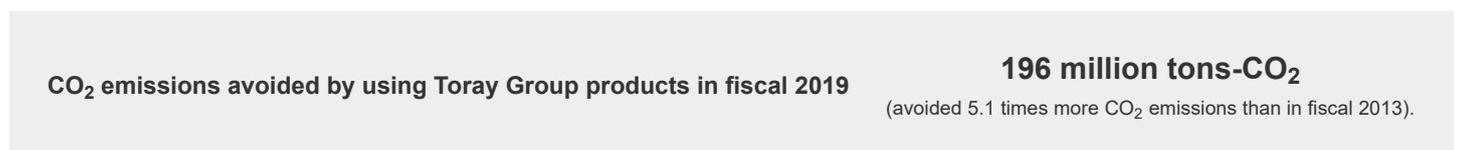
 Materiality Focus

Value Creation



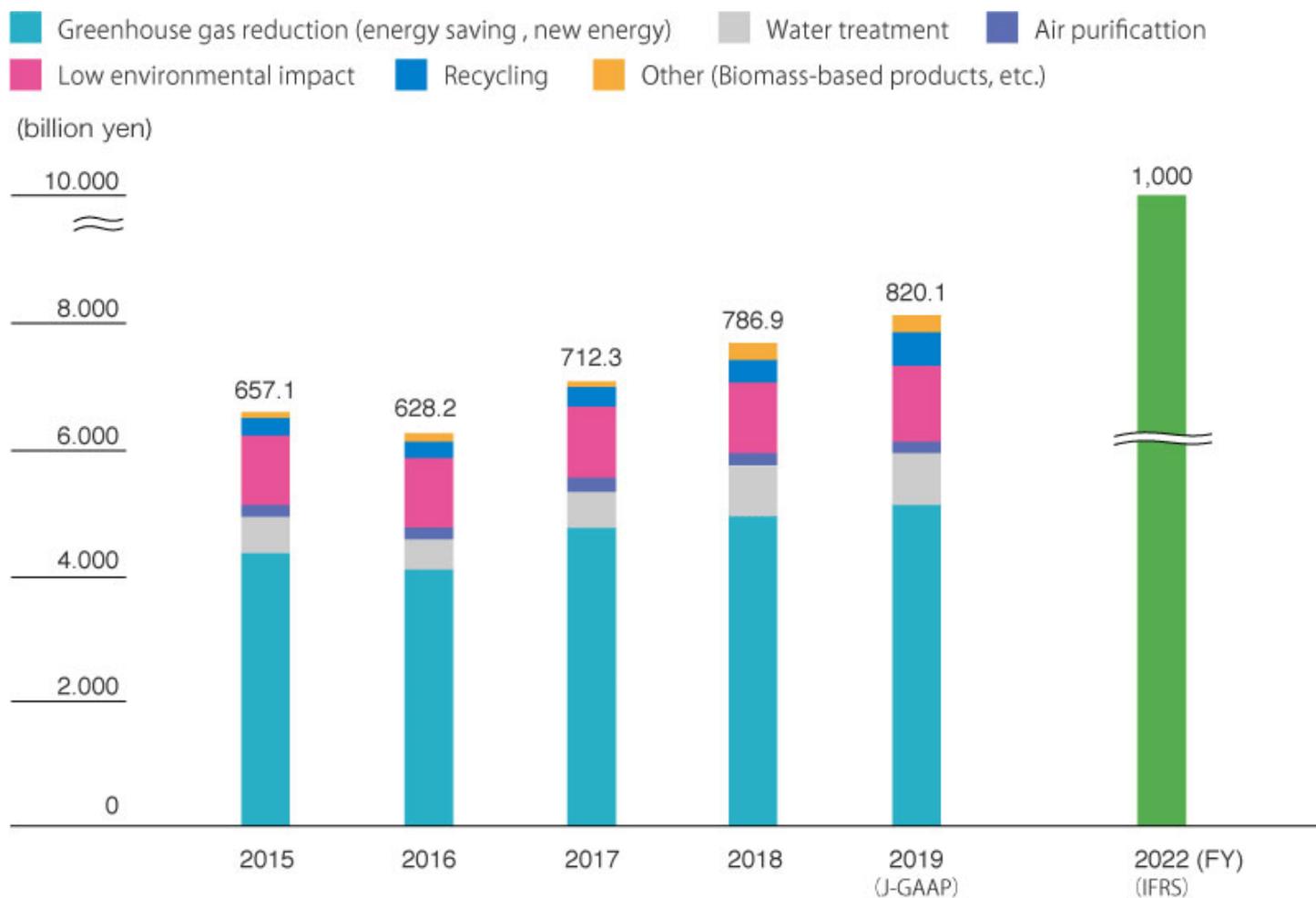
Toray Group embraces a management policy mandating that all business strategies must prioritize responsibility for the global environment in an effort to help build a more sustainable world with a small carbon footprint. The Group is endeavoring to realize this vision by addressing global environmental, resource, and energy issues through the continued implementation of the Green Innovation Business Expansion Project.

Green Innovation businesses have steadily grown since the start in 2011, reaching consolidated net sales of 820.1 billion yen in fiscal 2019. In the Medium-Term Management Program, Project AP-G 2022, which started in fiscal 2020, Toray Group set a challenging target of 1,000 billion yen in revenue from Green Innovation businesses on a consolidated and International Financial Reporting Standards (IFRS) basis and aims to expand its environment-related businesses. CO<sub>2</sub> emissions avoided by the use of Toray Group products have been steadily increasing with the expansion of the business, reaching 196 million tons-CO<sub>2</sub> in fiscal 2019<sup>1</sup> (avoided 5.1 times more CO<sub>2</sub> emissions than in fiscal 2013).



<sup>1</sup> For CO<sub>2</sub> emissions avoided in the supply chain, Toray Industries, Inc. calculates the CO<sub>2</sub> 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).

### Net Sales (Revenue) from Green Innovation Businesses (Toray Group)



Note: Revenue target for fiscal 2022 is based on IFRS

#### Related Information

[> Toray's Green Innovation](#)

# Promoting Life Cycle Management



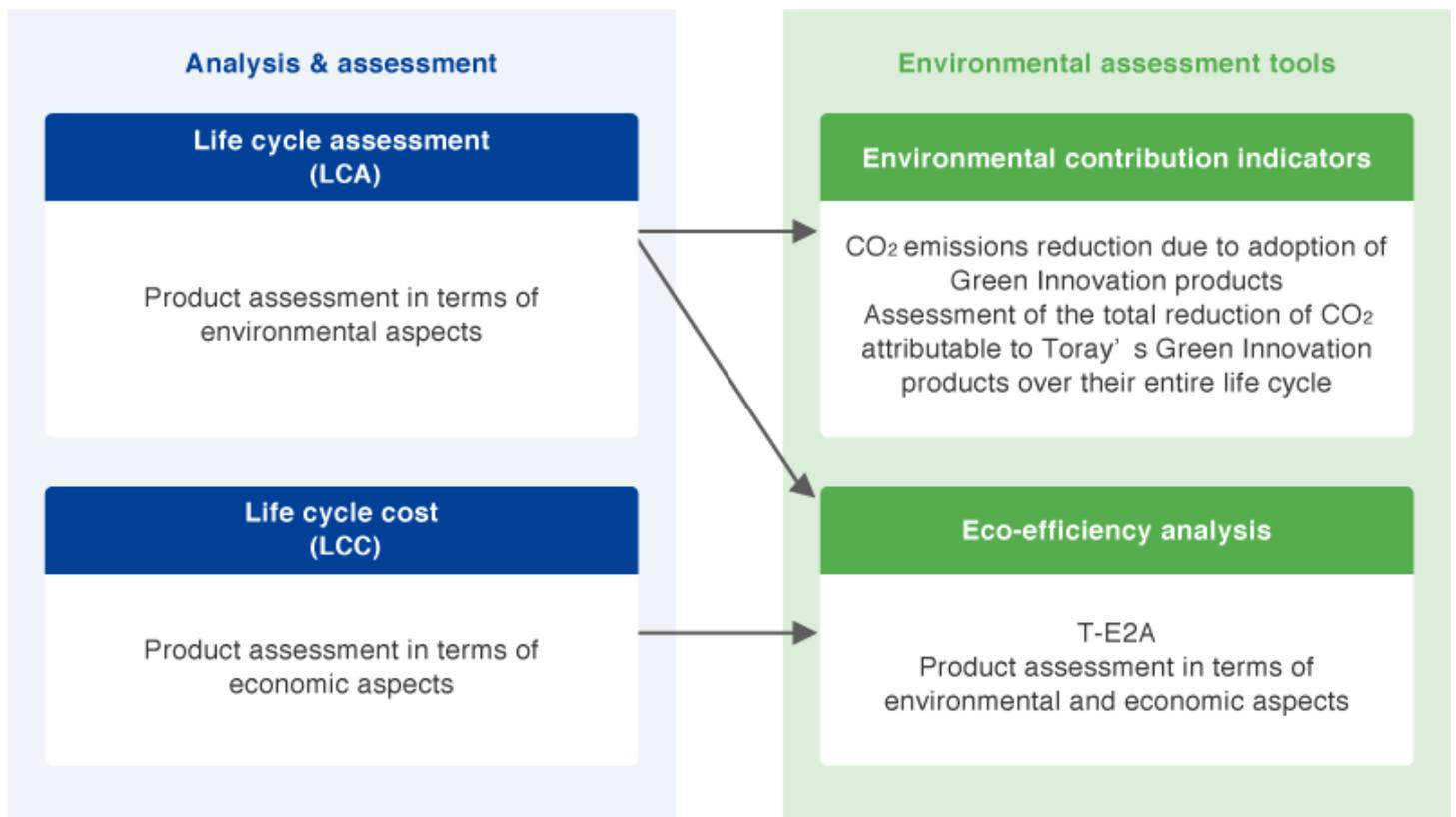
Value Creation

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 practices life cycle management. Life cycle management is the basis for Green Innovation products, and the Group has adopted life cycle assessment<sup>1</sup> and the Toray Eco-Efficiency Analysis (T-E2A)<sup>2</sup> tool and is working to ensure these are employed thoroughly in all of its businesses.

<sup>1</sup> 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.

<sup>2</sup> 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

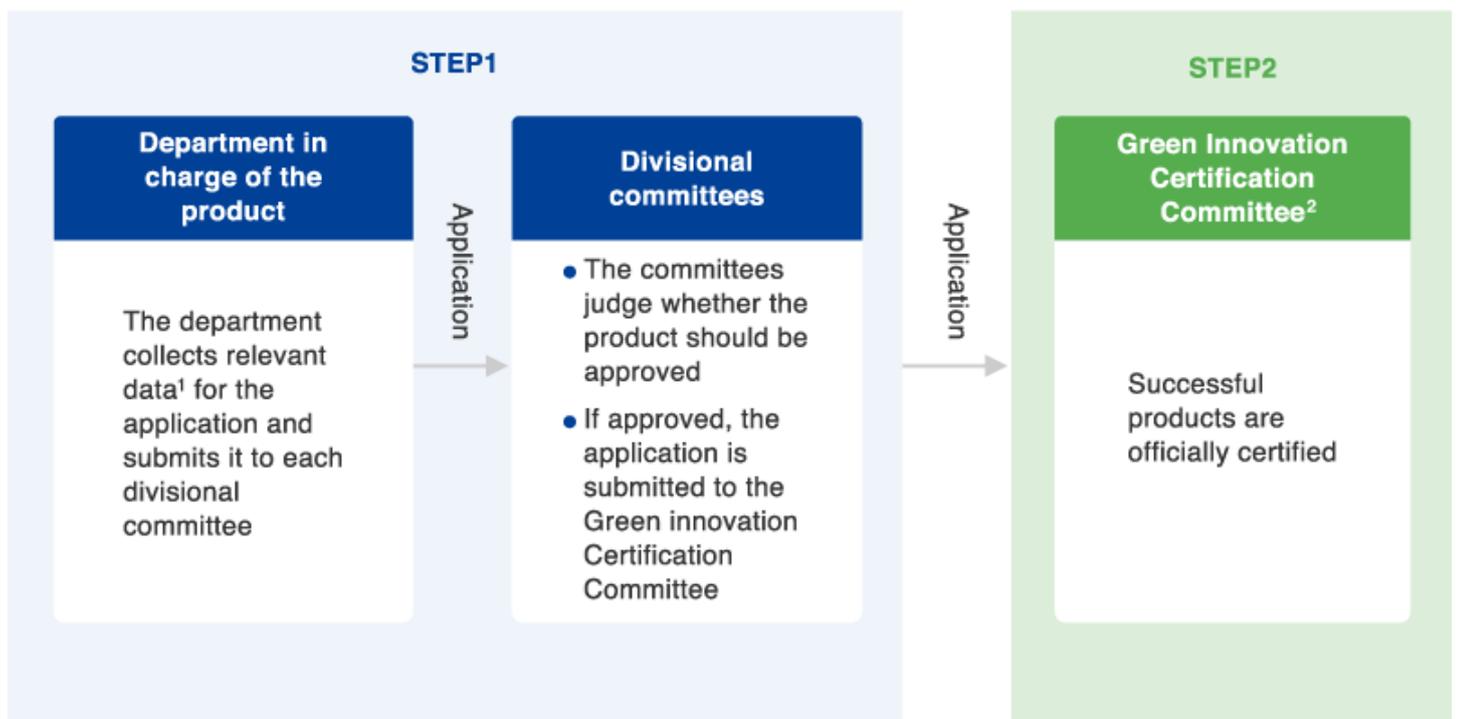


## Approach to Green Innovation Products

### Value Creation

The following diagram outlines Toray Group's process and procedures for certifying Green Innovation products. Products are 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 are certified as Green Innovation products.

### Green Innovation Product Certification Process



<sup>1</sup> This includes LCA data, T-E2A data, and estimates of CO<sub>2</sub> emissions reduction attributable to the product.

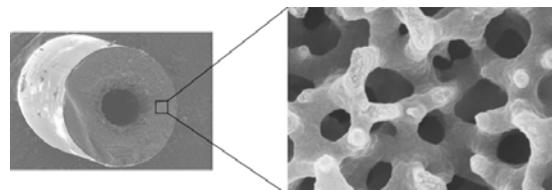
<sup>2</sup> Comprised of members of Toray Industries' Global Environment Business Strategic Planning Department, Corporate Marketing Planning Department, and Technology Center Planning Department, as well as experts when necessary.

## Green Innovation Products Released in Fiscal 2019

---

### **World's First Porous Carbon Fiber with a Continuous Pore Structure Created Helping to improve high-performance gas separation membranes indispensable to a sustainable world**

Toray Industries has created the world's first porous carbon fiber with a nanosized continuous pore structure. The new material can be used as a layer to support the structure of gas separation membranes for separating out greenhouse gases such as carbon dioxide, as well as biogas, hydrogen, and other gases. Absorption- and adsorption-based facilities conventionally separate carbon dioxide, biogas, hydrogen, and other gases. The issue with such setups, however, is that they are large and consume a lot of energy, resulting in heavy carbon dioxide emissions. While energy-saving membrane separation methods have been attracting attention as a result, membranes for practical use with both good gas separation performance and durability have not yet been realized. Membranes made from Toray's new material are lightweight and compact, and can improve separation performance. They are also chemically stable, which will help expand the applications for the membrane separation method. Going forward, Toray Industries will strive to develop applications for this material, in an effort to promote carbon recycling and help to build an energy-saving and hydrogen-based world.



Hollow fiber made from the new porous carbon fiber material and the pore structure inside

### **Textile Developed with Both Low Environmental Impact and High-Grade Water Repellency Using Toray's own conjugate spinning technology NANODESIGN™**

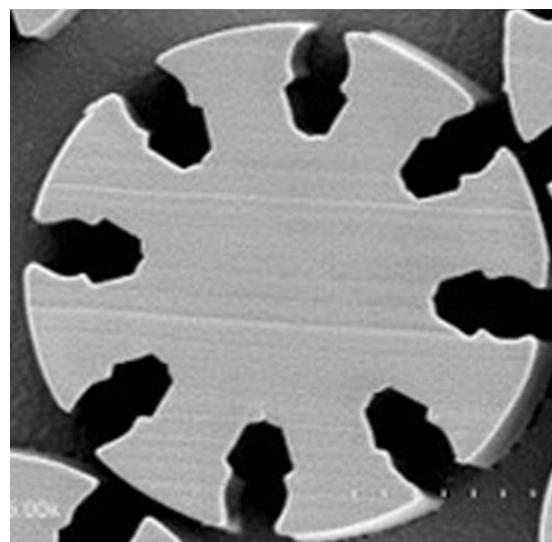
Toray Industries has developed Nanoslit Nylon, a new textile that offers a high degree of water repellency even when treated with eco-friendly water repellants.

Fluorine-based water repellents used in conventional water-repellent textiles contain perfluorooctanoic acid (PFOA), which does not decompose easily and may build up in the human body or remain in the natural environment.

Meanwhile, environmentally friendly water repellents that do not contain PFOA have low water repellency and durability. This makes them unsuitable for dedicated outdoor and sporting applications.

Nanoslit Nylon is made from raw yarn created using Toray's proprietary NANODESIGN™ conjugate spinning technology. It provides high-grade water repellency even when treated with an environmentally friendly water repellent, and delivers the same strength and abrasion resistance as regular yarn.

It will be marketed to makers of swimwear, athletic leisure jackets, and outerwear for active outdoor and sporting activities such as skiing.

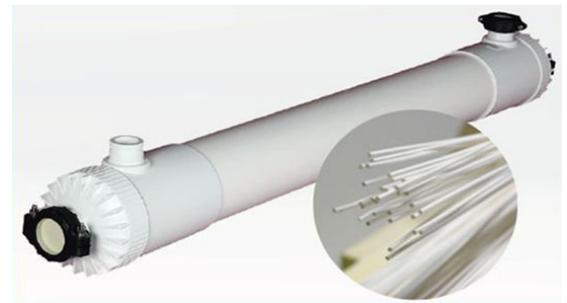


Magnified cross-section of Nanoslit Nylon fiber

**HFUG Series Advanced High-Surface-Area Ultrafiltration (UF) Membrane Modules Developed and Launched**  
**Membrane surface area increased by 25% while maintaining the same integrity and water permeability by creating a membrane from thinner hollow fibers**

Toray's hollow-fiber UF membrane can remove fine particles, bacteria, and viruses from wastewater thanks to a pore size of 0.01 $\mu$ m, equivalent to one five-thousandth the diameter of a human hair. The HFUG membrane series is based on proprietary membrane-forming technology that yields thinner hollow fibers while still maintaining membrane strength and water permeability. As a result, Toray Industries has achieved 25% more membrane area, 90 square meters, in the same conventional-sized module. This makes it possible to reduce the space needed for wastewater treatment equipment by about 20%, compared to conventional modules. The number of necessary pipes and valves has also been decreased, offering cost savings.

The UF membrane serves as a physical barrier to block viruses and pathogens. Moreover, unlike the conventional gravity-type solid/liquid separation process, the membrane-based process is ideal for automated and unmanned water treatment operations. In 2020, the COVID-19 pandemic has further heightened interest in the membrane process. Toray's UF membrane is set to play a major role in providing safe and reliable tap water.



HFUG Series ultrafiltration (UF) membrane module with larger surface area

## Promoting Recycling Initiatives

### Value Creation

As a manufacturer of a wide range of materials, Toray Group is promoting various recycling initiatives that ensure that the earth's resources are efficiently utilized. The Group will further expand its supply of recycled products and adopt more recycling technologies to help reduce plastic waste and promote a sound cycle of resource usage.

#### Recycling Activity Principles Adopted 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.

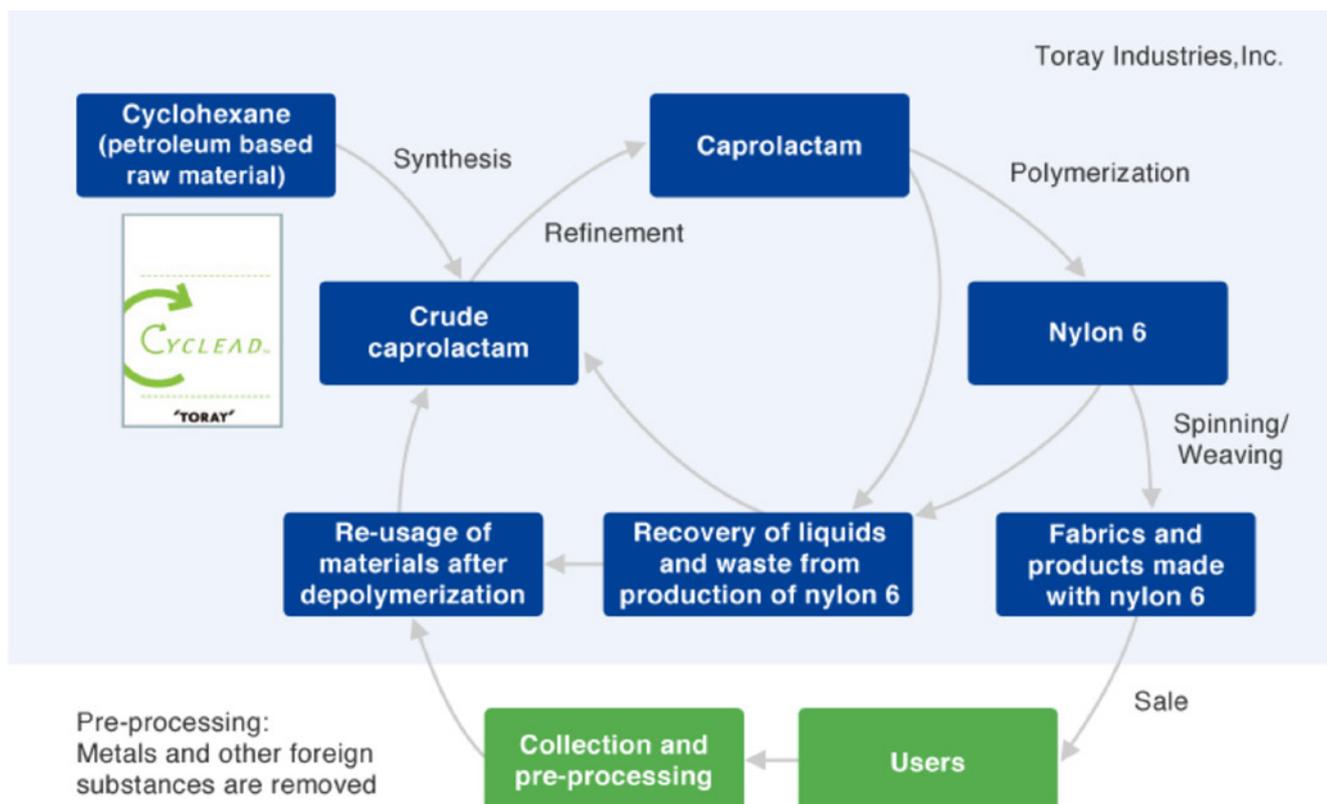
## Fiber and Textile Recycling

Toray Industries, Inc. has three brands in the fiber and textile recycling field: CYCLEAD™ (a system for collection and circulation type recycling which is used for recycling nylon 6 fibers, etc.), Ecouse™<sup>1</sup> (a regeneration type recycled from nylon and polyester fibers.) and &+™

<sup>1</sup> In fiscal 2015, the Company expanded the Ecouse™ brand to encompass non-fiber products, as an integrated brand name for recycled materials and products offered by Toray Industries.

### Collection and Circulation Type Recycling with CYCLEAD™

Fabric made from recycled fibers recovered from disposed nylon and other products



## Recycled Materials ECOUSE™ and &+™

ECOUSE™ is a textile mainly for corporate uniforms, made from reusing byproducts such as film and thread scraps from internal manufacturing processes. &+™ (“And Plus”) is a new fiber developed for sustainability, using discarded plastic PET bottles as raw material. Toray Industries employs filtering and cleaning technologies that remove foreign matter. This results in a fiber with high whiteness that can be made into a wide variety of products. Toray’s unique traceability function is also used for this material. Since January 2020, &+™ has expanded its application worldwide such as in the field of high-performance sportswear.

> [&+™ \(product site\)](#)

### &+™ Process Diagram



<sup>1</sup> &+™ raw pellets have better whiteness than typical recycled plastic pellets due to Toray's cleaning and filtering technologies.

<sup>2</sup> &+™ fiber has a high degree of whiteness and can be made in 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, texture, and color variation. Clean PET bottles that have been properly sorted are transformed using various recycling processes into high-quality &+™ PET fiber.

## Resin Recycling

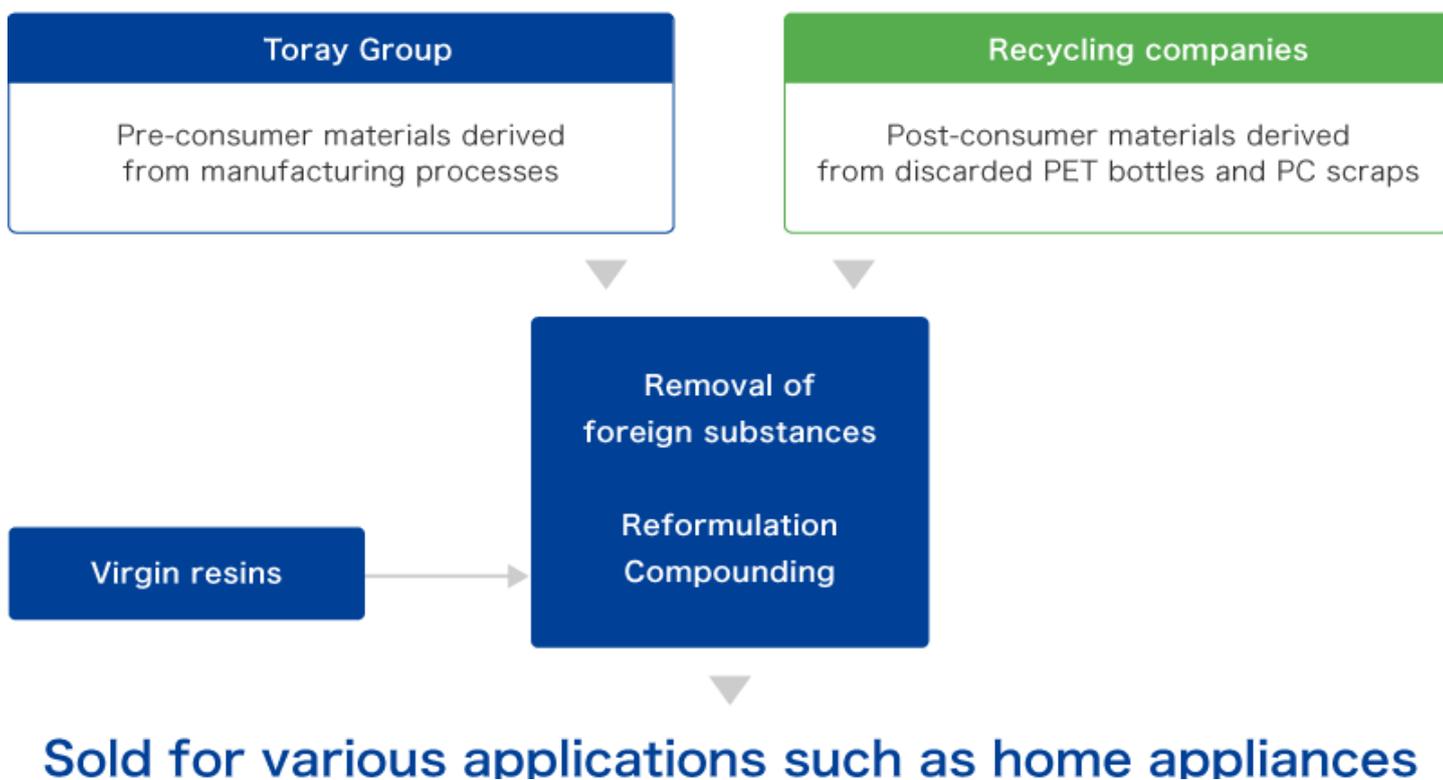
---

Toray Group is expanding closed-loop recycling (in which end-of-life products are recycled into the same product) such as recycling of fans inside home air conditioners conducting with home electronics appliance makers.

The Group is also diversifying its procurement sources of recycled plastic to accommodate growing market needs, thereby expanding its recycled resin business.

In addition, the Group actively engages in pre-consumer recycling, by reusing byproducts from internal manufacturing processes such as film scraps and fiber scraps. It also promote post-consumer recycling using PET bottles and PC scraps in order to accommodate increasing needs for recycled materials due to laws and regulations regarding green procurement both in the country and overseas.

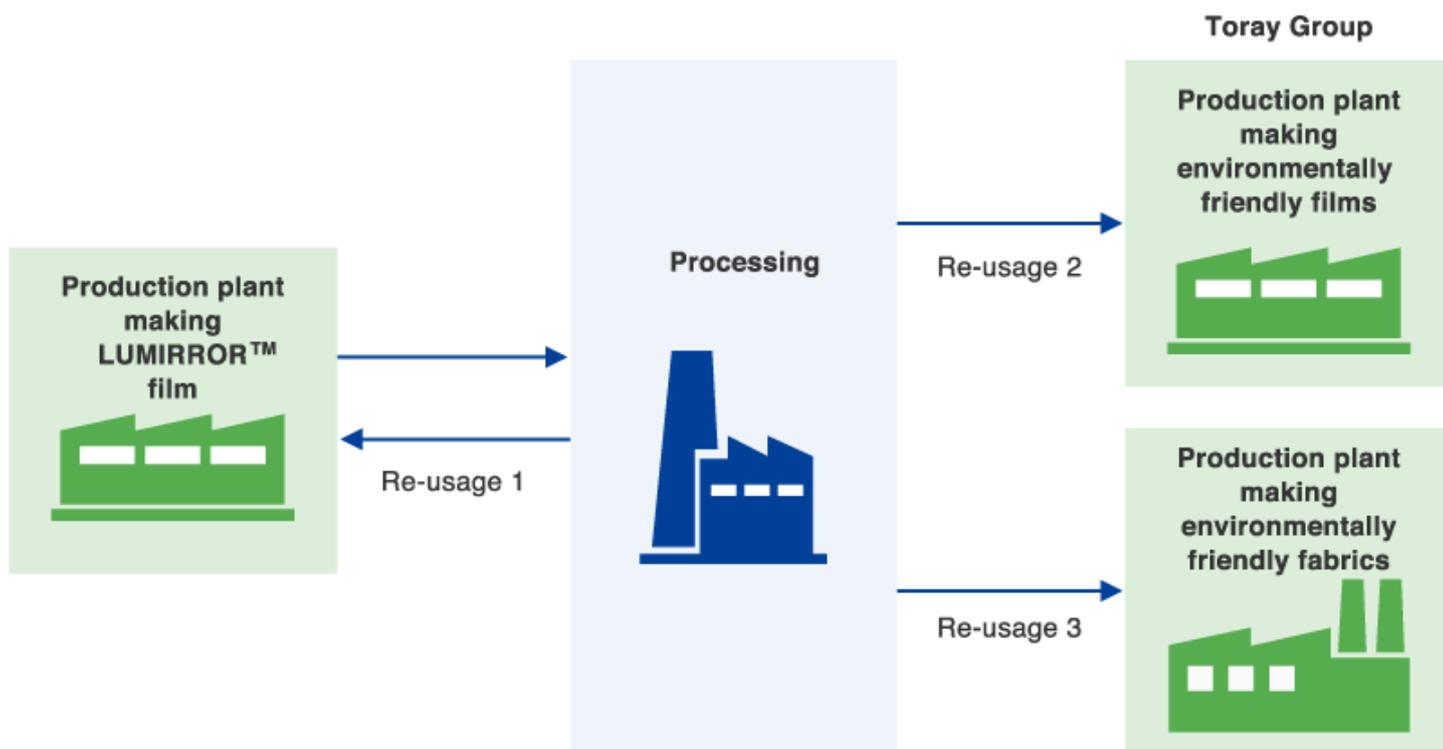
### Pre-consumer/Post-consumer Recycling



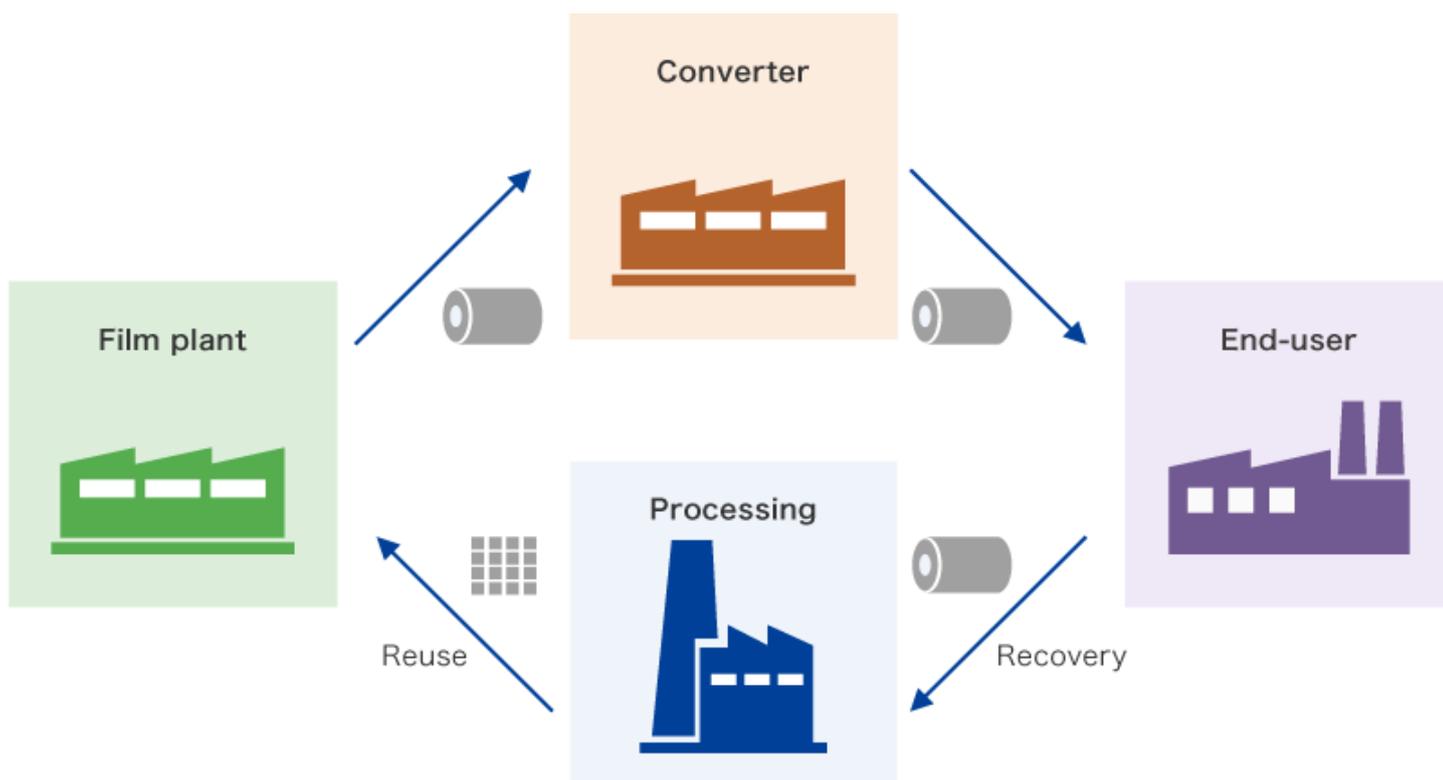
# Film Recycling

Toray Industries is promoting pre-consumer recycling, using byproducts from the PET film LUMIRROR™ manufacturing process in textile and resin applications, as well as for environmentally friendly film. Toray Industries is also promoting post-consumer recycling by collecting used PET film from our customers and recycling it into raw material for newly produced film.

## Processing and Re-using Recovered Raw Materials Generated from Manufacturing Processes



## Reusing waste PET film from customer manufacturing processes



## Carbon Fiber Recycling

---

Carbon fiber is a lightweight material that significantly curbs CO<sub>2</sub> emissions over the entire lifecycle of the products in which it is used. It is viewed as an important tool for helping to solve global environmental issues. As a result, demand for carbon fiber is expanding across a wide range of applications, including aircraft and automobile parts. 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 method,<sup>3</sup> and completed the project in June 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.

With an eye towards future commercialization, Toray Industries had constructed a pilot plant to test energy-efficient recycled carbon fiber manufacturing technologies, and began to operate it in July 2017. In addition, Toray Group will promote the development of new applications for recycled carbon fiber.

<sup>3</sup> Thermal decomposition method: A recycling method in which carbon fiber is recovered by heating carbon fiber composite materials and thermally decomposing the matrix resins.

# Life Innovation Business Expansion Project

Materiality Focus

Value Creation

## Sales of Life Innovation products

■Reporting scope

Toray Group

■Fiscal 2019 Target

300 billion yen

Fiscal 2019 Result

**223.2**

**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 have been added to the existing challenges of declining birthrates and aging populations in developed countries, soaring 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.

Under Project AP-G 2022, Toray Group intends to add and strengthen product initiatives related to personal safety, including ones that enable response to unforeseen circumstances such as the COVID-19 pandemic.

### 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

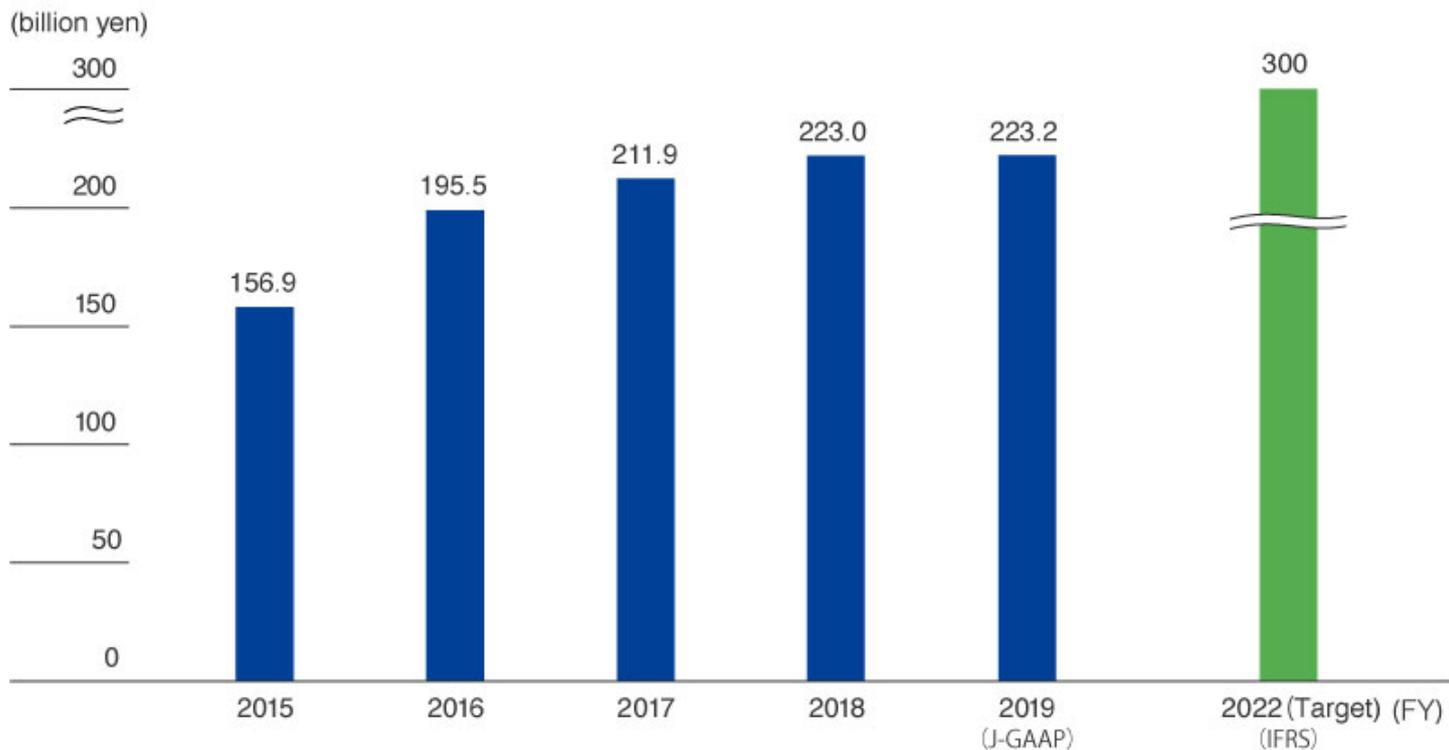
- Maintaining wellness, health, and independent living, improving activities of daily living (ADLs) for the elderly and home-care recipients, reducing the burden on care givers (nursing staff and families), and addressing public health issues

#### Supporting personal safety

- Leveraging materials to protect people from disasters, extreme weather (heat waves, etc.), and accidents

Net sales in Life Innovation businesses have steadily increased from 142.2 billion yen in fiscal 2014 to 223.2 billion yen in fiscal 2019. Going forward, Toray Group will add new products related to personal safety to this business area, aiming to expand revenue to 300 billion yen by fiscal 2022, based on International Financial Reporting Standards (IFRS).

**Net Sales (Revenue) of Life Innovation Businesses (Toray Group)**



Note: revenue target for fiscal 2022 is based on IFRS

## Life Innovation Product Topics

---

### Strengthening and Expanding the System to Supply Non-woven Fabric for Masks in Japan

In response to the rapid increase in demand for masks during the COVID-19 pandemic, Toray Industries, Inc. has utilized its global production facilities to strengthen and expand its system for supplying material to Japan to make non-woven masks. Toray Group manufactures non-woven fabrics for mask production at group companies outside Japan, and was supplying enough material to make about 30 million non-woven masks each month. In response to the soaring demand for masks, however, the Group created a system that increased production with existing equipment, and in September 2020, Toray supplied enough material to manufacturers in Japan to make about 60 million masks. In October, the supply will further increase to the equivalent of 80 million masks. In addition, Toray Industries utilized the non-woven fabric development equipment at its Shiga Plant to establish a production system in Japan that can manufacture enough fabric for 20 million masks each month. Therefore, starting in October, the Toray Group plans to supply enough material for a total of 100 million non-woven masks per month.

### Interim Approval for the Use of TORAYMYXIN™ to Treat COVID-19 Patients in Canada

The Canadian public health authority, Health Canada, has issued an interim order approving the use of an endotoxin adsorption cartridge, TORAYMYXIN™ to treat patients with COVID-19.

In April 2020, the company licensed to sell this product in the United States also obtained approval from the U.S. Food and Drug Administration (FDA) for its use in patients with COVID-19, as part of clinical trials. To help prevent the spread of COVID-19, Toray Group is committed to taking the necessary measures based on government action plans, and will make a group-wide effort to help end the pandemic as soon as possible and promote social and economic recovery.

### Product Lineup Expanded with a New Series of LIVMOA™ Single-Use Protective Clothing

The LIVMOA™ 2000 series of single-use protective suits was recently released, offering both comfort and protective barrier properties made possible by the integration of textile and film technologies. The protective suits include a multi-layered material made of TORAYMICRON™ non-woven fabric, which has excellent breathability and dust protection features. The advanced fabric is used for the head, chest, and back of the suits, areas especially prone to overheating, to achieve both comfort and cost balance. The coveralls also comply with JIS T 8115: 2015 Type 5 (Protective clothing for use against solid particulates). The needs of a wider range of customers have been met by designing the suits for work environments where heat and stuffiness are common throughout the year, and not just in summer.



LIVMOA®2000

Fiscal 2019 CSR Activity Report

# Corporate Governance and Management Transparency

Governance

Continually revise management systems, strengthen internal controls and strive for timely and appropriate information disclosure 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.

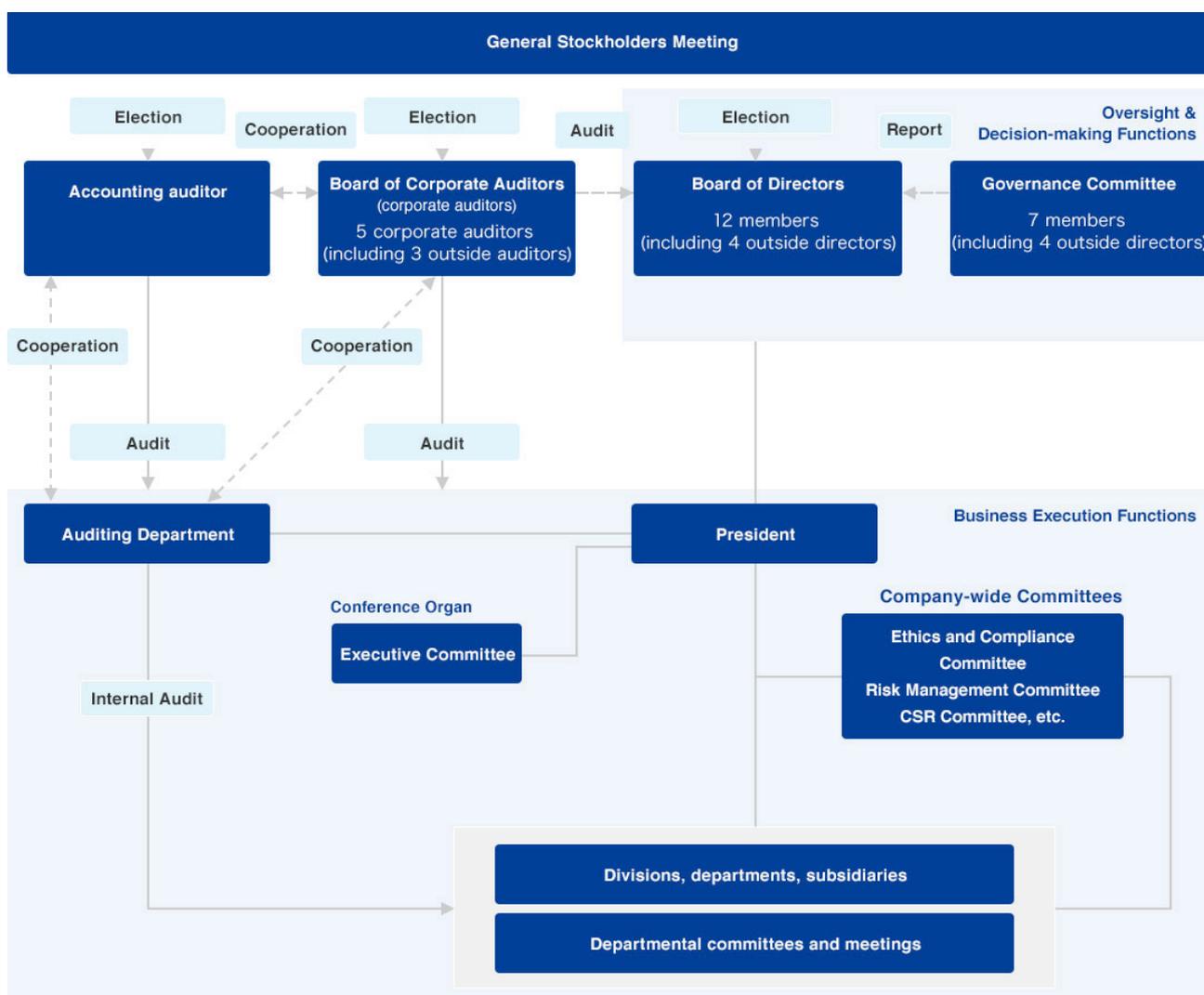
Toray Group operates in a broad spectrum of business fields at a global level. Business management and decision-making, as well as oversight, require assessment of a wide variety of risks from multiple perspectives based on expertise related to the day-to-day operations of the Group's worksites. To that 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 three internal members of the Board, and four outside directors, and an outside director serves as a chairperson.

## Toray Group's Corporate Governance System

As of July 2020



## CSR Road Map Targets and Results

01

Enhance management transparency, continually reflect stakeholder feedback in management, and fulfil responsibilities to explain corporate activities

■KPI

Number of dialogue meetings with stakeholders

■Reporting scope

Toray Group

■Target in fiscal 2019

Eight times

Result in fiscal 2019

**8times**

02

Perform monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Companies Act

■KPI

Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems

■Reporting scope

Toray Group

■Target in fiscal 2019

90%

Result in fiscal 2019

**95%**

03

Expand CSR education throughout the Toray Group to facilitate CSR activities

■KPI

Group companies implementing CSR education

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

**100%**

## Looking to the Future

An analyzing and evaluating the effectiveness of the Board of Directors in fiscal 2019 concluded that the Board had generally fulfilled its roles and responsibilities, but also called for "further activating discussions at the Board of Directors meeting". In response, following fiscal 2019, Toray Industries needs to implement concrete measures in fiscal 2020 and beyond to further enhance the effectiveness 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 shall deepen discussions based on those opinions with a view to further improving the effectiveness of the Board of Directors, as necessary.

Fiscal 2019 CSR Activity Report- Corporate Governance and Management Transparency

## Ensuring Proper Business Conduct and Transparency

Governance

### Board of Directors' positive assessment of the implementation of the Basic Policy for Internal Control Systems<sup>1</sup>

■Reporting scope  
Toray Group

■Target in fiscal 2019  
90%

Result in fiscal 2019

**95%**

<sup>1</sup> To evaluate the effectiveness of internal control relating to the Board of Directors, a questionnaire is given to all 24 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.

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 will continue to make every effort to ensure compliance with laws and regulations, efficient execution of duties, preservation and management of information, and control over risks of loss.

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 2019 was 95.0%, surpassing the target of 90%.

#### Related Information

> [Basic Policy on Corporate Governance](#)

Corporate Governance Report [PDF](#)

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

> [Information Disclosure Principles](#)

## Dialogue with Labor Unions

Toray Industries holds meetings of the Central Labor and Management Council twice a year. The meetings are attended by senior vice presidents and labor representatives at the union head level and above. In addition to briefing the union on management information about Toray Group, the meetings facilitate ongoing dialogue with the union.

Resolution of labor issues is undertaken at separate Labor and Management Council meetings.

As of March 2020, Toray Workers' Union membership stood at 8,561 workers.

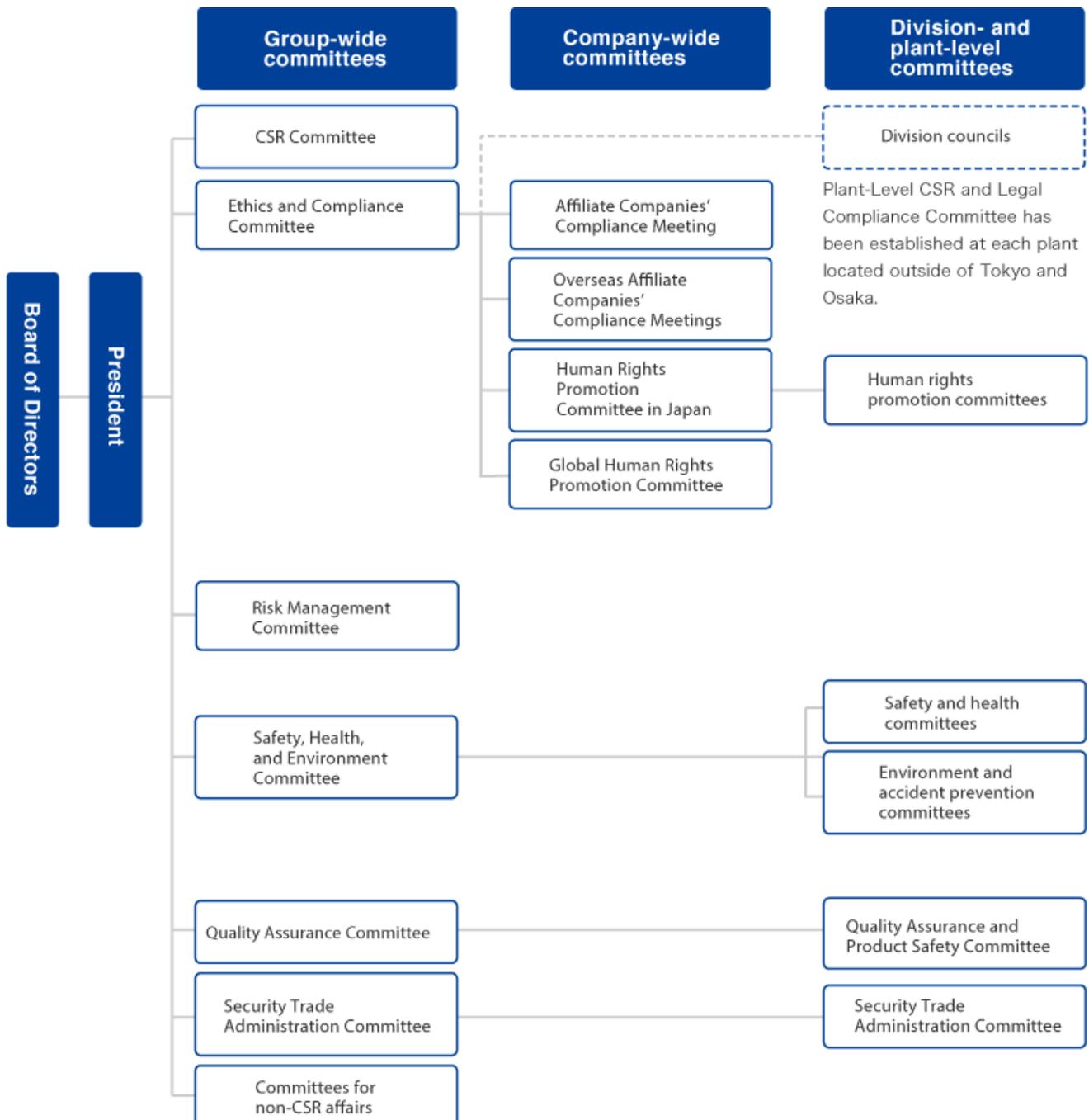
# Implementing CSR Activities and Improving CSR Education

## Governance

### Organizational Structure for Social Responsibility

The CSR Committee is headed by the chief social responsibility officer and coordinates five other group-wide committees, assigning tasks under each of the themes of the CSR Guidelines to them, in order to ensure Toray Group comprehensively implements CSR initiatives. Furthermore, committees and meetings on CSR have been established at each group company to help implement group-wide CSR activities.

#### Committee and Implementation Organization



## Promoting CSR Initiatives in Every Workplace

---

A special characteristic of Toray Group's approach to corporate social responsibility is its "CSR line activities," a unique 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.

## In-House Training on CSR-Related Issues

---

### Group companies implementing CSR education

■Reporting scope	■Target in fiscal 2019
Toray Group	100%

Result in fiscal 2019

**100%**

Toray Group strives to ensure that social responsibility is firmly rooted in its culture by providing various training opportunities. In fiscal 2019, 100% of Group companies implemented CSR education, achieving the target.

In fiscal 2019, the CSR Operations Department of Toray Industries visited internal departments as well as group companies worldwide to hold discussion meetings. The aim was to ascertain the status of CSR initiatives in each workplace, and to promote further progress. The issues for CSR activity implementation identified during the discussion meetings will be reflected in Toray Group's CSR promotion measures.

A CSR Newsletter was launched as a way to help employees easily understand the necessity of CSR activities at each workplace. An e-learning module was also prepared that covers CSR basics, and was expanded to the entire Toray Group to promote deeper CSR awareness.

In addition, the CSR Operations Department of Toray Industries held a seminar for employees of group companies in Japan to enhance understanding of CSR initiatives.



CSR seminar at Toray Medical Co., Ltd.

## Dialogue with Stakeholders

---

Toray Group's Corporate Missions call for contributing to customers, employees, shareholders, and society, by emphasizing stakeholders in its practice of business management. The Group is increasing its dialogue with stakeholders, both through its business operations and through briefing sessions and meetings in each region. In fiscal 2019, Toray Industries conducted regular dialogue with stockholders and employees, taking advantage of opportunities such as the general meeting of stockholders, business briefings for stockholders, and labor and management meetings. The Group will continue to seek opportunities to hear from stakeholders and gauge their expectations with the involvement of corporate management, in order to shape the direction of its management.

### Related Information

> [Materiality](#)

### Number of dialogue meetings with stakeholders

■ **Reporting scope**  
Toray Group

■ **Fiscal 2019 target**  
Eight times

Result in fiscal 2019

**8**times

Fiscal 2019 CSR Activity Report

# Corporate Ethics and Legal Compliance

Governance

**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](#)

### 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.

## 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 2019, the Ethics and Compliance Committee convened twice to deliberate on and discuss the results of fiscal 2018 initiatives, action plans for fiscal 2019, and the progress of implementation thus far. The committee also discussed individual measures such as revision of Toray Group Ethics & Compliance Code of Conduct.

In each workplace, the general manager of the division or department serves as a leader, facilitating initiatives in a top-down manner. 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, Toray Group is promoting compliance activities in each company, country and region.

# CSR Road Map Targets and Results

01

No major cases throughout the Toray Group of non-compliance with or violation of bribery regulations, antitrust laws, etc.

[Related material issue for CSR]

- Corporate ethics and legal compliance

■KPI

Number of major violations of laws or ordinances

■Reporting scope

Toray Group

■Target in fiscal 2019

0

Result in fiscal 2019

1<sup>1</sup>

02

Promote compliance activities in accordance with the conditions of each country or region

■KPI

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

■Reporting scope

Toray Group

■Target

Audits: In fiscal 2019 at group companies outside Japan; in fiscal 2017 and 2018 at Toray Industries, Inc. and its group companies in Japan  
Percent that improved: 100% for all audits by the following fiscal year

Result in fiscal 2019

100%

03

Enhance awareness-raising and educational activities relating to corporate ethics and legal compliance

■KPI

Group companies providing information and implementing education on major laws and regulations

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

100%

<sup>1</sup> Toray discovered in March 2020 that Suido Kiko, a subsidiary engaged in water and sewage facility engineering, had potentially allowed an employee to take the First Class Civil Engineering Works Execution Managing Engineer test despite not having satisfied the practical experience requirements for this test. Thereafter, a third-party committee was established and commissioned to investigate the facts and make recommendations on how to prevent a recurrence. On September 24, we received the report of the investigation by the third-party committee, and on September 25, we reported to the Ministry of Land, Infrastructure, Transport and Tourism on the content of the report and measures to prevent a recurrence. Going forward, the Group will strive to further strengthen compliance and prevent any similar recurrence.

## 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 *genba*<sup>1</sup> approach – Look to the facts!
- **R** : Responsibility as a member of our excellent company

<sup>1</sup> *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 2019, Toray Industries continued to assist and monitor compliance initiatives at group companies and actively share compliance-related best practices and educational materials. Through the 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.

Fiscal 2019 CSR Activity Report - Corporate Ethics and Legal Compliance

## Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance

Governance

### Toray Group Ethics & Compliance Code of Conduct

The Ethics & Compliance Code of Conduct was updated in May 2020, 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. They are fully informed of this code of conduct, along with the Group's internal whistle-blowing system and promotion framework for ethics and compliance.



[Download \(0.4MB\)](#) [PDF](#)

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

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

**100%**  
Toray Group

# 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.

## Corporate Ethics and Legal Compliance Education

### Group companies providing information and implementing education on major laws and regulations

■Reporting scope  
Toray Group

■Target in fiscal 2019  
100%

Result in fiscal 2019

**100%**

Toray Industries posts 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 corporate ethics and legal compliance for all executives and employees, including contracted, part-time and dispatched workers. In fiscal 2019 the Company conducted online training on human rights issues and Toray Group Anti-Bribery Regulations issues. For human rights issues, the Company worked to raise awareness using case studies based on actual reports and consultations within Toray Group, reminding all participants that issues can occur in any department. Group companies in Japan are using these materials to implement their own training.

## Expanding the Whistle-Blowing System

Toray Industries established the Corporate Ethics and Legal Compliance Helpline as a whistle-blowing system in fiscal 2003 and expanded the system to include all Toray Group companies in Japan in fiscal 2010. By introducing this system, the Company expects employees first to take the initiative in managing conduct with regard to corporate ethics and legal compliance, and to consult with a supervisor as soon as an issue arises.

Recognizing that reporting or consulting with supervisors may be difficult, the Company ensures that employees have access to alternative means of reporting and consulting such as via contact points at its offices, plants and labor unions or directly to the secretariat of the Ethics and Compliance Committee via phone or email.

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. There were reports in several countries/regions, and Toray Group is working to resolve the issues, while carefully confirming circumstances in interviews and investigations.

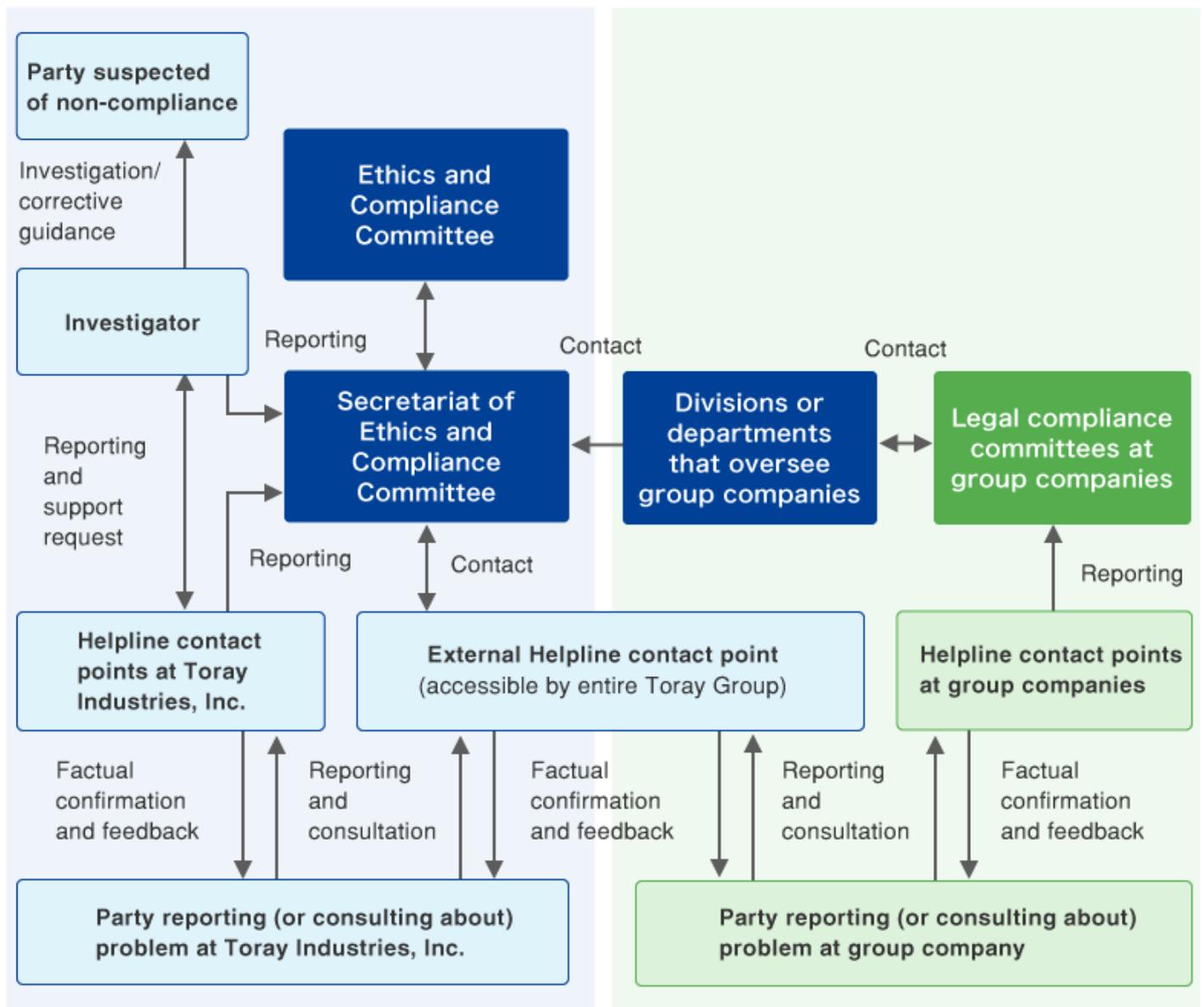
Since fiscal 2016, Toray Industries has also maintained an additional whistle-blowing system for group companies to directly report serious misconduct such as violations of antitrust laws and bribery, and it is working to inform all Toray Group companies about the system.

The number of inquiries (consultations) received through the hotline and the details of the cases are reported to directors by the Ethics and Compliance Committee, which convenes twice a year.

Group companies in and outside Japan that have established a whistle-blowing system

**100%**

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



<sup>1</sup> 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

---

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

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

#### Results in fiscal 2019

# 100%

(including companies under improvement)

In fiscal 2016, Toray Group adopted a group-wide system for self-inspections and mutual internal control audits. Designated divisions of Toray Industries and designated group companies in and outside Japan must receive an internal legal and compliance audit every other year.

In fiscal 2018, Toray Industries undertook an internal legal and compliance audit of the designated divisions of Toray and the designated group companies in Japan. In fiscal 2019, the Company confirmed the improvement status of problems found in the audit, verifying that 100% of the companies had made improvements (including companies under improvement).

Audits are carried out to ensure compliance with the highly important antitrust laws, bribery regulations, whistleblowing systems, and contract signing rules.

To enhance the effectiveness of these legal and compliance audits, the methods are being revised in fiscal 2019, and the new methods will be implemented starting in fiscal 2020.

## Ensuring Tax Compliance

### Governance

### Toray Group Tax Policy

---

With the recent 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 been enhancing 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. Toray Group will continue striving 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 officers) 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 when cooperation is required.

#### Other Initiatives

---

Transfer pricing is becoming more important as global trade increases. The 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

## Improving Security Trade Controls

### Governance

### Watching the Latest Trends and Management Strategies for Security Trade Controls

---

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 2019, 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

---

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**

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 769 employees participated in the 13 courses. The Company also conducted a series of advanced courses for employees with specialized expertise to practice classifications. A total of 127 employees participated in 2 courses. In addition, the Company systematically encourages employees to take the exam authorized by the Center for Information on Security Trade Controls in Japan. 221 Toray Group employees passed the exam in fiscal 2019, bringing the cumulative number of Toray Group employees who have passed the exam to 3,996 persons.

**Cumulative number of Toray Group employees who have passed the exam authorized by the Center for Information on Security Trade Controls in Japan**

**3,996  
persons**

### **(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 began to fully link its security trade control system with its backbone sales system, and put in place a mechanism 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.

## **Antitrust Compliance and Corruption/Bribery Prevention**

### **Governance**

#### **1. Compliance with Antitrust Laws**

The Toray Group Ethics & Compliance Code of Conduct, revised in May 2020, 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.

#### **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. Educational materials on corruption and bribery prevention have also been prepared in Japanese and English for all Group employees.

Fiscal 2019 CSR Activity Report- Corporate Ethics and Legal Compliance

## Protection of Personal Information

### Governance

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 2019, 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.

Fiscal 2019 CSR Activity Reports - Corporate Ethics and Legal Compliance

## Disclosure of Information Regarding the Ethical Treatment of Laboratory Animals

### Governance

Toray Industries, Inc. aims to contribute to the human development and health enhancement through the creation of pharmaceuticals and medical devices.

We believe 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; Refinement (minimization of pain), Reduction (reducing the number of animals used), and Replacement (pursuit of alternatives to animals).

In order to ensure that animal testing is conducted ethically, we have 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.

We have also set up the Animal Care and Use Committee, which carries out ethical and scientific review of all animal testing conducted at the company. All of our staff involved in animal testing receive training in standards of care and ethics on the use of animals in research to ensure appropriate conduct of animal testing based on the 3R principles.

We carry out self-monitoring and evaluation of animal tests to verify that each test is conducted appropriately.

We have received certification from the Health Science Center for Accreditation of Laboratory Animal Care and Use of the Japan Health Sciences Foundation.

Fiscal 2019 CSR Activity Report

## Risk Management

Governance

**Under normal conditions, Toray Group focuses on mitigating risk and preventing crises from occurring. In the event of a crisis, the Group strives 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

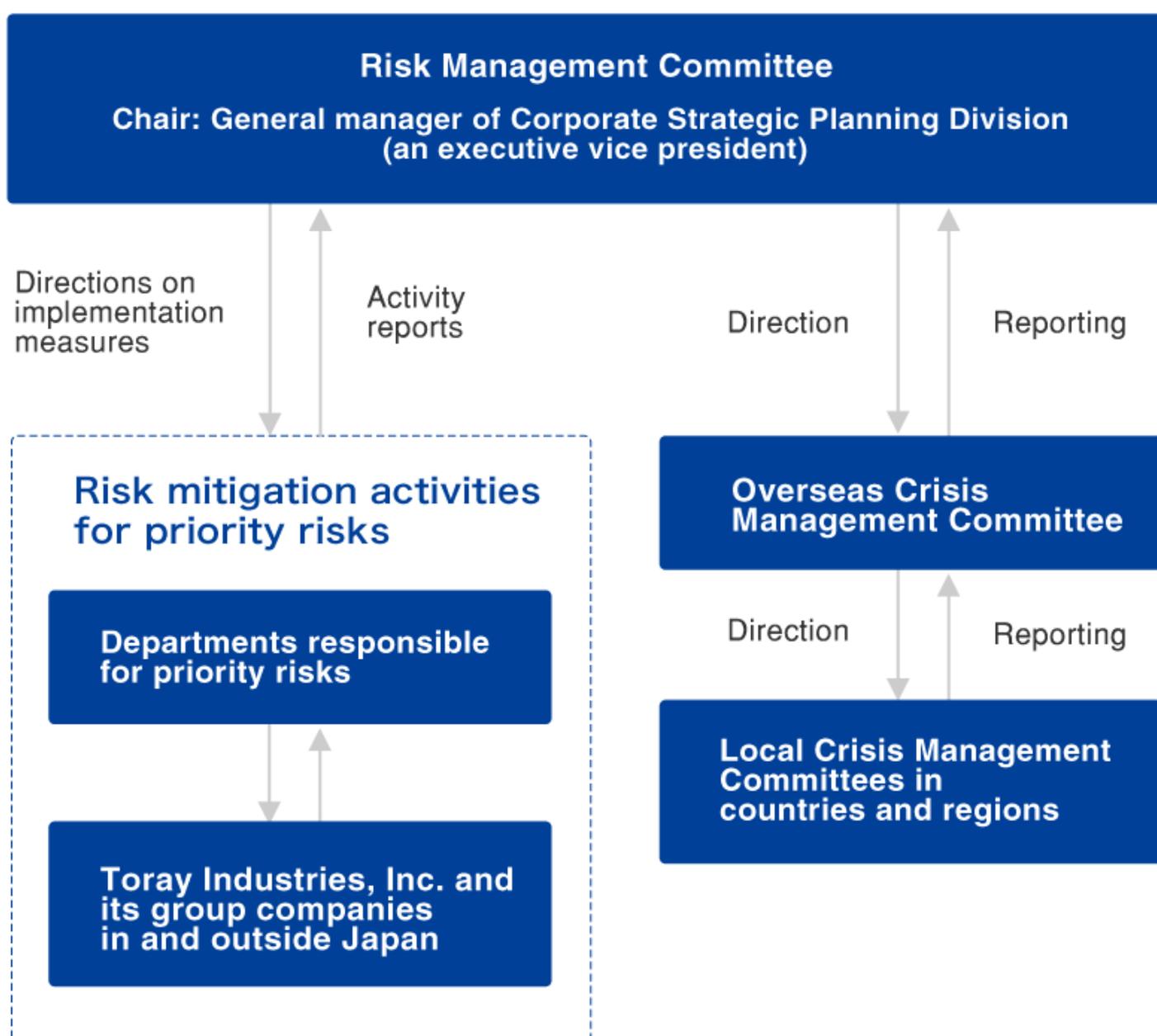
---

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, in April 2018, Toray Industries, Inc. established a dedicated team 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.

## Establishment of Risk Management Committee

In May 2018 Toray Industries established the Risk Management Committee, which is chaired by the general manager of the Corporate Strategic Planning Division (an executive vice president), tasking it 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 (As of June 2019)

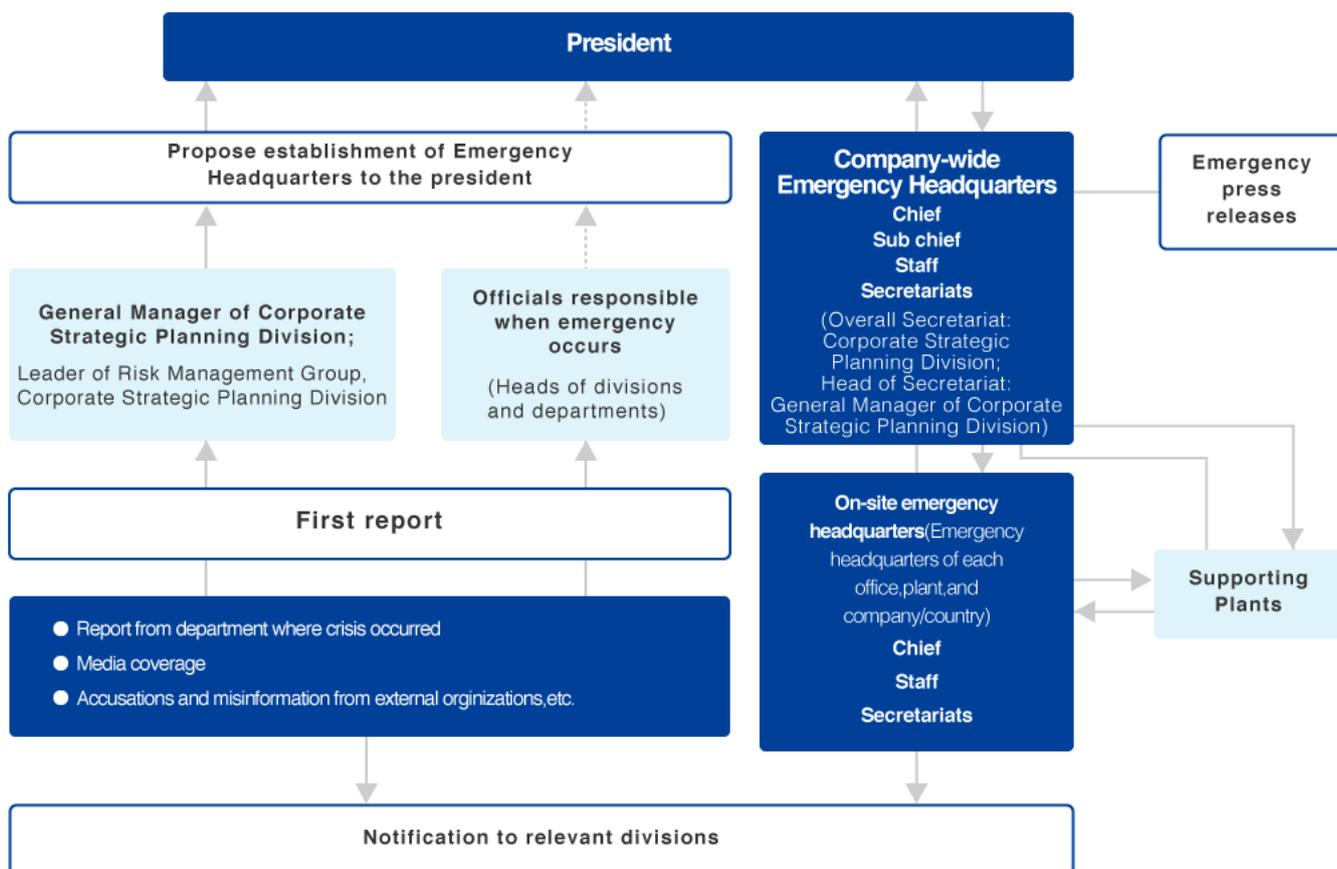


## Strengthening the Emergency Quick Response System

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. The Group recognized that the rapid spread of COVID-19, which emerged at the end of 2019, posed a serious risk to the health and safety of employees and the Group's business continuity. In accordance with its rapid response framework, the Group established a group-wide emergency headquarters on February 7, 2020, headed by an executive vice president. The emergency headquarters is steering the Group's response to COVID-19, implementing the following measures in accordance with the pandemic measures and directives issued by local and national governments in countries where the Group operates.

- Planning for and executing measures to secure the safety of employees
- Monitoring the health status of employees worldwide including in Japan, and responding appropriately to positive cases of COVID-19
- Providing appropriate assistance to Group companies, etc.

### Emergency Quick Response System (fiscal 2019)



# CSR Road Map Targets and Results

---

01

## Strengthen corporate risk management throughout the Toray Group and mitigate risks

---

■KPI

Group companies implementing continuous review of risk management (%)

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

**100%**

02

## Instill greater risk management among employees by rolling out risk management education throughout the Toray Group

---

■KPI

Group companies implementing risk management education (%)

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

**100%**

## Looking to the Future

---

The road map goals are: (1) strengthening corporate risk management throughout Toray Group and mitigating risks; and (2) instilling greater risk management awareness among employees. To achieve these goals, the Group will periodically and routinely identify latent risks in management activities, prevent and mitigate risks, and prevent crises from ever occurring.

During the period of the 6th CSR Road Map, the Group established risk management regulations to form the basis for the risk management activities of group companies in and outside of Japan, and strengthened these activities. Additionally, the Group enhanced its information security including BCP for earthquakes and the cyberattack response, through the implementation of priority risk mitigation activities.

# Risk Management Initiatives

## Governance

### Basic System for Group-Wide Risk Management

- ▼ 1. Periodic risk management (priority risk mitigation activities)
- ▼ 2. Routine risk management (monitoring trends in and outside Japan, identifying, assessing and monitoring risks)
- ▼ 3. Response in the event of a crisis

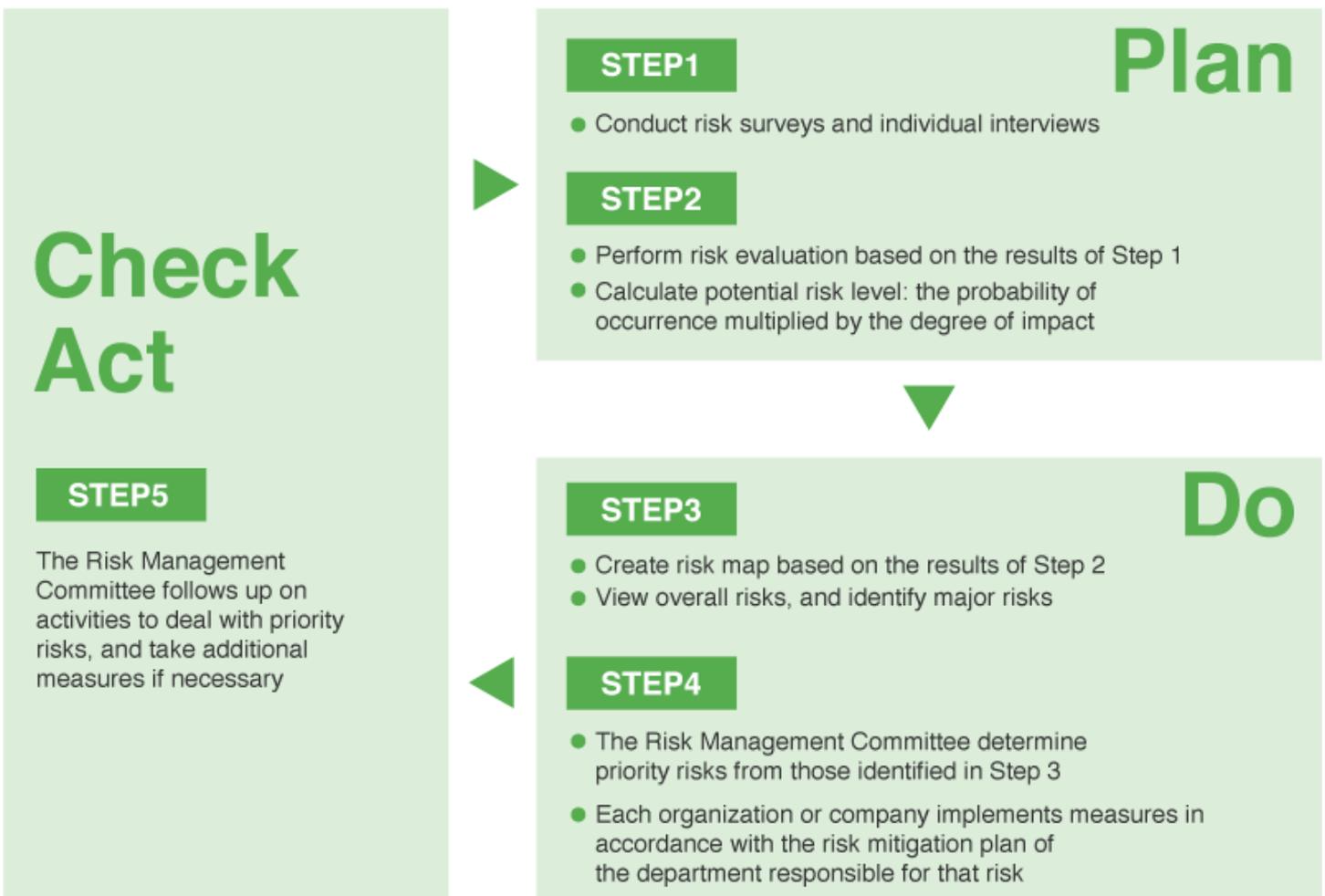
#### Description of Activities

##### 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 identifies important risks after carrying out an assessment to determine the relative importance of each risk. 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 (an executive vice president).

(2) Priority risks are addressed with risk mitigation activities following the PDCA cycle over a three-year period.

#### PDCA Cycle for Group-Wide Risk Management



(3) In the priority risk mitigation activities for the fourth cycle (fiscal 2018-2020), Toray Industries set quality management, earthquake response, information management and socially responsible procurement,<sup>1</sup> among others, as its priority risks. These efforts extend to the Group overall, including group companies in and outside Japan.

<sup>1</sup> For more information, please refer to “Facilitating CSR Initiatives Throughout the Supply Chain”

(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, the results of the annual activities for Toray Group overall are reported to the Risk Management Committee every year, and progress is monitored. 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 implementing continuous review of risk management (%)

■Reporting scope	■Target in fiscal 2019
Toray Group	100%

Result in fiscal 2019

**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.

1. Domestic and overseas demand and product market trends
2. Fluctuations in fuel prices
3. Capital expenditures, joint ventures, alliances and acquisitions, etc.
4. Fluctuations in foreign currency, interest rate, and the securities market
5. Changes in assumptions on which forecasts are based that might affect employee retirement benefit obligations and deferred tax assets
6. Overseas operations
7. Product liability
8. Lawsuits
9. Laws and regulations, taxes, competition policies, and internal controls
10. Natural disasters and accidents
11. Information security risks
12. Environmental issues
13. COVID-19

## Risk Management Education for Employees

---

In order to foster employee awareness of risk management, Toray Group has set a KPI in its Sixth CSR Roadmap of the number of Group companies implementing risk management education. In fiscal 2019, group education on risk management was provided to Toray Group's new employees, newly appointed managers, core managers, and group companies in and outside Japan.

### Group companies implementing risk management education (%)

■Reporting scope	■Target in fiscal 2019
Toray Group	100%

Result in fiscal 2019

**100%**

## Business Continuity Plan Initiatives

### Governance

### Ensuring Preparedness for Major Earthquakes

---

Toray Group maintains a business continuity plan (BCP) for the event of a major earthquake, which has been identified as a priority risk to address.

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 2019, Toray Group companies in and outside Japan 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. In addition, Toray Group has continued to conduct company-wide drills on setting up an emergency response headquarters since fiscal 2012. Toray Group will continue to strengthen its capacity to respond to earthquakes with training and other measures.

Fiscal 2019 CSR Activity Report - Risk Management

## Addressing Information Security Risks

Governance

### Addressing Information Security Risks

---

Toray Group has formulated its Confidential Information Management Regulations and Regulations for the Management of Personal Information for the purpose of protecting confidential information and personal information owned by the Group and of appropriately managing the confidential information and personal information entrusted by suppliers and stored by the Group.

Based on these regulations, the Group established the Corporate Information Security Officer as the officer responsible for the entire Group. The Corporate Information Security Officer discusses and coordinates measures related to enhancing information security with related departments, and promotes their deployment. Under the Corporate Information Security Officer, the Group is working to enhance information security by defining the roles and responsibilities of each division and department, and by establishing an Information Security Committee in each department for their promotion.

In terms of the electronic information security sector, which has been faced with growing risk of late, the Group formulated the Electronic Information Security Standards based on the Confidential Information Management Regulations in order to appropriately manage intellectual property and to implement measures designed to prevent information leaks.

Moreover, each group company formulates basic rules in accordance with regulations and standards of Toray Industries, Inc., and promotes measures related to information security.

### Combating Cyber Attacks

---

Along with thoroughly implementing and enhancing existing initiatives, such as standardizing and automating the settings and security measures of PCs owned by the Group, Toray Group is taking steps that include analyzing and monitoring the content of communications.

Because simply taking steps against increasingly sophisticated cyber-attacks from the stance of IT is insufficient, the Group also enhances education and training initiatives, which include conducting suspicious e-mail response training for all employees.

### Prevent Employees from Leaking Confidential Information

---

In addition to providing information security education for all employees on an annual basis, Toray Group conducts grade-specific training for employees, including new employees and newly appointed managers, in aims of improving security awareness and skill-levels.

Before removing a computer or smartphone from an office, for example, employees must receive permission from a manager, and the actual device must be inspected monthly. Moreover, the Group has established approaches to dealing with the loss of such devices and other similar incidents, and has built mechanisms to minimize damage thereof.

Fiscal 2019 CSR Activity Report

## Human Rights Promotion and Human Resources Development

Social Initiatives

**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, 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.

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 LGBT 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. 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 and to promptly and appropriately addressing issues if and when they arise.

### Toray Group Policy for Human Rights (Adopted 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 in November 2011, 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

---

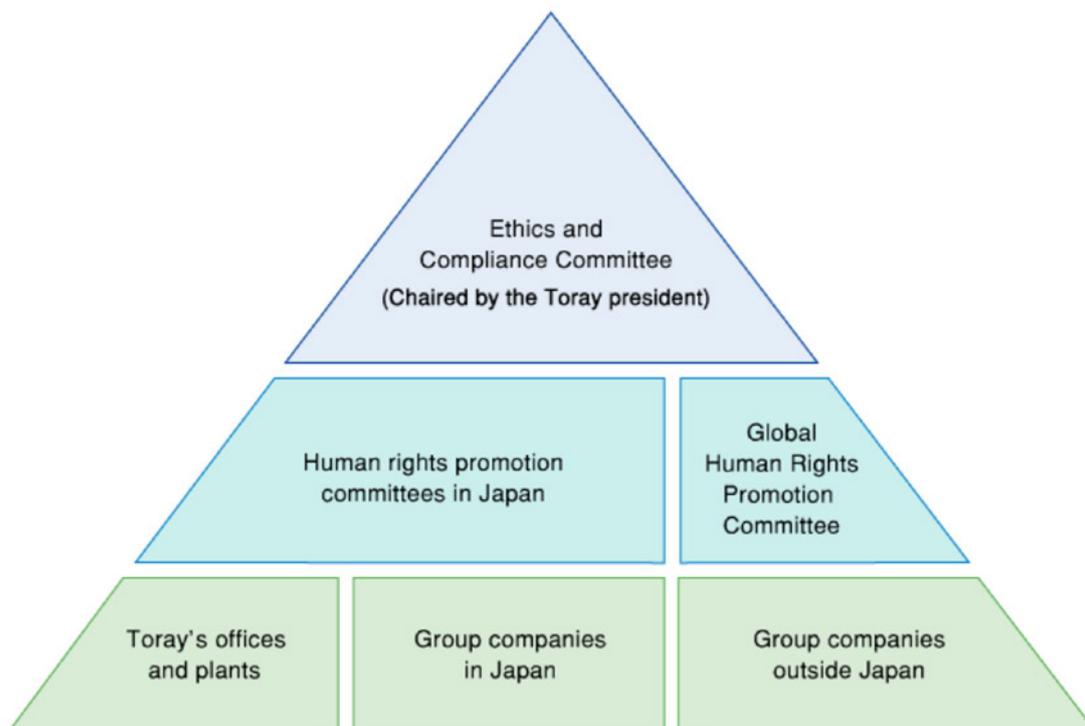
### Human Rights Promotion System at Toray Group

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.**

## Identifying, Assessing and Mitigating Human Rights Risks

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 group employees 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. 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 "Facilitating CSR Initiatives Throughout the Supply Chain."

### Related Information

- [Inquiries concerning CSR initiatives by Toray Group and its business partners](#)
- [Socially Responsible Procurement Initiatives at Toray Group](#)

## 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 Road Map Targets and Results

### Respect for human rights and fair promotion based on ability throughout Toray Group by eliminating discrimination based on race, gender, education, nationality, religion, and physical attributes

[Related material issue for CSR]

- Respecting for human rights

01

■KPI

Group companies implementing human rights education and training (%)

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

100%

02

■KPI

Group companies that have achieved legally mandated employment rate of persons with disabilities (%)

■Reporting scope

Toray Group (Japan)

■Target in fiscal 2019

100%

Result in fiscal 2019

61.3%

03

■KPI

Women in management positions (%)

■Reporting scope

Toray Industries, Inc.

Result in fiscal 2019

5.1%

## 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

### [Related material issues for CSR]

- Creating a positive workplace
- Securing and developing human resources

**04**

#### ■KPI

Group companies that have adopted a medium-term human resource plan (%)

#### ■Reporting scope

Toray Group

#### ■Target in fiscal 2019

100%

**Result in fiscal  
2019**

**100%**

**05**

#### ■KPI

Number of core staff outside Japan who participate in training courses

#### ■Reporting scope

Toray Group (Outside Japan)

**Result in fiscal  
2019**

**212persons**

**06**

#### ■KPI

Training expenditures per employee (yen)

#### ■Reporting scope

Toray Industries, Inc.

**Result in fiscal  
2019**

**96,821yen**

**07**

#### ■KPI

Available annual paid leave used by employees (%)

#### ■Reporting scope

Toray Industries, Inc.

**Result in fiscal  
2019**

**96.0%**

## Looking to the Future

---

### **Committed to Human Rights**

During the 6th Roadmap period (fiscal 2017-2019), efforts were made throughout Toray Group to improve awareness of the need to protect human rights. They were 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 2020.

### **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.

# Human Rights Activity Report

Social Initiatives

## Human Rights Training



Toray Industries, Inc. holds human rights promotion campaigns annually to help increase awareness and understanding of human rights issues. In fiscal 2019, the campaign focused on the human rights sensitivity of every person, harmony in the workplace, and considerate communication. 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 LGBT 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 2019, the plan for the Human Rights Promotion Section Manager to visit the Company's offices and plants and provide training for members of the Human Rights Promotion Committee as part of the campaign was canceled due to the COVID-19 pandemic. The sites that did not receive the workshops in fiscal 2019 conducted their own equivalent training during the first half of fiscal 2020. In March 2020, the Company held an annual e-learning program on corporate ethics and legal compliance for human rights targeting all employees (95.5% of employees completed the program).

For group companies in Japan, the manager of Toray Industries' Human Rights Promotion Section held training sessions on human rights for labor managers and supervisors (55 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 2019 Human Rights Training and Seminar

Type of training		Number of sessions	Number of participants
Toray Industries, Inc.	Training at head office	19	848
	Training at offices and plants	1,671	18,520
	Training at outside company	41	83
Group companies in Japan	Training at companies	163	11,053
	Training at outside company	191	268

**Total amount of time dedicated to training**

**1,005 hours**

Note: The number of training hours provided by the head office of Toray Industries decreased from the previous year due to the COVID-19 pandemic. Some training was instead provided by the offices and plants themselves.

## Response to Reports and Consultations on Human Rights

---

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 worked together to promptly and appropriately respond to the reports and consultations on human rights received by the Corporate Ethics and Legal Compliance Helpline.

The number of reports and consultations received, an overview, and the results of the response to them were reported to the Ethics and Compliance Committee, the Human Rights Promotion Committee in Japan, and the Global Human Rights Promotion Committee. Through Toray Group's human rights education in Japan, we 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 .

# Securing and Developing Human Resources to Create New Value



Social Initiatives

## Training expenditures per employee

■Reporting scope  
Toray Industries, Inc.

Result in fiscal 2019

**96,821** yen

## 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 diverse human resources, in order to drive the globalization of its business. 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.

### Number of Employees Hired in Fiscal 2017 - 2019 (Toray Industries, Inc.)

Result		2017	2018	2019
New graduates	Men	184	225	244
	Women	32	41	44
	Total	216	266	288
Mid-career	Men	97	55	35
	Women	22	17	9
	Total	119	72	44

## Systematic and Effective Training

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.

Over the recent years, Toray Industries has concentrated on enhancing and expanding its development of global human resources through Overseas Training for Young Employees, the Toray Global English School, and Business English Intensive Training, as well as through joint sessions of the Toray Management School and Toray Group Senior Management Seminar. The Company also implements the Global Diversity Seminar for non-Japanese employees working at Toray Industries. In fiscal 2019, training expenditures per employee at Toray Industries stood at 96,821 yen.

In addition to training, the Group is adopting diverse 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 2019 Training Program at Toray Industries

	Management	Technical	Sales, marketing, and administration	Global	General
<b>Directors</b>	Director Training			Toray Group Executive Seminar	
<b>Division and department managers</b>	Management Training for General Managers Department manager training			Toray Group Senior Management Seminar	
<b>Section managers</b>	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	
<b>Non-Managerial Senior Level</b>	Management Training for Supervisors	Training to Become Leaders in Technology Development Mid-Level Engineer Strategy Training	Marketing and Merchandising Strategy Training	TES Toray Management and Technology Training	
<b>Non-Managerial Junior Level</b>	Toray School of Technology and Business Administration	Second Technical Training First Technical Training Management Technology Seminars Open Patent Seminar	Second Sales/Marketing Training First Sales/Marketing Training Sales/Marketing Practical Seminars Senior/Junior Accounting Seminar	Global Diversity Seminar Business English Intensive Training	
<b>Newly-Hired Employees</b>	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 2019 (Toray Industries, Inc.)

Training category	Persons enrolled			Time dedicated to training per employee (hour) <sup>1</sup>
	Men	Women	Total	
Management	741	82	823	42.4
Technical	560	50	610	29.4
Sales, marketing, and administration	250	77	327	24.9
Global	233	57	290	38.1
General	134	38	172	15.1
Total	1,918	304	2,222	35.0

<sup>1</sup> Time dedicated to group training at the Toray Human Resources Development Center. It does not include time for correspondence learning or study abroad, etc.

## Personnel System (Toray Industries, Inc.)

Management-by-objectives system <sup>2</sup>	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 <sup>2</sup>	Designed to facilitate a fair appraisal of employee contributions in terms of duties, responsibilities, capabilities, and performance <sup>3</sup> .
Individual meeting system <sup>2</sup>	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.

<sup>2</sup> 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

<sup>3</sup> Including CSR initiatives

## Development of Future Management Candidates for Toray Group

### Group companies that have adopted a medium-term human resource plan(%)

■Reporting scope	■Target in fiscal 2019
Toray Group	100%

Result in fiscal 2019

**100%**

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.

Toray Group has been working on a succession plan and personnel development plan based on a medium- and long-term perspective and drawing up a medium-term human resources plan and practicing systematic personnel assignment 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 national staff at group companies outside Japan.

In fiscal 2019, the Group began using a new personnel information system to formulate medium-term human resource plans and better implement HR initiatives.

### Strategies for Developing Future Management Candidates

Program	Participants	Purpose	Year started	Total participants through FY2019
Management Training for General Managers	Division and department managers of Toray Industries, Board members/officers of group companies in and outside Japan	Develop management leaders at Toray Industries and group companies	2013	147
Toray Management School	Section managers of Toray Industries	Develop future management candidates at Toray Industries and group companies	1991	560
Toray Group Management School	Department managers of group companies in Japan	Develop management candidates focusing on group companies in Japan	2006	285
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)

**1,090**

## **Toray Global HR Management ("G-HRM") Fundamental Policy** Established November 2011

True to its 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 focuses on recruiting, retaining, and developing employees with high aspirations for the Toray Group, with the understanding that "Human Resources" are the most important asset in management.

As Toray Group continues to promote further business growth and expansion, 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 promoting individual career development, implementing timely assessments of development progress, 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 highly capable staff who understand and support Toray's corporate philosophy, regardless of nationality.
- (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 Japan.

### **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 enhance motivation of average-level performers who contribute to their team.

### **4. Continue various management methods to further strengthen the company's business structure**

- (1) Conduct head-count management and labor cost management as an entire company in a detailed and uniformed way.
- (2) Always sustain a flat, effective organizational structure and control the appropriate proportion of managerial staff.
- (3) Maintain and strengthen competitiveness through the appropriate utilization of diversified human resources such as contract employees, temporary staff sent from agencies, and external resources.

## Developing and Promoting Staff at Overseas Group Companies

---

### Number of core staff outside Japan who participate in training courses

■Reporting scope

Toray Group (Outside Japan)

Result in fiscal 2019

**212**persons

Toray Group regards the development of core staff at its overseas group companies as one of its priority management objectives. The Group makes active efforts to promote employees locally hired at these companies to executive management positions, as well as to key posts and management positions at Toray Industries' head office. In fiscal 2019, at Toray Industries, five core staff outside Japan help manage Toray Group, serving in senior director (riji) positions.

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. In addition, the Group is systematically fostering human resources by offering career development opportunities such as domestic and international job rotations.

## Training Courses Held for Core Staff outside Japan in Fiscal 2019 (Toray Group)

### Japan-based courses

Training program	vManagerial category	Number of participants
Toray Group Senior Management Seminar	Department managers	12
Toray Trainee Program	Section managers	27
National Engineer Key Person Training	Section managers	5
Toray Management & Technical Training	Unit managers	3
Total number of employees receiving training		47

### Courses held outside Japan

Training program	vManagerial category	Number of participants
Toray Group U.S. Senior Management Seminar	Department managers	20
Toray Group U.S. Management Training	Section managers	20
Toray Group EU Senior Management Seminar	Department managers	12
Toray Group EU Management Seminar	Section managers	8
Toray Group Indonesia Management Seminar	Department managers / section managers	38
Toray Group Malaysia Management Seminar	Department managers/section managers	45
Toray Group Korea Senior Management Seminar	Department managers	22
Total number of employees receiving training		165



Toray Group Senior Management Seminar for core staff outside Japan



Toray Trainee Program for core staff outside Japan

**Number of core staff members outside Japan who participated in management training courses held in their countries/regions in fiscal 2019 (cumulative total)**

**165**

## Promoting Diversity

### Social Initiatives

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

### Women in management positions (%)

■ Reporting scope

Toray Industries, Inc.

#### Result in fiscal 2019

**5.1%**

(As of April 2020)

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 2020, women held 9.7% of unit manager or higher positions and 5.1% 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.

In fiscal 2016, Toray Industries developed an action plan to increase the percentage of female employees promoted to managerial positions by focusing on individualized career plans and awareness of career development based on Japan's Act on Promotion of Women's Participation and Advancement in the Workplace, which was enacted on April 1, 2016. Under this action plan, the Company has set the following target, on average, for the five-year period from fiscal 2016 to fiscal 2020: ensuring a women's promotion rate that is at least 80% that of men.<sup>1</sup> This figure is the Japanese Ministry of Health, Labour and Welfare's yardstick for determining whether or not excessive discrepancy exists based on gender. Specifically, Toray Industries will take the following measures to achieve this goal:

- Request individualized career plans each year to be faithfully followed;
- Conduct morale surveys every other year and follow up on issues requiring attention; and
- Bolster training designed to raise awareness of career building.

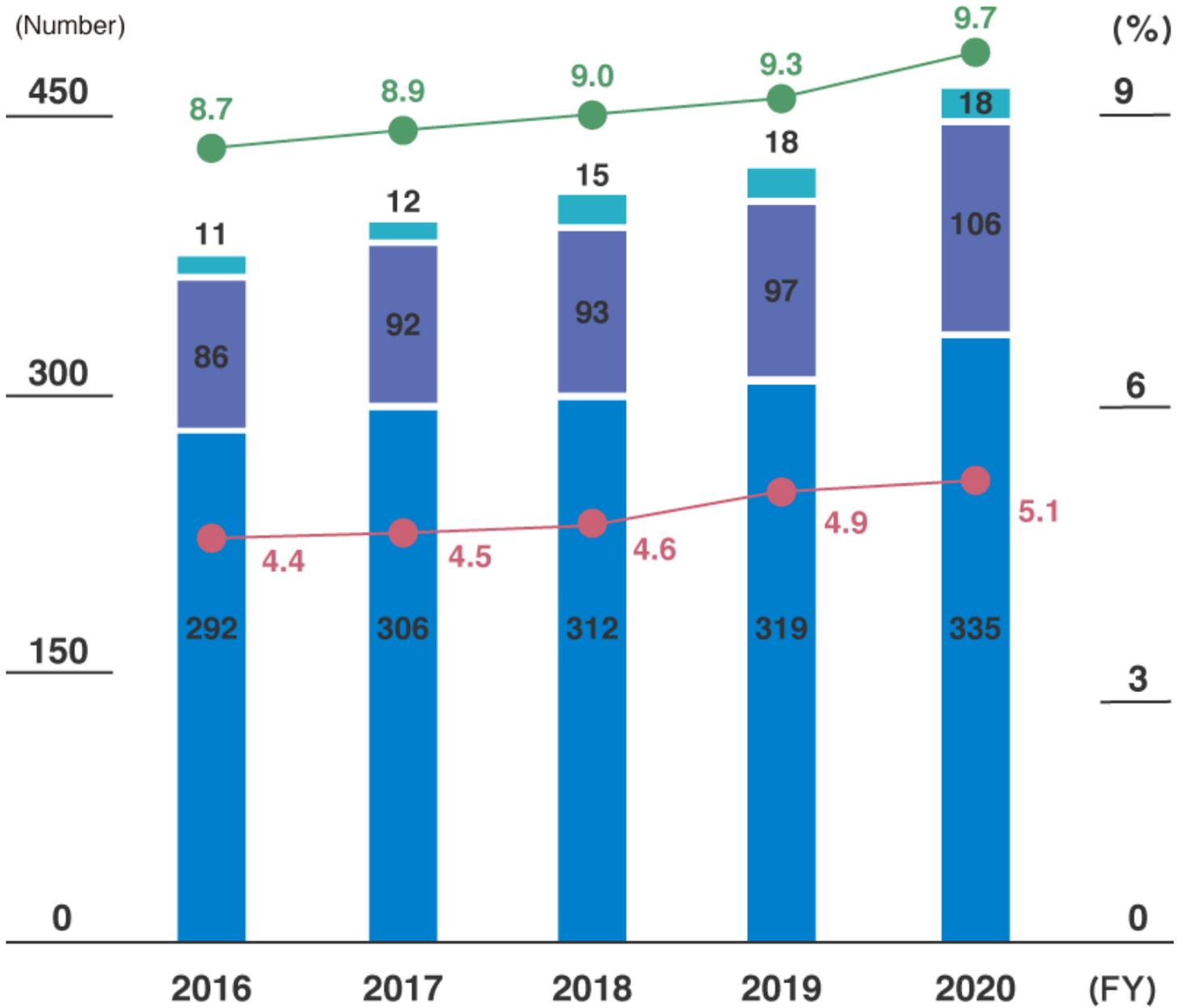
<sup>1</sup> Promotion rate of women to managerial positions compared to that of men = Percentage of female employees promoted to managerial positions / Percentage of male employees promoted to managerial positions  
Percentage promoted to managerial positions = Individuals promoted to managerial positions / No. of employees who were initially hired into the G Course who are eligible for promotion to managerial position that year

Number of Women in Management Positions and Women as a Percentage of Total Management (Toray Industries, Inc.)

■ Department manager
 ■ Section manager
 ■ Unit manager

● Percentage of women in section manager or higher positions

● Percentage of women in unit manager or higher positions



Note: As of April each year

## Promoting Communication Among Women in the Workplace

---

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 five times as of fiscal 2019. 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.

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 addition, 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, will continue to be held at all plants in fiscal 2019 and beyond.

## **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 2016<sup>1</sup>

**Purpose** Purpose: The meetings were held at plants; women shared their opinions on work situations and the issues they face, and these were summarized.

<sup>1</sup> 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 course<sup>2</sup> track and for raising interest in participating. Measures to improve these issues were considered and proposed in line with conditions at each plant.

<sup>2</sup> 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 general manager of the Personnel & Industrial Relations 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 general manager 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.

### 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.

By the end of fiscal 2019, the stories of 27 employees were posted on this website under the title of “Does This Help? My Story.” 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.

## Employment of Persons with Disabilities

### Group companies that have achieved legally mandated employment rate of persons with disabilities (%)

■ Reporting scope  
Toray Group (Japan)

■ Target in fiscal 2019  
100%

Result in fiscal 2019

**61.3%**

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 2019, Toray Industries met Japan's legally mandated employment rate of persons with disabilities, as did 61.3% 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 Group will continue to 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.

## Creating a Positive Workplace for Employees

Social Initiatives

### Available annual paid leave used by employees (%)

■Reporting scope  
Toray Industries, Inc.

Result in fiscal 2019

**96.0%**

Toray Industries, Inc. 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, Labor and Welfare. 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.

After acquiring the certification, Toray Industries revamped its child care support systems in June 2010 in an effort to encourage male employees to make use of them. Then in April 2011, the Company launched the Toray Smile Support Program,<sup>1</sup> a point-based system that lets employees choose from various programs that provide financial assistance for childcare and purchasing homes. The Company initiated a telecommuting program in April 2012, aimed at making it easier for employees to work while raising children or caring for family members (the scope was expanded in October 2019).<sup>1</sup> Toray Industries also expanded the scope of its commuting allowance for taking the bullet train in October 2012. In April 2013, the Company improved its 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. In July 2016, Toray Industries expanded its leave provisions for employees requiring special consideration as caregivers, and in January 2017, it eliminated restrictions on the number of times that employees can use long-term family care leave and lower-hour work schedule systems for caregivers. In July 2017, the Company started a flextime system without core-hour requirements for employees at the Tokyo and Osaka head offices. In April 2020, Toray Industries started to allow use of paid annual leave on an hourly basis.



<sup>1</sup> Available to regular employees.

## Major Support Systems for Employee Work and Family Life Balance

Category	Description
Long-term childcare leave	<ul style="list-style-type: none"> <li>• Available for employees using child care center services up to the end of the month in which the child turns two years of age</li> </ul>
Lower-hour work schedules for childcare	<ul style="list-style-type: none"> <li>• 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</li> <li>• May be used concurrently with flextime system</li> </ul>
Long-term family care leave	<ul style="list-style-type: none"> <li>• Available for a total of 365 days per situation requiring leave to provide care</li> <li>• May be split up</li> </ul>
Spouse's childbirth leave	<ul style="list-style-type: none"> <li>• Available for three days in the event that an employee's spouse gives birth</li> </ul>
Lower-hour work schedules for caregivers	<ul style="list-style-type: none"> <li>• May be taken multiple times per situation in the three-year period following the first day of use</li> <li>• May be split up</li> <li>• May be used concurrently with flextime system</li> </ul>
Leave to care for sick children	<ul style="list-style-type: none"> <li>• 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</li> <li>• Days not taken by the end of the fiscal year may be rolled over to the following fiscal year.</li> </ul>
Family care leave	<ul style="list-style-type: none"> <li>• Five days per year of leave available per family member</li> <li>• At maximum five additional days per year available when no other appropriate caregiver is available on those days</li> </ul>
Toray Smile Support Program	<ul style="list-style-type: none"> <li>• Welfare point system offering a selection of programs with an emphasis on providing support for childcare and home acquisition</li> </ul>
Childcare services payment assistance	<ul style="list-style-type: none"> <li>• Childcare coupons offering a 70% discount on services provided by participating companies issued as an additional Toray Smile Support Program service</li> <li>• No restrictions on number of coupons or age of participating employee's child</li> </ul>
Telecommuting program	<ul style="list-style-type: none"> <li>• Available for employees who meet certain requirements and have a family member requiring care or a child through the end of the fiscal year in which the child is in the third grade of elementary school</li> <li>• Available up to two days (15 hours) per week and no more than a maximum of six days (45 hours) per month for approved employees</li> </ul> <p>Note: In addition to the conditions above, in 2020, the program was also used to address the COVID-19 pandemic.</p>
Registration system for reemployment	<ul style="list-style-type: none"> <li>• 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</li> <li>• 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.</li> </ul>

Category	Description
Commuting allowance for bullet train or other limited express travel	<ul style="list-style-type: none"> <li>• 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</li> <li>• In certain cases, employees may be required to pay a part of the commuting expenses out of pocket.</li> </ul>

Note: Toray Group employees working near Nihonbashi in Tokyo can use a local consortium-based child care center (Kids Square Nihonbashi Muromachi).

#### Utilization of Childcare and Family Care Leave Systems (Toray Industries, Inc.)

FY		2015	2016	2017	2018	2019
Employees taking childcare leave	Women	53	64	68	58	60
	Men	3	4	3	4	10
Employees taking family care leave	Women	1	2	0	5	3
	Men	4	1	1	1	1

#### Notes:

1. Figures show the number of employees taking leave in each year.
2. Rate of employees returning to work from leave since fiscal 2018-2019
  - (1) Employees taking childcare leave: Women 100%, Men 100%
  - (2) Employees taking family care leave: Women 100%, Men 100%

**Number of Employees Who Returned to Work after Childcare Leave and Family Care Leave (Toray Industries, Inc.)**

		FY2018		FY2019	
		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	63	100%	50	100%
	Men	6	100%	11	100%
Family Care Leave	Women	3	100%	3	100%
	Men	0	-	2	100%

**Employees taking leave for spouse's childbirth (Toray Industries, Inc.)**

FY	2017 (program introduced in October 2017)	2018	2019
Number of employees	157	234	254

As part of its commitment to workplace innovation, Toray Industries makes provisions to help employees balance work and family life. Since fiscal 2008, regular workplace discussions are held in each workplace to raise awareness of different working styles, and working late at night or on holidays is prohibited, in principle. All lights in the workplace are turned off at a certain time at night, and company-wide "no overtime days" take place one day each month. The Company has been working on ongoing initiatives to reduce overtime hours and encourage employees to take annual paid leave. (Employees used 96.0% of available annual paid leave in fiscal 2019).

In fiscal 2010, Toray Industries set up a Work-Life Balance Committee and, in fiscal 2020, changed its name to the AP-G 2022 Labor-Management Committee.

At the committee, representatives of labor and management review and discuss measures on a variety of themes with a view to supporting balance between work and family life, building workplace environments that facilitate diverse working styles, preventing overwork and reducing excessive working hours, and enhancing mental healthcare. The committee is working on further improvement and operation of the system by following-up on the total actual working hours of each employee.

## 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 aggregate health information on the intranet, 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 February 2020, Toray Industries was listed as a White 500 Company in the Certified Health and Productivity Management Organization Recognition Program.

## 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 above. In addition to briefing the union on management information about Toray Group, the meetings facilitate ongoing dialogue with the union. Resolution of labor issues is undertaken at separate Labor and Management Council meetings. As of March 2020, Toray Workers' Union membership stood at 8,561 workers.

Fiscal 2019 CSR Activity Report

## Product Safety and Quality

Social Initiatives

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



### Basic Approach

---

To live up to its "customer first" and "quality first" commitments, Toray Group has established policies on product safety and quality assurance, 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 safety and quality of its products throughout its business activities.

The Medium-Term Management Program, Project AP-G 2019, directs Toray Group to pursue innovation and proactive management to achieve growth, and this hinges on securing product safety and quality. The Group continued to address individual areas for improvement and execute product safety measures in fiscal 2019.

## Related Policies

### **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.

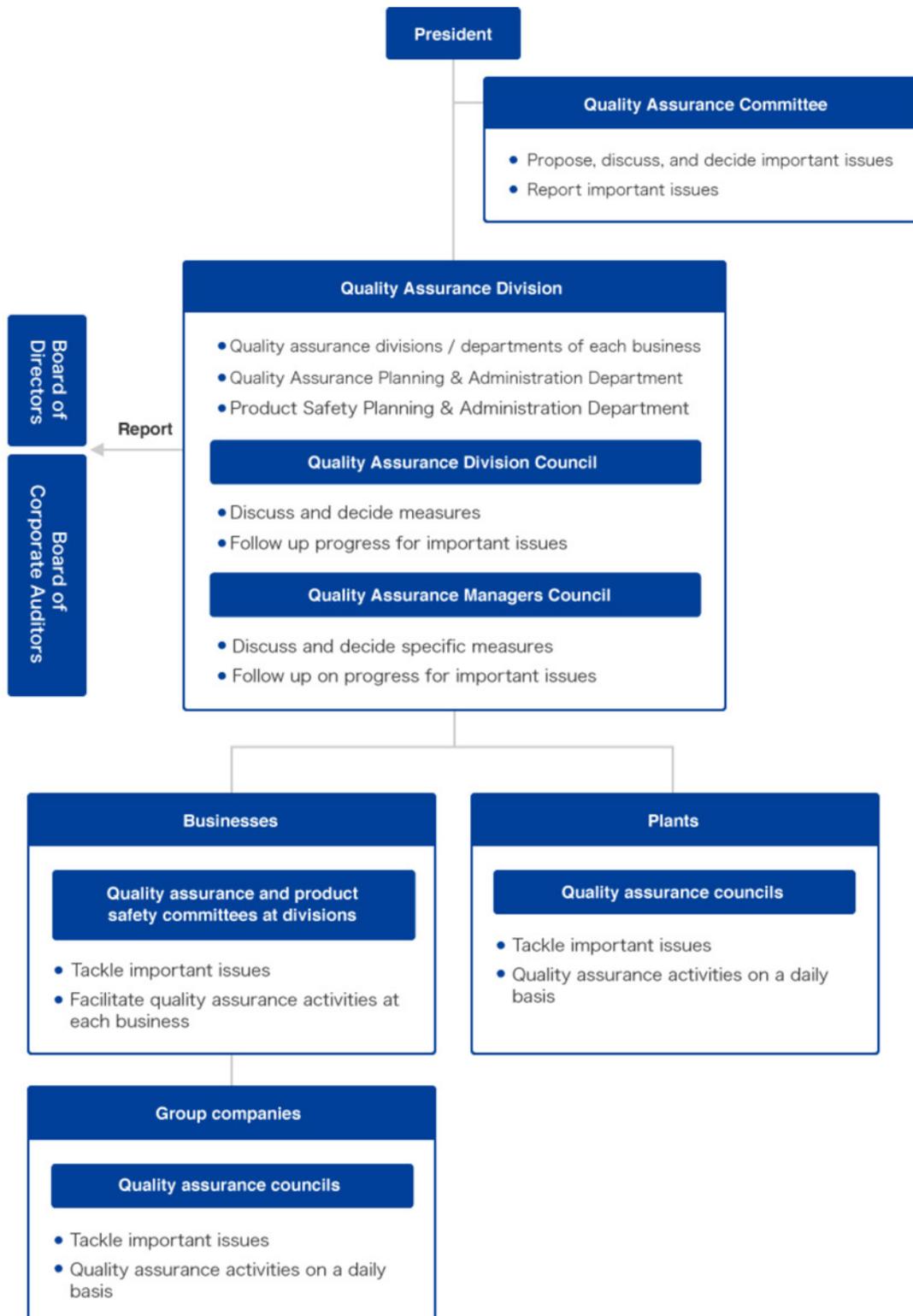
## Structure

---

### **Framework for Quality Assurance**

The quality assurance framework of Toray Industries, Inc. is shown in the diagram below. The Quality Assurance Managers Council promotes and implements the annual group-wide quality assurance themes that are 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 Managers Council, breaking them down into action items that are designated every year for implementation. Production, technology, and sales departments cooperate to tackle quality assurance issues and raise the level of activities.

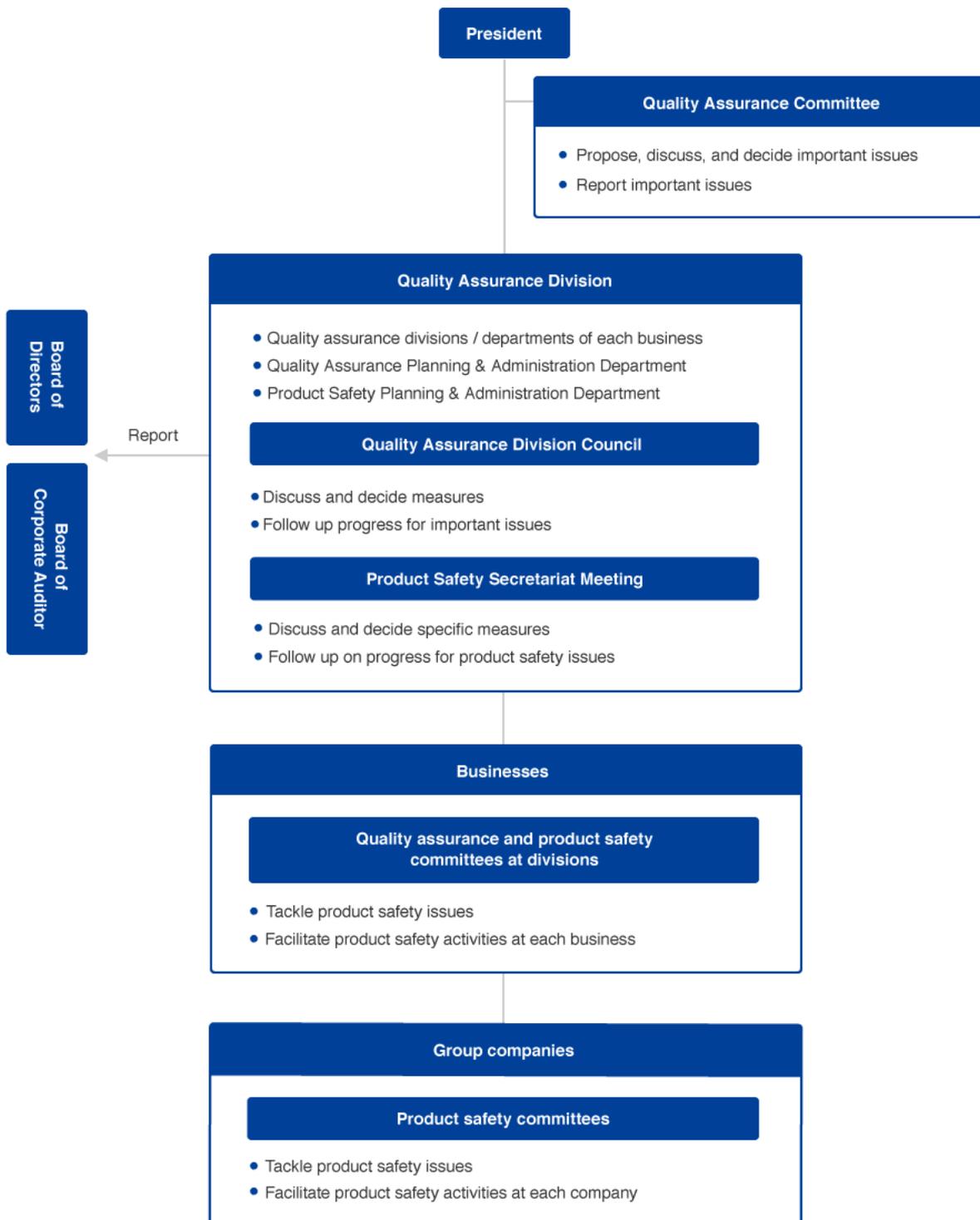
## Framework for Quality Assurance



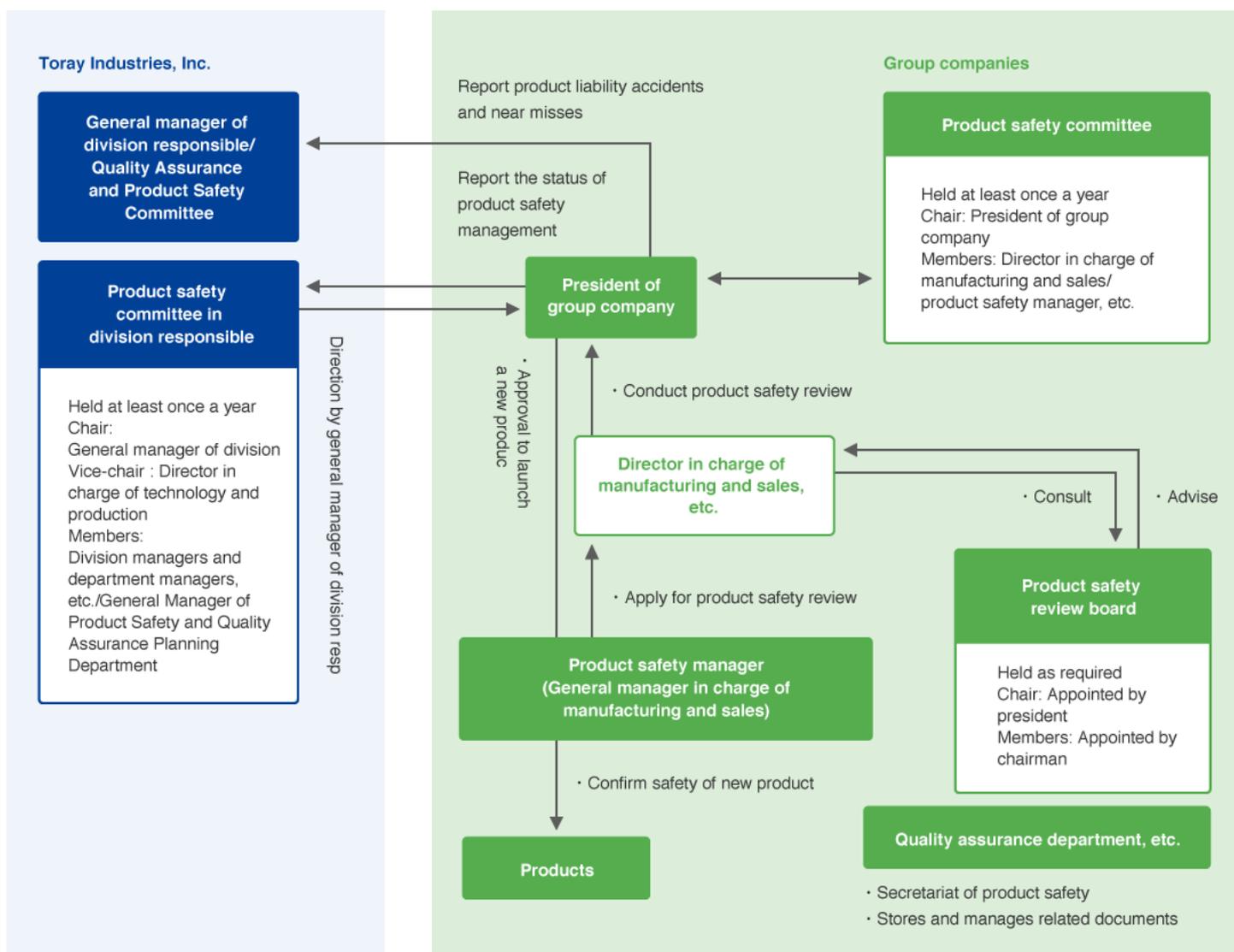
## Framework for Product Safety

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, with Toray Industries taking its turn to conduct self-inspections in fiscal 2019.

# CSR Road Map Targets and Results

---

01

## Achieve zero product accidents

[Related material issue for CSR]

- Ensuring product safety and quality

■KPI

Number of product accidents

■Reporting scope

Toray Group

■Target in fiscal 2019

0

Result in fiscal 2019

0

02

## Enhance the group-wide framework for product safety and quality assurance

■KPI

Group companies implementing product safety and quality assurance education (%)

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

100%

## Looking to the Future

---

In fiscal 2020 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 product safety and quality assurance.

## Initiatives for Product Safety and Quality Assurance

### Social Initiatives

### Reinforcing Compliance in Product Quality Assurance

---

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

The Group provides guidance to business divisions and group companies regarding their quality assurance frameworks, and audits the effectiveness of these frameworks and the work done under them. The organizations clarify their vision for quality assurance and design initiatives to close the gap between the vision and actual performance.

2. Development of human resources and creation of workplace culture not allowing any misconduct

The Group implements education on compliance in quality assurance. It has already been completed at Toray Industries, Inc. and group companies in Japan, and is underway at group companies outside Japan in fiscal 2020.

3. Review and adjustment of actual contracts with customers regarding quality (assurance)

The Group conducted an overall review of agreements based on guidelines for quality assurance agreements that were established in fiscal 2019, and is optimizing the provisions as needed.

4. Appropriate “maintenance or control” and “modernization or fulfillment” of measuring devices. Based on risk assessment sheets for judging the necessity of replacement or maintenance of measuring devices, Toray Group creates and implements a plan to replace the devices appropriately.

5. Improvement of quality data management system to not allow any misconduct

The Group is 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 Product Safety and for Quality Assurance

---

### Group companies implementing product safety and quality assurance education

■Reporting scope

Toray Group

■Target in fiscal 2019

100%

Result in fiscal 2019

**100%**

Toray Industries provides training every year for newly appointed department and section managers at the Company and its group companies in Japan. The training is designed to educate managers about quality assurance compliance and Toray Group's quality assurance and product safety initiatives. Since fiscal 2013, all group companies around the world have conducted original product safety and quality assurance training tailored to their operations.

### Enhancing Product Safety Reviews

---

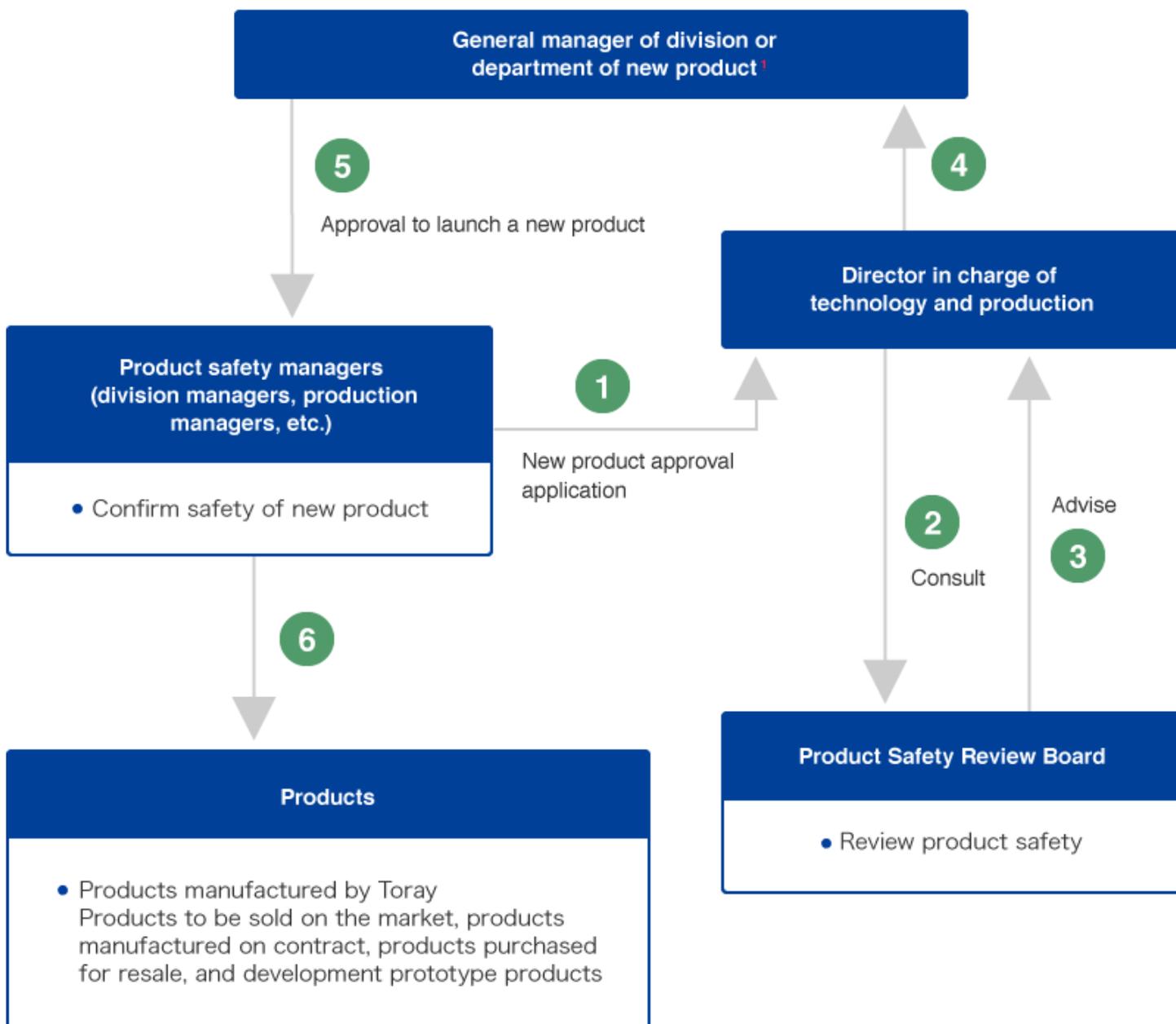
Toray Industries and its group companies implement product safety reviews for all products. In addition to addressing product safety, the reviews examine the adequacy of information provided to customers via, for instance, safety data sheets (SDS), labeling, and instructions. Products are also assessed 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.

The 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.)



<sup>1</sup> At group companies in and outside Japan, this position is held by the president or a director

## Preventing Product Accidents

---

### Number of product accidents

■ Reporting scope

Toray Group

■ Target in fiscal 2019

0

### Result in fiscal 2019

0

## 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 Excerpted from the Consumers International website

- 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

Fiscal 2019 CSR Activity Report - Product Safety and Quality

## Sites with ISO 9001 Certification

Social Initiatives

### Sites with ISO 9001 certification (as of June 2020)

---

#### Toray Industries, Inc.: All 13 plants

Shiga, Seta, Ehime, Nagoya, Tokai, Aichi, Okazaki, Mishima, Chiba, Tsuchiura, Gifu, Ishikawa, Nasu

#### Group companies in Japan: 22 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 Amenity and Civil Engineering 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 Advanced Film Co., Ltd., Toray KP Films Inc., Toray Carbon Magic Co., Ltd., Suido Kiko Kaisha, Ltd.

#### Group companies outside Japan: 39 companies

##### USA

Toray Plastics (America), Inc., Toray Fluorofibers (America), Inc., Toray Membrane USA, Inc., Zoltek Companies, Inc., TCAC

##### 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.

##### 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.

**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

**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 (Suzhou) Co.,Ltd., Toray Plastics (Chengdu) Co., Ltd., Toray Plastics Precision (Zhongshan) Ltd., Toray Film Products (Zhongshan) Ltd.

**Republic of Korea**

Toray Advanced Materials Korea Inc., STEMCO, Ltd., Toray Battery Separator Film Korea Limited.

**Taiwan**

Toray Advanced Film Kaohsiung Co., Ltd.

Fiscal 2019 CSR Activity Report

## Facilitating CSR Initiatives Throughout the Supply Chain

Social Initiatives

**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 companies.**



### 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, the CSR Procurement Guidelines specify the Group's commitment to building a supply chain that not only ensures quality and stable supply of products, but also incorporates ethical, social, environmental, and human rights considerations. The Group seeks the understanding of suppliers in this effort.

## Related Policies

### **CSR Procurement Guidelines** Revised December 2004

1. Establish an internal CSR organization and be committed to CSR
2. Work to enhance corporate ethics and comply fully with all laws and regulations
3. Position safety, accident prevention, and environmental preservation as a management priority and practice green procurement and purchasing whenever and wherever possible
4. Put crisis management systems into place, including capabilities for responding swiftly in unexpected situations, and disclose accurate information
5. Encourage dialogue and cooperation among all stakeholders
6. Ensure product safety as a precondition for supplying products
7. Respect human rights, eliminate discrimination, and improve workplace environments; prohibit forced labor, slave labor, child labor, and unfair low-wage labor
8. Maintain the confidentiality of information and respect others' intellectual property rights

## 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, legal compliance, environmental protection, respect for human rights, and quality improvement.

## Related Policies

### **Basic Purchasing Policies** Revised December 2004

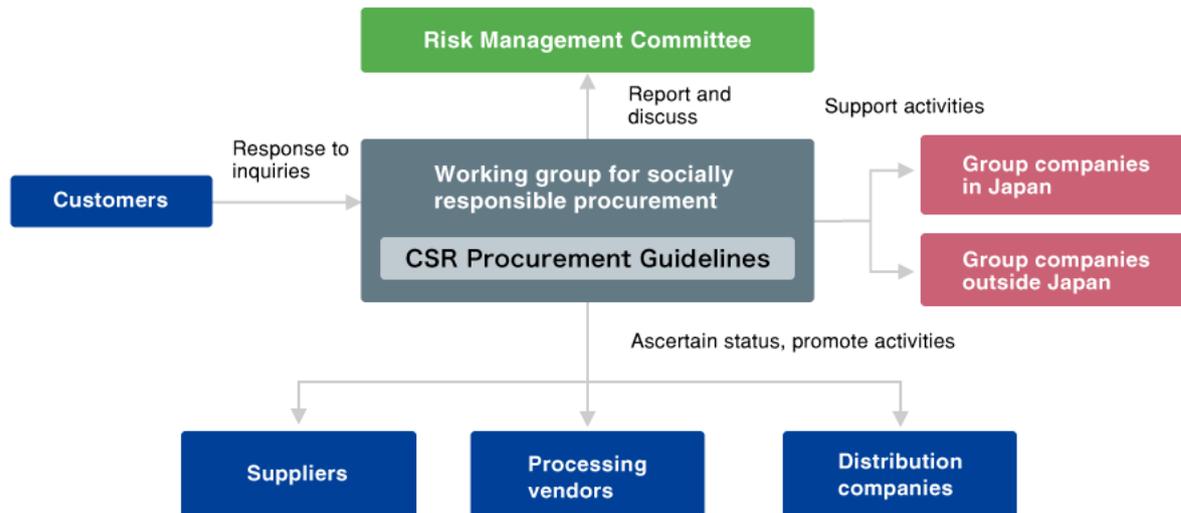
1. Toray does its utmost to select suppliers and determine actual purchases fairly and on the basis of economic rationality, with consideration for price, quality, capability to provide stable supplies, technological capabilities, reliability, and other factors.
2. In selecting suppliers, Toray opens 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. In making purchases, Toray complies with relevant laws and regulations while taking environmental preservation and fulfilling corporate social responsibility (CSR) issues into account. Toray actively pursues green procurement and purchasing as part of its environmental efforts.
4. Toray works to maintain and improve the quality of purchased products through cooperation with its suppliers.
5. Toray works to uphold its corporate social responsibilities on a company-wide basis.

**Basic Distribution Policies** Revised December 2004

1. We shall select our 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. We shall be open in selecting our transport and warehousing providers, rather than relying exclusively on companies with which we have done business in the past or companies affiliated with Toray Group.
3. We shall comply with relevant laws and regulations, consider environmental preservation, and fulfil our corporate social responsibilities in outsourcing our transport and warehousing operations.
4. We shall cooperate with our transport and warehousing providers in gauging and reducing the environmental impact of our transport and warehousing operations.

## 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.



**Suppliers’ status to be ascertained and items to be requested to supplier**

Establishment of CSR promotion system	Corporate ethics and compliance	Safety, accident prevention, and environmental preservation
Business continuity plan and risk management	Interaction with stakeholders	Product safety and quality assurance
Human rights and labor environment	Information security and intellectual property management	Supplier’s CSR promotion in its own supply chain

## CSR Road Map Targets and Results

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

[Related material issue for CSR]

- Managing social and environmental impact of suppliers

01

■KPI

Number of group companies that have requested their suppliers to practice CSR

■Reporting scope

Toray Group

■Target (Cumulative fiscal 2017 – 2019)

40 or more

Result

(Cumulative fiscal 2017 – 2019)

**155**

(Head Office: 1, Japan: 57, Outside Japan: 97)  
Of which, result in fiscal 2019: 5 (Japan: 2, Outside Japan: 3)

02

■KPI

Number of business partners that Toray Group companies have requested to practice CSR (cumulative)

■Reporting scope

Toray Group

Result

**7,438**

(Cumulative total of fiscal 2013-2019, result in fiscal 2019: 2,144)

03

■KPI

Reduction in CO<sub>2</sub> emissions per unit of sales from distribution activities (year-on-year)

■Reporting scope

Toray Group (Only specified consigners in Japan)

■Target in fiscal 2019

1%

Result in fiscal

2019

**-4.7%**

04

■KPI

Modal shift to sea or rail for transport across distances for 500 km or more (%)

■Reporting scope

Toray Industries, Inc.

■Target in fiscal 2019

40%

Result in fiscal

2019

**35%**

## Looking to the Future

Toray Group believes that socially responsible procurement must be pursued together with suppliers. It 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 promote greater awareness of human rights, social, environmental, and other CSR issues while mitigating risks across the supply chain.

# Socially Responsible Procurement Initiatives at Toray Group

 Materiality Focus

Social Initiatives

## Toray Group's Socially Responsible Procurement

### Number of group companies that have requested their suppliers to practice CSR

■Reporting scope  
Toray Group

■Target (Cumulative fiscal 2017-2019)  
40 or more (Cumulative)

**Result**  
(Cumulative fiscal  
2017-2019)

**155**

(Head Office:1, Japan:57, Outside Japan:97)  
(Result in fiscal 2019: 5(Japan: 2, Outside Japan: 3))

### Number of business partners that Toray Group companies have requested to practice CSR (cumulative)

■Reporting scope  
Toray Group

**Result**  
(Cumulative fiscal  
2013-2019)

**7,438**

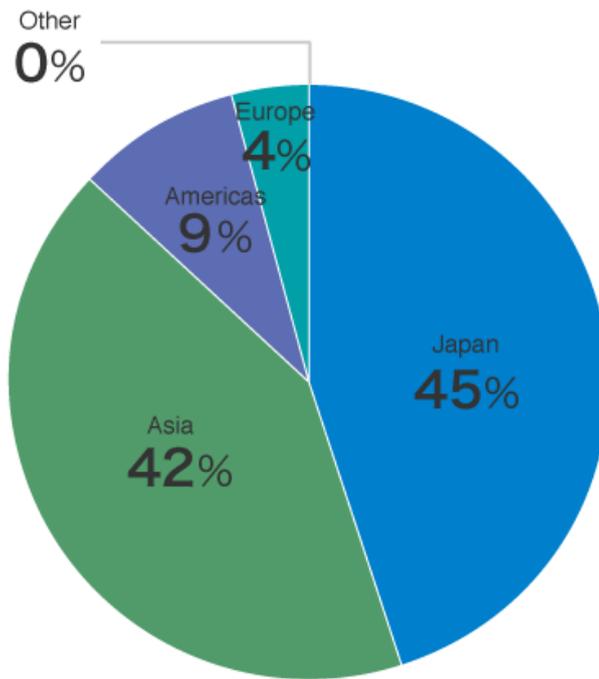
(Result in fiscal 2019: 2,144)

## Toray Group Supply Chain

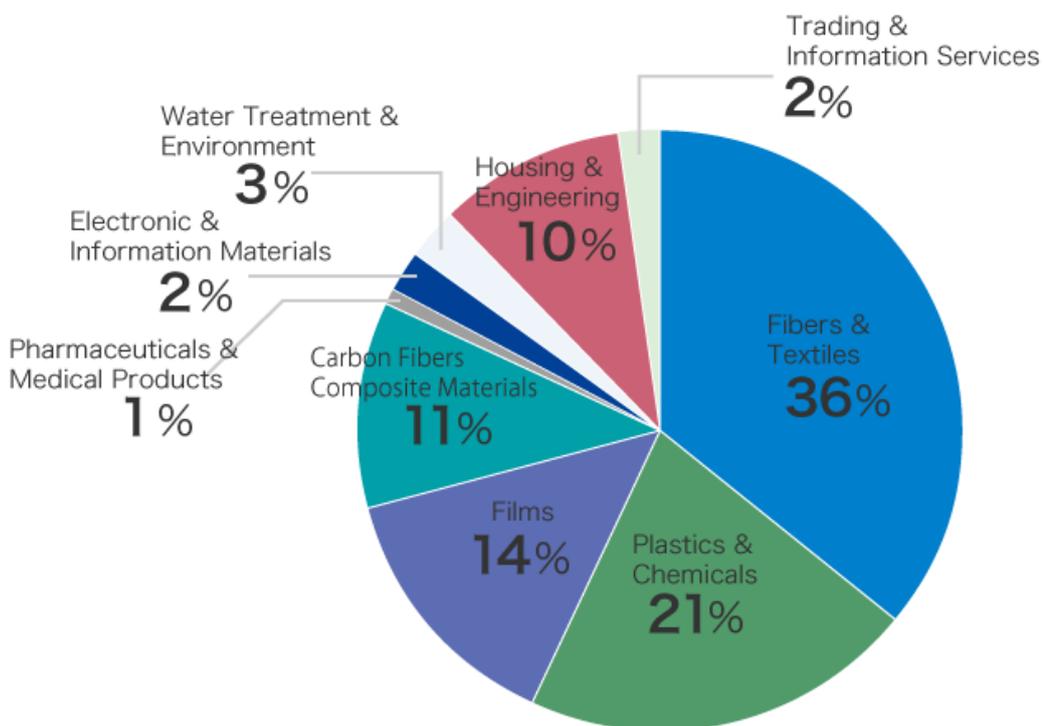
Toray Group's supply chain extends to diverse countries and regions around the world. In fiscal 2019, the Group's purchasing by region was 45% in Japan, 42% in the rest of Asia, 9% in the Americas, and 4% in Europe. Purchasing by business segment was 36% for Fibers & Textiles, 21% for Plastics & Chemicals, 14% for Films, 11% for Carbon Fibers Composite Materials, and 18% for others.

### Fiscal 2019 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

Toray Group is facilitating CSR initiatives across its supply chains, including at group companies around the world. These efforts include developing a socially responsible procurement system, responding to customers' requests for CSR practices, ascertaining the CSR initiatives of suppliers and educating them, carrying out CSR surveys of suppliers, and obtaining signed commitments on CSR from suppliers.

In addition, Toray Group has built a plan-do-check-action (PDCA) cycle using its own survey system. By regularly monitoring the status of CSR compliance at suppliers, assessing the overall Group using consistent standards, giving feedback on the results to suppliers, and following up on poor-performing suppliers, the Company endeavors to raise suppliers' awareness and efficiently and effectively lower CSR risks across the supply chain.

### 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

- Prevention of bribery, corruption, etc.
- Prevention of misuse of advantageous position and bid-rigging
- Compliance with changes in laws and regulations and educating employees about changes
- Protection of confidential information and personal information
- Protection of and respect for intellectual property
- 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
- Reduction of the emission of greenhouse gases
- 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

- Ban on illegal and inhuman labor practices, such as forced labor and child labor
- 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.

### IX. CSR initiatives in supplier's own supply chain

- Requests for promotion of CSR along supply chain

## Socially Responsible Procurement Initiatives at Toray Industries

In principle, Toray Industries carries out a biannual CSR survey of major suppliers, business partners and distribution companies which together are responsible for 90% of the Company's total procurement value. In addition to questions based on Toray Group's CSR Procurement Guidelines, the surveys exhaustively confirm the extent to which suppliers are addressing CSR, including their actions on human rights and environmental conservation—areas that have received greater social attention in recent years.

In fiscal 2018, Toray Industries carried out CSR surveys of 449 major suppliers. The results indicated that about 96% of companies surveyed were rated "excellent," "very good" or "good" for CSR practices, thus meeting the Company's standards for business partners. Four percent of the companies surveyed rated only "fair" or "needs improvement," requiring further investigation of their CSR practices.

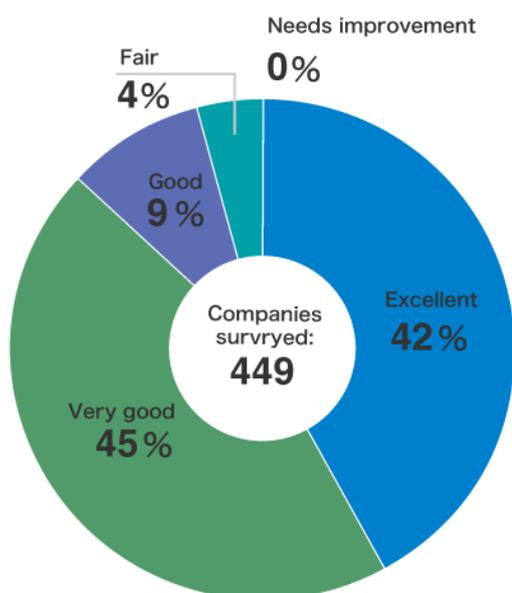
In fiscal 2019, the Company visited all suppliers who were rated "fair" or "needs improvement" in the fiscal 2018 survey to verify conditions and discuss the steps they need to take to improve. In fiscal 2020, the Company will carry out a CSR survey of major suppliers, including those who were rated "fair" or "needs improvement" in the previous survey, aiming to facilitate awareness of CSR throughout the supply chain and to promote CSR initiatives.

In parallel with those efforts, Toray Industries has been adding a CSR clause into basic supplier agreements. The clause stipulates that both the Company and the supplier will pursue CSR initiatives in areas such as legal compliance, environmental conservation, respect for human rights and product safety. When a new contract is signed or when a contract is renewed, this clause is added to the new agreement. In addition, rules for responses to CSR surveys from customers are set and a system is in place to facilitate prompt and accurate responses.

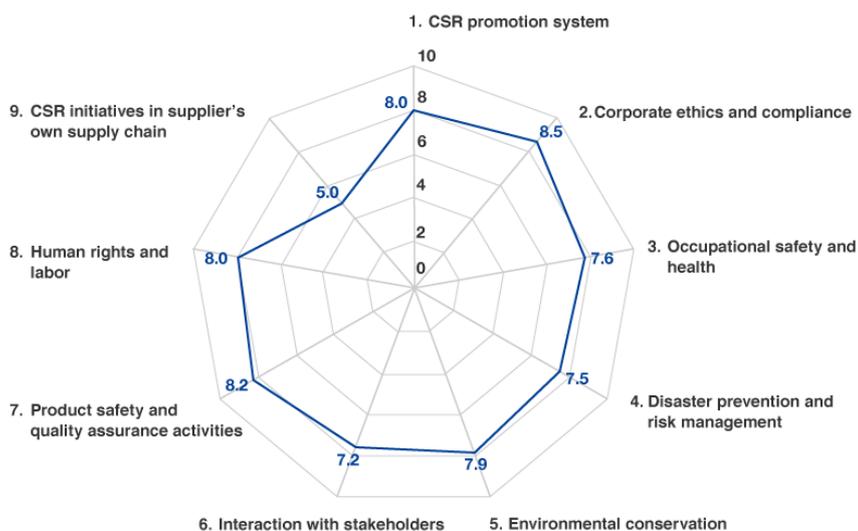
Percentage of suppliers with the level of efforts required by the Company  
(Rated as excellent, very good or good)

96%

Fiscal 2018 CSR Status of Suppliers  
(Toray Industries, Inc.)



Fiscal 2018 Analysis of CSR Survey of Suppliers  
(Toray Industries, Inc.)

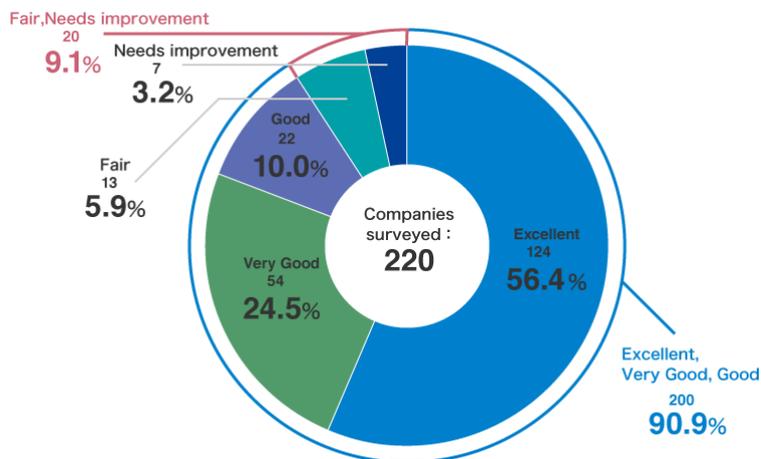


# Socially Responsible Procurement Initiatives at Toray Group Companies in and outside Japan

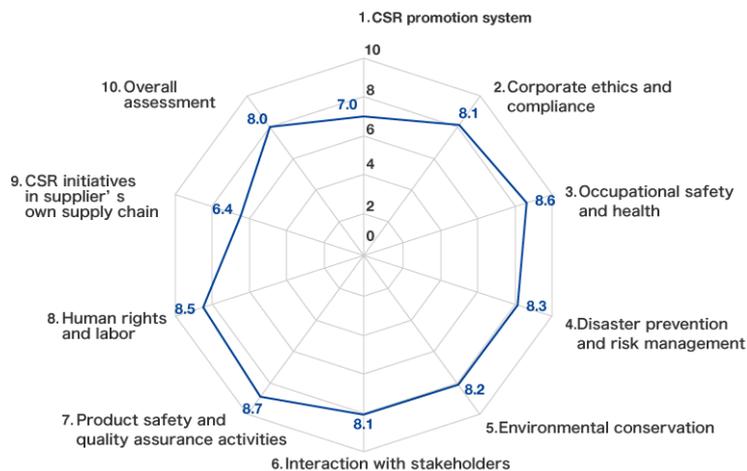
Assessing socially responsible procurement conditions across Toray Group is a key issue for the Group as it builds a global supply chain. Determining the extent to which suppliers outside Japan are addressing CSR issues is a priority issue for the Group. In fiscal 2018 and 2019, Toray Industries asked its group companies outside Japan whether they request their major suppliers to carry out CSR initiatives. For suppliers that had not been requested to take CSR initiatives by Toray Group companies, Toray Industries conducted a CSR survey of suppliers.

After analyzing responses from 220 suppliers, it was determined that 90% of them (199 companies) have been rated “excellent,” “very good” or “good” for the CSR initiatives required by Toray Group. Meanwhile the remaining 10% (21 companies) were rated “fair” or “needs improvement,” which means they will receive further inspection. In addition to providing feedback on the results to the group companies, Toray Industries has been conducting inspections of suppliers who were rated “fair” or “needs improvement,” and requesting improvements.

**CSR Survey Results of Suppliers of Toray Group Companies outside Japan**



**Analysis of CSR Survey of Suppliers of Toray Group Companies outside Japan**



To date, Toray Group companies in Japan have set up internal systems and rules and carried out CSR surveys on an ongoing basis. In fiscal 2019, they carried out CSR surveys of 1,924 suppliers to confirm their CSR initiatives and provided feedback on the resulting ratings to suppliers while following up with suppliers whose efforts are inadequate. In addition, the survey system is also deployed at Toray Group companies to standardize evaluation criteria, and the CSR status of suppliers is shared group-wide to mitigate CSR risk across the supply chain.

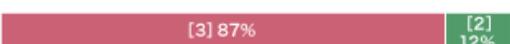
## Human Rights in the Supply Chain

---

Toray Group believes that respect for human rights is a crucial element in ensuring that the supply chain is stable and sustainable. Toray Group's CSR Procurement Guidelines state that the Company is dedicated to respecting human rights, eliminating discrimination, and improving workplace environments, as well as prohibiting forced labor, slave labor, child labor, and unfair low-wage labor. The Group requests all suppliers to comply with these guidelines.

In the CSR survey of suppliers that Toray Industries carries out regularly, the Company identifies and assesses the extent to which suppliers are addressing issues related to human rights and labor practices. In fiscal 2019, the Company confirmed the progress of suppliers who answered "Will address in one year" and "Not addressed" and requested them to enhance their human right initiatives, working to improve overall implementation rate. The Company will continue to encourage the promotion of respect for human rights and higher awareness across the supply chain.

### **Results of Fiscal 2018 CSR Survey of Suppliers**

Survey Questions	Survey results	Implementation rate	
	(The results are ranked from 0 to 4.0 and 1 mean that the company has not addressed the issues.)	Before	After Changes
1. Have policies and guidelines been set and employees educated about respect for human rights, eliminating discrimination and improving the work environment?		98%	99%
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%	99%
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?		97%	99%
4. Is forced labor, labor for debt repayment, slave labor, involuntary or exploitative labor, and/or child labor completely avoided?		99%	100%
5. Are foreign workers given employment contracts and employment regulations in a language that they can understand? Are ID, passports, and work permits managed to ensure that there is no confiscation, concealment, destruction or misuse?		88%	91%
6. Are conditions appropriately managed and operated in line with applicable laws, including welfare, to prevent wages that are below the minimum wage, inappropriate reductions and labor that exceeds the legal limit?		100%	100%
7. 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?		100%	100%
8. Are conditions appropriately managed and operated to ensure that the rights to freedom of association, assembly and collective bargaining are not illegally or inappropriately impeded or denied and that no retaliation is taken?		98%	100%
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%	100%
10. 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?		63%	65%

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 9, a scale from [0] to [3] is used; no value has been set for [4]. In question 5, suppliers that do not employ foreign workers are included under [0].

As part of efforts to promote human rights protections in the supply chain, the Company enables individuals to report supplier labor issues at any time via the Toray website.

#### **Related Information**

[> Inquiries concerning CSR initiatives by Toray Group and its business partners](#)

## **Addressing Conflict Minerals**

---

In recent years, the public has become more concerned about responsible procurement of minerals. In particular, the four minerals of gold, tin, tantalum and tungsten often mined in the Democratic Republic of Congo and surrounding countries have sometimes been a source of funding for armed groups. For this reason, under Section 1502 of the Dodd Frank Act in the United States, publicly traded companies have obligations for reporting and disclosing use of these minerals.

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 2019, the Company also investigated products made using any of 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.

## **International Cooperation in the Textiles and Apparel Industry**

---

Toray Group is a member of the Sustainable Apparel Coalition, a group of apparel manufacturers and retailers from around the globe. The coalition has created the Higg Index as a tool to evaluate and measure the impacts of apparel and footwear products on the environment, societies and workers. The aim is to mitigate these impacts and resolve issues. Toray Group participates in the coalition as a material supplier that plays an important role in the supply chain and collaborates with other coalition members to reduce negative impact of products on the environment and society.

# Toray Group Distribution Initiatives

## Social Initiatives

### Working Together with Business Partners

#### Holding Basic Distribution Policy Briefings

Toray Industries, Inc. holds annual Basic Distribution Policy Briefings as part of its ongoing effort to improve quality and reduce the environmental impact of its distribution process. In 2019, 52 distribution partner companies participated in briefings to promote understanding of Toray Group's distribution policies and improve distribution performance.



Basic Distribution Policy Briefing

#### Participation in White Logistics Movement and Declaration of Voluntary Activities

Toray Industries supports the White Logistics Movement,<sup>1</sup> 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. As part of this support, the Company submitted a declaration of voluntary activities.

The declaration included the Company's commitment to taking the following voluntary actions to overcome the growing logistics crisis in Japan. Going forward, it will continue to actively work to improve the logistics environment as part of its corporate social responsibility. This commitment is based on mutual understanding and cooperation with business partners and logistics companies, with the aim of ensuring sustainable logistics.

<sup>1</sup> 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.
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.

## Reducing the Environmental Impact of Distribution

### Reduction in CO<sub>2</sub> emissions per unit of sales from distribution activities (year-on-year)

■ Reporting scope

Toray Group (Only specified consigners in Japan)

■ Target in fiscal 2019

1.0%

Result in fiscal 2019

**-4.7%**

Toray Group is working hard to reduce CO<sub>2</sub> 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 2019, at Toray Group (only specified consigners<sup>2</sup> in Japan), CO<sub>2</sub> emissions from distribution activities were 30,800 tons, down 3,800 tons (10.9%) year-on-year, due primarily to a decrease in transport volume.

Meanwhile, CO<sub>2</sub> emissions intensity (average energy consumption per unit of sales) increased significantly for some group companies due to the fact that a relevant transport-related index<sup>3</sup> fell by more than the CO<sub>2</sub> emissions concerned. The average Toray Group CO<sub>2</sub> emissions intensity<sup>3</sup> was 96.1 in fiscal 2018, compared to the fiscal 2014 level (set at 100). In fiscal 2019, the figure was 100.6, an increase of 4.7%.

In fiscal 2019, Toray Industries' CO<sub>2</sub> emissions from distribution activities totaled 25,800 tons, down 3,100 tons (10.6%) from the previous fiscal year. This decline from the previous year was primarily due to full-load transport, increased loading rates and reductions of inefficient transport, which resulted in a 512-ton reduction, and a decrease in the transport volume for plastic and film products.

Energy consumption per unit of net sales decreased by 3.0% year-on-year and an average of 3.5% over the past five years, due mostly to a decrease in net sales. As a result, Toray Industries is meeting its legal mandate as a specified consigner to reduce energy consumption intensity by an average of at least 1% every year over the medium- and long-term.

Toray Group will continue to seek CO<sub>2</sub> emissions reductions by pursuing environmentally responsible distribution.

<sup>2</sup> Toray Industries, Inc., Toray Advanced Film Co., Ltd., and Toray Amenity and Civil Engineering Co., Ltd., which have annual cargo transport totaling 30 million ton-kilometers or more, are "specified consigners" under Japanese law.

<sup>3</sup> Energy consumption per unit of net sales refers to CO<sub>2</sub> emissions in transport divided by a transport-related index, as shown below:

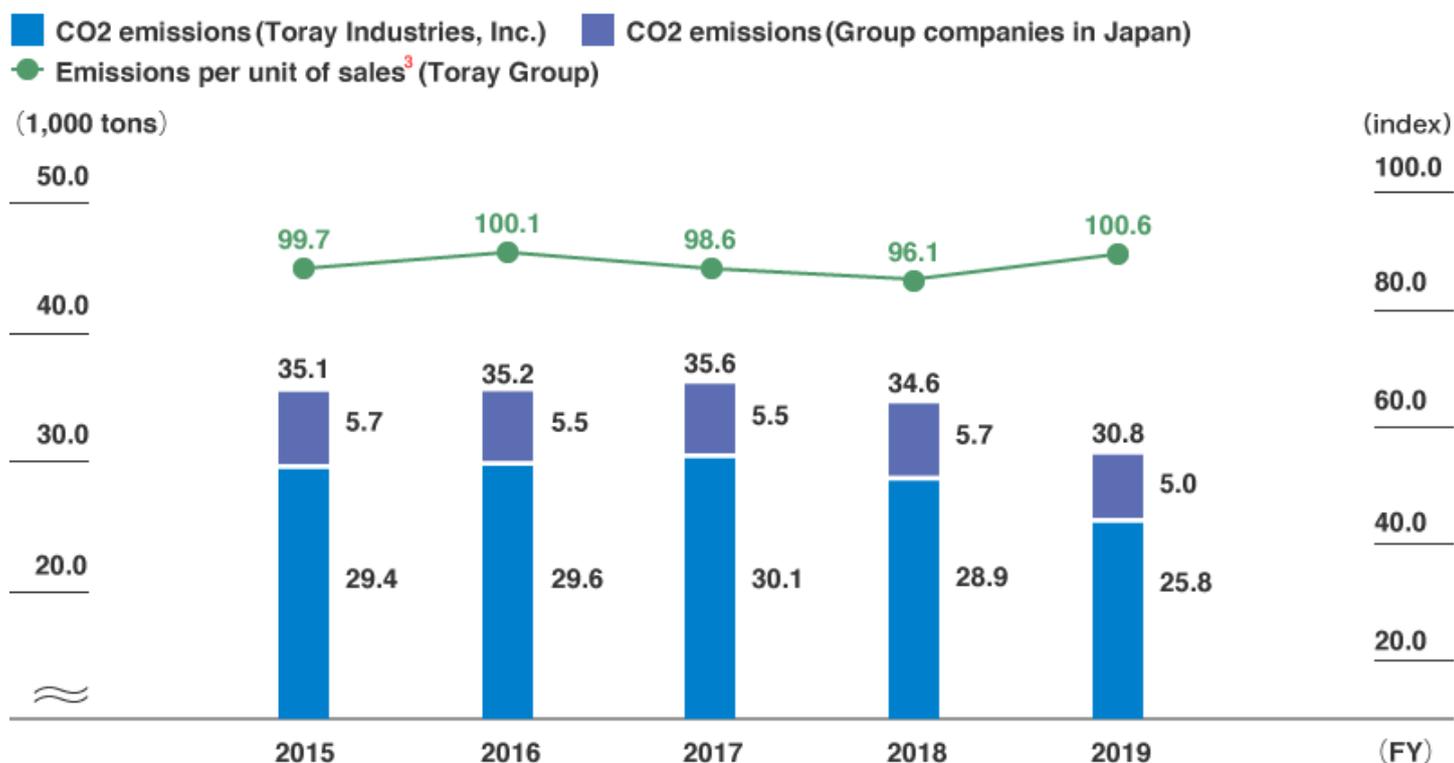
Toray Industries, Inc. = Net sales

Toray Advanced Film Co., Ltd. = Shipping volume

Toray Amenity and Civil Engineering Co., Ltd. = Shipping volume x distance (per ton-kilometer)

Specified consigners are required to endeavor to meet the legal mandate to reduce energy consumption intensity by an average of at least 1% every year over the medium- and long-term.

## CO<sub>2</sub> Emissions Resulting from Distribution Activities (Toray Group's Specified Consigners in Japan)



3. CO<sub>2</sub> emissions at the transport stage divided by sales on per unit basis

## CO<sub>2</sub> Emissions Reduction in Distribution Activities (Toray Industries, Inc.)

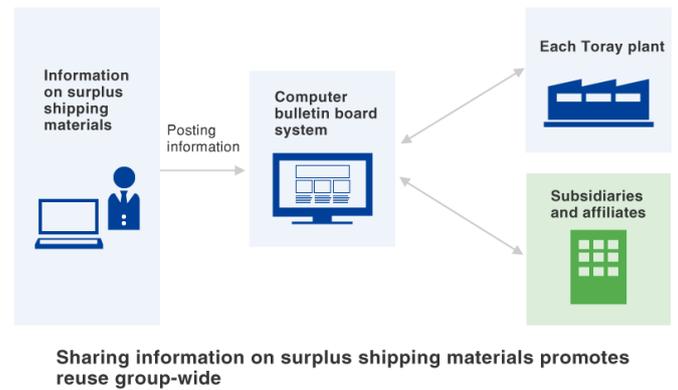
Details of initiatives	CO <sub>2</sub> Reduction (1,000 tons)
Recognized actual reductions more precisely due to improved calculation accuracy for maximum loading capacities, average loading rates, and other values	0.120
Modal shift	0.002
Full-load transport (strategic positioning of warehouses, etc.)	0.321
Shortened transport distances (loading at the nearest port, etc.)	0.069
Total	0.512

## 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. Group companies in Japan use an internal bulletin board to inform other companies if they have surplus packaging and shipping materials available for reuse.



System for Reusing Shipping Materials (Toray Industries, Inc.)

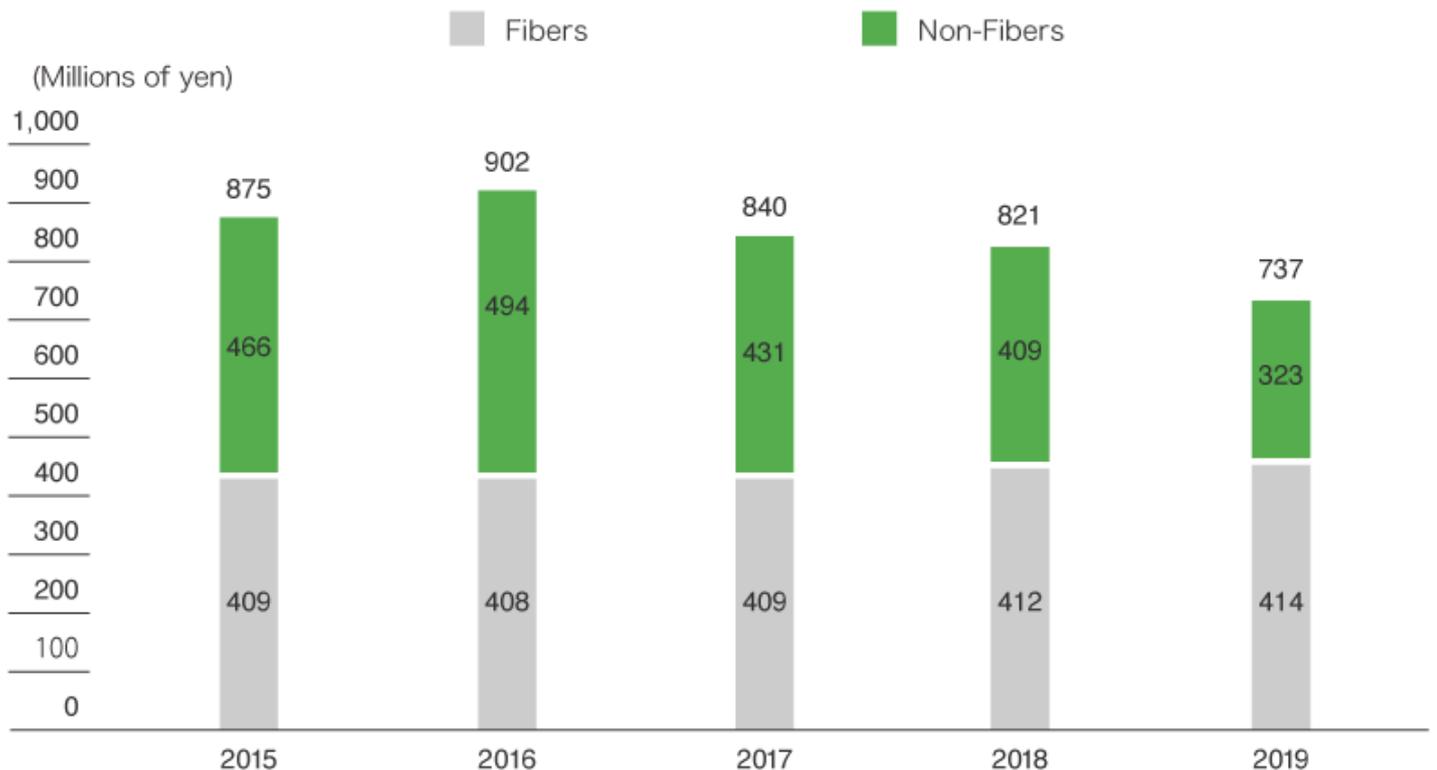


Toray Group's Bulletin Board System for Sharing Surplus Shipping Materials

## Monetary Amounts Recovered for Packaging Materials (Toray Industries )

Toray Industries recovered 740 million yen for packaging materials in fiscal 2019, down 80 million yen (10.2%) from the previous fiscal year.

The Company endeavored to improve the return rate and the reuse rate by prioritizing the recovery of its main packaging materials, as the recovery volume decreased due to a decline in the shipment volume for fibers and film.



## Promoting a Modal Shift

### Modal shift to sea or rail for transport across distances for 500 km or more (%)

■ Reporting scope  
Toray Industries, Inc.

■ Target in fiscal 2019  
40%

Result in fiscal 2019

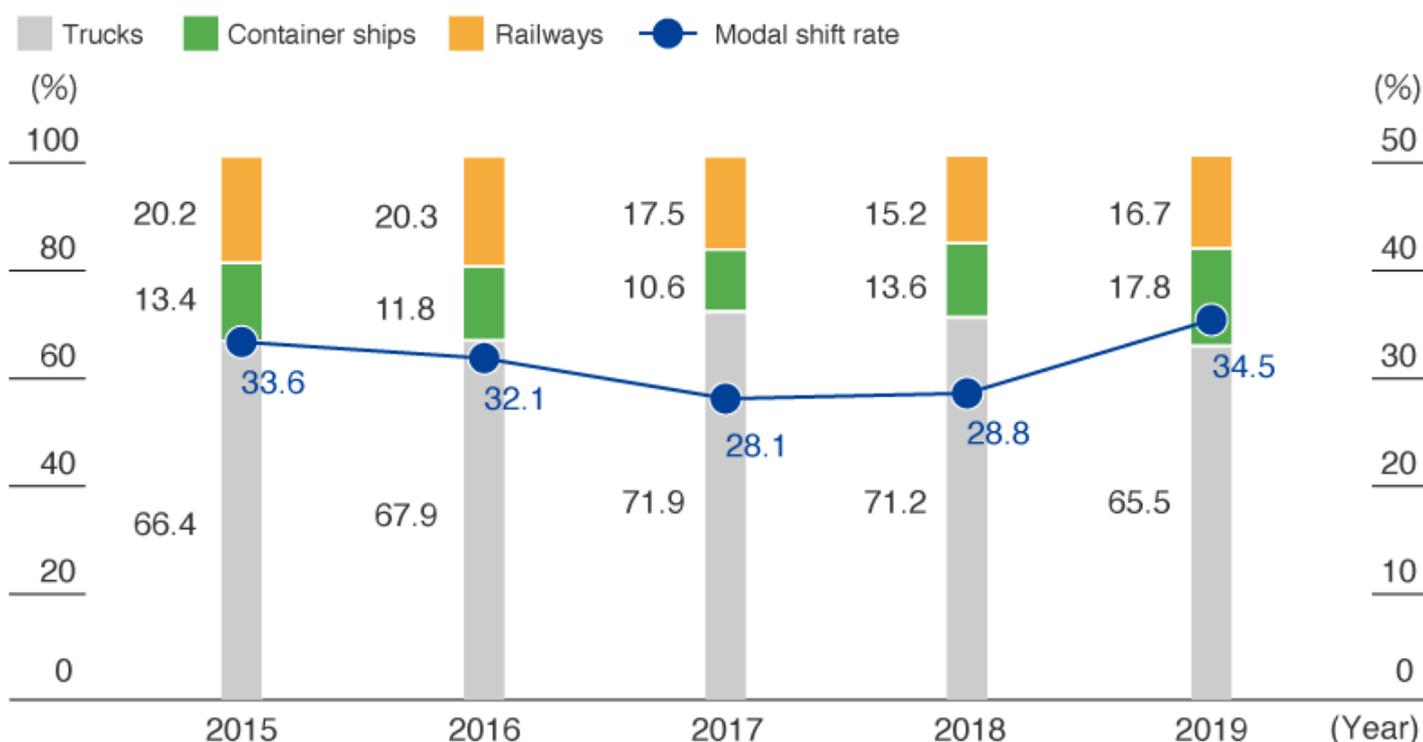
**35%**

Toray Industries laid out its commitment to environmentally friendly distribution in its Basic Distribution Policies (established in December 2004), 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 pursued modal shift. In addition, the Company augmented its initiatives to address the recent vulnerabilities in truck transport caused by a shortage of drivers, by using ships for products that cannot be easily transported by rail.

Toray Industries set a modal shift target of 40% to be achieved by fiscal 2019 and has been actively promoting the use of rail and sea transport. The modal shift rate for January to December 2019 increased by 5.7 points from the previous year to 34.5%. While the overall transport volume decreased, more resin and film products were shifted to ocean transport.

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 to Sea or Rail for Transport (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.



### Eco Rail Mark

**Toray Industries, Inc.**  
(certification for company)

Toray TETORON™ fiber  
(certification for products)

TORAYCON™ resin  
(certification for products)



### Eco Ship Mark

**Toray Industries, Inc.**  
(certification for company)

## Initiatives to Improve Safety and Quality in Distribution

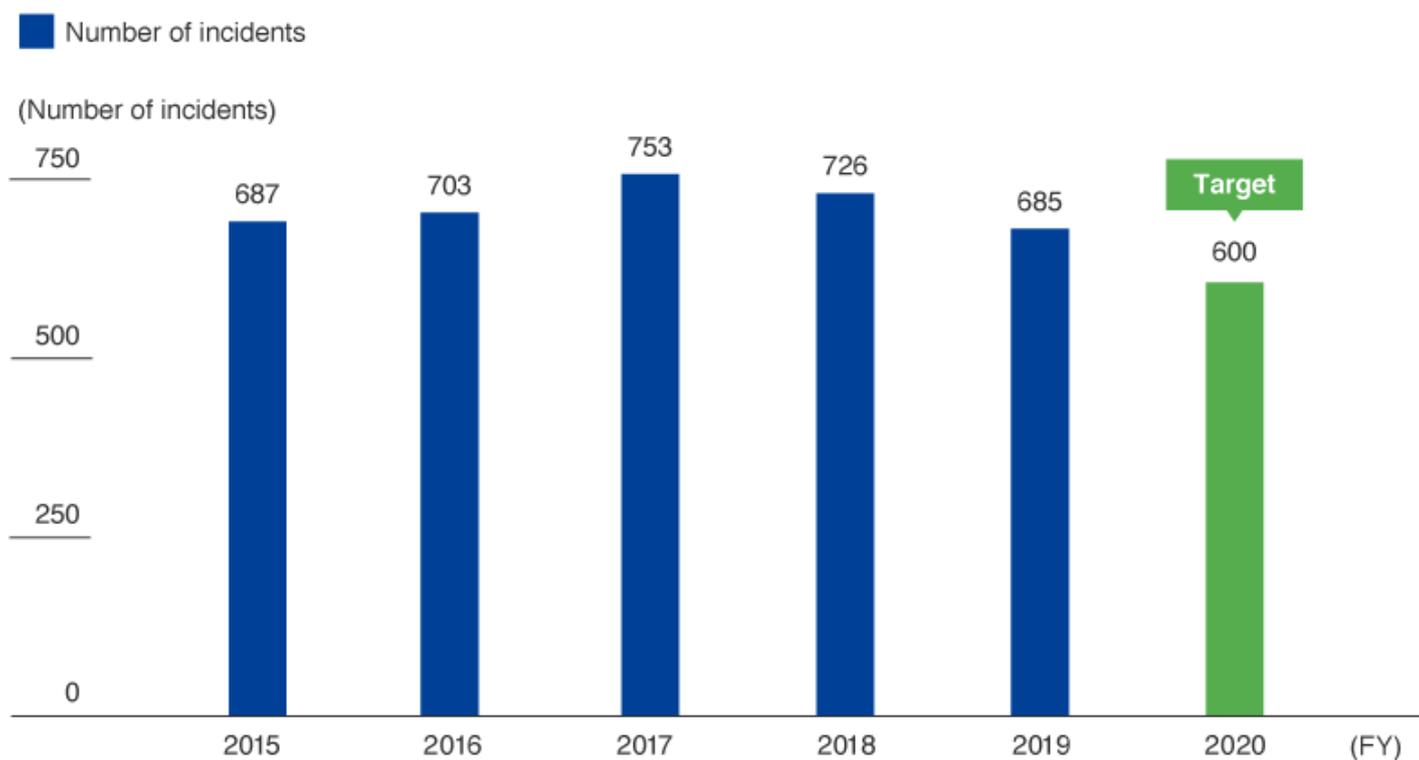
Toray Industries is working on a project to improve transport quality. The project involves sharing accident analysis data, and distribution quality enhancement reports. Partners that make outstanding contributions to improving quality are recognized through annual awards<sup>4</sup> These initiatives are aimed at reducing the number of problems such as those involving breakage, and reducing transport delays and incorrect shipments of Toray products. Toray Industries works with distribution partners to improve distribution quality and safety and to reduce the incidence of problems by conducting on-site inspections and holding quality control meetings with partners.

<sup>4</sup> Distribution-partner companies receiving awards in fiscal 2018 (alphabetical order):

Daiichi Storehouse & Refrigeration Co., Ltd., Hamakyorex Co., Ltd., Itochu Logistics Corporation, Mitsunori Corporation, Narukawa Warehouse Co., Inc., Shikoku Meitetsu Transportation Co., Ltd., Trancom Co., Ltd., Yamada Unso Co., Ltd.

## Distribution Incidents

---



Toray Industries worked to reduce the number of incidents in fiscal 2019. Not only did the number of shipments decline; the Company also set incident reduction targets and reinforced on-site inspections, particularly at the distribution companies where incidents had been high in the previous fiscal year. As a result, the number of accidents involving damage to plastic products, which account for about 60% of incidents, fell by 11%, and the overall number of incidents fell by 6% (41 accidents) from the previous year. Toray Group will continue working with partner companies to improve distribution quality.

## 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 Certification<sup>5</sup> and G Mark.<sup>6</sup> 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.

<sup>5</sup> Green Management Certification is awarded 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)

<sup>6</sup> The G Mark is awarded to companies that meet certain criteria and demonstrate excellent safety, based on an assessment of proactive initiatives for legal compliance and safety.

## Yellow Card Emergency Response Measures

---

Drivers of shipping vehicles carry a yellow card<sup>7</sup> 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.

<sup>7</sup> Cards summarizing the names of any hazardous substances, applicable laws and regulations, hazardous properties, emergency accident procedures, emergency reporting and contact information, methods for minimizing the spread of damage, and other accident response 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)<sup>8</sup> 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)<sup>9</sup> status.

<sup>8</sup> 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.

<sup>9</sup> 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.

## Communication

### Social Initiatives

**Disclose corporate information in an active, fair and straightforward manner, and encourage dialogue and cooperation with stakeholders including employees, stockholders, investors, business partners, consumers, local communities, non-profit organizations, government and administrative agencies, mass media, analysts 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.

Looking to strengthen its efforts, in April 2018 Toray Industries, Inc. established an organization to oversee all communications and pursue integrated internal and external communications.

### **Basic Policies to Promote Dialogue with Stakeholders** Adopted 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.

## 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 Road Map Targets and Results

---

**Promote dialogue and collaboration with stakeholders in accordance with the Basic Policies to Promote Dialogue with Stakeholders**  
**Reflect results of dialogue and collaboration with each stakeholder group in management activities in a timely and appropriate manner**

01

■KPI

Number of corporate website page views  
(per month)

■Reporting scope

Toray Group

■Target in fiscal 2019

1.5 million page views

Result in fiscal 2019

**1.58**  
million page views

02

■KPI

Group companies that have their own  
websites (%)

■Reporting scope

Toray Group

■Target in fiscal 2019

Japan: 90%

Outside Japan: 100%

Result in fiscal 2019

Japan:  
**100%**  
Outside Japan:  
**100%**

03

■KPI

Number of news releases

■Reporting scope

Toray Group

■Target in fiscal 2019

200

Result in fiscal 2019

**160**

04

■KPI

Number of responses to investor inquiries

■Reporting scope

Toray Group

Result in fiscal 2019

543

05

■KPI

Number of meetings with employees or labor unions

■Reporting scope

Toray Group

Result in fiscal 2019

14

## Looking to the Future

---

With the diversification of social issues in recent years, careful dialogue with stakeholders has become increasingly important. Toray Group treats requests from stakeholders as opportunities for growth. By contributing to society through its businesses and other efforts, the Group will continue to promote social progress and help to resolve global issues, thereby serving as a corporate group of high value to all stakeholders.

## Communication via Corporate Websites

Social Initiatives

### Number of corporate website page views (per month)

■Reporting scope	■Target in fiscal 2019
Toray Group	1.5 million page views

Result in fiscal 2019

**1.58**  
million page views

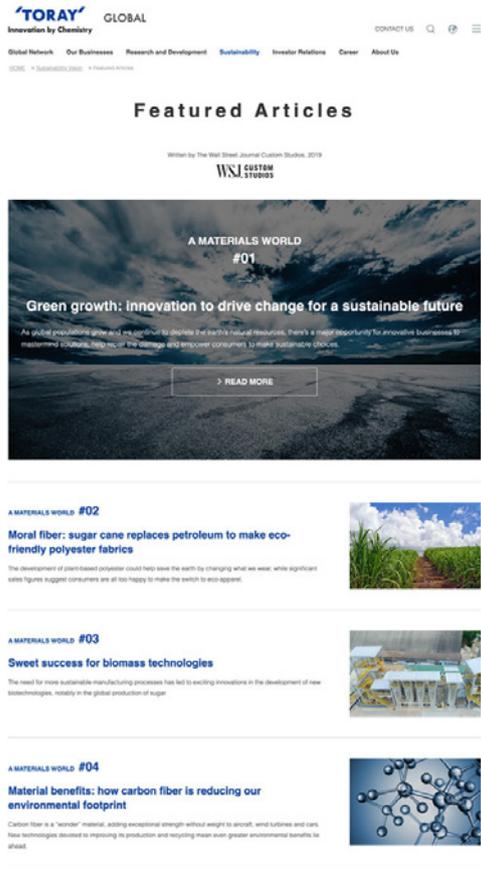
### Group companies that have their own websites (%)

■Reporting scope	■Target in fiscal 2019
Toray Group	Japan: 90%
	Outside Japan: 100%

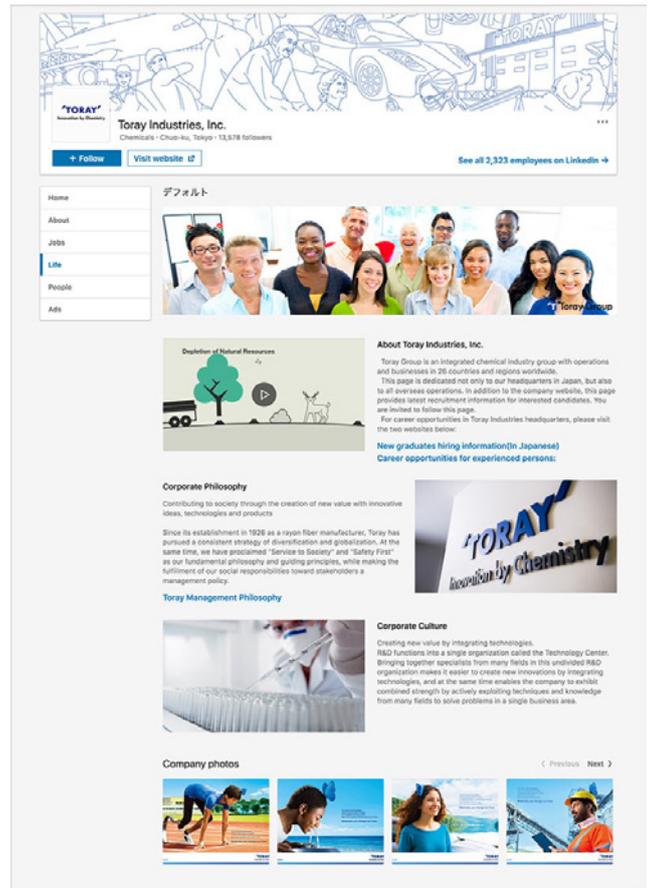
Result in fiscal 2019

Japan:  
**100%**  
Outside Japan:  
**100%**

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,” “Research and Development,” “Sustainability,” “Investor Relations” and “Career.” In fiscal 2019, the Group published a monthly feature article in the sustainability section of its website to inform stakeholders about the Group’s sustainability initiatives. In addition, in order to provide more stakeholders with information, Toray Group regularly provides information on its official social media site (on LinkedIn) and encourages users to visit from related sites.



Feature article on sustainability



Toray's official social media site (on LinkedIn)

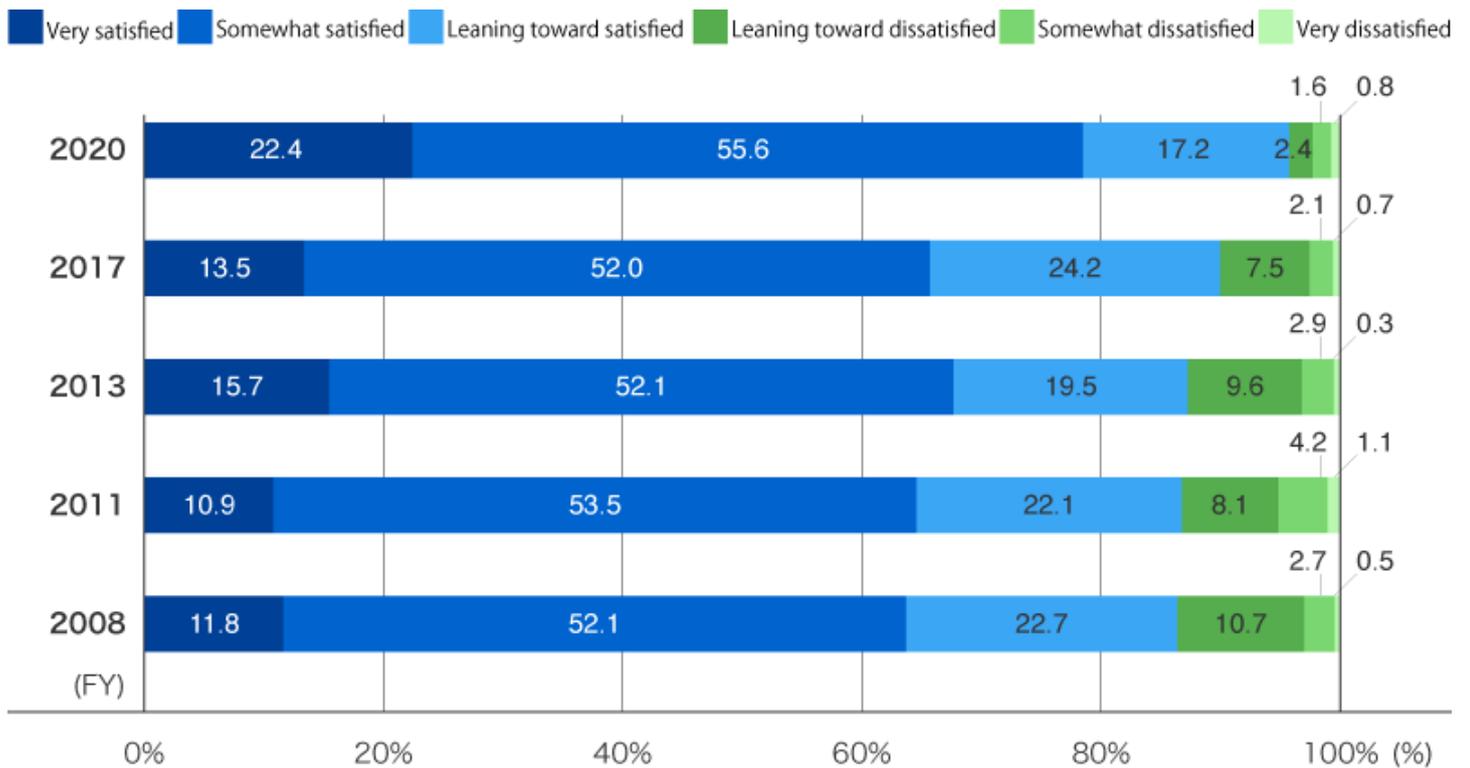
# Communication with Customers

Social Initiatives

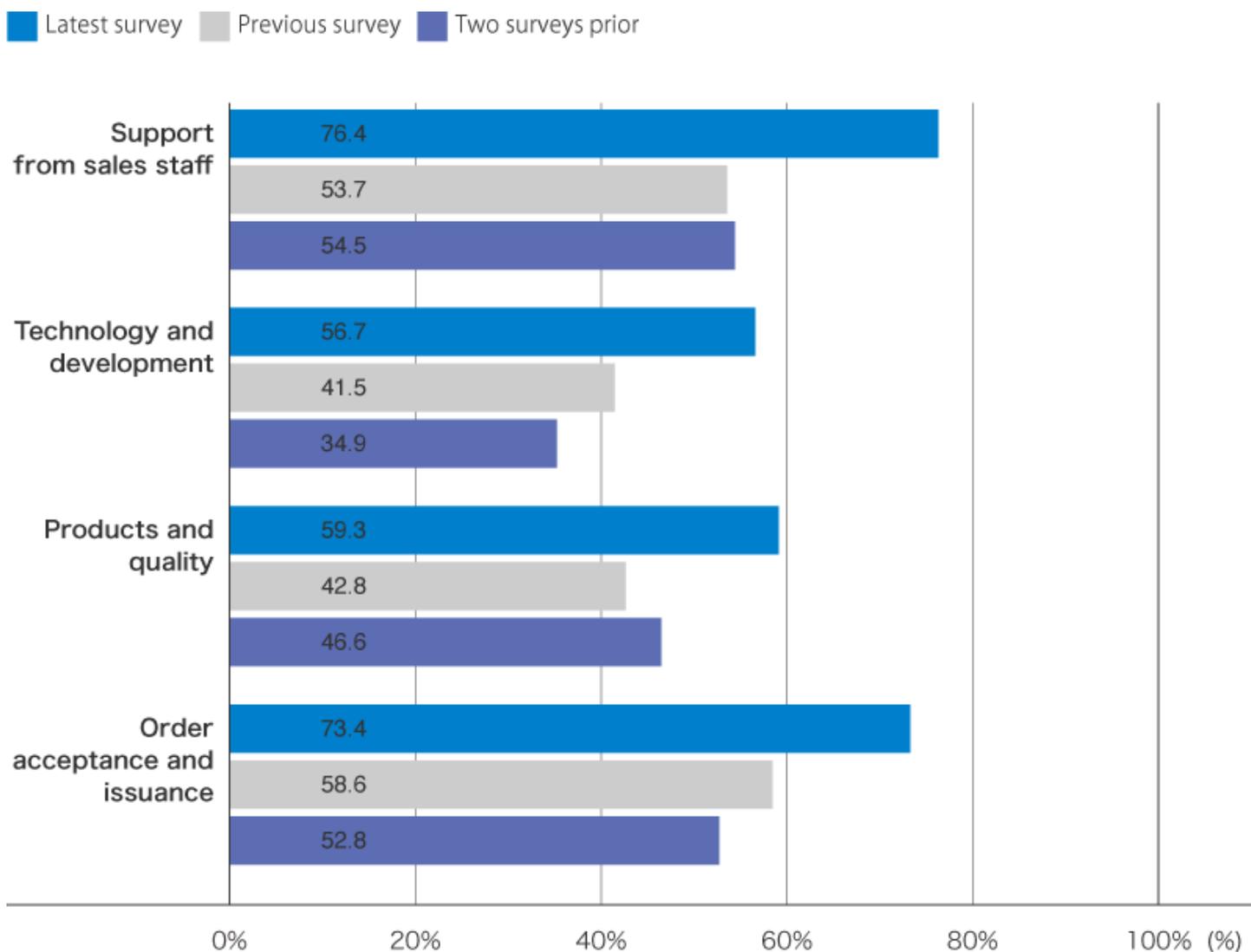
## Customer Satisfaction Survey

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 satisfied” and “Very satisfied.”

**Showrooms**

Toray has set up showrooms in its offices and plants as a space for communication with customers, including in Tokyo (at the head office), at the Shiga Plant, and at the Toray Human Resources Development Center in Mishima. These showrooms feature accessible displays of Toray’s business and product applications. The goal is to deepen understanding of Toray Group’s commitment to leverage its innovative technologies and advanced materials to help address a host of issues.

Fiscal 2019 CSR Activity Report- Communication

## Communication with Stockholders and Investors

Social Initiatives

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

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 table below summarizes the main investor relations activities that were conducted in fiscal 2019. 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. The Company holds briefings on its business for stockholders and strives to deepen understanding of Toray Group.

Activities	Attendees from Toray Industries, Inc.	Number of events	Number of participants / frequency
Briefings on business results announcements	President, vice president (Member of the Board) responsible for investor relations, and vice president (Member of the Board) responsible for finance and accounting	4 times / year	450
Meetings and conference calls with investors and analysts	Vice president (Member of the Board) responsible for investor relations, General Manager of the Investor Relations Department	As required	543

## 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 2019, the Company's publications were evaluated externally by a number of organizations, as shown below.

Organization details	Evaluations
Daiwa Investor Relations Co., Ltd.	Award for outstanding website in 2019
Nikko Investor Relations Co., Ltd.	2019 All Japanese Listed Companies' Website Ranking (AAA Website in overall ranking and AA Website in sector ranking)
GOMEZ	Silver Prize (top in textile sector) in IR Site Ranking 2019 First place in environment category, ESG Site Ranking 2020

## Evaluations from the Perspective of Socially Responsible Investment

---

- DJSI Asia Pacific
- FTSE 4Good Index/FTSE Blossom Japan Index
- MSCI ESG Indexes
- Ethibel Pioneer & Excellence Registers
- CDP Water Security A List
- SOMPO Sustainability Index

## 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. The Company's annual general meeting of stockholders on June 25, 2019 was attended by 431 stockholders. Toray Industries sends out notices of its general meetings of stockholders as early as possible to give sufficient time for stockholders to review the agenda. In addition, the Company translates the notices of its general meetings of stockholders into English and posts them on its website and has set up a system allowing stockholders to vote electronically.

Fiscal 2019 CSR Activity Report- Communication

## Communication with Business Partners

Social Initiatives

Toray Group holds policy briefings and carries out CSR procurement surveys for business partners to foster mutual understanding and closer collaboration.

### Related Information

[> Facilitating CSR Initiatives Throughout the Supply Chain](#)

## Communication with Employees

### Social Initiatives

### Communication via In-house Magazines and Intranet

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 three languages (Japanese, English, and Chinese) to keep employees informed about management and business topics as well as corporate projects. The Group has launched an intranet called TORAYNAVI Lite in Japanese and English for group companies in and outside Japan to share timely information on a global basis.

#### 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)

**Chinese edition of People in-house magazine:**

Around 6,000 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 Attitude Survey

---

Toray Industries, Inc. regularly conducts an employee attitude survey to gauge the level of employee engagement, implementation of the medium-term management program, motivation level of employees, and workplace conditions. The employee attitude survey conducted in fiscal 2019 yielded positive results with many respondents indicating they held a favorable view of the Company and found it to be a motivating place to work. The survey results are used to identify gaps that may exist between employee attitudes and customer assessments from customer satisfaction surveys, and 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. In addition, since fiscal 2018, a similar survey has been conducted in five languages (English, Chinese, Indonesian, Thai, and Korean) for employees of group companies outside Japan.

## Meetings with Employees and Labor Unions

---

### Number of meetings with employees or labor unions

■Reporting scope  
Toray Group

Result in fiscal 2019

**14**

Fiscal 2019 CSR Activity Report- Communication

## Communication with the Media

Social Initiatives

### Number of news releases

■ Reporting Scope

Toray Group

■ Target in 2019

200

Result in fiscal 2019

**160**

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 2019, Toray Group issued 160 press releases and carried out 298 interviews in response to media requests.

#### Related Information

> [Today's Information Disclosure Principles](#)

# Communication with Local Communities

Social Initiatives

## Number of meetings with communities

■Reporting scope

Toray Group

Result in fiscal 2019

**81**

Toray Group creates a variety of opportunities for communication with nearby residents. Some examples of these activities include regular community meetings with local residents, participation in events sponsored by local governments, and inviting local residents to summer festivals held on plant premises. The Group also collaborates with non-profits, such as the Mt. Fuji National Trust and the Arakawa Clean Aid Forum, on [community programs](#).



Employee volunteer team supported a local charity event (Toray Fluorofibers (America), Inc. , Toray Composite Materials America, Inc. )



Plant tour held for local elementary school students (Ogaki Fuso Spinning Co., Ltd.)



Employees participated in an educational event for local high school students (Toray Composite Materials America, Inc.)



Employees of Ehime Plant participated in a local summer festival (Toray Industries, Inc.)



Employees assisted a local friendship festival (Toray Industries (Malaysia) Sdn. Berhad)



Plant tour for local elementary school students at Ishikawa Plant (Toray Industries, Inc.)



Joint disaster training with local residents at Seta Plant (Toray Industries, Inc.)



Summer festival at Ehime Plant with a crowd of about 1,200, including employees, their families, and local residents (Toray Industries, Inc.)

## Social Contribution Activities

### Social Initiatives

**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 Green Innovation and Life Innovation businesses. These efforts are driven by the Medium-Term Management Program, Project AP-G 2022, and the Long-Term Corporate Vision, TORAY VISION 2030.

While helping to solve social issues as a responsible member of society through its business activities, under its CSR Roadmap 2022, the Group will continue tackling global issues such as those addressed by the United Nations Sustainable Development Goals (SDGs).<sup>1</sup> Based on the issues most relevant to its businesses, the Group has set three priority areas, namely science and technology promotion, environment and communities, and health and welfare. In particular, as indicated in the Toray Group Sustainability Vision, the Group will focus on educational support activities, including environmental, science, and career education, in order to promote public concern for the environment.

The Group's goal is to provide a total of 100,000 people with educational support, including science and environmental education such as the topics of water and climate change, between fiscal 2014 and fiscal 2020. The educational materials incorporate hollow fiber membranes and carbon fiber developed by Toray Group, in keeping with its corporate philosophy of contributing to society through its business.

<sup>1</sup> 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 Green Innovation businesses 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 Life Innovation businesses 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.

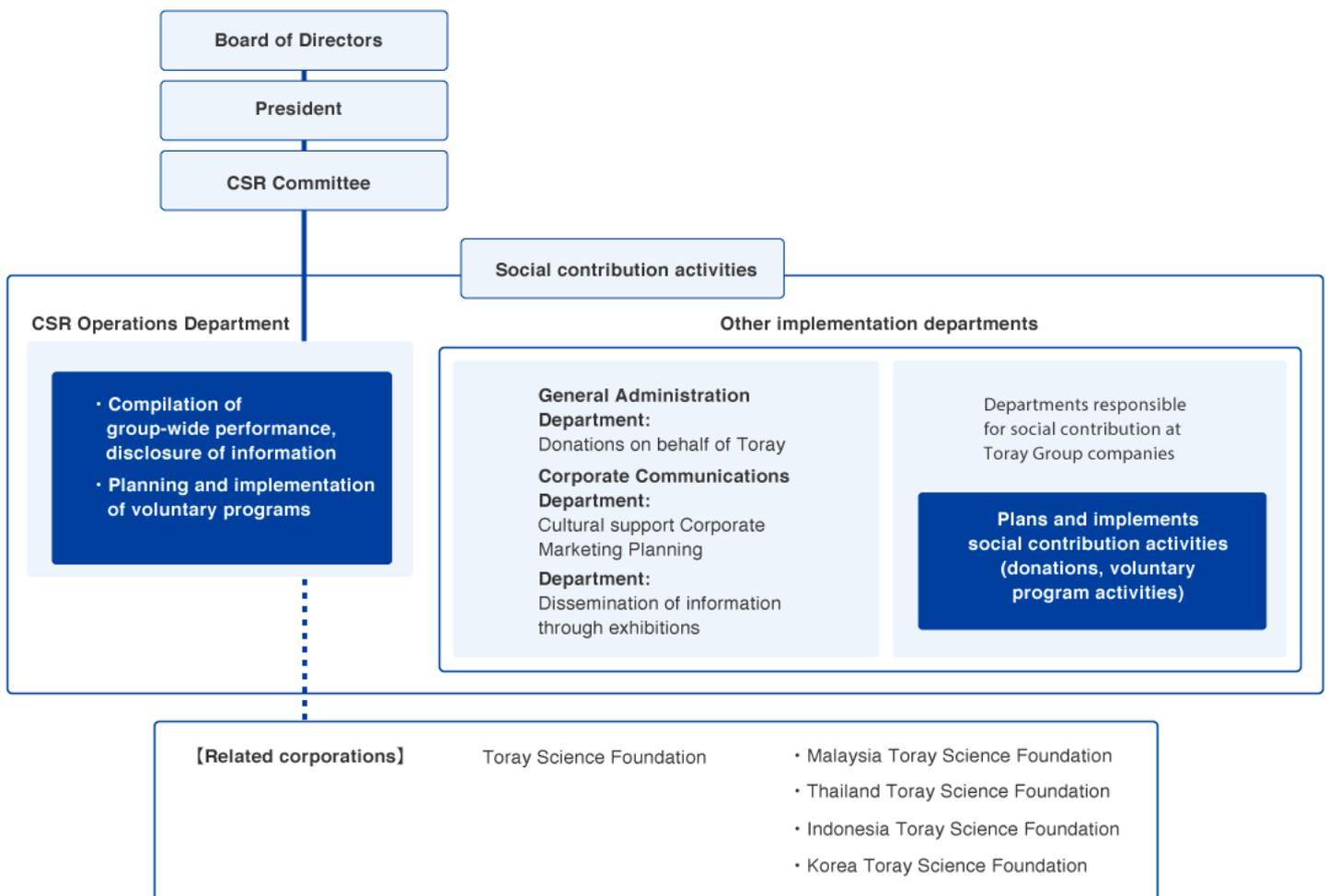
In 1986, Toray Industries established the corporate philosophy of “Contributing to society through the creation of new value with innovative ideas, technologies and products,” which carries on the core concept of the previous company principle. Toray Group pursues this corporate philosophy by emphasizing 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 line activities” designed to resolve CSR issues in specific workplaces, as well as meetings attended by representatives from each country where the Group operates outside Japan, in order to promote activities that are suitable for the particular circumstances of each country and company.

## Social Contribution Activities Operational Structure



## CSR Road Map Targets and Results

Pursue ongoing social initiatives throughout the Toray Group in the priority areas of “science and technology promotion,” “environment and communities,” and “health and welfare.”

01

■KPI

Social contribution expenditure (% compared with fiscal 2013-2018 average)

■Reporting scope

Toray Group

■Target in fiscal 2019

100% or more

Result in fiscal 2019

**123%**

02

■KPI

Number of persons reached through educational initiatives in these key fields

■Reporting scope

Toray Group

■Target in fiscal 2019

15,000 or more

Result in fiscal 2019

**16,600**persons

## Looking to the Future

---

Toray Group was founded with a commitment to contribute to society and build relationships of trust with local communities. Accordingly, under the recently completed Sixth CSR Roadmap, the Group worked on initiatives in the priority areas of “science and technology promotion”, “environment and communities”, and “health and welfare”, while supporting education to foster people who can help build a sustainable world.

With the adoption of the new CSR Roadmap 2022, the Group is now focusing on initiatives in the priority areas of science and technology promotion, environment and communities, and health and welfare, along with educational support activities to inspire interest in the environment. These efforts are all designed to ensure that Toray Group contributes as a good corporate citizen to overall social progress and the development of local communities.

Get an overview of the social and community engagement initiatives that Toray Group is pursuing:



**Toray Science Foundations around the World**



**Supporting science education to prepare young people for the future**

## Fiscal 2019 Results

### Social Initiatives

#### Social contribution expenditure (% compared with fiscal

2013-2018 average)

■Reporting scope

Toray Group

■Target in fiscal 2019

100% or more

Result in fiscal 2019

**123%**

#### Number of persons reached through educational initiatives in these key fields

■Reporting scope

Toray Group

■Target in fiscal 2019

15,000 or more

Result in fiscal 2019

**16,600**  
persons

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.

In fiscal 2019 the Group contributed some 1.85 billion yen on a consolidated basis (1.8% of consolidated ordinary income) and some 1.2 billion yen on a non-consolidated basis (2.4% of non-consolidated ordinary income). The main beneficiaries were the Toray Science Foundations in Japan, Malaysia, Thailand, Indonesia, and the Republic of Korea, and sponsorship of the Shanghai International Marathon.

In fiscal 2019, Toray Industries Inc., on behalf of Toray Group, donated approximately 230 million yen to Toray Science Foundation. Toray Group companies outside Japan donated approximately 200 million yen to Toray science foundations around the world.

#### Related Information

> [Toray Science Foundations around the World](#)

Breakdown of Expenditure in Fiscal 2019

others

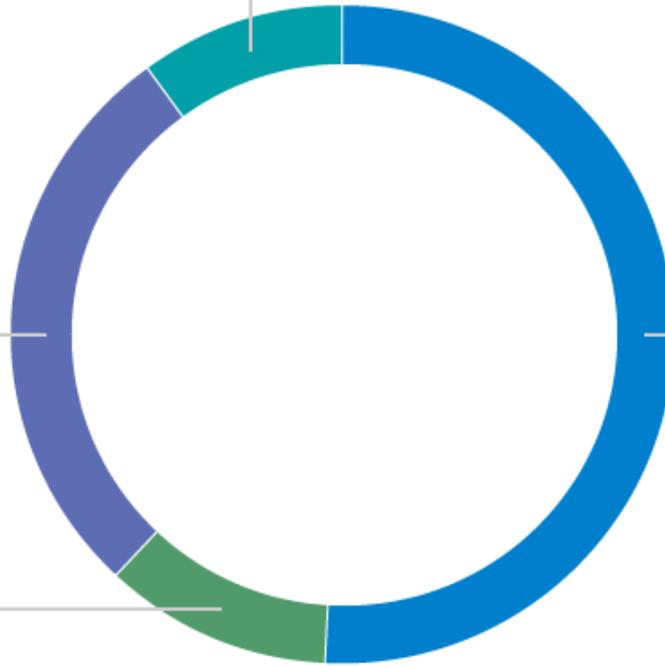
**10%**

Environment,  
communities

**28%**

Health,welfare,  
sports

**11%**



Academics,  
science research,  
education

**51%**

## Activities Carried Out in Fiscal 2019

### Social Initiatives

### Supporting Science Education in Schools (Sending Employees to Teach Classes at Schools)

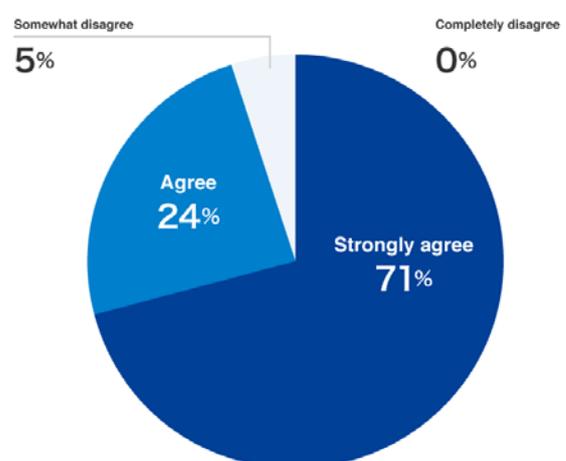
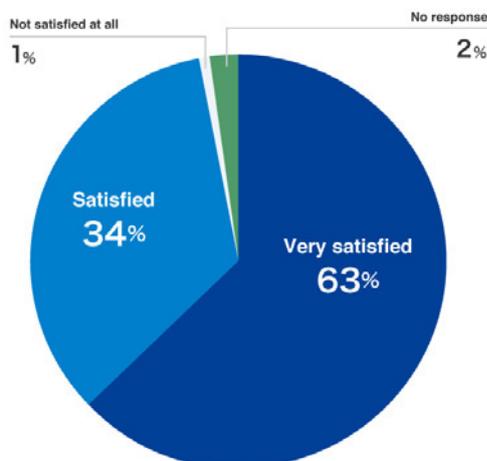


In order to foster greater awareness of the environment and interest in the sciences, Toray Group has developed environmental education and science experiment programs that employ some of its products. Delivering these programs, Group employees teach classes at local elementary, junior and senior high schools. In fiscal 2019, the Group sent employees to teach classes based on environmental education and science experiment programs to 41 schools in Japan.

The Group also supplied materials and equipment for science experiments and teaching materials to schools throughout Japan and conducted a professional development seminar for teachers in Tokyo. In its environment education program, the Group has increasingly fielded requests to mention its initiatives to help achieve the United Nations Sustainable Development Goals (SDGs), so employees introduced those initiatives alongside the Toray Group Sustainability Vision. Teachers and students have reacted positively to the classes and report that it helps to link what students learn at school to the real world.

This feedback and the opportunity to interact with students whose interest is sparked by the science experiments are both rewarding and motivating for the employees involved, and it remains a driving force for this ongoing initiative.

### Questionnaire Results on Classes Taught by Toray Group Employees



Satisfaction among Teachers  
How satisfied were you with the class?

Impression of Instructor from Toray Group  
Were you glad to teach the class?

Toray Group's involvement in science education extends beyond Japan to other countries where the Group does business. Toray Composite Materials America, Inc. (CMA) has been conducting outreach science experiment programs at local schools since 2012, using science experiments, Toray products, and visual materials to show how the Group and CMA are working to address environmental issues such as water scarcity and global warming. The program benefits communities and helps to build positive relations. In 2019, CMA sent employees to teach classes at three local schools, reaching more than 100 students. The employees who teach the classes find this valuable opportunity to interact with students in their communities highly rewarding.



An employee of Toray Industries conducts a science experiment class



Students listening intently during a workshop



An employee of Toray Composite Materials America, Inc. teaches a class at a local high school



At the professional development seminar for teachers in Tokyo

In response to requests from local communities, Toray Group participates in and collaborates on a variety of activities designed to increase interest in science, technology, and manufacturing.

### Summer Riko-challe<sup>1</sup> 2019 Science Event Sponsored by Toray Industries

In 2019, the Global Environment Research Laboratories of Toray Industries and Toray Research Center, Inc. (TRC) conducted the Summer Riko-challe 2019 Toray Research Experience Course under the theme, “Let’s Protect the Blue Earth with the Power of Science.” Seven high school girls attended the course, wearing lab coats, safety glasses, and face masks to conduct various research experiments under the guidance of young researchers from Toray Industries and TRC. During the course, the students made functional separation membranes and used dyes to evaluate the membrane performance. They then used a spectrometer to analyze the filtrate and conducted morphological observation using scanning electron microscopes. The feedback from students included comments like these: “I learned in detail about a technology with useful everyday applications”; and “It was valuable to talk with women involved in research, and I came away with a greater interest in research work.”



High school girls get firsthand research experience (Toray Research Center, Inc., Global Environment Research Laboratories, Toray Industries, Inc.).

<sup>1</sup> Riko-challe is an initiative established by the Gender Equality Bureau division of the Japanese Cabinet Office to provide support for junior high and high school girls who are interested in science and engineering, designed to help them envision their future and choose career paths in those fields.

### University Summer Camp for High School Students in India

Toray Industries (India) Private Limited conducted a class on Toray Group’s technologies and its initiatives to address global environmental issues. The class was provided to a group of promising high school students from southern India who had been chosen to attend a summer camp organized by the Indian Institute of Information Technology (IIIT). The lecture took place at the IIIT campus, which is situated in the Sri City Industrial Site. As part of the workshop, the students observed filtration using a hollow fiber membrane, which generated many questions such as whether the hollow fiber membrane was biodegradable and how it differed from a reverse osmosis membrane.



High school students in India examine a hollow fiber membrane during a class (Toray Industries (India) Private Limited).

## Workshops at the Science Museum

Since 2012, Toray Industries has conducted workshops at the Science Museum located in Kitanomaru Park in Tokyo, every day that the museum is open. In fiscal 2019, more than 5,527 people ranging from young children to adults attended the two workshops, which examined filtration and the importance of water, and the amazing properties of fibers.

## Sponsoring the Japan Biology Olympiad

Since 2007, Toray Industries has supported Japanese senior high school students to attend the International Biology Olympiad through arrangements made by the Japan Science Foundation. Four Japanese students attended the 30th Olympiad, which was held in Szeged, Hungary in July 2019. Out of the 285 students from 72 countries and regions, all four students from Japan earned medals: two silver and two bronze medals.



Four students from Japan (photo courtesy of Organization of Japan Biology Olympiad Committee)

## Held Aozora Science School



Toray Industries organizes the Aozora Science School<sup>2</sup> to foster children's interest in and an affinity for science, through fun activities that combine nature and science. The activities include filtering lake water to remove impurities, making rockets, and a campfire that changes color. The fifth edition was held in 2019 and featured experiments using Toray materials such as TORAYCA™ and ENTRANT™ as well as a sports science class led by former players of the Toray Arrows men's volleyball team, which was introduced the previous year. The campers enjoyed the full program of activities, which delivered many scientific discoveries and wonders.

<sup>2</sup> 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.



Testing the moisture-permeable waterproof qualities of ENTRANT™ fabric, which breathes air delivered from beneath while remaining impermeable to the cylinder of water on top of the fabric



Stargazing and enjoying a clear view of Saturn's rings

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. From the long-term perspective, the Group fosters human development by providing research grants and prizes through Toray Science Foundation and Toray science foundations outside Japan.

### **60th Toray Science and Technology Prizes, Toray Science and Technology Grants, and 51st Toray Science Education Prizes**

In February 2020, the Toray Science Foundation chose the latest recipients for the 60th Toray Science and Technology Prizes, Toray Science and Technology Grants, and 51st Toray Science Education Prizes.

Toray Science and Technology Prizes were awarded to Dr. Toichiro Kinoshita and Dr. Masamitsu Iino respectively. They and the science educators who were awarded Toray Science Education Prize received certificates, medals, and prize money. Grants totaling 130 million yen were awarded to 11 recipients of Science and Technology Grants.



**Dr. Toichiro Kinoshita**

**Development of precision calculation method of Quantum Electrodynamics and its applications**

Dr. Kinoshita used a precision calculation method for quantum electrodynamics that he developed, to successfully obtain the most accurate theoretical value in the history of physics.



**Dr. Masamitsu Iino**

**Studies on regulatory mechanisms of cell functions by calcium**

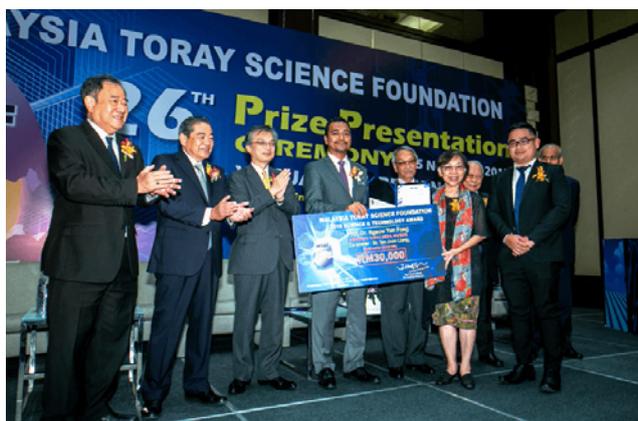
Dr. Iino used various new techniques to realize numerous findings concerning the temporal and spatial control mechanism of intracellular calcium and its physiological role.

The Minister of Education, Culture, Sports, Science and Technology Prize of the Toray Science Education Prize, which the Toray Science Foundation is known for, was awarded to Masaaki Toyoda, a teacher at Otani Junior and Senior High School, who with students fabricated a Van de Graaff generator using available materials as part of the school’s extracurricular student activities. He was awarded the prize for the major sense of accomplishment gained by students from developing a battery-driven Van de Graaff generator that works consistently in rainy seasons. This was achieved over a year of modifications and improvements, resulting in a Van de Graaff generator that exceeds the performance of commercially made units.

## Malaysia Toray Science Foundation (MTSF)

The 26th presentation ceremony of Malaysia Toray Science Foundation was held in November 2019, and a total of 290,000 ringgit (equivalent to about 7.5 million yen) in prize money and grants were awarded. The Toray Science and Technology Prize was awarded to one scientist, Toray Science and Technology Grants awarded to 11 researchers, and Toray Science Education Prizes awarded to 15 educators.

MTSF was honored with the 2019 Japanese Foreign Minister's Award for its contributions to friendly relations between Japan and Malaysia. To mark the occasion, Hiroshi Oka, Ambassador of Japan to Malaysia, presented the honor to Dr. Omar Abdul Rahman, chairman of MTSF.



26th presentation ceremony of Malaysia Toray Science Foundation with Science and Technology Prize winners



2019 Japanese Foreign Minister's Award presented to Dr. Omar Abdul Rahman (right), chairman of MTSF

## Thailand Toray Science Foundation (TTSF)

In fiscal 2019, TTSF awarded two Science and Technology Prizes, 21 Science and Technology Research Grants, and 13 Science Education Prizes totaling 5.44 million baht (equivalent to about 18.5 million yen) in prize money and grants. Due to the COVID-19 pandemic, the 26th presentation ceremony of Thailand Toray Science Foundation Award as postponed and will be conducted at a future point in time together with the 27th ceremony.



Selection meeting for Toray Science Education Prizes

## Indonesia Toray Science Foundation (ITSF)

The 26th presentation ceremony of the Indonesia Toray Science Foundation was held in Jakarta in February 2020, awarding one Science and Technology Prize, 18 Science and Technology Research Grants, and 10 Science Education Prizes totaling 1.05 billion rupiah (equivalent to about 7.88 million yen).

The day before the ceremony, winners of the fiscal 2018 grants participated in a research presentation meeting and a science education seminar. During the meeting, researchers presented their research results in one of three groupings consisting of physics and engineering, chemistry and biotechnology, and biology and environment. There was an in-depth discussion among the screening staff, judges and the general participants. In the science education seminar, the 10 recipients of this year's Science Education Prizes gave presentations on the teaching materials that they personally developed.



26th presentation ceremony of the Indonesia Toray Science Foundation, with science and technology grant recipients

## Korea Toray Science Foundation (KTSF)

The 2nd presentation ceremony of the Korea Toray Science Foundation Science was held in October 2019. A Science and Technology Prize was bestowed upon one scientist and three-year Research Fund Grants were awarded to four young researchers to pursue new research projects. The ceremony was attended by government officials, academic scholars, and eminent persons including the Minister for Economic Affairs of the Embassy of Japan. The guest speaker was Professor Hideo Hosono of the Tokyo Institute of Technology, who is considered a potential candidate for a Nobel Prize in Physics.



2nd presentation ceremony of Korea Toray Science Foundation, with science and technology grant recipients

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



Employees clean up the shoreline in Tagonoura, Japan as part of the introductory training for new employees (Toray Human Resources Development Center of Toray Industries)



Employees collaborate with the non-profit Arakawa Clean Aid Forum to clean up the shores of the Arakawa River, while educating participants about impacts on the global environment and ecosystems (Toray Group companies in the Tokyo area)



Employees participate in the Chirihama Nagisa Clean Campaign to preserve the Chirihama coastline in Hakui City, Ishikawa Prefecture (Sowa Textile Co., Ltd.)



Employees plant mangroves to conserve a mangrove forest (Toray Plastics Precision (Thailand) Co., Ltd.)



Employees cultivate young trees on the plant premises and donate them to municipal offices and police stations in Tangerang, Indonesia, to help keep the community green (PT Indonesia Toray Synthetics)



Employees collect trash from the shoreline in Guangdong, Zhuhai City (THK Apparel (Zhuhai) Co., Ltd. in China)



Employees regularly collect trash and help with the upkeep of surrounding communities (Toray BSF Coating Korea Ltd. and Toray Battery Separator Film Korea Ltd.)



Toray Group uses its resources to assist areas affected by large-scale disasters in and outside Japan

## Vocational Research Support for Junior High School Students (Toray Industries)

Since 2012, Toray Industries has sent researchers each year to Career Challenge Day<sup>3</sup>, a career education event held in Ofunato City, Iwate Prefecture. Representatives from the Company speak with local junior high school students and explain the nature of the R&D work done at a manufacturer. The Company is committed to regularly participating in this event, which helps the youth of Ofunato City find career paths.

<sup>3</sup> Career Challenge Day is an alternative program for the workplace experience education that was no longer possible after the Great East Japan Earthquake. In fiscal 2012, the program was awarded the Minister of Education, Culture, Sports, Science and Technology Award.



Researchers from the Electronic & Imaging Materials Research Laboratories of Toray Industries talk to students about their work

## Volleyball Clinic (Toray Industries Tohoku Branch, Toray Arrows)

Since 2013, the Tohoku Branch of Toray Industries has used volleyball as a means of providing support for local reconstruction efforts. In May 2019, former national volleyball team member Kana Oyama visited Tomiya Municipal Narita Junior High School to speak to the students about her own youth and the importance of working to achieve one's dreams. Afterwards, she provided extracurricular instruction to the girls' volleyball team. She and other former players of the Toray Arrows women's volleyball team visited Higashi-matsushima Municipal Omagari Elementary School to give a clinic on volleyball fundamentals and talked about the importance of teamwork and showing consideration toward opponents.



Kana Oyama teaches basic volleyball skills at Tomiya Municipal Narita Junior High School

### **Natural Dye Workshop for Kids (Chori Co., Ltd.)**

In September 2019, Chori Co., Ltd. held its seventh natural dye workshop in support of ongoing reconstruction efforts for the Great East Japan Earthquake. The workshop took place at the Kaigan Park Adventure Field and Takasago City Center in Sendai City, Miyagi Prefecture. The kids who attended the workshop used Chori's Natural Dye eco-friendly dying technology to color cloth shopping bags. The kids used the shibori dyeing technique to make different patterns on the cloth using objects such as marbles, chopsticks, and rubber bands. Employees interacted with the children and it was a fun time for all.



Kids show off reusable shopping bags that they dyed themselves

### **Aid for Areas Affected by Typhoons Faxai and Hagibis**

Toray Industries made a charitable donation in the amount of 5 million yen to assist areas affected by Typhoons Faxai and Hagibis, which caused extensive damage in various parts of Japan. The donation was made through the humanitarian aid organization NGO Japan Platform.

Group companies Ichimura Sangyo Co., Ltd. and Marusa Co., Ltd. also made separate charitable donations to support reconstruction efforts through the Japan Red Cross.

Toray Group companies host field trips by local children and students, to support their career education. In fiscal 2019, Group companies conducted plant tours in various countries and regions, as well as hosted and conducted training for employees from Japan.



Plant tour for local elementary school students (Ogaki Fuso Spinning Co., Ltd.)



Plant tour for local elementary school students (Toray Hybrid Cord, Inc.)



An employee teaches a class at a local elementary school (Toray Advanced Film Co., Ltd.)



In Indonesia, local senior high school students visit an office (PT Easterntex)



Students from a local university in Thailand visit a plant (Toray Textiles (Thailand) Public Company Ltd.)



In the Czech Republic, local students visit the plant and research facilities (Toray Textiles Central Europe s.r.o.)



In Taiwan, employees help with career education at a high school near the Toray Industries plant, giving students a tour of the plant and an introduction on the work of manufacturers overseas (Toray Advanced Film Kaohsiung)

## Promoting Communication Between Education and Business



As part of the Keizai Koho Center's Business Training for Japanese School Teachers program, Toray Industries has accepted around ten teachers each year in Shizuoka Prefecture since 1994. The participants learn about the Company's corporate philosophy and human resources development, and study research, production, safety, and environmental conservation at Toray Industries' Mishima Plant, as well as visiting the production floor. One participant said, "I learned about the efforts of a private sector company, which will make a big difference in the instruction that I provide to students." Complimentary feedback like this indicates that participants are using what they learn in this program in their classrooms.



Hazard-prediction training at Mishima Plant (Toray Industries, Inc.)

## Diverse Community Initiatives

As a responsible corporate citizen, Toray Group contributes to the betterment and advancement of communities.



Partnering with other Japanese-based companies in the same industrial park, 42 study desks were donated to local elementary and junior high schools in India (Toray Industries (India) Private Ltd.)



Employees of Group companies in Mexico assist with various duties at a Japanese supplemental school for children including helping teachers adjust to living in Mexico (Zoltek de Mexico S.A. de C.V., Toray Advanced Textile Mexico S.A. de C.V., Toray Resin Mexico S.A. de C.V., and Toray International de Mexico S.A. de C.V.)



In Indonesia, food supplies for victims of flooding in Jakarta are donated through an initiative organized by the Confederation of Indonesian Trade Unions (PT Acryl Textile Mills and PT Indonesia Textile Mills)



In Hungary, an employee dressed up as Santa visits excited kids at a local kindergarten class (Zoltek Zrt.)

# Promoting Sports and Childhood Development



In addition to helping to promote sports through athletic activity, Toray Industries also contributes to childhood development through sports instruction and training camps.



Toray Arrows volleyball clinics are held in various parts of Japan



Toray Industries Boating Club members instruct members of a local junior high school's boating club



Boys' kendo class sponsored by the Toray Kendo Club (Shiga Plant)

## Supporting Physical Education at Elementary Schools



Since 2015, former players of the Toray Arrows men's and women's volleyball teams have visited elementary schools to provide support of teaching soft volleyball in physical education classes.

In fiscal 2019, the players conducted a volleyball clinic at a school in Tokyo and a professional development clinic for elementary and junior high school educators in Atami City, Shizuoka Prefecture.



Teaching during an elementary school physical education class



Volleyball skills clinic for the professional development of physical education teachers in Atami City

## Promoting Sports Participation by Sponsoring the Shanghai International Marathon



Toray Industries and Toray Industries (China) Co., Ltd. are helping to promote sports in China by sponsoring the Shanghai International 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.

Since the inaugural event in 1996, which attracted approximately 6,000 runners, participation has grown every year. The 24th Shanghai International Marathon in 2019 was a major event, with approximately 38,000 runners.



2019 Shanghai International Marathon takes runners through the streets of Shanghai



## Supporting the Pink Ribbon Campaign

The Toray Pan Pacific Open Tennis Tournament provides support for the efforts of the Japan Ladies Tennis Federation (JLTF) to eradicate breast cancer. A booth is set up in the arena to sell Pink Ribbon badges, with the money raised donated to help supply breast cancer screening equipment. A mobile mammogram bus is parked at the venue and provides screenings to those who have signed up in advance. Participating tennis players are also actively involved in promoting the campaign.



Mobile mammogram bus



## Supporting Fureai Concerts

To support culture, education, and welfare, Toray Industries co-sponsors concerts by the Fureai Trio for persons with disabilities, with Toray Group employees helping to organize and run the concerts. Fureai Concerts at venues across Japan, including elementary schools and social welfare facilities, bring music to the people through music instruction, mini-concerts, and audience participation. In fiscal 2019, 13 Fureai Concerts performed in six cities were enjoyed by more than 2,000 people. At the Fureai Concert for people with disabilities, held at Tokyo Opera City Concert Hall in August 2019, volunteers from Toray Group and other corporate sponsors as well as individual volunteers handled various duties including guiding people to the venue, helping people get to their seats, and assisting audience members who wanted to try playing a violin. It was a night full of smiles.



Fureai Concert held in August 2019



Volunteers show a young child how to hold a violin

## Functional Prosthetic Limb Development Project



Toray Group companies in Thailand are assisting Chulalongkorn University with the development of a prosthetic limb that will improve the quality of life for underprivileged amputees, under the “A New Step with Research and Innovation Project.” Carbon Magic (Thailand) Co., Ltd., which normally manufactures carbon fiber-reinforced plastic (CFRP) components, is assisting the university to realize a functional prosthetic limb made from strong and lightweight carbon fiber. The developers welcome the chance to use components made in Thailand, which will significantly reduce the overall cost of the prosthetic limb compared with using imported components.

Professor Supot Teachavorasinskun of Chulalongkorn University, who is also head of engineering for the project, together with Assistant Professors Pairat Tangpornprasert and Chanyaphan Virulsri, are past recipients of science and technology research grants awarded by the Thailand Toray Science Foundation. Their involvement in the project is testament to the value of the Thailand Toray Science Foundation.



(Toray Industries (Thailand) Co., Ltd.)

## Corporate Philanthropy by Group Companies Outside Japan



Toray Group companies outside Japan work with other organizations to practice corporate philanthropy and raise funds for good causes, to benefit the communities in which they operate.

In the United States, Toray Fluorofibers America, Inc. and Toray Composite Materials America, Inc., both of which have bases in Decatur, Alabama, together formed the Toray Decatur team to participate in Relay for Life, a fundraising event by the American Cancer Society to help cancer patients and their families. The cancer walk raises funds for innovative research and cancer patient programs that ultimately benefit communities.

(Toray Fluorofibers America, Inc. and Toray Composite Materials America, Inc.)





Group companies in Mexico collected used clothing and footwear for the state-run DIF program to help needy families and children (Zoltek de Mexico S.A. de C.V., Toray Advanced Textile Mexico S.A. de C.V., Toray Resin Mexico S.A. de C.V., and Toray International de Mexico S.A. de C.V.)



At a teambuilding event organized at an orphanage in Penang, Malaysia participants played games that required creativity and teamwork (Toray Malaysia Systems Solution Sdn. Bhd.)



In the Republic of Korea, fun events are regularly organized to bring employees together with residents of an assisted living facility for persons with severe physical disabilities. This year, a summer camp was held where the participants enjoyed playing in the water and taking relaxing walks in the forest. (STEMCO, Ltd.)



In China, disposable diapers were donated for underprivileged children living at an orphanage in Nantong City (Toray Polytech (Nantong) Co., Ltd.)

## Toray Science Foundations around the World

### Social Initiatives

#### > Toray Science Foundations outside Japan

In 1955, Toyo Rayon Co., Ltd. (now Toray Industries, Inc.) made a clear statement concerning the principles it had upheld since its founding, establishing the Company Principle, “Toyo Rayon contributes to communities.” At that time, the business was expanding dramatically, but the company wanted to acknowledge that this achievement was due to the support of society and not just its own capabilities.

In 1960, the Toyo Rayon Science Foundation (now called Toray Science Foundation) was established to promote basic science and fulfill the Company Principle of contributing to communities. Toray Science Foundations were subsequently established in Indonesia, Malaysia, Thailand and the Republic of Korea to support the development of science and technology in those nations.

### Toray Science Foundation

Toyo Rayon Science Foundation (now called Toray Science Foundation) was established in 1960 to commemorate the 35th anniversary of the company's founding by funding and promoting research into science and technology.

The aim was to help advance science, technology and culture. Toray Industries, Inc. contributed one billion yen when it was established, and has continued to donate funds to cover operating costs through the present.

The Foundation was much talked about when it was first established as a pioneering corporate foundation. Its support activities include grants and prizes in the fields of basic science and science education. Unlike similar organizations, the Foundation also recognizes science teachers at junior and senior high schools, and its activities have continued to win high praise. Six<sup>1</sup> of the recipients of the Foundation's Science and Technology Prizes or Science and Technology Grants have gone on to win Nobel Prizes.

<sup>1</sup> Reona Esaki (recipient of the Foundation's Science and Technology Prize in 1961 and the Nobel Prize in Physics in 1973), Masatoshi Koshiba (recipient of various Foundation grants from 1968 to 1970 and the Nobel Prize in Physics in 2002), Ryoji Noyori (recipient of the Foundation's Science and Technology Prize in 1990 and the Nobel Prize in Chemistry in 2001), Isamu Akasaki (recipient of the Foundation's Science and Technology Prize in 2000 and the Nobel Prize in Physics in 2014), Shinya Yamanaka (recipient of the Foundation's Science and Technology Grant in 2004 and the Nobel Prize for Physiology or Medicine in 2012) and Tasuku Honjo (recipient of the Foundation's Science and Technology Grant in 1981 and the Nobel Prize for Physiology or Medicine in 2018).



First Toyo Rayon Science Foundation presentation ceremony  
(March 1960)



Toray Science and Technology Grant recipients at 59th  
presentation ceremony (March 2019)

## Main activities of Toray Science Foundation<sup>2</sup>

- (1) Toray Science and Technology Grant: This grant provides financial assistance to young researchers engaged in exploratory research in science and technology.
- (2) Toray Science and Technology Prize: This prize is awarded to scientists for their distinguished achievements in science and technology.
- (3) Toray Science Education Prize: This prize is awarded to commend junior and senior high school teachers who have given creative and innovative lessons in science with good results. Japan's Ministry of Education, Culture, Sports, Science and Technology backed the program in fiscal 2006 by establishing the Minister of Education, Culture, Sports, Science and Technology Prize. The Foundation publishes a booklet collecting the description of the prizewinner's works and circulates about 16,000 copies of it to junior and senior high schools every year for teachers to use.
- As a project to commemorate the 60th anniversary of the Toray Science Foundation, the Toray Science Education Planning Award was introduced in fiscal 2020. The aim is to recognize those who plan and develop science lessons based on new ideas and ingenuity.
- (4) Toray Science Foundation International Research Grant: This grant is awarded to young researchers engaged in basic research on science and technology in Indonesia, Malaysia, and Thailand.

<sup>2</sup> The prize and grant recipients are selected by a third-party committee made up of experts.

### Cumulative achievements, fiscal 1960-2019

Category	Number awarded	Amount (million yen)
Toray Science and Technology Grant	658	6,885
Toray Science and Technology Prize	125	468
Toray Science Education Prize	693	216
Japan total	1,476	7,569
Grants for researchers outside Japan <sup>3</sup>	761	458
Total	2,237	8,027

<sup>3</sup> Including direct grants to universities in 1989-1993 (61 cases, totaling 68 million yen)

#### Related Information

[> Toray Science Foundation](#) 

## Toray Science Foundations outside Japan

---

Toray Industries has established science foundations in three Southeast Asian nations where it has started businesses since the 1960s. These foundations aim to contribute to the advancement of science and technology and promote science education in each country. The science foundations in Malaysia and Indonesia were established in 1993, followed by the establishment of a foundation in Thailand in 1994.

Since their establishment, the foundations have provided awards for outstanding achievements in science, technology and science education, and grants for research in the natural sciences, using funds raised by interest income from endowments, grants from Toray Science Foundation, and annual donations from group companies in various countries. The award winners and grant recipients include outstanding science researchers, young researchers in the basic sciences, and science educators. These activities have earned great social respect in the countries of each foundation.

In January 2018, the Korea Toray Science Foundation was established to launch similar efforts in the Republic of Korea, where Toray Group's business continues to expand.

The foundations seek to support the medium- and long-term development of science and technology in the host countries, by generating interest among science and technology researchers, youth, and science educators. The foundations also contribute to mutual understanding, friendship, and goodwill between Japan and each country, and foster economic development there, as well.

## Malaysia Toray Science Foundation (MTSF)

---

Since its inauguration in August 1993, MTSF has extended awards and grants totaling 10.53 million ringgit to 771 researchers and science teachers. MTSF holds an annual award presentation ceremony with the attendance of guests from the Government of Malaysia and the Embassy of Japan in Malaysia. The awards are a badge of honor for the award winners and grant recipients.



25th presentation ceremony of Malaysia Toray Science Foundation with Science and Technology Prize winners

### Related Information

[> Malaysia Toray Science Foundation](#) 

## Thailand Toray Science Foundation <TTSF>

---

Since its inauguration in June 1994, TTSF has extended awards and grants totaling 134.82 million baht to 746 researchers and science teachers. TTSF holds an annual award presentation ceremony. From the inaugural ceremony in 1995 through 2009, the ceremony has been attended by President of the Privy Council His Excellency General Prem Tinsulanonda, and since 2010 has been attended by the Privy Councillor His Excellency General Surayud Chulanont. The ceremony is always a big moment for award and grant winners.



Toray President Akihiro Nikkaku speaks at the presentation ceremony

### Related Information

> [Thailand Toray Science Foundation](#) 

## Indonesia Toray Science Foundation <ITSF>

---

From the beginning, ITSF has enlisted the cooperation of the Indonesian Institute of Sciences, whose Director-General also chairs the Foundation. Since its inauguration in December 1993, ITSF has extended awards and grants totaling 20.8 billion rupiah to 744 researchers and science teachers. ITSF has assisted many individuals who are contributing to the progress of science and technology in Indonesia. Many of the past recipients of research grants now teach as professors and associate professors at leading universities, including the University of Indonesia, Bandung Institute of Technology, Gadjah Mada University, and Sekolah Tinggi Teknik Surabaya, and others conduct research at the Indonesian Institute of Sciences.



25th presentation ceremony of the Indonesia Toray Science Foundation, with science and technology grant recipients

### Related Information

[Indonesia Toray Science Foundation](#) 

## Korea Toray Science Foundation (KTSF)

---

The Korea Toray Science Foundation was established in 2018, 55 years after Toray Group first began operations in the Republic of Korea. The Foundation's aim is to encourage research and development in that country and expand the next-generation research infrastructure by fostering the development of human resources in the fields of science and engineering. Additional aims include building a sustainable research climate in the Republic of Korea in the fields of chemistry and materials, as well as the promotion of basic science and related industries there. The Foundation has already provided a total of 1.3 billion Korean won in research grants, awards and scholarships for science and technology.



1st presentation ceremony of Korea Toray Science Foundation, with science and technology grant recipients

### Related Information

[> Korea Toray Science Foundation](#) 

Fiscal 2019 CSR Activity Report- Social Contribution Activities

## Developing the Next Generation of Talent

Social Initiatives

### Supporting science education to prepare young people for the future

Since 2007, Toray Group has been supporting science education to prepare young people for the future by sending employees to give science lessons at elementary and junior high schools in local communities, as part of its CSR initiatives.

### Planting the seeds of new science and technology with children

As competition in science and technology heats up around the world, improving the education of budding scientists and engineers is a pressing task for ensuring future innovation. Toray Group regards this as one of today's most pressing social issues. In Japan, children's interest in science has been on the decline, and more and more young people are pursuing careers in non-technical fields. To address this situation, children must be shown the wonders of science and technology from a young age. Efforts by industry are being encouraged, to supplement what schools can do. Toray Group engages in dialogue with school teachers and offers examples of its technologies for use as teaching resources in class. The Group hopes to open children's eyes to the promise of science and technology for solving the problems faced by humankind today.



Toray Group employee shares a learning experience to the classroom



Students actively participating in the class

### Experiencing Science Connected to the Real World

Toray Group instructors provide lessons using advanced materials made by Toray as teaching tools. Young students learn how advanced Japanese nanotechnology is being utilized in everyday life, and how it is being used to help solve global environmental problems. The program aims to enhance the way children perceive and think about science and show them benefits of learning more about it.

## Features of the Toray Group science education support programs

- Extended programs are based on the school curriculum and designed with teachers
- Using actual advanced materials made by Toray to help students see the connection between learning and the real world
- Getting students to think about the role of advanced materials in creating a sustainable society

## Overview of Toray Group's science education support programs

Topic		Target	Program name	Related subject	Related official curriculum	No. of hours
Scientific experiments	Instructors sent to schools	Fifth year of elementary school	Thinking about water filtration and the global environment	Science	How things dissolve	2 hours
	Teaching materials provided to schools	First year of junior high school	Learning about particles in water		Properties of aqueous solutions	1 hour
Environmental education	Instructors sent to schools	Sixth year of elementary school	Water treatment membrane and global environmental issues	Science/ Integrated learning	Biology and the environment	1 hour
		Third year of junior high school	Advanced materials and global environmental issues : Materials can change our lives		Science, technology and humankind	1 hour

### Notes:

1. Upon request, employees may also be sent to teach classes for high school students.
2. In science experiment programs, Toray Group supplies schools with lab materials, as well.
3. Experiment-based teaching materials are provided to teachers free of charge, and they are also used in teacher training courses at universities.

# Filtration Experiment Using Toray's Water Treatment Membrane (Hollow Fiber Membrane) (Utilized in all Programs)



## Hollow fiber membrane:

This is a unique Toray teaching tool utilizing its hollow fiber membrane for water treatment.

Teaching tool used in class

## Lesson Format (Fifth-Year Elementary School Students: Thinking about Water Filtration and the Global Environment)

Introduction: Review what has been learned so far about removing dissolved material from a solution. Students consider whether color can be taken out of water using filter paper.



Part 1: Experiment to filter color out of water using hollow fiber membrane



Part 2: Saltwater filtration experiment using hollow fiber membrane. Students check if the filtered solution contains salt.



Knowledge application: The use of water treatment membranes by society is explained and students are made aware that global environmental problems such as water shortages are issues that also affect their lives.

Conclusion: Learning about the relationship between filtering technologies and global water problems.

### Feedback from Students

- I really like science now after this lesson. I'm going to tell my family all about the interesting class I had today. (Fifth-year elementary school student)
- Science is amazing because it allows you to make a filtration device with super tiny holes of one nanometer. I hope this filtration device will be widely used so that everyone can get drinking water. (Sixth-year elementary school student)
- Today's lesson was really fun. I learned about advanced Japanese technology and expanded my options for a future career. (First-year junior high school student)
- I thought there wasn't much we could do about environmental problems like global warming, but now I know that many things can be done with advanced materials. (Third-year junior high school student)

### Feedback from School Teachers

- As a knowledge application activity rather than a textbook-based lesson, it was a very interesting class. It was an opportunity for students to think rather than just absorb the concept of microscopic particles. It also helped them to better understand the concept. (Fifth-year elementary school teacher)
- The lesson gave students the opportunity to take their six years of science learning and form a global perspective. It was a valuable experience for the kids to conduct experiments with tools not usually available in school. (Sixth-year elementary school teacher)
- The practical lesson was given by someone from the frontlines of scientific application, which provided great learning motivation to the students. It made me fully realize the benefits of collaboration between schools and companies. I also appreciated the way the instructor actively involved the students. (Third-year junior high school teacher)

Fiscal 2019 CSR Activity Report

## **Safety, Accident Prevention, and Environmental Preservation**

Environment

**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**

---

For information on Toray Group's basic approach and policies on safety, accident prevention and environmental preservation, please visit the links for the related topics in the Activity Reports below.

## Related Policies

### **Ten Basic Environmental Rules** (Adopted 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 into consideration biodiversity, 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 2019

Action policy		Main activities
Safety	3Z activities <sup>1</sup> with the slogan of "Maintaining Zero, Day-to-Day."	<ul style="list-style-type: none"> <li>• Thoroughly practice 3S/5S<sup>2</sup></li> <li>• Thorough elimination of similar accidents</li> <li>• Expand communication to foster positive, communicative, and disciplined workplaces</li> </ul>
Health	Rigorous chemical substance management	<ul style="list-style-type: none"> <li>• Expand and strengthen management of hazardous chemical substances and toxic chemicals</li> </ul>
	Emphasize occupational health management	<ul style="list-style-type: none"> <li>• Implement mental health management</li> </ul>
Accident prevention	Achieve zero fire accidents	<ul style="list-style-type: none"> <li>• Thoroughly take fire prevention measures</li> </ul>
	Improve large scale earthquake response	<ul style="list-style-type: none"> <li>• Prepare for large scale earthquakes on a regular basis</li> </ul>
Environment	Achieve zero environmental accidents	<ul style="list-style-type: none"> <li>• Implement strict measures to prevent</li> </ul>
	Help to build a more sustainable world	<ul style="list-style-type: none"> <li>• Implement the Fifth Medium-Term Environmental Plan</li> </ul>

<sup>1</sup> 3Z Activities is a program that aims for zero accidents, zero problems, and zero claims under the slogan of "Maintaining Zero, Day-to-Day." The Manufacturing Division leads the program, which aims to achieve the goals of the Toray Group's medium-term management program.

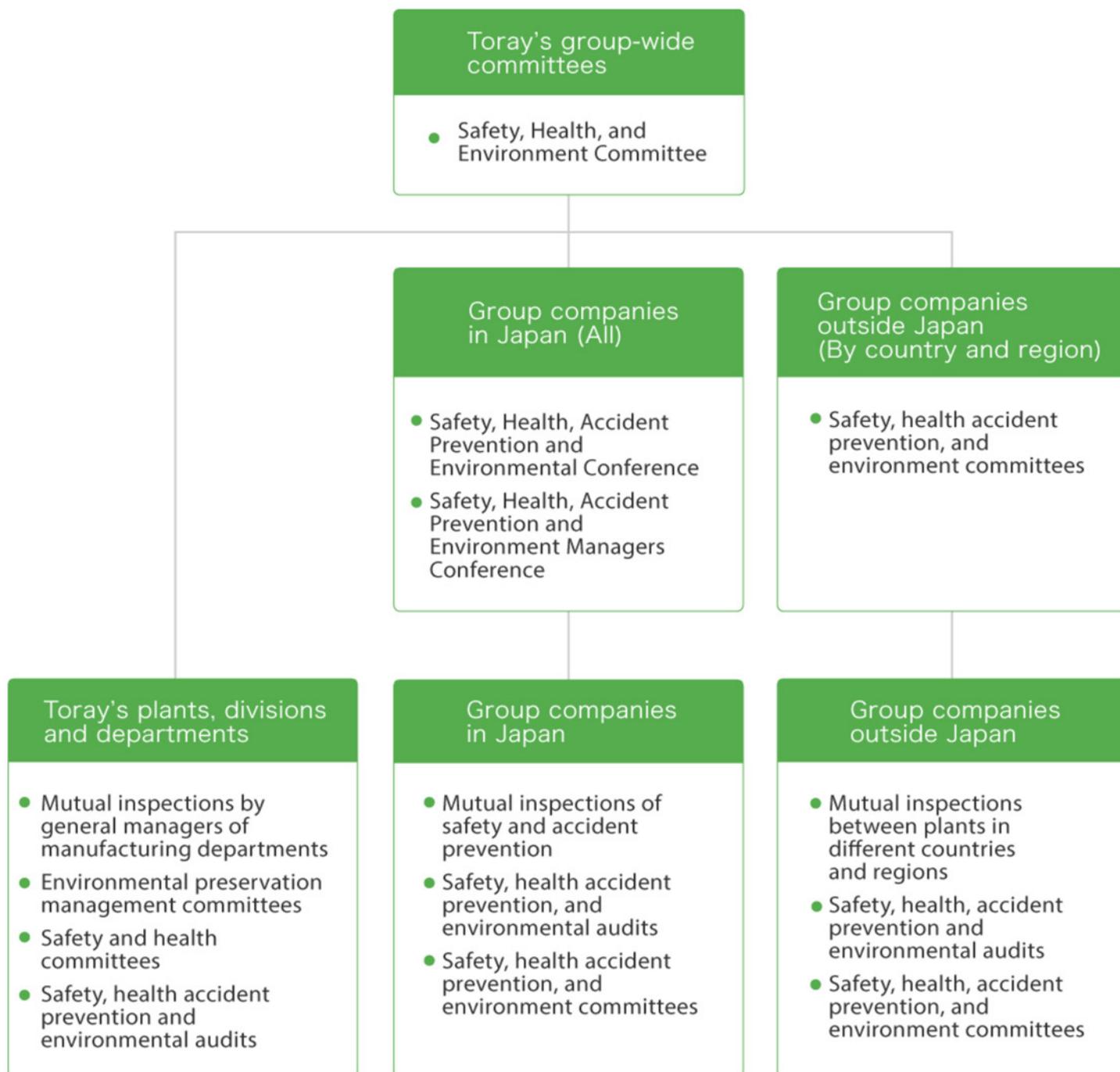
<sup>2</sup> 3S/5S: 3S stands for seiri (sort), seiton (set in order), and seiso (shine). Adding seiketsu (standardize) and shitsuke (sustain) to 3S make up 5S.

## 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 committee 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 2019)**



**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 2019, audits were conducted for all 13 plants and one research laboratory at Toray Industries, 32 plants operated by 28 group companies in Japan, and 72 plants operated by 51 group companies outside Japan. The audits focused on the following areas: thoroughly eliminating similar accidents; improving workplace discipline; checking status of emergency inspections for fire accidents; implementation of strict measures to prevent environmental accidents; and progress on Fifth Medium-Term Environmental Plan activities. 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 2019, 36 plants at 22 group companies in Japan and 60 plants at 45 group companies outside Japan were certified. In fiscal 2019, three plants at Sowa Textile Co., Ltd., TBPR in Malaysia, and TMQ in China, newly acquired ISO 14001 certification.

### Related Information

[> Sites with ISO 14001 Certification](#)

## 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.<sup>3</sup> In fiscal 2019, the Company set priority issues: implementing the Fifth Medium-Term Environmental Plan, strengthening accident-prevention countermeasures and ensuring implementation of the chemical risk assessments.

<sup>3</sup> 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.

## Complying with REACH and Other International Chemical Substance Regulations

All business divisions of Toray Industries, as well as its group companies in and outside Japan, have systems in place for securing compliance with regulations on the restriction of chemical substances such as the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) in Europe. Toray Group complies with international chemical substance regulations and conducts chemical substance safety management according to the regulations. As a part of this effort, the Group registers chemical substances registration in accordance with national laws and regulations. The Group also manages substances of high concern, a category that includes substances of very high concern (SVHC) under REACH, and studies the use of alternative substances. Chemical substances are checked for compliance with national chemical substance regulations both during product development and when bringing products to market, to ensure that marketed products do not contain unregistered or banned substances.

## Complying with Japan's Chemical Substances Control Law

With the revision of Japan's Chemical Substances Control Law<sup>4</sup> in April 2011, companies have been required to report on the manufacture, import, and utilization of general chemical substances. Toray Industries and its group companies in Japan studied the revisions, made the necessary preparations and completed their report covering fiscal 2019 in July 2020.

<sup>4</sup> Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

## CSR Road Map Targets and Results

### Clarify and fully comply with the basics of safety guidelines, and encourage employees to think carefully before taking action to prevent accidents

[Related material issue for CSR]

- Ensuring safety and disaster preparedness

01

■KPI

Number of major accidents

■Reporting scope

Toray Group

■Target in 2019 (calendar year)

0

Result in 2019  
(calendar year)

0

02

■KPI

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 2019 (calendar year)

No more than 0.05

Result in 2019  
(calendar year)

0.34

03

■KPI

Number of fire and explosion accidents

■Reporting scope

Toray Group

■Target in 2019 (calendar year)

0

Result in 2019  
(calendar year)

2

04

■KPI

Number of environmental accidents

■Reporting scope

Toray Group

■Target in fiscal 2019

0

Result in fiscal  
2019

0

## Reduce environmental impact by working to fulfill the Fifth Medium-Term Environmental Plan (achieve targets by fiscal 2020)

### [Related material issues for CSR]

- Addressing substances with negative environmental impact
- Addressing resource and energy issues
- Reducing greenhouse gas emissions

05

#### ■KPI

Reduction of atmospheric VOC emissions (%)

#### ■Reporting scope

Toray Group

#### ■Target in fiscal 2019

At least 70% lower than fiscal 2000

Result in fiscal 2019

76%

06

#### ■KPI

Waste recycling rate (%)

#### ■Reporting scope

Toray Group

#### ■Target in fiscal 2019

At least 86%

Result in fiscal 2019

86.4%

07

#### ■KPI

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

#### ■Reporting scope

Toray Group (Japan)

#### ■Target in fiscal 2019

At least 15% lower than fiscal 1990

Result in fiscal 2019

32%

## Pursue environmental preservation on the basis of policies on water resources and biodiversity

[Related material issues for CSR]

- Initiatives for managing water resources
- Conserving biodiversity

08

■KPI

Water usage per unit of sales (%)

■Reporting scope

Toray Group

■Target in fiscal 2019

No more than 61% of 2001 level

Result in fiscal 2019

52%

09

■KPI

Number of companies and plants developing greenery policy and plan

■Reporting scope

Toray Group

■Target in fiscal 2019

at least 55

Result in fiscal 2019

56

## 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.

## Activity Reports and Environmental Data

---

Click below on activity reports for fiscal 2019

# Occupational Safety and Accident Prevention Activities



## Environment

Toray Group pursues its own safety activities using occupational health and safety management systems (such as OHSAS 18001 and ISO 45001). In addition, officers and other employees audit all group companies and plants every year and evaluate and seek improvements in the status of their management of safety and health, accident prevention and environment 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 fiscal 2019, the Group used the unique keyword of "Anzen Koh-Doh"<sup>1</sup> to remind employees worldwide to take thoughtful safety actions. Toray Group is working hard to ensure that the message reaches all of its employees including those at group companies outside of Japan.

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 health and safety laws in the countries in which it operations. These efforts help to ensure a pleasant working environment.

<sup>1</sup> This refers to thinking about and acting on the basics of safety in order to enhance personal hazard sensitivity, identify hazards in the workplace, and ensure one's own safety.

### 2019 Safety Slogan

AP-G 2019

We Should Achieve "Zero Accidents". Each of us does "Anzen Koh-Doh"!

—"Seriousness," "Motivation," "Awareness"

Every year, company presidents and plant managers from Toray Industries and its group companies around the world 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. The Group's employees are all united under the leadership of top management in working on safety activities with the aim of achieving zero accidents.

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.



2019 Toray Group Safety Meeting in Toray Human Resources Development Center



Safety Summit of Toray Group Companies in the Americas

## Toray Group Safety Record

### Number of major accidents

■Reporting scope	■Target in 2019 (calendar year)
Toray Group	0

Result in 2019

**0**

### Number of fire and explosion accidents

■Reporting scope	■Target in 2019 (calendar year)
Toray Group	0

Result in 2019

**2**

### Achieve world's best standard for safety management

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

■Reporting scope	■Target in 2019 (calendar year)
Toray Group	No more than 0.05

Result in 2019 (calendar year)

**0.34**

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 2019 was 0.34. Although this is a positive result compared with that of Japan's manufacturing industry (1.20), it fell far short of the target 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.

To ensure familiarity with "Anzen Koh-Doh" practices, unit heads in charge of work on the front line will take the leading role at Toray Industries and its group companies in Japan in reforming safety awareness and actions in their own workplaces. Since 2015, unit heads have been meeting to share and discuss their safety activities, encouraging each other to work hard to ensure safety.

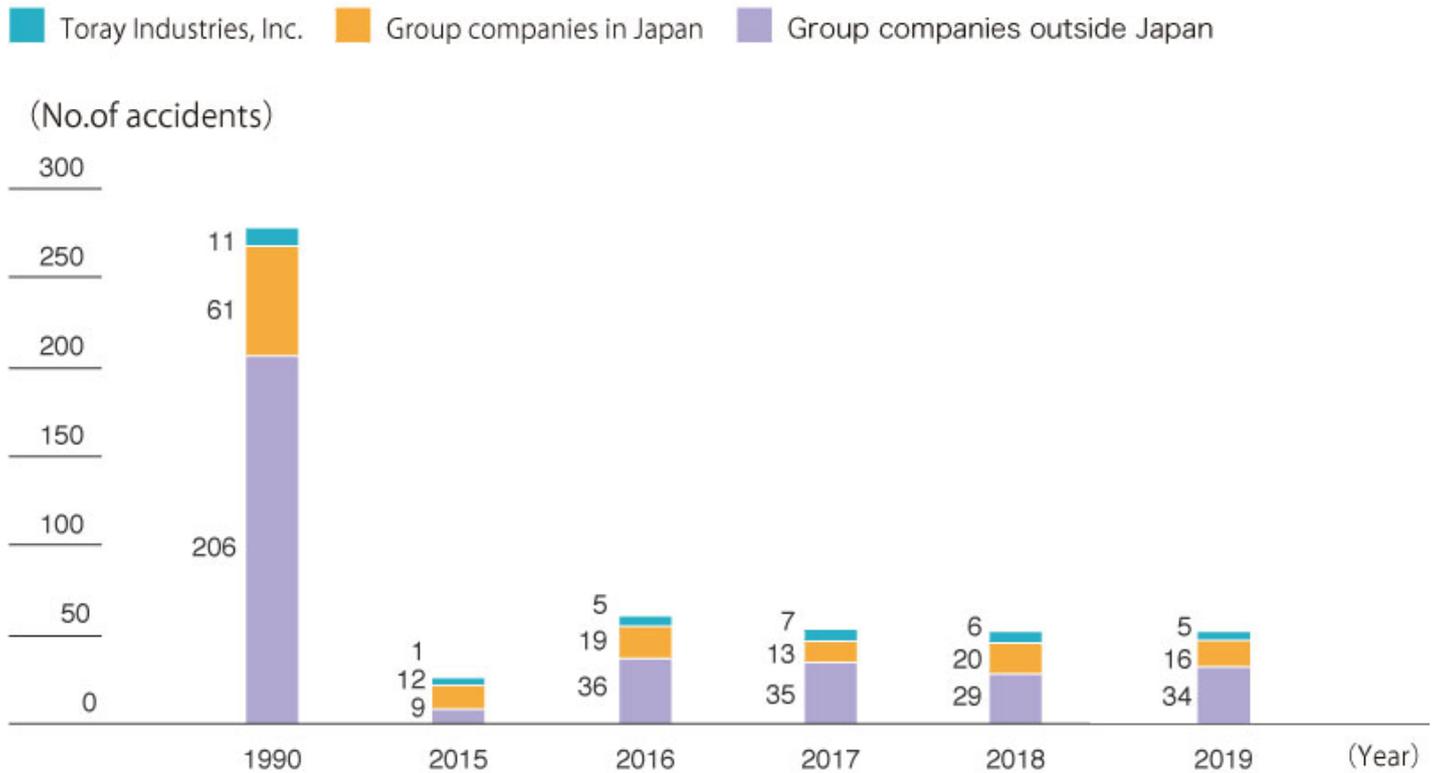
Furthermore, Toray Group has designated that an organized workplace is crucial to safety, as one of its safety principles under the Group's basic safety rules. In 2019, the Group stressed the basics of safety by emphasizing the comprehensive implementation of 5S—seiri (sort), seiton (set in order), seiso (shine), seiketsu (standardize) and shitsuke (sustain). The Group endeavors to foster 5S practice leading to Anzen-Koh-Doh, through repeated practice of seiri, seiton, and seiso in workplaces, so that all employees 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. To further energize these activities, employees visit Group companies and plants whose initiatives are models of excellence. This enables employees to learn about tools such as visualizing overload, unevenness, and waste in worksites and optimizing workflow to create space, which they implement at their own companies.

In terms of fire and explosion accidents, small-scale fires occurred at one group company in Japan and one group company outside Japan, but these accidents did not cause human damage nor did either affect any area outside of plant premises. One fire was caused by sparks emitted from hot work and the other fire traced to sediment from a duct or chimney. To prevent a recurrence of these fires, the Group has implemented stricter management of hot work and improved the duct sediment inspection and cleanup. 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.

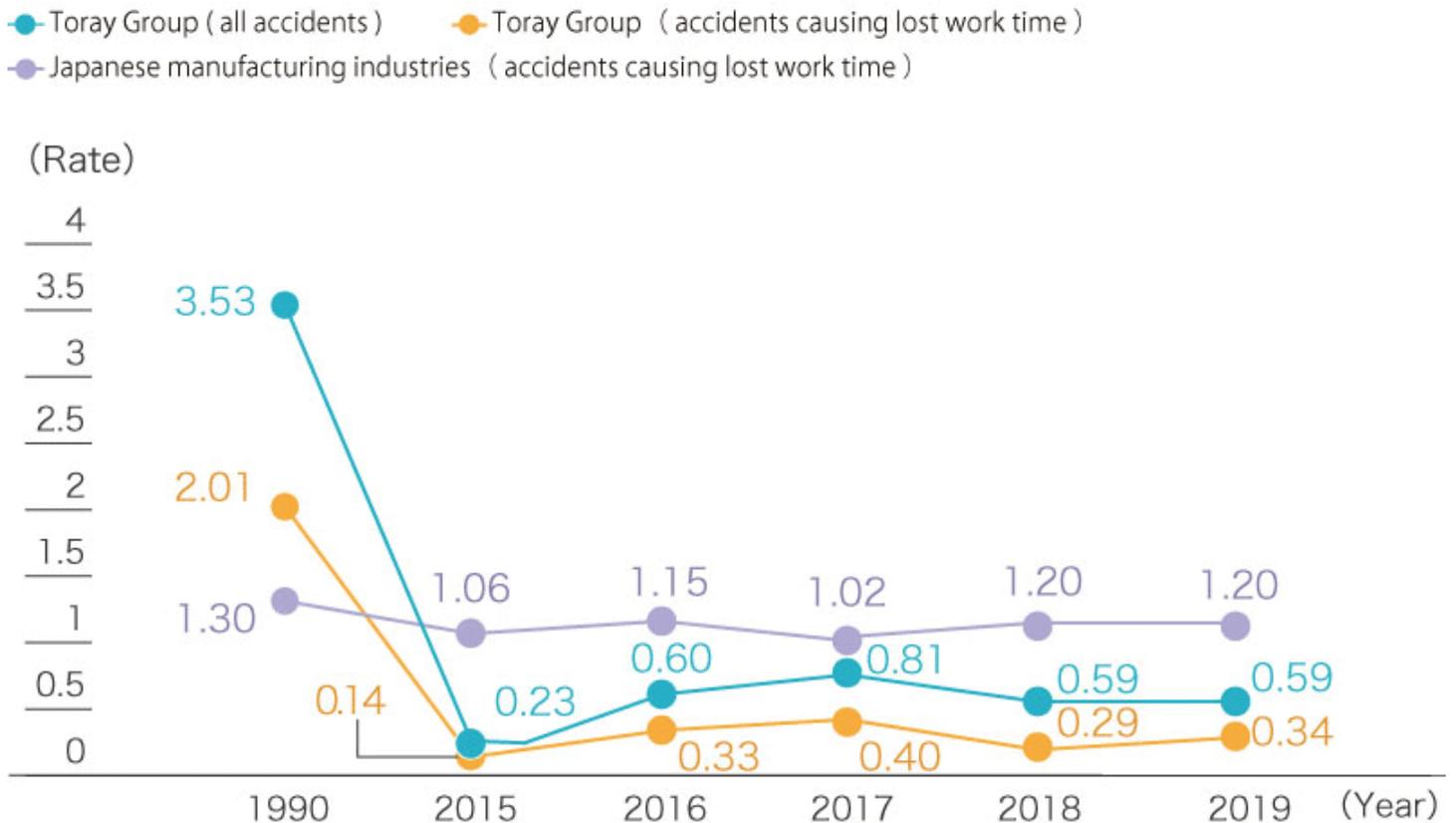


A safety meeting with the participation of unit heads at Aichi Plant (Toray Industries, Inc.)

**Number of Occupational Accidents<sup>2</sup>: Toray Group (Lost work time and non-lost work time)**



**Occupational Accident Frequency Rate<sup>3</sup>: Toray Group**



<sup>2</sup> 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.

<sup>3</sup> 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

## 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

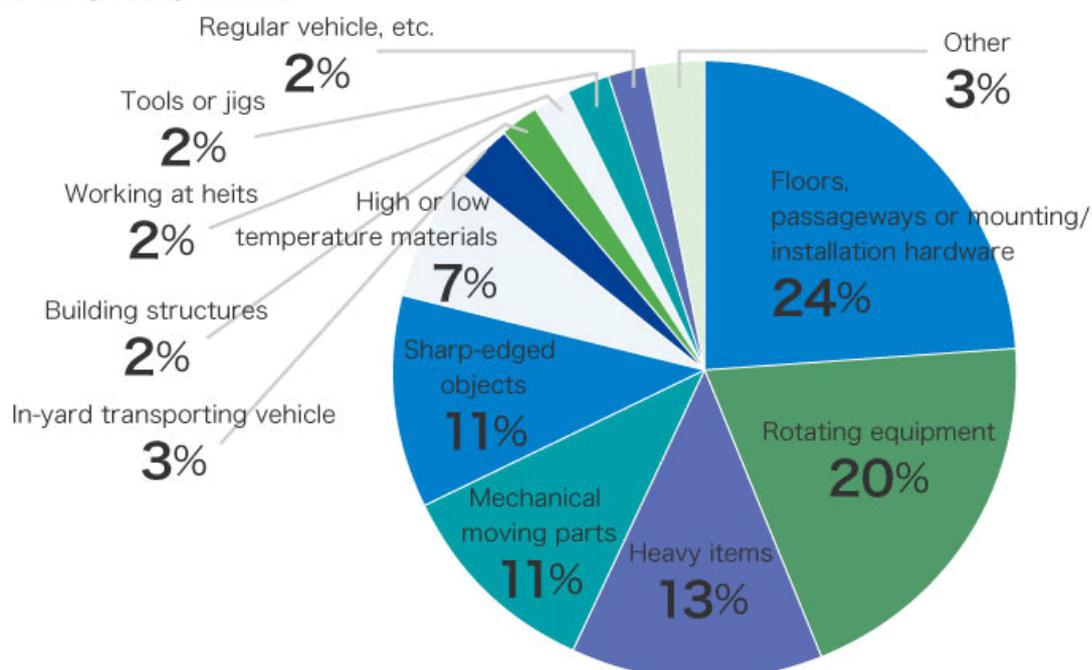
In the event of an occupational accident, the emergency response review meeting and the countermeasure meeting are convened to clarify the chain of events leading up to the accident, identify the cause, and decide on and execute countermeasures. In addition, information about the accident is shared throughout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

## 3. Prioritized risk reduction activities

The Group analyzed the factors involved in occupational accidents at Group companies in 2019, which indicated that floors, passageways or mounting/installation hardware were the leading cause of accidents at 24%, followed by rotating equipment at 20%. Many of the accidents relating to floors, passageways or mounting/installation hardware involved falls during everyday movement, which is seen as a risk to everyone who works at Toray Group worksites. To mitigate this risk, the Group has comprehensively implemented 3S and 5S at its worksites, to secure passageways and working space. The Group is also working to raise the safety awareness of all employees to ensure they practice safety first.

Accidents involving rotating equipment and sharp-edged objects can lead to significant injury and are considered major risk factors. All work involving rotating equipment and sharp-edged objects is subject to an annual risk assessment and classified based on the degree of risk, so that safety measures can be implemented according to the risk level. The Group implements risk management using plan-do-check-action (PDCA) cycles to reduce risks.

**Causes of Occupational Accidents (Both Requiring and Not Requiring Work Absence) at Toray Group in 2019**



## 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. Starting in 2019, the magazine has been publishing features on the fundamentals of accident prevention.



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



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

Virtual reality simulation of actual worksite, involving collision with a forklift



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

## Implementing Safety Management Together with Subcontractors

Toray Industries implements uniform safety activities for its own work as well as subcontracted work that is subcontracted to on-site Toray affiliates<sup>4</sup> 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.



On-site monitoring of actual work (Meinan Service Inc.)

<sup>4</sup> Toray affiliates: Toray Industries' subsidiaries that provide ancillary services for plant operations

## Safety Management Implemented by Subcontractors

Toray Group recognizes its duty to ensure the safety of the many subcontractors working at its sites. Occupational health and safety committees meet once a month with the participation of representative employees from subcontractors. Regular safety and liaison meetings are conducted to gain input from subcontractors, and are used to communicate the Group's policies and measures. At plants, Toray and subcontractors work together on safety initiatives, including safety posters, slogan contests and safety suggestions.



Safety meeting at Tokai 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 drills toward establishing 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 2019, the drills were expanded to encompass the response to subsequent earthquakes, which was appended to Japan's Basic Plan for Measures against an Earthquake Disaster in the Nankai Trough by the Central Disaster Management Council. In addition to conducting drills for the initial response to a large-scale earthquake, Group plants in seaside locations conduct evacuation drills in case of a tsunami triggered by a large-scale earthquake.



Safety confirmation team during an evacuation drill (Toray Engineering Co., Ltd.)



Firefighting training (Toray Plastics Precision Co.,Ltd.)

## Initiatives for Improving Fire-Prevention Capabilities

---

In 2019, Toray Group continued to implement Fire Prevention Project Part II to execute the four key tasks (see below) and entrench them into worksites in order to strengthen its fire prevention. The 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.

## Four Tasks

Tasks	Results of 2019 activities
Effectively use fire-prevention checklists	<ol style="list-style-type: none"> <li>1. Promoted use of revised fire-prevention checklists in and outside Japan</li> <li>2. Fostered leaders who can facilitate the use of fire-prevention checklists while giving instructions (in Japan)</li> <li>3. Fostered sub-leaders who actually use fire-prevention checklists at plants (in Japan)</li> </ol>
Enhance fire-prevention training	<ol style="list-style-type: none"> <li>1. Provided fire-prevention training for engineers, etc., company-wide (elementary and intermediate levels)</li> <li>2. Conducted accident prevention training for workers of Group companies outside of Japan (enhancement of Group training based on fire cases)</li> <li>3. Provided fire-prevention training for operators at plants (younger operators and leader courses)</li> </ol>
Enhance change management	<ol style="list-style-type: none"> <li>1. Conducted change management on manufacturing conditions, work contents, workers and equipment (in and outside Japan).</li> <li>2. Production engineering staff from Toray's main plant provided operational guidance to Group companies outside of Japan</li> </ol>
Build a safety management system for hot work	<ol style="list-style-type: none"> <li>1. Conducted hot work safety management at Group companies and plants (in and outside of Japan)</li> <li>2. Engineering staff from Toray Industries conducted inspections and provided guidance on hot work management at Group companies outside Japan</li> </ol>



Fire-prevention training for engineers, etc., company-wide (Toray Human Resources Development Center)

## Distribution Safety Initiatives

---

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

---

In consideration of the health risks to the Company's employees and contract employees, Toray Industries 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. To prevent health issues among workers and continually follow-up on the health status of employees, the Group conducts medical checkups and 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

---

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, 2020 are as follows.

Certified occupational accidents arising from handling asbestos (Toray Group): 107 (90)

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

Medical examination recipients involving asbestos (Toray Group): 4,035

Note: Figures in parentheses refer to fatalities.

Fiscal 2019 CSR Activity Report- Safety, Accident Prevention, and Environmental Preservation

## Progress on the Fifth Medium-Term Environmental Plan

### Environment

Toray Group is now implementing its Fifth Medium-Term Environmental Plan, which runs from fiscal 2016 to fiscal 2020. The plan aims to further reduce the Group's environmental impact. Amid further projected increases in production volumes for high-performance films and carbon fiber, the Group will continue to pursue environmental initiatives in order to achieve the challenging targets of the new plan.

In July 2018, Toray Group published its Sustainability Vision, which outlines the following goals in aiming to further reduce the Group's environmental impact.

- Toray Group: Achieve a 30% reduction of greenhouse gas emissions per unit of sales by fiscal 2030, compared with the fiscal 2013 level.
- Toray Industries and plants in Japan: Achieve a 7% reduction in the absolute volume of greenhouse emissions by fiscal 2030, compared with the fiscal 2013 level.

Toray Group will continue working to reduce emissions in fiscal 2020 and beyond, in order to achieve the goals outlined in the Sustainability Vision.

### Progress on the Fifth Medium-Term Environmental Plan Target

Area	Toray Group fiscal 2020 target	Fiscal 2019 results
Curb global warming	Maintain greenhouse gas emissions at least 15% below the fiscal 1990 level (Toray Industries, Inc.)	27% reduction
	15% or greater reduction in greenhouse gas emissions per unit of sales compared to fiscal 1990 (Toray Group in Japan)	32% reduction
Management of chemical substances	Atmospheric emissions of PRTR Law-Specified substances: Maintain at least 70% below the fiscal 2000 level (Toray Group)	73% reduction
	Atmospheric emissions of volatile organic compounds (VOCs): Maintain at least 70% below the fiscal 2000 level (Toray Group)	76% reduction
Waste reduction	Zero emissions goal: Achieve at 45 or more Toray Group plants	Achieved at 44 plants
	Simply disposed waste rate: 22.5% or lower (Toray Group)	24.5%
	Recycling rate: Maintain at 86% or more (Toray Group)	86.4%
	Landfill waste rate: 1.3% or lower (Toray Group in Japan)	8.3%

# Energy Saving and Curbing Climate Change

Materiality Focus

Environment

## Addressing Climate Change

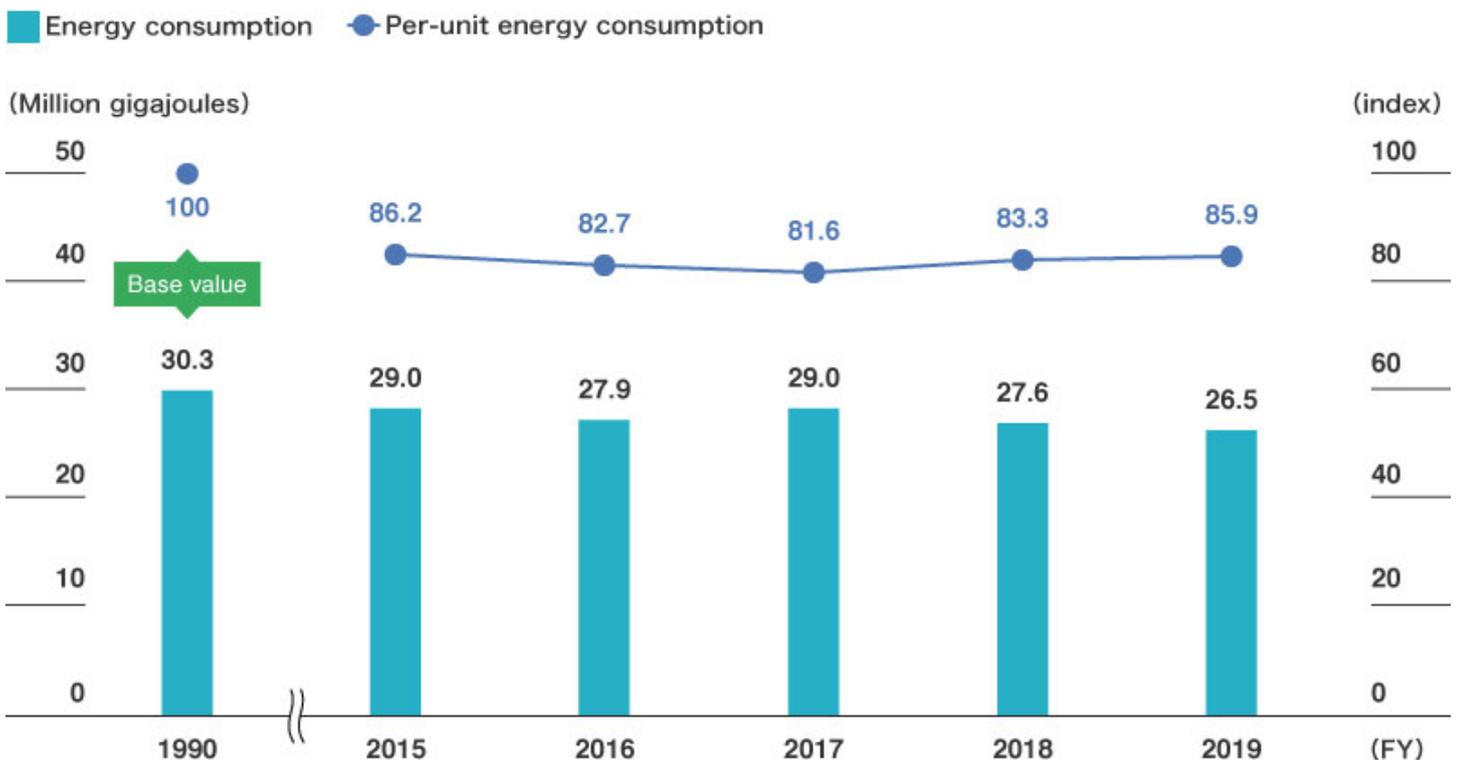
With a view to helping realize sustainable, low-carbon societies, Toray Group has been pursuing initiatives for reducing greenhouse gas emissions. Toward this end, the Group is working to reduce CO<sub>2</sub> emissions and save energy during manufacturing by improving manufacturing processes, increasing utilization of renewable energy and reducing coal consumption in accordance with its Fifth Medium-Term Environmental Plan launched in fiscal 2016 and the Toray Group Sustainability Vision announced in July 2018.

## Toray Industries' Energy Saving Activities

Toray Industries, Inc. has set a goal of reducing its per-unit energy consumption<sup>1</sup> by 2% annually. In fiscal 2019, the Company's energy consumption was down 4.0% year-on-year due mainly to a decrease in production volumes at some plants. Meanwhile, per-unit energy consumption was up 3.1 % year-on-year (14.1% reduction compared with the baseline year of fiscal 1990). This was due to an increase in the fixed energy ratio unrelated to production, stemming from lower production volumes.

<sup>1</sup> Energy consumption per converted production volume

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



Toray Group organizes energy saving teams to help carry out annual energy saving diagnostics at plants in Toray Industries and its group companies around the world. In fiscal 2019, these activities were conducted at 6 of Toray Industries' plants, along with 4 group company plants at in Japan and one outside Japan. Thanks to these proactive energy-saving initiatives, the Group reduced greenhouse gas emissions by about 31,000 tons-CO<sub>2</sub> equivalent.



Review for energy saving diagnostics outside Japan  
(Toray Textiles(Thailand)Public Company Limited)

## Toray Industries' Efforts to Fight Climate Change

### Reduction of greenhouse gas emissions per unit of sales

■Reporting scope  
Toray group (Japan)

■Target in Fiscal 2019  
At least 15% lower than fiscal 1990

Result in fiscal 2019

**32%**

Toray Industries systematically works to reduce greenhouse gas emissions, with the goal of maintaining greenhouse gas emissions at least 15% lower than the 1990 level by 2020. In fiscal 2019, the Company's CO<sub>2</sub> emissions decreased by 95,000 tons year-on-year. Greenhouse gas emissions were down 4.8% year-on-year at 1.86 million tons, which was 27.1% below the 1990 level, continuing to meet the reduction target (15% below fiscal 2013 level).

Moving forward, Toray Industries will endeavor to meet its reduction targets despite the higher production volumes projected due to business growth.

Greenhouse Gas Emissions (Toray Industries, Inc.)



**Related Information**

Toray Industries has obtained third-party assurance of its greenhouse gas emissions from Lloyd’s Register Quality Assurance Limited (LRQA) for Scope 1 (direct emissions from plants, offices, vehicles, etc. owned by the Company), Scope 2 (indirect emissions from the generation of energy), and Scope 3 (other indirect emissions). <sup>2</sup>

Scope 1: 1,560,000 ton

Scope 2: 300,000 ton

Scope 3: 860,000 ton

<sup>2</sup> Scope 3 emissions are calculated for Category 2 (capital goods), Category 3 (fuel and energy-related activities not included in Scope 1 or Scope 2), and Category 4 (upstream shipping and distribution).

[> Third-Party Assurance](#)

## Installing Renewable Energy Systems

Toray Group is systematically installing renewable energy systems. Toray Industries installed and started to operate a small hydroelectric system that generates power using the incoming industrial water pressure in Nagoya Plant in fiscal 2016, and installed solar power generation systems in Seta Plant in fiscal 2017, Nagoya Plant (Toray Engineering Central Co., Ltd.) and Penfabric Sdn. Berhad (Malaysia) in fiscal 2018. Those systems have been operating. In addition, the Tokai Plant of Toray Industries began co-combusting sludge fuel, which is carbon neutral, as boiler fuel from fiscal 2017.



A solar power generation system of Penfabric Sdn. Berhad (Malaysia)

**Renewable energy generated in fiscal 2019**

**11,149 MWh**

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

### **Toray Industries, Inc.**

- Seta Plant
- Ehime Plant
- Mishima Plant
- Okazaki Plant
- Nasu Plant

### **Group companies in Japan**

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

### **Group companies outside Japan**

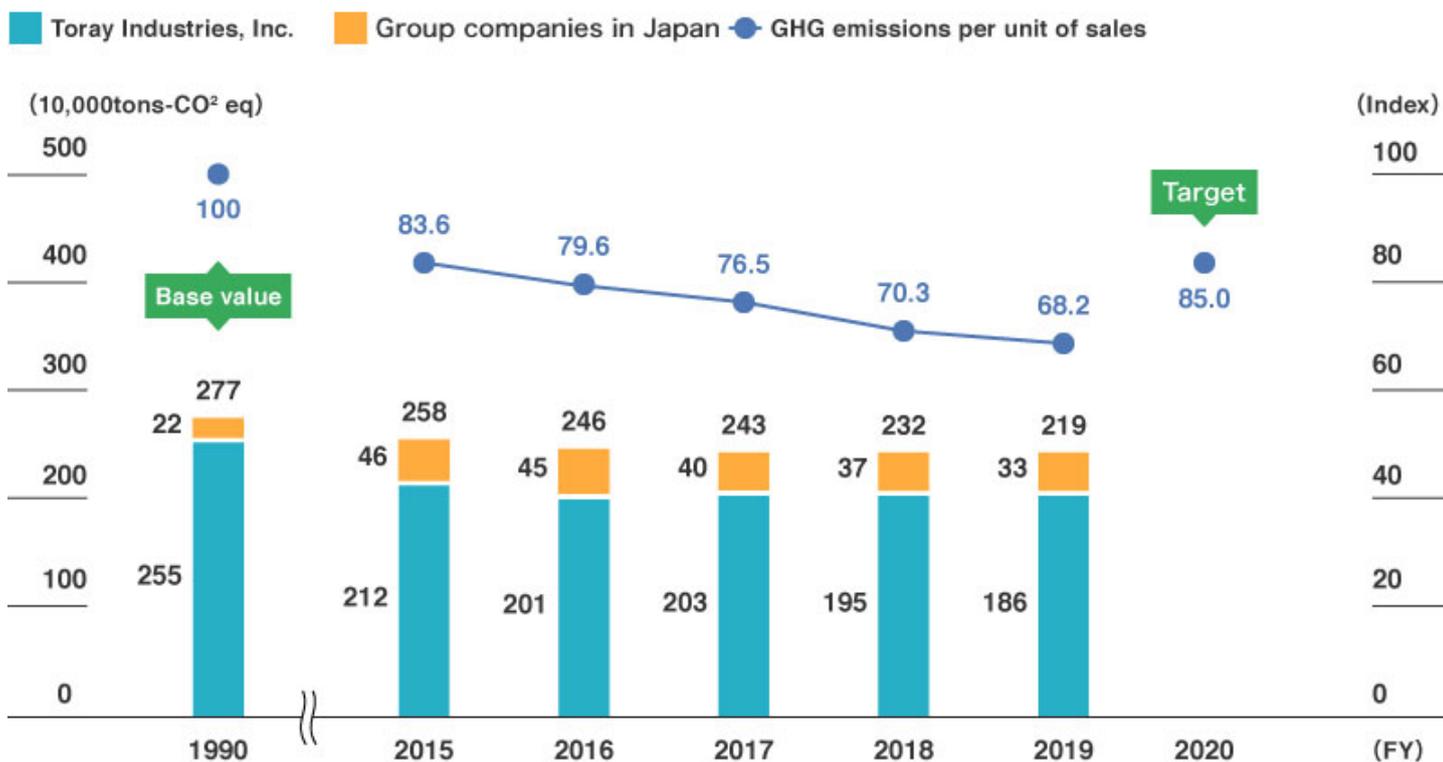
- Toray Membrane USA, Inc.
- Toray Plastics (America), Inc.
- Thai Toray Synthetics Co., Ltd.
- Penfabric Sdn. Berhad
- Toray Polytech (Nantong) Co., Ltd.
- Toray Advanced Materials Korea Inc.

# Greenhouse Gas Emissions (Toray Industries and Its Group Companies in Japan)

Toray Industries and its group companies in Japan are addressing climate change under a goal of reducing emissions by 15% on a per-unit-of-sales basis by fiscal 2020 compared to the fiscal 1990 level.

Greenhouse gas emissions were down 5.6% in fiscal 2019 compared to the previous fiscal year. Greenhouse gas emissions per unit of sales improved by 2.1 points compared to the previous fiscal year and were 31.8% below the base year.

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

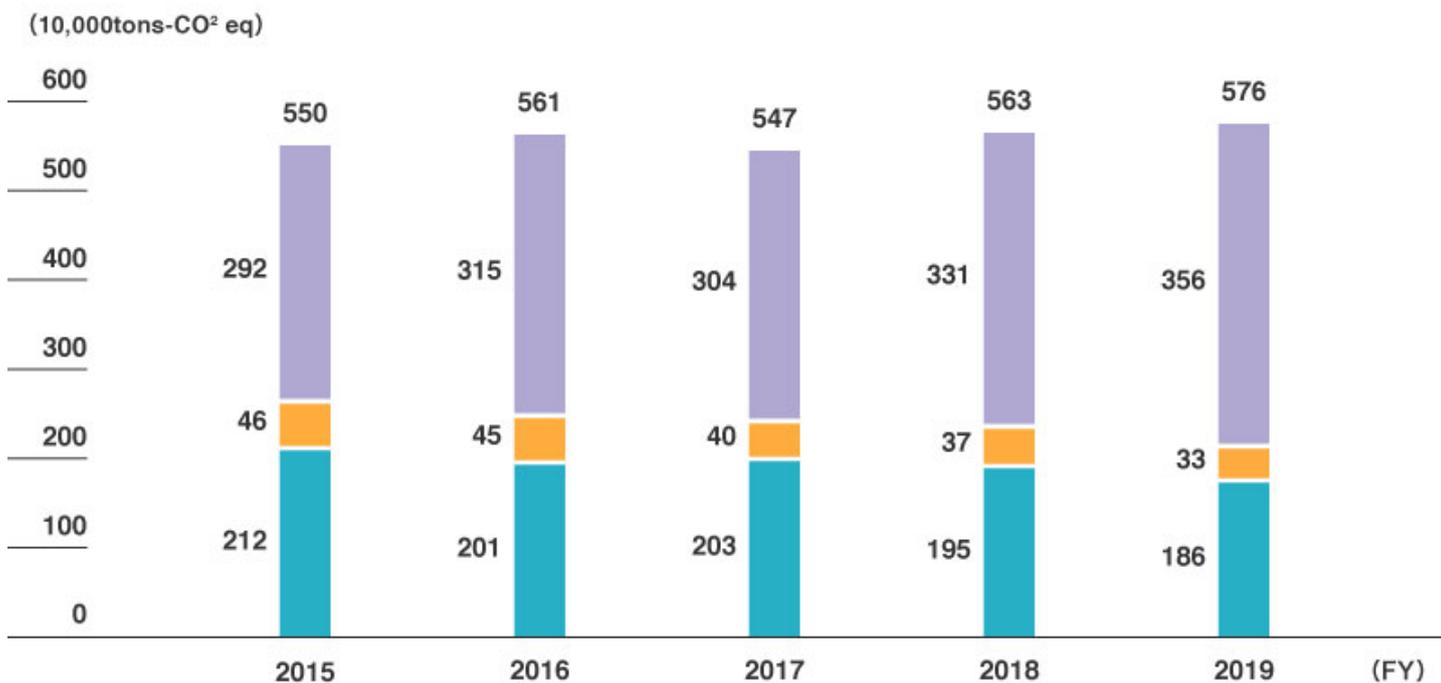


## Greenhouse Gas Emissions (Toray Group)

Fiscal 2019 greenhouse gas emissions for Toray Group worldwide were 5.76 million tons-CO<sub>2</sub> equivalent, an increase of 2.3% compared to the previous year. All Toray Group manufacturing companies and plants will continue to work to achieve the Group's goal of reducing the per-unit energy consumption rate by 2% each fiscal year.

### Greenhouse Gas Emissions (Toray Group)

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



## 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.

# Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances

Materiality Focus

## Environment

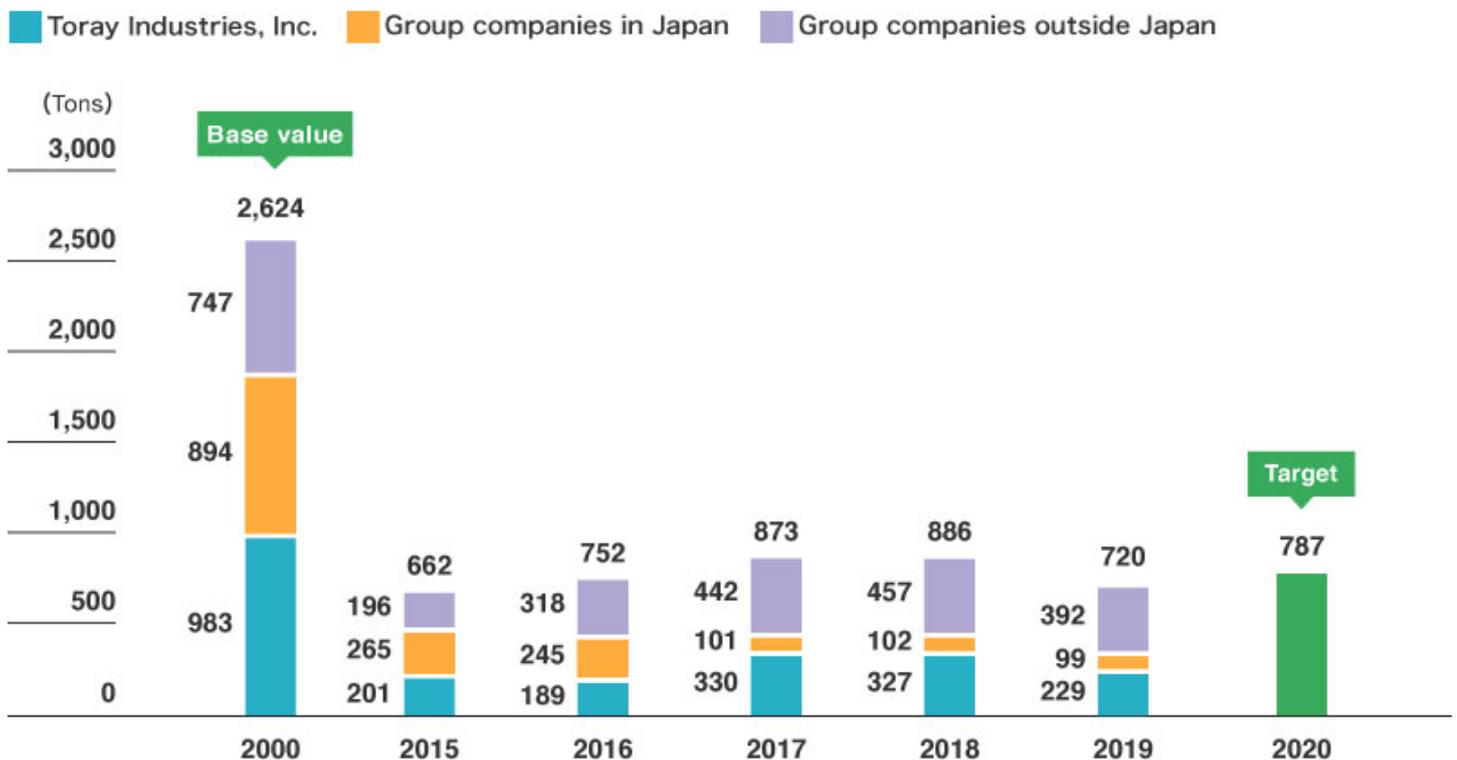
As a corporate group that does business in the chemicals sector, Toray Group places the highest priority on reducing emissions of chemicals into the atmosphere in order to reduce its environmental impact.

Under the Fifth Medium-Term Environmental Plan, which covered fiscal 2016–2020, the Group works 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).

## Reducing Atmospheric Emissions of PRTR Law-Specified Substances

In fiscal 2019, Toray Group's atmospheric emissions of PRTR Law-specified substances were 720 tons, which represented a 73% reduction compared to the base year of fiscal 2000, achieving the target of a 70% reduction compared with the base year under the Fifth Medium-Term Environmental Plan. Going forward, Toray Group will continue working to further reduce atmospheric emissions of substances designated by the PRTR Law.

### Atmospheric Emissions of PRTR Law-Specified Substances



## Reduction of Atmospheric VOC Emissions

### Reduction of atmospheric VOC emissions (%)

■ Reporting scope

Toray Group

■ Target in fiscal 2019

At least 70% lower than fiscal 2000

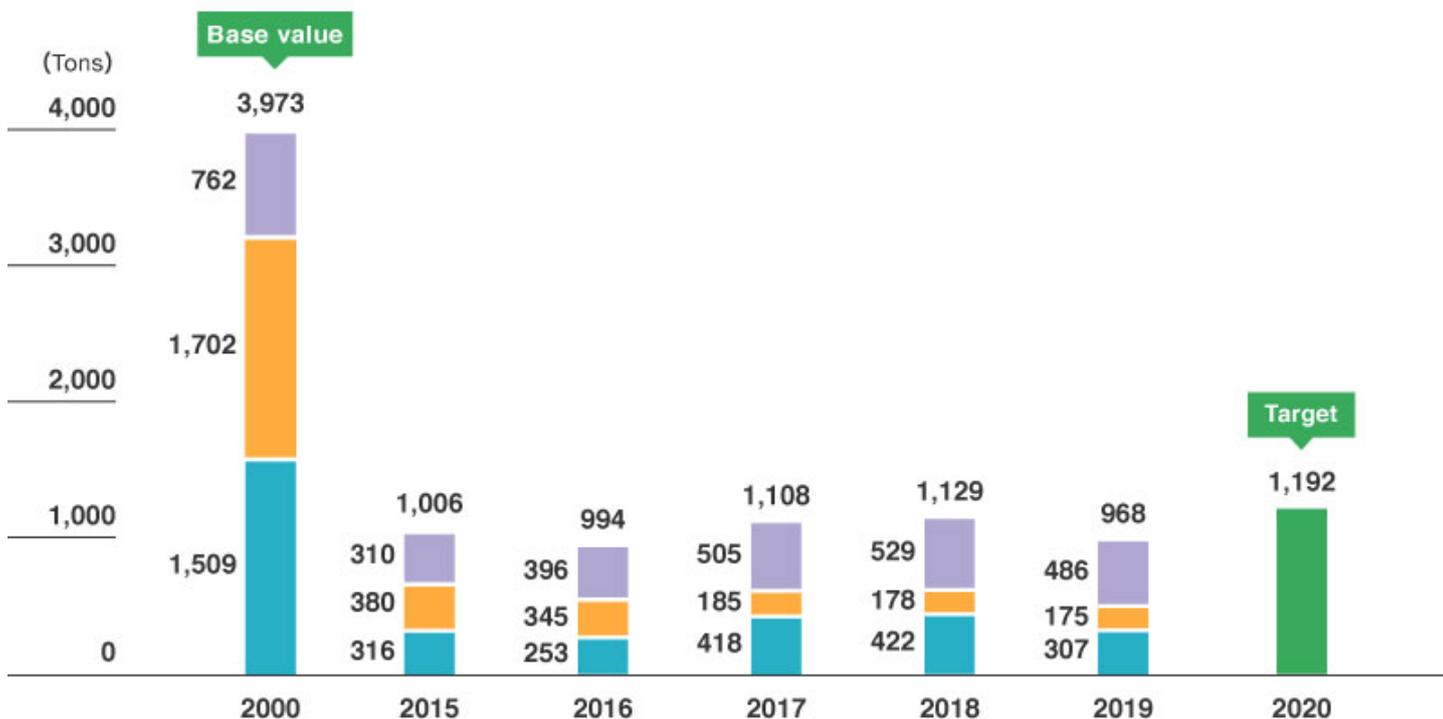
Result in fiscal 2019

**76%**

In fiscal 2019, Toray Group's atmospheric VOC emissions were 968 tons, down 14% (161 tons) compared to the previous fiscal year. The emissions were 76% below the base year of fiscal 2000, achieving the fiscal 2020 target of a 70% reduction compared to the base year. The main reason for the reduction of PRTR substance and VOC emissions was the reduced PRTR substances at the Nasu Plant of Toray Industries and Toray Battery Separator Film Korea Limited due to production impact.

### Atmospheric VOC Emissions

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



# Initiatives to Prevent Air and Water Pollution

Materiality Focus

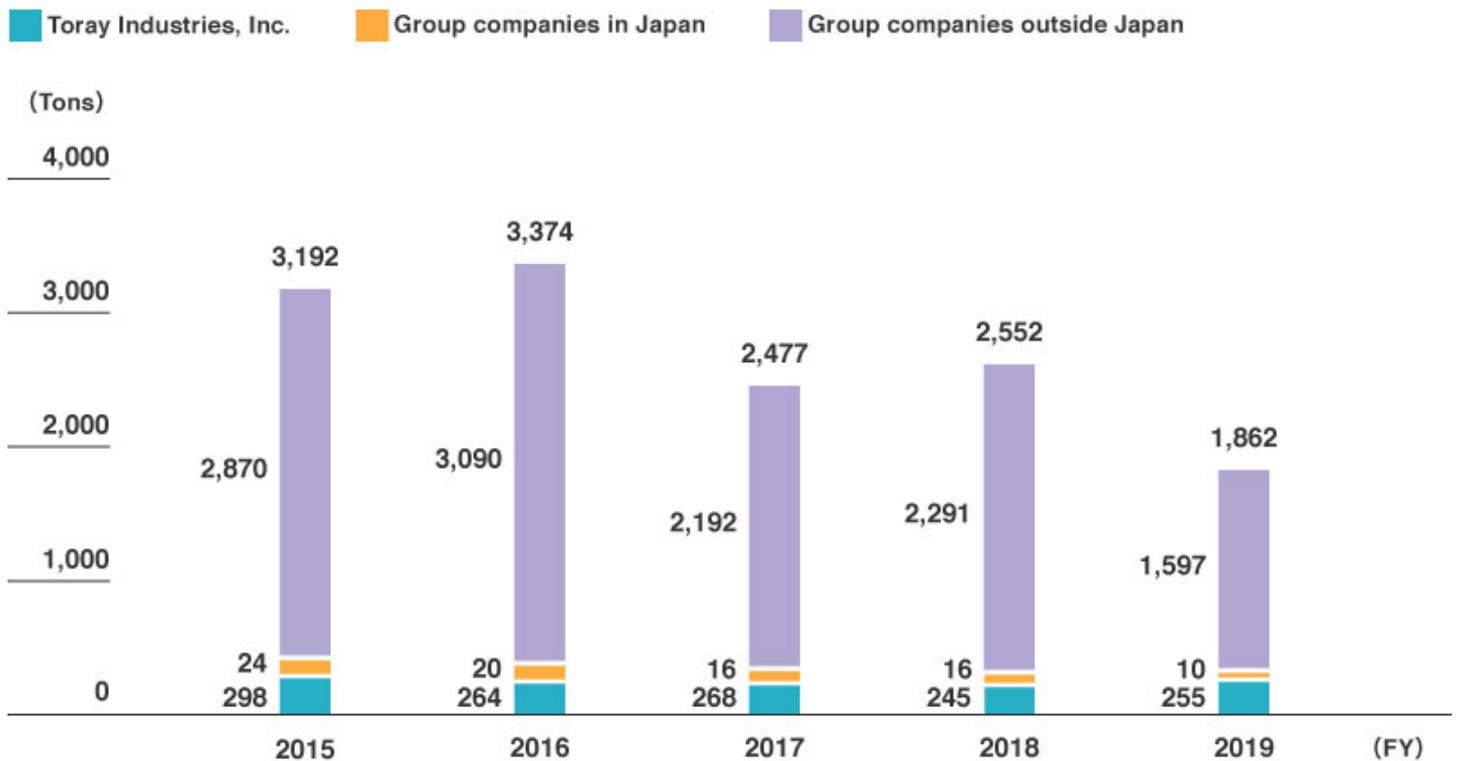
Environment

Toray Group implements ongoing initiatives at production sites to reduce sulfur oxide (SOx) emissions by installing desulfurization equipment and switching to cleaner fuels, and reduce chemical oxygen demand (COD) by expanding wastewater treatment facilities.

## Air Emission Management

In fiscal 2019, Toray Group recorded 1,862 tons of SOx emissions (down 27% year-on-year), 2,183 tons of NOx emissions (up 6% year-on-year), and 359 tons of dust emissions (up 32% year-on-year). The reduction in SOx emissions was due to the use of low sulfur concentration coal by a group company outside of Japan. The increases in NOx and dust emissions were due to increased production at Toray Industries and certain group companies outside Japan.

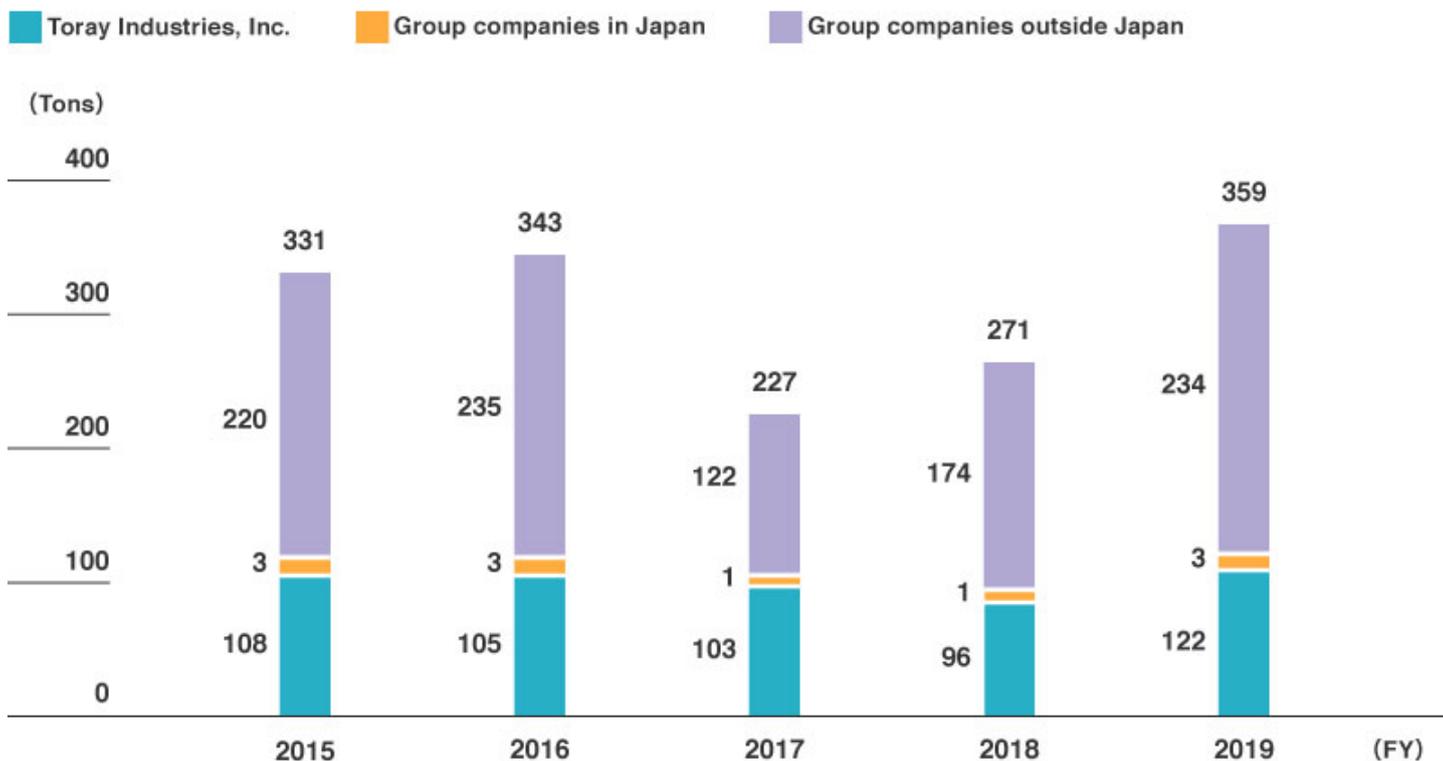
### Atmospheric Emissions (SOx)



### Atmospheric Emissions (NOx)



### Atmospheric Emissions (Dust)

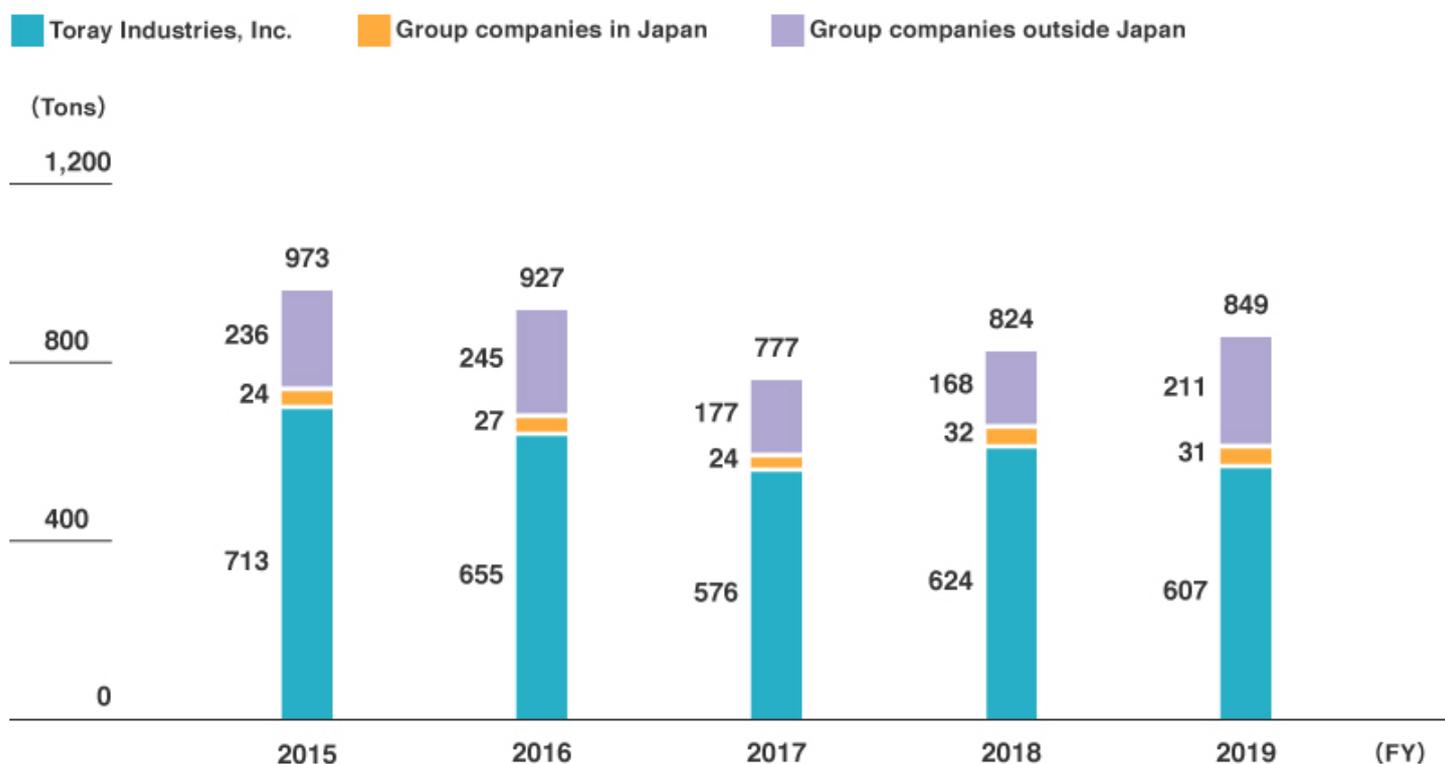


## Wastewater Quality Management

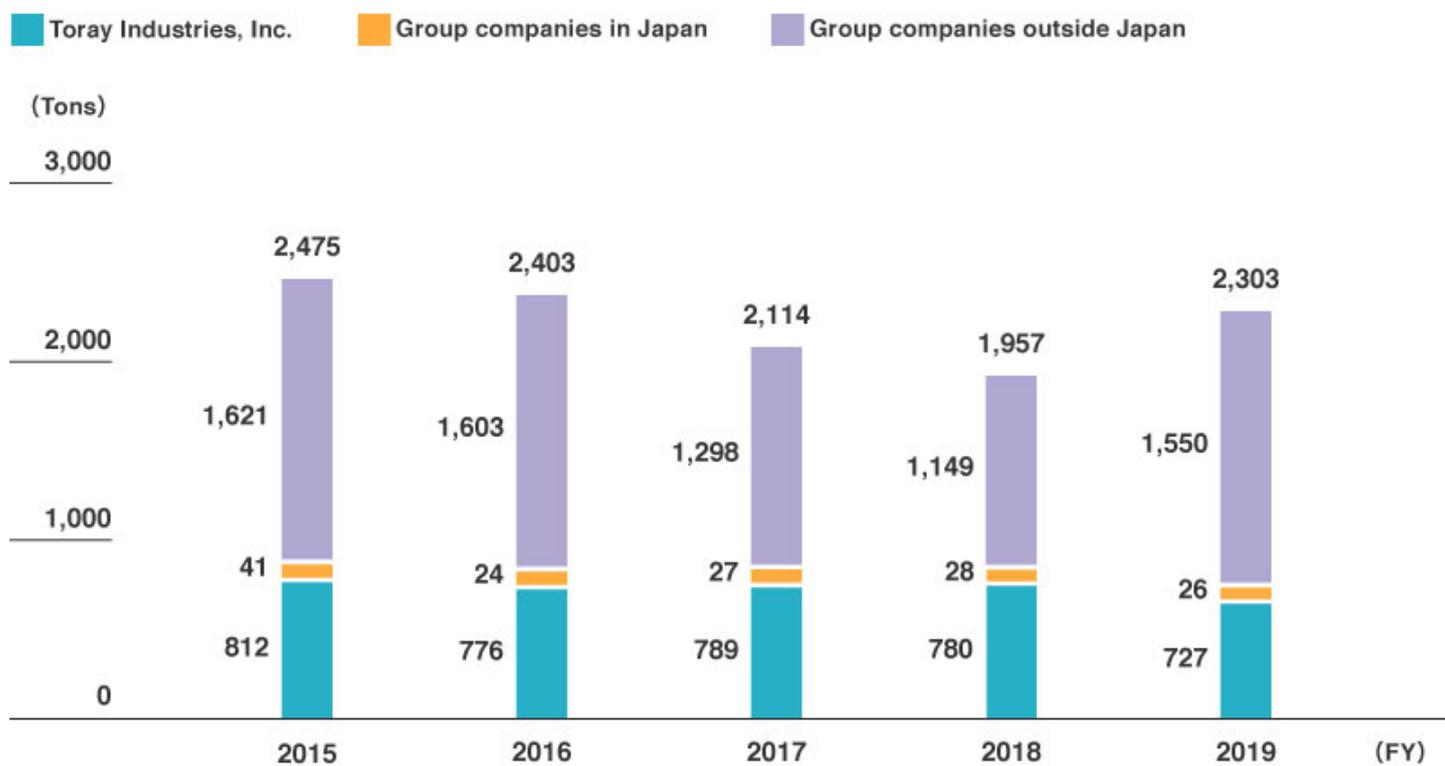
Toray Group monitors and complies with regulations concerning BODs, CODs, and nitrogen in countries and regions where it operates plants and implements water quality management for plant wastewater. Plants with high effluent loads are reducing effluents by installing wastewater treatment facilities (activated 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 2019, Toray Group recorded 849 tons of BOD emissions (up 3% year-on-year) and 2,303 tons of COD emissions (up 18% year-on-year). COD emissions were up due to an increase in production volumes in group companies outside Japan.

### 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 2019 meeting was attended by 16 persons from Toray Industries' plants and 17 persons from group companies in Japan.



# Water Usage Management

## Water usage per unit of sales

■ **Reporting scope**

Toray Group

■ **Target in fiscal 2019**

No more than 61% of 2001 level

Result in fiscal 2019

**52%**

Toray Group used 230 million tons of water in fiscal 2019, the same level as the previous fiscal year. Compared to the amount used per unit of sales in fiscal 2001, set to an index value of 100, usage in fiscal 2019 was 51.7 points, up 0.7 points from the previous fiscal year (a 23% decrease from fiscal 2013). This result, despite the fact that the amount of water used was basically the same as the previous fiscal year, was due to the decrease in Toray Group sales.

### Related Information

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

### Comparative Water Usage Per Unit of Sales (Toray Group)

(FY)	2013	2014	2015	2016	2017	2018	2019
Comparative water usage per unit of sales	66.7	59.7	56.2	59.5	54.0	51.0	51.7

# Initiatives to Reduce Waste

 Materiality Focus

Environment

## Waste recycling rate

■ Reporting scope	■ Target in fiscal 2019
Toray Group	At least 86%

Result in fiscal 2019

**86.4%**

Toray Group is carrying out zero emission initiatives as it works toward the realization of a sustainable, recycling-based world. Under the Fifth Medium-Term Environmental Plan, the Group worked to achieve its fiscal 2020 targets for rates of simply disposed waste,<sup>1</sup> landfill waste<sup>2</sup> and recycled waste,<sup>3</sup> which have been set as indicators for measuring progress toward attaining zero emissions.

<sup>1</sup> Simply disposed waste rate = (incineration +landfill) / total waste

<sup>2</sup> Landfill waste rate = landfill waste / total waste

<sup>3</sup> Recycling rate = (recycled resources + resources with monetary worth) / (total waste + resources with monetary worth)

In recent years, Europe in particular has embraced a business model aligned with the concept of a circular economy, which is a resource circulation policy aimed at reducing the procurement of natural resources and the production of waste. Adding to its previous initiatives, Toray Corporate Business Research, Inc. now publicizes its survey results regarding the circular economy as part of its economic trends survey.

### Related Information

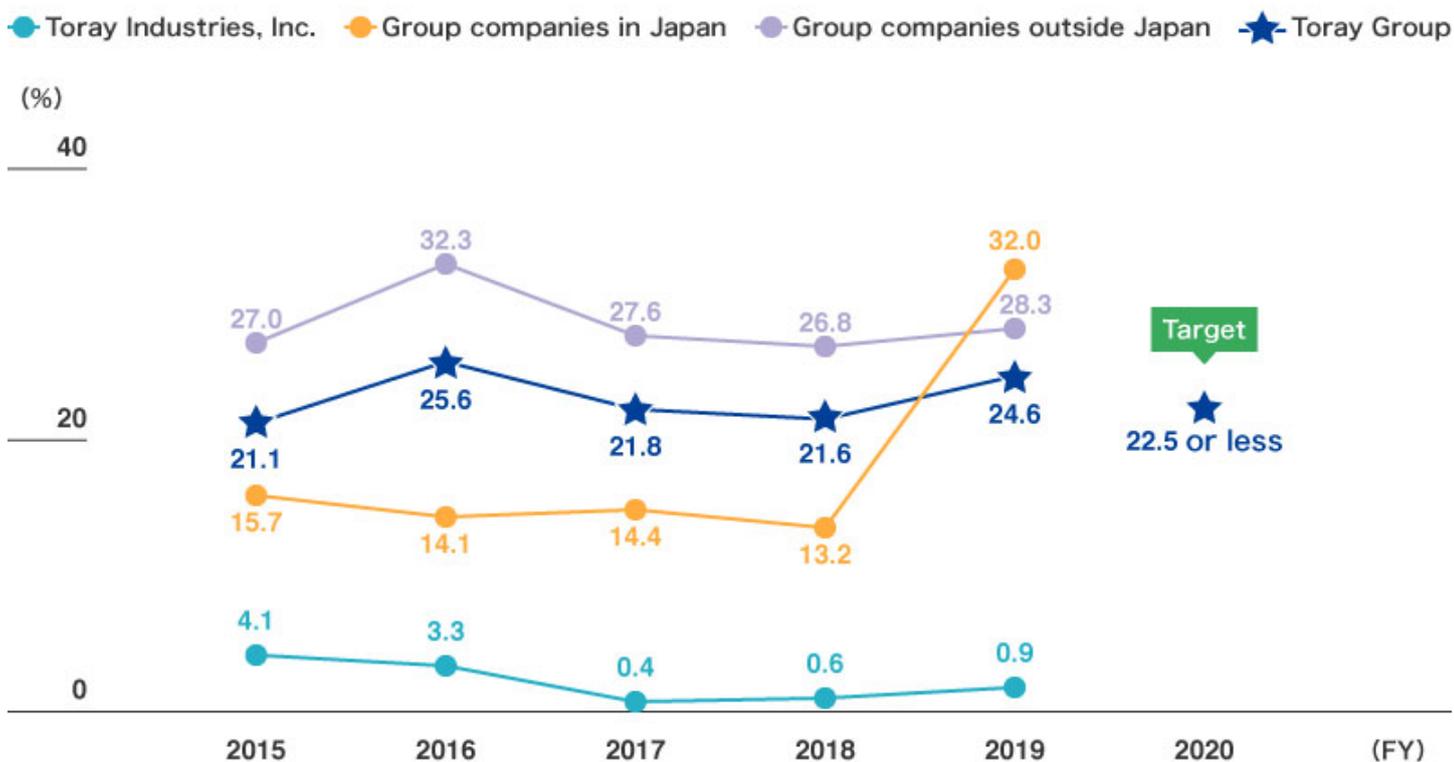
> [Toray Corporate Business Research, Inc.: Business Strategies in the Age of the Circular Economy \(Japanese site\)](#) 

## Results in Fiscal 2019

### Simply Disposed Waste Rate

The simply disposed waste rate for Toray Group was 24.6%, up 3.0 percentage points year-on-year. This was due to the volume of simply disposed waste increasing by around 4,600 tons year-on-year as a result of the merging or closing of plants by group companies in Japan. The result was that the Group failed to meet its target of 22.5% or less. The increase in simply disposed waste due to the merging or closing of plants is only temporary and specific to fiscal 2019. Consequently, the rate is expected to decrease in fiscal 2020 and beyond. Going forward, the Group will continue working to achieve the target for the simply dispose waste rate.

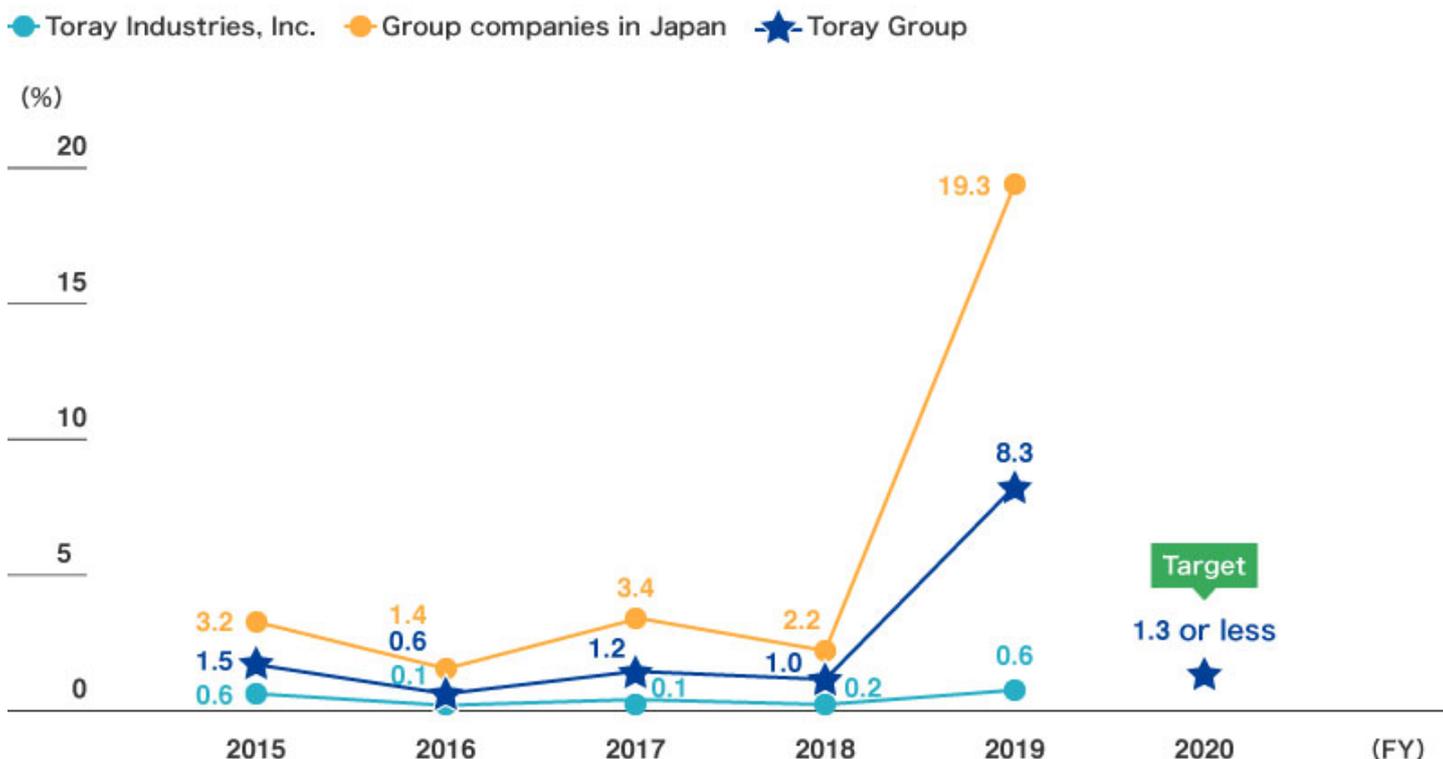
### Simply Disposed Waste Rate (Toray Group)



### Landfill Waste Rate

As a result of the merging or closing of plants by group companies in Japan, the landfill waste rate for Toray Group was 8.3%, up 7.3 percentage points year-on-year. The increase in landfill waste due to the merging and closing of plants is only temporary and specific to fiscal 2019. As such, the landfill waste rate is expected to decrease in fiscal 2020 and beyond.

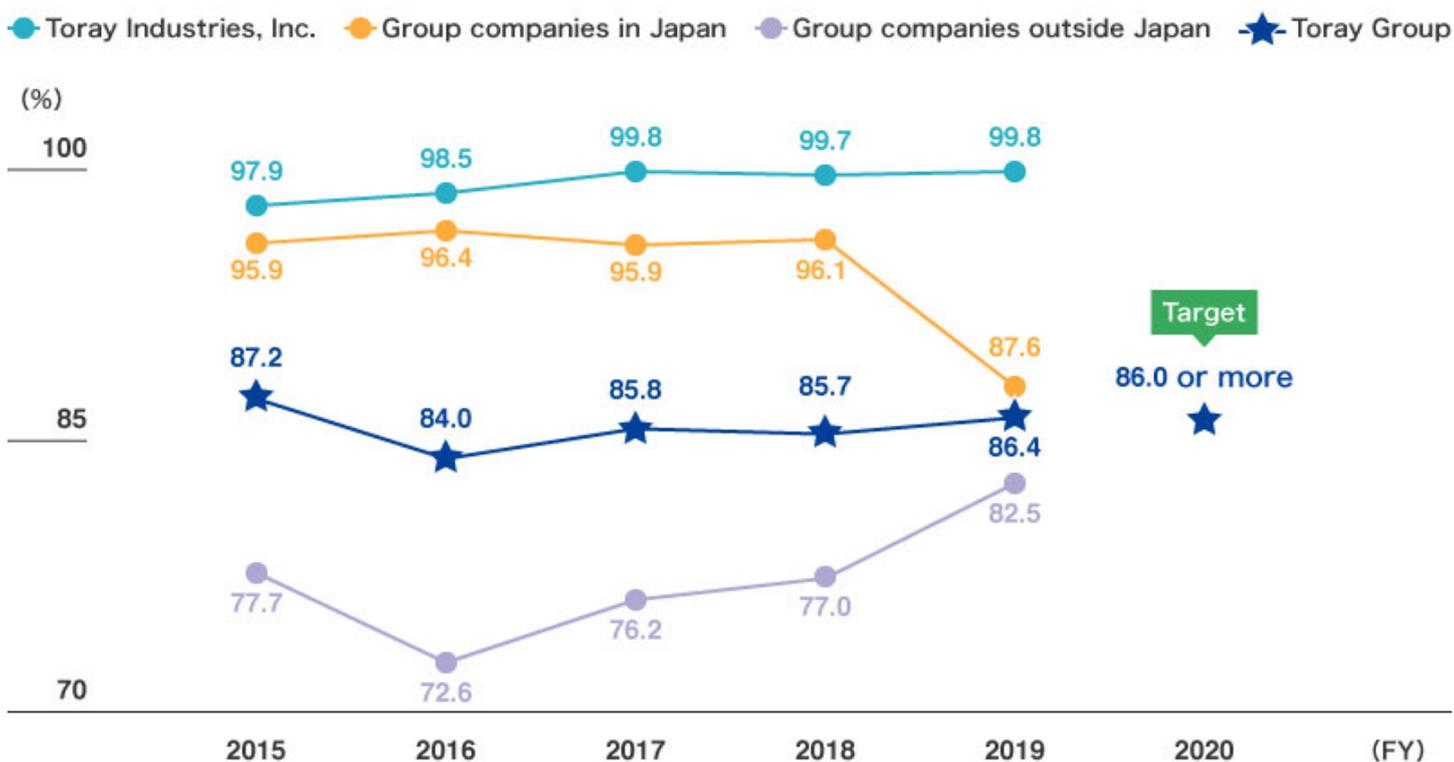
Landfill Waste Rate (Toray Industries, Inc. and Its Group Companies in Japan)



Recycling Rate

The recycling rate for the Toray Group was 86.4%, up by 0.7 percentage points year-on-year. Although the rate was impacted by the aforementioned merging or closing of plants by group companies in Japan, it was outweighed by the Group’s continued recycling efforts from the previous year.

Recycling Rate (Toray Group)



## Zero Emissions Initiatives at Companies and Plants

Toray Group considers a plant to have achieved zero emissions when the amount of simply disposed waste accounts for 1% or less of the total waste it generates. The Group works on its fiscal 2020 target of achieving zero emissions at 45 or more plants. However, in fiscal 2019, the number of plants with zero emissions totaled 44, at 23 companies, just missing the target.

### Companies and Plants with Zero Emissions Status in Fiscal 2019

Toray Industries, Inc.	Shiga Plant, Seta Plant, Ehime Plant, Nagoya Plant, Tokai Plant, Aichi Plant, Mishima Plant, Chiba Plant, Tsuchiura Plant, Gifu Plant, Ishikawa Plant, Nasu Plant
Group companies in Japan	Maruichi Fiber Co., Ltd., Toray Monofilament Co., Ltd., Toray Hybrid Cord, Inc., Sowa Textile Co., Ltd., Toray Engineering Co., Ltd. [Shiga, Numazu], Toray Precision Co., Ltd., Du Pont-Toray Co., Ltd. , Toray Opelontex Co., Ltd., Dow Toray Co., Ltd. [Chiba, Fukui, Komatsu], DuPont Toray Specialty Materials Kabushiki Kaisha, Soda Aromatic Co., Ltd. [Koriyama], Toray Plastics Precision Co., Ltd. [Okazaki, Mishima, Koriyama], Suido Kiko Kaisha, Ltd., Toray Advanced Film Co., Ltd. [Nakatsugawa, Mishima, Takatsuki, Fukushima], Toray Fine Chemicals Co., Ltd. [Moriyama, Tokai], Toray Medical Co., Ltd.
Group companies outside Japan	Toray Plastics (America), Inc. [Rhode Island], P.T. Toray Polytech Jakarta, Toray Chemical Korea Inc. [Anseong, Yugu], Toray Advanced Film Kaohsiung Co., Ltd, Toray Kusumgar Advanced Textile Private Limited, Toray BSF Coating Korea Limited

Note: Information in brackets refers to the names of the plants.

# Environmental Risk Management

Materiality Focus

## Environment

### Number of environmental accidents

■ Reporting scope      ■ Target in fiscal 2019  
Toray Group              0

Result in fiscal 2019

0

## Compliance with Environmental Laws and Accidents in Fiscal 2019

In fiscal 2019, no environmental accident occurred within Toray Group. The Group received three complaints and requests from residents near its facilities concerning noise and odor, which were seriously examined and addressed by implementing improvements.

### Environmental Accidents in Fiscal 2019 (Toray Group)

Administrative disposition due to violations of laws or ordinances <sup>1</sup>	0
Accidents (environmental accidents, etc.)	0
Slight but temporary exceeding of standard values <sup>2</sup>	0
Complaints/requests (noise, odor, etc.)	3

<sup>1</sup> Includes improvement orders and fines. Improvement guidance and recommendations are included in accident figures.

<sup>2</sup> No improvement guidance or recommendations were received from authorities, as there was no harm to the environment.

## 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 2019, 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.

Fiscal 2019 CSR Activity Report- Safety, Accident Prevention, and Environmental Preservation

## Environmental Accounting

Environment

### Fiscal 2019 Environmental Accounting Report (Toray Industries)

---

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

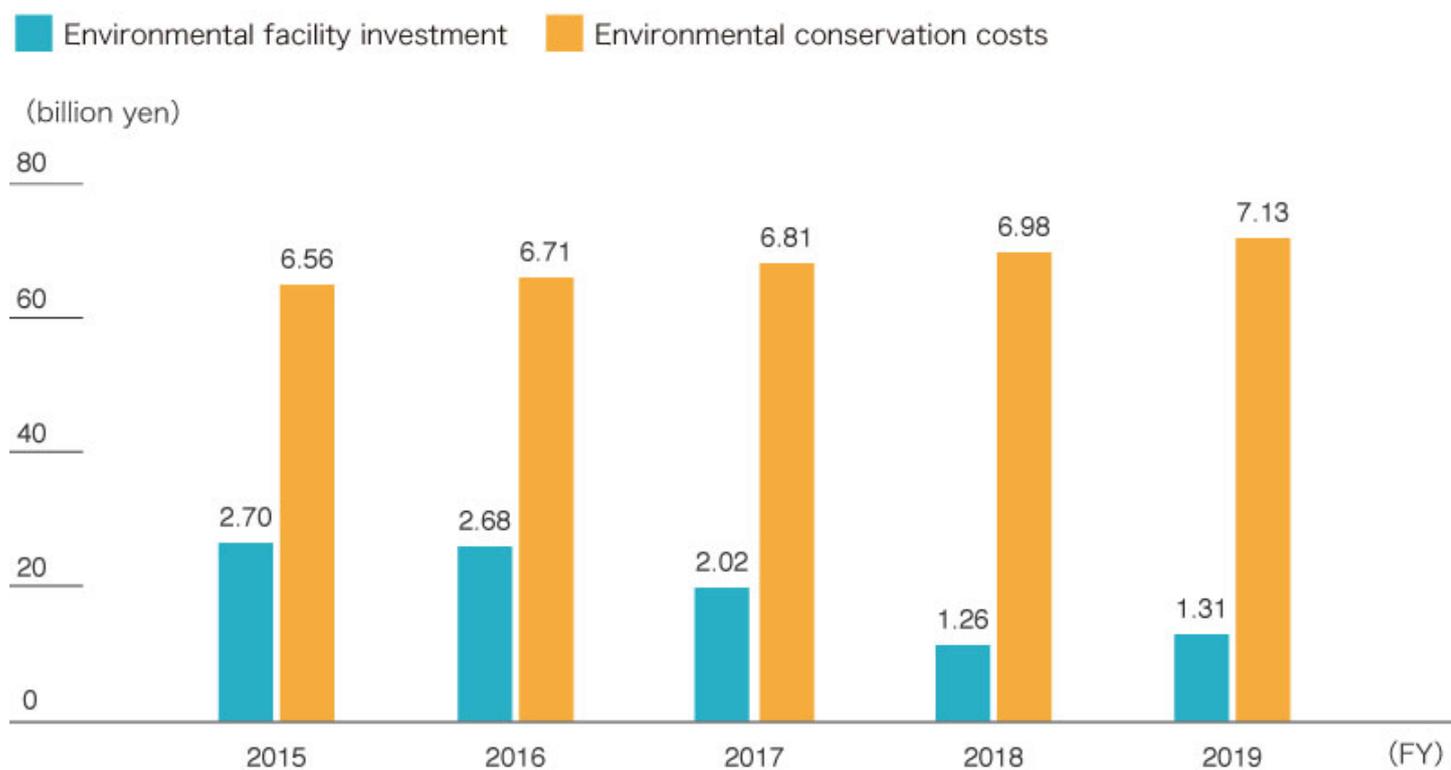
In fiscal 2019, the Company's environment-related investment amounted to 1.31 billion yen, up 0.05 billion yen compared to the previous year. Cost totaled 7.13 billion yen, up 0.15 billion yen compared to the previous year.

**Fiscal 2019 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)	101	2,168
		Water quality	715	2,239
		Noise and vibration	13	13
		Greening	5	314
		Odors and other	52	206
	Global environment conservation costs	Energy conservation and combating global warming	237	107
	Resource recycling costs	Industrial waste reduction, recycling, disposal, and PCB waste disposal services	42	1,274
Upstream and downstream costs		Product recycling	142	81
		Container and package recycling	0	1
Management activity costs		Indirect labor costs, ISO certification and maintenance, environmental communications, and education	0	448
Social initiative costs		Regional initiatives, support for organizations, etc.	0	84
Environmental remediation costs		SOx fines, soil purification, etc.	0	189
Total			1,307	7,125

Effectiveness		
Item		Amount (million yen)
Financial effects	Reduction in energy costs	107
	Reduction in industrial waste disposal costs	58
	Sale of valuable recycled resources with monetary value	719
Quantitative environmental effects	Reduction of greenhouse gas emissions	6,400 tons-CO <sub>2</sub> 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 2019 Facility Investment in Safety, Health, Accident Prevention, Environmental Preservation, and Energy Conservation Projects (Toray Group)

■ Environmental preservation
 ■ Energy conservation
 ■ Waste treatment and reduction
 ■ Recycling, etc.
 ■ Safety
 ■ Accident prevention
 ■ Health



#### Toray Industries Environmental Accounting Standards

- Some categories were changed based on the Ministry of the Environment's Guidelines for FY2005.
- 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.

## Biodiversity Initiatives



### Environment

Biodiversity is being destroyed at a dangerously fast pace with the advance of climate change, the depletion of natural resources, the destruction of ecosystems, and the extinction of species. This is one of the most urgent problems facing the world.

Toray Group views conservation of biodiversity as a critical global environmental issue that is of equal importance to reducing greenhouse gas emissions. The Group conducts risk assessments during the facilities design phase as well as the product safety review phase of all products. This encompasses the use of environmental assessment checklists to assess impacts on biodiversity, as part of the Group's commitment to help build a more sustainable world.

## Working Group Considers Initiatives for Biodiversity

Toray Group develops biodiversity initiatives, which are prioritized and implemented under the guidance of the Toray Group Biodiversity Basic Policy. In fiscal 2019, the Group conducted a review of raw materials containing bio-based ingredients.

### **Biodiversity Initiatives** Adopted 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.

## Procuring Raw Materials

---

Toray Group conducted a survey of all products to determine the usage of bio-based raw materials in product manufacturing. The Group developed rules for checking the biodiversity impacts of products in fiscal 2015, and has applied the rules to all products.

## Social Initiatives

---

Toray Group endeavors to conserve biodiversity with its social initiatives. In fiscal 2019, employees and families of Toray Group companies in the Tokyo area took part in the sixth Toray Group Arakawa Clean Aid event, a joint initiative with the non-profit Arakawa Clean Aid Forum. After learning about garbage in rivers and oceans and the impact on the environment and ecosystems, participants join a garbage collection and inspection program, where they separate and record the type of refuse, learn about the natural environment, and then review the day. The idea is to help them understand the problem of garbage firsthand and to gain an awareness of the importance of the environment, which fosters natural diversity. The nature observation walk gave participants an up-close look at the biodiversity of the Arakawa River including goby fish, sesarmid crabs, and insects, while learning about the importance of biodiversity conservation.



Employees and families of Toray Group companies in the Tokyo area collected and classified trash as part of the Sixth Toray Group Arakawa River Clean Aid



Nature observation walk participants have closer look at natural living organisms

## Increasing Green Areas

### Number of companies and plants developing greenery policy and plan

■Reporting scope  
Toray Group

■Target in fiscal 2019  
at least 55

Result in fiscal 2019

56

Plants at Toray Industries, Inc. and its group companies in Japan are operating greenery policies and plans through 2020, guided by the Toray Group Basic Policy for Increasing Green Areas.<sup>1</sup> The plans encompass initiatives to conserve green areas, including natural forests<sup>2</sup> that have been protected since the plants began operating. Sustainable greenery conservation initiatives also help to conserve the environment for communities.

<sup>1</sup> Toray Group Basic Policy on Increasing Green Areas was established in 2012, evolving out of greenery policies that were first established in 1973.

<sup>2</sup> Natural groves or forestation by species based on potential native vegetation



Forested area on the premises of Okayama Chemical Industry & Co., Ltd.

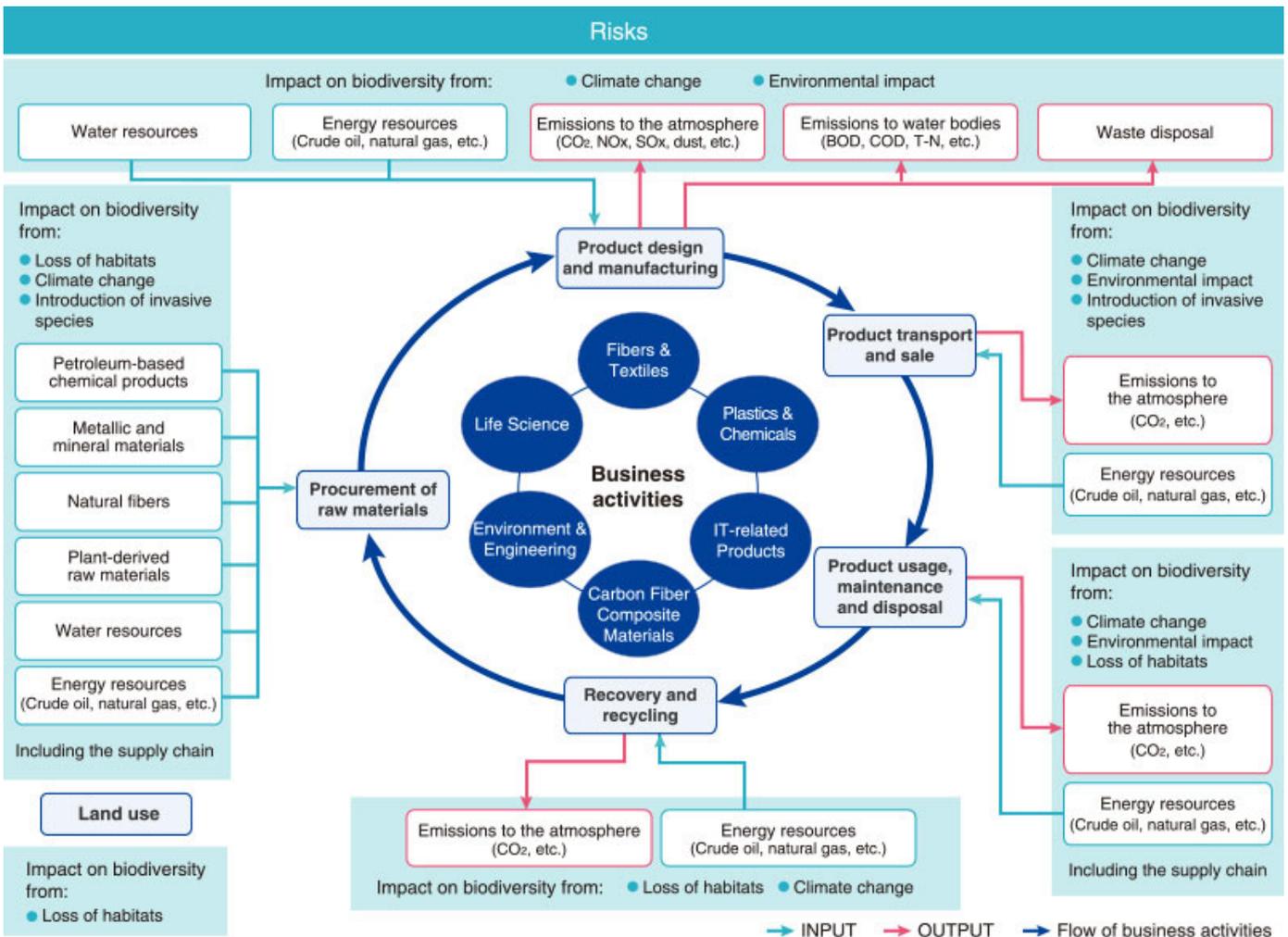
#### Toray Group's Basic Policy for Increasing Green Areas Established June 2012

- 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.

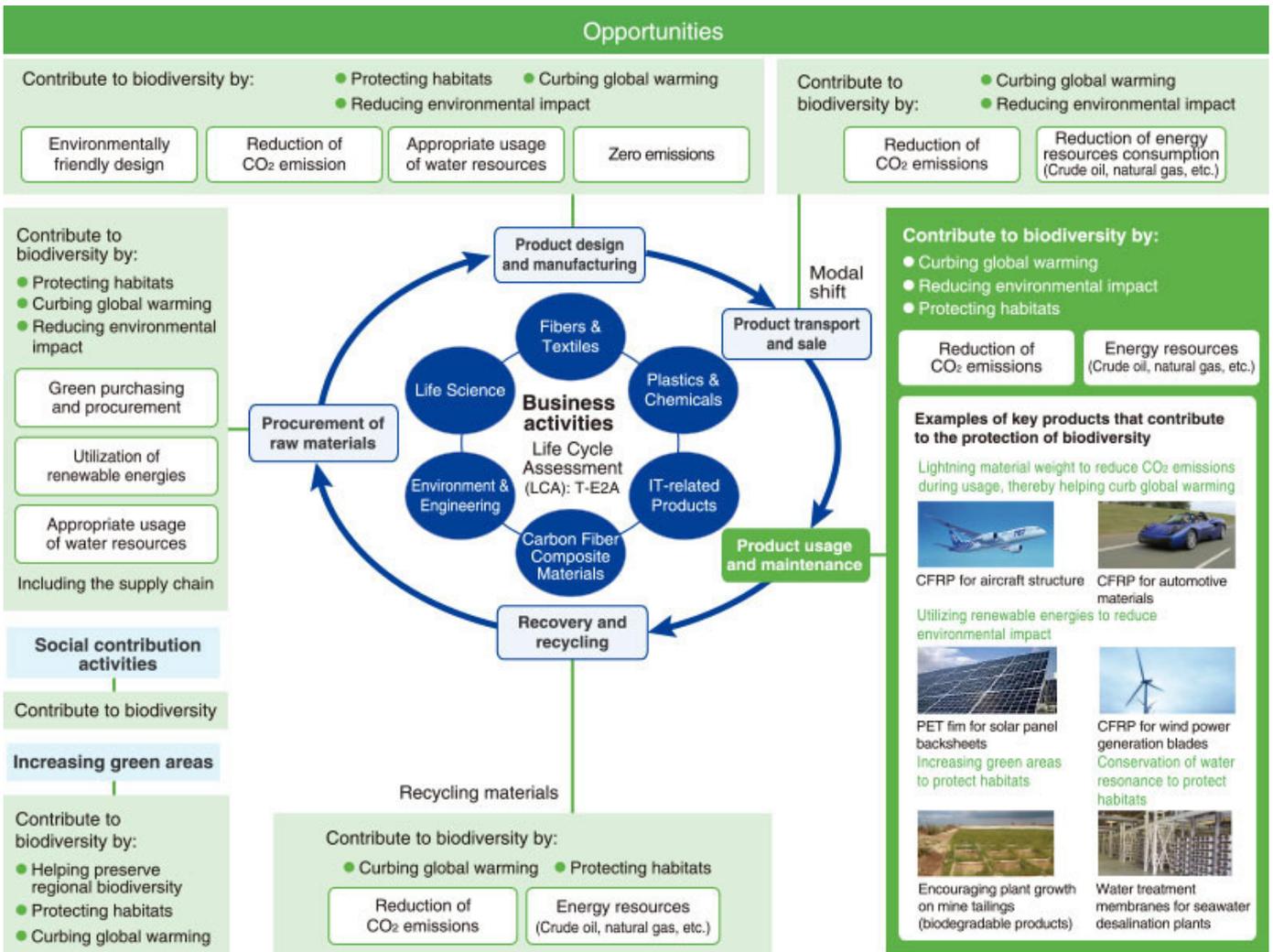
## Toray Group's Approach to the Relationship between Corporate Activities and Biodiversity

Starting from the procurement of raw materials, the entire lifecycle of Toray Group's business activities has a wide range of effects on biodiversity. On the risk side, these effects include the use of water resources and energy resources and emissions into the atmosphere and water, while on the opportunity side, these effects include reductions to CO<sub>2</sub> emissions by offering products that reduce the weight of parts for aircraft and other equipment and protecting habitats by offering products that maintain green areas and protect water resources.

The two diagrams below conceptualize the relationship between the Group's business activities and biodiversity in terms of the two aspects of risks and opportunities.



Note: These diagrams were produced based on the Map of Corporate Activities and Biodiversity® published by the Japan Business Initiative for Biodiversity.



Fiscal 2019 CSR Activity Report - Safety, Accident Prevention, and Environmental Preservation

# Environmental Impact Overview

## Environment

### Environmental Impact Overview Fiscal 2019

	Toray Industries, Inc.					Group companies in Japan					Group companies outside Japan				
	FY2016	FY2017	FY2018	FY2019	Compared to previous year (%)	FY2016	FY2017	FY2018	FY2019	Compared to previous year (%)	FY2016	FY2017	FY2018	FY2019	Compared to previous year (%)
<b>INPUT</b>															
Energy (1,000,000 gigajoules)	27.9	29.0	27.6	26.5	96.0	7.2	6.5	6.2	5.8	93.5	52.0	50.8	54.0	61.3	113.5
Water usage (1,000,000 tons)	168	174	176	171	97.2	13	13	13	14	107.7	44	41	42	41	97.6
Industrial water	135	135	139	131	94.2	5	4	4	5	125.0	13	23	17	16	94.1
Public water	0	0	0	0	-	0	0	0	0	-	12	11	11	10	90.9
Seawater	5	5	6	9	150.0	1	1	1	1	100.0	7	7	1	7	700.0
Groundwater	23	25	25	25	100.0	7	8	7	8	114.3	0	0	8	0	-
Others	5	5	6	6	100.0	1	0	0	1	-	2	6	6	6	100.0
<b>OUTPUT</b>															
<b>GHG (10,000 tons CO2eq)</b>															
6 gases including CO <sub>2</sub>	201	203	195 <sup>1</sup>	186		45	40	37	33	89.2	314	304	331	356	107.6
SCOPE-1	167	165	161	156		6	6	5	5		160	150	173	167	
SCOPE-2	34	38	34	30		39	34	32	29		154	154	158	190	
<b>PRTR Law-specified substances (tons)</b>															
Atmospheric emissions	189	330	327	229	70.0	245	101	102	99	97.5	318	442	457	392	85.8
Water emissions	31	27	28	24	84.9	0	0	0	0	-	0	0	0	0	-
Waste transfers	866	1,023	746	1,054	141.2	1,246	1,554	1,334	1,674	125.5	9,960	7,628	2,799	2,140	76.5
<b>Air pollutants (tons)</b>															
SO <sub>x</sub>	264	268	245	255	104.1	20	16	16	10	62.4	3,090	2,192	2,291	1,597	69.7
NO <sub>x</sub>	1,332	1,335	1,306	1,274	97.6	51	40	32	30	93.8	768	716	709	878	123.8
Dust	105	103	97	122	126.4	3	1	1	3	298.3	235	122	174	234	134.5
VOC	253	418	422	307	72.7	345	185	178	175	98.3	396	505	529	486	91.9
<b>Industrial wastewater (million tons)</b>															
	159	164	167	160	95.8	10	10	10	9	90.0	25	24	23	26	113.0
<b>Total water consumed (million tons)</b> Note: Calculated by subtracting industrial wastewater from water withdrawn															
	9	10	9	11	122.2	3	3	3	5	166.7	19	17	19	15	78.9
<b>Water pollutants (tons)</b>															
BOD	655	576	624	607	97.3	27	24	32	31	96.7	245	177	168	211	125.6
COD	776	789	780	727	93.2	24	27	28	26	93.9	1,603	1,298	1,149	1,550	134.9
Nitrogen	406	415	394	341	86.7	14	14	14	14	102.6	-	-	-	-	-
Phosphorus	27	25	31	25	80.6	1	1	2	1	60.5	-	-	-	-	-

	Toray Industries, Inc.					Group companies in Japan					Group companies outside Japan				
	FY2016	FY2017	FY2018	FY2019	Compared to previous year (%)	FY2016	FY2017	FY2018	FY2019	Compared to previous year (%)	FY2016	FY2017	FY2018	FY2019	Compared to previous year (%)
<b>Waste (1,000 tons)</b>															
Recycled	29.0	32.4	30.6	30.0	98.0	14.5	14.7	15.9	15.1	95.0	89.0	101.7	112.8	108.9	96.6
Incinerated and other	0.9	0.1	0.1	0.1	103.4	2.1	1.9	2.0	2.8	139.4	17.6	16.6	20.5	20.2	98.4
Direct landfill Diposal	0.0	0.0	0.1	0.1	-	0.2	0.6	0.4	4.3	1049.7	24.4	24.1	24.1	22.7	94.2
<b>Coal ash (1,000 tons)</b>															
Recycled	62.4	57.8	68.7	68.1	99.1	-	-	-	-	-	17.2	19.1	22.6	16.8	74.1
Direct landfill Diposal	2.0	1.9	3.2	0.0	0.0	-	-	-	-	-	0.4	0.2	0.2	0.3	123.6

<sup>1</sup> Toray greenhouse gas emissions have obtained a third-party guarantee from Lloyd's Register Quality Assurance Limited (LRQA).

## Index of Environmental Impact Per Unit of Sales<sup>2</sup>

	Toray Industries, Inc. and its group companies in Japan					Group companies outside Japan					Total				
	FY2016	FY2017	FY2018	FY2019	Year-on-year comparison (points)	FY2016	FY2017	FY2018	FY2019	Year-on-year comparison (points)	FY2016	FY2017	FY2018	FY2019	Year-on-year comparison (points)
GHG emissions	64.7	62.2	57.1	55.4	-1.7	74.2	58.7	57.8	62.1	4.3	76.4	67.8	64.7	67.1	2.4
PRTR atmospheric emissions	28.2	27.2	26.0	20.5	-5.5	27.4	31.1	29.1	24.9	-4.2	28.3	29.7	28.1	23.2	-4.9
SOx emissions	4.6	4.5	3.9	4.1	0.2	16.8	10.5	9.9	6.9	-3.0	18.0	12.6	12.1	9.0	-3.1
Water usage volume	70.9	70.4	68.6	70.5	1.9	53.7	41.1	36.8	37.6	0.8	59.5	54.0	51.0	51.9	0.9
BOD emissions	40.9	34.8	36.6	36.7	0.1	22.4	13.3	11.3	14.3	3.0	33.3	25.1	24.9	26.1	1.2
Landfilled waste volume	5.3	11.2	8.3	79.3	71.0	52.9	47.7	37.3	40.6	3.3	73.1	73.6	59.3	76.3	17.0

<sup>2</sup> 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	51 plants at 26 companies	86 plants at 64 companies
PRTR Law-specified substances	All 13 plants and 1 research laboratory	50 plants at 26 companies	86 plants at 64 companies
Sox, Nox, dust	All 13 plants and 1 research laboratory	43 plants at 23 companies	86 plants at 64 companies
BOD	All 13 plants and 1 research laboratory	43 plants at 23 companies	86 plants at 64 companies
COD <sup>3</sup>	All 13 plants and 1 research laboratory	43 plants at 23 companies	86 plants at 64 companies
Nitrogen and phosphorus	All 13 plants and 1 research laboratory	43 plants at 23 companies	-
Waste	All 13 plants and 1 research laboratory	50 plants at 26 companies	86 plants at 64 companies

<sup>3</sup> COD figures for Toray, group companies in Japan and Korea are given in CODmn (using the potassium permanganate method). Other group companies outside Japan are given in CODcr (using the potassium dichromate method).

Fiscal 2019 CSR Activity Report - Safety, Accident Prevention, and Environmental Preservation

# Chemical Substance<sup>1</sup> Emissions and Transfer Data

Environment

## PRTR Law-Specified Substance Emissions and Transfer Data for Fiscal 2019

<sup>1</sup> 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	0.3	0	0	0
Acrylonitrile	13.5	2.4	0	681.9
Acetaldehyde	2.8	0	0	0
Antimony and antimony compounds	0	0	0	0.4
Asbestos	0	0	0	9.3
Ethylbenzene	2.5	0	0	0
ε-Caprolactam	0	10.1	0	0.2
Xylene	4.5	0	0	0
Chlorobenzene	0.1	0	0	1.9
Chloroform	2.5	0	0	13.9
Cobalt and cobalt compounds	0	0.8	0	1.7
4,4'-diaminodiphenyl ether	0	0	0	0.2
Inorganic cyanide	33.6	0	0	0
1,4-Dioxane	0	4.5	0	1.8
Diuron	0	0	0	0.2
Dichlorobenzene	5.8	0	0	1.4
Dichloromethane	92	0	0	4.6

Toray Industries, Inc.	Tons (dioxins: mg-TEQ)			
Substance name	Atmospheric emissions	Water emissions	Soil emissions / company landfill	Waste transfers
N, N-dimethylacetamide	0.1	0	0	24.9
N, N-dimethylformamide	10.1	0	0	1.6
Styrene	8.8	0	0	1.4
Terephthalic acid	0	0	0	5.9
Dimethyl terephthalate	0	0	0	3.6
Trichloroethylene	0.4	0	0	0.6
Toluene	4.4	0	0	27.4
Nitrobenzene	0	0	0	15.9
O-, m- and p-Phenylenediamine	0	2.2	0	0
Phenol	0	2.4	0	0
Bromomethane	41.8	0	0	0
Benzene	1.4	0.8	0	0
Poly (oxyethylene) alkyl ether	0.8	0	0	9.4
Manganese and manganese compounds	0	0.3	0	1.4
Methyl methacrylate	3.4	0	0	15.1
Methylenebis (4,1-phenylene) diisocyanate	0	0	0	43.7
Nickel and nickel compounds	0	0	0	8.1
Dioxins	2.1	11.9	0	11.7
<b>Total</b>	<b>228.8</b>	<b>23.5</b>	<b>0</b>	<b>876.5</b>

Note: The list shows emissions and transfers of 34 substances (out of Toray Industries' 90 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	0.2
Butyl acrylate	0	0	0	0.2
Acetonitrile	0.1	0	0	9.7
Ethylbenzene	16.7	0	0	36.5
Ethylene oxide	0.1	0	0	0
Ethylene glycol monoethyl ether	0.2	0	0	0.4
Epichlorohydrin	0	0	0	3.1
Xylene	13.5	0	0	24.4
1-chloro-2,4-dinitrobenzene	0	0	0	0.2
Ethylene glycol monoethyl ether acetate	0	0	0	0.2
Ethyl acetate	1.4	0	0	0.3
Dichloromethane	1.7	0	0	19.4
N, N-dimethylacetamide	15.3	0	0	381.3
N, N-dimethylformamide	10.4	0	0	124.2
Styrene	0.3	0	0	0.3
Toluene	37	0	0	893.2
Carbon disulfide	0.3	0.4	0	0
1-nonanol	0	0	0	2.8
Hydroquinone	0	0	0	2.5
n-hexane	1.6	0	0	61
Poly (oxyethylene) alkyl ether	0	0	0	35.6
Formaldehyde	0.2	0	0	0.1
Maleic anhydride	0	0	0	2.5
Methacrylate acid	0	0	0	25.1
Methyl methacrylate	0.1	0	0	7.7
2,3-Epoxypropyl methacrylate	0	0	0	0.2

Group companies in Japan	Tons (dioxins: mg-TEQ)			
Substance name	Atmospheric emissions	Water emissions	Soil emissions/company landfill	Waste transfers
3-methylpyridine	0.4	0	0	51.8
1-Butanol	0	0	0	0.7
Tetrahydrofuran	0	0	0	16.9
Dioxins				
<b>Total</b>	99.3	0.4	0	1700.5

Note: The list shows emissions and transfers of 29 substances (out of the 72 PRTR Law-specified substances for group companies in Japan) exceeding 50 kg and dioxins.

Fiscal 2019 CSR Activity Report - Safety, Accident Prevention, and Environmental Preservation

## Sites with ISO 14001 Certification

Environment

### Sites with ISO 14001 Certification (as of March 2020)

**Toray Industries, Inc. : All 13 plants**

Shiga, Seta, Ehime, Nagoya, Tokai, Aichi, Okazaki, Mishima, Chiba, Tsuchiura, Gifu, Ishikawa, Nasu

**Group companies in Japan: 36 plants at 23 companies<sup>1・2</sup>**

- Du Pont-Toray Co., Ltd. [Tokai]
- Toray Opelontex Co., Ltd.
- Toray Textiles, Inc. [Tokai]
- Toray CoatexCo., 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. [Mishima, 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 Amenity and Civil Engineering Co., Ltd. [Ehime, Fukushima]
- Dow Toray Co., Ltd. [Chiba, Fukui, Komatsu]
- 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]<sup>4</sup>

**Group companies outside Japan: 60 plants at 43 companies<sup>2</sup>**

USA	<ul style="list-style-type: none"> <li>• Toray Plastics (America), Inc. [Rhode Island, Virginia]</li> <li>• Toray Resin Co.</li> <li>• Toray Fluorofibers (America), Inc.</li> <li>• Toray Composite Materials America, Inc. (Decatur, Tacoma)</li> <li>• Toray Membrane USA, Inc.</li> </ul>
UK	<ul style="list-style-type: none"> <li>• Toray Textiles Europe Ltd.</li> </ul>
France	<ul style="list-style-type: none"> <li>• Toray Films Europe S.A.S.</li> <li>• Toray Carbon Fibers Europe [Abidos, Lacq]</li> </ul>
Germany	<ul style="list-style-type: none"> <li>• Euro Advanced Carbon Fiber Composites GmbH</li> <li>• Greenerity GmbH</li> </ul>
Italy	<ul style="list-style-type: none"> <li>• Alcantara S.p.A.</li> <li>• Delta-Tech S.p.A.</li> </ul>
Czech Republic	<ul style="list-style-type: none"> <li>• Toray Textiles Central Europe s.r.o.</li> </ul>
Hungary	<ul style="list-style-type: none"> <li>• Zoltek Zrt. (ZHU)</li> </ul>
Indonesia	<ul style="list-style-type: none"> <li>• P.T. Century Textile Industry Tbk</li> <li>• P.T. Easterntex</li> <li>• P.T. Indonesia Toray Synthetics</li> <li>• P.T. Acryl Textile Mills</li> <li>• P.T. Indonesia Synthetic Textile Mills</li> <li>• P.T. Toray Polytech Jakarta</li> </ul>
Thailand	<ul style="list-style-type: none"> <li>• Toray Textiles (Thailand) Public Company Limited (NPT, M1, M2, M3)</li> <li>• Thai Toray Synthetics Co., Ltd. [Bangkok, Ayutthaya, Nakhonpathom]</li> </ul>
Malaysia	<ul style="list-style-type: none"> <li>• Penfibre Sdn. Berhad</li> <li>• Penfabric Sdn. Berhad [M1, M2, M3, M4]</li> <li>• Toray Plastics (Malaysia) Sdn. Berhad</li> <li>• Toray BASF PBT Resin Sdn. Berhad<sup>4</sup></li> </ul>
China	<ul style="list-style-type: none"> <li>• Toray Fibers (Nantong) Co., Ltd.</li> <li>• Toray Sakai Weaving &amp; Dyeing (Nantong) Co., Ltd.</li> <li>• Toray Plastics (Shenzhen) Ltd.</li> <li>• Toray Film Products (Zhongshan) Ltd.</li> <li>• Toray Plastics Precision (Zhongshan) Ltd.</li> <li>• Toray Plastics (Suzhou) Co., Ltd.</li> <li>• Toray Fibers &amp; Textiles Research Laboratories (China) Co., Ltd.</li> <li>• Toray Advanced Materials Research Laboratories (China) Co., Ltd.</li> <li>• Toray Polytech (Nantong) Co., Ltd.</li> <li>• Toray BlueStar Membrane Co., Ltd.</li> <li>• Toray Plastics (Chengdu) Co., Ltd.</li> <li>• Toray Medical (Qingdao) Co., Ltd.<sup>4</sup></li> </ul>
Republic of Korea	<ul style="list-style-type: none"> <li>• Toray Advanced Materials Korea Inc. [M1, M2, M3, M4, M5, Anseong, Yugu]</li> <li>• STEMCO, Ltd.</li> <li>• Toray Battery Separator Film Korea, Limited</li> <li>• Toray BSF Coating Korea Limited</li> </ul>
Taiwan	<ul style="list-style-type: none"> <li>• Toray Advanced Film Kaohsiung Co., Ltd.</li> </ul>

1. In addition, 12 companies received certification as affiliated companies on Toray Industries' sites.

2. Information in brackets refers to the names of the plants.

3. Companies or plants that had acquired ISO14001 certification before joining Toray Group are listed as ISO14001-certified organizations, not as organizations which newly acquired ISO14001 certification in fiscal 2019. Toray Battery Separator Film Co., Ltd. has been counted as Toray Industries' Nasu Plant since fiscal 2017.

4. A company that newly acquired ISO14001 certification in fiscal 2019.

Fiscal 2019 CSR Activity Report - Safety, Accident Prevention, and Environmental Preservation

# Environmental Data for Toray Industries and Principal Group Companies

Environment

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	SO x	NO x	Dust	BOD	COD	Water	Recycled	Simple incineration	Landfill disposal	
		Air	Water	Soil & landfill	Waste										
10,000 tons CO <sub>2</sub> /year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	million m <sup>3</sup> /year	tons/year	tons/year	tons/year		
Shiga Plant	6.5	1	0	0	17	0	16	5	28	44	14.7	3,325	12	0	<ul style="list-style-type: none"> <li>• Base material of ultrasuede™ man-made suede</li> <li>• TOPTICAL™ color filter</li> <li>• TORAYVINO™ home water purifier</li> </ul>
Seta Plant	0.2	0	0	0	1	0	0	0	0	0	0.1	82,0281	0	0	<ul style="list-style-type: none"> <li>• TORAYLON™ acrylic fiber</li> <li>• Medical devices(Inoue Balloon catheters, ANTHRON™ P-U catheters)</li> </ul>
Ehime Plant	67.9	50	9	0	859	248	726	107	147	125	32.1	6,543	25	0	<ul style="list-style-type: none"> <li>• TORAY TETORON™ polyester staple fiber</li> <li>• TORAYCA™ carbon fiber</li> <li>• ROMEMBRA™ reverse osmosis membrane module</li> <li>• TORAYCON™ PBT resin</li> </ul>
Nagoya Plant	8.7	12	0	0	41	0	49	2	74	115	28.2	3,759	37	37	<ul style="list-style-type: none"> <li>• AMILAN™ nylon resin</li> <li>• TORAYCON™ PBT resin</li> <li>• Various fine chemicals</li> </ul>
Tokai Plant	59.4	46	15	0	18	4	313	3	300	317	19.2	5,846	42	0	<ul style="list-style-type: none"> <li>• Caprolactam</li> <li>• Tereph- thalic acid</li> <li>• TORAY TETORON™ polyester chips</li> <li>• TORELINA™ PPS resin</li> </ul>
Aichi Plant	2.1	0	0	0	14	0	1	0	2	0	1.7	193.5	0	0	<ul style="list-style-type: none"> <li>• Nylon filament yarn</li> <li>• RAYTELA™ plastic optical fiber</li> </ul>
Okazaki Plant	8.1	9	0	0	77	0	51	2	16	27	6.2	3,057	127	127	<ul style="list-style-type: none"> <li>• Nylon filament yarn</li> <li>• TORAY WATERLESS PLATE™ printing plate</li> <li>• Filtryzer™ hemodialyzers</li> <li>• TORAYVINO™ home water purifier</li> </ul>
Mishima Plant	12.6	2	0	0	5	3	69	0	16	20	35.6	1,376	2	1	<ul style="list-style-type: none"> <li>• LUMIRROR™ polyester film</li> <li>• TORAY TETORON™ polyester filament yarn</li> <li>• DORNER™ oral administration prostacyclin PGI2 derivative</li> <li>• FERON™ natural interferon-β preparation</li> </ul>
Chiba Plant	2	18	0	0	2	0	10	0	6	67	5.2	2,437	13	5	<ul style="list-style-type: none"> <li>• TOYOLAC™ ABS resin</li> </ul>
Tsuchiura Plant	1.4	0	0	0	0	0	4	0	1	0	0.3	332	0	0	<ul style="list-style-type: none"> <li>• TORAYFAN™ BO polypropylene film</li> </ul>

	Emission Volume													Principal manufactured products	
	GHG emissions	PRTR				Gas emissions			Water emissions			Waste			
		Emissions			Waste transfers	SO x	NO x	Dust	BOD	COD	Water	Recycled	Simple incineration		Landfill disposal
		Air	Water	Soil & landfill	Waste										
10,000 tons CO <sub>2</sub> /year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	tons/year	million m <sup>3</sup> /year	tons/year	tons/year	tons/year		
Gifu Plant	7.4	1	0	0	19	0	2	0	13.2	4	9.9	963	0	0	<ul style="list-style-type: none"> <li>• ultrasuede™ man-made suede</li> <li>• LUMIRROR™ polyester film</li> <li>• TORELINA™ PPS film</li> </ul>
Ishikawa Plant	5.6	1	0	0	2	1	5	0	4	0	7.1	1,440	9	5	<ul style="list-style-type: none"> <li>• TORAY TETORON™ polyester filament yarn</li> <li>• Nylon filament yarn</li> <li>• TORAYCA™ prepreg</li> </ul>
Nasu Plant	3	90	0	0	0	0	5	2	0	0	0.1	795	7	0	<ul style="list-style-type: none"> <li>• Lithium-ion rechargeable battery</li> </ul>
Toray Hybrid Cord, Inc.	1.4	3	0	0	1	0	2	0	2	5	0.7	370	0	0	<ul style="list-style-type: none"> <li>• Tire cord</li> <li>• Carpet pile fiber</li> </ul>
Toray Advanced Film Co., Ltd. [Mishima]	0.1	1	0	0	15	0	0	0	0	0	0.3	230	0	0	<ul style="list-style-type: none"> <li>• CERAPEEL™ Release film</li> <li>• LUMISOLAR™ PV-back sheet</li> </ul>
Malaysia Penfibre Sdn. Berhad[Fibers & Textiles]	4.1	0	0	0	0	0	0	12	0	6	0.2	143	115	90	<ul style="list-style-type: none"> <li>• TORAY TETORON™ polyester staple fiber</li> </ul>
France Toray Films Europe S.A.S.	3.4	0	0	0	0	0	12	0	3	15	1.5	2,437	1,315	911	<ul style="list-style-type: none"> <li>• LUMIRROR™ polyester film</li> </ul>



# LR Independent Assurance Statement

## Relating to TORAY INDUSTRIES, INC.'s Environmental and Social Data within Toray's CSR Report 2020 for the fiscal year 2019

This Assurance Statement has been prepared for TORAY INDUSTRIES, INC. in accordance with our contract but is intended for the readers of this Report.

### Terms of engagement

Lloyd's Register Quality Assurance (LR) was commissioned by TORAY INDUSTRIES, INC. ("the Company") to provide independent assurance on its environmental data for the fiscal year 2019 (from 1 April 2019 to 31 March 2020) and social data for the year 2019 (from 1 January to 31 December 2019) within Toray's CSR Report 2020 ("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 and ISO 14064-3 for Greenhouse gas ("GHG") emissions data.

Our assurance engagement covered the operations and activities relating the Company and its group companies in Japan 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;

#### Environmental<sup>1</sup>

- Scope 1 GHG emissions<sup>2</sup> (tonnes CO<sub>2</sub>)
- Scope 2 GHG emissions<sup>2</sup> [market-based and location-based] (tonnes CO<sub>2</sub>)
- Scope 3 GHG emissions<sup>2</sup> (Category 2, 3, and 4) (tonnes CO<sub>2</sub>e)
- Energy consumption (GJ)

#### Social

- Lost Time Injury and Occupational Illness Frequency Rate<sup>3</sup>

Our assurance engagement excluded the data and information of the Company's suppliers, contractors and any third-parties mentioned in the report.

LR's responsibility is only to the Company. LR 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.

### LR's Opinion

Based on LR'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 assurance and at the materiality of the professional judgement of the verifier.

**Note:** 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

<sup>1</sup> GHG quantification is subject to inherent uncertainty.

<sup>2</sup> The scope is covered the Company's head Office, 13 factories and other 9 sites (Branch / Basic Research Center / Human Resources Development Center) in Japan.

<sup>3</sup> The scope is covered the Company, its 41 consolidated subsidiaries, and 10 affiliated companies in Japan. The scope of the Company is covered the Company's head Office, 13 factories and other 9 sites (Branch / Basic Research Center / Human Resources Development Center) in Japan.

obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### LR's approach

LR's assurance engagements are carried out in accordance with ISAE3000 and ISO14064-3 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;
- Verifying the historical GHG emissions / energy consumption data and records for the fiscal year 2019, and Lost Time Injury and Occupational Illness Frequency Rate data and records for the calendar year 2019; and
- By implementing the Company's "No Visitor" Policy due to the global infection spread of COVID-19, conducting the remote verification to Okazaki Factory and Shiga Factory for confirming the effectiveness of its data management systems via emails, telephone, and Microsoft Teams.

### Observations

The Company should continue efforts for implementing quality assurance and quality control (QA/QC) systems for the management of relevant data. This is particular to ensure effective internal verification processes at both the corporate and group company levels.

### LR's standards, competence and independence

LR 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.

LR 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.

LR is the certification body of ISO9001 and IATF16949 for the Company and as such does not compromise our independence or impartiality.

Signed

Dated: 21 July 2020



Takahiro Iio

LR Lead Verifier

On behalf of Lloyd's Register Quality Assurance Limited

10th Floor, Queen's Tower A, 2-3-1 Minatomirai, Nishi-ku, Yokohama, JAPAN

LR reference: YKA4005113

**Table 1. Summary of Toray's Environmental and Social data in FY2019**

Scope	
Scope 1 GHG emissions <sup>2</sup>	1,766,259 tonnes CO <sub>2</sub> e
GHG emissions relating supply to external organizations	207,215 tonnes CO <sub>2</sub> e
GHG emissions after deduction	1,559,044 tonnes CO <sub>2</sub> e
Scope 2 GHG emissions <sup>2</sup> (Market-based)	325,839 tonnes CO <sub>2</sub> e
GHG emission relating supply to external organizations	24,890 tonnes CO <sub>2</sub> e
GHG emissions after deduction	300,849 tonnes CO <sub>2</sub> e
Scope 2 GHG emissions <sup>2</sup> (Location-based)	327,410 tonnes CO <sub>2</sub> e
Scope 3 GHG emissions <sup>2</sup> (Categories 2, 3, and 4)	864,262 tonnes CO <sub>2</sub> e
2. Capital goods	1,482 tonnes CO <sub>2</sub> e
3. Fuel- and energy-related activities not Included in Scope 1 or Scope 2	1,246 tonnes CO <sub>2</sub> e
4. Upstream transportation & distribution	79,417 tonnes CO <sub>2</sub> e
Energy consumption	27,834,257 GJ
Lost Time Injury and Occupational Illness Frequency Rate <sup>3</sup>	0.291

Note: GHG emissions after deduction are same as GHG emissions under Japan's Act on Promotion of Global Warming Countermeasures (Act No. 117).

Lloyd's Register Group Limited, its affiliates and subsidiaries, including Lloyd's Register Quality Assurance Limited (LRQA), and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract. The English version of this Assurance Statement is the only valid version. Lloyd's Register Group Limited assumes no responsibility for versions translated into other languages.

This Assurance Statement is only valid when published with the Report to which it refers. It may only be reproduced in its entirety.

Copyright © Lloyd's Register Quality Assurance Limited, 2020. A member of the Lloyd's Register Group.

# The Toray Group's Response to the COVID-19 Pandemic

Amid this global health crisis, we are continuing to seek new ways to live up to our corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products."As such, we pledge to do everything we can to help prevent the spread of the virus, and to support social and economic recovery worldwide.

## Toray Group's Policy

On February 7, 2020, Toray Group established a company-wide pandemic task force headed by the executive vice president. The task force monitors the status of employee health in Japan and overseas, collects information from individual business sites, and implements proactive measures to prevent infection.

While following the changing pandemic situation and public response measures, the Group will continue to implement measures necessary to prevent any further spread of the virus, while placing top priority on the health of employees and their families.

## Major Business Initiatives to Help Curb the Pandemic

In response to the rapid increase in demand for masks during the pandemic, Toray Industries, Inc. has utilized its global production facilities to strengthen and expand its system for supplying material to Japan to make non-woven masks. Toray Group manufactures non-woven fabrics for mask production at group companies outside Japan, and was supplying enough material to make about 30 million non-woven masks each month. However, in response to the soaring demand for masks, Toray created a system to increase production with existing equipment, and in September 2020, Toray's supplied enough material to manufacturers in Japan to make about 60 million masks. In October, the supply will further increase to the equivalent of 80 million masks. In addition, Toray Industries utilized the non-woven fabric development equipment at its Shiga Plant to establish a production system in Japan that can manufacture the equivalent of 20 million masks each month. Therefore, starting in October, Toray Group plans to supply enough material for a total of 100 million non-woven masks per month.



Isolation gown

Based on an order from the Japanese government, which is facing a shortage of medical gowns, the Group plans to deliver a total of 5.6 million disposable isolation gowns<sup>1</sup> to the Ministry of Health, Labour and Welfare of Japan by October 2020. They are being made from non-woven fabric using Toray's Group's supply chain in Japan.

<sup>1</sup> A knee-length gown widely worn in medical settings by those performing simple or nonsurgical procedures, and sometimes by visitors and patients

### Other Initiatives (Excerpt)

Toray Industries, Inc.	Obtained an interim order for the use of an endotoxin adsorption cartridge, TORAYMYXIN® to treat patients with COVID-19 in Canada
Toray Research Center, Inc.	<ul style="list-style-type: none"> <li>· Content analysis of high-concentration ethanol products, three-dimensional and quantitative analysis of non-woven fabric products such as masks and protective clothing</li> <li>· Development support and raw material quality control for diagnostic agents, test kits, and vaccines, etc.</li> <li>· Implementation of quality and safety testing for diagnostic and therapeutic agents, etc.</li> </ul>
Toray Advanced Computer Solution, Inc.	Providing support programs for business continuity measures relating to the COVID-19 pandemic

# Example of Toray Group's Community Initiatives Response to the COVID-19 Pandemic

## Five Toray Group Companies in China Donate 100,000 Yuan for COVID-19 Response Measures

Five Toray Group companies located in Nantong, China – Toray Fibers & Textiles Research Laboratories (China) Co., Ltd. (TFRC), Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd. (TSD), Toray Fibers (Nantong) Co., Ltd. (TFNL), Toray Polytech (Nantong) Co., Ltd. (TPN), and TAK Advanced Film (Nantong) Co., Ltd. (TFN) – together donated 100,000 yuan to a charity fund in Nantong for coping with the COVID-19 pandemic.

During the Chinese New Year holidays, TFRC prepared for the return of employees to work after the holidays, including the procurement of masks, sterilizing alcohol, and thermometers for checking body temperatures. After employees returned to the office, they have been maintaining various safety protocols. These include wearing masks, checking body temperature, and regularly disinfecting office spaces, bathrooms, handrails and doors. The desks were also rearranged so that employees would not sit directly facing one another. When it became difficult to obtain masks in stores due to shortages, the company helped employees by providing them with masks and inserts for cloth masks to take home to family members.



Donation presentation by five Toray Group companies in Nantong

## Toray Advanced Materials Korea Donates 300 Million Won to Battle COVID-19

Toray Advanced Materials Korea Inc. (TAK) has donated 300 million won to the Hope Bridge Korea Disaster Relief Association to combat COVID-19 and to support healthcare professionals. The money was used for pandemic management and hygiene-related products such as masks and daily necessities, and to compensate medical workers battling the virus. The aim was to prevent further spread of COVID-19 in the Daegu area, which has been hit hard by the pandemic.

"Citizens of this nation are facing hard times, and all our employees will actively cooperate to help prevent further spread of the virus and overcome this crisis," said TAK President. "Daegu has been particularly hard hit, and as we have a business site there in Gyeongsangbuk Province, we would like to be of help to the people of Daegu located in the province as much as we can."

## Toray Composite Materials America Donates Personal Protective Equipment and Food

In response to the COVID-19 pandemic, Toray Composite Materials America, Inc. (CMA) donated personal protective equipment, including N95 masks, goggles, and face shields, to medical facilities in communities near its headquarters and plants.

Before the COVID-19 outbreak, the Decatur Plant in Alabama partnered with the annual Barrels of Love food drive campaign and was able to collect 5,672 non-perishable food items, breaking the previous record. This support was welcomed by local food banks, especially when demand for non-perishable food increased due to the pandemic.



Medical facility personnel holding personal protective equipment donated by CMA

### **Toray Plastics (America) Donates Needed Supplies for Containing COVID-19 to Local Communities**

Toray Plastics (America), Inc. (TPA) has been securing the supplies necessary to ensure employee safety amid the worsening COVID-19 pandemic crisis in the United States. At the same time, TPA has also been considering the needs of local communities. Using its extra supplies, the company donated N95 masks, protective suits, and shoe covers to Emergency Management Agencies and first responders in Rhode Island, and the neighboring states of Connecticut and Massachusetts. As long as this situation continues, TPA will continue to do its utmost to uphold the Toray traditions of valuing people, putting safety first, and working with local communities.



Masks donated by TPA to local communities

### **Toray Industries (America) Joins Project Called “Let’s Support COVID-19 Fighters! Feeding the Front Line in NY”**

New York City, where Toray Industries (America), Inc. (TAM) has its office, was the first region in the United States to experience an explosive outbreak of COVID-19. It was a serious situation, and the medical frontlines in particular, needed various forms of support.

With a desire to assist the selfless efforts of personnel at nearby medical facilities, TAM decided to participate in a project called, “Let’s Support COVID-19 Fighters! Feeding the Front Line in NY.” It was started by the Japanese Chamber of Commerce and Industry of New York and The Nippon Club, a local NGO, with support from their member companies and the Japanese Medical Society of America. The aim of the project was to provide regular delivery of free bento lunch boxes to healthcare workers. Some 120 balanced and nutritious Japanese-style lunch boxes were prepared by the chefs of The Nippon Club and delivered once a week to hospitals in New York City with messages of gratitude from the supporting companies.



Healthcare workers at Columbia Presbyterian Hospital with the bento boxes they received including a message from TAM

# Toray Group's Approach to Climate Change

## I. Background

Toray Group, since its founding in 1926, has consistently established “contributing to society” as the cornerstone of its existence, framing this in 1955 as its company motto and remaining committed to its current corporate philosophy of “contributing to society through the creation of new value.”

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 more sustainable world.

In May 2019, Toray Industries, Inc. declared its support for the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. In each of the following items, Toray Group discloses critical Group information related to climate change based on these TCFD recommendations.

Toray Group will continue to strive to contribute to the resolution of climate change issues and actively disclose information related to climate change in accordance with TCFD recommendations.



## II. Toray Group Efforts to Date

Based on the conviction that companies are public institutions, Toray Group management centers on achieving sustainable growth as a company that contributes to society through its businesses.

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 protection goals, which included targets for reducing greenhouse gas emissions. The Group has continued to focus on these efforts and is currently focused on its Fifth Medium-Term Environmental Plan (achieve targets by 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.

Based on its core values of contributing to society through its business activities, management from a long-term perspective, and people-centric management, Toray Group has established TORAY VISION 2030 with the aim of providing new value to society by focusing on the four perspective 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.

Project AP-G 2022 sets the following fiscal 2022 sustainability-related KPIs: 1 trillion yen in revenue from Green Innovation businesses, 300 billion yen in revenue from Life Innovation businesses, a 5.3-fold greater contribution to CO<sub>2</sub> reduction in the value chain compared to fiscal 2013, a 2.4-fold increase in water filtration throughput contribution by Toray's water treatment membranes, a 20% reduction in greenhouse gas emissions per unit of sales revenue in production activities, and a 25% reduction in water usage per unit of sales revenue in production activities.

Toray Group will continue in the coming decades to leverage the strength of its experience with actively striving to contribute to resolving all global environmental challenges, by making every effort to create the innovative technologies and advanced materials that provide essential solutions for climate change and other global environmental issues.

### III. Governance System

---

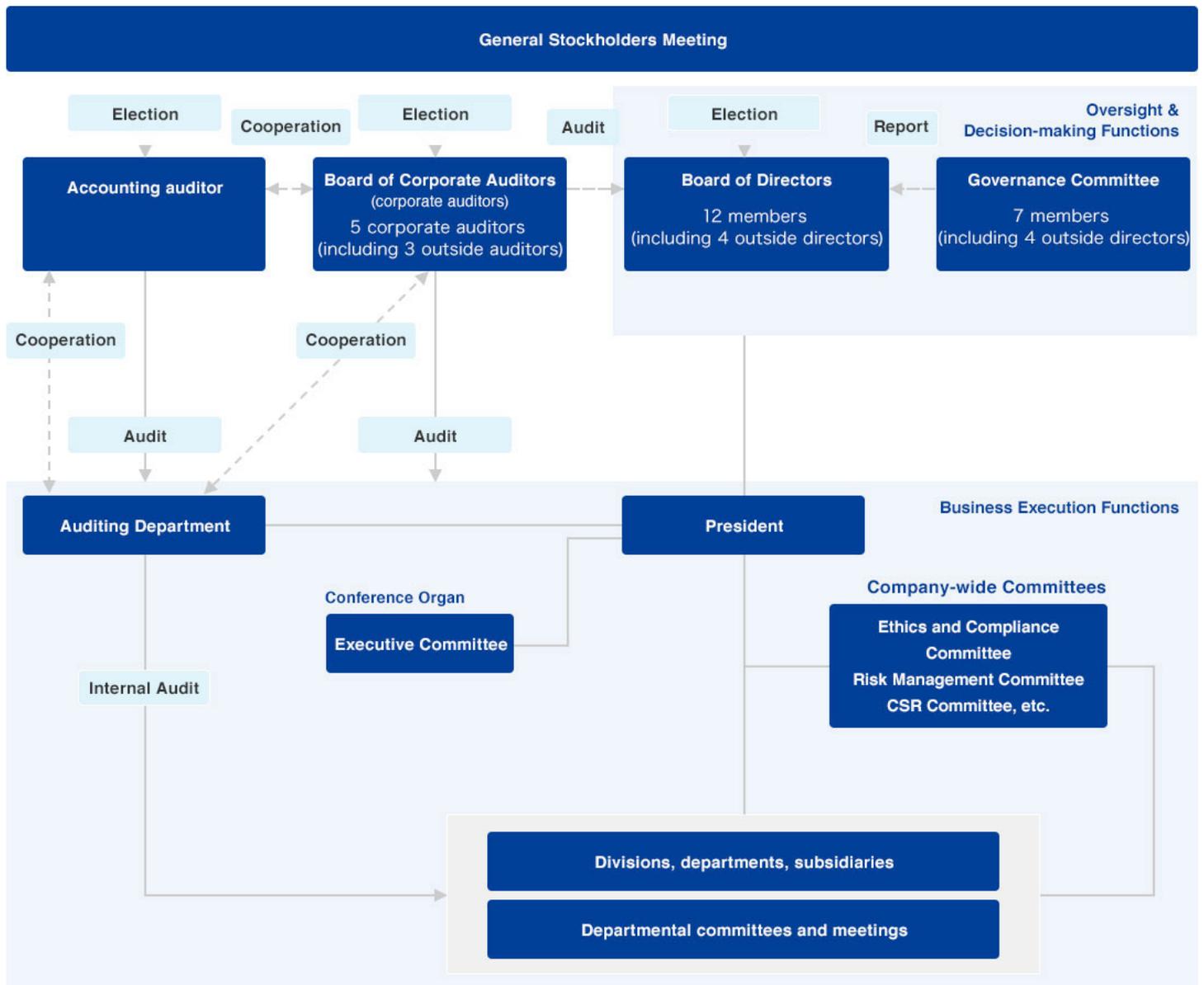
Enacted by decision of the Board of Directors in July 2018, the Toray Group Sustainability Vision spells out the Group's long-term commitment to contributing solutions to climate change and other global issues by delivering innovative technologies and advanced materials.

Moreover, the Long-Term Corporate vision, AP-Growth Toray 2020, formulated in February 2011, and the medium-term management issues tackled by Toray Group every three years since then include the group-wide Green Innovation Business Expansion Project, which contributes to resolving resource and energy issues, and global environmental challenges. In addition, 50% of the Group's research and technology development investment goes to Green Innovation Businesses (high energy cost efficiency, promotion of clean energy applications, enhancement/deployment of water treatment technology, creation of non-fossil materials, etc.).

Furthermore, three group-wide committees—the CSR Committee, the Risk Management Committee, and the Safety, Health, and Environment Committee—monitor, evaluate, and manage social challenges, including climate change, and the associated risks at Toray Group. Under this structure, the Board of Directors receives reports on committee discussions, overseeing committee practices and making decisions. (See figure below.) In addition to this structure, the Global Environment Business Strategic Planning Department reports on global environmental initiatives and presents proposals for expanding Green Innovation businesses at meetings attended by the Board of Directors twice a year.

<b>CSR Committee</b>	Chaired by Chief CSR Officer, (Corporate Vice President) , this committee discusses CSR-related issues centered on ESG and promotes Toray Group CSR-related activities. (Meeting held once a year)
<b>Risk Management Committee</b>	Chaired by the general manager of the Corporate Strategic Planning Division (Representative Member of the Board), this committee discusses critical risks that may affect Toray Group operations, including climate change, and promotes Toray Group risk management. (Meeting held once a year)
<b>Safety, Health, and Environment Committee</b>	Chaired by the general manager of the Manufacturing Division (Member of the Board), this committee discusses Toray Group policies and measures related to safety, health, accident prevention, and the environment and promotes Toray Group safety, health, accident prevention, and environmental activities, including the reduction of greenhouse gas emissions. (Meeting held once a year)

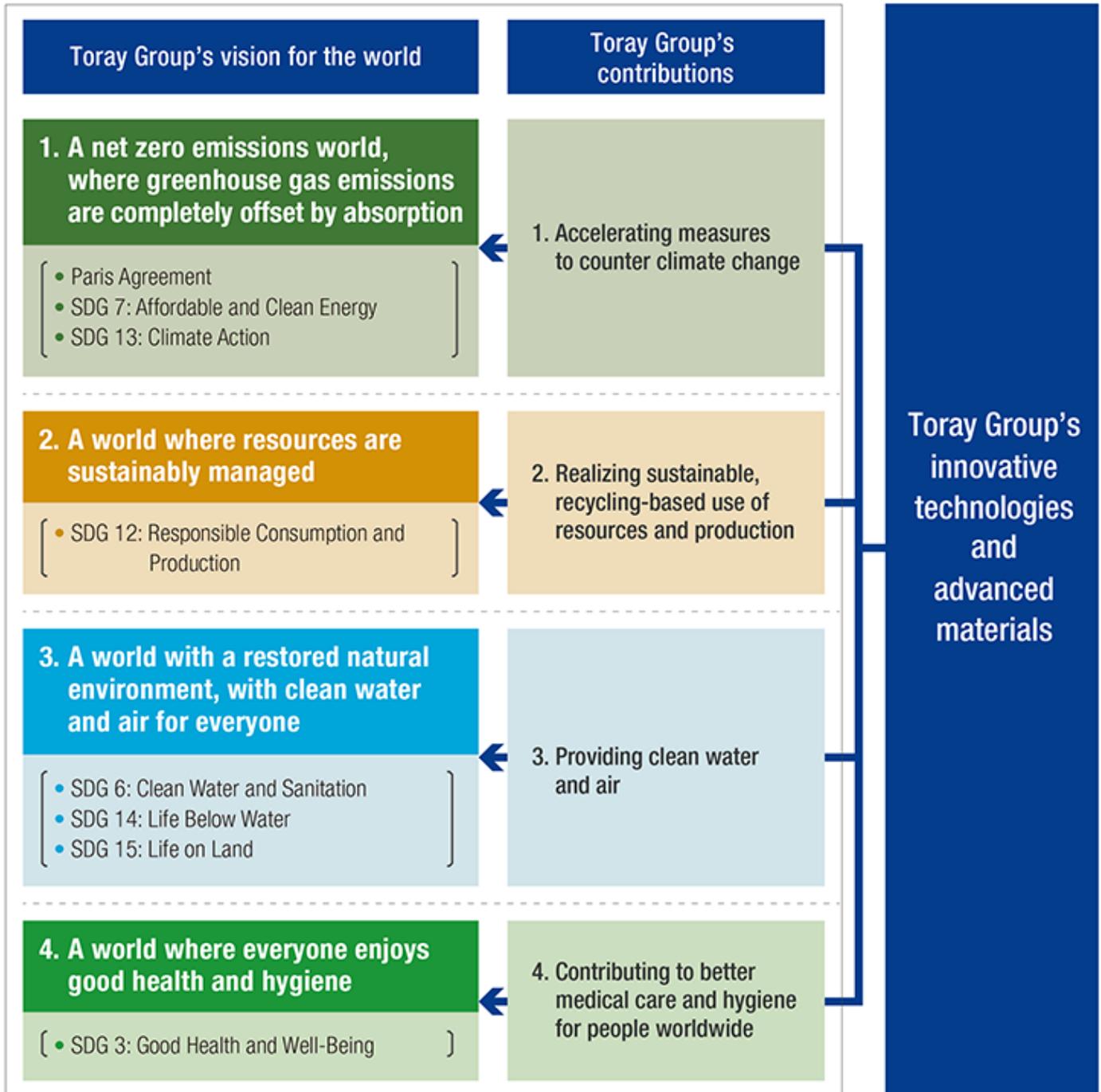
# Toray Group Governance Structure



## IV. Toray Group Business Activities That Help to Address Climate Change

### 1. Toray Group Sustainability Vision

In the aforementioned Toray Group Sustainability Vision, Toray Group describes four aspects of the world it envisions for 2050, including a “net zero emissions world, where greenhouse gas emissions are completely offset by absorption,” and also sets out issues to be addressed to achieve this and quantitative targets for fiscal 2030 (base year: FY2013).



In line with the Japanese government's goal of reducing greenhouse gas emissions by 26% from the 2013 level by 2030 (7% reduction for industry sector), Toray Group has set a quantitative target of reducing its greenhouse gas emissions relative to sales in production activities by 30% across the entire Group.

In addition, Toray Group believes that it is necessary to ascertain the CO<sub>2</sub> balance for the entire life cycle of products and services in order to help solve climate change issues through its businesses. Toray Group was an early adopter of contributing by reducing not only greenhouse gas emissions within the Group, but greenhouse gas emissions throughout the entire value chain. In its quantitative targets for fiscal 2030, the Group has raised its target by a multiple of eight for CO<sub>2</sub> emissions avoided in the value chain by supplying Green Innovation products.

## 2. Green Innovation Businesses

Toray Group's Green Innovation businesses contribute to solving global environmental challenges and resource and energy-related issues. With the aim of realizing a sustainable, low-carbon society by supplying Green Innovation products that make the most of Toray Group's advanced materials and core technologies, the Group will continue to promote its Green Innovation Business Expansion Project. In light of today's rapidly worsening environmental problems, Green Innovation businesses, which help resolve these problems, is one of the key areas that will support Toray Group's sustainable growth. Expanding Green Innovation business is one of the most important initiatives to realize the world Toray Group envisions for 2050, as described in the Toray Group Sustainability Vision.

As mentioned above, Toray Group has been focused on its Green Innovation Business Expansion Project since 2011, and sales of Green Innovation products increased from 378 billion yen in fiscal 2010 to 820.1 billion yen in fiscal 2019.

For more information on the Group's Green Innovation business activities, see the relevant section of the Toray website at the link below.

### Related Information

➤ [Contributing Solutions to Social Issues through Business Activities](#)

The following list offers specific examples of ways in which Toray Group's Green Innovation businesses relate to countering climate change.

### **Carbon Fiber Composite Materials**

Toray Group began supplying carbon fiber as primary structural materials for aircraft in 1992, signing a contract for the comprehensive supply of carbon fiber composite materials (Carbon Fiber Torayca® Prepeg) with The Boeing Company in the U.S. in 2005 and a long-term comprehensive supply contract with Boeing in 2015, extending the contract term by more than 10 years.

The improved fuel efficiency in aircraft that use carbon fiber reinforced plastic (CFRP) for 50% of the weight of the aircraft structure yields an estimated total CO<sub>2</sub> reduction of 27,000 tons per aircraft over ten years compared to conventional aircraft (which use CFRP for 3% of the weight of the aircraft structure). (Reduction calculated by the Japan Carbon Fiber Manufacturers Association.)

### **Battery Separator Film**

In addition to expanding consumer application of portable electronic devices, stationary secondary batteries, and other uses, in-vehicle applications of the separator film (BSF) used in lithium-ion batteries (LIB) are also expected to surge as electric vehicles (EV) become more commonplace.

With growing awareness of environmental issues, EV and other environmentally friendly vehicles are expected to become more common in Europe particularly quickly. In response, Toray Group has decided to build new BSF production facilities in Hungary as its third production base, joining Japan and South Korea. These facilities are expected to begin operations in July 2021.

### **Waterless Offset Printing System for Flexible Packaging**

In a joint project with ink and printing machinery manufacturers and printing companies, Toray Group has jointly developed a waterless offset printing system for flexible packaging, which eliminates volatile organic compounds (VOC) and makes it possible to significantly reduce CO<sub>2</sub> emissions in the printing process.

The waterless offset printing system reduces VOC emissions to less than 1/50 of the VOC emitted in gravure printing, which is widely used for printing on flexible packaging in Asia and other areas. Using an ink drying method based on power-saving LED-UV technology eliminates the need for the solvent drying and exhaust treatment required for gravure printing, reducing power consumption to less than 1/6, which makes it possible to significantly reduce CO<sub>2</sub> emissions associated with power consumption. By promoting and utilizing the waterless offset printing system for flexible packaging, Toray Group aims to reduce CO<sub>2</sub> emitted in Japan by approximately 500,000 tons a year around 2030 (figures estimated by Toray Industries, Inc.).

### 3. Initiatives Designed to Reduce CO<sub>2</sub> Emissions at the Manufacturing Stage

In order to reduce CO<sub>2</sub> emissions at the manufacturing stage, Toray Group is promoting such initiatives as the promotion of energy saving, utilizing renewable energy, and reducing the use of coal.

For information on results related to the reduction of CO<sub>2</sub> emissions at the manufacturing stage in fiscal 2019, see the relevant section of the Toray website at the link below.

#### Related Information

[> Energy Saving and Curbing Climate Change](#)

### 4. Initiatives to Reduce CO<sub>2</sub> Emissions in Distributions

In order to reduce CO<sub>2</sub> emissions in distribution, Toray Group is pursuing such initiatives as shortening transport distances, shifting to shipping and rail transport that have less impact on the environment (modal shift), and improving transportation efficiency. For information on results related to the reduction of CO<sub>2</sub> emissions in distribution in fiscal 2019, see the relevant section of the Toray website at the link below.

#### Related Information

[> Toray Group Distribution Initiatives](#)

### 5. Next Steps

Toray Group will continue to work to reduce greenhouse gas emissions in the Group's production activities and will strive to supply even more products and services that contribute to the mitigation of and adaptation to climate change by creating innovative technology and advanced materials as part of its Green Innovation Business Expansion Project. Meanwhile, Toray Group has identified the following risks posed by climate change to its own businesses: (1) the impact of weather-related disasters caused by climate change (flood, drought, etc.) on operations; and (2) increased operating and equipment costs due to carbon pricing (carbon taxes, etc.) and the expansion of various regulations. Moving forward, Toray Group will further analyze the scenario of a temperature rise of well below 2 degrees Celsius above pre-industrial levels and study the effect of the risks and opportunities posed by climate change on Group business and strategy.

## V. Risk Management

With regard to Group-wide risks, including risks associated with climate change, Toray Group conducts regular risk management (priority risk mitigation activities) and ongoing risk management (monitoring domestic and foreign trends and detecting, evaluating, and monitoring risk). For information on Toray Group-wide risk management activities, see the relevant section of the Toray website at the link below.

### Related Information

[> Risk Management Initiatives](#)

## VI. Indicators and Objectives

As mentioned above, the Toray Group Sustainability Vision sets out the Group's quantitative targets for fiscal 2030 as shown below. The chart below shows the results achieved with regard to the Group's quantitative targets for fiscal 2019.

- Supply four times more Green Innovation products  
This will avoid eight times more CO<sub>2</sub> emissions in the value chain
- Supply six times more Life Innovation products (products that enhance public health, improve the quality of medical care, and contribute to health maintenance, longevity, and personal safety)
- Triple the total annual volume of water treated using Toray's water treatment membranes
- Reduce greenhouse gas emissions in production activities by 30% per unit of sales across the entire Toray Group by introducing renewable energy or taking other initiatives
- Reduce water usage in production activities by 30% per unit of sales across the entire Toray Group

	Achieved FY2013	Achieved FY2019		Target FY2030 (Compared to FY2013)
			Compared to FY2013	
<b>Green Innovation product sales</b>	463.1 billion yen	820.1 billion yen	1.8 times	4 times
<b>Contribution to CO<sub>2</sub> reduction in value chain</b>	38.45 million tons	196.0 million tons	5.1 times	8 times
<b>Life Innovation product sales</b>	119.6 billion yen	223.2 billion yen	1.9 times	6 times
<b>Contribution to water treatment (conversion to water volume)</b>	27.23 million tons	50.95 million tons	1.9 times	3 times
<b>Greenhouse gas emission per unit of sales</b>	3.37 thousand tons /billion yen	2.97 thousand tons /billion yen	12 % reduction	30 % reduction
<b>Water usage per unit of sales</b>	152 thousand tons /billion yen	117 thousand tons /billion yen	23 % reduction	30 % reduction

## Comments from Thought Leaders

Comments are made on the basis of information publicly available as of September 2020.



### Sachiko Kishimoto

Representative Director and Managing Director  
Public Resources Foundation

These comments focus on the sections of the Toray Group CSR Report 2020 entitled “Contributing Solutions to Social Issues through Business Activities” and “Social Contribution Activities as a Good Corporate Citizen.”

Established in July 2018, the Toray Group Sustainability Vision outlines the Group’s long-term commitment to sustainability. One of the Group’s basic management strategies is to pursue business expansion in growth areas by promoting Green Innovation businesses that help solve global environmental issues as well as resource and energy issues, and Life Innovation businesses that help improve the quality of medical care, reduce the burden on medical staff, and contribute to health maintenance, longevity, and personal safety. These businesses are treated as group-wide projects and generated combined net sales of 1,043.3 billion yen in fiscal 2019, accounting for 47% of the Group’s consolidated net sales. The Group has set key performance indicators (KPIs) for the contribution to reducing CO<sub>2</sub> in the value chain from using the Group’s products, and the volume of fresh water produced by the water treatment membranes it sells. By these measures, the Group is steadily improving its performance and its clear stance on balancing solutions to social issues with corporate growth is worthy of great commendation.

Toray Group is engaged in ongoing initiatives to contribute to society as a good corporate citizen, designating “science and technology promotion,” “environment and communities,” and “health and welfare” as priority areas. These include endowments to its foundations. The Group should be particularly recognized for involving its employees in environmental and science education as instructors.

Toray Group has rapidly responded to societal needs during the current COVID-19 pandemic by strengthening and expanding its framework for supplying nonwoven fabrics for masks, and manufacturing medical gowns in Japan. The Group is also seeking to coexist harmoniously with communities around the world, for instance by donating resources to address COVID-19.

When it comes to Social Activities as a Good Corporate Citizen, under the CSR Roadmap 2022, Toray Group is seeking to help solve global-scale social issues such as those addressed by the United Nations Sustainable Development Goals (SDGs). Moving forward, I hope that the Group will place a greater focus on collaborating with non-profits and non-government organizations in order to leverage its specialized strengths and have an even greater impact.

### Sachiko Kishimoto Profile

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 2017.



## **Takeshi Mizuguchi**

Professor, Faculty of Economics

Takasaki City University of Economics

My comments focus on the numerical targets outlined in the long-term corporate vision through 2030, TORAY VISION 2030. I chose them because they stand out the most, particularly the first three KPI targets.

One of the three KPI targets is to contribute to CO<sub>2</sub> reduction in the value chain. For example, the Group supplies strong, lightweight carbon fiber that helps to improve fuel economy in aircraft and automobiles. This KPI is the amount of CO<sub>2</sub> emissions reduced, which is easy to understand and an excellent outcome.

The other KPI targets are to achieve fourfold and sixfold increases in sales revenue from Green Innovation and Life Innovation products, respectively. These are to be achieved by fiscal 2030, and are in comparison with fiscal 2013 levels. Green Innovation products span diverse categories ranging from materials made from bioresources to reverse osmosis membranes for efficient desalination. Toray Group is doing an excellent job contributing to sustainability from various angles. Because the Group has such a diverse range of products, it makes sense to set an integrated target such as sales revenue from Green Innovation products to align the direction of initiatives in the workplace.

However, caution is also needed in interpreting the KPIs. Of course, Green Innovation products have been screened to meet certain standards, so an increase in their sales revenue surely indicates an improvement. However, because this is an output-based KPI, I think it does not necessarily indicate the impact or outcome in terms of bringing the Group a step closer to a sustainable world. For example, in the Toray Group Sustainability Vision, which has a target year of 2050, the Group pursues a world where resources are sustainably managed, with reduced dependency on fossil fuel resources. These are excellent goals. However, because Green Innovation products are so varied, even a fourfold increase in overall sales revenue from those products does not provide any indication of the ratio of non-fossil fuel resources.

Toray Group also outlines various other sustainability targets. Going forward, I hope that the Group will invent the core technologies of the future (the likes of carbon fiber today) and establish specific, outcome-based KPIs for them.

## **Takeshi Mizuguchi**

### **Profile**

Graduated from Tsukuba University. Business Administration, Ph.D. After working at a trading company and an auditing firm, he became a lecturer at the Faculty of Economics of Takasaki City University of Economics in 1997, and was later appointed professor in 2008. His primary fields of research include the disclosure of non-financial information and responsible investment (ESG investment). He has chaired the Green Bond Review Committee and Positive Impact Finance Task Force of the Ministry of the Environment Government of Japan and Impact Investing Roundtable of the Financial Services Agency of Japan and Japan National Advisory Board of the Global Steering Group for Impact Investment.

His major publications include Responsible Investment: Changing the future with capital flows (Iwanami Shoten, Publishers), ESG Investment: A new form of capitalism (Nikkei Publishing Inc.), and The Era of Sustainable Finance: ESG/SDGs and the bond markets (author and editor, Kinzai).



## **Takeshi Shimotaya**

Executive Director

The Global Alliance for Sustainable Supply Chain (ASSC)

Established in 2017, the Toray Group Policy for Human Rights declares the Group's respect for international standards including the United Nations Universal Declaration of Human Rights and standards of the International Labor Organization. In fiscal 2019, the Group continued implementing human rights training in and outside of Japan based on its human rights policy, working to ensure that everyone is aware of its commitment to respecting human rights. It is very important for each employee, whether in or outside of Japan, to understand what it means to respect human rights as a basis for engaging in the Group's corporate activities. The Group is steadily embedding a respect for human rights throughout its organization.

Internationally, nations and corporations are advancing human rights initiatives based on the UN Guiding Principles on Business and Human Rights. European and other countries have issued national action plans and enacted laws that require conducting and reporting of human rights due diligence to prevent and mitigate the risk of human rights violations. Toray Group has issued a Statement on the UK's Modern Slavery Act and is implementing the initiatives in the statement. Human rights due diligence is central to such legislation and requires the identification of human rights risks including in supply chains, and prioritization of initiatives based on product-level and country-level human rights impact assessments. The Group currently operates the Human Rights Promotion Committees in Japan and the Global Human Rights Promotion Committee, under the direction of its Ethics and Compliance Committee. The human rights committees identify human rights issues and study and implement initiatives to address the issues. Going forward, there is a need to formulate, disclose, and execute plans for reducing the human rights risks that have been identified through human rights due diligence.

The UN Guiding Principles on Business and Human Rights place a greater onus on business enterprises to provide effective grievance mechanisms for persons who are directly or indirectly impacted by the enterprise's activities, particularly persons in vulnerable positions who are impacted more by the COVID-19 pandemic. The Group operates helplines for employees to file grievances and online avenues for business partners to submit grievances. In the future, I hope that the Group will disclose the details of these grievances and work toward building mechanisms for dealing with grievances identified in direct feedback from suppliers' workers.

### **Takeshi Shimotaya**

#### **Profile**

Takeshi Shimotaya held responsibilities in various areas with the plant management department at a heavy industries enterprise, including HR, general affairs, and health and safety. As the key person in charge of occupational health and safety, he compiled health and safety management principles and designed and implemented an occupational health and safety internal audit system. He established a new company engaged in an environment-related business, before moving to the United Kingdom in July 2007. In the UK, he received an MSc from the University of East Anglia in environmental studies, and an MBA from the University of Lancaster. He has been participating in the UN Forum on Business and Human Rights since 2013. The forum serves to communicate the importance of human rights in Japan as well as to collaborate with enterprises on human rights due diligence, adherence to the UK Modern Slavery Act, and solving supply chain-related issues.

CSR-Related Policies and Guidelines / ESG Data

## CSR-Related Policies and Guidelines

Policies and guidelines related to Toray Group CSR are listed below.

### Management

---

[Toray Group's Management Philosophy >](#)

### Governance

---

[Basic Policy on Corporate Governance >](#)

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

[CSR Guidelines & Activity Reports >](#)

[Information Disclosure Principles >](#)

### Corporate Ethics and Legal Compliance

---

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

[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 >

Biodiversity Initiatives >

## Product Safety and Quality Assurance

---

Product Safety Management Basic Policy >

Quality Policy >

## Purchasing and Procurement

---

Basic Purchasing Policies >

Basic Distribution Policies >

CSR Procurement Guidelines >

## 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 >

CSR-Related Policies and Guidelines / ESG Data

**ESG Data**

**Environment-Related**

		Scope	Period	2016	2017	2018	2019	Unit
Environment conservation costs	Investment	Toray Industries, Inc.	FY	2.68	2.02	1.26	1.31	billion Yen
	Cost			6.71	6.81	6.98	7.13	
Economic impact of environmental initiatives		Toray Industries, Inc.	FY	1.21	0.53	0.82	0.88	billion Yen
Energy consumption		Toray Industries, Inc.	FY	27.9	29.0	27.6	26.5	million gigajoules
		Group companies in Japan	FY	7.2	6.5	6.2	5.8	
		Group companies outside Japan	FY	52	50.8	54	61.3	
Unit energy consumption index (% compared to fiscal 1990)		Toray Industries, Inc.	FY	82.7	81.6	83.3	85.9	—
Water		Toray Industries, Inc.	FY	168	174	176	171	million tons
		Group companies in Japan	FY	13	13	13	14	
		Group companies outside Japan	FY	44	41	42	41	
Industrial wastewater		Toray Industries, Inc.	FY	159	164	167	160	million tons
		Group companies in Japan	FY	10	10	10	9	
		Group companies outside Japan	FY	25	24	23	26	
Greenhouse gas emissions	Toray Industries, Inc.	Scope-1	FY	1,670	1,650	1,610	1,560	1,000 tons CO <sub>2</sub> eq
		Scope-2	FY	340	380	340	300	
		Toray Industries, Inc.	FY	2,010	2,030	1,950	1,860	
	Group companies in Japan	Scope-1	FY	60	60	50	50	
		Scope-2	FY	390	340	320	290	

		Scope	Period	2016	2017	2018	2019	Unit
		Group companies in Japan	FY	450	400	370	330	
Group companies outside Japan	Scope-1	FY	1,600	1,500	1,730	1,670		
	Scope-2	FY	1,540	1,540	1,580	1,900		
	Group companies outside Japan	FY	3,140	3,040	3,310	3,560		
Atmospheric emissions (NOx)	Toray Industries, Inc.	FY	1,332	1,335	1,306	1,274	tons	
	Group companies in Japan	FY	51	40	32	30		
	Group companies outside Japan	FY	768	716	709	878		
Atmospheric emissions (SOx)	Toray Industries, Inc.	FY	264	268	245	255	tons	
	Group companies in Japan	FY	20	16	16	10		
	Group companies outside Japan	FY	3,090	2,192	2,292	1,597		
Emissions of substances subject to the PRTR Act (Atmospheric Emissions)	Toray Industries, Inc.	FY	189	330	327	229	tons	
	Group companies in Japan	FY	245	101	102	99		
	Group companies outside Japan	FY	318	442	457	392		
Emissions of substances subject to the PRTR Act (Water Emissions)	Toray Industries, Inc.	FY	31	27	28	24	tons	
	Group companies in Japan	FY	0	0	0	0		
	Group companies outside Japan	FY	0	0	0	0		
Emissions of substances subject to the PRTR Act (transfers)	Toray Industries, Inc.	FY	866	1,023	746	1,054	tons	
	Group companies in Japan	FY	1,246	1,554	1,334	1,674		
	Group companies outside Japan	FY	9,960	7,628	2,799	2,140		
VOC atmospheric emissions	Toray Industries, Inc.	FY	253	418	422	307	tons	
	Group companies in Japan	FY	345	185	178	175		
	Group companies outside Japan	FY	396	505	529	486		

	Scope	Period	2016	2017	2018	2019	Unit
Atmospheric emissions (Dust)	Toray Industries, Inc.	FY	105	103	96	122	tons
	Group companies in Japan	FY	3	1	1	3	
	Group companies outside Japan	FY	235	122	174	234	
Coal ash (recycled)	Toray Industries, Inc.	FY	62.4	57.8	68.7	68.1	1,000 tons
	Group companies in Japan	FY	—	—	—	—	
	Group companies outside Japan	FY	17.2	19.1	22.6	16.8	
Waste (direct landfill disposal)	Toray Industries, Inc.	FY	0.0	0.0	0.1	0.1	1,000 tons
	Group companies in Japan	FY	0.2	0.6	0.4	4.3	
	Group companies outside Japan	FY	24.4	24.1	24.1	22.7	
Water emissions (BOD)	Toray Industries, Inc.	FY	655	576	624	607	tons
	Group companies in Japan	FY	27	24	32	31	tons
	Group companies outside Japan	FY	245	177	168	211	
Water emissions (COD)	Toray Industries, Inc.	FY	776	789	780	727	tons
	Group companies in Japan	FY	24	27	28	26	tons
	Group companies outside Japan	FY	1,603	1,298	1,149	1,550	
Wastewater: Total nitrogen emissions	Toray Industries, Inc.	FY	406	415	394	341	tons
	Group companies in Japan	FY	14	14	14	14	
	Group companies outside Japan	FY	—	—	—	—	
Wastewater: Total phosphorous emissions	Toray Industries, Inc.	FY	27	25	31	25	tons
	Group companies in Japan	FY	1	1	2	1	
	Group companies outside Japan	FY	—	—	—	—	

Note: Greenhouse gas figures are affected by the fiscal 2017 integration of Toray Battery Separator Film Co., Ltd., a group company in Japan, into Toray Industries, Inc.

## Society-Related

		Scope	Period	2016	2017	2018	2019	Unit
Number of employees	Total	Toray Industries, Inc.	As of the end of each fiscal year	7,220	7,625	7,585	7,568	persons
	Male			6,440	6,785	6,749	6,708	
	Female			780	840	836	860	
Percentage of women in unit manager or higher positions		Toray Industries, Inc.	As of April each year	8.9	9.0	9.3	9.7	%
Women in management positions (%)	Management staff (Section manager or higher positions)			4.5	4.6	4.9	5.1	
Employment rate of persons with disabilities		Toray Industries, Inc.	Year	2.10	2.20	2.21	2.20	%
Average time on the job	Total	Toray Industries, Inc.	FY	14.5	14.6	15.0	15.4	years
	Male			14.2	14.5	14.9	15.3	
	Female			16.1	15.8	16.0	16.1	
Percentage of available annual paid leave used by employees	Toray Industries' employees (non-managerial)	Toray Industries, Inc.	FY	89.8	88.4	89.7	96.0	%
Number of employees taking childcare leave	Total	Toray Industries, Inc.	FY	68	71	62	70	persons
	Male			4	3	4	10	
	Female			64	68	58	60	
Number of employees taking family care leave		Toray Industries, Inc.	FY	3	1	1	4	persons
Number of employees hired	Total	Toray Industries, Inc.	FY	314	337	338	332	persons
	Male			270	283	280	279	
	Female			44	54	58	53	
Occupational accident frequency rate (Toray Group)		Toray Group (all accidents)	Year	0.60	0.61	0.59	0.59	—
		Toray Group (accidents causing lost work time)	Year	0.33	0.39	0.29	0.34	—

## Governance-Related

	Scope	Period	2016	2017	2018	2019	Unit
Number of members of the Board	Toray Industries, Inc.	FY	23	19	19	19	persons
Number of outside directors (independent officers)	Toray Industries, Inc.	FY	2	2	2	2	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	59.2	66.2	66.4	66.9	billion yen
Ratio of R&D expenses to net sales	Toray Group	FY	2.9	3.0	2.8	3.0	%
Number of major violations of laws or ordinances	Toray Group	FY	1	1	0	1	violation
Monetary contribution to Political fund-raising organization (The People's Political Association)	Toray Industries, Inc.	FY	50	50	30	30	million yen
Ratio between the total annual compensation of the CEO and the mean employee compensation	Toray Industries, Inc.	FY	21.36	22.23	21.26	21.25	times

Comparative Tables with GRI Standards, SASB Standards, and ISO 26000 Subjects

**Comparative Table with GRI Standards**

**Universal Standards**

**General Disclosures**

Organizational profile		References
102-1	Name of the organization	> <a href="#">Corporate Outline</a>
102-2	Activities, brands, products, and services	> <a href="#">Corporate Outline</a> > <a href="#">Our Businesses</a>
102-3	Location of headquarters	> <a href="#">Global Network</a>
102-4	Location of operations	> <a href="#">Global Network</a>
102-5	Ownership and legal form	> <a href="#">Corporate Outline</a> > <a href="#">Financial Results</a>
102-6	Markets served	> <a href="#">Corporate Outline</a> > <a href="#">Financial Results</a>
102-7	Scale of the organization	> <a href="#">Corporate Outline</a> > <a href="#">Financial Results</a>
102-8	Information on employees and other workers	> <a href="#">ESG Data</a>
102-9	Supply chain	> <a href="#">Facilitating CSR Initiatives Throughout the Supply Chain</a>
102-10	Significant changes to the organization and its supply chain	N/A
102-11	Precautionary Principle or approach	> <a href="#">Risk Management</a> > <a href="#">Corporate Ethics and Legal Compliance</a> > <a href="#">Initiatives for Product Safety and Quality Assurance</a> > <a href="#">Facilitating CSR Initiatives Throughout the Supply Chain</a>
102-12	External initiatives	> <a href="#">Human Rights Promotion and Human Resources Development</a> > <a href="#">Statement on the UK's Modern Slavery Act</a> > <a href="#">Toray Group's Approach to Climate Change</a>
102-13	Membership of associations	Toray Industries, Inc. belongs to the following associations: <ul style="list-style-type: none"> <li>• Nippon Keidanren (Japan Business Federation)</li> <li>• Japan Chemical Industry Association</li> <li>• Japan Chemical Fibers Association (chaired by the president of Toray Industries, Inc.)</li> <li>• SAC (Sustainable Apparel Coalition)</li> </ul>
Strategy		References

Organizational profile		References
102-14	Statement from senior decision-maker	> <a href="#">Message from the President</a> ;
102-15	Key impacts, risks, and opportunities	> <a href="#">Securities Report (available only in Japanese)</a> > <a href="#">Annual Reports</a> > <a href="#">Risk Management Initiatives</a>
Ethics and Integrity		References
102-16	Values, principles, standards, and norms of behavior	> <a href="#">Toray Philosophy</a>
102-17	Mechanisms for advice and concerns about ethics	> <a href="#">Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance</a>
Governance		References
102-18	Governance structure	> <a href="#">Corporate Governance and Management Transparency Corporate Governance Report</a> <b>PDF</b>
102-19	Delegating authority	Toray Group Corporate Social Responsibility Initiatives
102-20	Executive-level responsibility for economic, environmental, and social topics	> <a href="#">CSR Road Map</a> Toray Group Corporate Social Responsibility Initiatives
102-21	Consulting stakeholders on economic, environmental, and social topics	> <a href="#">Communication</a>
102-22	Composition of the highest governance body and its committees	<a href="#">Corporate Governance Report</a> <b>PDF</b> > <a href="#">Basic Policy on Corporate Governance</a> > <a href="#">Corporate Governance and Management Transparency</a>
102-23	Chair of the highest governance body	<a href="#">Corporate Governance Report</a> <b>PDF</b>
102-24	Nominating and selecting the highest governance body	<a href="#">Corporate Governance Report</a> <b>PDF</b>
102-25	Conflicts of interest	<a href="#">Corporate Governance Report</a> <b>PDF</b>
102-26	Role of highest governance body in setting purpose, values, and strategy	> <a href="#">Basic Policy on Corporate Governance</a>
102-27	Collective knowledge of highest governance body	
102-28	Evaluating the highest governance body's performance	<a href="#">Corporate Governance Report</a> <b>PDF</b>
102-29	Identifying and managing economic, environmental, and social impacts	
102-30	Effectiveness of risk management processes	> <a href="#">Risk Management</a>
102-31	Review of economic, environmental, and social topics	
102-32	Highest governance body's role in sustainability reporting	
102-33	Communicating critical concerns	<a href="#">Corporate Governance Report</a> <b>PDF</b> > <a href="#">Corporate Ethics and Legal Compliance</a> > <a href="#">Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance</a> > <a href="#">Risk Management</a>
102-34	Nature and total number of critical concerns	

Organizational profile		References
102-35	Remuneration policies	<a href="#">Corporate Governance Report</a> <a href="#">PDF</a>
102-36	Process for determining remuneration	<a href="#">Corporate Governance Report</a> <a href="#">PDF</a>
102-37	Stakeholders' involvement in remuneration	<a href="#">Corporate Governance Report</a> <a href="#">PDF</a>
102-38	Annual total compensation ratio	> <a href="#">ESG Data</a>
102-39	Percentage increase in annual total compensation ratio	> <a href="#">ESG Data</a>
Stakeholder Engagement		References
102-40	List of stakeholder groups	<ul style="list-style-type: none"> <li>&gt; <a href="#">Communication</a></li> <li>&gt; <a href="#">Comments from Thought Leaders</a></li> <li>&gt; <a href="#">Implementing CSR Activities and Improving CSR Education</a></li> <li>&gt; <a href="#">Corporate Governance and Management Transparency</a></li> <li>&gt; <a href="#">Communication with Local Communities</a></li> </ul>
102-41	Collective bargaining agreements	> <a href="#">Corporate Governance and Management Transparency</a>
102-42	Identifying and selecting stakeholders	> <a href="#">Communication</a>
102-43	Approach to stakeholder engagement	<ul style="list-style-type: none"> <li>&gt; <a href="#">CSR Roadmap 2022</a></li> <li>&gt; <a href="#">Communication</a></li> </ul>
102-44	Key topics and concerns raised	<ul style="list-style-type: none"> <li>&gt; <a href="#">Comments from Thought Leaders</a></li> <li>&gt; <a href="#">Materiality</a></li> </ul>
Reporting practice		References
102-45	Entities included in the consolidated financial statements	<ul style="list-style-type: none"> <li>&gt; <a href="#">Corporate Outline</a></li> <li>&gt; <a href="#">Financial Results</a></li> </ul>
102-46	Defining report content and topic Boundaries	<ul style="list-style-type: none"> <li>&gt; <a href="#">Materiality</a></li> <li>&gt; <a href="#">Editorial Policy</a></li> </ul>
102-47	List of material topics	<ul style="list-style-type: none"> <li>&gt; <a href="#">Materiality</a></li> <li>&gt; <a href="#">CSR Roadmap 2022</a></li> </ul>
102-48	Restatements of information	N/A
102-49	Changes in reporting	N/A
102-50	Reporting period	> <a href="#">Editorial Policy</a>
102-51	Date of most recent report	September ,2019
102-52	Reporting cycle	End of September yearly
102-53	Contact point for questions regarding the report	> <a href="#">Contact Us</a>
102-54	Claims of reporting in accordance with the GRI Standards	> <a href="#">GRI Standards Content Index</a>
102-55	GRI content index	> <a href="#">GRI Standards Content Index</a>
102-56	External assurance	> <a href="#">Third-Party Assurance</a>

Management Approach		
General Requirements for Reporting the Management Approach		References
103-1	Explanation of the material topic and its Boundary	<ul style="list-style-type: none"> <li>&gt; <a href="#">Materiality</a></li> </ul>
103-2	The management approach and its components	<ul style="list-style-type: none"> <li>&gt; <a href="#">Toray Group Corporate Social Responsibility Initiatives</a></li> <li>&gt; <a href="#">Fiscal 2019 CSR Activity Report</a></li> <li>&gt; <a href="#">CSR Roadmap 2022</a></li> <li>&gt; <a href="#">Contributing Solutions to Social Issues through Business Activities</a></li> <li>&gt; <a href="#">Corporate Governance and Management Transparency</a></li> <li>&gt; <a href="#">Corporate Ethics and Legal Compliance</a></li> <li>&gt; <a href="#">Risk Management</a></li> <li>&gt; <a href="#">Human Rights Promotion and Human Resources Development</a></li> <li>&gt; <a href="#">Product Safety and Quality</a></li> <li>&gt; <a href="#">Facilitating CSR Initiatives Throughout the Supply Chain</a></li> <li>&gt; <a href="#">Communication</a></li> <li>&gt; <a href="#">Social Contribution Activities</a></li> <li>&gt; <a href="#">Safety, Accident Prevention, and Environmental Preservation</a></li> </ul>
103-3	Evaluation of the management approach	<ul style="list-style-type: none"> <li>&gt; <a href="#">Toray Group Corporate Social Responsibility Initiatives</a></li> <li>&gt; <a href="#">Fiscal 2019 CSR Activity Report</a></li> <li>&gt; <a href="#">CSR Roadmap 2022</a></li> <li>&gt; <a href="#">Contributing Solutions to Social Issues through Business Activities</a></li> <li>&gt; <a href="#">Corporate Governance and Management Transparency</a></li> <li>&gt; <a href="#">Corporate Ethics and Legal Compliance</a></li> <li>&gt; <a href="#">Risk Management</a></li> <li>&gt; <a href="#">Human Rights Promotion and Human Resources Development</a></li> <li>&gt; <a href="#">Product Safety and Quality</a></li> <li>&gt; <a href="#">Facilitating CSR Initiatives Throughout the Supply Chain</a></li> <li>&gt; <a href="#">Communication</a></li> <li>&gt; <a href="#">Social Contribution Activities</a></li> <li>&gt; <a href="#">Safety, Accident Prevention, and Environmental Preservation</a></li> </ul>

## Topic-Specific Standards

Economic		
Economic Performance		References
201-1	Direct economic value generated and distributed	<ul style="list-style-type: none"> <li>&gt; <a href="#">Financial Results</a></li> <li>&gt; <a href="#">Securities Report (available only in Japanese)</a></li> <li>&gt; <a href="#">Social Contribution Activities Fiscal 2019 Results (Data)</a></li> </ul>
201-2	Financial implications and other risks and opportunities due to climate change	<ul style="list-style-type: none"> <li>&gt; <a href="#">Toray Group's Approach to Climate Change</a></li> </ul>
201-3	Defined benefit plan obligations and other retirement plans	<ul style="list-style-type: none"> <li>&gt; <a href="#">Securities Report (available only in Japanese)</a></li> </ul>

201-4	Financial assistance received from government	Restrictions related to confidentiality and/or information difficult to obtain
Market Presence		References
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	> <a href="#">Application guidelines for new graduates (available only in Japanese)</a>
202-2	Proportion of senior management hired from the local community	
Indirect Economic Impacts		References
203-1	Infrastructure investments and services supported	
203-2	Significant indirect economic impacts	
Procurement Practices		References
204-1	Proportion of spending on local suppliers	> <a href="#">Facilitating CSR Initiatives Throughout the Supply Chain</a>
Anti-corruption		References
205-1	Operations assessed for risks related to corruption	> <a href="#">Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance</a> > <a href="#">Antitrust Compliance and Bribery Prevention</a>
205-2	Operations assessed for risks related to corruption	> <a href="#">Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance</a> > <a href="#">Antitrust Compliance and Bribery Prevention</a> > <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a>
205-3	Confirmed incidents of corruption and actions taken	No incidents
Anti-competitive Behavior		References
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	N/A
Tax		References
207-1	Approach to tax	> <a href="#">Ensuring Tax Compliance</a>
207-2	Tax governance, control, and risk management	> <a href="#">Ensuring Tax Compliance</a>
207-3	Stakeholder engagement and management of concerns related to tax	> <a href="#">Ensuring Tax Compliance</a>
207-4	Country-by-country reporting	
<b>Environment</b>		
Materials		References
301-1	Materials used by weight or volume	
301-2	Recycled input materials used	Information difficult to obtain

301-3	Reclaimed products and their packaging materials	<ul style="list-style-type: none"> <li>&gt; <a href="#">Initiatives to Reduce Waste</a></li> <li>&gt; <a href="#">Toray Group Distribution Initiatives (Expanding Collection and Reuse of Packaging Materials)</a></li> </ul>
Energy		References
302-1	Energy consumption within the organization	<ul style="list-style-type: none"> <li>&gt; <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> </ul>
302-2	Energy consumption outside of the organization	<ul style="list-style-type: none"> <li>&gt; <a href="#">Third-Party Assurance</a></li> </ul>
302-3	Energy intensity	<ul style="list-style-type: none"> <li>&gt; <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> </ul>
302-4	Reduction of energy consumption	<ul style="list-style-type: none"> <li>&gt; <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> </ul>
302-5	Reductions in energy requirements of products and services	<ul style="list-style-type: none"> <li>&gt; <a href="#">Green Innovation Business Expansion Project</a></li> </ul>
Water and Effluents		References
303-1	Interactions with water as a shared resource	<ul style="list-style-type: none"> <li>&gt; <a href="#">Initiatives for Managing Water Resources</a></li> </ul>
303-2	Management of water discharge-related impacts	<ul style="list-style-type: none"> <li>&gt; <a href="#">Initiatives to Prevent Air and Water Pollution</a></li> </ul>
303-3	Water withdrawal	<ul style="list-style-type: none"> <li>&gt; <a href="#">Environmental Impact Overview</a></li> <li>&gt; <a href="#">SASB Standards</a></li> </ul>
303-4	Water discharge	<ul style="list-style-type: none"> <li>&gt; <a href="#">Initiatives to Prevent Air and Water Pollution</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> </ul>
303-5	Water consumption	<ul style="list-style-type: none"> <li>&gt; <a href="#">Environmental Impact Overview</a></li> <li>&gt; <a href="#">SASB Standards</a></li> </ul>
Biodiversity		References
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas Biodiversity Initiatives	<ul style="list-style-type: none"> <li>&gt; <a href="#">Biodiversity Initiatives</a></li> </ul>
304-2	Significant impacts of activities, products, and services on biodiversity	<ul style="list-style-type: none"> <li>&gt; <a href="#">Biodiversity Initiatives</a></li> </ul>
304-3	Habitats protected or restored	<ul style="list-style-type: none"> <li>&gt; <a href="#">Biodiversity Initiatives</a></li> </ul>
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Information difficult to obtain
Emissions		References
305-1	Direct (Scope 1) GHG emissions	<ul style="list-style-type: none"> <li>&gt; <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> <li>&gt; <a href="#">Third-Party Assurance</a></li> </ul>
305-2	Energy indirect (Scope 2) GHG emissions	<ul style="list-style-type: none"> <li>&gt; <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> <li>&gt; <a href="#">Third-Party Assurance</a></li> </ul>
305-3	Other indirect (Scope 3) GHG emissions	<ul style="list-style-type: none"> <li>&gt; <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>&gt; <a href="#">Environmental Impact Overview</a></li> </ul>

		<ul style="list-style-type: none"> <li>› <a href="#">Third-Party Assurance</a></li> </ul>
305-4	GHG emissions intensity	<ul style="list-style-type: none"> <li>› <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>› <a href="#">Environmental Impact Overview</a></li> </ul>
305-5	Reduction of GHG emissions	<ul style="list-style-type: none"> <li>› <a href="#">Energy Saving and Curbing Climate Change</a></li> <li>› <a href="#">Environmental Impact Overview</a></li> </ul>
305-6	Emissions of ozone-depleting substances (ODS)	<ul style="list-style-type: none"> <li>› <a href="#">Energy Saving and Curbing Climate Change (Initiatives to Protect the Ozone Layer)</a></li> </ul>
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	<ul style="list-style-type: none"> <li>› <a href="#">Initiatives to Prevent Air and Water Pollution</a></li> <li>› <a href="#">Environmental Impact Overview</a></li> <li>› <a href="#">Chemical Substance Emissions and Transfer Data</a></li> </ul>
Effluents and Waste		References
306-1	Water discharge by quality and destination	<ul style="list-style-type: none"> <li>› <a href="#">Environmental Impact Overview</a></li> </ul>
306-2	Waste by type and disposal method	<ul style="list-style-type: none"> <li>› <a href="#">Environmental Impact Overview</a></li> <li>› <a href="#">Initiatives to Reduce Waste</a></li> <li>› <a href="#">SASB Standards</a></li> </ul>
306-3	Significant spills	<ul style="list-style-type: none"> <li>› <a href="#">Environmental Risk Management</a></li> </ul>
306-4	Transport of hazardous waste	<ul style="list-style-type: none"> <li>› <a href="#">Chemical Substance Emissions and Transfer Data</a></li> </ul>
306-5	Water bodies affected by water discharges and / or runoff	N/A
Environmental Compliance		References
307-1	Non-compliance with environmental laws and regulations	<ul style="list-style-type: none"> <li>› <a href="#">Environmental Risk Management</a></li> </ul>
Supplier Environmental Assessment		References
308-1	New suppliers that were screened using environmental criteria	<ul style="list-style-type: none"> <li>› <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a></li> </ul>
308-2	Negative environmental impacts in the supply chain and actions taken New suppliers that were screened using environmental criteria	<ul style="list-style-type: none"> <li>› <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a></li> </ul>
<b>Social Initiatives</b>		
Employment		References
401-1	New employee hires and employee turnover	<ul style="list-style-type: none"> <li>› <a href="#">Securing and Developing Human Resources to Create New Value</a></li> </ul>
		<ul style="list-style-type: none"> <li>› <a href="#">Creating a Positive Workplace for Employees</a></li> </ul>
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<ul style="list-style-type: none"> <li>› <a href="#">Promoting Diversity</a></li> </ul>
		<ul style="list-style-type: none"> <li>› <a href="#">Creating a Positive Workplace for Employees</a></li> </ul>
401-3	Parental leave	<ul style="list-style-type: none"> <li>› <a href="#">Creating a Positive Workplace for Employees</a></li> </ul>
Labor Management Relations		References
402-1	Minimum notice periods regarding operational changes	

Occupational Health and Safety		References
403-1	Occupational health and safety management system	> <a href="#">Safety, Accident Prevention, and Environmental Preservation</a>
403-2	Hazard identification, risk assessment, and incident investigation	> <a href="#">Safety, Accident Prevention, and Environmental Preservation</a>
403-3	Occupational health services	> <a href="#">Safety, Accident Prevention, and Environmental Preservation</a>
403-4	Worker participation, consultation, and communication on occupational health and safety	> <a href="#">Occupational Safety and Accident Prevention Activities</a>
403-5	Worker training on occupational health and safety	> <a href="#">Occupational Safety and Accident Prevention Activities</a>
403-6	Promotion of worker health	> <a href="#">Creating a Positive Workplace for Employees</a>
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	> <a href="#">Occupational Safety and Accident Prevention Activities</a>
403-8	Workers covered by an occupational health and safety management system	> <a href="#">Occupational Safety and Accident Prevention Activities</a>
403-9	Work-related injuries	> <a href="#">Occupational Safety and Accident Prevention Activities</a>
403-10	Work-related ill health	> <a href="#">Occupational Safety and Accident Prevention Activities</a>
Training and Education		References
404-1	Average hours of training per year per employee	> <a href="#">Securing and Developing Human Resources to Create New Value</a>
404-2	Programs for upgrading employee skills and transition assistance programs	> <a href="#">Securing and Developing Human Resources to Create New Value</a> > <a href="#">Promoting Diversity</a>
404-3	Percentage of employees receiving regular performance and career	> <a href="#">Securing and Developing Human Resources to Create New Value</a>
Diversity and Equal Opportunity		References
405-1	Diversity of governance bodies and employees	> <a href="#">Promoting Diversity</a> > <a href="#">ESG Data</a>
405-2	Ratio of basic salary and remuneration of women to men	> <a href="#">Human Rights Promotion and Human Resources Development</a>
Non-discrimination		References
406-1	Incidents of discrimination and corrective actions taken	> <a href="#">Human Rights Promotion and Human Resources Development</a>
Freedom of Association and Collective Bargaining		References
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	> <a href="#">Corporate Governance and Management Transparency</a>
Child Labor		References

408-1	Operations and suppliers at significant risk for incidents of child labor	<ul style="list-style-type: none"> <li>&gt; <a href="#">Human Rights Promotion and Human Resources Development</a></li> <li>&gt; <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a></li> </ul>
Forced or Compulsory Labor		References
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<ul style="list-style-type: none"> <li>&gt; <a href="#">Human Rights Promotion and Human Resources Development</a></li> <li>&gt; <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a></li> </ul>
Security Practices		References
410-1	Security personnel trained in human rights policies or procedures	
Rights of Indigenous People		References
411-1	Incidents of violations involving rights of indigenous peoples	
Human Rights Assessment		References
412-1	Operations that have been subject to human rights reviews or impact assessments	
412-2	Employee training on human rights policies or procedures	> <a href="#">Committed to Human Rights</a>
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	> <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a>
Local Communities		References
413-1	Operations with local community engagement, impact assessments, and development programs	<ul style="list-style-type: none"> <li>&gt; <a href="#">Environmental Accounting</a></li> <li>&gt; <a href="#">Social Contribution Activities</a></li> </ul>
413-2	Operations with significant actual and potential negative impacts on local communities	N/A
Supplier Social Assessment		References
414-1	New suppliers that were screened using social criteria	> <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a>
414-2	Negative social impacts in the supply chain and actions taken	> <a href="#">Socially Responsible Procurement Initiatives at Toray Group</a>
Public Policy		References
415-1	Political contributions	> <a href="#">ESG Data</a>
Customer Health and Safety		References
416-1	Assessment of the health and safety impacts of product and service categories	> <a href="#">Initiatives for Product Safety and Quality Assurance</a>
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	> <a href="#">Initiatives for Product Safety and Quality Assurance</a>
Marketing and Labeling		References

417-1	Requirements for product and service information and labeling	<ul style="list-style-type: none"> <li>&gt; <a href="#">Product Safety and Quality</a></li> <li>&gt; <a href="#">Our Businesses</a></li> <li>&gt; <a href="#">Initiatives for Product Safety and Quality Assurance</a></li> </ul>
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
Customer Privacy		References
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	<ul style="list-style-type: none"> <li>&gt; <a href="#">Protection of Personal Information</a></li> </ul>
Socioeconomic Compliance		References
419-1	Non-compliance with laws and regulations in the social and economic area	<ul style="list-style-type: none"> <li>&gt; <a href="#">Corporate Ethics and Legal Compliance</a></li> </ul>

Comparative Tables with GRI Standards, SASB Standards, and ISO 26000 Subjects

**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 <sub>2</sub> -e, Percentage (%)	Gross global Scope 1 emissions: 3.27 million tons-CO <sub>2</sub> Notes: 1. 6 gases (CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> ). There are no NF <sub>3</sub> emissions. 2. The scope of aggregation is Toray Industries, Inc., group companies in Japan and group companies outside Japan. Please refer to the following webpage for a breakdown of each.  > <a href="#">ESG Data</a>
	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	> <a href="#">Energy Saving and Curbing Climate Change</a> > <a href="#">Toray Group's Approach to Climate Change</a>
Air Quality	RT-CH-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N <sub>2</sub> O), (2) SOx, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	Metric tons (t)	(1) NOx (2) SOx > <a href="#">Initiatives to Prevent Air and Water Pollution</a> (3) VOC (4) hazardous air pollutants (HAPs) > <a href="#">Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical Substances</a> Note: (4) applies to atmospheric emissions of PRTR Law-specified substances
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 > <a href="#">Environmental Impact Overview</a> (2) Percentage grid electricity: 21.9% (3) Percentage renewable energy: Not disclosed (4) Total self-generated energy > <a href="#">Energy Saving and Curbing Climate Change</a>
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 <sup>3</sup> ), Percentage (%)	(1) Total water withdrawn: 227,052 thousand tons Of which, percentage of water withdrawn in regions with High Baseline Water Stress: 1.5% Of which, percentage of water withdrawn in regions with Extremely High Baseline Water Stress: 2.0% (2) Total water consumed: 32,669 thousand tons

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
				<p>Of which, percentage of water consumed in regions with High or Extremely High Baseline Water Stress: 1.3%</p> <p>Of which, percentage of water consumed in regions with Extremely High Baseline Water Stress: 6.8%</p> <p>Note: Total water consumed is calculated by subtracting water discharged from water withdrawn. Water stress is surveyed for Toray Group's each 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.</p>
	RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Number	n/a
	RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	n/a	> <a href="#">Initiatives for Managing Water Resources</a>
Hazardous Waste Management	RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	Metric tons (t), Percentage (%)	<p>(1) Amount of hazardous waste generated: 305 tons</p> <p>(2) Percentage recycled: 94.0%.0%</p> <p>Note: The scope of aggregation for waste generated is Toray Industries, Inc. and its group companies in Japan. Data corresponding to "specified hazardous industrial waste," as defined in Japan's Waste Disposal and Public Cleansing Act, is recorded as hazardous waste generated.</p>
Community Relations	RT-CH-210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	n/a	> <a href="#">Communication</a>
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): 0.12</p> <p>(b) Onsite business partner companies (Only staff stationed at Toray Industries plants; working hours used in the calculations are estimates): 0.09</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	> <a href="#">Occupational Safety and Accident Prevention Activities</a>

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
Product Design for Use-phase Efficiency	RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency	Yen	<p>&gt; <a href="#">Green Innovation Business Expansion Project</a></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>&gt; <a href="#">Initiatives for Product Safety and Quality Assurance</a></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>&gt; <a href="#">Safety, Accident Prevention, and Environmental Preservation</a></p> <p>&gt; <a href="#">Product Safety and Quality</a></p> <p>&gt; <a href="#">Initiatives for Product Safety and Quality Assurance</a></p> <p>(2) Discussion of strategy to develop alternatives with reduced human and/or environmental impact</p> <p>&gt; <a href="#">Safety, Accident Prevention, and Environmental Preservation</a></p>
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Percentage (%) by revenue	n/a
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	<p>Through the participation in following economic and industry associations, Toray Group works to grasp policy trends in order to identify opportunities or risks for the Group and engage in dialogue with the government and others to help build a better world.</p> <ul style="list-style-type: none"> <li>• Nippon Keidanren (Japan Business Federation)</li> <li>• Japan Chemical Industry Association</li> <li>• Japan Chemical Fibers Association (chaired by the president of Toray Industries, Inc.)</li> <li>• SAC (Sustainable Apparel Coalition)</li> </ul>
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	<p>&gt; <a href="#">Occupational Safety and Accident Prevention Activities</a></p> <p>Note: Information based on "process safety incidents" is not disclosed. However, Toray Group has defined "major accidents" and "fire and explosion accidents" and works with strong determination to prevent accidents such as fires and explosions. See the webpage above for "Number of major accidents" and "Number of fire and explosion accidents" based on the definitions.</p>

TOPIC	CODE	ACCOUNTING METRIC	UNIT OF MEASURE	Progress/CSR Report Coverage
	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 <sup>3</sup> ) and/or metric tons (t)	Not disclosed

Comparative Tables with GRI Standards, SASB Standards, and ISO 26000 Subjects  
**Comparative Table with ISO 26000 Subjects**

**Core subjects**

- ▼ **Organizational governance**      ▼ **Human rights**      ▼ **Labor practices**      ▼ **The environment**
- ▼ **Fair operating practices**      ▼ **Consumer issues**      ▼ **Community involvement and development**

**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
	Materiality
	Fiscal 2019 CSR Activity Report
	CSR Roadmap 2022 (Fiscal 2020 – Fiscal 2022)
	Corporate Governance and Management Transparency
	Implementing CSR Activities and Improving CSR Education
	Corporate Ethics and Legal Compliance
	Promoting Diversity
Communication	

## Human rights

Issues	Toray's initiatives
1. Due diligence	Human Rights Promotion and Human Resources Development
2. Human rights risk situations	Human Rights Promotion and Human Resources Development
	Socially Responsible Procurement Initiatives at Toray Group
3. Avoidance of complicity	Human Rights Promotion and Human Resources Development
	Socially Responsible Procurement Initiatives at Toray Group
4. Resolving grievances	Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance
	Human Rights Promotion and Human Resources Development
5. Discrimination and vulnerable groups	Human Rights Promotion and Human Resources Development
	Promoting Diversity
6. Civil and political rights	Corporate Ethics and Legal 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
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	Corporate Governance and Management Transparency
	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)
	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
2. Sustainable resource use	Approach to Green Innovation Products
	Promoting Recycling Initiatives
	Toray Group Distribution Initiatives
	Energy Saving and Curbing Climate Change
	Initiatives for Managing Water Resources
	Initiatives to Reduce Waste
	Environmental Impact Overview
3. Climate change mitigation and adaptation	Contributing Solutions to Social Issues through Business Activities
	Green Innovation Business Expansion Project
	Toray Group Distribution Initiatives
	Energy Saving and Curbing Climate Change
	Environmental Impact Overview
4. Protection of the environment, biodiversity and restoration of natural habitats	Biodiversity Initiatives
	Environmental Risk Management

## Fair operating practices

Issues	Toray's initiatives
1. Anti-corruption	Corporate Ethics and Legal Compliance
	Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance
	Antitrust Compliance and Corruption/Bribery Prevention
2. Responsible political involvement	Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance
3. Fair competition	Establishing a Corporate Culture of Total Respect for Corporate Ethics and Legal Compliance
	Antitrust Compliance and Corruption/Bribery Prevention
4. Promoting social responsibility in the value chain	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	<a href="#">Communication with Customers</a>
2. Protecting consumers' health and safety	<a href="#">Initiatives for Product Safety and Quality Assurance</a>
3. Sustainable consumption	<a href="#">Contributing Solutions to Social Issues through Business Activities</a>
	<a href="#">Green Innovation Business Expansion Project</a>
	<a href="#">Promoting Life Cycle Management</a>
	<a href="#">Approach to Green Innovation Products</a>
	<a href="#">Promoting Recycling Initiatives</a>
4. Consumer service, support, and complaint and dispute resolution	<a href="#">Initiatives for Product Safety and Quality Assurance</a>
5. Consumer data protection and privacy	<a href="#">Protection of Personal Information</a>
6. Access to essential services	<a href="#">Business Continuity Plan Initiatives</a>
7. Education and awareness	<a href="#">Initiatives for Product Safety and Quality Assurance</a>

## Community involvement and development

Issues	Toray's initiatives
1. Community involvement	Communication with Local Communities
	Social Contribution Activities
	SDGs in Action
2. Education and culture	Social Contribution Activities (Activities Carried Out in Fiscal 2019)
3. Employment creation and skills development	Social Contribution Activities (Activities Carried Out in Fiscal 2019)
4. Technology development and access	Social Contribution Activities (Activities Carried Out in Fiscal 2019)
5. Wealth and income creation	Social Contribution Activities (Activities Carried Out in Fiscal 2019)
	Ensuring Tax Compliance
6. Health	Social Contribution Activities (Activities Carried Out in Fiscal 2019)
7. Social investment	Social Contribution Activities (Fiscal 2019 Results) (Data)

## 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 2019 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 2019, the period from April 1, 2019 to March 31, 2020. Contents may include efforts underway after this period.

## Scope of this Report

---

### Environmental Data

Covers Toray Industries, Inc. and the following 89 manufacturing subsidiaries (90 companies in all).

Notes:

1. For group companies newly covered under the scope of environmental data from fiscal 2019, results are published using performance data for fiscal 2019. Under Toray's Fifth Medium-Term Environmental Plan, if a target is managed based on an absolute value (such as air emissions of a chemical substance), the target is managed by adding newly added group companies' baseline year performance and target values.
2. Environmental data used in this report concerning greenhouse gas emissions by Toray Industries, Inc. has been verified by a third party, Lloyds Register Quality Assurance Limited.

### Group companies in Japan: 26

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 Amenity and Civil Engineering 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.

### Group companies outside Japan: 63

#### 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.、Nyergesi Vizszolgaltato Kft.、Toray Advaned Composites Netherlands B.V.

#### 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.、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 Membrane Middle East LLC、Toray Battery Separator Film Korea Limited、Toray BSF Coating Korea Limited

Note: Underlined names indicate group companies newly covered under the scope of environmental data.

## Safety Data

Covers Toray Industries, Inc. and 52 group companies in Japan and 78 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. (131 companies in all)

## Social Data

Covers Toray Industries, Inc. and its consolidated subsidiaries (62 companies in Japan, 123 companies outside of Japan), but scope of reporting may differ for some items.

## Economic Data

Covers Toray Industries, Inc. and its 282 consolidated companies (283 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.

## Issued

October 2020 (Next issue scheduled for September 2021. Previous report issued in September 2019.)