

TORAY Group Social Responsibility

2011

TORAY

Innovation by Chemistry

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SOCIAL RESPONSIBILITY

Recognizing the promotion of CSR activities as an integral part of realizing the Group's Management Philosophy, Toray has established a Group-wide CSR program.



Since its founding, Toray Group has been dedicated to making social contributions through business activities based on the Corporate Philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products." The Group promotes bolstered safety, accident prevention, environmental preservation, and corporate ethics and compliance to fulfill its corporate social responsibility (CSR) as its top priority management theme. The goal is to excel as a corporate group that delivers exceptional value to each and every one of its stakeholders.

CSR News

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Nov. 28, 2011 [Press Release]

[Impact of Thai Floods on Toray's Operations \(Update 3\)](#)

Nov. 15, 2011 [Press Release]

[Toray Succeeds in Production of the World's First Fully Renewable, Biobased Polyethylene Terephthalate \(PET\) Fiber](#)

Nov. 2, 2011 [Press Release]

[Impact of Thai Floods on Toray's Operations \(Update 2\)](#)

Oct. 27, 2011 [Press Release]

[Impact of Thai Floods on Toray's Operations \(Update 1\)](#)

Oct. 27, 2011 [Japan]

[Toray Industries, Inc.](#)
[Toray Co-sponsors JAPAN TENT](#)
[— Exchange of Foreign Students in Ishikawa 2011 \(Aug. 18-24, 2011\)](#)

> Message from the President



Toray Group is deeply committed to innovation throughout all business activities and finding solutions for problems faced by society.

> Toray Group's Corporate Social Responsibility



Introduction to the Toray Group Corporate Philosophy and its CSR activities

> Global Environmental Activities



Environmental preservation, environmentally-friendly products, and recycling initiatives

> CSR Report Highlight



Highlights from the Toray Group CSR Report

> CSR Report Download

TORAY Group Social Responsibility
2011

Previous years' CSR Reports can be downloaded here.

> Environmentally Friendly Products



Toray Group's advanced materials and technologies are used in many everyday situations, affecting the lives of everyone.

> For Our Customers



> For Our Employees



> For Our Shareholders



> For Society



> Navigation for First-Time Visitors



> Subject Index



Message from the President

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

Akihiro Nikkaku
President
Toray Industries, Inc.



Introduction

On behalf of Toray Group, I would like to offer my deepest condolences to the many individuals and families affected by the Great East Japan Earthquake; our heartfelt wishes go out for their safety and security. Toray Group is committed to do its utmost to support reconstruction efforts in the disaster stricken areas.

Fortunately, no harm came to Toray Group employees or their families. However, in addition to Toray's Tsuchiura and Chiba plants, 10 plants of eight Toray affiliates including Toray Advanced Film Co., Ltd. and the Fukushima Plant of Toray ACE Co., Ltd. received minor structural damage. Plant operations and employee commutes to and from work were also hindered by rolling blackouts in the aftermath of the disaster. Thereafter, all Toray plants and Group companies worked diligently to ensure a quick recovery, with a full-scale resumption of operations in May.

Regarding the procurement of raw materials, Toray Group has secured enough volume to meet its current requirements. In addition, steps have been taken to upgrade the Company's in-house electric power plant to ensure that the Group is well-placed to meet essential production demands.

From the lessons learned during this unprecedented disaster, Toray Group is conducting a full review of earthquake, tsunami and other disaster countermeasures. Together with efforts to upgrade and expand risk management structure and systems, the Group is striving to ensure sustainable growth and development.



Second Head Office Building in Urayasu



Tsuchiura Plant



Toray Advanced Film Co., Ltd.

Confirming the status of damage following the Great East Japan Earthquake. Inspecting Toray's second head office building (Urayasu, Chiba) on March 17, the Company's Tsuchiura Plant (Tsuchiura, Ibaraki Prefecture) on April 7 and the Fukushima Plant (Iwase-gun, Kagamiishi-machi, Fukushima Prefecture) of Toray Advanced Film on April 11.

Toray Group Business Activities

Toray Group is guided by the corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products." This philosophy is reflected in our continuing commitment to research and development toward the creation of new products and technologies, which enhance the quality of life for people over the world. Concurrently, every effort is made to actively address wide-ranging global issues such as climate change by harnessing the inherent power of chemistry as a diversified chemical company.

Founded in 1926, Toray commenced operations as a rayon filament manufacturer. In the ensuing years, the Company continued to evolve and develop in the three major synthetic fiber sectors, nylon, polyester and acrylic, while expanding into such wide-ranging areas as highly functional films, engineering plastics, carbon fiber composite materials, IT-related products, high-performance water treatment membranes, as well as pharmaceuticals and medical products. Toray's operations continue to grow across a range of fields from basic materials to processed products.

The long-term corporate vision AP-Growth TORAY 2020, a unified roadmap for management activities over the next decade, was commenced in April 2011. As a first step in its implementation, the Group launched Project AP-G 2013, a three-year medium-term management program extending from April 2011 through to March 2014.

Under Project AP-G 2013 and building on the robust business footing established with IT-II, a project implemented over the past two years, Toray Group will pursue a growth strategy that prioritizes expansion in growth markets and business fields. While leveraging growth opportunities in Asia and emerging countries elsewhere, we will expand existing businesses and establish new businesses in four major growing fields: (1) environment, water-related and energy; (2) information, telecommunications and electronics; (3) automobiles and aircraft; and (4) life science. In particular, the Group will proactively develop Green Innovation Business to help resolve increasingly serious global environmental, resource and energy issues.

Promoting Product Life Cycle based Environmental Management

Toray Group places the utmost priority on corporate ethics and legal compliance in concert with safety, accident prevention and environmental protection in all management issues. Accordingly, the Group actively promotes efforts aimed at fulfilling its corporate social responsibility (CSR).

In 2003, Toray Group established the CSR Committee while adopting an organizational and systematic approach toward CSR.

Moreover, in striving to provide solutions to issues increasingly confronting modern society such as climate change, steady depletion of resources, waste reduction and recycling, the Group pledged to place priority on the global environment in all business activities. To this end, efforts were initiated to collaborate with industries and communities across the globe to secure reductions in CO₂ emissions consistent with the Group's policy to expand LCM-based environmental businesses. A CO₂ emissions reduction target of over 200 million tons per year through the use of Toray products worldwide by around 2020 has been set. Looking ahead, Toray Group will continue to pursue new business opportunities and promote corporate activities that contribute to the protection of the global environment.

As a Group that engages in global business development, Toray is also committed to pursuing innovation in wide array of fields. By harnessing the Group's collective strength, Toray aims to address broader issues faced by society.

This Report seeks to clearly present the Group's CSR activities and results. As Toray Group continues working toward achieving its established goals, I kindly request the continued support and understanding of readers.

August 2011

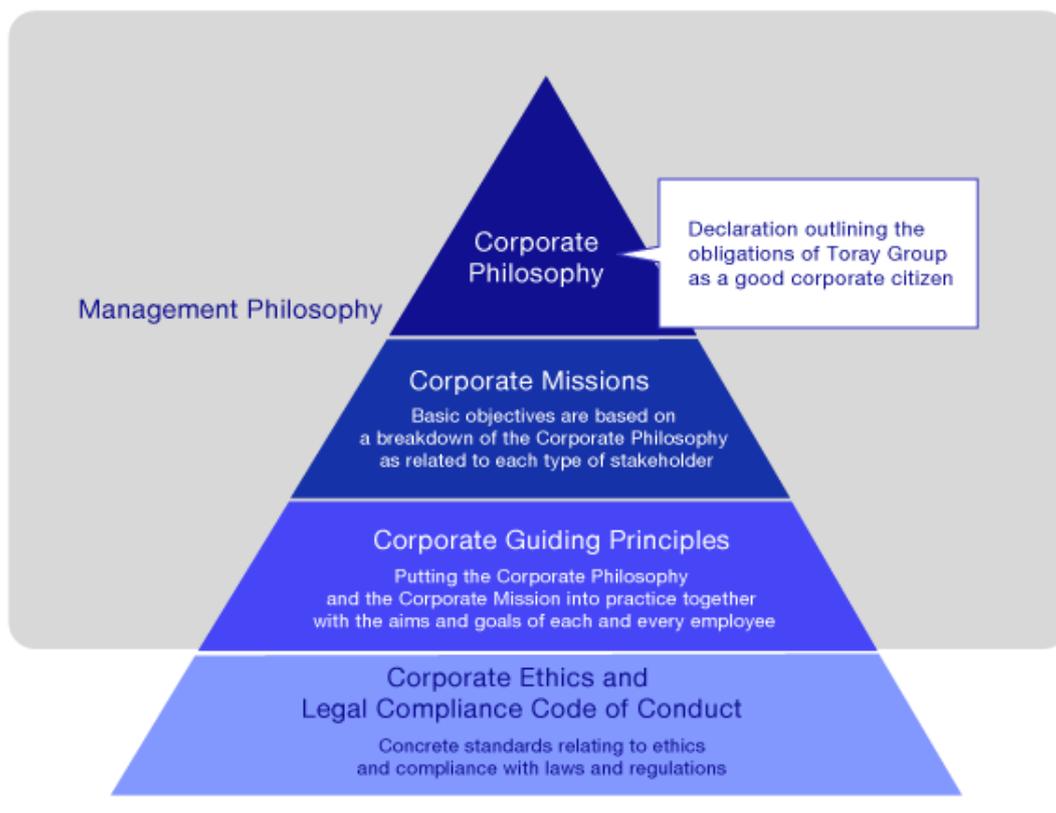


I would like to express my heartfelt condolences to the people in the Tohoku and Kanto regions affected by the Great East Japan Earthquake on March 11, 2011. My sincere wishes also go out to those affected by radioactive contamination from the resulting nuclear reactor accident. Toray is providing various forms of support, which includes volunteer efforts by employees. We are committed to providing as much support as possible for recovery and reconstruction efforts. This year marks the 85th anniversary of Toray Industries' founding. Thanks to the hard work of employees over the decades, we have enjoyed 85 years of growth through changing economic climates, while diversifying and globalizing our businesses. Today, there are almost 40,000 Toray Group employees in 23 countries worldwide who share the Corporate Philosophy and are constantly striving to further improve performance. However, achievements made thus far do not guarantee success in facing challenges in over the centuries to come—it is Toray Group's CSR activities that will play a significant role in securing our future. In order for the Group to maintain continual growth, we must respond to societal demands and constantly innovate management practices. As I am responsible for setting issues to be addressed in various risks, I am devoting all my energy to their promotion as the director in charge of CSR.

Toray Group's Management Philosophy and CSR

Since its founding, Toray Group has been dedicated to making social contributions through business activities based on the Corporate Philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products." The Group carries out CSR activities strategically in order to realize its Management Philosophy. The Corporate Missions outline Toray's policies towards its four main stakeholders, while the Corporate Guiding Principles set out objectives that all employees must strive for in achieving exemplary corporate citizenship. The Corporate Ethics and Legal Compliance Code of Conduct supports the Management Philosophy and serves as a specific guide on appropriate behavior for all employees.

Toray's Management Philosophy and Code of Conduct



Related information

- [Corporate Philosophy](#)
- [Corporate Missions](#)
- [Corporate Guiding Principles](#)
- [Corporate Ethics and Legal Compliance Code of Conduct](#)
- [Ten Basic Environmental Rules](#)
- [Toray Group Biodiversity Basic Policy](#)

Toray's Group-Wide CSR Activities

Toray Group established the CSR Committee in 2003 and formulated the First Road Map as a three-year plan. The CSR Guidelines were drawn up in the following year. 2007 saw the establishment of the CSR Operations Department and the position of a supervisor responsible for overall CSR. In addition to activities aimed at reducing environmental impact already outlined and promoted under the Ten Basic Environmental Rules, key issues concerning social responsibility were added to Toray Group's CSR Guidelines.

Promoting CSR Through Parallel Activities

Toray Group CSR activities are characterized by the parallel promotion of CSR guideline activities and CSR line activities. The former are driven by the entire organization based on the CSR Guidelines, while the latter are pursued by individual divisions in accordance with their own targets.

For the CSR guideline activities, a director is appointed to oversee their promotion while each relevant division implements plans. Activity progress and results are regularly reported to the company-wide CSR Committee. The information is also broadly disclosed to the general public through such media as Toray Group's CSR Report and website on a regular basis. The CSR line activities, in which all Toray Group employees participate, have already been fully implemented at subsidiaries and affiliates in Japan. Steps are currently being taken for their expansion to subsidiaries and affiliates outside Japan according to local conditions.

Result of the Third CSR Road Map

Toray Group shares the CSR Road Map as a promotion plan for all CSR activities and framework for ongoing plan-do-check-act (PDCA) cycle implementation. The First CSR Road Map was established by the CSR Committee in 2003. The following year, the CSR Guidelines were implemented with a comprehensive indication of issues to be addressed by the entire Group.

The Third CSR Road Map encompasses the completion stage for activities promoted by the entire Group thus far. In FY 2010, the final year of the plan, Toray Group further promoted Group-wide risk management, improved CSR training at Japanese subsidiaries and affiliates, and revised its activities according to ISO 26000. Despite certain points yet to be fully addressed, such as the review of organizations and systems relating to CSR and consideration on the use of third party audits, results have been achieved according to plan.

Third CSR Road Map (FY 2008-2010)				
	Group-wide CSR issues	FY2008	FY2009	FY2010
Establishment of CSR promotion system	1 Establishment of Company-wide Committees and implementing organizations relating to CSR	△	△	△
Plan-Act	2-1 Formulation and review of CSR Guidelines and Action Programs	○	○	○
	2-2 Establishment and review of CSR line activity issues	○	○	○
Do	3-1 Implementation of CSR Guidelines and Action Programs	○	○	○
	3-2 Deployment of CSR line activities throughout the Group	○	○	○
	3-3 Development of an enterprise risk management system	○	○	○
	3-4 Implementation of CSR training and dissemination strategies	○	○	○
	3-5 Promotion of CSR-related communications within the Group and externally	○	○	○
Check	4-1 Promotion of stakeholder engagement	△	○	○
	4-2 Consideration on industry standards and international code of conduct	○	△	○
	4-3 Consideration on the use of third party audits		△	△

◎ Completed ○ On schedule △ Progressing, but with some delay × Plan suspended/abolished

Related Information

- [Fourth CSR Road Map and KPI\(PDF:114kB\)](#)

Management Strategy and CSR

CSR promotion is essential across all corporate activities for Toray Group's sustainable growth. Fostering a Group-wide culture of corporate social responsibility is crucial to this end. Accordingly, three key CSR elements are incorporated in the basic concept of the long-term corporate vision AP-Growth Toray 2020.

CSR is also vital for the long-term Toray Group Corporate Image objective, which encompasses safety and environmental stewardship, global expansion, green innovation, vitality, and corporate social responsibility.

Related Information

Formulation of the Fourth CSR Road Map

Starting in FY 2011, the Fourth CSR Road Map aims to further consolidate management strategy across the Group. It calls for additional information disclosure and sets specific achievement targets by FY 2013, the completion year for the medium-term management program, Project AP-G 2013.

The Fourth CSR Road Map broadens the previously limited framework for CSR promotion, and is closely integrated with the CSR Guidelines. Transitioning the previously yearly action programs of the CSR Guidelines to three-year plans now enables targets for medium-term management issues to be set.

The Group set key performance indicators (KPI) in each category and are pursuing numerical targets. KPI target figures and results are to be disclosed at the end of FY 2011, and will be used to follow-up on the Road Map progress.

Related Information

- [CSR Road Map and KPI](#)

Social Responsibility
CSR Guidelines

Toray CSR Guidelines were established as a foundation for Toray Group management in and outside Japan; they also facilitate the Group's contributions to the building of a sustainable society. Each of the ten guidelines is implemented through individual action programs, which are carried out using plan-do-check-act (PDCA) management practices. Action programs adapt to changing times and societal needs, and are revised yearly. In FY 2011, annual action programs were transitioned to three-year plans while retaining the setting and achievement of key performance indicators (KPI).

▼ FY2011

▼ FY2010

CSR Road Map and KPI

Adopted December 2004 and revised June 2011

CSR GUIDELINE

1
2011

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.

Road Map (FY2011-2013)

- (1) Enhancing management transparency, continually reflecting stakeholder feedback in management, and fulfilling responsibilities to explain corporate activities.
- (2) Performing monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Corporate Law.
- (3) Implementing the CSR management system Group-wide, and ensuring its effectiveness through CSR training.

Implementation Leader

Norihiko Saitou
Senior Vice President
In charge of CSR activities
General Manager,
General Administration &
Legal Division, Investor
Relations Department,
Corporate Communications
Department, Advertising
Department
Toray Industries, Inc.

CSR GUIDELINE

2
2011

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.

Road Map (FY2011-2013)

- (1) Achieving zero violations of laws or ordinance.
- (2) Promoting compliance activities in accordance with the conditions of each country or region.
- (3) Enhancing awareness-raising and educational activities relating to corporate ethics and legal compliance.

Implementation Leader

Kiyoshi Fukuchi
Senior Vice President
General Manager, Personnel
& Industrial Relations
Division
Toray Industries, Inc.

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.

Road Map (FY2011-2013)

Occupational Safety

- (1) Clarifying safety fundamentals, ensuring that they are always followed, and striving to prevent accidents.
- (2) Promoting activities based on the Toray Group Safety, Health, Accident Prevention and Environmental Action Policy.
- (3) Promoting the Fourth Three-Year Environmental Plan (target achievement by fiscal 2015), and achieving targets.

Implementation Leader

Nobuo Suzui
Senior Vice President
General Manager, Product Safety & Quality Assurance Planning Department,
General Manager,
Manufacturing Division
Toray Industries, Inc.

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.

Road Map (FY2011-2013)

- (1) Achieving zero product accidents.
- (2) Enhancing the systems for product safety and quality assurance, Group-wide.

Implementation Leader

Nobuo Suzui
Senior Vice President
General Manager, Product Safety & Quality Assurance Planning Department,
General Manager,
Manufacturing Division
Toray Industries, Inc.

Risk Management

Enhance Group-wide risk management systems including those pertaining to information security. Build systems capable of rapidly responding to unexpected circumstances and disclosing accurate information.

Road Map (FY2011-2013)

- (1) Promoting enterprise risk management Group-wide and steadily minimizing risk.
- (2) Preparing business continuity plans (BCP) in response to a major earthquake and influenza pandemic, and raising the plan awareness of all employees.
- (3) Promoting information security measures, and reducing the number of security incidents.

Implementation Leader

Norihiko Saitou
Senior Vice President
In charge of CSR activities
General Manager,
General Administration & Legal Division, Investor Relations Department,
Corporate Communications Department, Advertising Department
Toray Industries, Inc.

Communication

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.

Road Map (FY2011-2013)**Implementation**

- (1) Improving stakeholder satisfaction in accordance with the Basic Policies to Promote Dialogue with Stakeholders.
- (2) Reflecting results of dialogue and collaboration with each stakeholder group in its management activities in a timely and appropriate manner.

Leader

Norihiko Saitou
Senior Vice President
In charge of CSR activities
General Manager,
General Administration &
Legal Division, Investor
Relations Department,
Corporate Communications
Department, Advertising
Department
Toray Industries, Inc.

CSR GUIDELINE
7
2011

Green Innovation Businesses

Provide solutions that contribute to global social issues such as climate change.

Road Map (FY2011-2013)

- (1) Providing advanced materials and technology that contribute to solving social issues.
- (2) Implementing Life Cycle Assessment for principal products, and contributing to GHG reduction throughout product life cycles.

Implementation Leader

Koichi Abe
Senior Vice President
General Manager, Water
Treatment & Environment
Division, Intellectual
Property Division,
Information Systems
Division, General Manager,
Technology Center
Toray Industries, Inc.

CSR GUIDELINE
8
2011

Train Personnel and Promote Human Rights

Secure and train personnel, diversify and strive to protect employment, respect human rights, and continuously improve workplaces.

Road Map (FY2011-2013)

- (1) Respecting human rights by prohibiting discrimination in any form based on factors such as race, gender, academic background, nationality, religion or physical characteristics. Granting fair promotion of employees based on ability.
- (2) Creating supportive workplace environments for employees.
- (3) Actively providing training opportunities for employees.

Implementation Leader

Kiyoshi Fukuchi
Senior Vice President
General Manager, Personnel
& Industrial Relations
Division
Toray Industries, Inc.

CSR GUIDELINE
9
2011

CSR Procurement

Promote CSR activities throughout the entire supply chain by working closely with suppliers, processing vendors, customers and distribution companies.

Road Map (FY2011-2013)

- (1) Requesting the cooperation of major suppliers and subcontractors for CSR procurement.
- (2) Responding to all CSR procurement questionnaires from corporate customers.
- (3) Implementing the CSR procurement system Group-wide.

Implementation Leader

Yoshio Shingeya
Senior Director
General Manager, Purchasing
& Logistics Division
Toray Industries, Inc.

Social Contribution Activities

Promote social contribution activities, including those that help foster the next generation and encourage regional development, as a good corporate citizen.

Road Map (FY2011-2013)

- (1) Carrying out independent and ongoing social contribution activities according to the Toray Group Social Initiative Policies.
- (2) Increasing science education activities, and the amount of educational material provided.

Implementation Leader

Norihiko Saitou
Senior Vice President
In charge of CSR activities
General Manager,
General Administration &
Legal Division, Investor
Relations Department,
Corporate Communications
Department, Advertising
Department
Toray Industries, Inc.

Social Responsibility
CSR Road Map

Beginning in FY 2011, the Fourth CSR Road Map was integrated with the CSR Guidelines. By expanding the previous framework, CSR activities are being consolidated Group-wide.

CSR Road Map and KPI
(PDF)

KPI

Corporate Missions	Guideline	Road Map
<p>For Our Customers: To provide new value to our customers through high-quality products and superior services</p> <p>See KPI</p>	7. Green Innovation Businesses	<p>(1) Providing advanced materials and technology that contribute to solving social issues.</p> <p>(2) Implementing Life Cycle Assessment for principal products, and contributing to GHG reduction throughout product life cycles.</p>
	4. Product Safety and Quality	<p>(1) Achieving zero product accidents.</p> <p>(2) Enhancing the systems for product safety and quality assurance, Group-wide.</p>
	9. CSR Procurement	<p>(1) Requesting the cooperation of major suppliers and subcontractors for CSR procurement.</p> <p>(2) Responding to all CSR procurement questionnaires from corporate customers.</p> <p>(3) Implementing the CSR procurement system Group-wide.</p>

Corporate Missions	Guideline	Road Map
<p>For Our Employees: To provide our employees with opportunities for self development in a challenging environment</p> <p>See KPI</p>	8. Train Personnel and Promote Human Rights	<p>(1) Respecting human rights by prohibiting discrimination in any form based on factors such as race, gender, academic background, nationality, religion or physical characteristics. Granting fair promotion of employees based on ability.</p> <p>(2) Creating supportive workplace environments for employees.</p> <p>(3) Actively providing training opportunities for employees.</p>
	3. Safety, Accident Prevention and Environmental Preservation	<p>Occupational Safety</p> <p>(1) Clarifying safety fundamentals, ensuring that they are always followed, and striving to prevent accidents.</p> <p>(2) Promoting activities based on the Toray Group Safety, Health, Accident Prevention and Environmental Action Policy.</p>

Corporate Missions	Guideline	Road Map
<p>For Our Shareholders: To provide our shareholders with dependable and trustworthy management</p>	1. Corporate Governance and Management Transparency	<p>(1) Enhancing management transparency, continually reflecting stakeholder feedback in management, and fulfilling responsibilities to explain corporate activities.</p> <p>(2) Performing monitoring based on the Basic Policy for Internal Control Systems, in accordance with Japan's Corporate Law.</p> <p>(3) Implementing the CSR management system Group-wide, and ensuring its effectiveness through CSR training.</p>
	2. Corporate Ethics and Legal Compliance	<p>(1) Achieving zero violations of laws or ordinance.</p> <p>(2) Promoting compliance activities in accordance with the conditions of each country or region.</p>

See KPI		(3) Enhancing awareness-raising and educational activities relating to corporate ethics and legal compliance.
	5. Risk Management	(1) Promoting enterprise risk management Group-wide and steadily minimizing risk. (2) Preparing business continuity plans (BCP) in response to a major earthquake and influenza pandemic, and raising the plan awareness of all employees. (3) Promoting information security measures, and reducing the number of security incidents.

Corporate Missions	Guideline	Road Map
For Society: To establish ties and develop mutual trust as a responsible corporate citizen See KPI	6. Communication	(1) Improving stakeholder satisfaction in accordance with the Basic Policies to Promote Dialogue with Stakeholders. (2) Reflecting results of dialogue and collaboration with each stakeholder group in its management activities in a timely and appropriate manner.
	10. Social Contribution Activities	(1) Carrying out independent and ongoing social contribution activities according to the Toray Group Social Initiative Policies. (2) Increasing science education activities, and the amount of educational material provided.
	3. Safety, Accident Prevention and Environmental Preservation	Safety and the Environment (1) Implementing the Toray Group Safety, Health, Accident Prevention and Environmental Action Policy. (3) Promoting the Fourth Three-Year Environmental Plan (target achievement by fiscal 2015), and achieving targets.

Social Responsibility
Key Performance Indicators (KPI)

Starting in FY 2011, the CSR Guidelines action programs have been transitioned to three-year plans. Using specific targets set for each guideline to be achieved within the timeframe, Toray Group will set key performance indicators (KPI) such as numerical values, and commence initiatives.

[CSR Road Map and KPI \(PDF\)](#)

[CSR Road Map](#)

Corporate Missions	Guideline	KPI
<p>For Our Customers: To provide new value to our customers through high-quality products and superior services</p> <p>See Road Map</p>	7. Green Innovation Businesses	(1) Green Innovation Business sales (Toray Group) (2) Number of meetings by the Global Environment Committee (Toray)
	4. Product Safety and Quality	(1) Number of product accidents (Toray Group) (2) Ratio of complaints costs to sales (Toray)
	9. CSR Procurement	(1) Ratio of principal suppliers and subcontractors participating in CSR procurement (Toray) (2) Ratio of subsidiaries and affiliates that have implemented the CSR procurement system (Toray Group companies in Japan) (3) Ratio of responses to CSR procurement survey requests from corporate customers (Toray) (4) Ratio of modal shifting to sea or rail for transport across distances for 500 km or more (Toray)

Corporate Missions	Guideline	KPI
<p>For Our Employees: To provide our employees with opportunities for self development in a challenging environment</p> <p>See Road Map</p>	8. Train Personnel and Promote Human Rights	(1) Women in management positions (Toray) (2) Employment ratio of disabled persons (Toray) (3) Paid-leave ratio (Toray) (4) Training expenditures per employee (Toray) (5) Number of key overseas employees in training courses (Toray Group) (6) Number of meetings by Human Rights Promotion Committee (Toray Group companies in Japan)
	3. Safety, Accident Prevention and Environmental Preservation	(1) Occupational accident frequency with lost-time (Toray Group) (2) Number of major accidents (Toray Group) (3) Improvement in <i>Hiyari Hatto</i> *1 rate (Toray Group) *1: The Japanese words <i>hiyari</i> and <i>hatto</i> express the sensation of shock after a near accident.

Corporate Missions	Guideline	KPI
<p>For Our Shareholders:</p>	1. Corporate Governance and Management Transparency	(1) Number of information disclosure items (Toray) (2) Number/ratio of subsidiaries/affiliates performing CSR training (Toray Group) (3) Number of meetings of the CSR Committee (Toray)
	2. Corporate Ethics and Legal	(1) Number of major violations of laws or ordinance (Toray Group) (2) Number of ethics training sessions for new executives

<p>To provide our shareholders with dependable and trustworthy management</p> <p>See Road Map</p>	Compliance	(Toray Group companies in Japan) (3) Number of internal legal audits (Toray Group) (4) Number of Corporate Ethics Committee meetings (Toray) (5) Number of Legal Compliance Committee meetings (Toray)
	5. Risk Management	(1) Number/ratio of companies with enterprise risk management systems (Toray Group companies in Japan) (2) Number/ratio of companies with emergency employee contact systems (Toray Group) (3) Number of incidents relating to information security (Toray Group) [compared to FY 2010] (4) Number of improvements for priority risks (Toray) (5) Number of meetings by the Group-Wide Risk Management Committee (Toray)

Corporate Missions	Guideline	KPI
<p>For Society: To establish ties and develop mutual trust as a responsible corporate citizen</p> <p>See Road Map</p>	6. Communication	(1) Number of corporate website page views (Toray) (2) Customer satisfaction survey implementation (Toray) (3) Number of meetings with employees or labor unions (Toray Group) (4) Employee job satisfaction survey implementation (Toray) (5) Number of meetings with regional and local governments (Toray) (6) Number of participations in community activities (Toray Group) (7) Number of IR briefings held for investors (Toray) (8) Amount of media enquires (Toray) (9) Number of meetings by the Communications Committee (Toray)
	10. Social Contribution Activities	(1) Social contribution expenditure (Toray Group) (2) Number of science education activities, and institutions provided with educational material(Toray)
	3. Safety, Accident Prevention and Environmental Preservation	(1) Reduction of atmospheric VOC emissions (Toray Group) (2) Ratio of improvements to issues indicated in safety, health, fire prevention, and environmental surveys (Toray Group) (3) Waste recycling ratio (Toray Group) (4) Reduction of GHG emissions (Toray) (5) Number of social contribution activities relating to biodiversity (Toray Group) (6) Number of biodiversity protection conditions ascertained at suppliers (Toray)

Social Responsibility
CSR Initiative Reporting Policies

Toray Group is aiming to realize its Management Philosophy through the promotion of CSR activities. CSR initiatives are based on the Toray CSR Guidelines; the purpose of each of these initiative areas and how they relate to the Management Philosophy are shown in the following Corporate Missions outline of the Management Philosophy Framework.



Related Information

- [CSR Guideline \(FY 2011\)](#)
- [CSR Guideline \(FY 2010\)](#)

Social Responsibility
Chronology of CSR Initiatives

Business and CSR Activities	Year	Environment and Responsible Care Activities
Formulated the Fourth CSR Road Map	2011	Formulated the Fourth Medium-Term Environmental Plan
Formulated the Toray Group Biodiversity Basic Policy	2010	Established Nano-Material Safety Guidelines
50th anniversary of the Toray Science Foundation	2009	Established the Global Environment Business Strategic Planning Department
Began Group-wide risk management Established a director in charge of CSR activities	2008	Established the Fire Prevention & Environmental Technology Section in the Chemical Engineering Department
		Commenced Toray Group Household Eco-Account Book Program
Appointed a director in charge of CSR activities	2007	Held the Toray Group Safety Meeting with the first-time participation of overseas subsidiaries and affiliates
CSR Operations Department established		Third Three-Year Environmental Plan started
CSR Operations Group established in the Corporate Planning Department	2006	Established the REACH Promotion Department
CSR Line Activity started	2005	Established the Toray Group <i>Hiyari Hatto</i> *1 Reporting System
Commenced publishing the CSR Annual Report		
CSR Guidelines and Action Programs adopted	2004	Established the Crisis Management Regulations
		Established the Green Procurement Guidelines
Commenced publishing the CSR Annual Report		Established the Green Purchasing Guidelines
CSR Committee established	2003	Second Three-Year Environmental Plan started
Formulated the First CSR Road Map		
Compliance Committee established	2002	Established the Safety Management Regulations for Hazardous Substance Transportation
		Established the Management Standards for Yellow Card Issuing
Reemployment system introduced	2001	Recycling Committee established
		Three-Year Environmental Plan started, Ten Basic Environmental Rules adopted

	2000	Toray Group Environmental Management Standards established
		Environmental accounting results for FY 1999 announced
		All 12 Toray plants acquire ISO14001 certification
	1999	Environmental Report published
		Second Waste Reduction Plan prepared
		Toray Group Domestic Grand Safety Meeting held (first Group meeting)
	1998	Safety, health, accident prevention, and environmental audits start at Japanese subsidiaries and affiliates
		Safety, Health, Accident Prevention, and Environment Conference and Product Safety Conference created for overseas subsidiaries and affiliates
Corporate Ethics Committee established	1997	Carried out the Fire Prevention (FP) Project
Toray Human Resources Development Center opens	1996	
Toray Europe Labor and Management Council established		
Human Rights Promotion Committee established		
Management Philosophy (Corporate Philosophy, Corporate Missions, and Guiding Principles) adopted	1995	Joined Japan Responsible Care Council as a founding member
Involved in establishing the Ecological Life and Culture Organization		Safety, health, accident prevention, and environmental audits start at overseas subsidiaries and affiliates
Toray Science Foundation established in Thailand	1994	Safety, Health, Accident Prevention, and Environment Conference and Product Safety Conference created for Japanese subsidiaries and affiliates
		Purchase and manufacturing use of certain chlorofluorocarbons abolished
Started shortening scheduled working hours with the goal of 1,800 hours	1993	Safety, health, accident prevention, and environmental audits start at Toray plants
Toray Science Foundations established in Indonesia and Malaysia		
		Global Environment Committee and Product Safety

	1991	Committee established
		Industrial Waste Reduction Project started
Admitted into Keidanren's 1% Club	1990	First Grand Safety Meeting of Domestic Subsidiaries and Affiliates held
		Industrial Waste Reduction Project started
English language version of company magazine People first published	1989	Mutual inspections of safety and accident prevention start at Japanese subsidiaries and affiliates
Corporate Philosophy, "contributing to society through the creation of new value by innovative ideas, technologies, and products," adopted	1986	
	1984	Environment, Accident Prevention, Safety, and Health Assessment system established at the equipment planning stage
		First Monday of each month established as a company-wide Safety and Accident Prevention Day
	1983	First Energy Conservation Technology Presentation Meeting held
	1982	First Company-wide Grand Safety Meeting held
		Product Safety Management Regulation enacted
	1981	Energy Technology Department established
Toray Welfare Society established	1980	Standard for the Prevention of Earthquake Disasters established
	1979	Chemical Substance Safety Management Guidelines enacted
	1976	Accident Prevention and Safety Management Regulations enacted
Five-day workweek implemented	1974	Accident prevention and safety inspections of chemical plants started (expanded to all plants in 1984)
Child care leave of absence system established		Occupational Safety and Health Management Regulations enacted
	1973	Environment Management Regulations and Basic Policy for Greening adopted
		Plant greening work started
Company name changed to Toray Industries, Inc.	1970	Environment Technology Section established at all Toray plants (now the Environment & Safety Section)

	1969	Environmental Pollution Prevention Committee established (now the Safety, Health, and Environment Committee)
Mandatory retirement age of 60 adopted	1966	
	1965	Accident Prevention Technology Section established (now the Environment & Safety Department)
Toyo Rayon Science Foundation established (now the Toray Science Foundation)	1960	
English annual report first published		
Central Production Committee convenes (reorganized into the Labor and Management Council in 1965)	1958	
Pension plan established	1956	
Company creed "Toyo Rayon serves society" adopted	1955	
Monthly company magazine Toray Newsletter first published (name changed to People in April 1986)	1953	
Toyo Rayon Labor Union Federation established	1946	
Toyo Rayon Health Insurance Association established	1940	
Toyo Rayon Co., Ltd. founded	1926	

*1: The Japanese words *hiyari* and *hatto* express the sensation of shock after a near accident.

Social Responsibility
External Commendations

[Click here for information on awards for R&D](#)

Year	Month	Country	Awarding Institution	Commendations	Recipient
2011	March	Japan	Shiga Labour Bureau Director, Ministry of Health, Labour and Welfare	Achieved 3.5 million hours free from type-1 accidents	Shiga Plant of Toray Opelontex Co., Ltd.
		Japan	Ministry of Health, Labour and Welfare	2010 Minister of Health, Labour and Welfare Award for Outstanding Foreman Safety	Masato Hamada, Tokai Plant of Toray Industries, Inc.
	January	Japan	Japan Chemical Industry Association	Safety Effort Award	Toray Industries, Inc
2010	June	Japan	Fire and Disaster Management Agency	Fire and Disaster Management Agency Director's Award for Outstanding Workplace Handling Hazardous Substances	Toray Monofilament Co., Ltd.
	May	Japan	Japan Chemical Industry Association and Japan Responsible Care Council	Outstanding Safety Award	Okazaki Plant of Toray Industries, Inc.
	April	USA	State of Alabama, Manufacture Alabama, and the Business Council of Alabama	Safety Award	Toray Carbon Fibers America, Inc.

For Our Customers

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



In order to provide safe and high-quality products to customers, Toray Group is striving to strengthen its product safety and quality assurance control systems, and disclose appropriate information. The Group promotes R&D related to recycling and Green Innovation Products. It is also promoting CSR procurement initiatives in cooperation with suppliers.

For Our Customers

Initiatives for Green Innovation Businesses

With the aim of promoting technology innovation from the perspective of product lifecycle management, Toray seeks to reduce its environmental load and provide solutions for customer issues.

For Our Customers

Product Safety and Quality

Ensuring product safety and quality is crucial for gaining customer trust. With the aim of "Quality" and "Customer focus," Toray Group continues to strengthen its product safety and quality assurance.

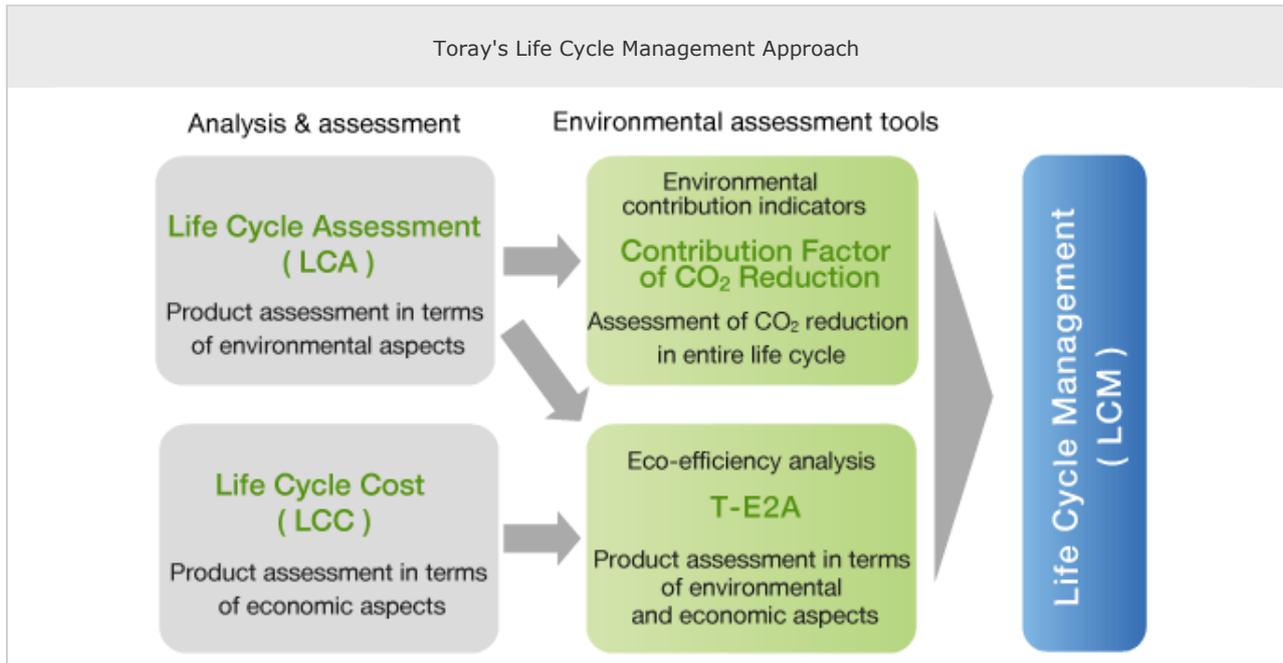
For Our Customers

CSR Procurement

With a commitment to CSR procurement, Toray Group is promoting cooperative initiatives with suppliers in order to fulfill its social responsibilities throughout the entire value chain as a materials manufacturer.

Initiatives for Green Innovation Businesses
Promoting Life Cycle Management

Toray Group is committed to promoting product life cycle management (LCM) in corporate activities through highly realizable initiatives for both environmental load reduction and sustainable growth. Efforts to raise awareness of these initiatives outside the Company are also being made.



LCM is utilized in company decision making by comprehensively considering the environmental load and cost of all life cycle stages for products and services across countries and regions, which include resource extraction, manufacturing, use by consumer, and disposal, as part of industrial and corporate activities. Toray has adopted life cycle assessment (LCA)^{*1} and T-E2A^{*2} as environmental analysis methods for effectively implementing LCM, and is working to expand its use Group-wide. Goals for Toray products have been determined in each business division where LCA and T-E2A analysis are being performed. In addition, all business divisions are using these tools to facilitate communication with customers and offer effective solutions.

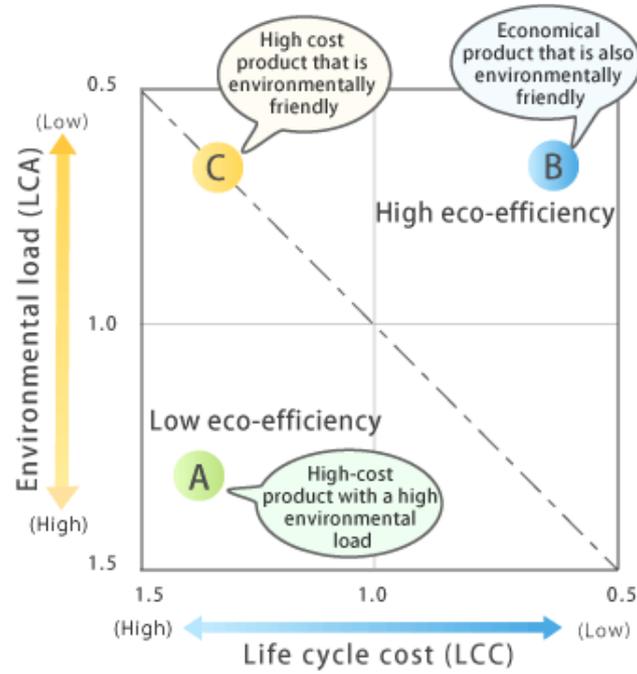
*1: LCA:

A method for evaluating the impact of a product or service on the environment by measuring emissions such as exhaust gas and waste, as well as the amount of resources and energy consumed. This is done by considering the entire life cycle of the product or service concerned, from resource extraction, material manufacturing and production, to product usage and disposal by the consumer.

*2: Toray Eco-Efficiency Analysis (T-E2A):

Investigating 1) a product or process through comparison to a reference product or process, and 2) the product life cycle cost and environmental cost from the perspective of the consumer. The T-E2A analysis results are subject to comparative assessment with a portfolio-type analysis called an eco-efficiency map.

Eco-Efficiency Map

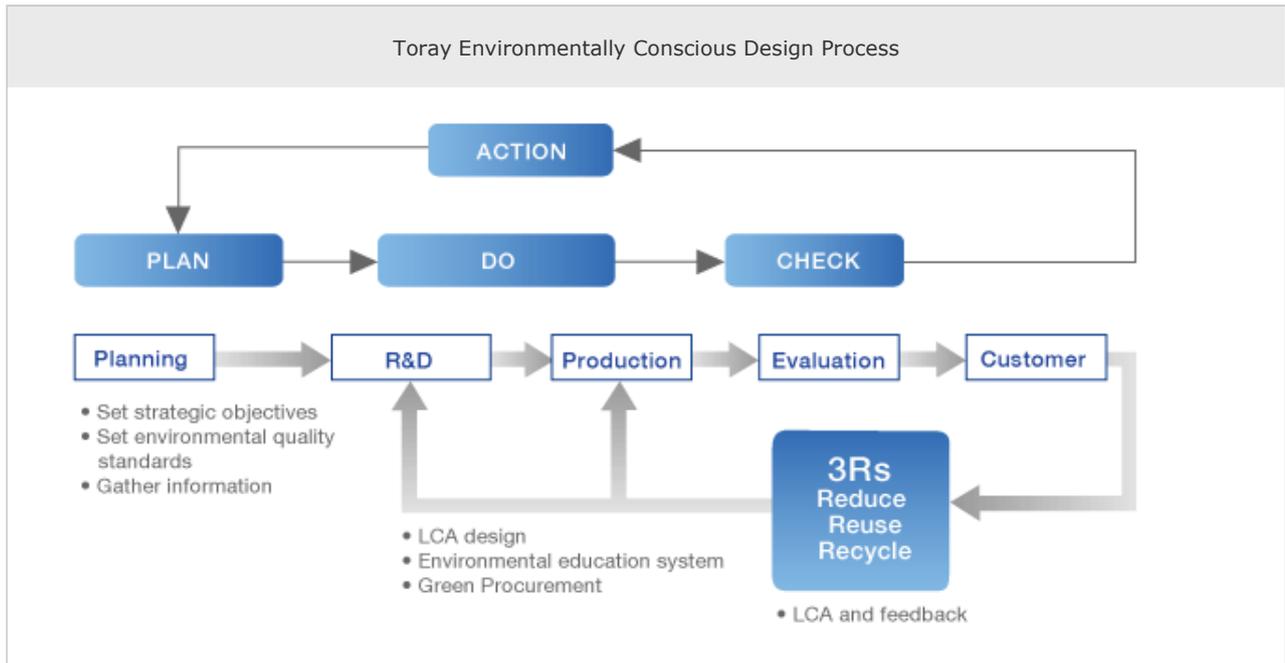


Toray Group aims to help realize a sustainable low-carbon society and address global environmental problems through the promotion of effective LCM throughout industry and society. In FY 2010, Toray promoted LCM to relevant government agencies, industry organizations and 30 corporate environmental leaders worldwide. The efforts helped increase the number of companies involved and strengthened cooperation.

Initiatives for Green Innovation Businesses
Pursuing Environmentally Conscious Design

In pursuing the development of environmentally conscious products, Toray Group implements Life Cycle Assessment (LCA) methods to assess the environmental load of each product at every stage through product design, research and development (R&D), to production.

The Group also requires relevant divisions to create an Environmental Assessment Checklist as part of the product safety review process before launching new products in the marketplace. Environmental data as well as product safety data are subjected to review and verification before products are commercialized.



Initiatives for Green Innovation Businesses
Transition from Project EcoChallenge
to the Green Innovation Business Expansion Project

Toray Group has been promoting Project EcoChallenge since FY 2007. The activity prioritizes resource saving and global environmental protection in order to realize a sustainable low-carbon society, and places the global environment at the center of all business strategy.

The long-term corporate vision AP-Growth Toray 2020 was announced in February 2011 and launched in April of this year. In this vision and the new medium-term management program, Project AP-G 2013, Toray Group has again set the expansion of its Green Innovation Business as a top priority, in order to further develop Project EcoChallenge. Headed by the company president, the Green Innovation Business Expansion Project (GR Project) was initiated to further strengthen technologies and products that help solve pressing resource and energy problems faced by society, as well as global environmental issues. The project will be promoted through Group-wide collaboration and involves the unified management of two directives. The first is the expansion of existing green innovation businesses by setting targets and following up on issues in each business division. The second is the development of new green innovation businesses by enabling the Technology Center to identify new opportunities based on novel material and component technologies.

Definition of Green Innovation Products

Green Innovation Products (GR Products) are existing environmentally friendly products that have been upgraded in a manner that more comprehensively contributes to the global environment. They play a crucial role in the following areas that help resolve global environmental and resource/energy problems: 1) energy saving, 2) new energy resources, 3) biomass, 4) water treatment, 5) air purification, 6) low environmental load, 7) recycling, and 8) process innovation. Toray Group has established its own standards for GR Products, classified below.

GR Product Types and Basic Concepts	
GR Product type	Basic concept
1. Energy Saving	Products that reduce the energy consumed during their product life cycle
2. New Energy Resources	Any parts, materials, and technologies used in industries relating to new energy sources
3. Biomass	Products derived from non-petroleum raw materials
4. Water treatment	Parts, devices, and systems, etc. used in water treatment
5. Air purification	Parts, devices, and systems, etc. used in air purification
6. Low environmental load	Products that control the emissions or use of hazardous substances
7. Recycling	Products made from recycled materials that are also designed for easy recycling
8. Process innovation	Innovative manufacturing technology that greatly reduces the environmental load of an existing process

Targets for Green Innovation Businesses

Under the GR Project, Toray has set a target of further CO₂ emissions reductions by GR Products*¹ to 200 million tons per year around 2020. Toray is also aiming to expand sales to 1 trillion yen by around 2020, by first working toward a sales target of 500 billion yen by FY 2013.

*1: Improved CO₂ reduction, in other word "Avoided Emission," by GR Products over the entire product life cycle compared to alternative products.

Target1 CO₂ emissions reduction by GR Products

200 million tons around 2020

Target2 Sales of Green Innovation Businesses

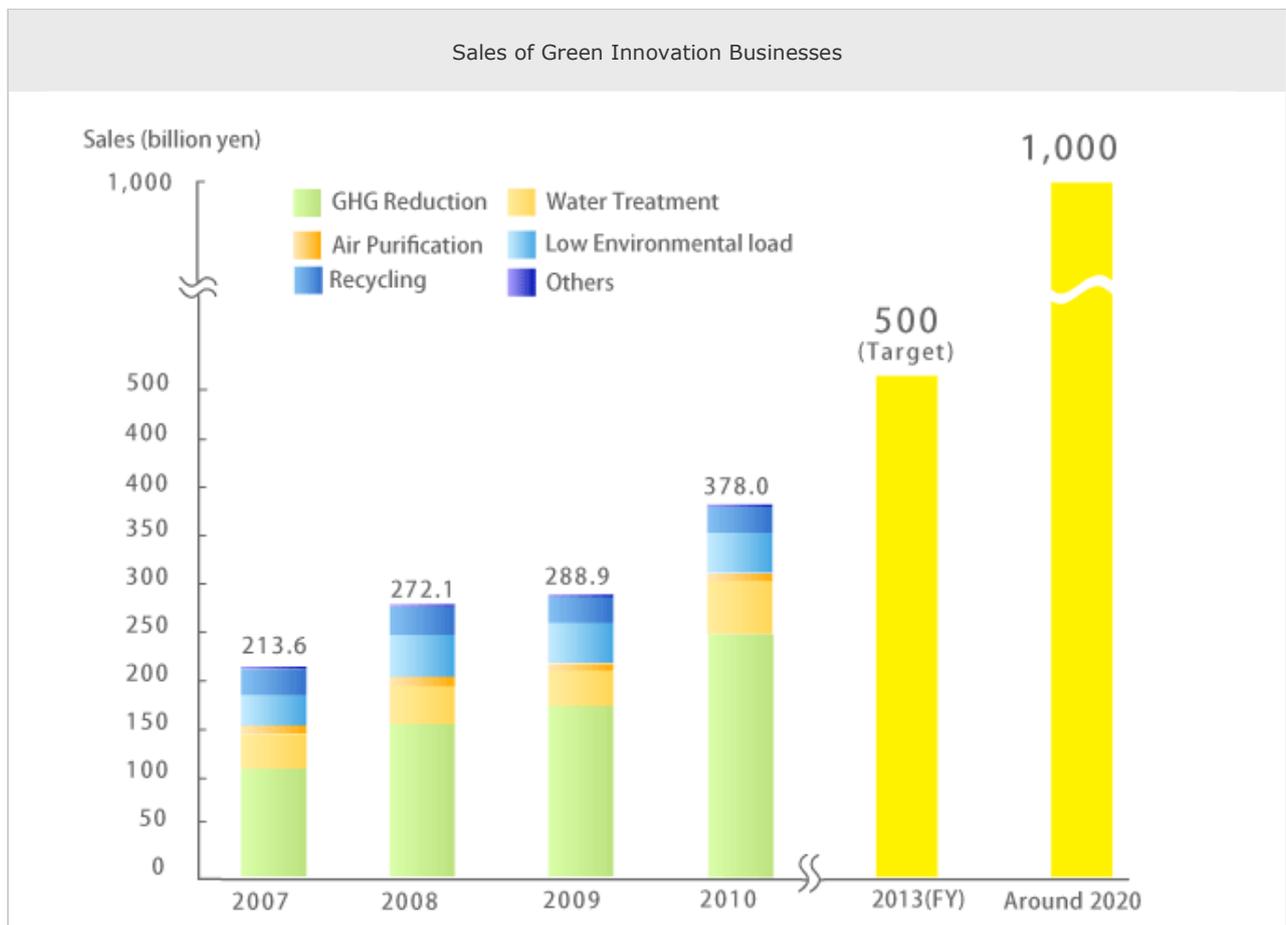
1 trillion yen by around 2020

FY 2010 Results

Toray has been promoting long-term targets for CO₂ emissions reduction by GR Products according to plan. The results for FY 2010 were about 29 million tons of CO₂. *2

Green Innovation Business sales in FY 2010 totaled 378 billion yen, an increase of 31% over the previous year. Consequently, the 2010 target was achieved, along with the highest sales to date.

*2: Calculated CO₂ emissions reduction arising from principal GR Products, based on Toray's LCA analysis



Initiatives for Green Innovation Businesses
Advances in Green Innovation Products

Energy Saving

› **Carbon Fiber Reinforced Plastic (CFRP)**

In May 2010, Toray signed a 15-year frame supply contract with the European Aeronautic Defense and Space Company (EADS) to provide carbon fiber materials for CFRP airplane, mainly to Airbus S.A.S. In June 2011, Toray established a joint venture company with Daimler AG to manufacture and sell CFRP automobile parts to be used in Mercedes Benz vehicles.

› **Functional HEATTECH® Underwear**

HEATTECH®* is a line of functional winter innerwear manufactured by UNIQLO Co., Ltd., based on a strategic partnership agreement with Toray. Due to its excellent thermal qualities, HEATTECH® wearers can comfortably lower indoor temperatures to minimize energy usage. Toray has performed trial calculations of the resulting CO₂ emissions reduction over the life cycle of the product, and outside experts have also submitted calculations for critical review.

*HEATTECH® is a registered trademark of FAST RETAILING CO., LTD.

Biomass

› **Bio-Based Plastic**

In October 2010, Toray and Canon Inc. announced the development of the industry's largest*¹ exterior plastic part for copiers and multifunction printers (MFP) made from bio-based plastic. The part is used in Canon's MFP for production printing and offers the world's highest flame retardancy rating of UL94-5V. Since March 2011, Toray's bio-based plastic has also been used by Oki Data Corporation for logo plates on printers and MFPs.



*1: According to a survey by Toray and Canon as of October 4, 2010. The part measures approximately 640 mm wide by 440 mm high, with a weight of about 1,100 grams.

Water Treatment

Toray Bluestar Membrane (Beijing) Co., Ltd. (TBMC) is the first company outside Japan to produce reverse osmosis (RO) membranes and elements. The company was established through a joint venture with China National Bluestar (Group) Co., Ltd. in July 2009, in order to help meet the rapidly growing demand for clean water in China. TBMC facilities began full-scale operation in January 2011. In February of this year, Toray began receiving RO membrane orders for seawater desalination plants in Qingdao (Qingdao, Shandong Province) and Caofeidian (Tangshan, Hebei Province), China.



SPOTLIGHT

Kazuya Matsumura
General Manager, Environment & Energy Development Center
Toray Industries, Inc.

Strengthening development of environmental and energy related technologies toward a sustainable recycling-based society

During the decade from 2011 to 2020, industries in the environmental field will be undergoing a phase of full-scale innovation. In response, Toray has created its Environment & Energy (E&E) Center in January 2011, as a comprehensive site for technology development in the field.

I belong to the Environment & Energy Development Center, which is the core

organization of the E&E Center. We build the infrastructure of the life cycle management (LCM) system, and develop components and materials related to new energy sources, such as solar cells, fuel cells and lithium-ion secondary batteries. We also develop environment-conscious products such as biomass and air cleaning filter materials, and materials for energy-saving homes. By combining Toray Group core technologies and creating new core technologies as a result, we will continue to strengthen our initiatives for both expanding business and solving global environmental issues.



Initiatives for Green Innovation Businesses
Promoting Recycling

As a manufacturer of a wide range of materials, Toray has been promoting the recycling of various resources including fibers and textiles, plastics, and carbon fiber.

Recycling Activity Principles (adopted in March 2004)

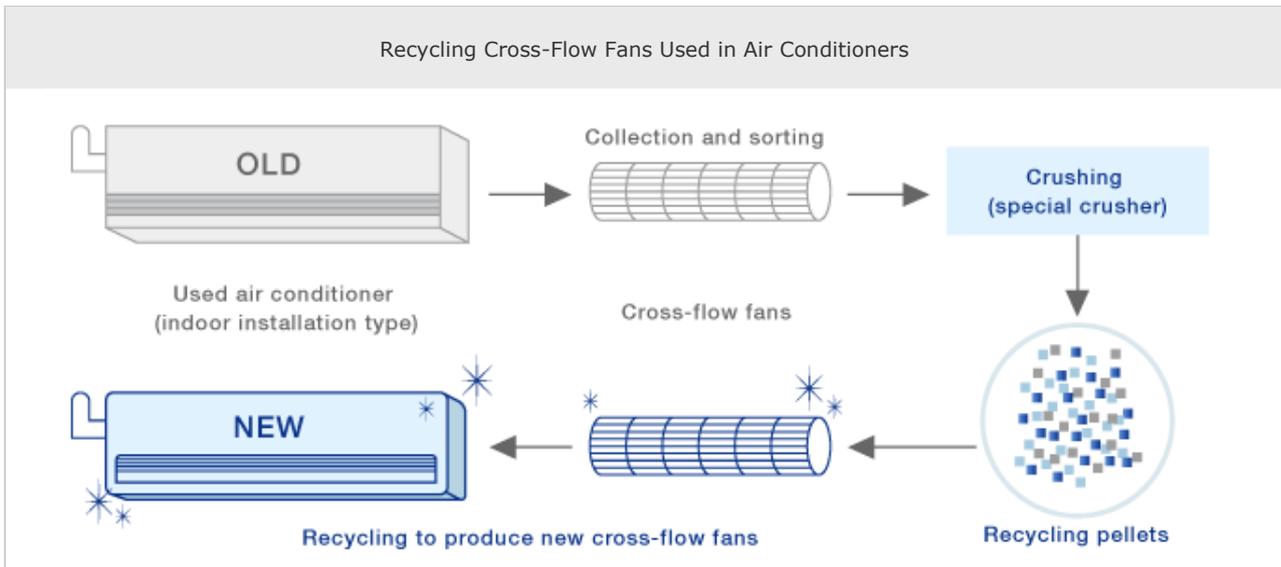
1. We shall design, produce, and sell products that reduce our impact on the environment.
2. We shall purchase and use materials and products which will help reduce our impact on the environment
3. We shall disclose information related to recycling programs and recycled goods.
4. We shall voluntarily cooperate with customers to recycle or otherwise appropriately dispose of our products.

Fibers and Textiles Recycling

Toray carried out life cycle assessment (LCA) of recycled and virgin materials used in its 100% polyester uniform, which weighs 0.4 kg. The Company confirmed that by using recycled materials, GHG emissions can be reduced by 1 kg of CO₂ for each uniform.

Plastic Recycling

Based on the Home Appliance Recycling Law, used air conditioners are collected, and their fans are recycled by Toray, in cooperation with Mitsubishi Electric Corporation and Hitachi Appliances, Inc. The Company is promoting the initiative with other companies.

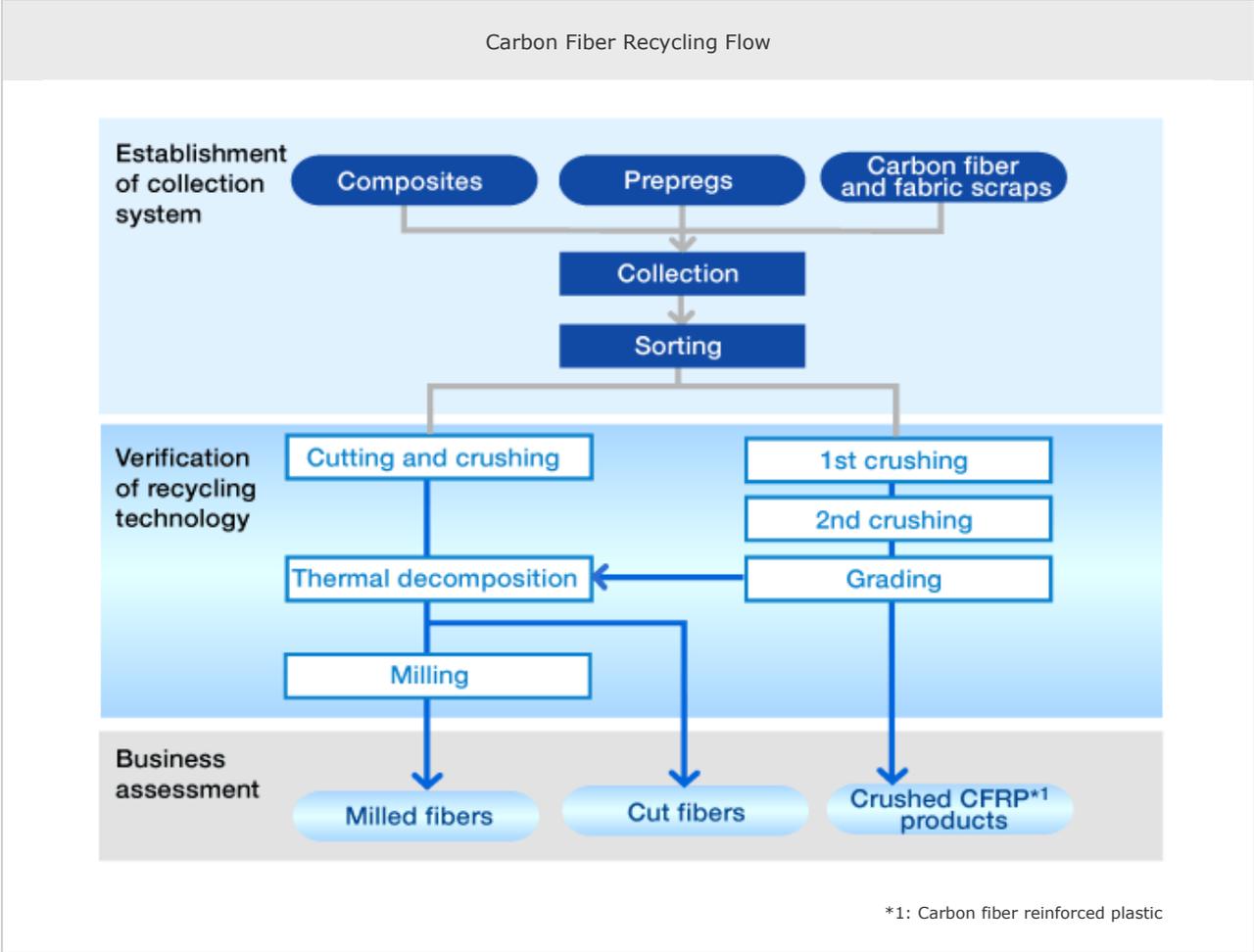


Carbon Fiber Recycling

As a member of the Japan Carbon Fiber Manufacturers Association (JCMA), Toray engages in recycling initiatives with other carbon fiber manufacturers.

Under a project initiated by the JCMA with the support of the Ministry of Economy, Trade and Industry, Toray carried out quality and performance evaluation of recycled materials as part of joint research led by Omuta City, Fukuoka Prefecture.





*1: Carbon fiber reinforced plastic

Product Safety and Quality
Product Safety and Quality Policies

In the pursuit of "Quality" and "Customer focus," Toray Group has established policies for product safety and quality assurance that drive synergy between the two activities.

Quality Policy (revised June, 2007)

We give top priority to the product quality offered to our customers as well as to safety and to the environment in our corporate activities. We work on quality assurance with the stance of "Customer First."

1. We make our best efforts to meet our customers' expectations with products and services of high satisfaction.
2. We commit ourselves to abide by the "Quality First" principle, and to improve the quality and reliability of our products, in all our divisions, including sales, manufacturing and research and development.
3. We meet quality requirements at the stage of design and development, and ensure and enhance these in the manufacturing process.
4. We continuously strive to organize, maintain and improve our quality management system.

Product Safety Management Basic Policy (established January, 1992)

1. We shall place priority on the various measures required to ensure product safety.
2. We shall conduct adequate safety evaluations prior to marketing a new product.
3. For products already on the market, we shall take note of feedback from customers and the general public and always remain attentive to safety.

Related Information

- [Long-Term Corporate Vision AP-Growth TORAY 2020](#)

**Product Safety and Quality
Providing Quality Assurance****Perfecting Systems in Support of Quality Assurance Activities**

In pursuing the Toray Group directives of "Quality" and "Customer focus," a system was created to promote both aims simultaneously.

The Product Safety and Quality Assurance Planning Department develops relevant policies and strategies for Toray Group, and the individual business divisions' Quality Assurance Departments ensure that they are reflected in business activities. In FY 2010, Toray identified product safety and quality assurance issues in each business area with a view to medium and long-term business development, and began specific activities for their resolution.

The Group will continue to pursue synergy by strengthening its Group-wide management system in quality assurance and product safety.

Acquiring Quality Assurance Certification

Toray Group has been actively obtaining ISO 9001 certification, and most of its manufacturing companies have now been certified. In April 2011, Towa Orimono Co., Ltd, a subsidiary in Japan, obtained the certification. Quality management system certifications required in each industry Toray operates have also been acquired. Toray Group companies have obtained ISO/TS16949 *1 certification for their man-made suede for automotive use, and textile products for air bags and tire cords. Toray also obtained JIS Q 9100 *2 certification for advanced composite materials used in the aerospace field.

*1: ISO/TS16949: Quality management system standards for automotive applications

*2: JIS Q 9100: Quality management system standards for aerospace applications

**SPOTLIGHT**

Mitsuhiko Taniguchi
Advanced Engineer, Quality Assurance Department, Electronics Division,
Toray Engineering Co., Ltd.

**Providing products that customers and society can use
with confidence**

I am in charge of product quality assurance and safety in the Electronics Division of Toray Engineering Co., Ltd. In addition to promoting initiatives that meet the various specifications and technologies of different customers, we are striving to realize a high level of quality and safety through the use of risk assessment.

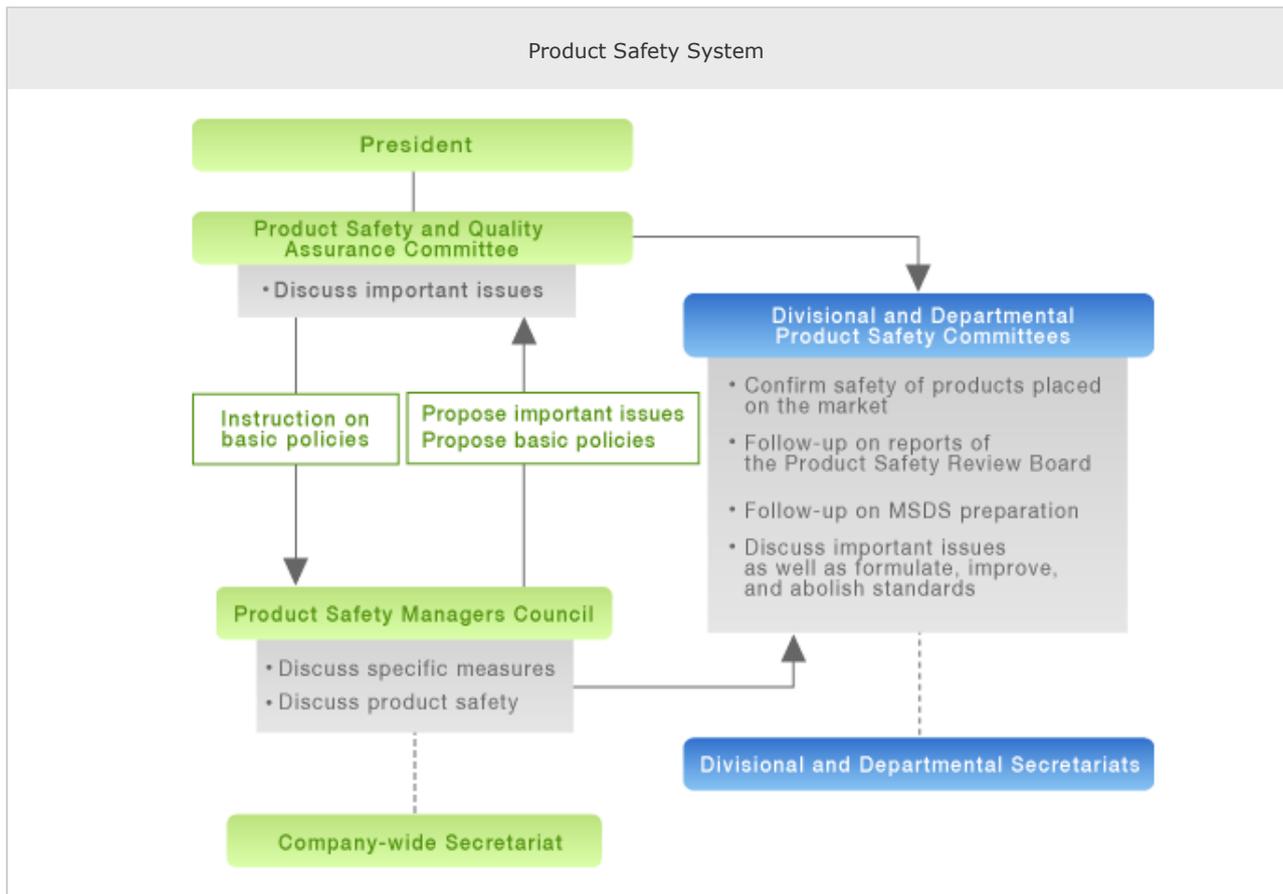
For example, glass substrate with a thickness of 1 mm or less is used in the manufacture of LCD panels. In recent years, the size of these substrates have grown considerably to dimensions of 305 by 285 cm, and measures for securing product safety have become a lot more complicated as a result. With risk assessment, we thoroughly identify potential issues that could arise during product manufacture to final disposal, in addition to risks in facility operation, maintenance, and repair. Product design details are then repeatedly revised, based on ISO 12100 (Safety of machinery – General principles for design) , until risk tolerance levels are met. Through this kind of design review, I will continue working to achieve even greater product quality and safety to meet the needs of customers.



Product Safety and Quality
Ensuring Product Safety

Implementation of Product Safety Activities

Toray's Product Safety System is shown in the diagram below. Based on Product Safety Control Regulations, Toray's Product Safety Managers Council promotes and implements annual Group-wide product safety themes that are established by the Product Safety and Quality Assurance Committee. Each Divisional and Departmental Product Safety Committee further breaks down the product safety themes, based on deliberations of the Product Safety Managers Council. Under this arrangement, implementation issues are identified by each relevant division and department every year, and the production, engineering, and sales divisions cooperate in efforts to thoroughly implement and improve product safety management.



To ensure that all Japanese and overseas subsidiaries and affiliates have the same safety management as Toray, the Product Safety Control Regulations are adopted in each company. Relevant divisions and departments take the lead in providing support and guidance to improve product safety levels Group-wide.

Product Safety Education and Training

Newly appointed departmental and section managers at Toray Group in Japan are trained by the Product Safety and Quality Assurance Planning Department. Toray divisions in charge of guidance provide assistance in product safety training to subsidiaries and affiliates overseas. In this way, Toray Group is striving to improve education and training.

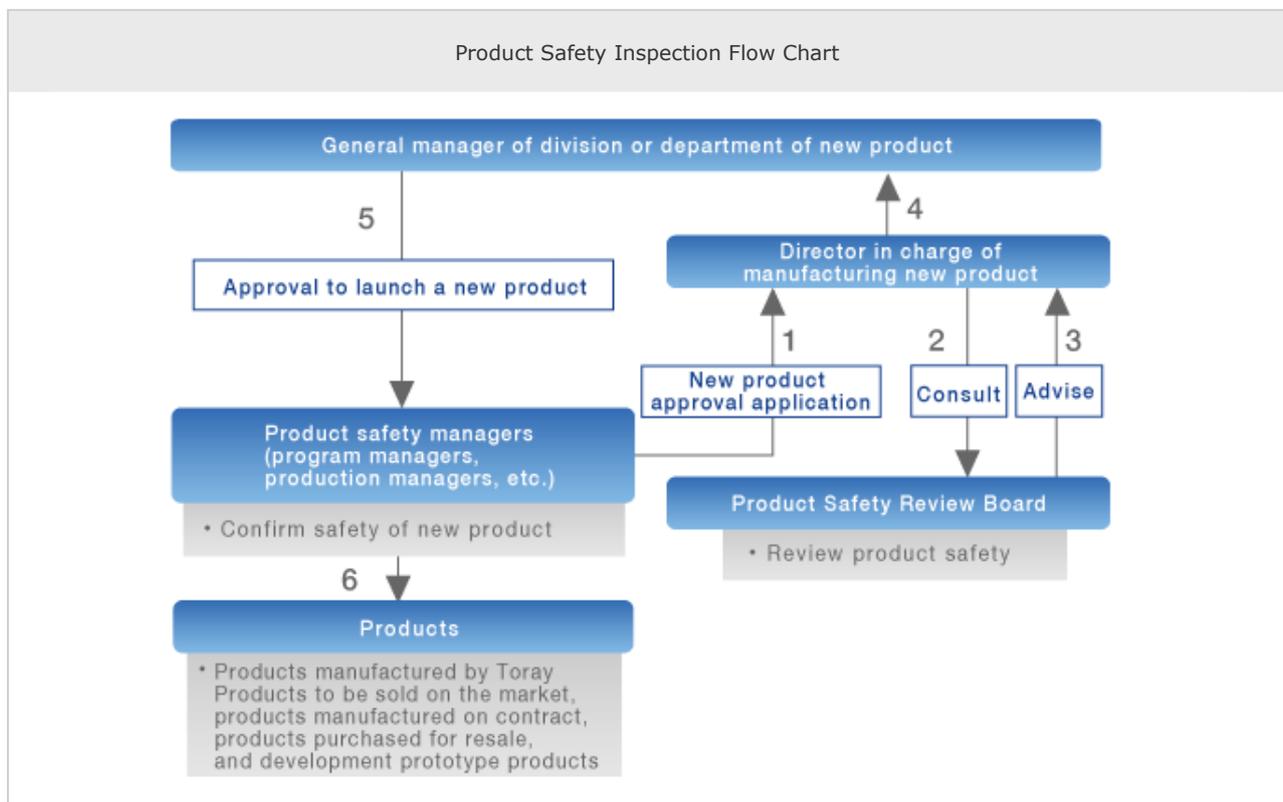
Responding to Product Incidents

In FY 2010, there was an overheating incident caused by an electrically heated floor mat manufactured and sold by Toray more than 25 years ago. In addition, a charger for an ultrasonic electric toothbrush sold by Toray Ireeve Corp. (now Toray

International, Inc.) between 2004 and 2009 was prone to deformation due to overheating. In both these incidents, there was no injury to the customers concerned, and no fire resulted. Nevertheless, Toray and Toray International posted announcements on the top page of their Japanese websites, placed recall notices in newspapers, and reported the cases to the National Institute of Technology and Evaluation.

A Stronger Product Safety Review System

Safety reviews for new products are undertaken by the director in charge of manufacturing the product. They include a safety check of the product, Material Safety Data Sheets (MSDS), an inspection of the product's instruction manuals and warning labels, the production of catalogs and other useful safety information resources for customers, as well as an assessment of the environmental impact of the product. When any doubts about product safety are identified, a meeting is held by the Product Safety Review Board, which comprises impartial experts from the Company, and external experts if necessary. The product must pass this review before launch. In order to ensure the reliable and efficient implementation of reviews, in FY 2010 Toray established and revised review performance guidelines for each business area, and clarified the definition of new products subject to review. The Company also strengthened procedure for the efficient promotion of risk reviews.



Providing Product Safety Information

Toray Group provides product safety information along with its many products and services in a manner appropriate for each business. Toray Group's respect for consumer rights is fundamental in its dealings with customers. Toray Group strives to ensure product safety and quality by undertaking major programs and initiatives. As such, every effort is made to improve accessibility to users of its most popular consumer goods, through methods such as a toll-free product inquiry phone service.

Related Information

- [Respecting Consumer Rights](#)

Product Safety and Quality
Respecting Consumer Rights

Protecting the rights of consumers while ensuring open, just and equitable trade are essential for a sound consumer culture.

The Consumer Protection Fundamental Act was first introduced in Japan in 1968. It was revised and renamed the Consumer Basic Act in June 2004, in line with changes in the socio-economic conditions of consumers. Key features outlined under the Act include respect for the rights of consumers and the need to develop a self-support structure. Toray engages in a wide variety of businesses for the benefit of both business operators and consumers. In dealing with a diverse customer base, the Company adheres strictly to the fundamental principle of consumer rights, and works diligently to ensure the safety and quality of its products.

Consumer Rights

1. The right to satisfaction of basic needs
2. The right to safety
3. The right to be informed
4. The right to choose
5. The right to be heard
6. The right to redress
7. The right to consumer education
8. The right to healthy environment

CSR Procurement
Toray Procurement and Purchasing

Basic Purchasing Policies and CSR Procurement Guidelines

As a manufacturer and supplier of advanced materials and material products, Toray places importance on upstream management that reflects the needs of its end users, including the management of production facilities, as well as procurement of raw materials. Toray established Basic Purchasing Policies to guide its upstream management and ensure fair transactions. In addition, the Company has created an effective supply chain that fulfills its corporate social responsibilities, and has established CSR Procurement Guidelines in order to provide customers with materials that are environmentally and socially conscious.

Basic Purchasing Policies

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.

CSR Procurement Guidelines

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

CSR Procurement Rules

Toray has company-wide CSR procurement rules to ensure that CSR promotion at suppliers can be accurately reported to customers using the materials. A CSR procurement office has also been established to manage and share supplier information with customers. Toray employs a PDCA cycle as shown below in its CSR procurement activities.

PDCA Cycle in CSR Procurement



Promotion of Toray's CSR Procurement

In order to assess CSR initiatives at suppliers, Toray conducted a survey in FY 2009 of 406 companies comprising principal suppliers, manufacturing subcontractors and sales agencies. In addition to providing them with survey analysis and evaluation results, Toray visited a portion of these companies to conduct CSR audits. In FY 2010, Toray promoted further improvement of partnerships by regularly monitoring conditions and providing support based on the PDCA cycle.

CSR Procurement Initiatives throughout the Supply Chain

In order to promote CSR procurement throughout the supply chain, Toray signed CSR pledge forms with procurement partners in FY 2010. The Company has created an internal system for prompt response to CSR questionnaires from customers. In addition, Toray's 18 subsidiaries and affiliates in Japan conduct CSR questionnaires for their principal suppliers.

CSR Procurement
Environmentally Conscious Distribution Policies

Enhancing Communication with Distribution Partners

Toray's Basic Distribution Policies place importance on environmental preservation, together with fair and equitable transactions. While continuing to work to improve quality and reduce environmental load, Toray also promotes understanding of its distribution policies. This is done through Basic Distribution Policy Briefings, held annually for distribution-partner companies.

In FY 2010, Toray was certified as an Eco Rail Mark Company for its active use of environmentally friendly rail freight transport. The certification is provided by the Railway Freight Association and the Ministry of Land, Infrastructure, Transport and Tourism. The Company also obtained Eco Rail Mark Product certification for its TOREY TETORON® fiber product.



Basic Distribution Policies Briefing



Basic Distribution Policies

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 fulfill 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.

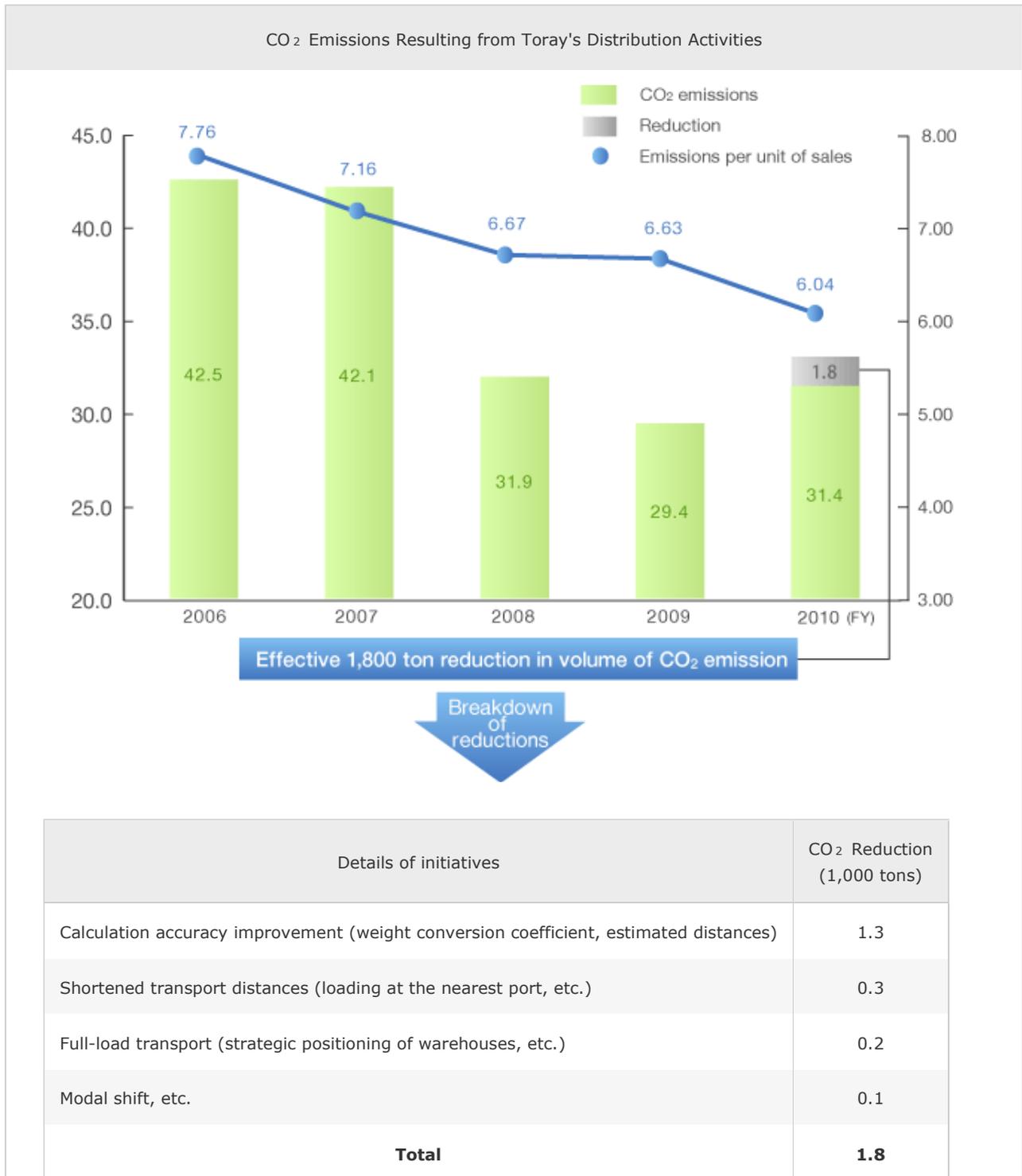
Consultant on Governmental CO₂ Emissions Research

Since 2009, Toray has been serving as a consultant to the Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT) as part of its survey, entitled "Research into the Best Future Disclosure of CO₂ Emissions from Distribution." CO₂ emissions from freight transport are ascertained on a consolidated company basis, including international distribution. Toray is providing expertise and advice for the creation of the Simple Tools for Measuring Distribution CO₂ Emissions by the Ministry, and will continue to ascertain and reduce CO₂ emissions on a consolidated basis.

CSR Procurement

A Specified Conignor under the Revised Law Concerning the Rational Use of Energy

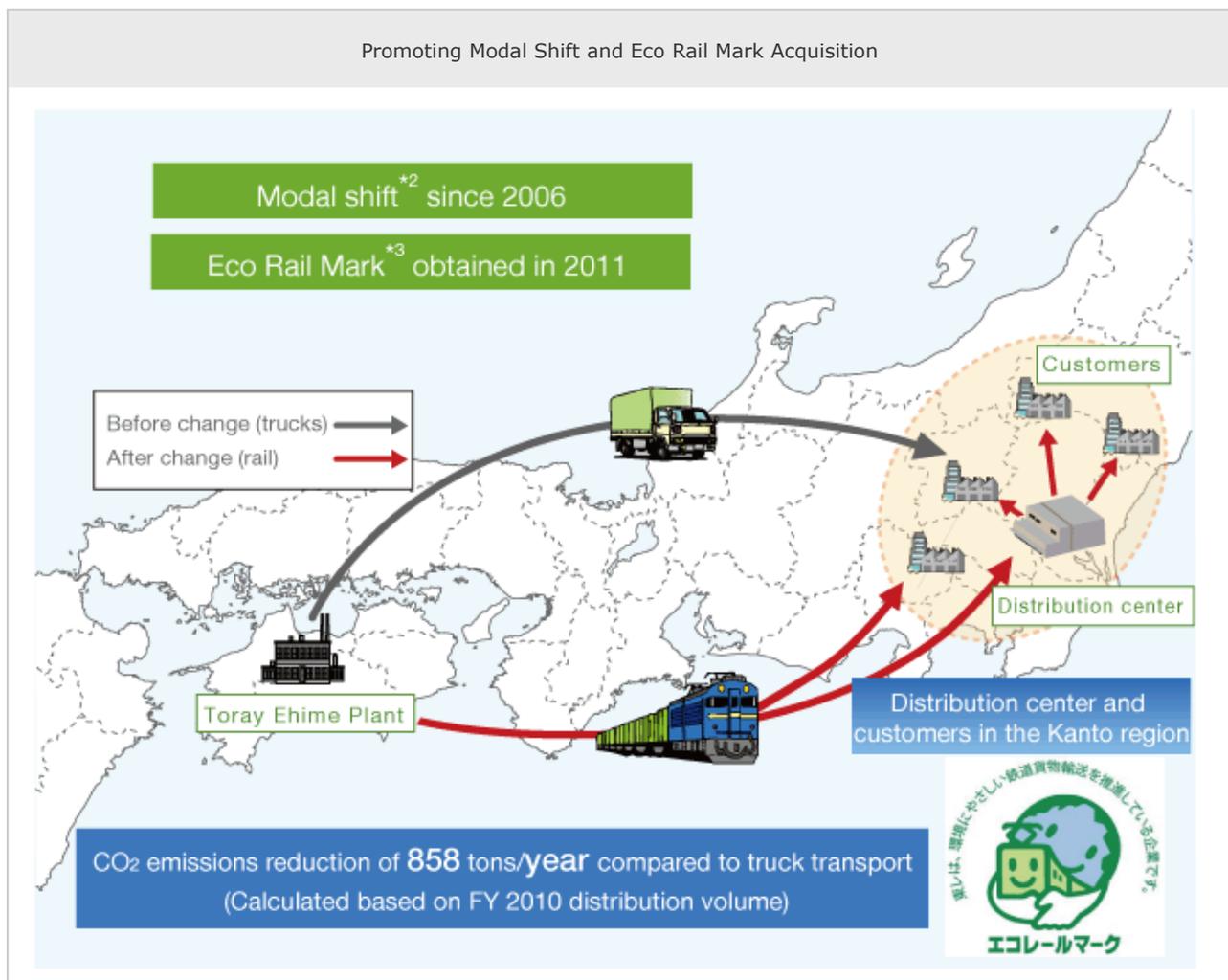
Toray set a goal to reduce CO₂ emissions from its cargo shipping and transport by 5% compared with the level in FY 2006 by 2010, and has been improving distribution measures accordingly. In FY 2010, Toray's CO₂ emissions rose by about 31,400 tons due to strong sales. However, as this still represented a reduction of 26% compared to FY 2006, the target was achieved. CO₂ emissions per unit of sales fell by 9% compared to FY 2009, and a reduction of 22% compared to FY 2006 was achieved. In FY 2010, a reduction of about 1,800 tons of CO₂ emissions was the result of efforts including the active use of regional ports, shortening transport distances through the adjustment of inventory locations, and promoting modal shift. Also in FY 2010, Toray and seven subsidiaries and affiliates adopted the ATLAS distribution system, which ascertains CO₂ emissions on a consolidated-company basis and shares the information across the Group. The Company will expand the system to other Group companies while continuing to reduce its CO₂ emissions on a consolidated basis.



Promoting Rail Transport and Eco Rail Mark Acquisition

As part of efforts to carry out green distribution, Toray is actively promoting modal shift. The Company previously used trucks for the transport of staple fiber products from the Ehime Plant. With the cooperation of customers and railway companies, Toray has switched to rail transport, which reduced the Company's CO₂ emissions by 858 tons per year. *1 In FY 2010, Toray was certified as an Eco Rail Mark Company for its active use of environmentally friendly rail freight transport. The certification is provided by Japan's Railway Freight Association and the Ministry of Land, Infrastructure, Transport and Tourism. The Company also obtained Eco Rail Mark Product certification for its TOREY TETORON® fiber product.

*1: Compared to CO₂ emissions level from past truck transport. Calculated using FY 2010 distribution volume



*2: Modal shift

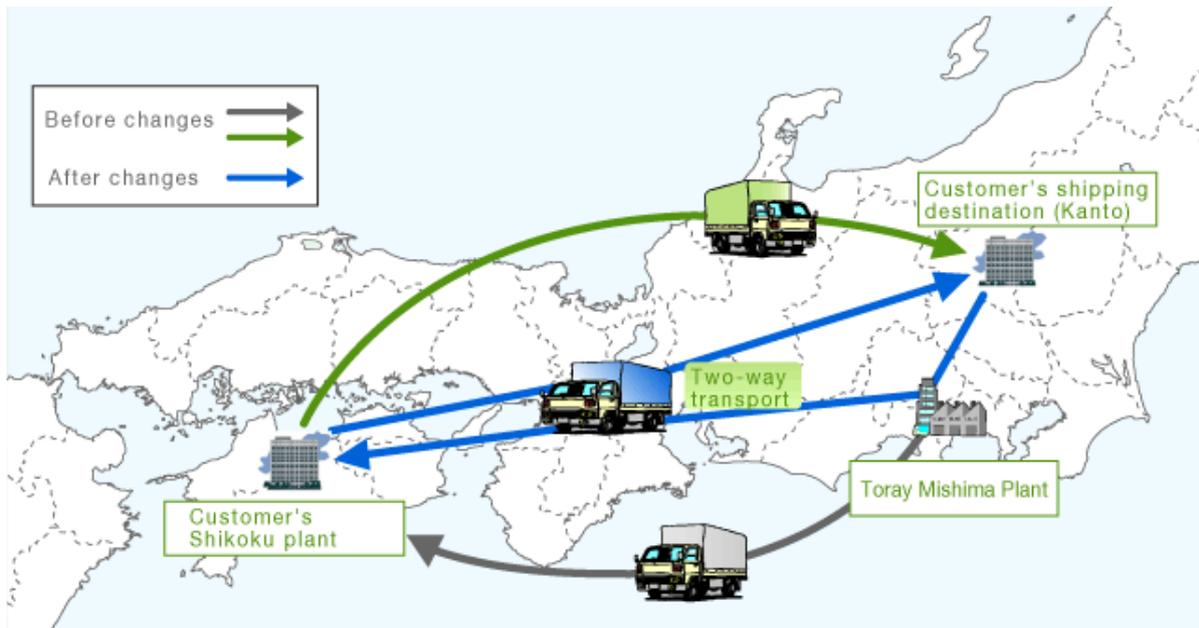
Reducing environmental load based on CO₂ emissions reduction, by using transportation methods with a lower environmental load such as rail and sea.

*3: Eco Rail Mark

Companies or products certified by Japan's Ministry of Land, Infrastructure, Transport and Tourism and the Railway Freight Association for their active use of environmentally friendly rail are permitted to display the Eco Rail Mark on applicable products or catalogues.

Expansion of Shared Transport Arrangements with Customers and Suppliers

A customer in Shikoku was transporting products to the Kanto region, but was left with empty trucks for the return trip to Shikoku. In order to resolve this problem, it began a joint distribution scheme with Toray in FY 2008, which enabled the two companies to improve their distribution efficiencies and reduce CO₂ emissions at the same time. This was achieved by sending products from the Toray Mishima Plant near Kanto to the customer's Shikoku plant, and then using the same truck to send the customer's products to Kanto on the return trip. By implementing similar measures with other customers and suppliers, Toray reduced its CO₂ emissions by 301 tons in total by FY 2010.



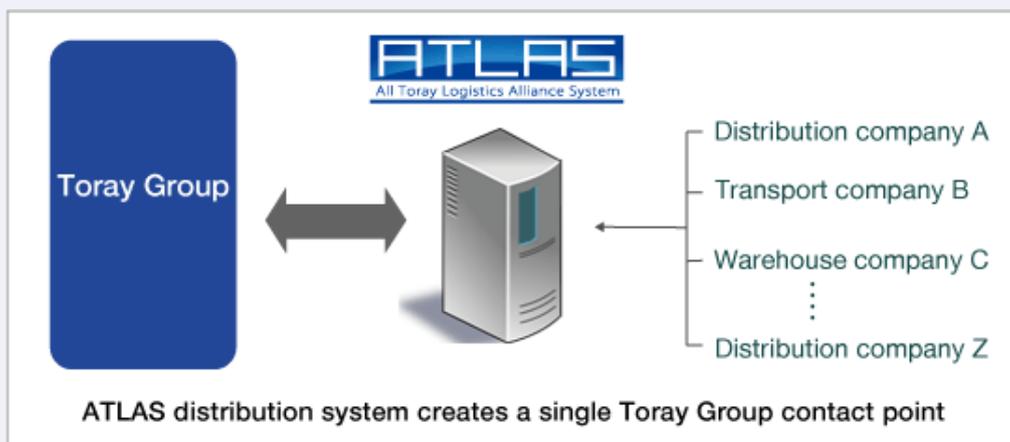
SPOTLIGHT

Strengthening and Expanding Joint Logistics and Green Distribution using the ATLAS*4 Group-wide Distribution System

Toray Group has been working on the optimization of Group-wide distribution through the use of joint logistics and green distribution.

The All Toray Logistics Alliance System (ATLAS), a standardized distribution system for Toray Group, was launched by eight Toray Group companies in 2010. The system is expected to effectively accelerate the Group's distribution initiatives to date, and its use will also be expanded Group-wide.

*4: ATLAS is a shared distribution information system infrastructure for Toray Group. Features include operational functions such as the issuing of invoices, as well as the calculation of CO₂ emissions, warehouse inventories, and transport costs. The system also performs distribution operational management that includes shipping schedules and contract details.



Comment from a System Planner

One of our major aims was to build a system infrastructure to realize data visibility and sharing

When the Revised Law Concerning the Rational Use of Energy took effect in 2006, Toray Industries and three Group companies were designated as

specified consignors, responsible for transporting freight exceeding 30 million ton-kilometers annually. In my department, which promotes green distribution, we believe that environmental initiatives gaining acceptance worldwide need to be implemented across the entire Group and supply chain, irrespective of whether they are legally required. The Logistics Department of Toray had also been promoting optimal distribution planning for Toray Group, and realized that a tool was needed to make data visible in order to ascertain, verify, and analyze overall distribution. ATLAS was developed as a result, which enabled distribution data including CO₂ emissions to be easily visible for the entire Group. The system has also accelerated Group-wide distribution planning optimization, reduced unnecessary transport, and lowered CO₂ emissions.



Kazumoto Takahashi
General Manager, Purchasing &
Logistics Planning &
Administration Department
Toray Industries, Inc.

Comment from a System User

The automated system has made calculation faster and more accurate, and CO₂ emissions easier to ascertain

There are many kinds of packaging, transportation and storage methods being used for the chemical products that I manage. With the expansion of Toray Group's business, there has been an increase in the variety of freight items and packing. However, our computer system could not keep up with the changes, and there were many partial operations such as fee calculation that had to be done manually. The introduction of ATLAS has brought a huge benefit, as fees and CO₂ emissions are now calculated automatically.

Previously, the streamlining of non-standard and complicated fee calculations had been a major issue for the logistics sections. Being able to ascertain CO₂ emission for shipping items will also help to further promote green distribution.



Tsuyoshi Kato
1st Logistics Section, Logistics
Department
Toray Industries, Inc.

Comment from a System User

It will help us improve distribution quality and realize joint distribution that benefits customers

A great advantage of ATLAS is that it can share information externally with distribution companies. Thanks to the ease of transaction it enables, we can now do business with companies that was previously not possible due to system incompatibilities. By having both parties use a common system, information confirmation can be rapidly achieved. Furthermore, it is now possible to carry out comprehensive optimization discussions, which have provided great benefits.

We plan to expand the use of ATLAS through initiatives to improve distribution quality by raising awareness of best practices for freight handling through photos and video. It will also be useful for distribution planning in order to realize joint distribution,^{*5} which is highly requested in the pharmaceutical field.

*5: Joint distribution: Shared transport arrangements with multiple partners for more efficient shipping



Toshiki Kodo
General Manager, Logistics
Department
Toray Medical Co., Ltd.

Safety and Energy Conservation Initiatives

Toray is encouraging its distribution partners to install digital tachographs^{*6} in their vehicles for reasons such as energy conservation and safety. Driving data obtained from digital tachographs is used to provide guidance on safe driving. This results in improved driving skills, better safety awareness, prevention of dangerous driving, reduction in the number of accidents, and mileage improvements from more fuel-efficient driving.

*6: Digital tachographs: A device that records and outputs truck operation data

Toray designs its packaging materials based on the 3R^{*7} approach, and has developed a system for collecting and reusing packaging materials sent to customers. In FY 2008, Toray implemented an initiative to collect pallets used to import film from overseas, and enabled some of its plants in Japan to reuse the pallets for shipping other products. Through such efforts, the Company is working to respond to the global business environment.

*7: 3R

Reduce, Reuse, and Recycle

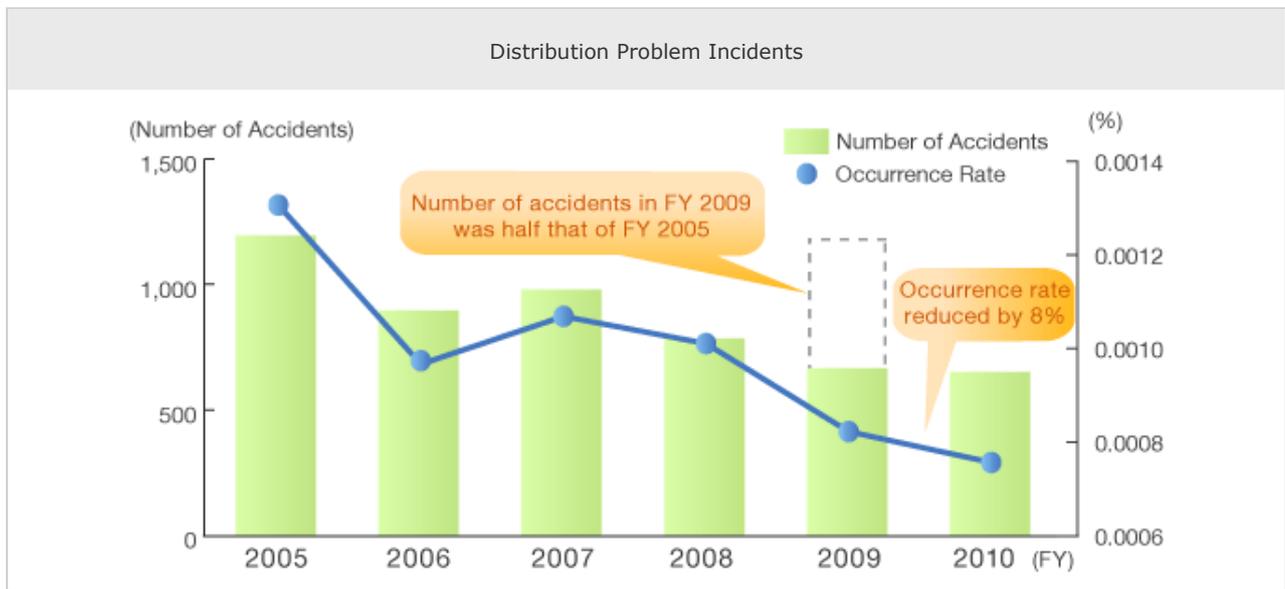
CSR Procurement
Distribution Safety Initiatives

Initiatives to Improve Distribution Quality

Toray has implemented a Quality Improvement Project with its distribution partners as a measure for raising distribution quality. In FY 2009 Toray achieved the project goal of halving distribution issues such as delivery damage, delays, and errors in the storage and delivery of Toray products, compared to FY 2005. In FY 2010, the incident occurrence rate^{*1} was further reduced by 8% compared to FY 2009. Consequently, Toray presented awards to distributions partners^{*2} that made major contributions to quality improvement.

Additionally in FY 2010, Toray began issuing an email newsletter as a new initiative. Through the newsletter, a campaign for reducing various accidents using ideas submitted by distribution partners was shared horizontally. A video was also produced to share accident prevention tips with distribution partners.

*1: Number of incidents per year / Number of shipments per year



*2: Distribution-partner companies awarded in FY 2010

Transport Quality Excellence Awards:

Iyoshoun Co., Ltd., and Japan Transcity Corporation

Warehouse Quality Excellence Awards:

Nagahama Reizo Co., Ltd., Chuo Warehouse Co. Ltd., and Trinet Logistics Co., Ltd.

Improvement Awards:

UPR Corporation, and Daisei Soko Unyu Co., Ltd.

Zero Accident Maintenance Awards:

Sapporo Express Co., Ltd., Sukagawa Toubu Unsou Co., Ltd., and NBS Logisol Co., Ltd.



Yellow Card Emergency Response Measures

Drivers of shipping vehicles carry a yellow card^{*3} detailing emergency measures to be taken to minimize damage in the event of an accident. Toray has also established an emergency communication system and carries out emergency training in case of an accident during transportation. In the unlikely event of such an accident, Toray has procedures in place enabling the necessary staff to be dispatched as swiftly as possible to the accident site for assistance.

*3: Yellow Card

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.



The overloading of trucks causes vibration, noise, damage to roads and facilities, and also creates driving hazards. Consequently, Toray is putting considerable effort into the prevention of overloading in order to fulfill its social responsibilities in the transportation of goods.

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 C-TPAT^{*4} 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 is also encouraging its worldwide distribution partners to obtain AEO^{*5} status.

^{*4}: C-TPAT (Customs-Trade Partnership Against Terrorism)

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.

^{*5}: AEO (Authorized Economic Operator)

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.

For Our Employees

To provide our employees with opportunities for self development in a challenging environment



In order to create supportive workplaces for employees, Toray Group actively promotes initiatives that instill the concepts of balancing work and family lives, as well as respecting individual rights and diversity. Such initiatives are carried out through various company activities such as human rights promotion and recruitment. Toray Group also widely promotes its objective of achieving zero accidents in the pursuit of maintaining safe and healthy workplaces.

For Our Employees

Human Resources Development and Human Rights Promotion

Toray Group values every one of its employees and respects human rights. The Group endeavors to create a vibrant workplace that provides job satisfaction, and encourages employees to take on challenges.

For Our Employees

Occupational Safety

The top management is committed to achieving zero accidents, and all employees thoroughly practice safety fundamentals in the workplace.

Human Resources Development and Human Rights Promotion
Promote Human Rights

Toray Group believes that respect for human rights is a fundamental principle essential to the management of a company. The Group therefore strives to promote and increase human rights awareness. It prohibits discrimination in any form based on factors such as race, creed, gender, academic background, nationality, religion or physical characteristics in the areas of recruiting, hiring, positioning, compensation, education, and retirement. In addition, Toray Group respects international standards such as the United Nations Universal Declaration of Human Rights and the ILO Treaty, which prohibits forced labor and child labor under any circumstances, and complies with the laws and regulations of each country and region in which it operates.

Human Rights Promotion System

Under the Corporate Ethics Committee, Toray has established a Company-Wide Human Rights Promotion Committee, along with sub-committees at the office and plant level. In addition, the Company has appointed Human Rights Promotion Officers at each workplace, who are dedicated to making the work environment more pleasant and productive. A Human Rights Promotion Section was also established in the Company's Industrial Relations Department. Initiatives were pursued in FY 2010 to strengthen employee communication and create pleasant, energetic and considerate working environments.



Human Rights Training

Toray holds human rights promotion campaigns annually to help increase awareness and understanding of human rights issues. The action goal of the FY 2010 campaign called on employees to prevent harassment by fostering respect for others. As part of this effort, the Company promoted a return to the fundamentals of human rights. In order to create pleasant workplaces, employees were encouraged to create good interpersonal relations and be considerate toward colleagues.

Training sessions were held for operational and administrative supervisors at the head office, and each office and plant. Workshops were also conducted in conjunction with workplace study groups. As in FY 2010, the Human Rights Promotion Section Manager visited Toray and its domestic group companies' offices and plants as part of the campaign, and held workshops for Human Rights Promotion Officers.



FY 2010 Human Rights Training and Seminars		
Type of training	Number of sessions	Number of participants
Training at head office	26	1,514
Training at offices and plants	1,377	14,521
Training at outside company	48	131

Human Resources Development and Human Rights Promotion
Retaining Key Employees

Toray regards the protection of employees' jobs as a fundamental management principle, and does not make employment adjustments according to short-term perspectives. The Company's basic policy regarding key employees is to provide stable, continuous employment based on a long-term outlook, irrespective of economic trends and company performance. As part of future global business development, Toray will continue to secure and develop human resources that operate on a global level with a strong sense of commitment.

Human Resources Development and Human Rights Promotion
Developing Human Resources to Create New Value

Based on the following three goals, Toray Group is promoting human resource development as one of its most important management issues.

- 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

Systematic and Effective Training

The Toray Group employee education system represents a rational, systematic approach to human resources training that responds to needs in various fields. Many types of training are conducted for employees of all levels, and in all areas, to improve management performance, sales performance, production management skills, professional skills, and international operations. The following programs were held by the Group: the Toray Management School and the Toray Group Management School for the purpose of fostering future top managers, the Management Basic Training for developing future frontline leaders, and the Practical Sales Course and the Technical Management Course for developing employee professionals. The voluntary Challenge Training Program also helps motivated employees develop skills, and the Overseas Junior Training Program develops employees with a global mindset.

Company-Wide Training Course Enrollment	
Training Category	Persons enrolled
Management	545
Technical	270
Sales, marketing, and administration	325
Global	142
General	332
Total	1,614

Early Leadership Development

To foster exceptional group management, Toray established the Toray Management School in 1991, designed to develop young middle-ranking managers into future executives. As of FY 2010, a total of 380 employees have participated in the school's programs over 19 terms. In addition, the Toray Group Management School was established in 2006 to foster top management successors at Toray Group companies and the next generation of leaders. Through Manager Training for New Appointees and Management Basic Training, Toray is developing outstanding frontline leaders by educating section and unit managers on coaching skills *1 and boosting their problem-solving skills. The Company has also established the Toray School of Technology and Business for training mid-level employees at plants. It offers selected employees a year's full-time education in a live-in schooling environment.

* 1: Coaching skills: Communication skills designed to promote a greater degree of autonomous action by staff.

A Personnel System that Prizes Employee Motivation and Accomplishment

Toray adopts the following personnel systems to create a dynamic organizational culture that encourages individuals to explore new possibilities and contribute to the Company.

Management-by-objectives system	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	Designed to facilitate a fair appraisal of employee contributions in terms of duties, responsibilities, capabilities, and performance.
Individual meeting system	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 general staff	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 general staff	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.
Bonus system for employee inventions	Toray revised this system in April 2005 to boost incentives from past levels, in an effort to accelerate the creation of exceptional inventions.

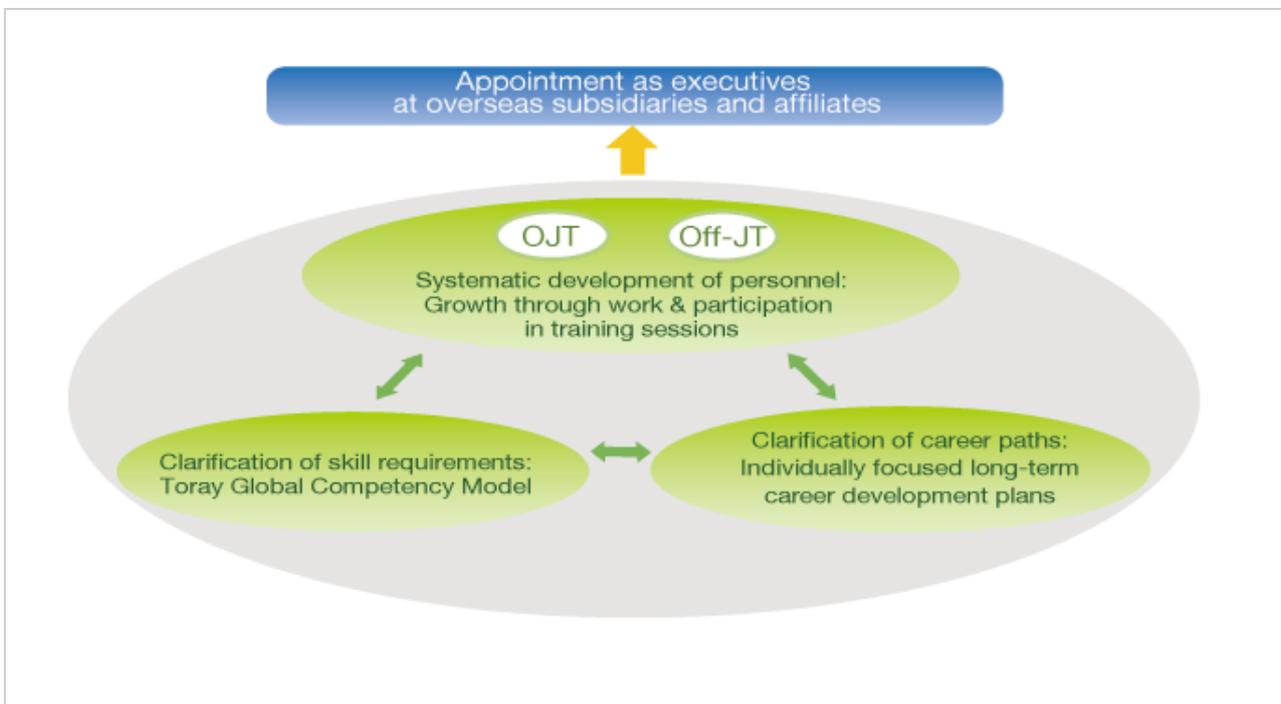
Human Resources Development and Human Rights Promotion
Developing and Promoting Staff at Overseas Group Companies

Toray Group regards the development of key employees at overseas subsidiaries and affiliates as one of its major business challenges. Each Group company promotes the training of locally hired employees and their appointment in executive positions.

Infrastructure for Developing and Promoting Local Personnel

Positions deemed critical for the global management of Toray Group have been classified into four levels based on a Group-wide standard. Toray head office is working with overseas subsidiaries and affiliates to develop and promote local staff in these positions; the employees are known as National Core Staff.

Toray has specified the Group-wide skill requirements and code of conduct expected of National Core Staff in the form of the Toray Global Competency Model. In accordance, individually focused long-term career development plans are formulated. To facilitate information sharing, Toray also established the Toray Global Database, which allows employees worldwide to access information related to the Company.

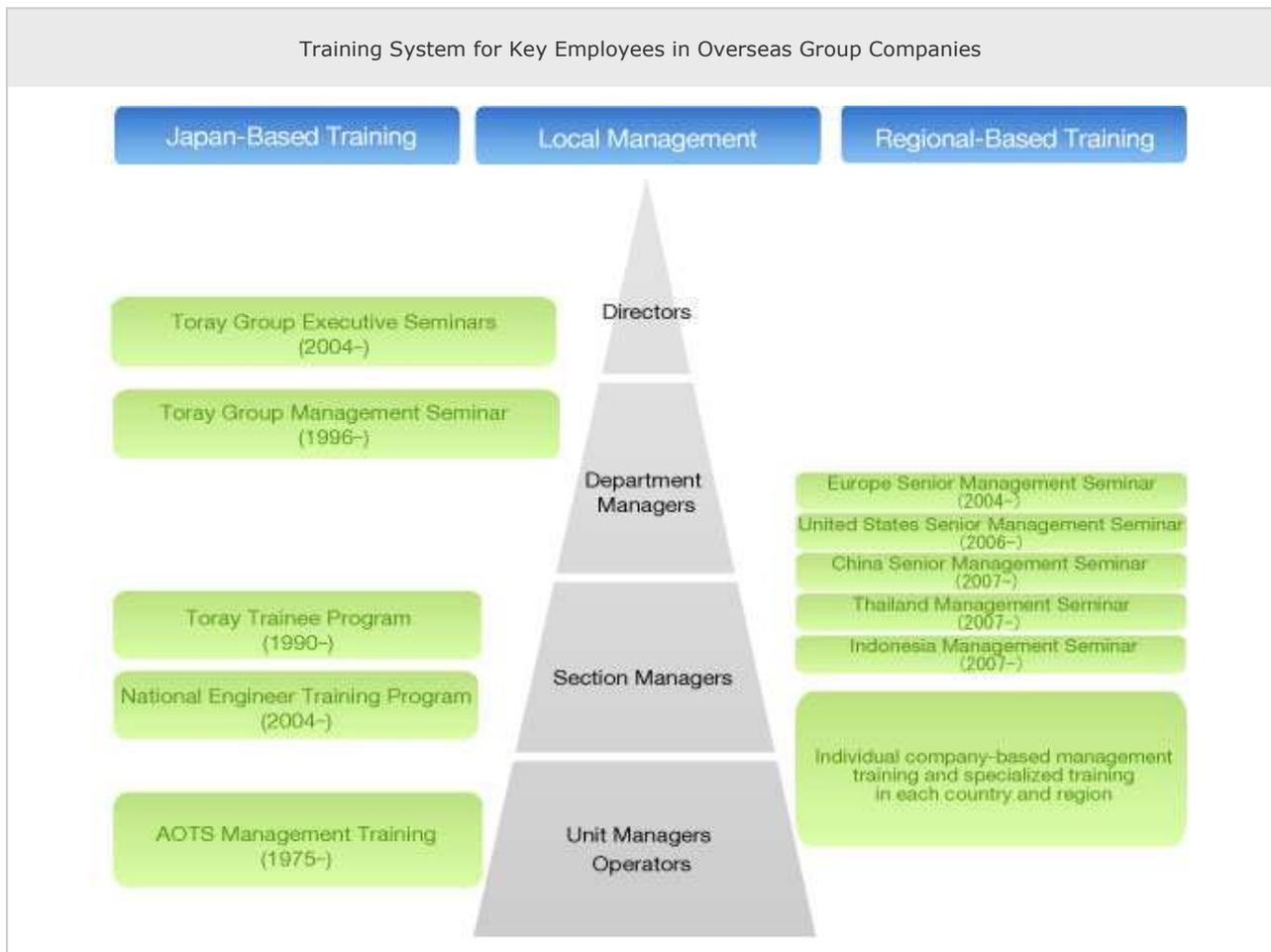


Development and Training of Key Employees at Overseas Group Companies

To become familiarized with Toray Group's Management Philosophy and policies, key local employees at overseas subsidiaries and affiliates participate in training programs in Japan, organized according to managerial level. The programs are linked with individually focused long-term career development plans. Seven types of online self-study materials have been created, allowing the Group to improve training efficiency and content. Toray's head office participates in planning the management training programs conducted in each country and region, and strives to support personnel development efforts. Along with the improvement of managerial level-based programs, Toray Group has created a multi-level training system for executive and manager candidates.



Toray Trainee Program for overseas employees



Training Courses held for Overseas Key Employees during FY 2010 (Toray Group)		
Japan-Based courses	Toray Group Senior Management Seminar	16
	Toray Trainee Program	24
	National Engineer Training Program	2
	Toray Group Supervisors' Seminar	4
Courses held overseas	7th Europe Senior Management Seminar	15
	5th U.S. Senior Management Seminar	17
	Management Seminar in China	6
	East and North China Management Seminar	23
	South China Management Seminar	22
	4th Thailand Management Seminar	22

Human Resources Development and Human Rights Promotion
Promoting Diversity

Toray Group is committed to promoting employee diversity toward the creation of thriving workplaces where each individual's abilities can flourish.

Fostering an Organizational Culture Conducive to the Career Advancement of Women

Toray advocates the employment of women and provides a work environment that meets their needs. The Company appointed its first female manager in 1958 and introduced a childcare leave program in 1974, almost 20 years before its establishment as a law; in 2003 a Toray affiliate appointed a woman as president. The Company continued to improve its systems and programs in this area, and initiated the Advancement of Women Project in 2004.

As a result of the ongoing implementation of such initiatives, the ratio of unit manager level positions or higher held by women continues to rise each year, reaching 6.77% in April 2011.

Number of Women in Management Positions and Women as a Percentage of the Workforce (Toray)

(as of April each year)



Employment of International Students and Mid-Career Recruitment

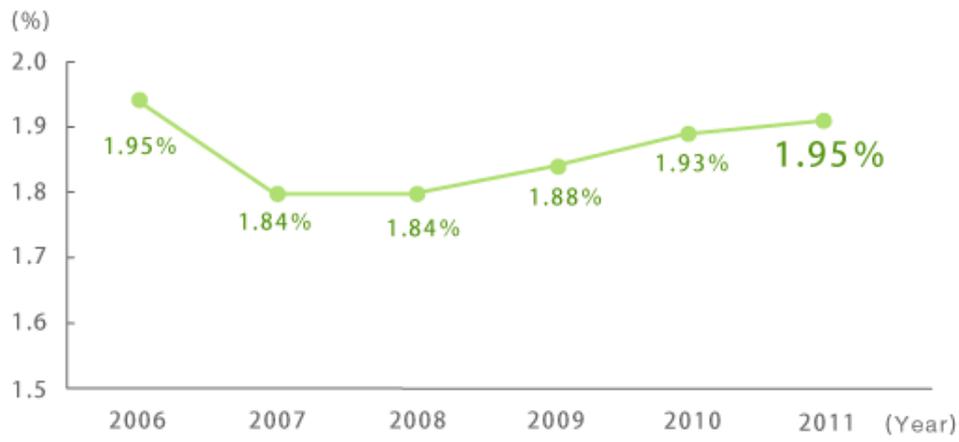
Given the diversification of job requirements, Toray has been promoting the hiring of full-time non-Japanese employees since 1998. They are regarded as key employees familiar with the local languages and cultures of Toray's overseas operations. As part of globalization, the Company is actively hiring non-Japanese that have graduated from Japanese universities, Japanese that have graduated from foreign universities, and those with extensive job experience or specialized expertise. These individuals are hired for their highly specialized abilities, language skills, global perspective and outlook.

Employment of Disabled Persons

Toray takes its social responsibility to employ disabled persons seriously, and has achieved the legally required employment ratio of 1.8%. Moreover, the Company strives to create a suitable workplace for the disabled. Initiatives include providing barrier-free spaces, training at the time of hiring, and ensuring an appropriate working environment based on suggestions and requests from disabled employees.

Employment Ratio of Disabled Persons (Toray)

(Figures for June of each year)



Reemployment System

As part of initiatives to encourage full utilization of skilled individuals over 60 years of age, Toray concluded a labor-management agreement for union members in FY 2001, and introduced a reemployment system for all employees who wish to continue working. The labor-management agreement concerning this reemployment system was revised and expanded in December 2005 to include employees in management and occupational specialist categories. In November 2006, the Company concluded a new labor-management agreement to progressively increase the maximum age for reemployment, based on the Revised Law concerning the Stabilization of Employment of Older Persons. The eligible reemployment age will be extended to 65 after April 2013. Counseling is provided to employees prior to reemployment.

Human Resources Development and Human Rights Promotion
Creating a Positive Workplace for Employees

Assisting Employee Work-Life Balance

Toray has been working to further improve systems that help employees achieve a harmonious balance between work and family life, by offering a wider variety of lifestyle options for men and women. Support systems that exceed those legally mandated for childcare, family-care, and maternity protection are provided, the result of Toray's commitment to making them accessible and responsive for a diverse range of employee needs.

In May 2007, Toray was granted certification as a General Corporate Entity Meeting the Requirements of the Action Plan to Maintain Compliance with the Next Generation Law. In June 2010, the Company made changes to the system in accordance with revisions to the Child and Family Care Leave Law. They include making male employees eligible for childcare leave even if his spouse is a full-time homemaker, and allowing male employees to take a second childcare leave if the first leave was taken within the eight weeks after his spouse gave birth.



Utilization of Childcare and Family-Care Leave Systems (Toray)						
Fiscal Year		2006	2007	2008	2009	2010
Employees taking childcare leave	Women	75	73	91	67	79
	Men	3	1	0	3	2
Employees taking family-care leave	Women	2	4	1	1	2
	Men	1	0	1	0	1

Note: Figures show the number of employees taking leave.

Toray has also implemented the following initiatives, while placing importance on balancing work and family life as part of its commitment to workplace innovation.

(1) Changing awareness

Creating a workplace culture that strives for increased efficiency and productivity through discussions on improvements at each workplace

(2) In principle, prohibiting work late at night and on holidays

(3) Turning off all lights at 10 p.m. on all floors at the head office building

(4) Holding company-wide no overtime days one day per month

In October 2010, Toray began strengthening labor-management initiatives regarding work-life balance. The following points are being promoted along with the aim of ensuring the reduction of overtime and holiday work.

Key Points for Work-Life Balance	
Key point	Initiatives
Support systems for employee work and family life balance	(1) Promoting the system, including use by male employees (2) Investigating a work-from-home system for childcare and family-care (3) Providing a company welfare system that offers a choice of programs to suit employee needs including childcare, family care, and home acquisition (launched in April 2011)
Initiatives to reduce long working hours and prevent overwork	(1) Further ensuring proper management of work hours (2) Promoting further measures to prevent overtime, holiday and late night work

Major Changes in Support Systems for Employee Work and Family Life Balance

Action	Description of changes	Before changes
Reviewed the registration system for reemployment *1 (From April 2007)	Registration period for reemployment extended to ten years. Reemployment as a full-time employee is available for applicants conditional to the nature of the job, the applicant's desired role, and their personal conditions. Among 14 employees that registered, one was reemployed (as of March 2011).	The registration period was for three years. Registrants were required to work in part-time positions for the first six months, after which they became eligible for full-time positions.
Enabled concurrent use of short-time work systems, designed to provide employees time off for childcare, family-care and maternity protection, with flextime systems. (From April 2007)	All short-time and flextime work systems able to be used concurrently by employees.	Short-time and flextime work systems were unable to be used concurrently by employees.
Extended the period of employees' eligibility for childcare short-time work systems, flextime systems, overtime/holiday work limits, and night work limits. (From April 2007)	Period of eligibility extended to the end of the fiscal year in which employees' children entered the third grade of elementary school.	Employees were eligible for the systems until their children started elementary school.
Introduced an infertility treatment support system. (From July 2007)	Enabled employees or their spouses to undergo infertility treatments under the following provisions: 1. Up to 30 half day's leave granted per year. 2. Special leave granted. 3. Up to 2 million yen provided as a loan by Toray Welfare Society.	-
Extended the period of eligibility for leave to care for sick children. (From July 2007)	Leave to care for sick children available until the end of March of the year in which employees' children entered the third grade of elementary school	Leave was available for employees until their children started elementary school.
Provided leave for employees serving jury duty. (From July 2008)	Required period of paid leave granted when an employee is summoned for jury duty.	-
Established the Toray Smile Support Plan (April 2011)	Introduced a welfare point system offering a selection of programs with an emphasis on supporting childcare and home acquisition	-
Revised employee childcare	Adjusted the service fee to a 70% discount, through incorporation into the	Toray provided a corporate child care program for employees at a subsidized rate of 900 yen per hour, compared to the standard rate of

services payment assistance (April 2011)

above-mentioned Toray Smile Support Plan. Age limit for child eligibility was also eliminated.

2,000 yen per hour. The service is available for employees until the end of the fiscal year in which their children enter the third grade of elementary school.

*1: The registration system provides 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.



SPOTLIGHT

Takashi Teshigawara
Manager, Special Demand Section, Uniform & Advance Textiles Department
Toray Industries, Inc.

Balancing work and childcare responsibilities by coordinating childcare leave

My wife, Yuriko, and I are both managers at Toray. Since the birth of our first child six years ago, we have worked to balance our work and childcare responsibilities. When our second child was born in July 2010, I decided to take childcare leave for the first time, starting my two-month leave just as my wife finished hers, and consequently was the first male manager at Toray to take childcare leave.

In order to balance work and childcare responsibilities, it is essential to have the understanding and support of superiors and colleagues, and increase one's efficiency at work. I am very grateful to my colleagues who covered for me while I was away. Toray Group is improving its childcare support and creating supportive workplace environments by working with daycare companies and subsidizing costs.

As it becomes common for women in Japan to return to work after having a child, men will have to take on more childcare responsibilities. I would like to help change our corporate culture so that male employees can take a more active role in raising their children.



The couple took childcare leave in succession after the birth of their second child in July 2010

Wife's leave: August 31 to October 30, 2010 → → →

→ → → **Husband's leave: November 1 to December 31, 2010**

Yuriko Otaka

Manager, 1st Operation Section, Film Global Operation Department
 Toray Industries, Inc.

Occupational Safety

Occupational Safety and Accident Prevention Activities

As the first of its Corporate Guiding Principles, Toray Group places top priority on safety, accident prevention and environmental preservation, ensuring the safety and health of our employees, our customers and local communities, and actively promoting environmental preservation.

Toray Group Safety Meetings are held annually for the heads of Group companies, offices and plants in order to align safety activities and raise safety awareness. All employees are united in their efforts to achieve zero accidents with the thorough guidance of senior managers.

2010 Safety Slogan

IT-II We Should Achieve "Zero Accidents"
Keep the Basics and Work Safely!

Main Priority Activities in 2010

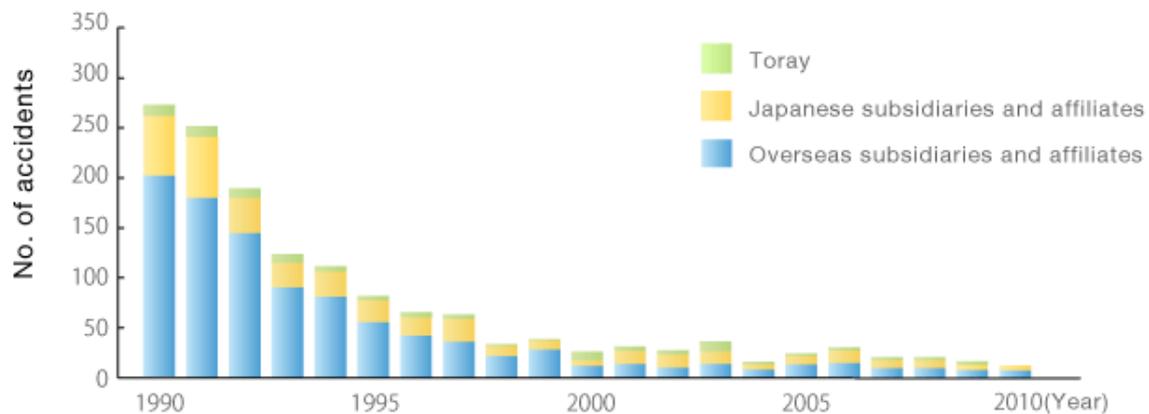
- Emphasize safety action
- Strengthen prevention measures against recurrence of similar accidents

Toray Group Safety Record

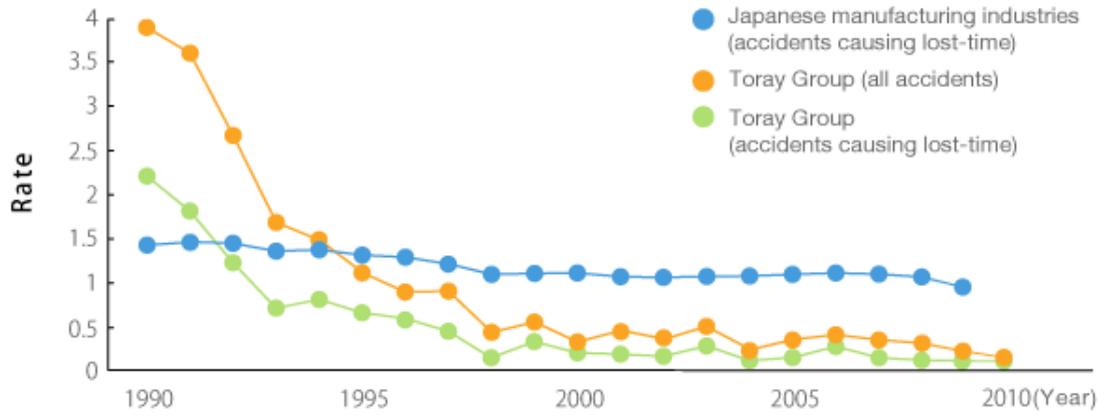
Safety records have been retained by Toray since 1980, and by Toray Group since 1990. Information on occupational accidents is shared Group-wide, and used to prevent similar incidents from occurring in the future. As a result, safety standards have improved at subsidiaries and affiliates both in and outside Japan to similar levels as Toray.

In 2010, the occupational accident frequency rate was 0.00 for Toray, and 0.20 and 0.11 for its subsidiaries and affiliates in Japan and overseas, respectively. Toray achieved a perfect record of zero occupational accidents (resulting in either lost work time or no lost work time) for the first time since the Company began keeping safety records.

Number of Occupational Accidents: Toray Group
(Lost worktime and non-lost worktime)



Occupational Accident Frequency Rate ^{*1} : Toray Group



*1: Occupational Accident Frequency Rate: Casualty toll per million man-hours worked

Improved Education and Training for Safety and Accident Prevention

Toray Group is committed to increasing safety education for employees. Occupational safety and accident prevention training is incorporated into the curriculums of specialized and level-specific organizational education programs. It includes direct safety training, an effective method for raising hazard awareness through employee participation in crisis situation simulations. Each Toray Group company and plant uses sophisticated training methods, which include simulated production-roll entanglement accidents and explosion demonstration. Additionally, Toray Group conducts ongoing awareness raising activities through a section in the Company magazine PEOPLE dedicated to safety and accident prevention.

Dust explosion demonstration

Explosion demonstration (Cangzhou Toray Fine Chemicals Co., Ltd., China)

Entanglement accident simulation (Okazaki Plant, Toray)

Toray safety mascot, Mr. Safety

Company magazine PEOPLE

Thorough Checklist Use for Accident Prevention

Fire safety at Toray Group centers on the use of an FP checklist (fire prevention checklist) for fire and explosion hazard inspections. The checklist consists of 906 items including lessons learned from past accidents. It is used consistently for safety inspections at Toray’s Japanese and overseas subsidiaries and affiliates.

As part of safety management efforts in the transportation of hazardous substances, Toray concludes security agreements with certain customers and transporters that outline specific safety responsibilities and roles. Handling manuals are also shared in order to ensure distribution safety.

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 FY 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 any of the approximately 3,600 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 application 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 facilities.

The health effects on former and current Toray Group employees as of March 31, 2011, are described in the table below.

	Number of individuals (Fatalities)
Certified occupational accidents (Toray Group)	46(32)
Certified health victims based on the Asbestos Law (Toray Group)	5(5)



For Our Shareholders

To provide our shareholders with dependable and trustworthy management

To ensure the confidence and support of society, Toray adheres to its governance structure and strives to be a company of integrity. Toray Group carries out various activities under the guidance of top management, in order to maintain a high level of Group-wide employee awareness for corporate ethics and legal compliance.

For Our Shareholders
Corporate Governance and Management Transparency

Toray Group is improving its corporate governance system and working to enhance management transparency. Through its CSR activities, Toray Group aspires to become an "Excellent Company" with global reach.

For Our Shareholders
Corporate Ethics and Legal Compliance

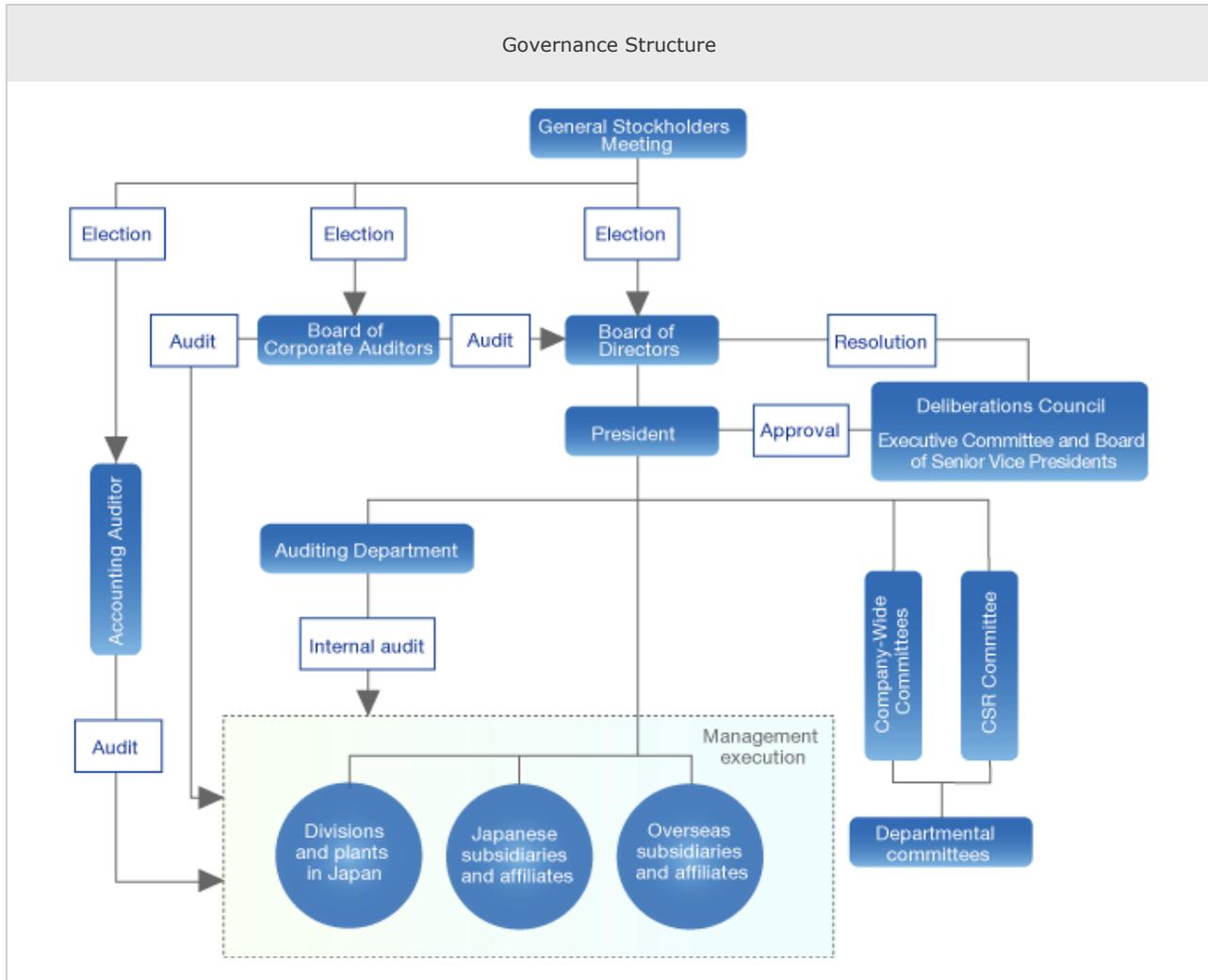
Corporate ethics and legal compliance is one of Toray Group's primary management objectives. The Group is earning the confidence of society by ensuring that all its executives and employees carry out their daily activities based on an awareness of these social responsibilities.

For Our Shareholders
Risk Management

Companies face diverse and complex risks, and corporate management involves dealing with these risks effectively. That is why Toray maintains a system of risk management extending from the identification and prevention of possible risks, to mechanisms for major crisis response.

Corporate Governance and Management Transparency
Toray Group Corporate Governance

In pursuit of its fundamental objective of remaining worthy of the trust placed in it by society and its stakeholders, Toray Group has developed a governance structure characterized by sincerity and transparency.



The Company believes that decision-making, management and supervision by the Board of Directors, all of whom are thoroughly familiar with these industries, will result in responsible, transparent management. As such, the Company follows an autonomous approach to governance, strictly adhering to approval authority as stipulated by its Top Management Authority regulations. The Executive Committee and the Board of Senior Vice Presidents efficiently deliberate matters for the approval of the president and Board of Directors. Management is further supplemented by special company-wide committees in charge of important management issues.

Comprising four auditors including two external auditors, the Board of Corporate Auditors provides thorough management oversight. In FY 2010, the auditors attended all the meetings of the Board of Directors. They also performed regular audits of business offices, plants, subsidiaries and affiliates in and outside Japan, as well as meetings involving all directors and general managers. This was carried out according to the plans and auditing policies for the current fiscal year decided by the Board of Corporate Auditors.

On June 24, 2011, the executive retirement benefit scheme was abolished for Toray directors and auditors. The scheme has been replaced by a stock-options program for directors and auditors, with the aim of further improving corporate value.

With the revision of the Tokyo Stock Exchange Securities Listing Regulations and Related Rules in December 2009, listed companies must have at least one independent director. In accordance to the requirement for an external director or corporate auditor without any risk of conflict of interest with general shareholders, Toray reported the appointment of two external auditors to the Tokyo Stock Exchange and four other stock exchanges in Japan where the company is listed.

Basic Policy for Internal Control Systems

In March 2008, Toray reviewed its Basic Policy for Internal Control Systems—a mandatory policy under Japan's Corporate Law. Some changes were made following a decision by a meeting of the Board of Directors in May 2006.

The main changes were as follows: (1) thorough implementation of security trade administration, (2) cutting all ties with antisocial forces, (3) promoting the establishment and operation of internal control systems for financial reporting. Details of these changes were described in the "Corporate Governance Report," submitted to the Tokyo Stock Exchange, and published on the company's website.

Related Information

- [Management Philosophy](#)

Internal Controls for Financial Reporting based on the Financial Instruments and Exchange Act

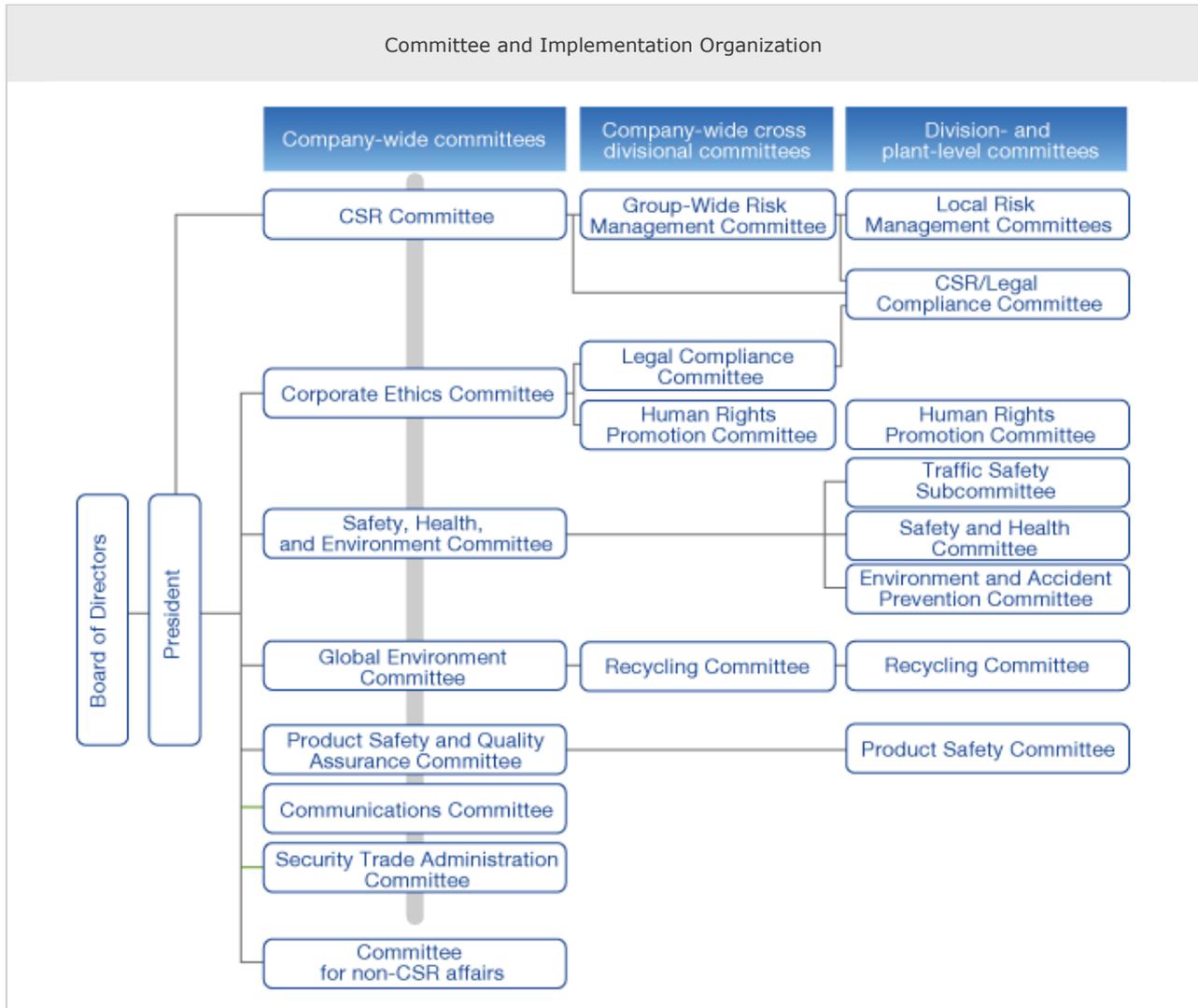
As required under Japan's Financial Instruments and Exchange Act as of the fiscal year ending March 31, 2009, Toray established an internal control system for financial reporting, and began its full-scale implementation in April 2008. The implemented financial reporting controls for FY 2010 were confirmed as effective, and were also verified by accounting auditors.

Dialogue with Labor Unions

Toray holds meetings of the Central Labor and Management Council twice a year. The meetings are attended by directors at the senior vice president level and higher and labor representatives at the union head level and above. At these meetings, management-related information is shared, and there is an ongoing dialogue with the labor union. Resolution of labor issues is undertaken at separate Labor and Management Council meetings.

Corporate Governance and Management Transparency
Promoting CSR Activities and Improving CSR Education

The CSR Committee, which reports directly to the president, coordinates the activities of six company-wide committees. Furthermore, CSR/Legal Compliance Committees have been established at each subsidiary and affiliate, division, and plant to help promote CSR activities. The director in charge of CSR activities acts as chairperson of the CSR Committee and is in charge of Group-wide CSR promotion.



Improving CSR Education

Toray is steadily promoting CSR activities throughout the Group by offering various educational opportunities. For example, CSR material is included in training for those promoted to management positions, and the content is updated each year.

In FY 2010, 10,077 Toray Group employees (including part-time and temporary personnel) at 43 Japanese subsidiaries and affiliates underwent training using an intranet CSR e-learning ^{*1} course that was first used for Toray head office employees in FY 2009.

*1: e-learning: training provided through PCs connected to the company's intranet

Corporate Governance and Management Transparency Information Disclosure Principles

Being fully aware of the importance of corporate social responsibility, Toray strives to become an "open company," in pursuit of management transparency, on the basic principle of not only complying with disclosure rules designated by law but also making fair, timely and appropriate disclosures, which exclude those pertaining to socially-accepted corporate secrets and nondisclosure agreements. The social responsibilities affecting information disclosure must be fairly fulfilled for our stakeholders, including customers, suppliers, employees, stockholders, investors and local communities, based on the following principles.

Information Disclosure Principles (adopted January 2004)

1. Information Disclosure Principle:

Do not avoid reality, conceal facts, or lie when disclosing information.

2. Voluntary Disclosure Principle:

Comply with legal disclosure requirements and voluntarily disclose information that can be disclosed.

3. Timely Disclosure Principle:

Disclose information that can be disclosed as quickly as possible.

4. Fair Disclosure Principle:

Disclose information to all stakeholders fairly and without bias.

5. Information Management Principle:

Employees responsible for disclosure shall strive to maintain strict information management until disclosure.

As a part of its Management Philosophy, Toray Group's Corporate Guiding Principles express "ethics and fairness." It also states: "We will obtain the trust of society and meet expectations by acting fairly with high ethical standards and a strong sense of responsibility, and maintaining transparency in management." As a firm set of standards, Toray has established its Corporate Ethics and Legal Compliance Code of Conduct outlining eight general rules.

Corporate Ethics and Legal Compliance Code of Conduct (Adopted October 2003)**1. Contribute to society**

As a company aspiring to be a New Value Creator, provide trustworthy products and services that satisfy our customers.

2. Communicate with society

Communicate with the various parties associated with the company, including its customers and shareholders as well as members of the local community. Actively and fairly disclose pertinent information about the company.

3. Behave as a good corporate citizen

Comply with laws and regulations, respect human rights, and actively contribute to society as a good corporate citizen.

4. Play an active role in preserving the global environment

Recognize that playing an active role in preserving the global environment is an important management issue, and strive to coexist with the environment in all corporate activities by conserving energy, reducing emissions and waste, promoting recycling, and so forth.

5. Prioritize fairness and trust in corporate activities

Engage in proper trade based on free, fair, and transparent market competition, and conduct corporate activities that earn the deep trust of society.

6. Comply with national laws and regulations

Pursue management reform from a global perspective, comply with the respective national laws and regulations in overseas operations, and be self-disciplined with high ethical standards. Conduct corporate activities with respect to the culture and customs of each country and contribute to the advancement of local communities.

7. Raise motivation and create a corporate culture that lets employees demonstrate their ability

Strive to create a corporate environment that allows each and every employee to be motivated to demonstrate their ability, respect individual human rights, character, and personality, and maximize creativity and professionalism.

8. Break off relations with antisocial forces

Always work for the good of society, break off relations with antisocial forces that threaten the order and safety of civil society, and take a resolute stand as a unified company.

Corporate Ethics and Legal Compliance
Emphasizing Corporate Ethics and Legal Compliance

Toray Group considers corporate ethics and legal compliance to be among its most important management issues. Based on a clearly defined stance and the leadership of top management, the Group works to further improve its conduct in this area.

Promoting Corporate Ethics and Legal Compliance

Toray has established a Corporate Ethics Committee and a Company-Wide Legal Compliance Committee. The Corporate Ethics Committee is chaired by the president and comprises employees and management, who work together to discuss comprehensive policies on corporate ethics. Operating under the Corporate Ethics Committee, the Company-Wide Legal Compliance Committee is primarily comprised of section managers. It promotes independent activities, placing importance on direct communication with top management for addressing Group-wide issues. CSR/Legal Compliance Committees at the division- and plant-level encourage employees to perform on-site activities.



CSR/Legal Compliance Committees have been established at domestic subsidiaries and affiliates, with appointed executives and section managers in charge of legal compliance. Furthermore, a Group-wide corporate ethics and legal compliance meeting is held annually to deepen understanding of revised laws, and respond to individual issues. Activities are promoted in conjunction with the relevant department at Toray's headquarters.

CSR/Legal Compliance Committees have also been established at overseas subsidiaries and affiliates with the support of Toray's International Division, the CSR Operations Department, and other relevant sections. The committees independently promote initiatives for legal compliance and corporate ethics.

Corporate Ethics and Legal Compliance Code of Conduct and Handbook

The Corporate Ethics and Legal Compliance Code of Conduct is a firm set of standards that is strictly observed by all Toray Group executives and employees in relation to all corporate activities both in Japan and abroad.

Violations of these rules, which are upheld by an inquiry conducted by the Rewards and Sanctions Committee, are penalized strictly. Proven violations also result in the disclosure of relevant information, an investigation of the cause, and action to prevent a recurrence.

All Toray executives and employees including part-time and temporary personnel receive a copy of the Corporate Ethics and Legal Compliance Handbook, which explains the Company's Code of Conduct in detail. In April 2010, the third edition of the Handbook was published in order to provide updated content in response to revisions of the Japanese Antitrust Law and the internal hotline system. Toray Group also publishes similar codes of conduct, guidelines, handbooks, and other

Main Content of the Corporate Ethics and Legal Compliance Handbook

- Carrying out proper transactions based on free, fair, and transparent market competition (compliance with Japan's Antitrust Law, Subcontract Act, and Act against Unjustifiable Premiums and Misleading Representations)
- Respecting local laws and regulations in all countries where Toray Group operates
- Respecting human rights and prohibiting all forms of discrimination
- Using proper accounting practices (complying with all relevant laws including Japan's Corporate Law, Tax Law and Financial Instruments and Exchange Act)
- Complying with Japan's Foreign Exchange and Foreign Trade Act, Political Funds Control Act, and Public Offices Election Act
- Prohibiting any form of bribery involving stakeholders
- Corporate Ethics and Legal Compliance Helpline, an internal hotline system



Corporate Ethics and Legal Compliance Handbook (third edition)

Related Information

- [Corporate Ethics and Legal Compliance Code of Conduct](#)

Fostering a Corporate Culture Based on Ethics and Legal Compliance

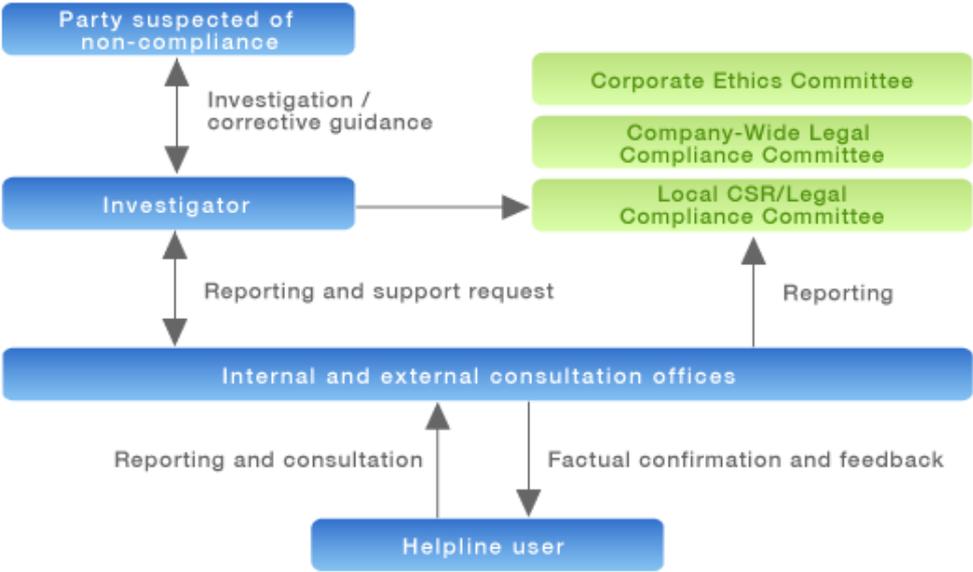
In order to ensure a thorough understanding and acceptance of corporate ethics and legal compliance standards, Toray Group carries out awareness raising activities. For example, corporate ethics and legal compliance issues are taken up in study groups, and instances of corporate misconduct are reviewed at monthly meetings held at each workplace. The Group has introduced a Legal Reform Information Distribution System, under which bulletins relating to amendments to laws relevant to administration within Toray Group are emailed to all Toray departments, Japanese subsidiaries and affiliates on a weekly basis. The System includes a special website that allows employees and managers to check revised laws in detail. As part of efforts to strengthen information distribution relating to legal compliance, a Company-Wide CSR/Legal Compliance Bulletin Board has also been set up on the company intranet.

Enhancement of the Internal Hotline System

Any actions that may not comply with the Corporate Ethics and Legal Compliance Code of Conduct should be reported to and discussed with a direct supervisor at the earliest instance. Should that channel present difficulties, several alternative options are available. These include reporting or discussing matters at consultation offices in each division, plant and labor union. Employees can also use a dedicated hotline or email service to directly report to or consult with the chairperson or secretariat of the Company-Wide Legal Compliance Committee.

As part of efforts to strengthen measures that prevent non-compliance, Toray created an internal Corporate Ethics and Legal Compliance Helpline, which began operation at Toray Group companies in Japan from April 2010. Based on existing hotline systems operating at each Group company, the new helpline offers an expanded system for efficiently addressing non-compliance problems. In addition to internal consultation offices at each company, a new external consultation service was provided for the entire Toray Group.

The confidentiality of helpline users is strictly maintained through the distribution of guidelines and provision of training for consultation office staff. Labor contracts and company regulations specifically prohibit discrimination against employees making reports or seeking advice, and clearly stipulate disciplinary action against those attempting to illegally seek gains through false accusations.



Company-Wide Activities in FY 2010

Toray established or undertook the following company-wide initiatives in FY 2010 relating to corporate ethics and legal compliance:

- Provided thorough training on security trade administration
- Maintained internal controls for financial reporting
- Made thorough efforts to promote awareness on Antitrust Law compliance
- Established and promoted a new internal helpline system

Strengthening Security Trade Administration

In order to help promote international peace and security as well as stable international free trade, Toray Group diligently manages security trade administration in accordance with laws such as Japan's Foreign Exchange and Foreign Trade Act, and as part of the Group's social responsibilities.

Related Information

- [Addressing Existing Major Risks](#)

Corporate Ethics and Legal Compliance
Antitrust Law Compliance

Antitrust Law Compliance Education

In order to ensure thorough compliance with the Antitrust Law, Toray Group has prepared an Antitrust Law Compliance Program and an Antitrust Law Red Card system to draw attention to possible violations. Thorough efforts to raise their awareness among employees are being made.

Education on the Antitrust Law is also included as part of training for new employees, employees promoted to management positions, and in other seminars at Toray and its subsidiaries and affiliates. In March 2009, Toray was issued a cease-and-desist order by the Japan Fair Trade Commission (JFTC) for suspected price fixing activities of cross-linked high-foaming polyethylene. In addition, Toray's subsidiary, Toray PEF Products, Inc., was issued a cease-and-desist order as well as an order for surcharge payment (see CSR Report 2009).

Regarding the incidents with great seriousness and sincerity, Toray continued efforts in FY 2009 to strengthen measures to prevent their reoccurrence via regular audits, refresher training for sales employees, and other efforts to ensure thorough understanding of the Antitrust Law Compliance Manual across the entire Toray Group.

Compliance Audit Concerning the Antitrust Law

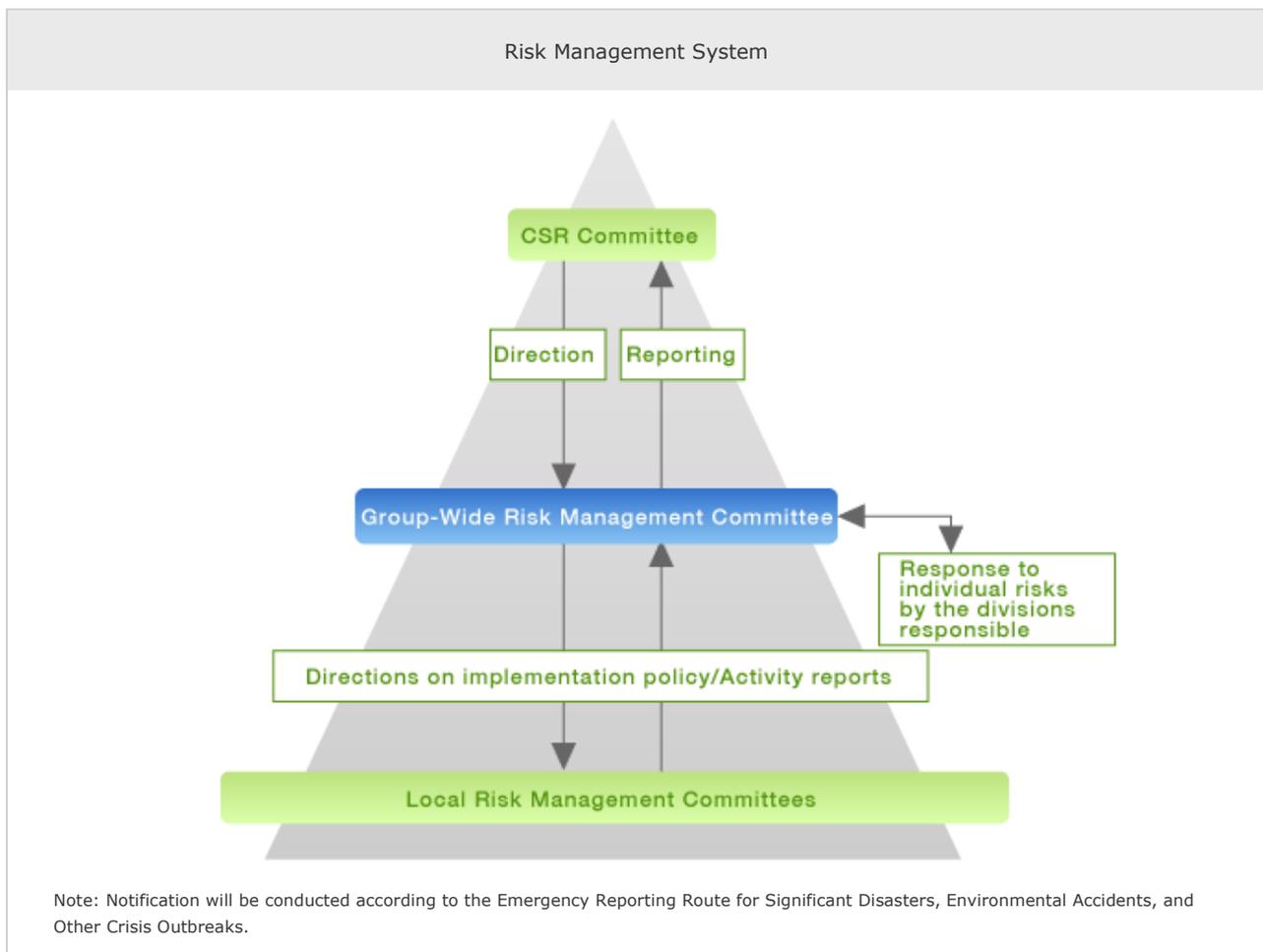
Toray Group is implementing an internal audit of conditions for compliance with the Antitrust Law. The Group strives to prevent the reoccurrence of any issues discovered in the audit through immediate requests for improvement measures. Toray will continue to perform these internal audits Group-wide.

Risk Management
Risk Management System and Initiatives

Toray Group believes risk management is a fundamental pillar of corporate management. It operates a Group-wide risk management system based on three-year cycles, and strives to identify and reduce potential risks. The Group has also established a set of Crisis Management Regulations. Accordingly, an Emergency Quick Response System is in place for deployment in the event of a major crisis to prevent crisis escalation and carry out rapid recovery.

Developing a Risk Management System

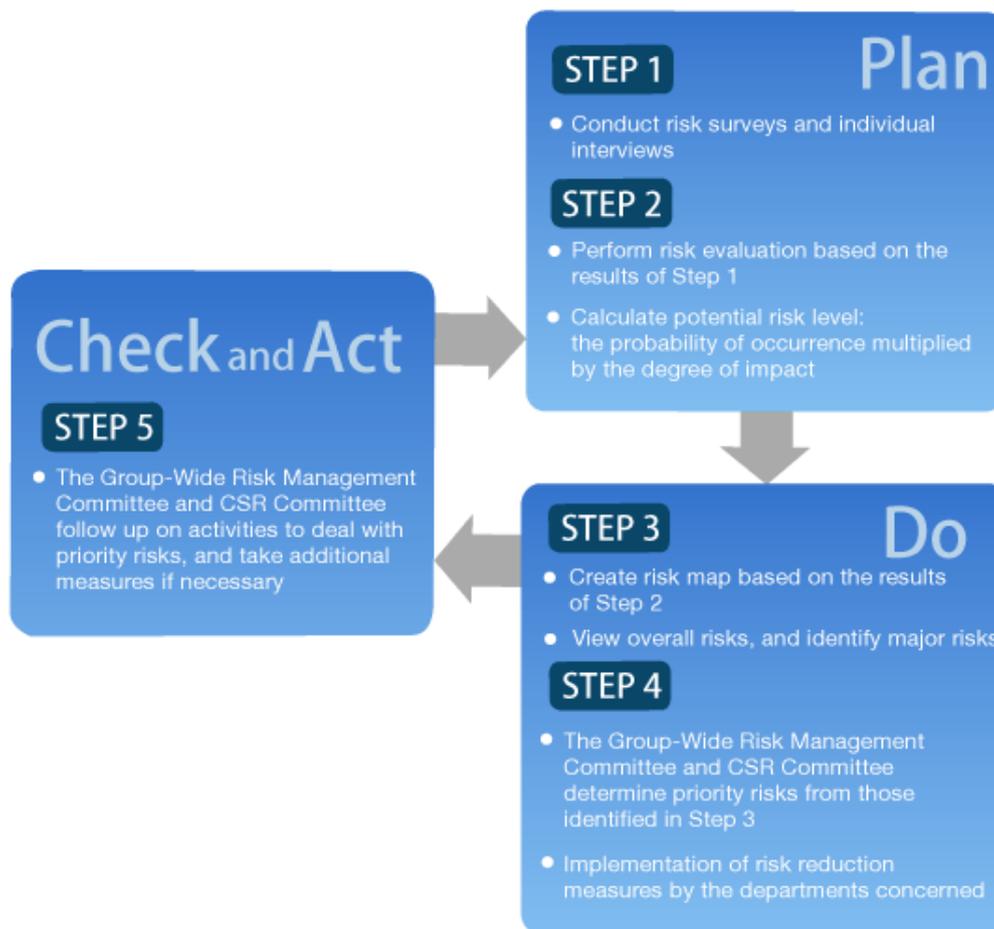
Toray has established a Group-Wide Risk Management Committee under the CSR Committee. It monitors risk reduction progress across all Group companies, and conducts integrated planning and promotion of risk management measures. Local Risk Management Committees have also been established at each division, department, office, and plant. In accordance with company-wide measures, they work to minimize specific risks relevant to the particular business area or plant, while taking measures to prevent incidents from occurring. In conjunction with specific risk reduction measures at each division or plant, coordinated risk management is also carried out. Progress made by each local committee is reported to the Group-Wide Risk Management Committee, before being periodically reported to the CSR Committee.



Promotion of Enterprise Risk Management

Toray Group evaluates management risk from a Group-wide perspective. Commenced in FY 2008, measures are carried out through the implementation of plan-do-check-act (PDCA) cycles as shown below.

PDCA Cycle for Group-Wide Risk Management



Measures to address priority risks are developed by working groups or departments responsible for risk management. Progress is regularly reported to the Group-Wide Risk Management Committee, which evaluates the degree of risk reduction at the manager's meeting.

As a biennial measure, in FY 2010, Toray conducted a simple survey in order to identify the most recent risks. At Japanese and overseas subsidiaries and affiliates, priority risks were selected considering the characteristics of each region and industry type, and specific risk reduction activities were carried out at each company. Progress is regularly reported to the Group-Wide Risk Management Committee.

Addressing Priority Risks

Working groups have been established, and measures are being promoted for the following priority risks:

1. Maintaining information security

All employees including temporary staff participate in internal e-learning programs on information security. Tighter management of recording media is also being promoted.

2. Supply chain risk reduction

Internal rules were created and additional risk reduction measures were investigated across Toray's entire supply chain. The CSR procurement survey was reviewed by the Company with biodiversity protection in consideration. In FY 2010, Toray expanded risk reduction activities such as conducting CSR procurement surveys for the supply chains of principal subsidiaries and affiliates in Japan.

3. H1N1 Influenza Outbreak Countermeasures Plan

Toray investigated measures to deal with the global A/H1N1 influenza pandemic in 2009, and compiled information for the completion of an H1N1 Influenza Outbreak Countermeasures Plan.

Related Information

Addressing Existing Major Risks

Toray is promoting ongoing risk reduction activities through Group-wide committees that deal with existing major risks separately from the priority risk reduction measures. They include legal compliance, security trade administration measures, fluctuations in raw material markets, business strategy, and fluctuations in exchange rates and economic conditions. Progress is reported to the Board of Directors as necessary.

As part of these efforts, Toray performs risk management in security trade administration covering the export of products, devices, materials, and samples; and the transfer of technologies outside Japan. Particularly strict management is necessary for TOREYCA® 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. In FY 2010, Toray carried out the following measures to enhance risk management.

1. Development and skills improvement for security trade specialists

Toray established a training program for employee specialists to review cases where export permission may be required. Implemented at offices and plants across the Company, the program is enhancing the development of personnel and enabling them to act accordingly.

2. Regular audits conducted

Toray and its subsidiaries and affiliates conducted surveys and onsite audits. Through these and ongoing follow up activities, effort was focused on further improving management.

3. Failure reports

Failure cases in risk management were reported and evaluated to prevent the occurrence of similar cases.

4. Development and Group-wide expansion of operation review systems

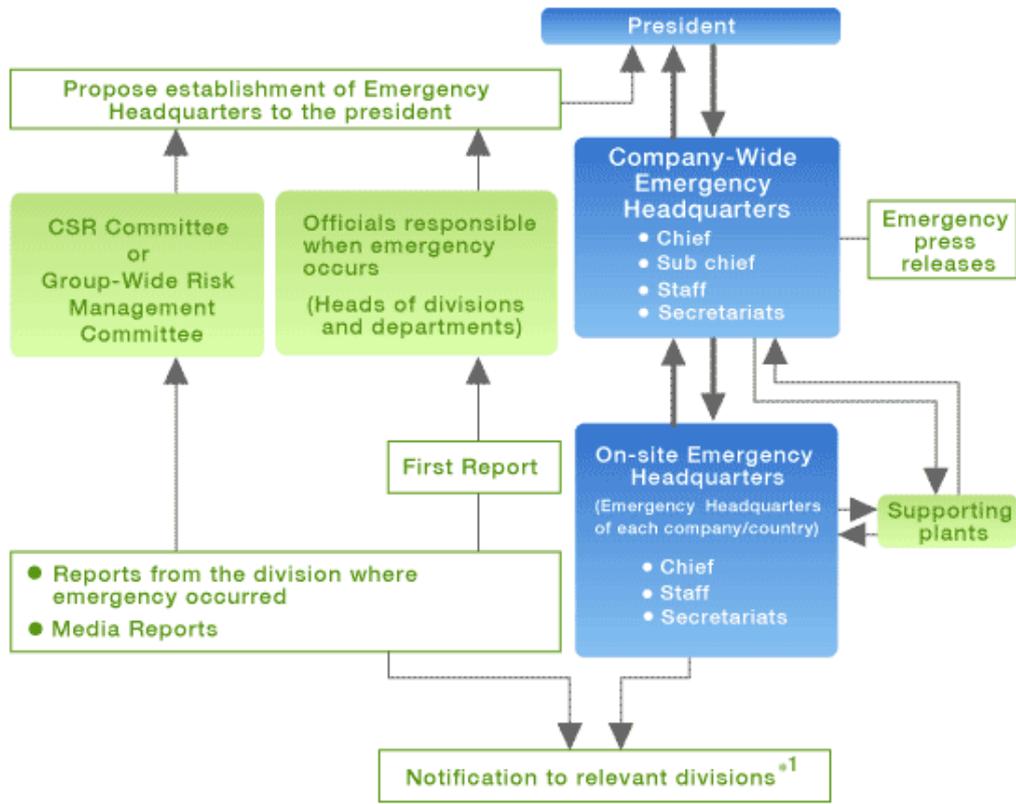
Toray improved the efficiency of its risk management operations along with measures to prevent human error.

Crisis Management Systems

Toray has established Crisis 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 Company works to ensure the thorough implementation of these regulations when required.

An Emergency Quick Response System is put into effect in the event of a major crisis affecting Toray's operations. Notification is conveyed via the Emergency Reporting Route, and a Company-Wide Emergency Headquarters is established, led by the Toray president, or a person nominated by the president. The Company-Wide Emergency Headquarters then works closely with the Onsite Emergency Headquarters, undertaking a variety of activities aimed at preventing further escalation of the crisis and achieving a swift recovery. The Company-Wide Emergency Headquarters is responsible for the provision of emergency information to relevant areas, both within and outside Toray, in accordance with regulations. When the Great East Japan Earthquake struck on March 11, 2011, Toray set up its Company-wide Emergency Headquarters according to the Crisis Management Regulations. As a result of prompt and appropriate response to the situation, the disaster's impact on the Company was minimized.

Emergency Quick Response System



*1: Notification is conducted according to the Emergency Reporting Route for Significant Disasters, Environmental Accidents, and Other Crisis Outbreaks.

Related Information

- [Environmental Risk Management](#)

Risk Management
Business Continuity Plan (BCP) Initiatives

Toray has long taken seriously the risks of a destructive earthquake, and has been carrying out initiatives based on a Major Earthquake Business Continuity Plan.

Fortunately, no Toray Group employees came to harm in the Great East Japan Earthquake. Emergency response manuals for the supply chain functioned effectively.

In preparation for future large-scale earthquakes predicted for the Tokai, Tonankai, and Nankai regions, satellite phones and an earthquake early warning system were introduced at all Toray offices and plants. Emergency preparedness measures are being implemented systematically: tsunami evacuation drills were carried out in the earthquake's aftermath, and buildings are undergoing further seismic reinforcement.

Toray has identified new risks from the disaster, such as radioactive contamination from nuclear power plant accidents, tsunami, planned power outages due to insufficient power, and unexpected large-scale power outages. They were assessed for incorporation into existing business continuity plans (BCP), placing the highest priority on the protection of human life. An internal survey was promptly conducted to evaluate the Company's recent emergency response, and important issues were identified. Existing response plans are now being actively revised as a result, and Toray Group will continue to take planned measures to further develop effective BCPs.



Emergency Response Plan for Severe Earthquakes (Tokyo Head Office)

Related Information

- [Response to the Great East Japan Earthquake](#)

Risk Management

Initiatives to Protect Personal information

Toray established a set of Personal Information Management Regulations in March 2005, and the Personal Information Management Database was launched on the company intranet. All personal information held by each department is registered in the database and strictly managed. In addition, inspections are conducted regularly by relevant offices.



Toray Group strives to engage with stakeholders in trusting relationships and fulfill its environmental responsibilities as a materials manufacturer. The Group aspires to be one that is valued by the local communities where it operates, through ongoing efforts in areas such as environmental safety, human safety, and accident prevention.

■ For Society

Communication

Dialogue with stakeholders forms the basis of a company's operations. Toray Group works to provide appropriate information in a timely manner to all its stakeholders, including customers, employees, stockholders, and local communities. In this way, the Group promotes good communication while responding to diverse stakeholder expectations.

■ For Society

Social Contribution Activities

In order to help realize a more prosperous society, Toray Group will continue to undertake activities that promote science, technology, arts, culture, and sports, contribute to local communities, and foster the next generation.

■ For Society

Safety and the Environment

By placing top priority on the management of safety, accident prevention, and environmental preservation, Toray Group has been working to further reduce its environmental load in areas such as greenhouse gas emissions. As a result, substantial results were achieved in its Third Three-Year Environmental Plan.

In accordance with its Basic Policies to Promote Dialogue with Stakeholders, Toray Group is committed to broadening communication and collaboration with all stakeholders toward improving satisfaction. Based on the policies, Toray Group employees engage with stakeholders through a variety of corporate activities.

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.

Providing Information for Stakeholders

Toray posts a variety of corporate information on its website relating to its business, research and development, investor relations, social responsibility activities, and company data. The Company also provides a range of printed materials upon request, while individual Toray workplaces prepare communication tools to foster good relations with stakeholders. In FY 2010, Toray actively distributed information internally and externally regarding the appointment of a new president. Increased awareness on the completion of the medium-term management program Project IT-II, and the new long-term corporate vision and medium-term management program to commence in FY 2011 was promoted through the company magazine and other media. The Company's Chinese-language website was also improved with the aim of enhancing communication globally.

Dialogue and Collaboration between Stakeholders and Toray Group				
	Basic stance	Communication tools	Communication opportunities	Reflect dialogue / Promote collaboration
Customers	Build trust by listening to customer feedback and providing exceptional products and services.	<ul style="list-style-type: none"> ● Website ● Press releases ● Product pamphlets ● Product descriptions ● Material safety data sheet (MSDS) ● Advertising 	<ul style="list-style-type: none"> ● Marketing and sales activities ● Consumer service representatives 	<ul style="list-style-type: none"> ● Joint product development ● Create products and services that meet customer demands
Stockholders and investors	Provide accurate business information and ensure effective communication.	<ul style="list-style-type: none"> ● Website ● Financial Results ● Financial Report ● Business Report for Toray stockholders 	<ul style="list-style-type: none"> ● General Stockholders Meetings ● Investor briefings ● IR activities 	<ul style="list-style-type: none"> ● Regular reporting and study on opinions of stockholders and investors at the Board of Directors meetings

		<ul style="list-style-type: none"> • Annual Report 		
Business partners	Observe laws and regulations and consider impact on the environment, and promote openness and ensure fair trade.	<ul style="list-style-type: none"> • Website • Corporate Profile • CSR Report 	<ul style="list-style-type: none"> • Purchasing activities • Surveys • Briefings 	<ul style="list-style-type: none"> • Joint operations and development • Green procurement • CSR procurement
Employees	Create ideal working conditions to match diversifying employment patterns.	<ul style="list-style-type: none"> • Toray Navi intranet • Company magazine PEOPLE (Japanese and English Editions) 	<ul style="list-style-type: none"> • Business Results briefings • Meetings with the presiden • Labor-management consultation on corporate management 	<ul style="list-style-type: none"> • Improve working conditions • Improve workplace environment • Labor regulations maintenance
Government	Cooperate and work to maintain a sound relationship.	<ul style="list-style-type: none"> • Website • Corporate Profile • CSR Report • Site Reports 	<ul style="list-style-type: none"> • Plant tours • Producing and releasing various reports 	<ul style="list-style-type: none"> • Conclude individual agreements
Local communities	Increase communication with residents near plants, and explain business practices and environmental activities.	<ul style="list-style-type: none"> • Website • Corporate Profile • CSR Report • Site Reports 	<ul style="list-style-type: none"> • Plant tours • Meetings with local community associations • Sports classes by the Toray Arrows volleyball teams, as well as the Toray judo and kendo (Japanese fencing) clubs 	<ul style="list-style-type: none"> • Conclude individual agreements • Promote volunteer activities
NPOs	Promote tie-ups with NPOs to advance mutual cooperation.	<ul style="list-style-type: none"> • Website • Corporate Profile • CSR Report 	<ul style="list-style-type: none"> • Support NPO activities 	<ul style="list-style-type: none"> • Participate in NPO activities
Citizens	Share opinions with indirect customers and appraise feedback.	<ul style="list-style-type: none"> • Website • Advertising • Corporate Profile • CSR Report 	<ul style="list-style-type: none"> • Exhibitions, events • Inquires page on the website 	<ul style="list-style-type: none"> • Develop products with end-users in mind • Support academic and cultural activities
Global community	Work to expand global activities to create a better society.	<ul style="list-style-type: none"> • Website • Press releases • Corporate Profile • CSR Report 	<ul style="list-style-type: none"> • International conferences • Toray Science Foundations (Malaysia, Thailand, and Indonesia) 	<ul style="list-style-type: none"> • Develop products that contribute to society and the environment • Support academic and cultural activities
Media	Work for enhanced transparency in management by ensuring public accountability and engage in shaping	<ul style="list-style-type: none"> • Website • Press releases • Corporate Profile • CSR Report 	<ul style="list-style-type: none"> • Press conferences • Press Interviews • Surveys • Industry Activity PR 	-

Communication
Communication with Customers

In order to realize Customer-focus, Toray is actively promoting communication led by its marketing and sales departments. In FY 2010, numerous exhibits and briefings were held for customers, including booths at Eco-Products 2010 and Messe Nagoya 2010.

Toray also holds exhibits at customer premises to increase opportunities for directly interacting with clients. In March 2011, an exhibit was organized at the headquarters of Sony Corporation to provide a comprehensive presentation of Toray Group materials. Numerous Sony development and purchasing personnel attended, and there was a lively exchange of ideas with Toray representatives.



Eco-Products 2010



SPOTLIGHT

Exhibiting at the China-Japan Green Expo 2011

Toray exhibited at the China-Japan Green Expo 2011, held from June 1-3, at the China National Convention Center in Beijing. Sponsored by the China Council for the Promotion of International Trade and the Japan Business Federation (Keidanren), the Expo promoted the building of a greener future for the two countries. The international event attracted approximately 20,000 visitors, and featured displays of outstanding technology from Chinese and Japanese companies, research institutions and national/local governmental agencies.

The centerpiece of the Toray booth was a cut-away car. In addition to advanced automobile materials and technologies, the booth showcased the Company's environmental technologies in the areas of water treatment, energy saving, new energy, biomass, and environmental load reduction. At a forum held in conjunction with the event, a lecture was given by Toray Chairman Sadayuki Sakakibara, in addition to specialized seminars by other Toray executives.



Toray booth



Toray Chairman Sakakibara giving a lecture on Japanese advanced materials for solving environmental problems

Communication

Communication with Stockholders and Investors

Under its policy for information disclosure, Toray does its utmost to fairly, timely and appropriately disclose a broad range of information beyond what is required by laws and regulations. To this end, Toray established an Investor Relations Department directly under the president. The Company also strives to reach out to stockholders and investors at every possible opportunity, and reflect their opinions in its management and business activities.

Active Communication through Investor Briefings

Toray hosts quarterly briefings for institutional investors and securities analysts on the same day that it announces its financial results. It also participates in company briefings held by various stock exchanges in order to communicate directly with individual investors.

The Group's major IR activities in FY2010 are as follows:

Activities	Attendees from Toray	Number of events	Approximate number of participants/frequency
Briefings on business results announcements	President, Executive in charge of Investor Relations Department, Executive in charge of finance and controller's division.	4	695 participants
Briefings for individual investors	General Manager of the Investor Relations Department	2	448 participants
Meetings and conference calls with investors and analysts	Executive in charge of Investor Relations Department; General Manager and staff of the Investor Relations Department	As required	770 instances

IR Information Disclosure and Corporate Ratings

Useful stockholder and investor information including content on management policies and strategies, as well as financial results data can be found in the Investor Relations section of the Toray website. The Company strives for fair information disclosure by swiftly posting IR information, such as presentation materials disclosed at briefings for institutional investors and English translations of the materials.

Awards for Toray IR activities and its corporate ratings in FY 2010 are as follows:

Evaluations	Organization Details
Daiwa Investor Relations Co., Ltd.	Outstanding company for Internet IR site content
Nikko Investor Relations Co., Ltd.	Most outstanding site in a completeness ranking of listed company websites in FY 2010
enterprise.com (Belgium)	110th place in the Best Annual Reports 2010 Top 500 Annual Reports (10th place among Japanese companies)

Evaluation by Socially Responsible Investment (SRI) Index

The following are Toray's ratings by SRI survey organizations in FY2010:

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Survey Name	Rating
"Survey of Corporate Social Responsibility" Center for Public Resources Development (Japanese NPO)	A (highest level)
"Base of Integrity Screening" Integrex Inc. (Japan)	No.1 in the industry (textile products, pulp and paper sector)

Main SRI indexes in which Toray is included

An SRI index is based on stocks in companies that outperform a set of standards for CSR activities. The companies providing these indexes independently select index components and calculate indexes based on publicly available data and questionnaire surveys.

As of March 2011, Toray is included in the following SRI indexes:

• FTSE KLD Global Climate 100 Index

Global Climate 100 Index, comprised of 100 companies that are leaders in providing long-term solutions to global warming and climate change.

• Morningstar Socially Responsible Investment Index (MS-SRI)

The Morningstar Socially Responsible Investment Index (MS-SRI) tracks the share performance of 150 selected listed Japanese companies based on their commitment to CSR. It is the first such index in Japan.



Reflecting Stockholder and Investor Opinion

The opinions of stockholders and investors obtained in the course of day-to-day communication with investors and at IR meetings are regularly reported to the Board of Directors. They are also periodically discussed by the Company-Wide Communications Committee, composed of members of management, as the Company endeavors to ensure the opinions of stockholders and investors are reflected in management and business activities.

Convenient General Stockholders Meetings

For the convenience of stockholders, Toray avoids holding Stockholders Meetings on a date when the majority of companies hold their Stockholders Meetings. Notices of General Stockholders Meetings are sent out as early as possible to ensure that all stockholders are given enough time to consider scheduled proposals. In FY 2010, the notice was dispatched approximately three weeks prior to the meeting date.

Related Information

- [Ordinary General Meeting of Stockholders](#)

Communication

Communication with Business Partners

The Group holds policy briefings with business partners, carries out surveys of their CSR procurement to foster mutual understanding and closer collaboration.

Related Information

- [CSR Procurement](#)

Communication

Communication with Employees

Toray communicates with its employees through various forms of media, and is striving to promote the sharing and understanding of information to strengthen the corporate brand.

Following the appointment of a new president in FY 2010, the president's message to employees was posted on the Toray Navi intranet, and an interview was published in the company magazine. From May to November 2010, meetings hosted by the president to exchange opinions with mid-level managers were held at Toray offices and plants. A total of approximately 550 employees attended, and suggestions were incorporated into the new medium-term management program toward investigating and implementing systems that provide further professional development support to mid-level managers.

In February 2011, booklets and PDF files were prepared to promote awareness and understanding of the new long-term corporate vision AP-Growth Toray 2020 and the medium-term management program Project AP-G 2013, both of which took effect in April 2011. The materials were distributed across the Toray Group worldwide.

Communication

Communication with Local Communities

Toray Group companies hold regular community meetings with residents near their plants, and participate in community festivals and events sponsored by local governments. Through cleanup activities around plants, community summer festivals sponsored by Toray and other activities, the Group strives to foster good communication with local residents.

In October 2010, Toray's Ishikawa Plant organized a panel exhibit showing semi-finished and finished products at the Nomi City Commerce and Industry Exhibition in Nomi, Ishikawa. The event was held as part of the 50th anniversary of the Japanese Commerce and Industry Association Act. In the area of apparel, the popular HEATTECH® and SILKY DRY® products were featured, while in the carbon fiber products area, familiar products such as golf clubs were showcased, in addition to a Boeing 787 model. Panels explaining Toray's product life cycle assessment (LCA) activities were also displayed.



Commerce and Industry Exhibition in Nomi,
Ishikawa

In addition, the Toray Okazaki Plant participated in a presentation of first-response fire-extinguishing equipment held by local municipal fire departments. . Toray offices and plants participated in joint disaster training for local companies and first-response fire-extinguishing training. The activities helped to maintain strong community relations and raise safety and disaster awareness.

*HEATTECH® and SILKY DRY® are registered trademarks of Fast Retailing Co., Ltd.

Communication

Communication with NPOs

As the importance of NPOs as stakeholders in industry increases, Toray aims to build long-term and proactive communications with such organizations in the future.

Yoshiki Makabe, Deputy Director of Toray's Advanced Materials Research Laboratories, conducted a hands-on class entitled "Future of Society through Chemistry" at the Creativity Summer School on August 5, 2010, sponsored by the NPO Net Journalist Association.

The class was organized by the school principal Akito Arima, also the Director of the Science Museum in Tokyo, former Minister of Education, and former President of Tokyo University. Held annually near the foot of Mt. Fuji, the Creativity Summer School selects 40 second-year junior high school students from across Japan based on their love of science. Students participate in classes conducted by internationally renowned scientists; in 2010, classes were taught by physics Nobel laureates Makoto Kobayashi and Toshihide Masukawa, as well as astronaut Soichi Noguchi.

For his class, Deputy Director Makabe gave a presentation on Toray's advanced materials such as carbon fiber, hollow fiber membranes, fuel cells, photolithography, and polylactic acid. Numerous samples of the materials and equipment were also provided for students to conduct experiments and observations. The students participated enthusiastically in the class and were encouraged to make great achievements as scientists in the future.



Deputy Director Makabe (left) conducting the class



Chief Researcher Yoshioka (left) capturing the interest of students

Communication
Communication with Citizens

Toray strives to create opportunities for engaging with local residents through exhibitions and events, and actively seeks to obtain feedback from members of the public who represent the Company's indirect customers.

The Ishikawa Environment Fair 2010 was held at the Ishikawa Prefectural Industrial Exhibition Center on August 21 and 22. As in 2009, the Toray Ishikawa Plant set up a booth with Ichimura Sangyo Co., Ltd; under the concept of "Reducing CO₂ Emissions through the Use of Carbon Fiber," panels on life cycle assessment, and carbon fiber and prepreg materials were displayed. The companies also showcased rear spoilers and propeller shafts as examples of carbon fiber being used to lighten vehicles in the low carbon society theme zone sponsored by the Ishikawa Prefecture Global Warming Prevention Office.

The fair attracted around 22,000 visitors, many of who stopped by the Toray and Ichimura Sangyo booth and were able to gain a deeper understanding of how carbon fiber can contribute toward global warming prevention.



Plant Manager Shunsuke Komichi (right) giving an explanation to Masanori Tanimoto, Governor of Ishikawa Prefecture (center), with Director Matsumura of Ichimura Sangyo (left) looking on

Communication

Communication with the Media

The Corporate Communications Department serves as the intermediary between the Company and the mass media. The department is working with a full understanding of the Company's accountability for information disclosure to stakeholders and the role it plays in shaping public opinion. Established directly under the president, the department works with a range of news organizations. It strives for fair and equitable transmission of information, even when it might be sensitive or negative, based on Toray's Information Disclosure Principles.

Toray's main PR activities in FY 2010 are shown on the right.

Press conferences	193
Press interviews given	444
Surveys conducted	Approximately 400

Related Information

- [Toray's Information Disclosure Principles](#)

Social Contribution Activities

Toray Group Social Contribution Activities

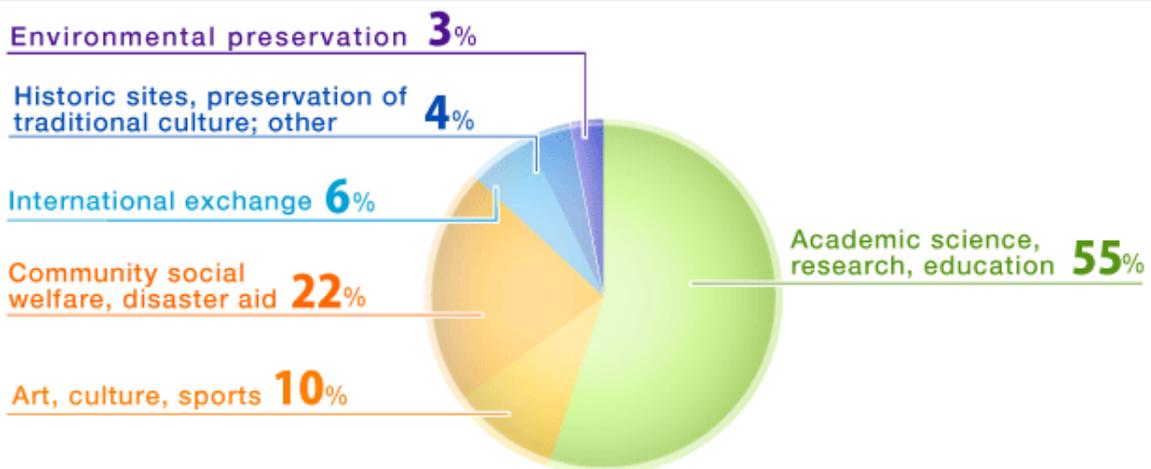
As outlined in the Corporate Missions, Toray Group values its relation with society and constantly engages in social contribution activities, particularly in providing financial support for science foundations both in Japan and overseas. Accordingly, Toray Group Social Initiative Policies have been established as guidelines for social contribution activities. As a member of the 1% Club founded by Nippon Keidanren (the Japan Business Federation) in 1990, Toray has also declared its intention to invest about 1% of its consolidated ordinary income into social contribution activities.

Toray Group Social Initiative Policies (adopted May 2005)

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.
5. We will contribute funds amounting to about 1% of our consolidated ordinary income to social initiatives.

In FY 2010, implementation of social contribution activities at Toray Group generated approximately 1.3 billion yen, or about 1.3%, of its consolidated ordinary income, in donations. Toray contributed approximately 800 million yen or about 2.6%, of its non-consolidated ordinary income in donations. Principal activities included donations to the Toray Science Foundation in Japan and the Toray Science Foundations in the three ASEAN countries of Malaysia, Thailand, and Indonesia; and assistance for Mishima in Shizuoka Prefecture, Japan where Toray Group provides water for irrigation, firefighting, and a water park.

Results of Social Contribution Activities



Social Contribution Activities
Promoting of Science and Technology

Toray Science Foundation

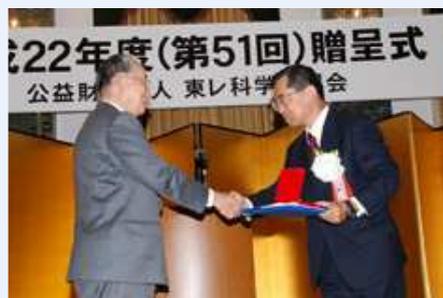
The Toray Science Foundation was established in 1960 to provide funding for basic research in science and technology. With the aim of contributing to the improvement and development of science, technology, and culture, its establishment is regarded as a pioneering initiative by the private sector in Japan. Now having reached its 50th anniversary, the Foundation has been highly acclaimed for its activities by past science and technology grant recipients, two of whom went on to receive Nobel Prizes. The main activities of the Foundation in FY 2010 are shown on the right.

Related Information

- [About Toray Science Foundation](#)

Principal Toray Science Foundation Activities
(Figures in parentheses refer to number of award recipients in FY 2010.)

1. Toray Science and Technology Prize (2)
2. Toray Science and Technology Grant (10)
3. Toray Science Education Prize (8)
4. Science Lecture Meetings



Toray Science Foundation awards ceremony

Toray Science Foundations established in three ASEAN countries

With the objective of assisting, promoting, and expanding science and technology research in Southeast Asia, Toray established Toray Science Foundations in Malaysia, Thailand, and Indonesia in 1993 and 1994. Each year, these foundations carry out various activities including special lectures and award presentations.

Related Information

- [Toray Science Foundations in ASEAN Countries](#)

Social Contribution Activities Helping Nurture Future Generations

Promoting Science Education

Toray Group utilizes its own products and technologies, and carries out various activities in order to reverse the declining interest of children in science and foster the human resources of the future.

Accordingly, Toray sends employees as guest instructors to elementary and junior high schools to teach classes utilizing the Company's products and technologies. The Toray instructors introduce children to the fun of doing science experiments, and show them technologies that can help solve global environmental issues. In FY 2010, Toray instructors visited a total of nine schools in cities including Tokyo and Osaka, and provided science classes on the theme of "Water Filtration and the Global Environment." Two schools in Tokyo and Ibaraki received environmental classes entitled, "Japanese Companies Take on the Challenge of Global Warming: Toray Efforts." Another eight schools received laboratory experiment equipment from Toray.



Laboratory science class

Related Information

- [CSR Report Highlight 2010](#)
[3. CSR Initiatives in Education](#)

Supporting Community Interaction through Music



Fureai Trio performing at an elementary school

Toray supports the activities of the Fureai Trio, a group of professional musicians that performs at schools to give children a chance to experience classical music. They also hold concerts at community halls near the schools, and assist institutions that provide work to persons with disabilities.

Other Major Activities in FY 2010

- Established a scholarship fund for graduate students at the University of Rhode Island in the US
- Supported the International Science Olympiads (Biology and Physics)
- Supported the 7th Japan Science & Engineering Challenge (sponsored by the Asahi Shimbun Company), which aims to foster high school students who will build the future of science and technology in Japan
- Supported Science Camp, a hands-on science and technology program for high school students who intend to pursue careers in science (sponsored by the Japan Science and Technology Agency)
- Supported a master class given by the Quatuor Voce quartet
- Supported art programs such as Setagaya Public Theatre @ School, a joint program instituted by Setagaya Public Theatre in collaboration with schools
- Participated in the Monozukuri Taikan Stadium 2010 (sponsored by the Monozukuri Taikan Stadium 2010 Executive Committee)

Social Contribution Activities

Support for Culture and the Arts

Toray is committed to promoting international exchange in arts and culture. Examples include providing support for Japan Fashion Week in Tokyo, performances in Japan by the Quatuor Voce quartet, and overseas publicity for the National Art Center, Tokyo (National Museum of Art). Toray also continues to implement activities to keep traditional arts alive, such as providing support for domestic performances of Youkiza, a type of marionette theater with a history of over 370 years.

Social Contribution Activities
Contributing to Local Communities

Through Sports and Events

Toray contributes to local communities through sports. This includes holding volleyball classes led by the Toray Arrows, and judo and kendo (Japanese fencing) classes taught by Toray employees in a number of different communities. The Company also opens up its sports grounds, gymnasiums and other sports facilities to the public.



Volleyball class led by the men's Toray Arrows team (Shizuoka)



Volleyball class led by the women's Toray Arrows team (Shiga)

Welfare Facility Visits and Cleanup Activities

Volunteer activities at Toray Group's plants, Japanese and overseas subsidiaries and affiliates included visits to neighborhood senior citizen homes and social welfare facilities to call on residents and help with cleaning. Another way in which employees contribute to society is by participating in cleanup activities for roads and rivers near Toray plants and offices and at other similar events.

Major FY 2010 Activities

- Kanorigawa plant drainage canal cleanup by Toray Okazaki Plant (Sept. 21, 2010)
- Nanatsudaki Cleanup Volunteer Activity by Toray Ishikawa Plant (October 16, 2010)
- Yahagi River Embankment Cleanup by Toray Okazaki Plant (October 24, 2010)

As a Major Sponsor of Sporting Events

While the Toray Cup Shanghai International Marathon and the Toray Pan Pacific Open Tennis Tournament (Toray PPO) are part of the Company's advertising activities, Toray primarily sponsors these events to contribute to the community. During the Toray PPO, the Company supports Pink Ribbon activities in order to raise awareness of the importance of early detection and treatment of breast cancer.

Related Information

- [2011 Toray Cup Shanghai International Marathon](#)
- [Toray Pan Pacific Tennis Tournament 2011](#)

Social Contribution Activities
Disaster Relief

In order to aid victims of the November 2010 volcanic eruption in Java, Indonesia, and the tsunami in West Sumatra, Toray Group companies supported fundraising activities conducted by the union and employees of P.T. Indonesian Synthetic Textile Mills and P.T. Acrylic Textile Mills. A donation was also made through a local TV station that was supporting the fundraising activities. See the additional information below regarding Toray Group's efforts to help the victims of the Great East Japan Earthquake.

Related Information

- [Response to the Great East Japan Earthquake](#)

Social Contribution Activities

Major Social Contribution Activities

FY

2010	Provided relief funds and supplies to the victims of the Great East Japan Earthquake (Japan)
	Established a scholarship fund for graduate students at the University of Rhode Island (USA)
	Donated to the Hospice of the Valley (USA)
	Supported the International Science Olympiads – Biology and Physics (Republic of Korea and Croatia)
2009	Supported the Japan Pavilion exhibit at Expo 2010 Shanghai (China)
	Supported Japan Fashion Week in TOKYO (Japan)
	Supported concerts of the Fureai Trio (Japan)
	Made a donation to the victims of the 2010 Chile earthquake (Chile)
2008	Supported Japan Fashion Week in TOKYO (Japan)
	Supported the France Meets Japan-Ukiyo-e Influence on French Ceramics exhibit (sponsored by Nikkei Inc.) (Japan)
	Supported Corot: Souvenirs et Variations exhibit (sponsored by the Yomiuri Shimbun) (Japan)
2007	Supported L'art de Monet et sa Posterite exhibit (Japan)
	Supported performances of Quatuor Voce in Japan (Japan)
	Supported art programs such as Setagaya Public Theatre @ School (Japan)
2006	Sponsored "Musee d'Orsay" exhibition. (Japan)
	Sponsored the Fourth Japan Science & Engineering Challenge 2006, a science and technology contest for high school students. (sponsored by Asahi Shimbun).
	Supported Science Camp, a hands-on science and technology program for high school students who intend to pursue careers in science sponsored by Japan Science and Technology Agency.
	Sponsored concerts in Tokyo by "the Shanghai Quartet". (Japan)
	Sponsored the Sustainable Society Education Support Project (sponsored by Diamond, Inc.), a program that donates the book Tales of Life: Eleven Stories of Biodiversity to elementary, middle, and high schools throughout Japan.
	Sponsored Japan Tent (sponsored by the Japan Tent Steering Committee), an event held in Ishikawa Prefecture that promotes international exchange.
	Sponsored "Vermeer String Quartet" concert. (Japan)
	Sponsored U.S. Tour of Chikamatsuza of Shochiku Grand Kabuki. (U.S.)

2005	Sponsored Art Deco Exhibit. (Japan)
	Sponsored the Umewaka Kennohkai Europe Tour. (Germany, Latvia, France, Belgium)
	Sponsored "Napoleon and Versailles" exhibition. (Japan)
2004	Sponsored "Flemish and Dutch Paintings from the Collection of the Kunsthistorisches Museum WienVienna" exhibition (Japan)
	Sponsored "Florence: The Birth of the Capital of Arts" exhibition (Japan)
	Sponsored "Mirai Sen-i Ten (Fabric in the Future)" exhibition (Japan)
	Sponsored publishing "Sekai-wo kaeru okane-no tsukaikata (The way you use money can change the world)" (Japan)
2003	Supported setting up "Re-birth", website of Masako Imaoka, photographer (Japan)
	Sponsored "Shigeru AOKI and Romanticism in Modern Japanese Art" exhibition (Japan)
	Sponsored performances of the Yukiza marionette theater (Japan)
	Sponsored concerts in Tokyo by "the Shanghai Quartet". (Japan)
	Sponsored "Japan Science & Engineering Challenge" (Japan)
	Sponsored performance in Paris by "Meiwa Denki" (France)
	Sponsored "Monet and Renoir: Two Great Impressionist Trends" exhibition. (Japan)
2002	Sponsored "Masters of the Pardon Museum" exhibition (Japan)
	Sponsored performances of the Yukiza marionette theater in France (France)
	Sponsored concerts in Tokyo by the "Vermeer Quartet" (Japan)
2001	Sponsored "Mohri's Colored Space Part5, SAYOKO" (Japan)
	Sponsored Italy 2001 in Japan (Japan): Participated in the following exhibitions ; "IL Rinascimento In Italia" "Innovative Engineers of Renaissance" "Italia E Giappone: Design Come Stile Di Vita" "Masterpieces of Italian Majolica from the collection of The International Museum of Ceramics in Faenza" "A Century of Italian Art-From 1990 to 2000" "Artisans from the Palace of Florence"
	Sponsored "Dufy" exhibition. (Japan)
	Submitted dress materials to "Mitsui Collaboration 2001-AMATERASU". (U.K.)
	Sponsored Tokyo performance of "Juilliard String Quartet". (Japan)
	Sponsored "the Coming of Age of CG" Toray DCA 5th Anniversary Exhibition. (Japan)
	Sponsored concerts in Tokyo by "the Shanghai Quartet". (Japan)
	Sponsored "The public and the private in the Age of Vermeer". (Japan)

2000	Costume materials provided for the performance at the opera house in Luang. (France)
	Sponsored the Umewaka Kennokai Noh troupe's tour of Germany, Netherlands. (Germany, Netherlands)
	Kite materials provided for "the Wind Caravan Sanda". (Japan, New Zealand, Finland, Morocco, Mongolia, Brazil)
1999	Sponsored "History and Imagination in Goya's Etching" exhibition. (Japan)
	Sponsored "les coulisses de la mode" exhibition. (Japan)
	Sponsored "Masterpieces of The National Gallery of Art, Washington" exhibition. (Japan)
	Sponsored concerts in Tokyo by "the Vermeer Quartet" (Japan)
1998	Sponsored the "Treasures of Celtic Art" exhibition. (Japan)
	Sponsored concerts in Tokyo by "the Shanghai Quartet" (Japan)
	Sponsored "THE AIR WARE" exhibition by CG artist Daizaburo Harada. (Japan)
	Sponsored The Toray Corp Shanghai International Marathon. (China)
	Sponsored performances in Japan by "Orchestra Asia". (Japan)
	Contribution of exhibits to and sponsorship of "Structure and Surface: Contemporary Japanese Textiles" exhibition at the Museum of Modern Art (MOMA). (U.S.)
1997	Sponsored The Toray Corp Shanghai International Marathon. (China)
	Sponsored Coutauld Institute Collection. (Japan)
1996	Sponsored the first China performance of "Orchestra Asia". (China)
1995	Presented a congratulatory curtain for "Nakamura-Kai Grand Kabuki" commemorating the centennial anniversary of Shochiku. (Japan)
	Sponsored the first Japan performance of "Orchestra Asia", featuring traditional folk instrument form Japan, China and Korea. (Japan)
1994	Costumes produced and supplied for the Bunraku puppet theatre production of "Kotobukishiki Sanbanso". (Japan)
1993 - 1994	Toray Science Foundations established in Indonesia, Thailand and Malaysia. (Indonesia, Thailand, Malaysia)
1993	Costume supplied for the Bayreuth Opera's production of "Tristan and Isolde". (Germany)
	Sponsored the Umewaka Kennokai Noh troupe's tour of Germany. (Germany)
1992	Costume materials provided for the production of "Turandot", performed at the opera house in Lyons. (France)
	The Toray Arrows volleyball team visited Indonesia and Malaysia for a series of friendly matches. (Indonesia, Malaysia)
	Toray produced and supplied the official uniforms for the Lithuanian team, competing in its first Olympics as an independent nation. (Lithuania)

	Toray contributed one million dollars to establish a scholarship fund at the University of Rhode Island. (U.S.)
	Using its Shingosen new synthetic fabrics, Toray produces and supplied the costumes for the Kabuki drama "Musume Dodo-ji". (Japan)
1991	Sponsorship provided for the Courtauld Institute of Art's first exhibition of drawings. (U.K.)
	Noh and Kyogen performances at the Japan Festival in London are sponsored. (U.K.)
	President of Toray Plastics (America) Inc. spoke at a periodical assembly of Harvard Business School graduates. (America)
	Provided extensive cooperation in the production of the NHK TV series "Fashion Dream". (Japan)
1990	Sponsored Performances in France by the Umewaka Kennokai Noh troupe. (France)
	Financially sponsored for the construction of a new building of Japanese School in Paris. (France)
	Funds donated to the Indonesian Judo Association to build a national judo center. (Indonesia)
	Toray Science Foundation established a scholarship system through CENTEX. (Indonesia)
	Partially funded for the construction of a new community hall of Nakhon ChaiSi County through Thai Toray Textile Mills Public Co., Ltd. (Thailand)
	Toray representative in Thailand made a donation to Thai Amateur Volleyball Association. (Thailand)
1989	Through Toray Science Foundation, fostered basic studies of natural science carried out by Indonesian, Thai and Malaysian universities. (Indonesia, Thailand and Malaysia)
	To commemorate the 30th Anniversary of Toray Science Foundation, started funding for basic studies of natural science at Southeast Asian universities. (Indonesia, Thailand and Malaysia)
	Found donated to Courtauld Institute of Art to assist relocation. (U.K.)
1988	Financially sponsored for the acquisition and renovation of a building and donated for the purchase of educational materials and tools for Japanese School in Milan. (Italy)
	Costume and staging materials provided for the musical "Idamante", directed by Ennosuke Ichikawa. (Japan)
1987	Costume materials provided for the China performances of the opera "The Magic Flute". (China)
1986	Costume materials provided for the Kabuki performance "Yamato Takeru". (Japan)
1982	Swimming pool built with funds donated by Toray in Penang. (Malaysia)
1960	Established Toray Science Foundation. (Japan)

Safety and the Environment
Ten Basic Environmental Rules

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 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.

Toray Group Biodiversity Basic Policy (Adopted on December 10, 2010)

Basic Concept

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

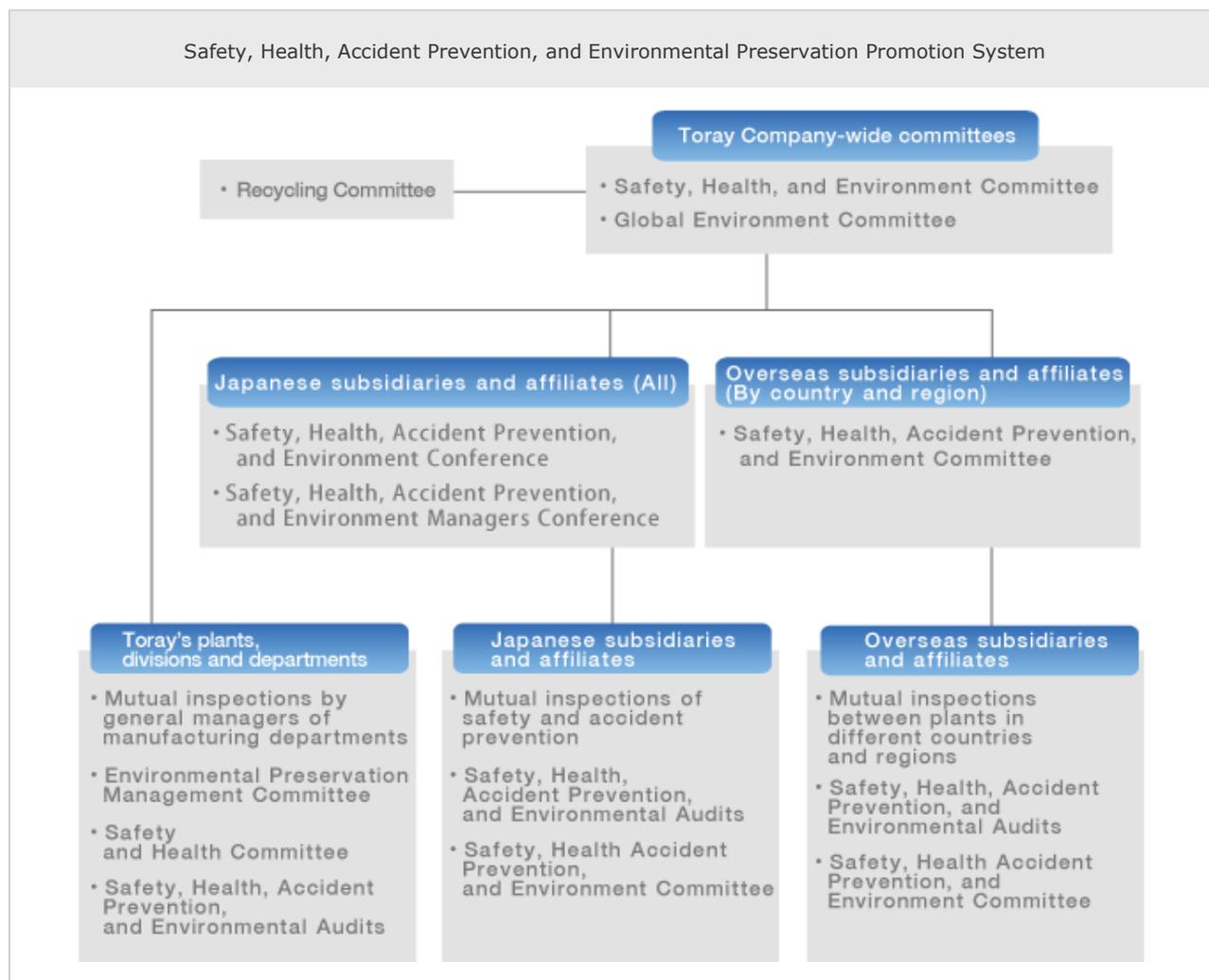
1. We take into consideration the impact of our business activities on biodiversity, and strive to realize the conservation and sustainable use of biodiversity.
2. We endeavor to develop environmentally friendly technologies and products, and contribute to the conservation of biodiversity by making them 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*.

Safety and the Environment

Safety, Health, Accident Prevention and Environmental Preservation Management

Toray Group conducts globally integrated management in the areas of safety, health, accident prevention and environmental preservation, covering subsidiaries and affiliates. The Group-wide Safety, Health, and Environment Committee determines future policies and measures based on the assessment of activities and their results at Toray Group companies, offices and plants. In addition, the Global Environment Committee discusses and determines measures for expanding the Green Innovation Business, product recycling, and initiatives to fight global warming.



Toray Group establishes and promotes Safety, Health, Accident Prevention, and Environmental Activity Policies based on the results of activities in the previous year. 14 main activities were carried out in FY 2010.

Every year, Toray Group uses a unified Group-wide internal audit form to objectively evaluate and improve activities and management at manufacturing companies, offices and plants. Safety, Health, Accident Prevention, and Environmental Audits are carried out by company executives; in FY 2010, they were conducted at all 13 Toray plants and one research laboratory, 47 plants at 23 Japanese subsidiaries and affiliates, and 39 plants at 30 overseas subsidiaries and affiliates. Audits were carried out with an emphasis on the thorough application of safety basics, and management of nanomaterial safety. In addition, the annual Toray Group Safety Meeting was held in December 2010. Toray Group presidents, executives and plant managers from around the world attended, bringing the number of participants to 150. Thorough efforts were made to raise safety awareness Group-wide.



The Toray Group Safety Meeting

Safety, Health, Accident Prevention, and Environment Activity Policy of TORAY Group in 2010

	Action Policy	Main Activities
Common	<ul style="list-style-type: none"> Promote 3Z^{*1} activity Accomplish risk management 	<ul style="list-style-type: none"> Certain implementation of 3Z activity plan (each company, plant) Enhance risk reduction activity Strengthen quick response system when crisis occurs
Safety	<ul style="list-style-type: none"> Ensure thorough application of basic safety practices 	<ul style="list-style-type: none"> Emphasize safety action <ul style="list-style-type: none"> Make improvement for safe and workable operation standard manual and strictly follow through with it Pointing & Calling, KY^{*2}, Pay attention to each other, & 3S^{*3} Strengthen prevention measures against recurrence of similar accidents <ul style="list-style-type: none"> Ensure thorough utilization of accident and HHT^{*4} case studies Raise awareness through simulations
Health	<ul style="list-style-type: none"> Emphasize occupational health management 	<ul style="list-style-type: none"> Thoroughness in management of mutagenic substance Ensure thorough management and proper handling of nanomaterials and powders Promote countermeasures against pandemic influenza Enhance mental health management
Accident Prevention	<ul style="list-style-type: none"> Strengthen accident prevention measures 	<ul style="list-style-type: none"> Thoroughness of fire prevention by step-up of FP^{*5} activity Strengthen disaster prevention and environment measures at chemical facility Implement BCP against large-scale earthquake
Environment	<ul style="list-style-type: none"> Achieve targets under the Third Three-Year Environmental Plan Promote global warming countermeasures 	<ul style="list-style-type: none"> Achieve environmental emission reduction goals Further promote greenhouse gas reduction

* 1: 3Z: Zero Accident, Zero Trouble, and Zero Claims Program

* 2: KY: the Japanese words *kiken* (danger) and *yochi* (prediction)

* 3: 3S: the Japanese words *seiri* (tidiness), *seiton* (orderliness) and *seisou* (cleanliness)

* 4: HHT: the Japanese words *hiyari* and *hatto* that express the sensation of shock after a near accident

* 5: FP: Fire Prevention

Related Information

- [Occupational Safety](#)
- [Business Continuity Plan \(BCP\) Promotion](#)

Responsible Care (RC) Program

RC is a program that fosters communication between society and chemical-handling companies. Safety, health, and environmental measures are implemented, and the results are announced. The measures cover the entire product lifecycle from development, manufacturing, distribution and consumer use, to the disposal of chemical substances. Toray has participated in the Japan Responsible Care Council (JRCC) since its foundation, and undertook thorough management of nanomaterial safety and mutagenic substances as priority activities in FY 2010.

ISO 14001

Toray Group is promoting the acquisition of ISO 14001 certification and improving its environmental management. At the end of 2000, all 12 Toray plants had obtained the certification, and acquisition efforts are continuing at subsidiaries and affiliates. In FY 2010, two plants at two overseas subsidiaries and affiliates received certification for the first time. This brings the total number of certified plants to 38 at 29 Toray Group companies outside Japan. 35 plants at 20 Toray Group companies in Japan have also been certified.

Sites with ISO 14001 Certification (As of March 2011)

Notes:

- Names in blue indicate companies or plants that first obtained certification in FY 2010
- Information in brackets refers to the names of the plants

Toray: All 12 plants

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

Japanese subsidiaries and affiliates: 35 plants at 20 companies

Du Pont-Toray Co., Ltd., Toray Opelontex Co., Ltd., Toray Textiles, Inc. [Tokai], Toray Coatex Co., Ltd. [Kyoto, chemical products], Toyo Tire Cord Co., Ltd., Toyo Plastic Seiko Co., Ltd. [Mishima, Koriyama], Toray PEF Products Inc. [Konan, Tsukuba], 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 ACE Co., Ltd. [Ehime, Fukushima], Dow Corning Toray Co., Ltd. [Chiba, Fukui, Yamakita, Komatsu], Suido Kiko Kaisha, Ltd., Toray Medical Co., Ltd., Ichimura Sangyo Co., Ltd., Toray International, Inc., Chori Co., Ltd.

Note: In addition, 12 companies received certification as affiliated companies on Toray sites

Overseas subsidiaries and affiliates: 38 plants at 29 companies

USA	Toray Plastics (America), Inc. [Rhode Island, Virginia], Toray Resin Co., Toray Fluorofibers (America), Inc., Toray Carbon Fibers America, Inc., Toray Composites (America), Inc.
UK	Toray Textiles Europe Ltd.
France	Toray Plastics Europe S.A.S.
Italy	Alcantara 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
Thailand	Thai Toray Textile Mills Public Company Limited, Thai Toray Synthetics Co., Ltd. [Bangkok, Ayutthaya, Nakhon pathomn], Luckytex (Thailand) Public Company Limited [Mill1 , Mill2, Mill3]
Malaysia	Penfibre Sdn. Berhad [Mill3], Penfabric Sdn. Berhad [Mill1, Mill2, Mill3, Mill4] Toray Plastics (Malaysia) Sdn. Berhad
China	Toray Fibers (Nantong) Co., Ltd., Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd., Toray Plastics (Shenzhen) Ltd., Toray Film Products (Zhongshan) Ltd., Toray Sanko Precision (Zhongshan) Ltd., Toray Jixiang Plastics (SuZhou) Co., Ltd., Toray Fibers & Textiles Research Laboratories (China) Co., Ltd. [Nantong, Shanghai]
Republic of Korea	Toray Advanced Materials Korea Inc., STECO, Ltd.

All Toray business divisions, subsidiaries and affiliates in Japan as well as overseas have initiated and are independently carrying out projects for complying with REACH regulations. Toray Group completed measures for the registration of relevant substances by the deadline of November 30, 2010. Measures are also being promoted for substances subject to registration starting in 2013. In addition, Toray is steadily classifying, labeling, and reporting hazardous substance information with regard to the CLP ^{*6} regulation for the classification and labeling of chemicals, based on the UN GHS. ^{*7}

* 6: CLP: Classification, Labeling and Packaging of Substances and Mixtures (EU regulation)

* 7: UN GHS: The Globally Harmonized System of Classification and Labeling of Chemicals

Complying with the Chemical Substances Control Law

With the revision of the Chemical Substances Control Law ^{*8} in Japan, companies are required to report on the manufacture, import, and utilization of general chemical substances, as of April 2011. Toray and its Japanese subsidiaries and affiliates carried out internal training for relevant staff and conducted thorough surveys for identifying applicable substances. All necessary reporting on general chemical substances has been completed.

* 8: Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Safety and the Environment
Results of the Third Three-Year Environmental Plan and Formulation of the Fourth Medium-Term Environmental Plan

Results of the Third Three-Year Environmental Plan

In 2000, Toray Group established a Three-Year Environmental Plan as a basic medium-term roadmap for strengthening and expanding environmental initiatives. The Group has since implemented various voluntary efforts. Under the Third Three-Year Plan, which commenced in FY 2007, Toray Group carried out planned initiatives to reduce atmospheric emissions of GHGs, chemical substances and waste. As a result of these efforts, Toray achieved seven of its eight targets for FY 2010.

Area	Toray Group FY 2010 target	FY 2010 results	Related links
Prevent global warming	Toray: 6% or greater reduction in GHG emissions compared to FY 1990	16% reduction	Initiatives to Fight Global Warming
	Toray Group (Japan): 15% or greater reduction in GHG emissions per unit sales compared to FY 1990	11% reduction	
Management of chemical substances	Atmospheric emissions of PRTR Law- specified substances: 55% reduction compared to FY 2000	66% reduction	Voluntary Reduction of Atmospheric Emissions of Chemical Substances
	Atmospheric emissions of volatile organic compounds (VOCs): 55% reduction compared to FY 2000	69% reduction	
Waste reduction	Pursue the goal of zero emissions	Achieved at 24 plants at 15 subsidiaries/affiliates	Initiatives to Reduce Waste
	Rate of simply disposed waste: 34% or lower	26%	
	Recycling rate: 85% or higher	86%	
	Landfill rate, Toray Group (Japan): 5% or lower	2.1%	

Formulation of the Fourth Medium-Term Environmental Plan

In order to further expand environmental initiatives based on the results above, Toray Group established a Fourth Medium-Term Environmental Plan to be achieved by 2015. Considering an anticipated production increase from business expansion in areas such as carbon fiber, reduction targets have been set in order to continue progress made under the Third Three-Year Environmental Plan. In the area of waste reduction, a new target was set for the number of zero-emission plants. By continuing to implement measures to ensure environmental target achievement, Toray is helping to prevent global warming, while fostering the realization of a recycling-based society.

Area	Toray Group FY 2015 target
	Toray: Ongoing achievement of 10% in GHG emissions compared to FY 1990

Prevent global warming	Revise target if there is a drop in the CO ₂ emissions coefficient for purchased electricity due to the nuclear reactor incident in Fukushima
	Toray Group (Japan): 15% or greater reduction in GHG emissions per unit sales compared to FY 1990 Revise target if there is a drop in the CO ₂ emissions coefficient for purchased electricity due to the nuclear reactor incident in Fukushima
Management of chemical substances	Atmospheric emissions of PRTR Law- specified substances: 70% reduction compared to FY 2000
	Atmospheric emissions of volatile organic compounds (VOCs): 70% reduction compared to FY 2000
Waste reduction	Zero emissions goal: Achieved at 30 Toray Group Plants
	Rate of simply disposed waste: 25% or lower
	Maintenance of a recycling rate of 85% or more
	Landfill rate, Toray Group (Japan): 2% or lower

Safety and the Environment
Initiatives to Fight Global Warming

Toray Group has been working on the planned reduction of its greenhouse gas (GHG) emissions by switching from heavy oil to natural gas, and by promoting energy conservation based on process improvement under the Third Three-Year Environmental Plan. As a result, in FY 2010, Toray achieved a 16% reduction in emissions compared to FY 1990, while Group companies in Japan achieved an 8% reduction. The Group will continue to carry out the planned reduction of GHG emissions based on the Fourth Medium-Term Environmental Plan, which commenced in FY 2011.

Employees are also working to reduce their GHG emissions at home through a Household Eco-Account Book Program, in addition to their efforts at work.

Related Information

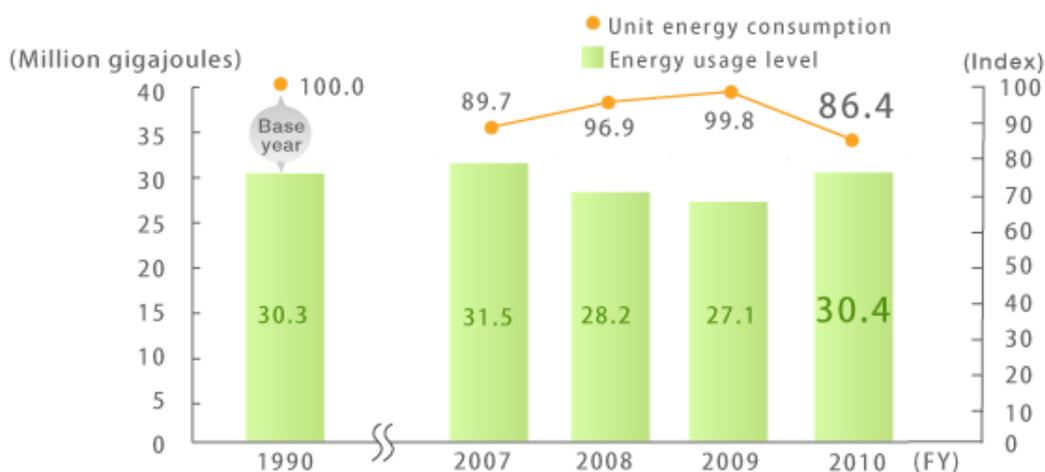
- [Results of the Third Three-Year Environmental Plan](#)
- [Formulation of the Fourth Medium-Term Environmental Plan](#)

Toray Energy Conservation Activities

Toray is actively working on energy conservation activities, with the goal of a 2% annual reduction in the unit energy consumption rate.

Due to a recovery in production levels, in FY 2010 Toray increased its energy usage by 12% compared to the previous year. However, unit energy consumption fell by 13.4% compared to the previous year, due to the promotion of energy conservation diagnostics by Toray experts, and ongoing energy conservation activities at each plant. There was also a rise in efficiency as a result of higher production levels.

Toray Energy Consumption and Unit Energy Consumption Index



Promoting Energy Conservation Diagnostics at Subsidiaries and Affiliates

As it strives to reduce GHG emissions, Toray Group organizes energy conservation teams to help carry out energy conservation diagnostic activities annually at both domestic and overseas plants. In FY 2010, they were conducted at eight Japanese plants and GHG emissions were reduced by 3,000 tons of CO₂ per year as a result of energy savings.

Toray Actions on Global Warming Initiatives

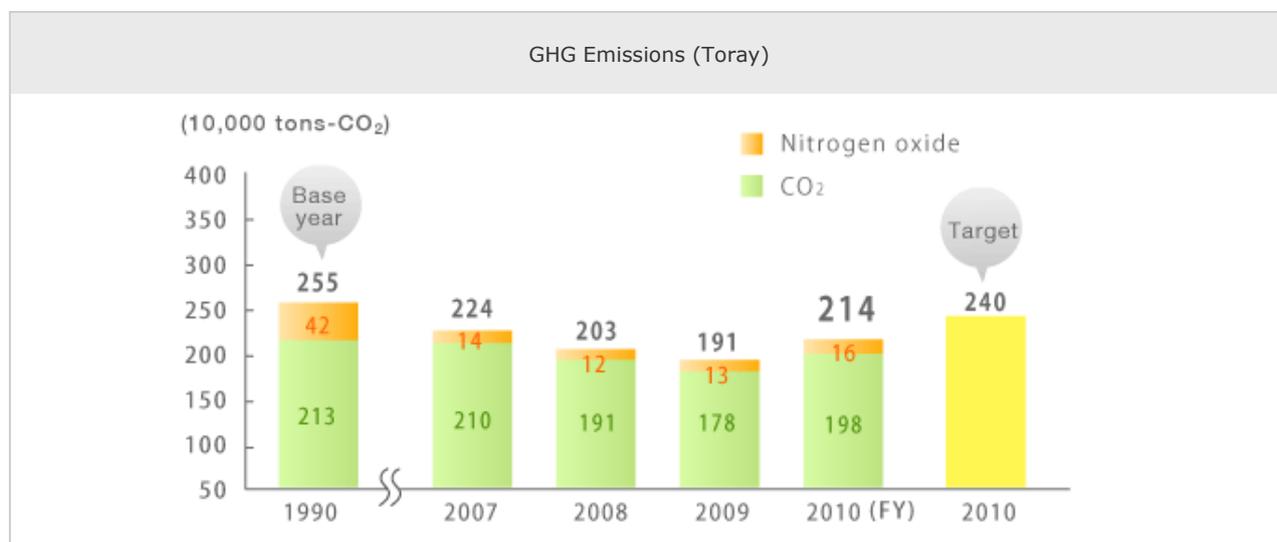
Toray carried out planned measures for emissions reduction to achieve the FY 2010 target of reducing GHG emissions by at least 6% compared to FY 1990. The Company also installed a gas cogeneration facility at its Nagoya Plant with the aim of substantially reducing GHG emissions and boosting overall efficiency. Operation of the new equipment began in

September 2010.

As a result of a recovery in production levels during FY 2010, GHG emissions increased by 12% compared to the previous year. However, with the startup of a new gas cogeneration facility at Toray's Nagoya Plant and the considerable effects of process improvement at the Ehime and Tokai Plants, Toray was able to reduce GHG emissions by 16% compared to FY 1990, surpassing the target significantly.



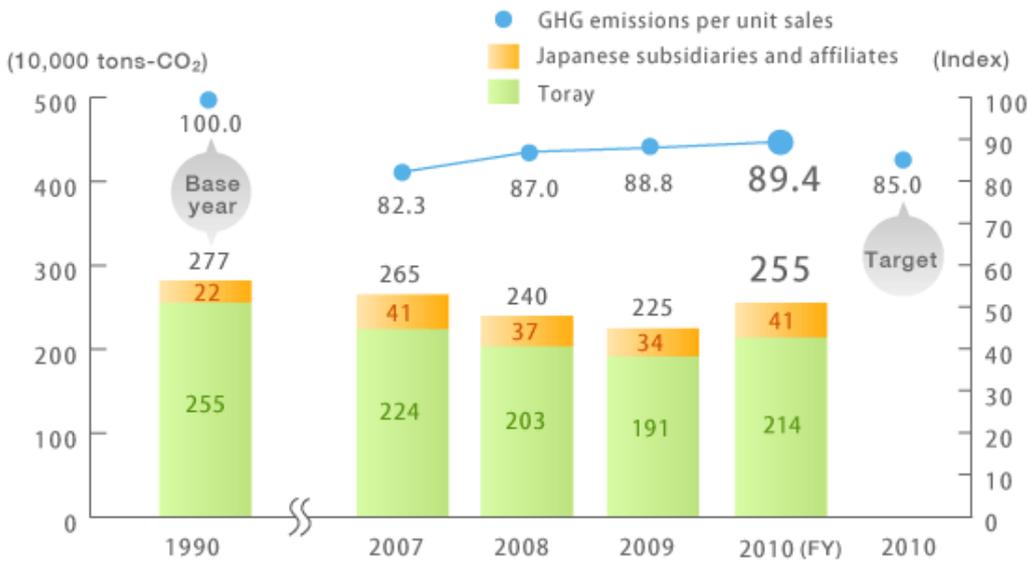
Cogeneration facility at the Nagoya Plant



Toray Group in Japan Initiatives to Fight Global Warming

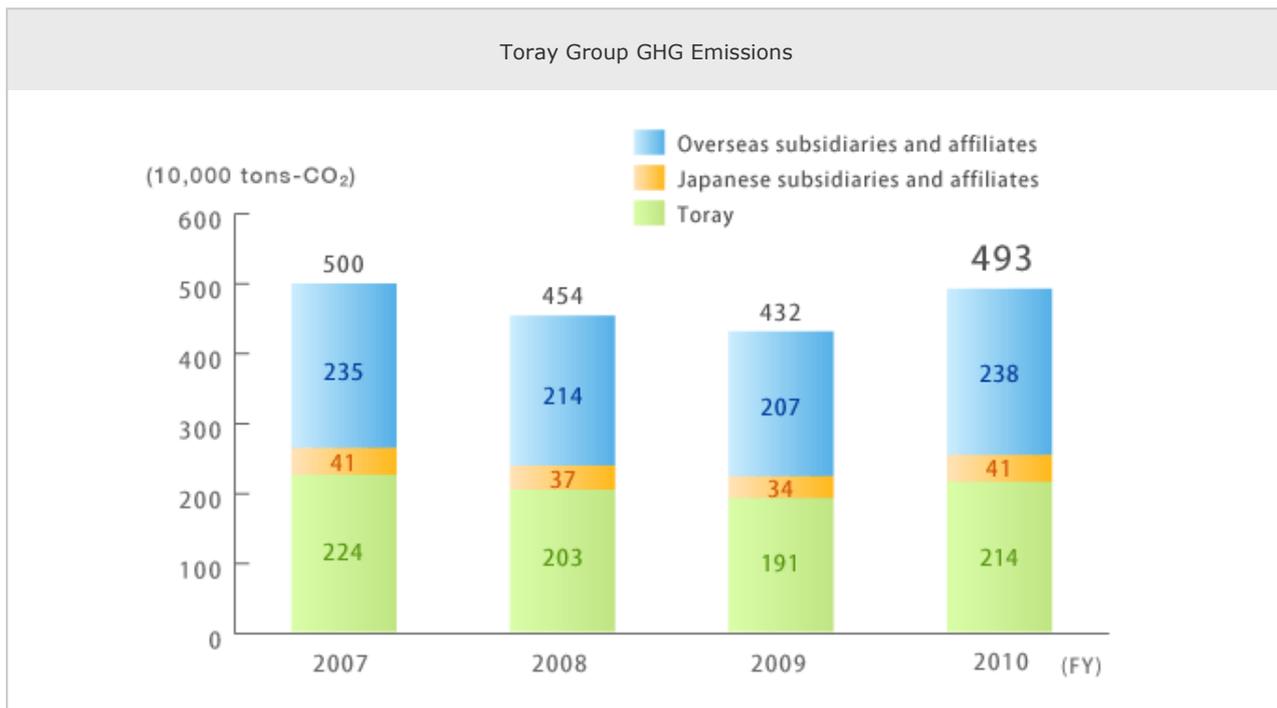
Toray Group in Japan implemented measures to fight global warming in order to achieve a FY 2010 goal of a 15% reduction in GHG emissions per unit of sales over FY 1990 levels. In FY 2010, Toray Group in Japan achieved a GHG emissions reduction of 8% compared to FY 1990. Although the target for GHG emissions per unit of sales in FY 2007 was achieved, due to the subsequent drop in sales resulting from poor global economic conditions in FY 2010, GHG emissions per unit of sales remained at the level of an 11% reduction over FY 1990.

Toray Group in Japan GHG Emissions and GHG Emissions Per Unit of Sales



Toray Group GHG Emissions

FY 2010 GHG emissions for Toray Group worldwide were 4.93 million tons of CO₂, an increase of 14% compared to the previous year, which marked a return to the FY 2007 level. The increase was due to a recovery in production levels. All Toray Group manufacturing companies and plants will continue initiatives to reduce the unit energy consumption rate by 2% in their commitment to cut GHG emissions.



Household Eco-Account Book Program

With the aim of raising environmental awareness among employees and reducing GHG emissions in households, Toray Group (Japan) initiated a Household Eco-Account Book program in August 2008. Employees keep monthly records of their electricity, natural gas, gasoline and other usage amounts online, enabling the calculation of their household CO₂ emissions and providing motivation to reduce them. As of March 31, 2011, 3,548 households are participating in the program, and the number is steadily increasing each month. In December 2010, Toray received an "effort award" from the Japan Chemical Industry Association for the activity. The Company plans to continue expanding the program's scope to fight global warming.

Toray ceased the use of chlorofluorocarbons (CFCs) in all manufacturing processes in 1994. The Company has also stopped purchasing CFCs for use in refrigerators, and has been working to replace existing CFCs with alternative compounds. In FY 2010, the Shiga Plant planned the installation of high-efficiency refrigerators, which use a CFC-replacement coolant compound with zero ozone depletion potential. Installation is underway and operation commenced in July 2011.

Safety and the Environment

Voluntary Reduction of Atmospheric Emissions of Chemical Substances

Toray Group is working on the voluntary reduction of atmospheric emissions of chemical substances as a priority issue for environmental preservation. As a result of such measures, FY 2010 reduction targets were achieved for Pollutant Release and Transfer Register (PRTR) Law-specified substances and volatile organic compounds (VOCs), as established under the Third Three-Year Environmental Plan which commenced in FY 2007. Emissions will continue to be reduced under the Fourth Medium-Term Environmental Plan.

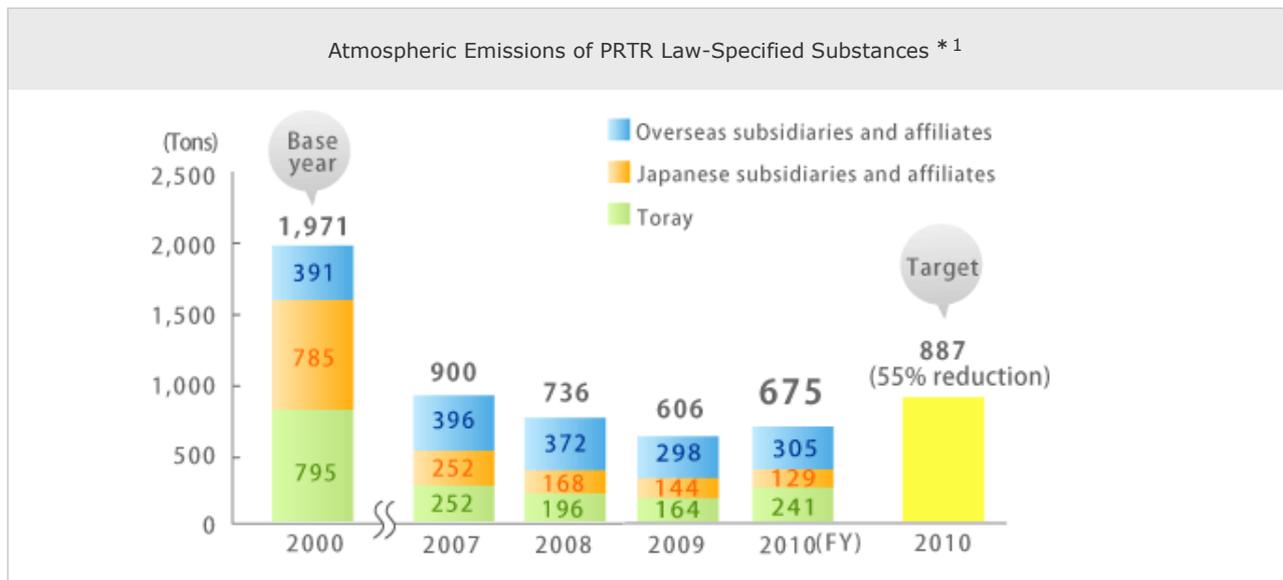
Related Information

- [Results of the Third Three-Year Environmental Plan](#)
- [Formulation of the Fourth Medium-Term Environmental Plan](#)

Reducing Atmospheric Emissions of PRTR Law-Specified Substances

Due to increased production resulting from the economic recovery, Toray Group's atmospheric emissions of PRTR Law-specified substances in FY 2010 increased by 11% compared to the previous year. However, due to efforts under the Third Three-Year Environmental Plan, emissions were reduced by 66% compared to FY 2000, significantly exceeding the target reduction of 55%. This was a result of the planned implementation of measures such as the installation of direct and catalytic combustion equipment.

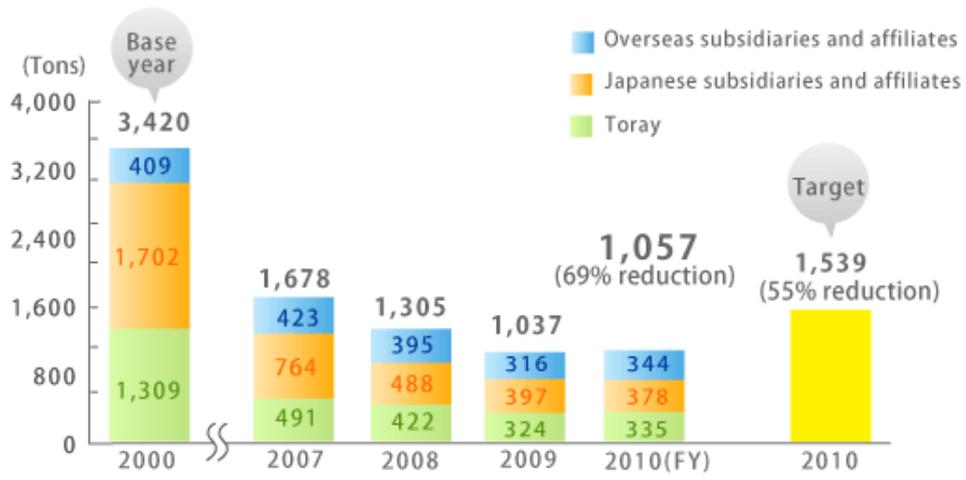
As an example of emissions reduction in FY 2010, Toray Plastics (Malaysia) Sdn. Berhad carried out gradual measures to recover more organic emissions. Measures implemented at the end of FY 2009 achieved their full effect in FY 2010, and atmospheric emissions were reduced by 36 tons.



* 1: Atmospheric emissions designated as type 1 under the PRTR Law before the ordinance revision that took effect in April 2010

Reducing Atmospheric Emissions of VOCs

Toray Group undertook initiatives to meet its FY 2010 Group-wide goal of a 55% reduction in VOC atmospheric emissions compared to FY 2000 levels. Various measures were taken from FY 2007 to FY 2010 such as switching to water-based solvents in processes, and installing regenerative combustion facilities. As a result, a 69% reduction of atmospheric VOC emissions was achieved, significantly surpassing the target.



Safety and the Environment

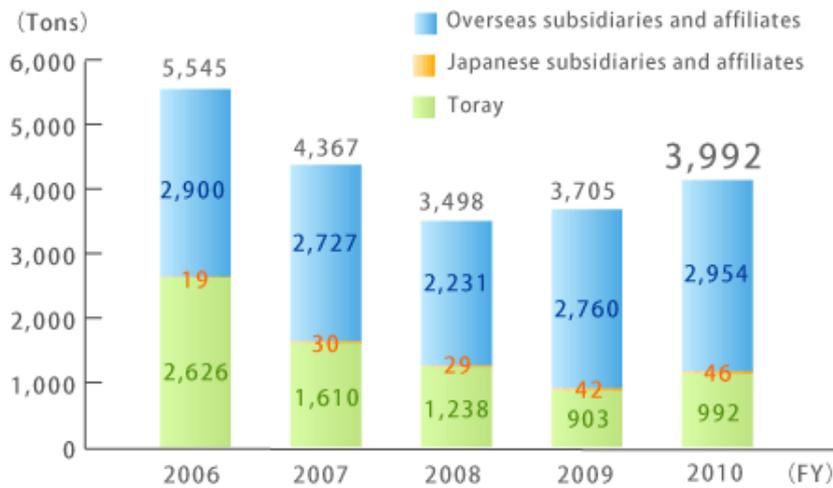
Initiatives to Prevent Air and Water Pollution

Toray Group has ongoing environmental protection initiatives in place for the prevention of air and water pollution from plants worldwide. The installation of desulphurization equipment and fuel conversion have cut SOx emissions, and improvement of wastewater treatment facilities has reduced chemical oxygen demand (COD) emissions.

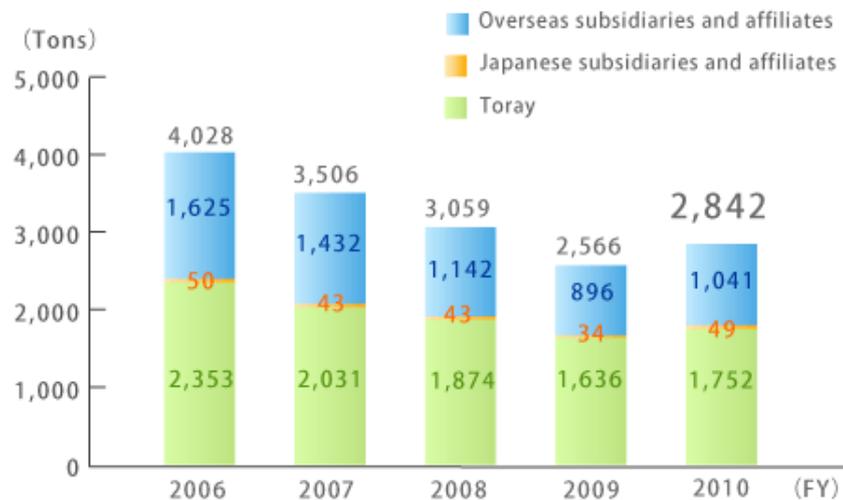
Air Quality Management

Toray Group emitted 3,992 tons of SOx, 2,842 tons of NOx, and 354 tons of dust emissions. SOx and NOx emissions increased by 8% and 11%, respectively, while dust emissions decreased by 8%, compared to the previous year. The increase in SOx and NOx emissions was due to higher production levels resulting from economic recovery. However, the Group is continuing efforts to reduce emissions, including a 286-ton reduction in SOx emissions, thanks to boiler fuel conversion at the Bangkok Plant of Thai Toray Synthetics Co., Ltd.

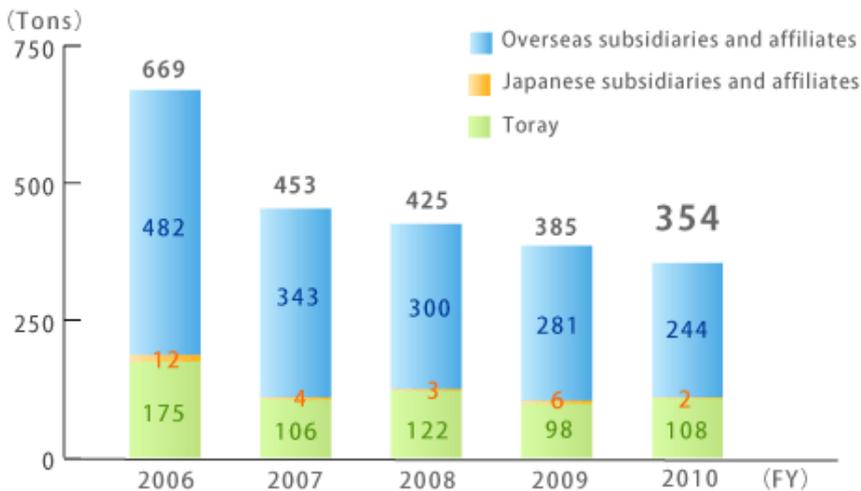
Atmospheric Emissions (SOx)



Atmospheric Emissions (NOx)



Atmospheric Emissions (Dust)



Water Quality Management

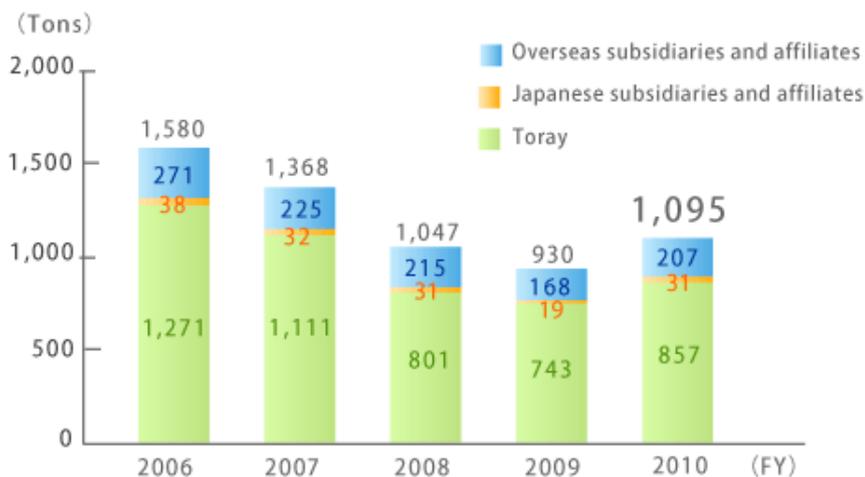
Toray Group’s emissions of biochemical oxygen demand (BOD) and COD were 1,095 and 2,316 tons, respectively, increases of 18% and 16% compared to the previous year.

As with atmospheric emissions, the increases were due to higher production levels. Along with thorough wastewater management, Toray Bluestar Membrane Co., Ltd. installed a membrane bioreactor (MBR *¹) developed by Toray, and water quality was improved as a result.

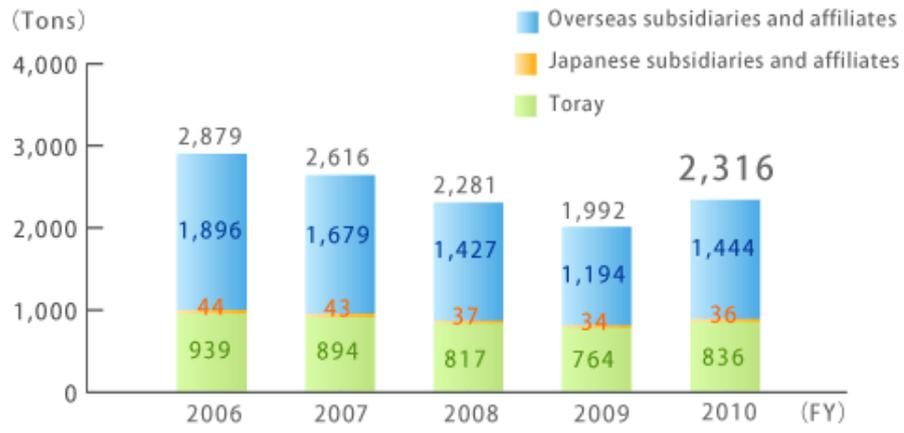
In order to raise management skills at wastewater treatment facilities of Toray’s overseas subsidiaries and affiliates, wastewater treatment staff and engineers (a total of 22 employees at 2 companies) received training on the operation and management of facilities, troubleshooting, and the design and selection of equipment.

*1: MBR: Membrane bioreactor. A wastewater treatment technology that can produce clear treated water by removing all suspended solids using a fine membrane.

Water Emissions (BOD)



Water Emissions (COD)



New MBR wastewater treatment facility of Toray Bluestar Membrane Co., Ltd.



Training for wastewater treatment staff at Toray Fibers (Nantong) Co., Ltd.

Safety and the Environment
Initiatives to Reduce Waste

Toray Group has zero emissions initiatives in place as it works toward the realization of a sustainable, recycling-based society. Under the Third Three-Year Environmental Plan, the Group set and worked to achieve numeric targets for the rates of simply disposed waste, *1 landfill waste *2 and recycled waste *3, which are indicators for measuring zero emissions initiatives. As a result of these efforts, the Group achieved all its targets. Further reduction efforts will be carried out under the Fourth Medium-Term Environmental Plan.

*1: Simply disposed waste rate: (Incineration + landfill)/ Total waste

*2: Landfill rate: Landfill waste/Total waste

*3: Recycling rate: (Recycled resources + resources with monetary worth)/ (Total waste + resources with monetary worth)

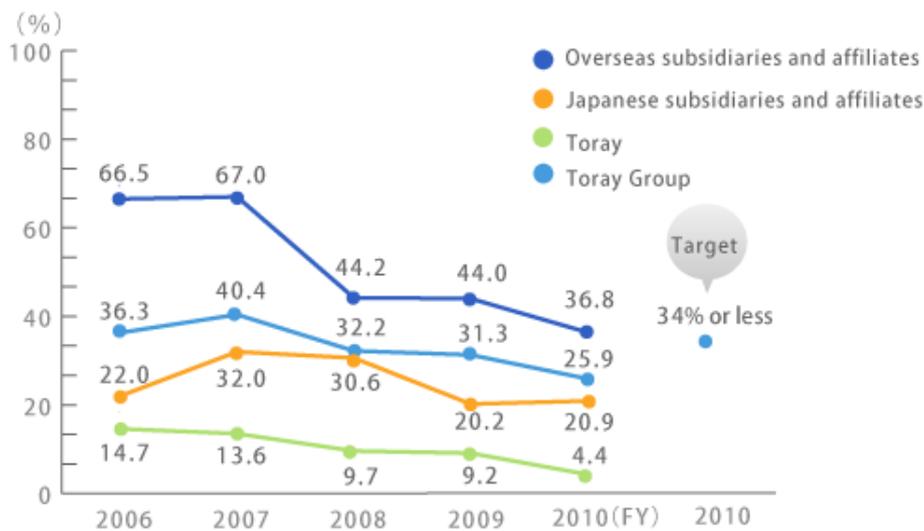
Related Information

- [Results of the Third Three-Year Environmental Plan](#)
- [Formulation of the Fourth Medium-Term Environmental Plan](#)

Simply Disposed Waste Rate

As a result of improvements at Toray and its overseas subsidiaries and affiliates, the simply disposed waste rate for Toray Group improved by 5.4 points over the previous year to 25.9%. This maintained the early achievement of the FY 2010 target of 34% or less.

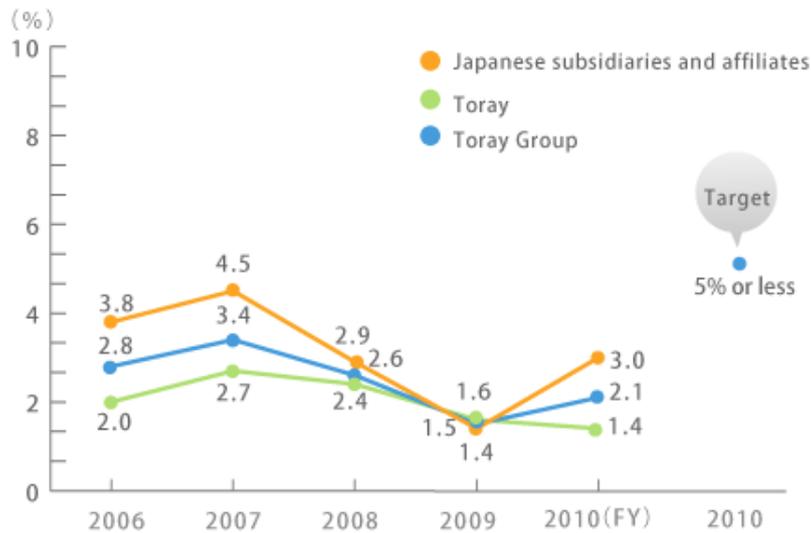
Rate of Simply Disposed Waste (Toray Group)



Landfill Rate

As a result of an increase in landfill waste at Toray and its Japanese subsidiaries and affiliates, Toray Group's landfill rate fell by 0.6 points over the previous year to 2.1%. However, the Group still maintained the early achievement of the FY 2010 target of 5% or lower.

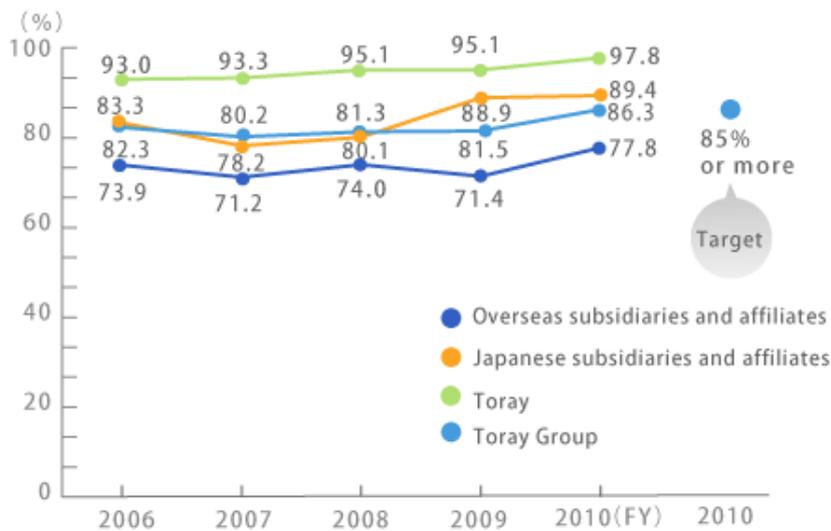
Landfill Rate (Toray and its Japanese Subsidiaries and Affiliates)



Recycling Rate

As a result of improvements at Toray and its Japanese and overseas subsidiaries and affiliates, the recycling rate for Toray Group improved by 4.8 points over the prior year to 86.3%. The FY 2010 target of 85% or higher was achieved as a result.

Recycling Rate (Toray Group)



Zero Emissions Activity Initiatives at Companies and Plants

Toray Group defines zero emissions as a waste stream where simply disposed waste accounts for 1% or less of total waste generated. It is now working to achieve zero emissions at all Group companies and plants. In FY 2010, seven more plants achieved zero emissions, bringing the total to 24 plants at 15 companies.

Zero Emission Companies and Plants in FY 2010(Toray Group)

Notes:

- Names in blue indicates companies and plants that achieved zero emissions in FY 2010
- Information in brackets refers to the names of the plants

Seta Plant, Ehime Plant, Aichi Plant, Okazaki Plant, [Chiba Plant](#), Tsuchiura Plant, Gifu Plant, [Ishikawa](#)

Toray	Plant
Japanese Subsidiaries	Toray Opelontex Co., Ltd., Toray Textiles [Kiryu], Toray Coatex Co., Ltd., Maruichi Fiber Co., Ltd. , Toyo Plastic Seiko Co., Ltd. [Mishima], Toray PEF Products Inc. [Konan], Toray Advanced Film Co., Ltd. [Nakatsugawa], Toray KP Films Inc. , Dow Corning Toray Co., Ltd. [Chiba, Fukui], Soda Aromatic Co., Ltd. [Koriyama] , Toray ACE Co., Ltd. [Fukushima], Toray Engineering Co., Ltd. [Shiga, Seta], Toray Precision Co., Ltd.
Overseas	Toray Membrane USA, Inc.

Safety and the Environment
Environmental Risk Management

Soil and Groundwater Pollution Prevention

Toray Group constructs special embankments around facilities and storage tanks holding hazardous or dangerous substances to prevent spills from leaking into the surrounding area or seeping into the soil. Ongoing efforts to clean up groundwater contamination at Toray Monofilament Co., Ltd., discovered by Toray's investigations, are progressing favorably. In FY 2010, the Company drilled an additional remediation well to help eliminate soil contamination at the Nagoya Plant (refer to CSR Annual Report 2005). Toray Group is committed to conducting voluntary surveys, reporting and otherwise disclosing survey results, and undertaking adequate clean up measures in the event that any pollution is discovered.

Related Information

- [CSR Reports Download](#)

Compliance: Accident Prevention and the Environment

In FY 2010, no Toray Group companies or sites received government sanctions due to the violation of laws or ordinance, nor were there any incidents related to the environment or accidents at work sites. However, five incidents occurred at facilities affected by the Great East Japan Earthquake, and standard values were exceeded briefly at one factory. All incidents were reported to the authorities, and countermeasures were implemented to prevent their reoccurrence. A total of five complaints or requests were received from the public relating to odors or noise from work sites. The complaints were treated seriously, and improvements were made.

Toray Group Environmental Incidents in FY 2010	
Administrative disposition due to violations of laws or ordinances *1	0
Accidents (fires, explosions, environmental accidents, etc.)	5
Standard values slightly exceeding temporarily *2	1
Complaints/requests (noise, odor, etc.)	5

*1: Includes improvement orders and fines. Improvement guidance and recommendations are included in accident figures.

*2: No improvement guidance or recommendations were received from authorities, as there was no harm to the environment.

Safety and the Environment
Environmental Accounting

Toray introduced environmental accounting in FY 1999 to record and calculate the effectiveness of investments and costs relating to environmental preservation, energy conservation, and recycling.

Toray FY 2010 Accounting Results

In FY 2010, environment-related investment amounted to 1.24 billion yen, a 1.20 million yen decrease compared to the previous year due to an absence of large-scale investment. Major contributions to this total included measures to reduce atmospheric emissions of chemical substances, wastewater treatment facilities, and equipment for waste reduction.

Costs totaled 7.06 billion yen, an increase of 30 million yen compared to the previous year. Of this amount, atmospheric costs totaled 1.82 billion, while water quality costs amounted to 2.64 billion. The main portion of total costs consisted of operating costs for exhaust gas and wastewater treatment equipment already installed.

As a result, Toray realized 1.02 billion yen in energy cost reductions, 50 million yen in waste disposal cost reductions, and gained 390 million yen on the sales of valuable recycled resources.

Toray FY 2010 Environmental Accounting

Costs				
Item		Subcategory and description	Investment (million yen)	Investment expenses (million yen)
Business area costs	Pollution prevention costs	Air (including CFC countermeasures)	224	1,822
		Water quality	254	2,643
		Noise and vibration	32	40
		Greening	0	259
		Odors and other	53	152
	Global environment conservation costs	Energy conservation and combating global warming	669	—
Resource recycling costs	Waste reduction, recycling, disposal, and PCB waste disposal services	4	1,477	
Upstream and downstream costs		Product recycling	0	2
		Container and package recycling	0	1
Management activity costs		Indirect labor costs, ISO certification and maintenance, environmental communications, and education	0	366
Social initiative costs		Regional initiatives, support for organizations, etc.	0	27

Environmental damage costs	SOx fines, soil purification, etc.	0	273
Total		1,236	7,062

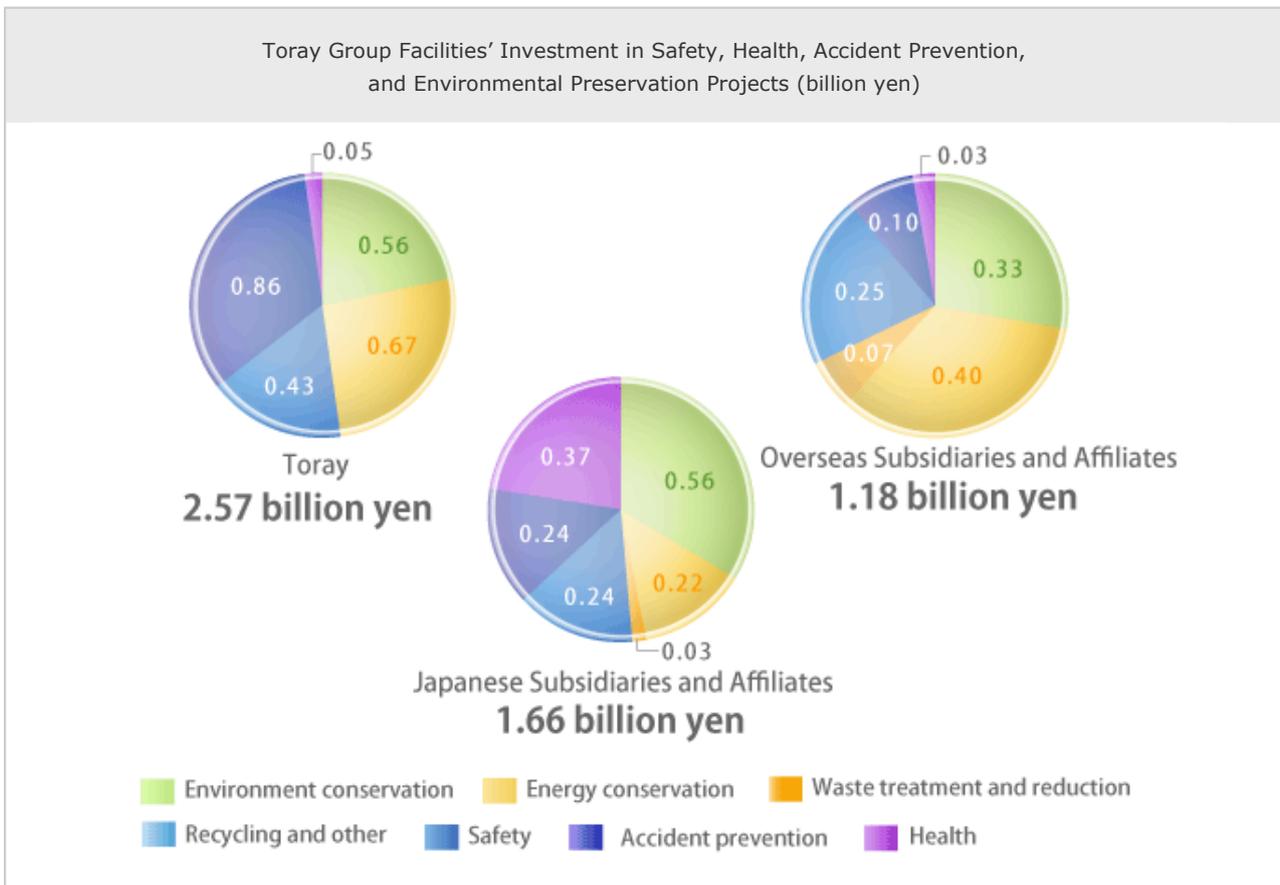
Effectiveness	
Policy	Amount (million yen)
Reduction in energy costs	1,021
Reduction in waste disposal costs	50
Sale of valuable recycled resources with monetary value	386

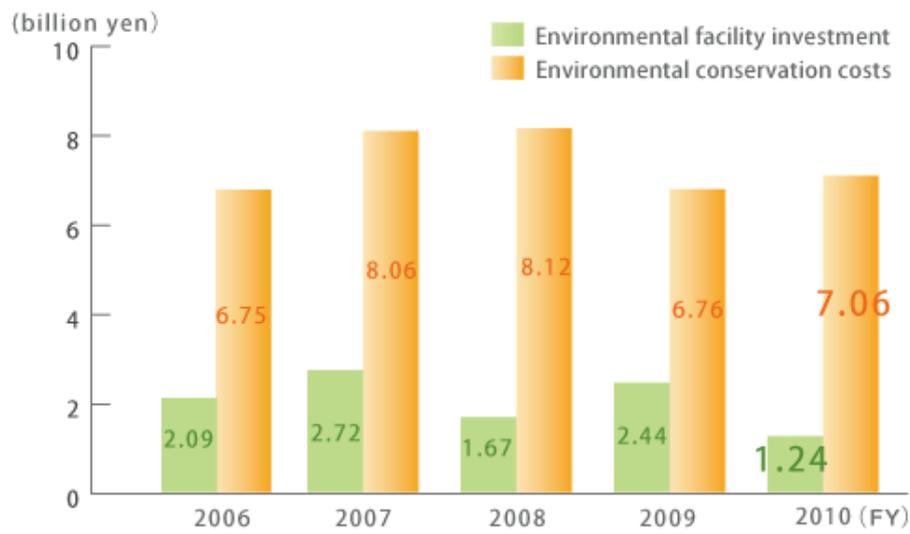
Toray Group Facilities' Investment in Safety, Health, Accident Prevention, and Environmental Preservation Projects

In addition to environmental accounting, Toray Group reports its investments relating to safety, accident prevention, and health. The total amount of equipment investment in FY 2010 was 2.57 billion yen for Toray, 1.66 billion yen for Japanese subsidiaries and affiliates, and 1.18 billion yen for overseas subsidiaries and affiliates.

Safety investment continued to center on retrofitting existing equipment to improve fundamental safety, while accident prevention investment was made to strengthen buildings to increase earthquake resistance.

In the area of environmental efforts in Japan, Okayama Chemicals Co., Ltd. increased the capacity of its wastewater treatment facilities. Overseas, Toray Advanced Materials Korea Inc. took measures to reduce its atmospheric emissions of chemical substances.





Toray Environmental Accounting Standards

- Some categories were changed based on the Ministry of the Environment's Guidelines for FY 2005.
- Only economic effects that can be determined with a high degree of certainty are included in the calculation. Presumed effects are not included.
- Capital investment also includes facility investments for which environmental preservation is not the main objective. Capital investment resulting from leases is also included. Expenses include labor costs and depreciation. However, internal labor costs related to local volunteer activities are not included.
- Energy cost reduction figures show the amount of reduction for the 12 months after the completion of an energy conservation 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.

Safety and the Environment
Environmental Data

Environmental Impact Overview FY 2010

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	Toray			Japanese Subsidiaries and Affiliates			Overseas Subsidiaries and Affiliates		
	FY 2009	FY 2010	Compared to the previous year (%)	FY 2009	FY 2010	Compared to the previous year (%)	FY 2009	FY 2010	Compared to the previous year (%)
INPUT									
Energy (1,000,000 gajou/hrs)	27.1	30.4	11	6.4	7	9.4	33.5	38.6	11.2
Water (2,000,000 tons)	179	192	7.3	18	18	0	31	31	0
OUTPUT									
GHG (10,000 tons CO ₂ e)									
9 gases including CO ₂	195	214	11	36	41	11.4	207	208	1.0
PRTR Law-specified substances **1 (tons)									
Atmospheric emissions	184	280	53.8	189	138	-26.5	298	305	2.3
Water emissions	28	25	-10.7	0	0	0	0	0	0
Waste transfers	1,300	1,438	10.6	1,280	1,345	-2.7	690	434	-37.1
Air pollutants (tons)									
Sulfur**	903	992	9.9	42	46	9.5	2,760	2,854	3.4
Nox	1,436	1,752	2.1	34	49	44.1	896	1,041	16.2
Dust	98	108	10.2	6	2	-66.7	281	284	1.1
Industrial wastewater (1,000,000 tons)									
	189	181	-4.2	11	11	0	20	20	0.0
Water pollutants (tons)									
BOD	743	807	10.8	19	21	63.2	168	207	23.2
COD**	764	836	8.4	34	35	5.9	1,194	1,444	20.9
Nitrogen	567	599	5.6	18	19	5.6	-	-	-
Phosphorus	26	33	26.9	2	1	-50	-	-	-
Waste (1,000 tons)									
Recycled	25.9	26.7	14.7	15.9	17.0	6.9	36.8	42.9	16.6
Incinerated and other	2.1	0.9	-57.1	0.9	0.8	-10	9.1	6.3	-30.8
Direct landfill disposal	0.5	0.4	-20.0	0.2	0.6	200.0	19.8	16.8	-15.2
Coal ash (1,000 tons)									
Recycle	43.8	53.2	19.7	-	-	-	28.8	31.1	7.9
Direct landfill disposal	0.9	1.1	22.2	-	-	-	0.3	0.3	0.0

*1: FY 2009 data for emissions and transfer amount designated as type 1 is reported according to the PRTR Law prior to its revision in April 2010.
FY 2011 data is reported according to the revised PRTR Law.

*2: Calculation errors concerning FY 2009 amounts of SO_x have been corrected here.

Water pollutant calculations include the following

	Toray	Japanese Subsidiaries and Affiliates	Overseas Subsidiaries and Affiliates
BOD	All 12 plants and 1 research laboratory	33 plants at 26 companies	42 plants at 31 companies
COD**	12 plants and 1 research laboratory (including 6 plants subject to Total Water Pollutant Load Control)	34 plants at 19 companies (including 7 plants at 7 companies subject to Total Water Pollutant Load Control)	42 plants at 31 companies
Nitrogen and phosphorus	All 12 plants and 1 research laboratory	18 plants at 15 companies	-

*3: COD figures for Toray, Japanese subsidiaries and affiliates, and factories in Korea are given in COD_{Cr} (using the potassium dichromate method).
COD figures for other overseas subsidiaries and affiliates are given in COD_{Mn} (using the potassium permanganate method).

Chemical Substance Emissions and Transfer Data
PRTR Law-specified substance emissions and transfer data for FY 2010

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Toray	Substance name	Tons (dioxin: mg-TEQ)			
		Atmospheric emissions	Water emissions	Soil emissions / company level	Waste transfer
Acrylonitrile		48.5	2.7	0	2.6
Acetaldehyde		5	0	0	0
Acetonitrile		0	0	0	1
Antimony and antimony compounds		0	0	0	0.3
Iodine and iodine compounds		0	0	0	0.5
Ethyl benzene		0	0	0	0.2
Ethylene glycol monoethyl ether		0.2	0	0	0.2
Ferri chloride		0	0	0	1.7
ε-Caprolactam		0.3	15	0	17.5
Ethylene		12.6	0	0	0
Silver and other water-soluble compounds		0	0	0	4.8
n-Chlorobenzene		6.6	0	0	0
Chlorobenzene		2	0	0	40.3
Chloroform		1.8	0	0	16.4
Cobalt and cobalt compounds		0	0.3	0	6.8
4,4'-diaminodiphenyl ether		0	0	0	2.8
Inorganic cyanide		49.5	0	0	0
1,4-Dioxane		0	2.1	0	0
Carbohexylamine		0.1	0.1	0	0
HCRC-123		1.3	0	0	0
p-Dichlorobenzene		4.1	0	0	1.6
Dichloromethane		1.7	0	0	3
Diphenyl ether		0	0	0	0.7
N, N-dimethylacetamide		18.6	0	0	666.9
N, N-dimethylformamide		17.4	0.6	0	241.4
Ethylene		12.7	0	0	1.4
Terephthalic acid		0	0	0	172
Dimethyl terephthalate		0	0	0	0.6
Trichloroethylene		0.3	0.1	0	0.6
Toluene		3.3	0	0	80.6
Nitrobenzene		0	0	0	33.7
Hydrazine		0	0.1	0	0
Biphenyl		0	0	0	0.2
Pyridine		0	0	0	3.7
m-Phenylenediamine		0	2.3	0	0
Bit (2-ethylhexyl) phthalate		0	0	0	0.5
Bromomethane		72.2	0	0	0
n-Heptane		0	0	0	35
Benzene		1.4	0.9	0	0.1
Boron and boron compounds		0	0	0	0.8
Poly (acrylonitrile) allyl ether		1	0	0	1.9
Formaldehyde		0	0	0	0.8
Manganese and manganese compounds		0	0.4	0	3.3
Methacrylic acid 2,3-Epoxypropyl		0	0	0	2.3
Methyl methacrylate		7.5	0	0	15.4
Methylenebis (4,1-phenylene) diisocyanate		0	0	0	68
Dioxin		2.4	19	0	76.3
Total		260	25	0	1,438

Note: The List shows emissions and transfers of 46 substances (out of Toray's 70 PRTR Law-specified substances) exceeding 50 kg and dioxin

Japanese Subsidiaries and Affiliates	Substance name	Tons (dioxin: mg-TEQ)			
		Atmospheric emissions	Water emissions	Soil emissions / company level	Waste transfer
n-butyl acrylate		0.1	0	0	0.2
Acetonitrile		0	0	0	4.8
2-aminoethanol		0	0	0	56.8
1-Allyloxy-2,3-epoxy propane		0	0	0	7.8
Ethylbenzene		4.2	0	0	1.5
Ethylene oxide		1	0	0	0
Ethylene glycol monoethyl ether		1.8	0	0	0.2
Ethylene diamine		0	0	0	0.1
Epichlorohydrin		0.1	0	0	1.8
Ethylene		26.5	0	0	25.4
2-Ethoxyethyl Acetate		0	0	0	0.3
Dichloromethane		4.5	0	0	0.4
N, N-dimethylacetamide		3.6	0	0	191.2
N, N-dimethylformamide		12.3	0	0	232.2
Styrene		0	0	0	0.4
Decabromodiphenyl ether		0	0	0	0.1
Dodecyl sodium sulfate		0.1	0	0	0
Toluene diisocyanate		0.5	0	0	0
Toluene		74.6	0	0	636.5
Carbon dioxide		0.9	0	0	0
Hexadecyltrimethylammonium chloride		0.8	0	0	0
n-Heptane		1.9	0	0	31
Poly (acrylonitrile) allyl ether		0	0	0	46.7
Isobutyl (acrylate) diethyl ether sulfonate		0.3	0	0	0
Formaldehyde		0.7	0	0	0.3
Maleic anhydride		0	0	0	0.3
Methacrylic acid		0	0	0	3.1
n-butyl methacrylate		0.1	0	0	0
Methyl methacrylate		0.2	0	0	0
3-Methylpyridine		1.9	0	0	3
n-Methyl styrene		0	0	0	0.2
Molybdenum and molybdenum compounds		0	0	0	0.7
Dioxin		0.9	0.1	0	49
Total		144	0	0	1,867

Note: The List shows emissions and transfers of 33 substances (out of the 50 PRTR Law-specified substances for domestic subsidiaries and affiliates) exceeding 50 kg and dioxin

Environmental Data for 12 Toray Plants and Principal Subsidiaries and Affiliates

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Unit	GHG emissions 10,000tne CO2/year	Emission volume													Principal manufactured products
		PRTR				Gas emissions			Water emissions			Waste			
		Air	Water	Soil & landfill	Waste transfers	SOx	NOx	Dust	BOD	COD	Water	Recycled	Simple incineration	Landfill disposal	
Shiga Plant	9.9	21	0	0	108	0	36	0	104	113	30.3	3,418	50	0	ECSAIND® man-made suede, LUMRROR® polyester film, TOPTICAL® color filter, Electronics & information materials
Seta Plant	0.3	0	0	0	0	0	0	0	0	0	0.2	71	0	0	TORAYLON® blended yarn, Medical products (Inoue balloon catheters and ANTHRON® I-J catheters)
Ebina Plant	53.6	86	6	0	253	416	759	76	82	137	30.7	8,649	34	31	TORAY TETORON® polyester staple fiber, TORAYCA® carbon fiber, SCHEMIS® reverse osmosis membrane-module, TORSEYCON® PBT resin
Nagoya Plant	15.1	15	0	0	92	0	146	4	140	176	32.6	2,553	703	196	ANILAN® nylon resin, TORAYCON® PBT resin, Gypsum, Various fine chemicals
Tokai Plant	81.2	82	19	0	172	11	378	5	446	454	17.6	7,396	70	130	Caprolactam terephthalic acid, TORAY TETORON® chips, TORSELINA® PPS resin
Aichi Plant	2.7	0	0	0	14	0	0	0	4	-	2.0	134	0	0	Nylon filament yarn, RAYTEL® plastic optical fiber
Okazaki Plant	11.2	12	0	0	713	85	39	13	18	40	7.9	2,978	0	14	Nylon filament yarn, TORAY WATERLESS PLATE® printing plate, Fibrycer® artificial kidney, TORAYVINO® home water purifier
Niishina Plant	19.4	3	0	0	39	26	286	1	40	37	36.8	679	67	40	LUMRROR® polyester film, TORAY TETORON® polyester filament yarn, DIXER® (DMJ Administration Hydrocortin [HSD] derivative), Isera™ natural interferon-β preparation
Chiba Plant	1.9	39	0	0	2	0	11	0	6	64	4.2	2,661	8	6	TOYOLAC® ABS resin
Tsuchiura Plant	2.4	0	0	0	0	0	0	0	1	-	0.4	153	0	0	TORAYFAN® 80 polypropylene film
Gifu Plant	9.6	0	0	0	6	403	63	3	15	6	9.2	462	0	3	ECSAIND® man-made suede, LUMRROR® polyester film, TORSELINA® PPS film
Ishikawa Plant	4.6	1	0	0	40	50	28	6	1	5	9.5	647	0	6	TORAY TETORON® polyester filament yarn, Nylon filament yarn
Toyo Tire Cord Co., Ltd.	1.6	1	0	0	1	0	1	0	1	7	1.0	177	6	0	Tire cord, Carpet pile fiber
Toray Advanced Film Co., Ltd. [Niishina]	0.8	2	0	0	46	0	1	0	0	0	0.3	492	4	3	Release film
Luckytex (Thailand) Public Company Limited (LHIC)	2.2	0	0	0	0	0	4	1	11	78	0.3	0	242	650	Polyester filament fabric for lining, cotton fabric for jeans, canvas for airbags, Srecois
Toray Films Europe S.A.S.	2.8	0	0	0	0	0	31	0	-	21	2.5	594	532	512	LUMRROR® polyester film, TORAYFAN® polypropylene film

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

Social Responsibility Global Environment Activities



In order to fulfill its responsibilities as a materials manufacturer, Toray Group is working to reduce its environmental load, while promoting ongoing activities in areas that include safety and accident prevention.

The global population has grown from 1.6 billion to 6.7 billion since the beginning of the 20th century, and this figure is projected to rise to 9.5 billion by 2050. Although significant advances have been made in science and technology alongside economic growth, issues such as global warming, the depletion of fossil fuels, and shortages in both water and food resources have emerged. Toray Group recognizes that companies must proactively engage in activities to address these critical issues and protect the global environment for future generations. Based on the approach that all business strategies should be grounded in concerns for the environment and contribute to realizing a sustainable low-carbon society, Toray adopted an operating policy in 2008, and was a leader in introducing and promoting life cycle management (LCM) as a diversified chemical company. In addition to reducing the environmental load of products and services across their entire life cycle, LCM entails activities aimed at promoting sustainable development. In promoting life cycle assessment (LCA) across all of its business areas, Toray has also adopted Contribution Factor of CO₂ Reduction, a proprietary environmental contribution indicator that incorporates the practice. In order to further boost LCM, Toray developed T-E2A, a method for comprehensively evaluating environmental load reduction and economic efficiency. In addition to its application in appraising the Company's own business strategies and investment activities, Toray is looking to promote its use across all industries.

As a part of efforts to carry out LCM, Toray has adopted ECODREAM® as an overall brand name for its environmentally friendly products, and has been actively promoting Project EcoChallenge, an initiative that recognizes the broad range of ecological concerns. To further the initiative, Toray is in the process of vigorously advancing a Green Innovation Business Expansion (GR) Project under the leadership of the president. The Company is expanding its Green Innovation products business through the provision of solutions for global environmental issues. Toray will take the lead in these initiatives in order to help realize a sustainable low-carbon society.

Initiatives for Green Innovation Businesses

1. [Life Cycle Management \(LCM\) and T-E2A](#)
 - (1) [Life Cycle Management](#)
 - (2) [T-E2A](#)
2. [Promoting Life Cycle Management](#)
3. [Pursuing Environmentally Conscious Design](#)
4. [Transition from Project EcoChallenge to the Green Innovation Business Expansion Project](#)
5. [Advances in Green Innovation Products](#)
6. [Promoting Recycling](#)

Safety and the Environment

1. [Ten Basic Environmental Rules](#)
2. [Toray Group Biodiversity Basic Policy](#)
3. [Safety, Health, Accident Prevention and Environmental Preservation Management System](#)
4. [Initiatives to Fight Global Warming](#)
5. [Voluntary Reduction of Atmospheric Emissions of Chemical Substances](#)
6. [Initiatives to Prevent Air and Water Pollution](#)
7. [Initiatives to Reduce Waste](#)
8. [Environmental Risk Management](#)
9. [Environmental Accounting](#)
10. [Environmental Data](#)

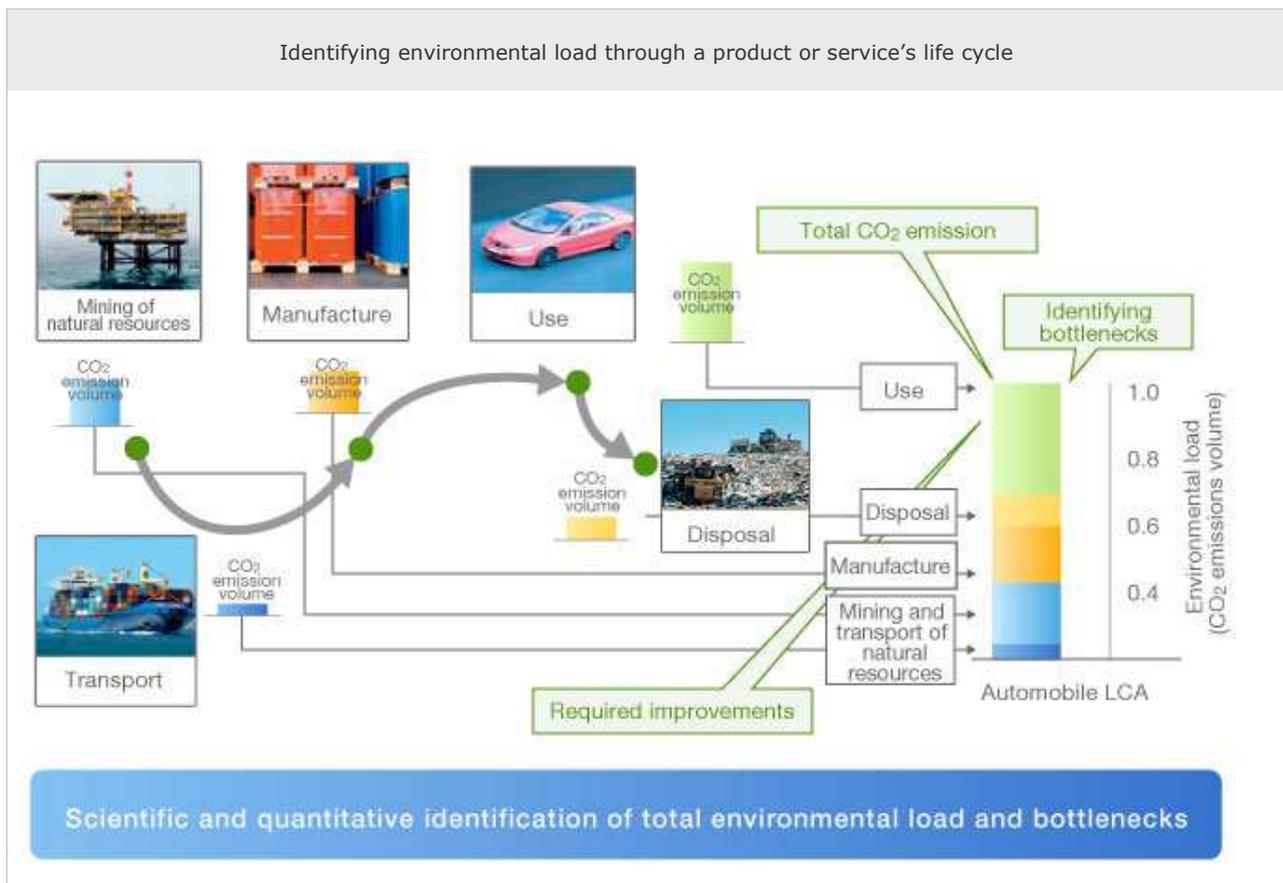
Social Responsibility
**Global Environment Activities:
Product Life Cycle Based Environmental Management**

1. Life Cycle Management

Extending beyond the boundaries of country or region, the principles of LCM examine the balance of CO₂ and costs of products and services across their entire life cycle for all industrial and corporate activity. LCM is an ongoing endeavor that strives to enhance economic and social value while at the same time reduce environmental load. LCM offers significant potential in balancing environmental load reduction with sustainable growth.

LCM Approach 1

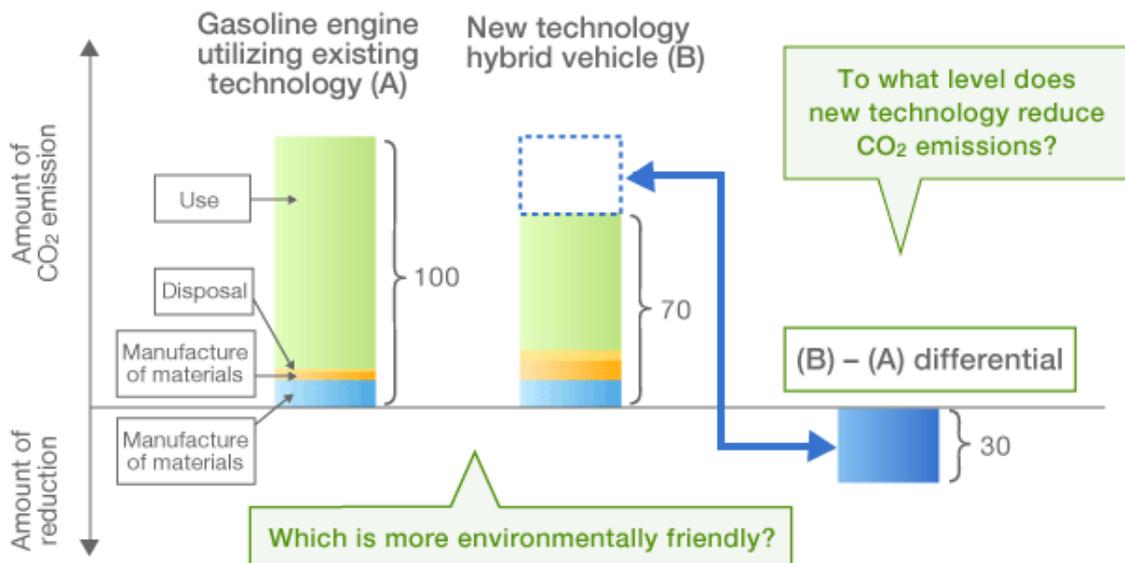
Identifying major factors that affect the environment is paramount with the advance of globalization. Rather than simply focus on characteristics of a region, it is crucial to adopt an approach that examines environmental load across every phase of a product or service's life cycle. The following diagram illustrates the environmental load of an automobile from the mining of natural resources through manufacture, to its use and disposal. In this approach, we are better positioned to scientifically and quantitatively identify the total amount of CO₂ emissions as well as process bottlenecks that emit large volumes of CO₂, together with the necessary improvement measures.



LCM Approach 2

Another major point is to focus on not only the volume of emissions, but also the differential with the volume generated through new technologies. For example, against a base reference of 100, which is the volume of CO₂ emissions throughout the lifecycle of a gasoline engine, the overall figure for the entire life cycle of a hybrid vehicle is 70. While CO₂ emissions are high at the point of manufacture, levels are substantially lower during its use. In addition to clarifying which product is more environmentally friendly, the LCM approach identifies the reduction achieved through the application of new technologies by noting the differences between products. Clarifying the benefits of new technology not only enhances its promotion, but also facilitates simultaneous environmental and economic development. Furthermore, LCM approach helps the advancement of practical procedures aimed at alleviating global warming.

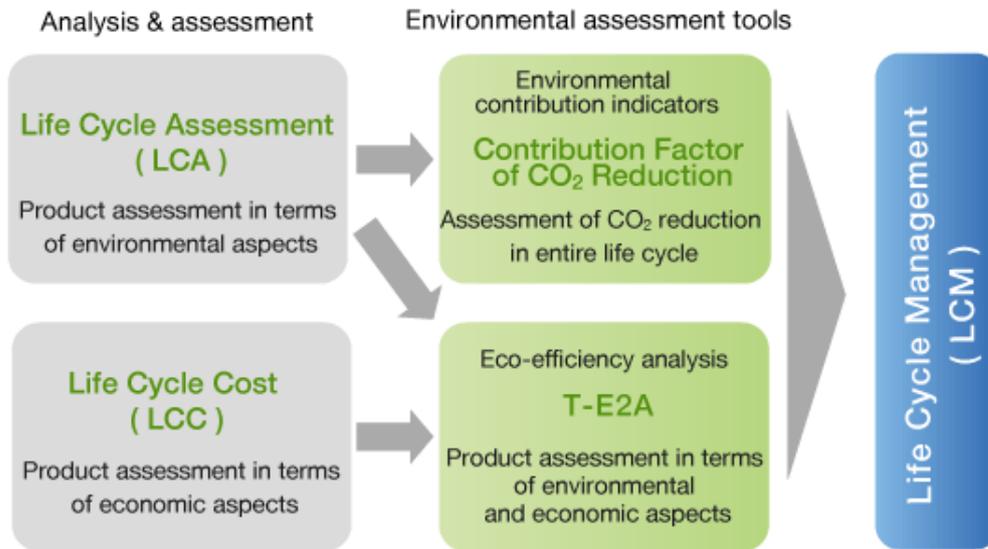
In addition to the volume of emissions, take note of the differential in the amount of CO₂ emissions attributable to the introduction of new technology



Clarifying the effect of new technologies helps both in its promotion as well as maintaining balance between environmental and economic development

Overview of Toray's LCM

In 2008, Toray initiated a new management policy based on the approach that all business strategies must place priority on the global environment in an effort to help realize a sustainable low-carbon society. The approach is underpinned by the principles of LCM. Critical to the aforementioned are the following two environment assessment tools:

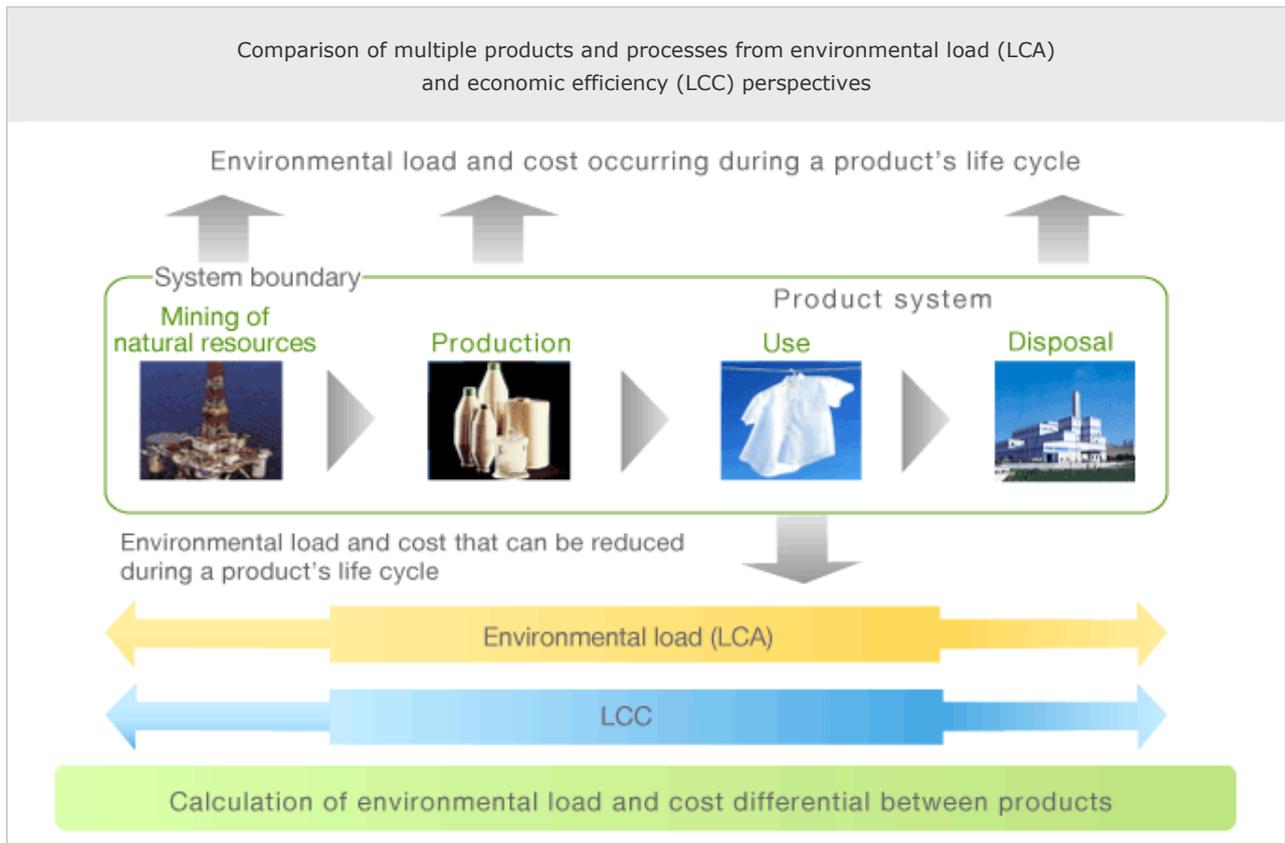


Social Responsibility
Global Environment Activities:
Product Life Cycle Based Environmental Management

2. T-E2A

T-E2A: Eco Efficiency Analysis

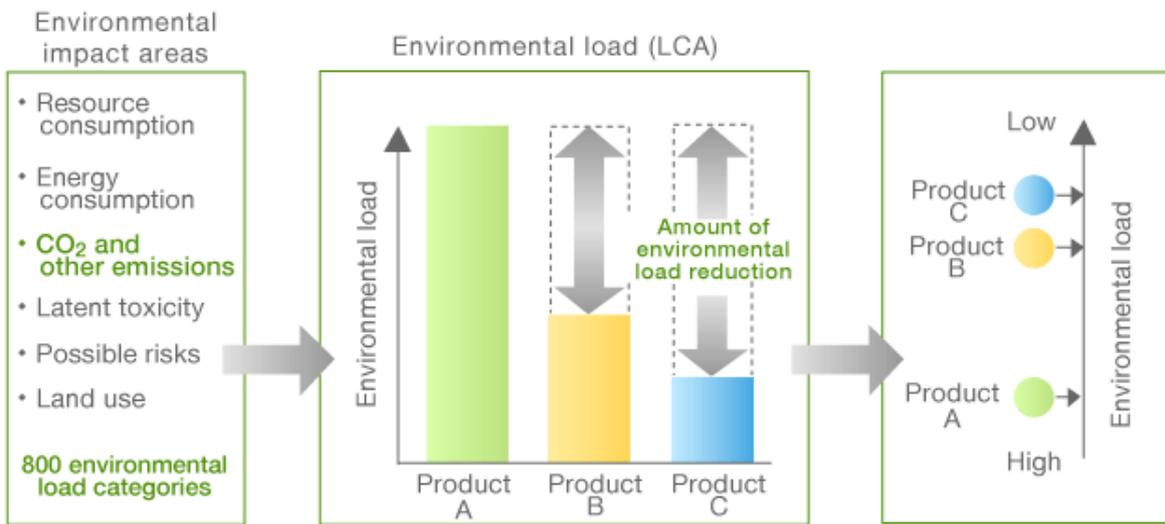
The T-E2A is an analysis tool that provides a comparative evaluation of the environmental load and economic efficiency of multiple products and processes. Specifically, it offers (1) a life cycle assessment (LCA) function, quantitatively evaluating environmental load that occurs throughout the life cycle of a product; (2) a life cycle cost (LCC) function, quantitatively evaluating economic impact that occurs throughout the life cycle of a product; and (3) a visualization function, calculating differential between the environmental and economic impact of products, which includes CO₂ emissions during the product's use.



Evaluation of Life Cycle Environmental Load Reduction

In an evaluation of environmental load reduction throughout the life cycles of more than two products, research and input of approximately 800 environmental load categories is undertaken as an initial measure. LCA is then calculated on an individual product basis. As indicated by the dotted areas, products that generate lower environmental load, or in other words, products that record a larger environmental load reduction, are plotted higher along the vertical axis.

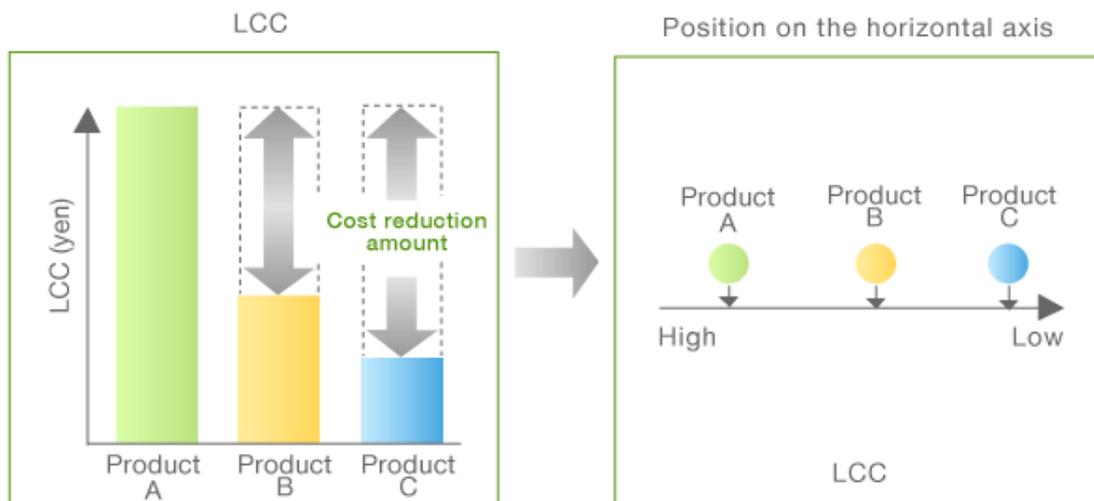
The lower the environmental load (or the larger the volume of environmental load reduction), the higher the product is plotted along the vertical axis.



LCC Reduction Evaluation

Evaluation of LCC reduction entails research and calculation of all LCCs, including manufacturing costs as well as costs borne by consumers on an individual product basis. In a similar manner to environmental load, when the LCC is low or the cost reduction amount for a product is large as indicated by the dotted areas, that product is plotted towards the right of the horizontal axis.

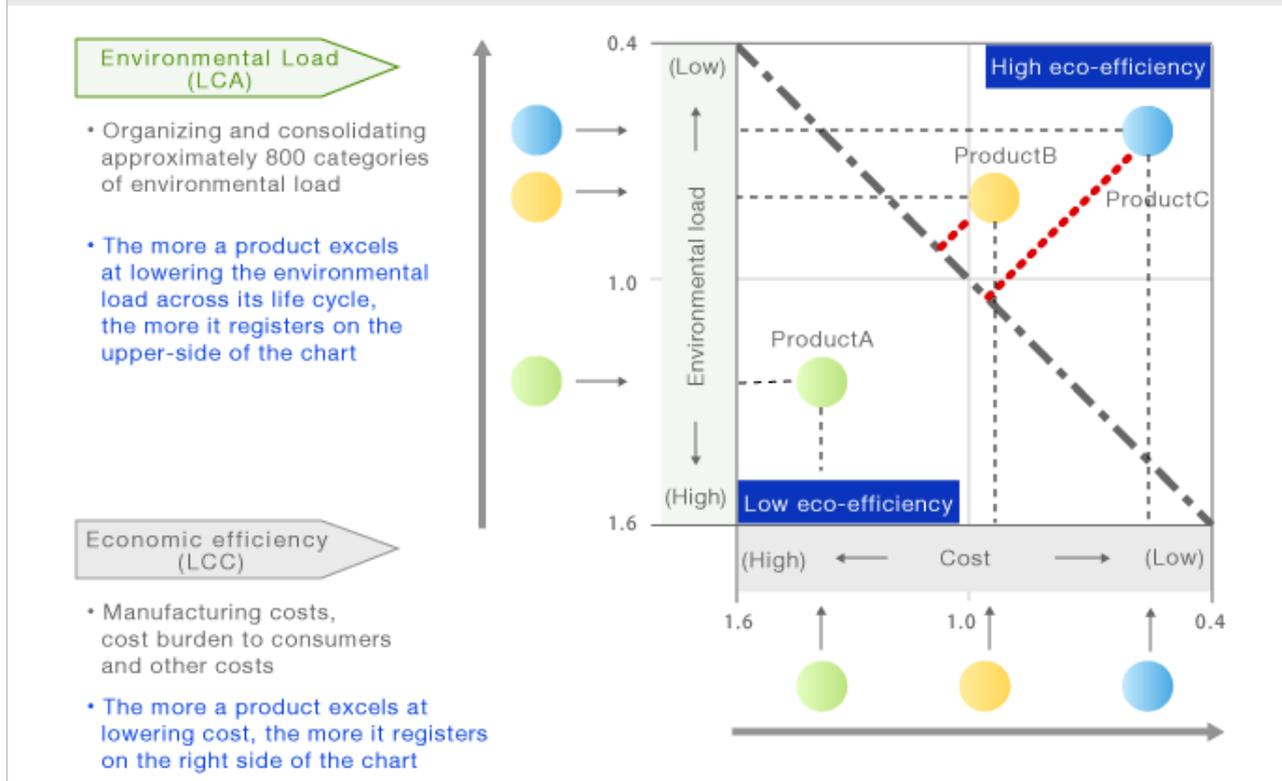
The lower the LCC (or the larger the cost reduction volume) for a particular product, the further it is plotted on the right of the horizontal axis.



Eco-Efficiency Map

The results of the two environmental load analyses can be charted in a single eco-efficiency map. The vertical axis of the eco map denotes environmental load measured by LCA, and the horizontal axis denotes economic efficiency including the life cycle cost of a product. The lower the environmental load of a product, the higher it is plotted on the eco-map. A product is plotted further to the right if its cost is lower (or its economic burden is smaller). Increasingly eco-efficient products are therefore plotted higher and further to the right. The product with the lowest environmental load and most outstanding economic efficiency in terms of total costs offers the highest Contribution Factor of CO₂ Reduction. Many countries over the world including Japan are currently pursuing plans to introduce a variety of environment improvement measures. At the same time, they are faced with such related issues as the procurement of financial resources to fund these measures, and their burden on the general populace. In this light, the T-E2A is an innovative tool that analyzes the cost performance of a particular environment improvement measure, and is essential towards securing both environmental protection and economic growth.

High eco-efficiency: Products that exert low environmental load and boast high economic efficiency



The T-E2A software adopts analytical measures that comply with ISO-14040. Inventory data is input by weight on an individual product basis and clarifies environmental load, including the natural resources used in products and their CO₂ emissions. The software then calculates LCA and E2A.

Toray promotes the use of T-E2A across every facet of its operations including R&D, production, marketing and corporate PR activities. It is also being used as an important management decision-making tool for assessing capital expenditure and formulation of new business strategies. In particular, the T-E2A is being applied during initial stages of R&D to help devise new products and processes that incorporate both environmental and economic perspectives. Its use significantly contributes towards Toray's development of competitive products for the future.

Response to the Great East Japan Earthquake

Toray Group will continue to actively assist with the reconstruction effort, especially in East Japan.

Junichi Fujikawa

*Chief of the Great East Japan Earthquake Headquarters,
Executive Vice President and Representative Member of the Board,
Toray Industries, Inc.*



Immediately after the earthquake struck, Toray Group set up an earthquake response headquarters directly under the president, and I was named headquarters chief. In order to properly fulfill management responsibilities to all of the Company's stakeholders, the earthquake headquarters was organized into eight response teams. Once the disaster conditions were ascertained, we began carrying out measures for business recovery and support for the affected regions. All Toray Group companies came together, and in close cooperation with customers and suppliers, we worked to support one another and achieve recovery. As a result of these efforts, Toray Group was able to safely return to normal business operations.

In response to governmental policies to deal with the current electric power shortage in Japan, Toray is now implementing thorough energy-saving measures. We will continue to enhance crisis management measures to deal with the possibility of further power supply restrictions in the future.

A questionnaire survey was conducted within Toray Group concerning our response to the earthquake, and important issues were identified. Based on these results, we will continue to share the lessons learned, in order to improve disaster prevention measures and business continuity plans (BCP).

Toray Group will continue to actively support the reconstruction effort, especially in East Japan.

Initial Response Based on the BCP

› Confirming Employee Safety and Establishing Earthquake Response Headquarters

After the earthquake struck at 2:46 p.m. on March 11, 2011, Toray began confirming the whereabouts and safety of employees, damage incurred at Toray Group offices and plants, as well as the damage situation at suppliers, based on the Major Earthquake Business Continuity Plan. The information was immediately reported to top management, and the task was completed at 7:39 p.m. on March 11.

An earthquake headquarters was immediately set up on the president's instructions, according to the Crisis Management Regulations. The president presided at all the headquarters meetings from the first meeting on March 14, to the ninth meeting on June 21.

The earthquake headquarters was divided into eight response teams in order to quickly and accurately respond to the wide range of disaster damage and impact. There was a clear division of roles.

At each of the affected Toray Group offices and plants, local earthquake headquarters were also set up with plant managers serving as headquarters chiefs.

Earthquake Response System (as of June 2011)



› Confirming Damage Conditions

Damage conditions were checked immediately after the earthquake, and fortunately no Toray Group employees had been harmed. However, there was damage to equipment and buildings. The damage and recovery situations for each Toray Group site affected by tremors of level 5 or greater on the Japanese seismic scale are given below.

There were also some Toray Group plants that were not directly hit by the quake, but were still affected. Due to damage suffered by customers and suppliers, these sites were not able to obtain raw materials or parts, and had to suspend production or were forced to change raw materials. Other sites were able to continue production but could not ship products.

Damage and recovery conditions at Toray Group sites in areas that experienced seismic intensity level of 5 or more

	Plants	Principal manufactured products	Greatest seismic intensity	Main damage (March 11)	Main recovery efforts
Toray Industries, Inc.	Tschiura Plant	Polypropylene film	Just under 6	Electricity, steam, and water supply were cut off, and all the TORAYFAN® lines were halted (became difficult to secure food and drinking water, and supplies were received from the Chiba Plant and Soda Aromatic Co., Ltd.)	Production was partially restarted on March 22; all lines were recovered in April and normal operation resumed
	Chiba Plant	Acrylonitrile butadiene styrene resin	Just under 5	All the polymerization, compound and in-house power generation equipment was shut down (water and steam remained operating)	Production was partially restarted on March 13; all lines were restored within March and normal operation resumed
	Fukushima Plant, Toray ACE Co., Ltd.	Housing materials for exterior wall	Just under 6	No major damage to equipment, but the water supply was partial damaged	Production was partially restarted on March 28; all lines were recovered in April and normal operation resumed
	Koriyama Plant, Soda Aromatic Co., Ltd.	Dairy product flavoring and food flavoring	Just under 6	Although there was no equipment damage, some raw material containers fell and there was some partial leakage. Isolated damage to building walls and ceilings. No problems with utilities.	Production was partially restarted on March 15; all lines were restored within March and normal operation resumed.

Japanese subsidiaries and affiliates	Koriyama Plant, Toyo Plastic Seiko Co., Ltd.	Engineering plastic molding	Just under 6	Temporary suspension of electricity, water, and natural gas supply; all lines shut down	Production was partially restarted on March 16; all lines were restored within March and normal operation resumed
	Fukushima Plant, Toray Advanced Film Co., Ltd.	Vapor deposition and electroplating films	Over 6	All lines shut down. Some damage occurred requiring repair, including damage to plumbing, and cracks in building walls	Production was partially restarted on March 31; all lines were restored by May and normal operation resumed
	Toray Tonen Specialty Separator Godo Kaisha (Nasushiobara City, Tochigi Prefecture)	Battery separator film	Just under 6	All lines shut down. Some damage occurred requiring repair, including damage to plumbing, and water penetration into power distribution panels	Production was partially restarted on March 31; all lines were recovered in April and normal operation resumed

Related Information

- [Press Release](#)
[Impact of the 2011 off the Pacific coast of Tohoku Earthquake on Toray Facilities \(March 18, 2011\)](#)
- [Press Release](#)
[Impact of the 2011 off the Pacific coast of Tohoku Earthquake on Toray Facilities \(March 25, 2011\)](#)

CSR Report Highlight

Toray Group is expanding business activities worldwide, and is committed to addressing global issues through advanced materials and green innovation



CSR Report Highlight 2011



Toray's Legacy and Future

- [\(1\) Promoting Product Life Cycle based Environmental Management and Expanding Green Innovation Businesses](#)
- [\(2\) Environmental Initiative](#)



Toray Group's strength in materials opens new horizons in the future

- [\(1\) Creating Smart Communities](#)
- [\(2\) Resolving Social Issues](#)

Back Number

CSR Report Highlight 2010

■ CSR REPORT 2010 HIGHLIGHT 1

Contributing to a Sustainable Society

Promoting and advancing development of materials that reduce environmental impact through product life cycle management

- [\(1\) Establishment of the Global Environment Business Strategic Planning Department](#)
- [\(2\) Promotion of Life Cycle Management](#)
- [\(3\) Eco-Efficiency Analysis Tool: T-E2A](#)

■ CSR REPORT 2010 HIGHLIGHT 2

Mitigating Water Resource Issues

Contributing to resolve global water resource issues through Toray's water treatment membrane technology

- [\(1\) Proprietary Seawater Desalination Technology for Solving Water Shortages on Small Islands](#)
- [\(2\) Water Recycling: New Technology for Wastewater Reuse](#)
- [\(3\) Global Water Resource Issues and Expansion of Toray's Water Treatment Business](#)

CSR REPORT 2010 HIGHLIGHT 3**CSR Initiatives in Education**

Helping to foster future generations through science education support

[-Developing Study Programs and Providing Classes](#)

[that Feature Toray Products and Technologies](#)

[-Supporting "Science Camp"](#)

[-Supporting the International Science Olympiads](#)

[-The Toray Science Education Prize](#)

CSR Report Highlight 2009**CSR REPORT 2009 HIGHLIGHT 1****Tackling Climate Change**

Toray aims to reduce its CO₂ emissions through the development and promotion of next-generation materials such as Carbon Fiber Reinforced Plastics(CFRP)for the automotive and aircraft industries.

[1.Expanded Use of CFRP](#)

[2.Establishment of Automotive & Aircraft Center and Our Technological Innovation](#)

CSR REPORT 2009 HIGHLIGHT 2**Initiatives to Mitigate Water Resource Issues**

Toray is contributing to solving water resource issues by providing safe water to regions around the world that suffer from water scarcity. This is being achieved by applying Toray's water treatment membrane technology in seawater desalination.

CSR REPORT 2009 HIGHLIGHT 3**CSR Initiatives Around the World**

Toray Group employees are promoting CSR activities in countries and regions where the company operates. The following report covers the details and results of Toray Group's main CSR activities.



1. History of Environmental Management

(1) Promoting Product Life Cycle based Environmental Management and Expanding Green Innovation Businesses

Since its foundation, Toray Group has positioned safety, health, accident prevention and environmental preservation management as a core priority. In addition to maintaining and improving the safety and health of its employees and society at large, the Group today is united in its commitment to preserve the global environment.

Promoting Product Life Cycle based Environmental Management

As a materials manufacturer, Toray has adopted a long-term perspective in production that emphasizes a harmonious coexistence with the environment, and the Company's environmental management is focused on the development and commercialization of environmentally friendly products. Taking the overall lifecycles of products, technology and services into consideration, the Company has adopted the Toray Eco-Efficiency Analysis (T-E2A) tool, which incorporates life cycle assessment (LCA) techniques to provide a comparative evaluation of the environmental load and economic efficiency of multiple products and processes. In specific terms, T-E2A helps to identify and analyze economic benefits and costs of environmental load as the basis for determining business and management strategies to promote LCM based environmental management.

Related Information

- [Life Cycle Management \(LCM\) and T-E2A \(1\) Life Cycle Management](#)

Expanding Green Innovation Businesses

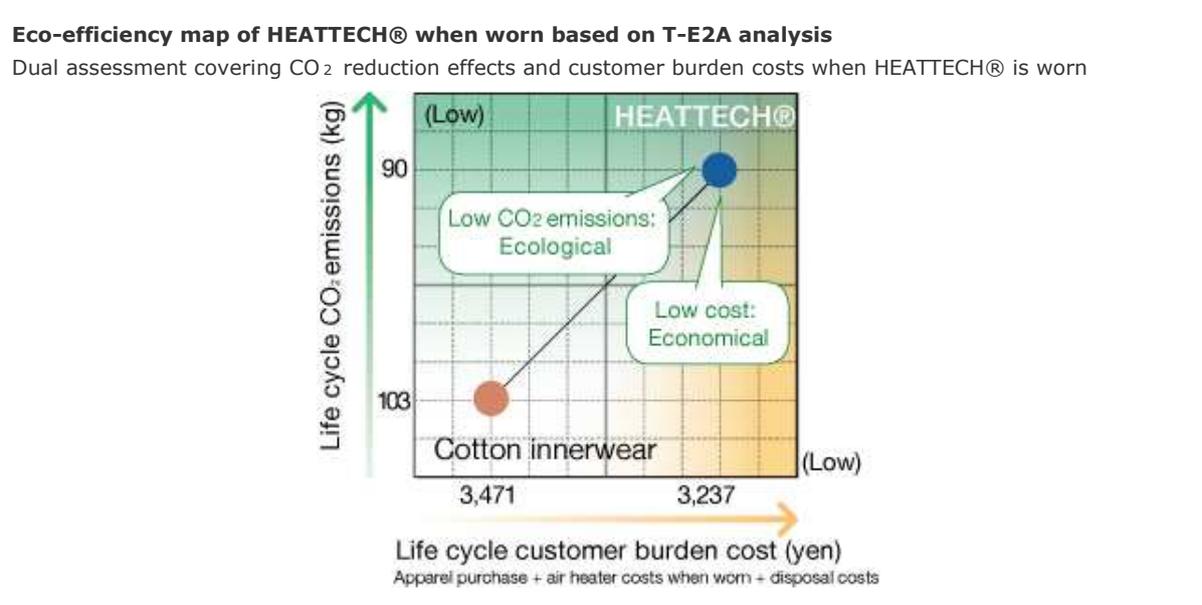
Toray Group launched the Green Innovation Business Expansion Project under Project AP-G 2013, the Group's medium-term management program, and the carbon fiber composite materials business has been positioned at the heart of its activities. Toray Group will continue to pursue innovation through the materials' wide-ranging applications in aircraft, automobiles, wind turbine blades and other fields. Further Green Innovation Business development will lead to new technologies and opportunities in materials and components that contribute to addressing global environmental issues, such as lithium ion battery electrode materials, electrolyte membranes for fuel cells, and solar cell encapsulant. Through these initiatives, the Group aims to raise its CO₂ emissions reduction target to 200 million tons by around 2020.

Related Information

- [Initiatives for Green Innovation Businesses](#)
[Transition from Project EcoChallenge to the Green Innovation Business Expansion Project](#)

Utilizing T-E2A to assess eco-efficiency of HEATTECH®, thermal clothing jointly developed by UNIQLO and Toray

Thanks to the warmth provided by HEATTECH®, interior heating temperatures can be comfortably lowered by one degree Celsius in the middle of winter. This efficacy was assessed from both the product’s LCA and life cycle cost (LCC) perspectives using the eco-efficiency analysis tool, T-E2A. Compared with cotton innerwear of the same thickness, HEATTECH® offers the benefits of lower load costs and CO₂ emissions.



Collaborating with Toray to better contribute to a sustainable society

UNIQLO CO., LTD. and Toray worked together to develop HEATTECH®, a range of innovative and highly functional innerwear. Popular worldwide, accumulated sales volume has now reached approximately 200 million units. Over the nine-year period since its launch, measures have been taken to continuously improve quality and functionality, and we will continue our commitment to providing warmth and comfort for customers worldwide.

Since the Great East Japan Earthquake, calls for cutbacks in energy consumption have risen dramatically. Under these circumstances, HEATTECH® will play a new and increasingly important role in supporting people’s lives by keeping them warm during the cold winter months. This, in turn, will contribute to energy saving initiatives.



Shuichi Nakajima
 Senior Executive Officer
 FAST RETAILING CO., LTD.

*HEATTECH® is a registered trademark of FAST RETAILING CO., LTD.

Related Information

- [Global Environment Activities](#)
- [Life Cycle Management \(LCM\) and T-E2A \(2\) T-E2A](#)



1. History of Environmental Management
(2) Environmental Initiatives

Toray Group will continue to grow its business globally while proactively addressing pressing issues concerning the environment, energy and resources. By expanding its Green Innovation Business, the Group aims to become a corporate group that continually increases revenues and profits, and contribute to the development of society and protection of the environment.

Placing safety and the environment as our top priorities, Toray is engaged in activities aimed at promoting sustained safety and security in society



Osamu Funabiki
Director; Manufacturing Division (the Environment and Safety); the Global Environment Business Strategic Planning Department; General Manager, Product Safety and Quality Assurance Planning Department; General Manager, REACH Promotion Department Toray Industries, Inc.

The Manufacturing Division is comprised of 12 plants, nine engineering departments and 15 R&D departments. Not only does it service Toray; it also plays a central role in meeting the manufacturing and technology development requirements of the entire Group. Responsible for the environment and safety, the Division promotes the third clause of Toray Group's CSR Guidelines encompassing safety, accident prevention and environmental preservation.

The establishment of the Accident Prevention Technology Section in 1965 marked the start of Toray's activities toward safety and the environment. Within the section, the Accident and Environment Experimental Laboratory has developed a host of industry-leading process safety and effluent treatment technologies. The legacy of this section and laboratory is being continued by various entities throughout the Group including the Environment & Safety Department, the Chemical Engineering Department and the Global Environment Research Laboratories. Toray established the Environmental Pollution Prevention Committee in 1969, and set up Environment Technology sections at all of its plants in the following year. Through these measures, the Company swiftly developed and implemented an environmental management structure and system.

Toray commenced an environmental preservation project and embellished its plants with natural greenery in 1973 under the guidance of Akira Miyawaki, then a Professor of Bioecology at the Yokohama National University. Through the implementation of Group-wide activities, the sites today flourish with lush greenery. Steps were then taken to upgrade and expand the Group's environmental management, with initiatives such as the establishment of the Global Environment Committee in 1991. In order to better clarify Toray Group's environmental stance, the Ten Basic Environmental Rules were formulated in January 2000. The Group then initiated its First Three-Year Environmental Plan, which marked the launch of deliberate and ongoing efforts to reduce environmental load. Around the same time, the Environmental Report (currently the CSR Report) was published and publicly distributed, and efforts were made to participate in regional dialogue of the Japan Chemical Industry Association. Through these means, Toray Group continues to expand its engagement with society and remains committed to its aspiration of being a company that is trusted by society.

Developing and expanding Green Innovation Business, and a commitment to resolving global issues

Taking the global lead, Toray commenced the manufacture of carbon fiber in 1971. Four decades later, carbon fibers, which play an important role in supporting lighter weight aircraft and automobiles, are attracting growing interest as a material that contributes to the prevention of global warming by reducing CO₂ emissions. Moreover, Toray's reverse osmosis (RO) membrane technology in the seawater desalination field is receiving high worldwide acclaim for its energy efficiency and cost effectiveness. Reflecting the dramatic population increase in certain areas of the world, social issues such as global warming, water resource depletion and desertification are becoming more critical. It is imperative that the corporate sector fulfills its obligation toward resolving these issues and identify new business opportunities as they unfold. Accordingly, Toray Group launched the Green Innovation Business Expansion Project in 2011. Built around several technology development themes including solar and wind power generation, renewable energy sources and biomass products that eliminate the use of petroleum feedstock—the central driving force behind business growth—Toray Group is engaging in plan-do-check-act (PDCA) activities by theme. Furthermore, the Project is distinguished by its use of Toray's proprietary T-E2A product life cycle management evaluation and analysis tool. Employing T-E2A, sustainable development that balances environmental and economic concerns is being pursued. Looking to the future, Toray Group will push forward with efforts to resolve global-scale social issues while continuing its focus on Green Innovation Business development and expansion.

History of Environmental Activities

With an eye focused on the future, Toray Group has maintained an unwavering commitment to protecting the environment as a part of its production activities. Highlight 1 looks back on Toray's growth and multitude achievements in this area.



History of Environmental Activities

(PDF:671KB)



Susumu Ota

General Manager, Planning Department, Technology Center Toray Industries, Inc.

Toray Group's technology development is undertaken at the Technology Center. As general manager of the center's Planning Department, I oversee the promotion of the seventh clause of Toray Group's CSR Guidelines, which encompasses Green Innovation Business activities through operations such as the planning, modification, proposal and management of technology development.

CSR Report Highlight 2011

2. Toray Group's Commitment to the Future

Toray Group's strength in materials opens new horizons in the future



2. Toray Group's Commitment to the Future
(1) Creating Smart Communities

Smart Communities realize both environmental performance and quality of life. These new communities are being built around the world using the latest infrastructure technologies in areas such as information systems and public transit systems; various innovations for increasing energy efficiency; and renewable energy sources such as wind and solar. With its strength in materials, which form the basis of all products, Toray Group is promoting the effective use of energy while contributing to the construction of Smart Communities for the future.



Promotion of renewable energy

A. Wind power generation (carbon fiber)

Carbon fiber reinforced plastic (CFRP) is a lightweight yet strong material, and is utilized for the turbine blades of large-scale wind power generation systems.

B. Solar energy generation (polyester film)

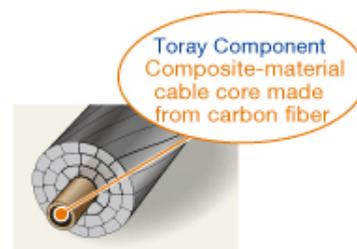
Toray's thin and strong polyester film has been adopted worldwide as a material used in solar cell back sheets.

Related Information

- [\(2\) Resolving Social Issues](#)

C. Smart grid power cables (carbon fiber)

Strong and lightweight cable reinforced with carbon fiber is essential for transmitting electricity from remote wind and solar power stations to cities. Its advantages include fewer accidents due to sagging when compared with conventional power cables, and less towers required to support the lines.



Effective energy usage

D. Next-generation vehicles (carbon fiber)

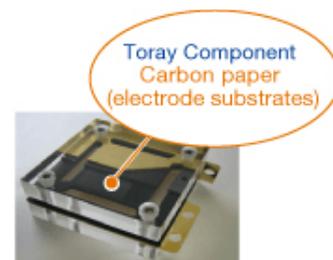
Lightweight and strong CFRP is contributing to CO₂ emissions reduction and the improvement of energy efficiency by making lighter vehicles.

Related Information

- [\(2\) Resolving Social Issues](#)
[Issue 1: Global warming](#)
[CFRP](#)

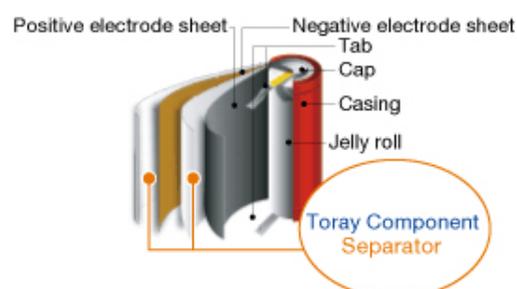
E. Fuel cell (carbon fiber)

Carbon fiber components are being utilized in vehicle fuel cells where exceptional durability is required.



F. Lithium ion battery (separator film)

Toray is highly experienced in the area of separator film supply, which is indispensable for lithium-ion batteries in mobile phones and electric vehicles.



G. HEATTECH® thermal clothing

Toray manufactures a functional material with superior heat-generation and retention properties used in HEATTECH® thermal clothing, which enables wearers to turn down indoor heating.

* HEATTECH® is a registered trademark of Fast Retailing Co., Ltd.



Contributions in other fields

H. Seawater desalination (RO membrane)

Toray is helping to secure water suitable for residential and industrial use through the widespread introduction of its reverse osmosis (RO) membrane in various water treatment fields. They include seawater and brackish water desalination, wastewater reuse and ultra-pure water production.

Related Information

- [\(2\) Resolving Social Issues](#)
[Issue 3: Water resource issues](#)
[Water Treatment Membrane \(RO membrane\)](#)

I. Desert greening (PLA fiber)

Toray is contributing to the prevention of desert expansion by assisting seed germination in desertified regions. It is achieved through the use of **tubes** made from biodegradable polylactic acid (PLA), which have superior water retention properties.

Related Information

- [\(2\) Resolving Social Issues](#)
[Issue 2: Desertification](#)
[PLA fiber](#)



2.Toray Group's Commitment to the Future
(2) Resolving Social Issues

What will the world be like in 2050? Toray's Green Innovation always begins with a vision of the future. As a materials manufacturer, Toray is intently considering social issues and developing technologies that will contribute to the creation of a sustainable society.

Social Issues

<p>Issue 1 Global warming</p>	<p>Issue 2 Desertification</p>	<p>Issue 3 Water resource issues</p>	<p>Issue 4 Energy Crisis</p>
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Issue 1: Global warming

Global warming is attributed to human activities. Although repeating warming and cooling cycles have occurred throughout the planet's history, the current global warming trend is a result of human activities such as the large-scale consumption of fossil fuels. Consequently, technologies for the use of renewable energy sources, such as wind power and fuel cells, need to be developed.

Product : CFRP

Strong, lightweight CFRP

Toray's CFRP technologies hold great potential in two areas of global warming prevention. The first involves CO₂ emissions reduction through improvement of energy efficiency by making lighter aircraft and vehicles. The weight of the Boeing 787 aircraft has been reduced through the adoption of CFRP for 50% of its primary structural elements by weight, which includes the wings, tail, and fuselage. The aircraft's CO₂ emissions have been reduced by 7%. The second area encompasses renewable energy such as wind power and fuel cells. Carbon paper manufactured from carbon fiber is utilized for electrode substrates in fuel cells due the material's superior conductivity, shape retention, and corrosion resistance.



The Boeing 787 Service Readiness Validation in Japan Media Event was held at Haneda Airport in July 2011 The upper right image shows Toray's TORAYCA® prepreg *1

[CO₂ Emissions reduction from CFRP]

CO₂ emissions reduction of **an aircraft with 50% CFRP structural elements*²**  Reduction through use of CFRP over a 10-year lifecycle: **Approximately 27,000 tons CO₂ per aircraft*³**
by weight compared to **a conventional aircraft with 3% CFRP**

*1: Carbon fiber sheet impregnated with resin

*2: Structural elements do not include engines and interior equipment

*3: Lifecycle assessment (LCA) based on calculations by the Japan Carbon Fiber Manufacturers Association

More details on CFRP

 [Business Segments > Carbon Fiber Composite Materials](#)

Issue 2: Desertification

Deserts worldwide are expanding by five million hectares each year. Desertification is a process whereby fertile, livable land becomes desert due to climate change, overgrazing, and human activities. Rapid desertification is occurring in regions such as Africa, Asia, Australia, and South America. Each year, five million hectares of agricultural land, equivalent to an area larger than Japan's cultivated land, is turning into desert worldwide. *⁴

*4: Based on a 1991 survey by the United Nations Environment Programme (UNEP)

Product : Polylactic acid (PLA) biodegradable fiber

ECODEAR® helping to prevent desertification

Under a partnership with Mitsukawa Co., Ltd., and collaboration with Japanese and Chinese universities, Toray is carrying out verification testing of technology that restores vegetation in desert areas and prevents topsoil loss. It involves tubes manufactured from ECODEAR®, an environmentally friendly biodegradable fiber derived from plants. By laying out sand-filled tubes in a grid pattern over a 10,000 square meter area, sand movement and dispersion is prevented, allowing airborne seeds to settle and germinate. The biodegradable fiber is eventually broken down by microbes into water and CO₂.



Demonstration and testing of desert greening and topsoil retention technology. The system combines an ancient Chinese "grass grid" technique with the use of biodegradable biomass material.

Left image shows tubes made from Toray's ECODEAR®

More details on PLA

 [Business Segments > Fibers&Textiles > ECODEAR® Polylactic Acid \(PLA\) Fiber](#)

Issue 3: Water resource issues

From a global population of 6.9 billion, 900 million people do not have access to safe drinking water. Although the earth is known as a water planet, most of its water is seawater, and the majority of freshwater is frozen in ice caps and glaciers. Consequently, only 0.01% of the earth's freshwater is available for human use. In order to secure safe drinking water and ensure human health, technology for desalinating seawater and recycling wastewater needs to be developed.

Product : Water Treatment Membrane (RO membrane)

Seawater desalination with less environmental load

Toray's reverse osmosis (RO) membrane enables the production of freshwater from seawater with less environmental load. Plants using RO membrane technology enable a CO₂ emissions reduction of approximately 80% compared to facilities utilizing the evaporation method, where seawater is evaporated to obtain distilled water. Currently, the total desalination volume at plants using Toray's RO membrane exceeds 22 million m³ per day, equivalent to the amount of water used daily by 88 million people. If new plants utilizing RO membranes continue to be constructed at the current pace, or if evaporation method plants are converted to use RO membranes, CO₂ emissions could be reduced by approximately 100 million tons by 2020. *5



Singapore's largest wastewater recycling plant in the Changi region ©Sembcorp NEWater Plant, Singapore
Upper right image shows Toray's ROMEMBRA® RO membrane elements

[CO₂ emissions reduction from RO membrane use]

CO₂ emissions reduction using the reverse osmosis method (eliminating salt with an RO membrane) compared to the evaporation method (evaporating seawater and collecting distilled water)



Reduction by RO membrane use over entire lifecycle:
Approximately 283 tons of CO₂ per membrane element*6
(2.63 m³ water produced)

*If RO membrane technology were to be introduced worldwide, CO₂ emissions reduction in 2016 would be about 170 millions tons*7*

*5: Toray calculation of CO₂ emissions reduction amount based on the evaporation method being replaced by the RO method for seawater desalination and pure water production

*6: Based on calculations by the Japan Chemical Industry Association

*7: Desalination Markets 2010

More details on RO membrane

 [Business Segments > Environment & Engineering > Water Treatment Membranes](#)

Issue 4: Energy Crisis

Japan is the world's fourth largest consumer of energy, and about 96% of the country's energy resources are imported. Japan is lacking in resources such as petroleum and natural gas, and is only able to supply 4% of its own energy needs. From the perspectives of securing stable supplies and reducing CO₂ emissions, Japan must promote the use of renewable energy sources such as solar and wind. As demand for energy from China and other East Asian nations is expected to soar, technology cooperation is also needed on a global scale.

Product : Polyester Film

Highly durable back sheets for solar cells

Along with an increase in energy conversion efficiency, solar panels require greater durability for many years of use under harsh outdoor conditions. The panels are therefore laminated with a glass sheet, while the reverse side is covered with a highly weather-resistant sheet. Toray's ultra high durability PET (polyester) film



Toray's back sheets for solar cells offer

offers about 4 times the durability of general-purpose PET film and about 1.5 times the durability of conventional high durability PET film. In addition to developing front sheets for flexible solar cells, substrate film, and semiconductor layers, Toray is also working to improve solar cell performance.

superior durability and generating efficiency. They are an important material for solar panels

The upper right image shows a photovoltaic module back sheet made from Toray's polyester film

More details on polyester film

 [Business Segments > Plastics & Chemicals > LUMIRROR® Polyester Film](#)

Toray Group will continue to accelerate its Green Innovation Business to contribute to the creation of an even brighter future.