

TORAY Group Social Responsibility

2010

TORAY

Innovation by Chemistry

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Toray Group enhances and implements CSR as priority management issues, and seeks to remain a high-value corporate group for all stakeholders.



- ▶ For Our Customers
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- ▶ For Society


<p>Interview with the President</p> <p>Materials that Help Society Evolve With innovation in every facet of its business activities, Toray will continue contribution to the development of a sustainable society.</p> 	<p>Toray Group's Corporate Social Responsibility</p> <p>Introduction to the Toray Group Corporate Philosophy and its CSR activities</p> 	<p>CSR Report Highlight</p> <p>Addressing climate change and water resource issues</p> 	<p>Global Environmental Activities</p> <p>Environmental preservation, environmentally-friendly products, and recycling initiatives</p> 
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- Navigation for First-Time Visitors**

Introduction to our Social Responsibility Website's main features
- Development of Science and Technology**

Promoting basic research in science and technology as well as educational activities of the Toray Science Foundation
- CSR Reports Download**

Previous years' CSR Reports can be downloaded here.


- Contact Us**
- Subject Index**

CSR News		Back Number
Oct. 14, 2010	Press release	Canon, Toray develop industry's largest bio-based plastic exterior part for use in multifunction office systems
Aug. 23, 2010	Press release	Outline of the Toray Pan Pacific Open Tennis Tournament 2010
Jul. 30, 2010	Press release	2010 Toray Shanghai Marathon Entries for Japanese runners will be accepted starting from August 2 Races are scheduled for Sunday, December 5, 2010 Full Marathon / Half Marathon / Fun Marathon (4.5 km)
Jul. 20, 2010	Information	Indonesia P.T. Indonesia Toray Synthetics (ITS) Safety Declaration Gathering (Mar. 8, 2010)
Jul. 20, 2010	Information	Japan Toray Science Foundation (TSF) 50 th TSF Award Presentation (Mar. 17, 2010)
Jul. 20, 2010	Information	Indonesia P.T. Indonesia Synthetic Textile Mills (ISTEM) / P.T. Acryl Textile Mills (ACTEM) The 4th English Speech Contest (Mar. 18, 2010)
Jul. 20, 2010	Information	China THK Apparel (Zhuhai) Co., Ltd. Middle Management Seminar (May 2010)
Jul. 20, 2010	Information	China Toray BlueStar Membrane Co., Ltd. (TBMC) The First Safety Meeting (Jun. 9, 2010)
Jul. 20, 2010	Information	Germany Toray International Europe GmbH (TIEU) J.P. Morgan Corporate Challenge® Run in Frankfurt (Jun. 9, 2010)
Jun. 15, 2010	Information	U.S.A. Toray Carbon Fibers America, Inc. (CFA) 1000 Days and Counting
Apr. 23, 2010	Press release	Toray Pan Pacific Tennis 2010 Maria Sharapova (Rus) will play as defending champion!
Apr. 8, 2010	Information	Australia Australian Branch Office, Toray Asia Pte. Ltd. (TAS)

Apr. 8, 2010	Information	Japan Toray Industries, Inc. Participating in nano tech 2010(Feb. 17-19, 2010)
Apr. 8, 2010	Information	Indonesia Indonesia Toray Science Foundation 16 th ITSF Award Presentation Ceremony(Feb. 11, 2010)
Apr. 8, 2010	Information	U.S.A. Toray Plastics (America), Inc. (TPA) Cause for Celebration(Feb. 5, 2010)
Apr. 8, 2010	Information	Thailand Toray Industries (Thailand) Co., Ltd. (TTH) Launching Training Course for Shift Leaders(Jan. 19-20, 2010)
Apr. 8, 2010	Information	Korea STEMCO, Ltd. (STEMCO) Awarded by Korea's Minister of the Environment(Sep. 2009)
Mar. 23, 2010	Information	Thailand Thailand Toray Science Foundation (TTSF) TTSF Presentation Ceremony(Feb. 8, 2010)
Feb. 22, 2010	Information	U.S.A. Toray Composites (America), Inc. (TCA) Toray Composites America Wins Safety Award(Jan. 26, 2010)



Materials Possess the Power to Change the Very Essence of Society

You were appointed president of Toray Industries, Inc. in June 2010. As president, what do you believe are the unique features that define the Company?

When we consider product creation as a means of ensuring the development of a sustainable society, we must first look to refine the components if we are to change the nature of the products. In this context, the performance of a particular part is completely dependent on the materials from which it is made. I am convinced that the materials that underpin each and every product possess the power to change the essence of society. It is therefore imperative that we continue to take the lead in technology innovation as a materials manufacturer.

For over eight decades, Toray Group has consistently taken up the challenge of developing advanced technologies. We have delivered a diverse range of materials and products from fibers & textiles through plastics to carbon fiber composite materials, IT-related products, high-performance water treatment membranes, as well as pharmaceuticals and medical products that play an important role in the daily lives of people and society.

In other words, the integrity with which the Company develops innovative technologies and fulfills its responsibility as a materials manufacturer is a feature that defines Toray Group.

Exactly—it is the very essence of a materials manufacturer. Guided by its Corporate Philosophy of “contributing to society through the creation of new value with innovative ideas, technologies and products,” Toray Group is dedicated to helping society resolve wide-ranging issues. At the same time, we will pursue specific measures aimed at fulfilling our four commitments to our stakeholders identified in the Group’s Corporate Missions. This dedication and commitment forms the basis of Toray Group’s CSR activities.

Consistently Engaging in Proactive CSR Activities

Recognizing that CSR activities help realize the Group’s Management Philosophy, what are some of Toray’s ongoing initiatives?

Long before the term CSR came into common use, Toray Group addressed social and environmental concerns in every facet of its business activities. Prior to the development of the Japanese Industrial Standards, for example, the Group had established its own set of quality management criteria placing the utmost priority on a “quality first” approach. The other day, I was extremely pleased to learn from an electric appliance manufacturer that they had based their own management standards on Toray’s model.

At the same time, change is part and parcel of everyday business, due largely to societal demands and shifts in societal trends. Humility, for example, has historically been considered a virtue in the context of Japanese society. Showcasing one’s attributes and activities was traditionally not seen in a positive light. With management transparency and accountability playing an increasingly important role in recent business, however, it has become essential for companies to publicly explain in detail their initiatives and activities. In this regard, society as a whole is undergoing a modal shift. Moreover, the scope of a company’s responsibility is steadily expanding, particularly when taking the supply chain and other issues into consideration.

Adapting to changes in society, Toray Group established the CSR Committee in 2003 and launched wholeheartedly into CSR activities. Collating issues that are best addressed by the Group as a whole, Toray later formulated its own set of CSR guidelines. A defining feature of Toray’s CSR activities is the parallel implementation of two sets of unique guidelines. They consist of “CSR guideline activities,” which are implemented on an organizational basis, and “CSR line activities,” which are implemented by each division. In adopting this parallel framework, Toray Group is ensuring that its CSR activities are

developed in a steady and systematic manner.

In addition, Toray Group, as a diversified chemicals manufacturer, strives to promote CSR across the entire supply chain. Complementing traditional efforts to approach suppliers and business partners, Toray pursues multifaceted CSR procurement based on a unified response to customer inquiries.

As a global entity that strives to consistently evolve, it is imperative that Toray Group publicly discloses the details of its CSR activities in an easily understood manner. Critical to this disclosure and the Group's concept of CSR is Toray's emphasis on mutual growth and development with society.

The Importance of Responding Appropriately to Fast-Paced Change and the Growing Complexity of Society

Maintaining a firm base while adapting flexibly to social trends is crucial even from a CSR perspective.

A company's ability to flexibly and appropriately respond to changing conditions is of the utmost importance. It is imperative that we grasp how our products are perceived by society, ascertain market needs and expectations, and anticipate change. Critical to our future growth is the level of success we can achieve in optimally balancing these issues. For example, recognizing issues that are increasingly confronting modern-day society such as climate change, the steady depletion of resources, waste reduction and recycling, Toray Group adopted the approach that all business activities must place priority on the global environment in FY 2007. We have pledged to provide solutions that focus on the environment.

More recently in FY 2009, we established a designated department and developed the TORAY Eco-Efficiency Analysis (T-E2A) tool to promote Life Cycle Management (LCM). This is consistent with the Group's policy to expand LCM-based environment-related businesses. Accordingly, we have initiated efforts to approach the broader society, including our global business partners, to collaborate with industry and the community at large to secure meaningful reductions in CO₂ emissions.



Related Information

- [CSR Report Highlight 2010](#)
1. [Contributing to a Sustainable Society](#)

Toray Group is currently determining its approach to biodiversity, a field drawing increasing attention from industry, and is in the process of assessing value and its current status from this perspective. From our position as a corporate entity, it is important that we clearly define our scope of activity commensurate with our industry and business type. I would like us to follow a path that is consistent with the Group's philosophy and mission.

In adopting a CSR perspective, a company's ability to match or address social needs and issues is fast becoming a matter of paramount importance. This in fact mirrors the growing recognition that stakeholder and society's needs must be incorporated into each company's business activities.

I consider myself as belonging to the frontline, and have always undertaken my duties by first conducting a thorough analysis of current conditions and work status. In identifying issues at hand and coming to a decision, every effort should be made to match the needs of society from the broadest possible perspective. As you rightly pointed out, I am convinced that this is the essence of fulfilling one's CSR in modern society. Adopting a simplistic or single-minded view of an individual business unit or the limited concerns of input materials ultimately leads to misjudgments on society's requirements and efforts to secure sustainable development. The Group's overarching goal is to develop into a global company capable of resolving global-level issues through its proprietary technologies and know-how. Therefore, it is even more imperative that we adopt the aforementioned stance.

In other words, "returning to the basics" and "adopting a broad social perspective" are prerequisites for a global company.

Absolutely. Toray has in the past pursued business expansion throughout Asia, the United States and Europe. Our rationale always took wide-ranging factors and issues into consideration—we have never been motivated by a single concern such as competitive labor costs. For a diversified chemical company, a considerable amount of investment is

required, and there isn't an option for an easy withdrawal once a commitment has been made. Our investment is generally for the long term, and as such, we focus on establishing deep-rooted ties within the region with the aim of securing mutual benefit and growth. In July 2009, Toray was invited by the Chinese government to participate in a joint-venture water treatment business. Naturally an invitation by the Chinese government carries considerable honor and weight. We were equally motivated, however, by the opportunity to contribute to the nation and region's development, and to help address the pressing social concern of water resource depletion.

In conducting business overseas, a solid grasp of the region's customs as well as its statutory and regulatory requirements is essential. I have worked both in France and the United States, and can remember the odd occasion when accepted business practice in Japan was completely lost in the local context. These differences are a product of each country and region's unique history and culture. Mutual respect and understanding, as well as a company's drive and sincere aspiration to fulfill its responsibility to the local community and harmoniously develop in co-existence with its surroundings, are critical.

An Unwavering Commitment as the Source of Innovation

Your remarks and personal experiences convey a strong commitment and conviction as a materials manufacturer.



Critical to the growth and development of the materials industry is a commitment to long-term research and development, underpinned by an unwavering conviction. Of equal importance is the dedication to remain faithful to the basics. With this in mind, the industry is unlikely to lose its true path. This is a credo that I have continued to espouse at every opportunity and workplace.

Among Toray's cutting-edge environmental materials, carbon fibers and water treatment membranes are currently attracting significant interest. In reality, four to five decades of research and development underpin these products; it is this longstanding commitment and conviction that serves as a source for innovation. Looking ahead, Toray will require much more than just technological development if it is to secure

sustainable growth. Innovation must form the basis of every facet of our business endeavors and not just R&D activities. Under its long-term corporate vision, Toray Group aspires to become a world leader in advanced materials. To achieve this overarching vision, it is imperative that we accelerate innovation across all of the Group's operations.

As a part of its basic strategy for sustainable business activity development, Toray has identified the expansion of its advanced material business in four major fields: information, telecommunication and electronics; automobiles and aircrafts; life science; and environment, water and energy. In pursuing advanced materials expansion strategies, the Company is providing customer solutions through cross-sectional endeavors. Toray is, therefore, stimulating competition among materials manufacturers and contributing to industry-wide growth.

Do you have a closing message as the Group's newly appointed president?

Staying true to the basics applies not only to CSR, but to every facet of business activities. It is imperative that Toray employees maintain a strong sense of dedication for the company and for growth as a powerful Group. In carrying out our duties, we must also never lose sight of the human aspects of life. As president, I would hope that Toray remains a Group made up of motivated employees. Enjoying one's work is key to a dynamic and vibrant workplace. Without sensitivity, consideration towards one another and a sense of community, it would be extraordinarily difficult to improve performance. Despite signs of an economic recovery, business conditions will remain challenging. Against this backdrop, I intend to address my daily management responsibilities with a strong sense of purpose: To help foster a corporate group whose employees carry out their activities with confidence and pride, and to secure an unshakeable position as a trusted partner of society.

August 2010

Interview

Eriko Mizumoto
Senior Research Fellow
Aarata Sustainability Co., Ltd.



Small and medium enterprise management consultant, Steering Committee member of the Sustainability Forum of Japan, Member

of the Japan Environmental Auditors Society Ms. Mizumoto has served in an advisory capacity in the preparation of the Toray Group' CSR reports since FY 2004.

Toray Group's Corporate Social Responsibility

Toray Group aims to become a leading company for CSR promotion that is supported and valued internationally. It strives towards this through continuous initiatives that reflect Toray's unique character, while developing with society's changing needs.

Norihiko Saitou
*Senior Vice President
Director in charge of CSR activities
Toray Industries, Inc.*



Toray Group has advocated a policy of social contribution since its founding, and has been promoting CSR activities on the acknowledgement of its responsibilities as a social institution. The Group respects the basic principle of protecting employee jobs through business growth based on diversification. Toray works to create demand together with customers, regardless of the timeframe from R&D to market development, and strives to promote locally rooted management in its operations outside Japan. The Group has been taking action on crucial matters based on the belief that persistence becomes strength. These management approaches are specific to a materials manufacturer, and Toray Group is proud of its unique character.

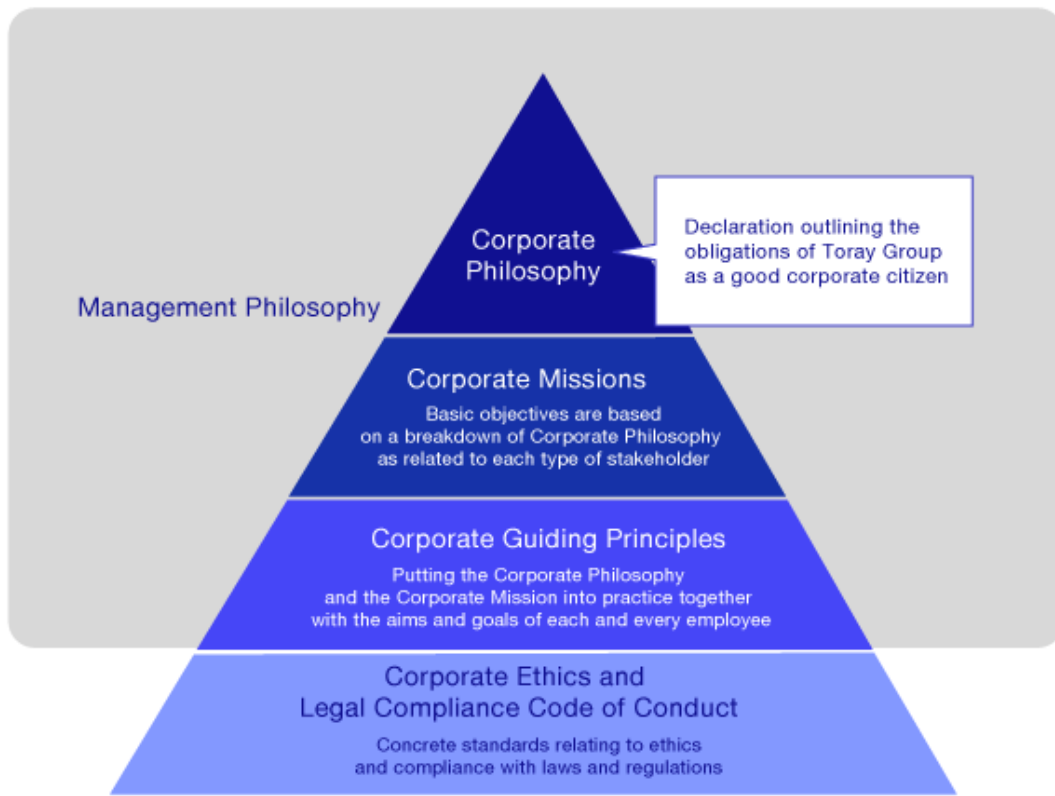
The basis of corporate management is responding to the requests and expectations of society. Understanding the importance of developing with a changing society rather than just reflecting the latest trends, I recognize the significance of my role in supervising Toray Group's CSR activities. I intend to continue my work to promote CSR efforts that reflect Toray's unique character and develop with society's changing needs. Aspiring to become an entity that is valued and supported internationally, Toray Group will continue advancing progressive CSR activities as an outstanding global company relevant to all stakeholders.

Toray Group's Management Philosophy and CSR

Since its founding, Toray Group has been dedicated to making social contributions through its 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 conduct 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 to proper behavior for all employees.

A Conceptual Diagram of 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'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. CSR guideline activities are driven by the entire organization based on the CSR Guidelines, while CSR line activities are pursued by individual divisions in accordance with their own targets.

For the CSR guideline activities, a director is appointed to oversee promotion while each relevant division establishes an Action Program for the coming year. Activity progress and results are regularly reported to the company-wide CSR Committee. This information is also broadly disclosed to the general public through such media as Toray's CSR Report and its website. 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 to expand them to subsidiaries and affiliates outside Japan according to local conditions. In FY 2009, the Company shared examples of initiatives to expand CSR line activities within Toray Group.

Toray Group shares its overall plan for CSR activity promotion via a CSR Road Map.

FY 2009 was the interim year in Toray's Third CSR Road Map, and activities were carried out according to plan.

Specifically, Toray promoted further Group-wide risk management, improved CSR training for overseas subsidiaries and affiliates, and held CSR discussion meetings with employees. In FY 2010, a directive of the CSR Guideline relating to CSR procurement was revised, and is expected to expand the guideline's framework for not only suppliers, but also for the entire supply chain, including vendors.

The details and progress made on the Third CSR Road Map are as follows:

Third CSR Road Map (FY 2008-2010)				
	Group-wide CSR issues	FY 2008	FY 2009	FY 2010
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

Social Responsibility
CSR Guideline

Toray CSR Guidelines were established as a foundation for Toray Group management activities in and outside Japan as well as to facilitate its contributions to the building of a sustainable society. The ten guidelines are implemented via concrete annual plans, also referred to as action programs, established specifically for each guideline and carried out using plan-do-check-act (PDCA) management practices. Such Action programs are flexible to changing times and societal needs, and are revised every year.



Adopted December 2004 and revised June 2010

CSR GUIDELINE
1
2010

Corporate Governance and Management Transparency

Promote CSR activities with integrity, strive for timely and appropriate information disclosure, and tighten internal controls. Also, continually revise management systems and foster awareness of the company's role in contributing to the development of a sustainable society.

Action Program (FY 2010)

1. Steadily implement PDCA practices by building a stronger CSR management system for Toray Group.
2. Implement reliable monitoring in order to execute Toray's basic policy on internal control system based on Japan's Corporate Law.
3. Strengthen management transparency, incorporate stakeholder opinions, and fulfill disclosure responsibilities.

Implementation Leader

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

CSR GUIDELINE
2
2010

Corporate Ethics and Legal Compliance

Make the upholding of "Corporate Ethics and Compliance with Laws and Regulations" a top management priority for maintaining the trust of society. Also, ensure that all executives and employees act with fairness and a sense of responsibility while maintaining high ethical standards.

Action Program (FY 2010)

1. Continually strengthen educational activities regarding corporate ethics and legal compliance.
2. Provide training to ensure that employees obtain legal knowledge essential for their work.
3. Constantly strengthen measures aimed at thorough compliance especially with the Antitrust Law.

Implementation Leader

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

CSR GUIDELINE
3
2010

Emphasize Safety, Accident Prevention, and Environmental Preservation

Give Safety, Accident Prevention, and Environmental Preservation priority as a top management issue, and work to ensure the safety and health of society and employees while protecting the environment in all of our business processes, from procuring raw materials to manufacturing, supplying, and disposing of products.

Action Program (FY 2010)

1. Implement activities based on the 2010 Company-wide Safety, Health, Accident Prevention, and Environmental Action Policy.
2. In efforts to ensure occupational safety, promote thorough application of the Safety Fundamentals to eliminate disasters.
3. Aim to achieve goals under the Third Three-Year Environmental Plan, as fiscal year 2010 marks the final fiscal year to verify the plan.

Implementation Leader

Osamu Nakatani
Senior Vice President and Representative Member of the Board
In charge of General Administration, Legal Division, (Security Trade Administration Department), Product Safety and Quality Assurance Planning Department

CSR GUIDELINE
4
2010

Product Safety and Quality

Recognize the importance of product safety and quality assurance in supplying safe and highly reliable products, and strive to enhance management systems and disclose appropriate information.

Action Program (FY 2010)

1. Promote the continual and systematic improvement and strengthening of the product safety and quality assurance system.
2. Undertake activities with the participation of all departments, including sales, procurement, production, engineering, research, and quality assurance, in order to establish a system that also covers Japanese and overseas affiliated companies.

Implementation Leader

Osamu Nakatani
Senior Vice President and Representative Member of the Board
In charge of General Administration, Legal Division, (Security Trade Administration Department), Product Safety and Quality Assurance Planning Department

CSR GUIDELINE
5
2010

Risk Management

Promote visualization of Group-wide risks including those pertaining to information security, develop a system capable of responding quickly to unexpected circumstances and disclosing accurate information, and work to inform all employees about this system.

Action Program (FY 2010)

1. Promote company-wide risk management activities, and carry out activities to mitigate risks without fail through PDCA practice.
2. Continue to promote Business Continuity Plan (BCP) initiatives to prepare for a major earthquake or new influenza virus outbreaks.
3. Reinforce promotion of information security measures.
4. Strengthen the promotion of Risk Management Committee activities at the headquarters, divisions, departments, offices, and plants.

Implementation Leader

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

CSR GUIDELINE
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2010

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.

Action Program (FY 2010)

1. Implement the Basic Policies to Promote Dialogue with Stakeholders.
2. Set specific themes targeting stakeholder groups (customers, employees, stockholders, and society) specified in Toray's Corporate Missions and carry

Implementation Leader

Norihiko Saitou
Senior Vice President

CSR GUIDELINE
7
 2010

Initiatives for Developing Environmentally Friendly Products

Pursue research and development using new approaches in order to provide solutions from the perspective of product lifecycle management in the areas of environment, natural resources and energy, and contribute to the improvement of the global environment.

Action Program (FY 2010)

1. Expand business with solutions that contribute to environmental issues, including the prevention of global warming and reducing environmental impact.
2. Contribute to reducing environmental impact throughout the Toray product lifecycle using scientific and quantitative approaches to assess environmental load.

Implementation Leader

Chiaki Tanaka
 Executive Vice President and
 Representative Member of
 the Board
 General Manager,
 Technology Center
 Toray Industries, Inc.

CSR GUIDELINE
8
 2010

Train Personnel and Promote Human Rights

Secure and train personnel and diversify employment while striving to protect employee jobs, respect human rights, and continuously improve workplace environments.

Action Program (FY 2010)

Initiate Group-wide efforts in areas such as securing and training personnel, promoting human rights, diversifying employment, improving the workplace environment, balancing work and family life, and promoting the career advancement of women.

Implementation Leader

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

CSR GUIDELINE
9
 2010

Promote ethical procurement

Promote CSR activities aimed at ensuring environmental conservation, legal compliance and human rights throughout the supply chain, by working together with suppliers, processing vendors, and customers.

Action Program (FY 2010)

1. Efficiently promote PDCA practices in ethical procurement from suppliers and companies to which Toray Group outsources sales and production, and pursue ongoing follow-up with suppliers.
2. Grasp status of promotion of CSR-related activities at suppliers to domestic affiliates and promote measures for ensuring ethical procurement at each of domestic group companies.
3. Consider measures for enabling ethical procurement also at overseas affiliates.

Implementation Leader

Yoshio Shingeya
 Senior Director
 General Manager, Purchasing
 & Logistics Division

CSR GUIDELINE
10
 2010

Social Contribution Activities

Voluntarily conduct promotional programs for science and technology, arts and culture, social welfare, sports, and other activities by allocating an appropriate amount of resources as a good corporate citizen.

Action Program (FY 2010)

Implementation

1. Carry out independent and ongoing social contribution activities in accordance with “Toray Group Social Initiative Policies.”
2. Promote educational support activities targeting the next generation and encourage volunteer activities of employees.

Leader

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

Social Responsibility
CSR Initiative Reporting Policies

Toray Group is aiming to realize its Management Philosophy through the promotion of CSR activities. The Group's 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 outline of the Corporate Missions that make up the Management Philosophy Framework.



Related Information

- [CSR Guideline \(FY 2010\)](#)
- [CSR Guideline \(FY 2009\)](#)

Social Responsibility
Chronology of CSR Initiatives

Business and CSR Activities		Environment and Responsible Care Activities
Began Group-wide risk management Established a director in charge of CSR activities	2008	
CSR Operations Department established	2007	Third Three-Year Environmental Plan started
CSR Operations Group established in the Corporate Planning Department	2006	
CSR Line Activity started	2005	CSR Report published
CSR Guidelines and Action Programs adopted	2004	CSR Annual Report published
CSR Committee established	2003	Second Three-Year Environmental Plan started
Compliance Committee established	2002	
Reemployment system introduced	2001	Recycling Committee established
	2000	Three-Year Environmental Plan started, Ten Basic Environmental Rules a
		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	
Toray Human Resources Development Center		

opens		
Toray Europe Labor and Management Council established	1996	
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		
	1991	Global Environment Committee and Product Safety 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	

Social Responsibility
External Commendations

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

Year	Month	Country	Awarding Institution	Commendations	Matters for Commendation
FY 2009		Japan	Director of the Ministry of Health, Labour and Welfare, Labour Standards Bureau	Completion of works with no accidents throughout the full term (10 in total)	Toray Engineering Co., Ltd.
	February	Italy	Confederation of Italian Industries	Italian Republic President's Prize	Alcantara S.p.A
2010	January	Japan	Ministry of Health, Labour and Welfare	2009 Minister of Health, Labour and Welfare Award for Outstanding Safety Foreman	Takeshi Takahashi, Tsuchiura Shokusan Inc.
		USA	Evergreen Safety Council	John D. Spellman Safety Award	Toray Composites (America), Inc.
2009	December	Japan	Aichi Labour Bureau	Japan THP Promotion Association Progress Award	Nagoya Plant, Toray Industries, Inc.
	October	Japan	Invest in France Agency	Investor in France Award of the sixth annual French-Japanese Investment Awards	Toray Industries, Inc.
		Japan	Ministry of the Environment	2009 Commendation for Contributions to the Development of a Recycling-oriented Society Minister of the Environment Award	Uniform & Advanced Textiles Department, Toray Industries, Inc.
		Korea	Korea Occupational Safety and Health Agency	Achieving 24-fold improvement in accident-free days	Daehan Precision Co., Ltd.
	June	Japan	2009 Hazardous Materials Safety Conference	Fire and Disaster Management Agency Director's Award	Chiba Plant, Dow Corning Toray Co., Ltd.
		Japan	Japan Chemical Industry Association and Japan Responsible Care Council	Safety Award	Ehime Plant, Toray Industries, Inc.

	May	Korea	Korea Management Association Registration & Assessment Inc.	Korea Management Award	Toray Saehan Inc. (Currently Toray Advanced Materials Korea Inc.) Young Kwan Lee, President
		Thailand	Government of Thailand	Thailand's National Occupational Safety and Health Award	Thai Toray Synthetics Co., Ltd.
	April	Japan	Ehime Prefecture	The Prize for Creativity Ministry of Education, Culture, Sports, Science and Technology	Kenji Kikuchi, Staple Fibers Technical Department, Ehime Plant, Toray Industries, 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, while disclosing appropriate information. The Group promotes R&D related to recycling and environmentally friendly products. It is also promoting CSR procurement initiatives in cooperation with suppliers.

FOR CUSTOMERS

**Initiatives for Developing
Environmentally Friendly Products**

Toray Group aims to reduce environmental impact by providing customers with product solutions that meet their needs, while pursuing technical innovations with a view toward life cycle management.

FOR 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 is further strengthening its product safety and quality assurance.

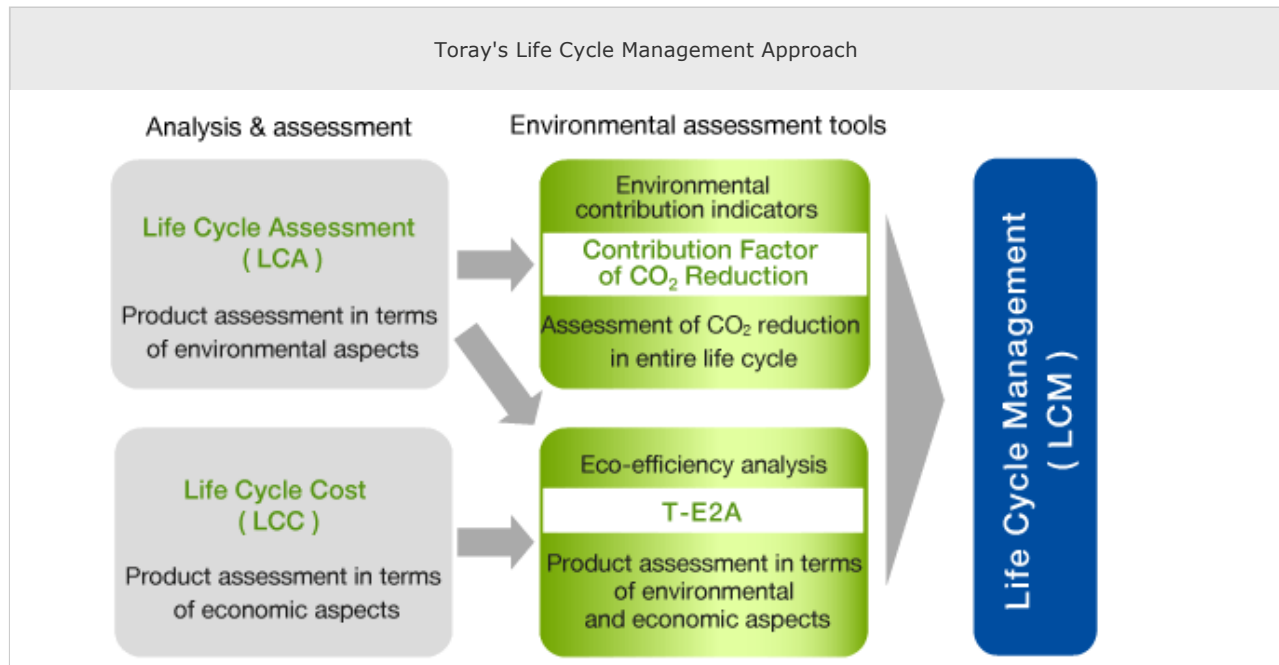
FOR CUSTOMERS

**Cooperating with Suppliers in Their
Environmental and Social Initiatives**

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 Developing Environmentally Friendly Products
Promoting of Life Cycle Management

Focusing on the global environment, Toray Group conducts its business strategies based on life cycle management (LCM) in order to help realize a sustainable, low-carbon society. LCM aims to increase economic and social value while reducing environmental impact throughout the entire life cycle of a product or service. It is the underlying concept of Project EcoChallenge shown below.

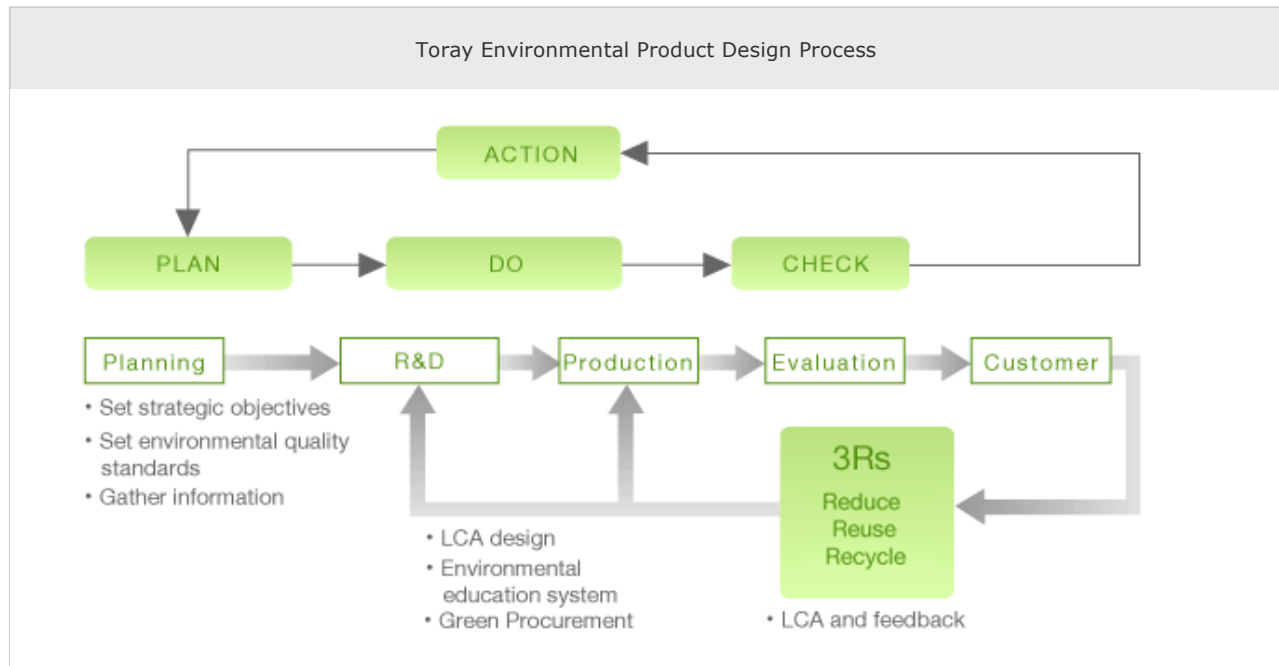


Related Information

- [CSR Report Highlight 2010](#)
1. [Contributing to a Sustainable Society](#)
- [Global Environment Activities](#)

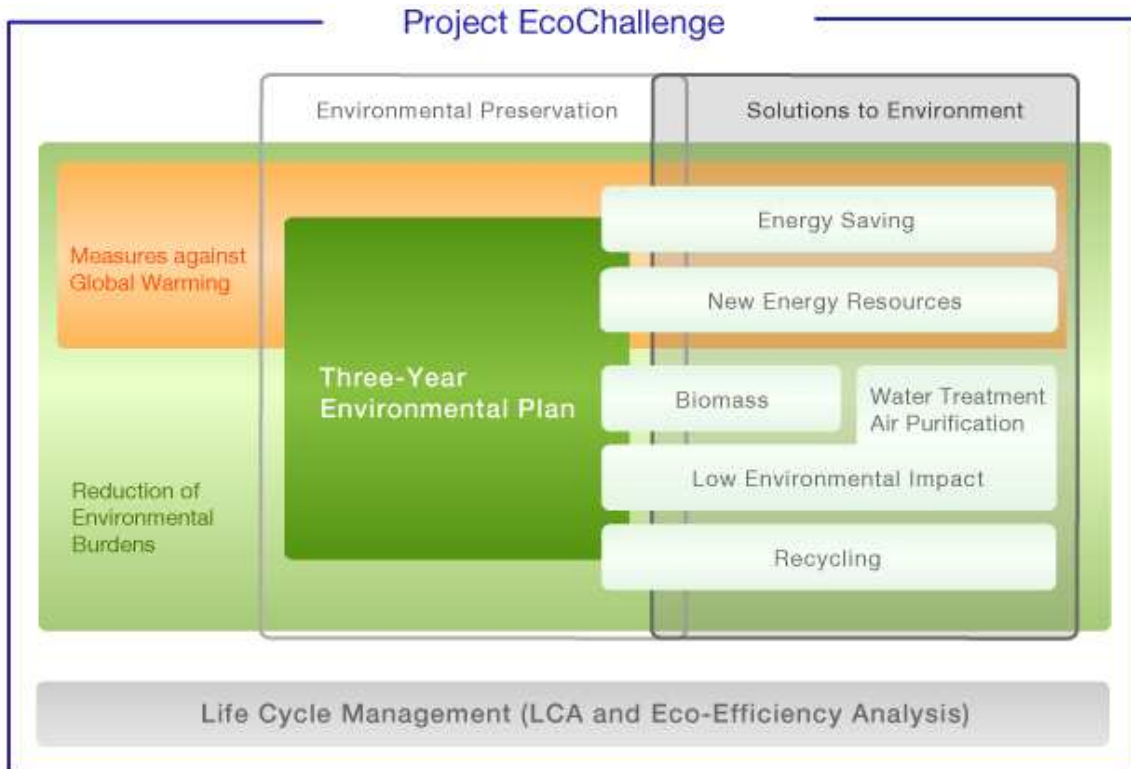
Initiatives for Developing Environmentally Friendly Products
Pursuing “Environmental Design” to Create Environmentally Friendly Products

Toray Group is pursuing Environmental Design in order to develop environmentally conscious products, and it implements Life Cycle Assessment (LCA) methods to assess the environmental impact of each product at every stage through product design, research and development (R&D), to production. Toray 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 subject to review and verification before products are commercialized.



Initiatives for Developing Environmentally Friendly Products
Project EcoChallenge Promotion

Toray Group promotes Project EcoChallenge based on the management policy of focusing on the global environment. The project takes a comprehensive approach to the ecology movement, and is implemented under the following framework for Toray Group activities that place priority on resource conservation and global environmental protection.



Project EcoChallenge Targets

In FY 2009, Toray Group commenced initiatives toward the following long-term targets for Project EcoChallenge.

Target1 Contribution Factor of CO₂ Reduction: 20 times by around 2020

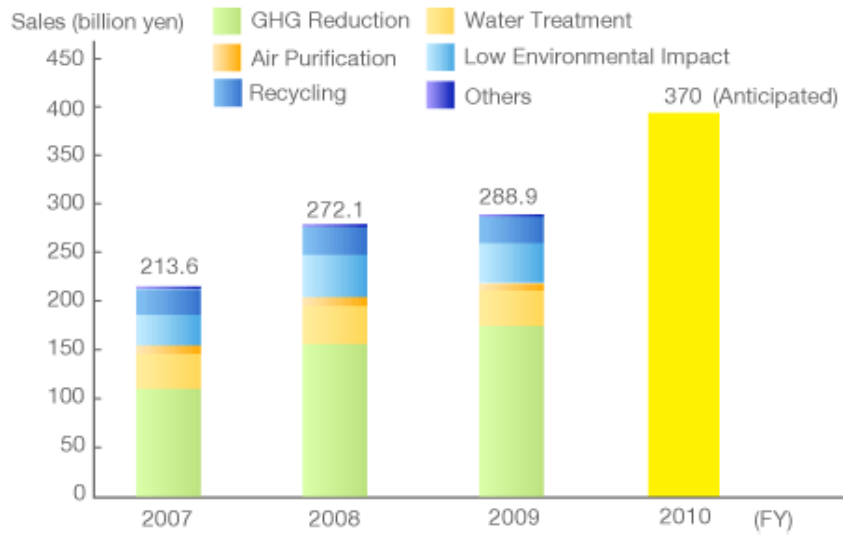
$$\text{Contribution Factor of CO}_2 \text{ Reduction} = \frac{\text{CO}_2 \text{ Reduction in Entire Life Cycle}}{\text{CO}_2 \text{ Emission in Feedstock, Production and Disposal}}$$

Target2 Sales of Environmentally friendly Products: 1 trillion yen by around 2020

Toray Group's Contribution Factor of CO₂ Reduction is steadily increasing and on track toward the long-term target. In FY 2009, sales of Environmentally friendly products totaled 288.9 billion yen (272.1 billion yen in FY 2008), due to the launch of new initiatives.

The Group is planning to sell 370 billion yen worth of environmentally friendly products in FY 2010, and expects to achieve a target of 350 billion yen set for environmental and recycling activities of Ecodream around the end of 2010.

Sales of Environmentally Friendly Products



Initiatives for Developing Environmentally Friendly Products
Solutions for Global Environment Business

Aiming to achieve the Project EcoChallenge targets, Toray Group develops and introduces a wide range of environmentally friendly products that provide solutions in areas such as energy savings, new energy resources, and low environmental impact.

Environmentally Friendly Products

Toray Group defines environmentally friendly products as ones that play a major role in making any of the following environmental contributions along the entire product life cycle.

Environmentally Friendly Products	
Classification	Environmentally friendly products and services
Reduction of greenhouse gas (GHG) emissions	Carbon fibers for aircrafts, automobiles, wind turbine blades and compressor tanks; engineering plastics for automobiles; cooling and insulating micro fibers; heat reflective films; films and equipments for solar cells; films and equipments for lithium ion batteries; Polylactic Acid for textiles, plastics, and film; 3GT fibers and textiles
Water treatment	RO/UF/MF membranes, base materials for water treatment, water treatment system business, Torayvino* home-use water purification system
Air purification	Dust collector filters, bag filters, and air filters
Low environmental impact	Non-halogen flame retardant materials (fibers & textiles, plastics, and films); Toray Waterless Plate;* slit coaters; positive type Photoneece*
Recycling	ECOUSE,* CYCLEAD,* material recycling and chemical recycling
Environmental measurement, surveys, and consulting	

* A Toray Group registered trademark, or trademark pending registration

See [Toray's Products and Services webpage](#) for information about Toray Group's environmentally friendly products.

GHG Reduction 1: Carbon Fiber Reinforced Plastic (CFRP)

CFRP is widely used and its demand is expanding in airplane and automobile applications, where CFRP can improve mileage by reducing body weight of the airplane and automobile. In May 2010, Toray signed a 15-year frame contract with European Aeronautic Defense and Space Company (EADS) to supply carbon fiber materials for CFRP airplane applications, mainly to Airbus. In March 2010, Toray signed a joint development agreement with Daimler AG to develop CFRP automobile parts.

GHG Reduction 2: Improved Flow PBT Grade

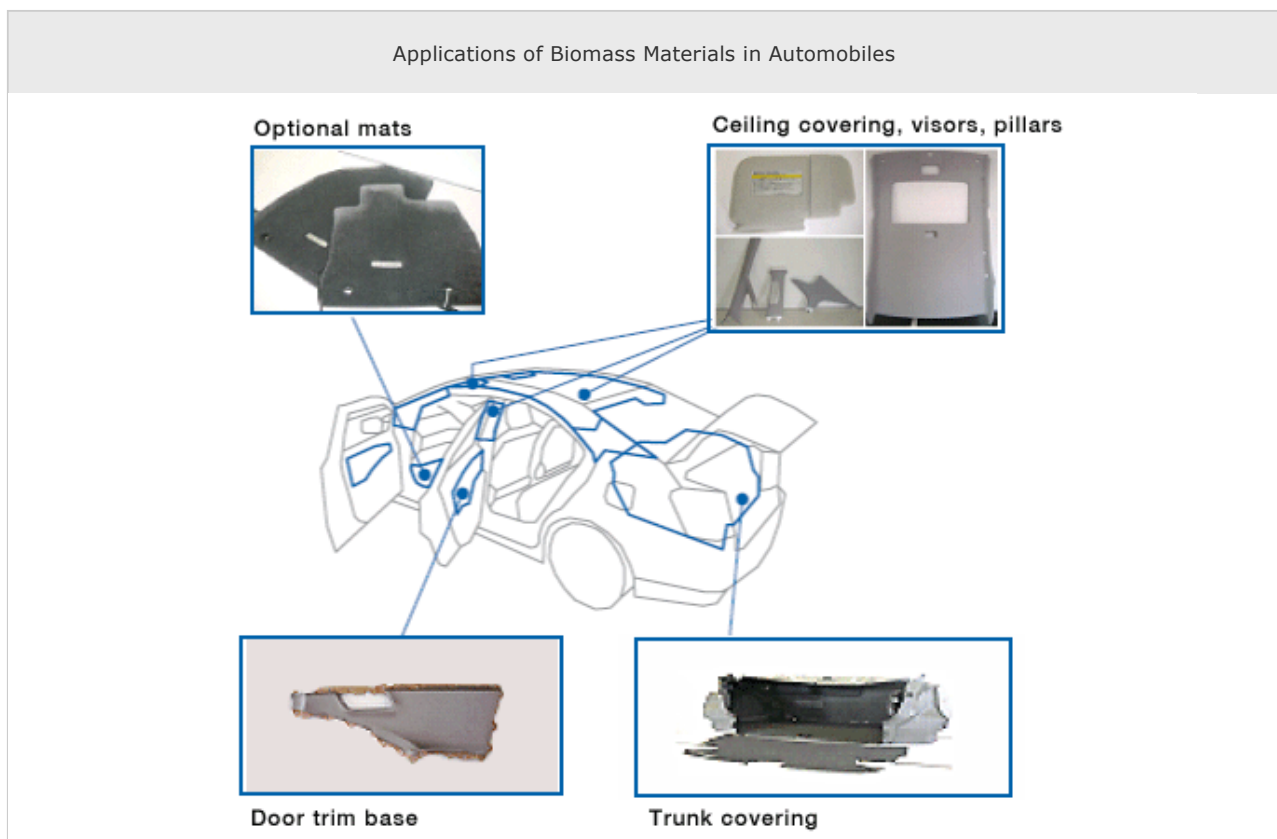
In October 2009, Toray developed and commenced the full scale marketing of Toraycon Nano Flow, a grade of Toraycon* polybutylene terephthalate (PBT) resin with an improved flow. It is expected to offer energy savings due to benefits such as allowing thinner walls for molded parts, a shorter molding cycle, and lower molding temperature. Flow property in experiments using Toraycon Nano Flow was improved by up to 80%, and a 20 degree Celsius reduction was achieved for the melt molding temperature. This will contribute to customers' GHG reductions through improved productivity and energy savings. The Company aims to use the product in automobile parts, including electric and electronic parts.

* A Toray Group registered trademark, or trademark pending registration

In February 2010, TonenGeneral Sekiyu K.K. and Toray established the joint venture Toray Tonen Specialty Separator Godo Kaisha for battery separator film (BSF), a main component in lithium ion batteries for hybrid-electric and electric vehicles. The joint venture will build on the companies' experience and success in separator films for the personal electronics market, including cell phones and notebook computers. It aims to create synergies through the introduction of Toray's next-generation BSF technology while leveraging its film production, development technologies and global operations, to contribute towards growth of the lithium ion battery market.

GHG Reduction 4: Expanding Usage of Polylactic Acid (PLA) Resin

The use of material made of polylactic acid (PLA) and biomass such as plant-derived polyester is growing in areas such as automobile interiors. Conventionally, PLA and similar materials had limited applications due to inferior heat and abrasion resistance. However, Toray has created a highly durable material by making full use of its diverse technologies for processes such as the formation of polymer alloys and composites, and hydrolysis control.



Moreover, a bio-based plastic developed by Toray and Canon Inc. with the world's highest flame retardant levels has been used in exterior plastic parts for Canon multifunction office copiers since July 2009. More than 25% of the bio-based plastic's content by weight consists of plant-derived material. It can also reduce CO₂ emissions during manufacturing, compared to conventional plastics made from fossil fuel.

Water Treatment: Accelerating Global Expansion

In August 2009, Toray established an R&D base for water treatment technology in Singapore. In addition, the Company established a water treatment joint venture in China and has been taking other steps to expand business globally, which will contribute to securing water resources around the world.

Related Information

- [CSR Report Highlight 2010](#)
- [2. Mitigating Water Resource Issues](#)
- [\(3\) Global Water Resource Issues and Expansion of Toray's Water Treatment Business](#)

| Low Environmental Impact: Development of a Flame Retardant Aramid Film

Toray used molecular design technology that achieves a balance between structural linearity at the molecular level and intermolecular force, to develop a clear and colorless aramid film that is halogen-free and highly flame retardant. The Company is aiming to deploy the film for electric and optical circuit boards, solar cell substrates, and display substrates.

Initiatives for Developing Environmentally Friendly Products
Promoting Recycling

As a manufacturer of a wide range of materials, Toray has been taking on the challenge of recycling various resources including fibers and textiles, plastics, and carbon fiber. The initiative is based on the Company's Recycling Activity Principles and future vision, and is underpinned by the basic principle of "Less Energy." Particular emphasis is being placed on working with customers to provide product solutions.

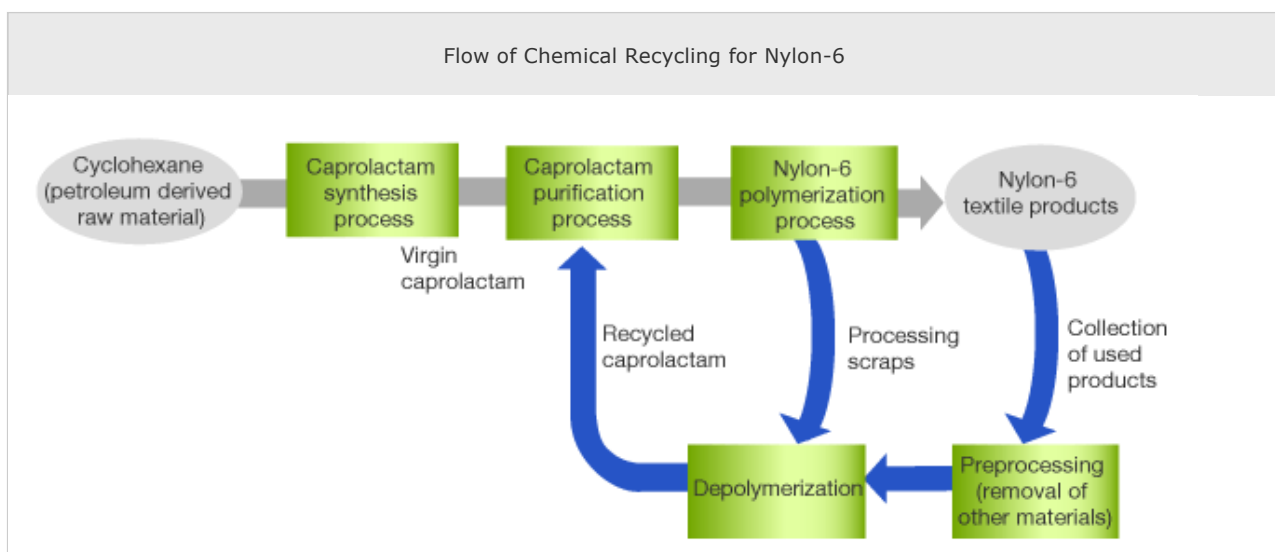
Recycling Activity Principles (adopted in March 2004)

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.

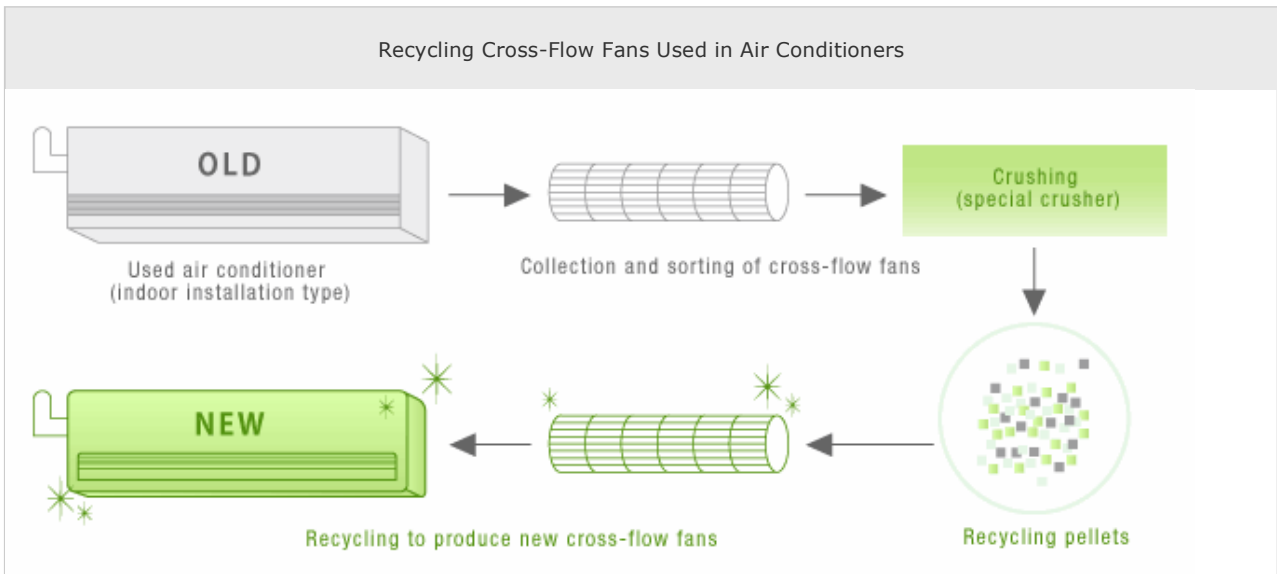
Recycling Vision	
Company-wide	<ul style="list-style-type: none"> • Approach recycling based on the concept of "Less Energy" • Pursue sustainable recycling through partnerships with customers
Fibers and textiles recycling	<ul style="list-style-type: none"> • Approach recycling based on the concepts of "Less Energy" and "Total Recycling" • Expand efforts through partnerships with users
Plastic recycling	<ul style="list-style-type: none"> • Approach recycling based on the concept of "Less Energy" • Focus on profitable material recycling using the life cycle inventory (LCI) technique
Carbon fiber recycling	<ul style="list-style-type: none"> • Demonstrate a pilot recycling plant as part of a national project • Lead the carbon fiber industry by establishing recycling methods

Fibers and Textiles Recycling

In FY 2009, Toray participated in the Textile Products Recycling Model Program sponsored by the Textile and Clothing Division of the Ministry of Economy, Trade and Industry. Toray verified its chemical recycling technology on nylon-6 textile products from articles of clothing collected from consumers.



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



Carbon Fiber Recycling

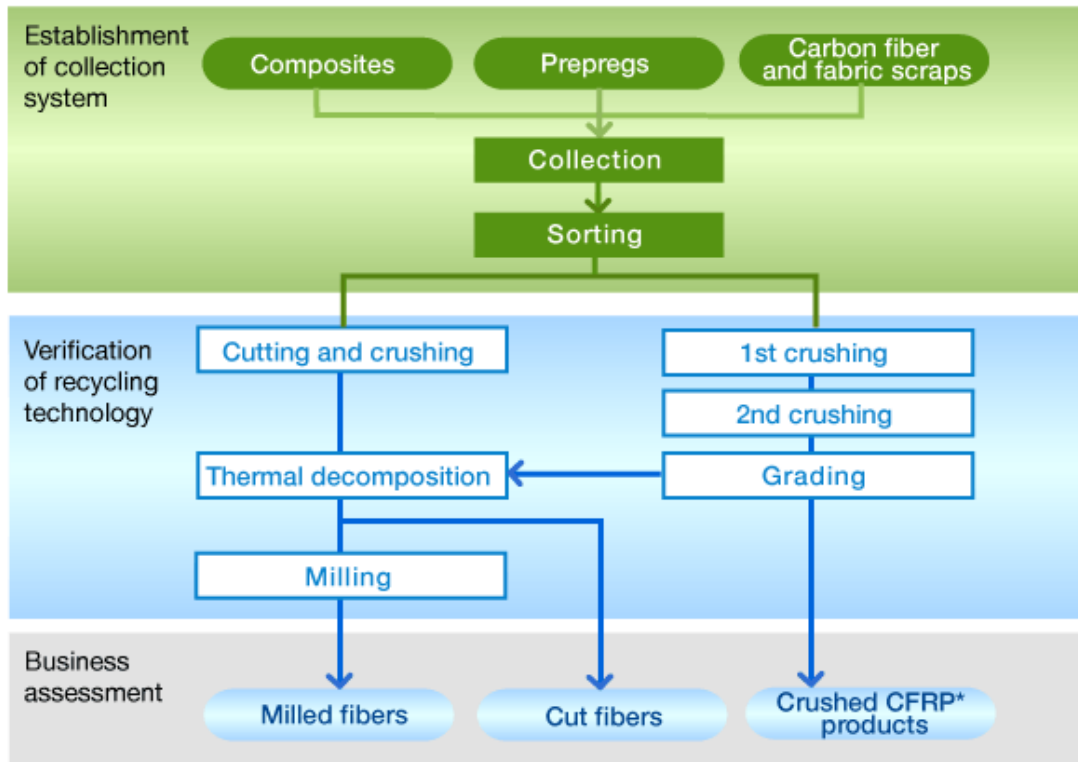
As a member of the Japan Carbon Fiber Manufacturers Association (JCMA), Toray engages in recycling initiatives along with other carbon fiber manufacturers.

With the support of the Ministry of Economy, Trade and Industry, the JCMA built a carbon fiber recycling pilot plant in Omuta City, and a Research and Development of "Carbon Fiber Manufacturing Energy Reduction Technology" project was conducted with the theme "Verification of Carbon Fiber Recycling Technology." Quality and performance evaluation of recycled materials was completed through the project.



Carbon fiber recycling pilot plant (in Omuta Eco Town, Fukuoka Prefecture)
Photo: JCMA

Carbon Fiber Recycling Flow



*CFRP: Carbon fiber reinforced plastic

Product Safety and Quality
Product Safety and Quality Policies

With the aim of achieving “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-Innovation TORAY 21”](#)

Product Safety and Quality
Providing Quality Assurance

Perfecting Systems in Support of Quality Assurance Activities

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. Toray established Group-wide reporting procedures for product claims in May 2009, to improve its system for the uniform management of information on important claims. The Group will continue to pursue synergy by strengthening its Group-wide management system in terms of both quality assurance and product safety.

Acquiring Quality Assurance Certification

Toray Group's production plants are dedicated to obtaining ISO 9001 certification in order to improve the Group's quality assurance framework. In FY 2009, Toray Polytech (Nantong) Co., Ltd., and Toray Membrane USA, Inc., obtained certification. Toray Group has also acquired quality management system certifications required of raw material manufacturers in each industry. Toray Group companies have obtained ISO/TS16949¹ certification for their man-made suede for automotive use, and textile products for air bags and tire cords. Certification was also acquired in FY 2009 by Toray Plastics (Shenzhen) Ltd. and Toray Textiles Central Europe s.r.o. Toray also obtained JIS Q 9100² 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



INTERVIEW

Sachiyo Yoshida
Composites Materials Quality Assurance Department,
Toray Industries, Inc.

Customer-focus: Striving to Provide Quality that Satisfies Customers

I work in the department in charge of global quality assurance for carbon fiber and carbon fiber composite material products. My responsibilities involve creating the framework for quality assurance activities throughout the entire supply chain, to ensure the quality assurance system for each product suits the standards required by customers.

Demand for carbon fiber composite material products in the environmental business field have been increasing in recent years, and we have been striving to improve our systems to meet customers' diversifying quality requirements.

As part of these efforts, we expanded the scope of JIS Q 9100 certification, which is required for aerospace applications, to include not only the Ehime Plant where production takes place, but also the Tokyo head office, as well as sales and distribution. Currently we have a multi-base system in place, including the Nagoya Plant, and are continuing improvement activities aimed optimizing the entire organization. For other applications, we are ascertaining the quality management standards of each industry and working to incorporate them into our quality assurance.

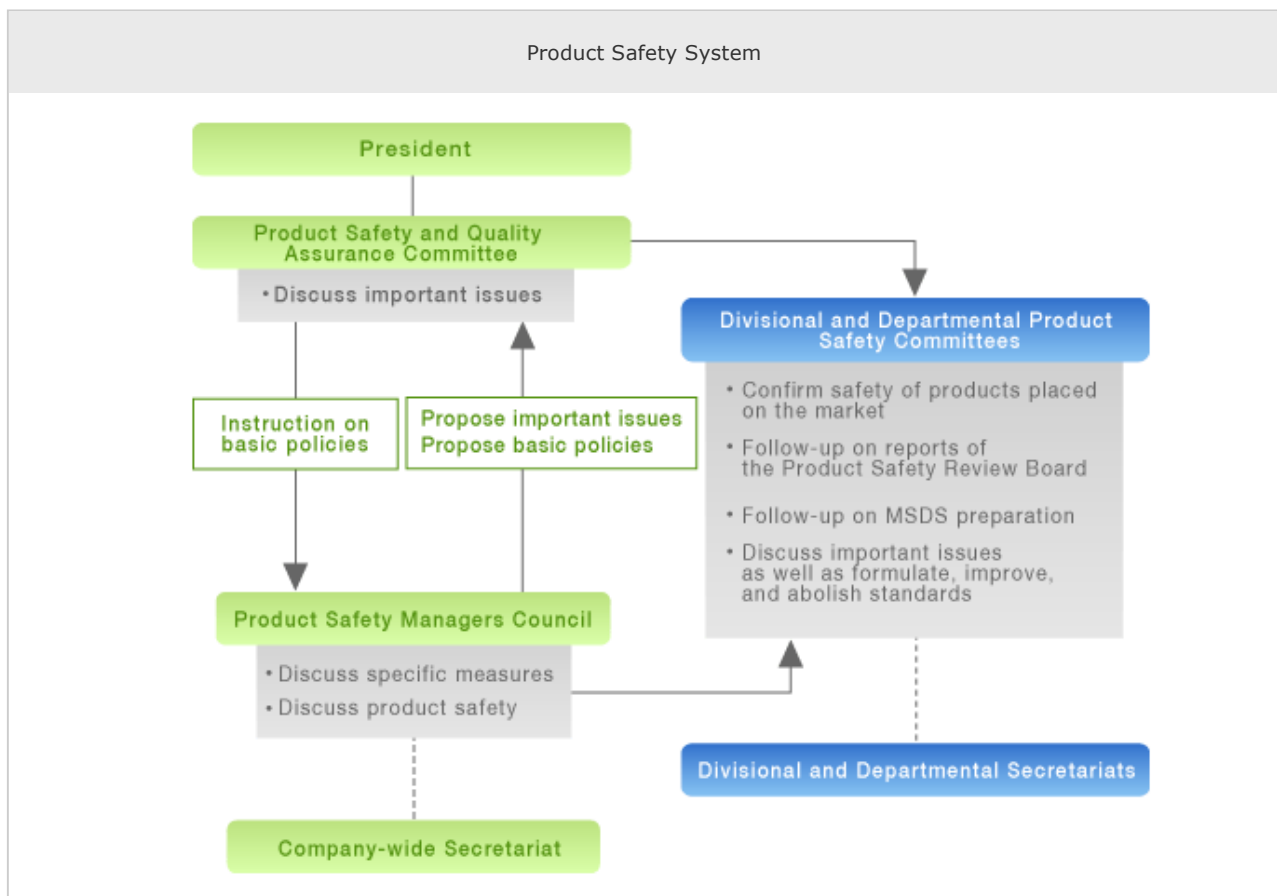
In addition to our own quality assurance activities, we participate in the establishment of JIS and ISO testing standards related to composite materials. Going forward, we will continue to reliably follow quality assurance trends in the industry, and strive to strengthen Toray's quality assurance system to achieve the standards that customers demand.



Product Safety and Quality
Ensuring Product Safety

Implementation of Product Safety Activities

Toray's Product Safety System is shown in this diagram. Based on its 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 Group-wide product safety themes, based on the deliberations of the Product Safety Managers Council. Under this arrangement, issues for implementation are established 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

At Toray, newly appointed departmental and section managers 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.

Expanded Scope for Accident Response Standards

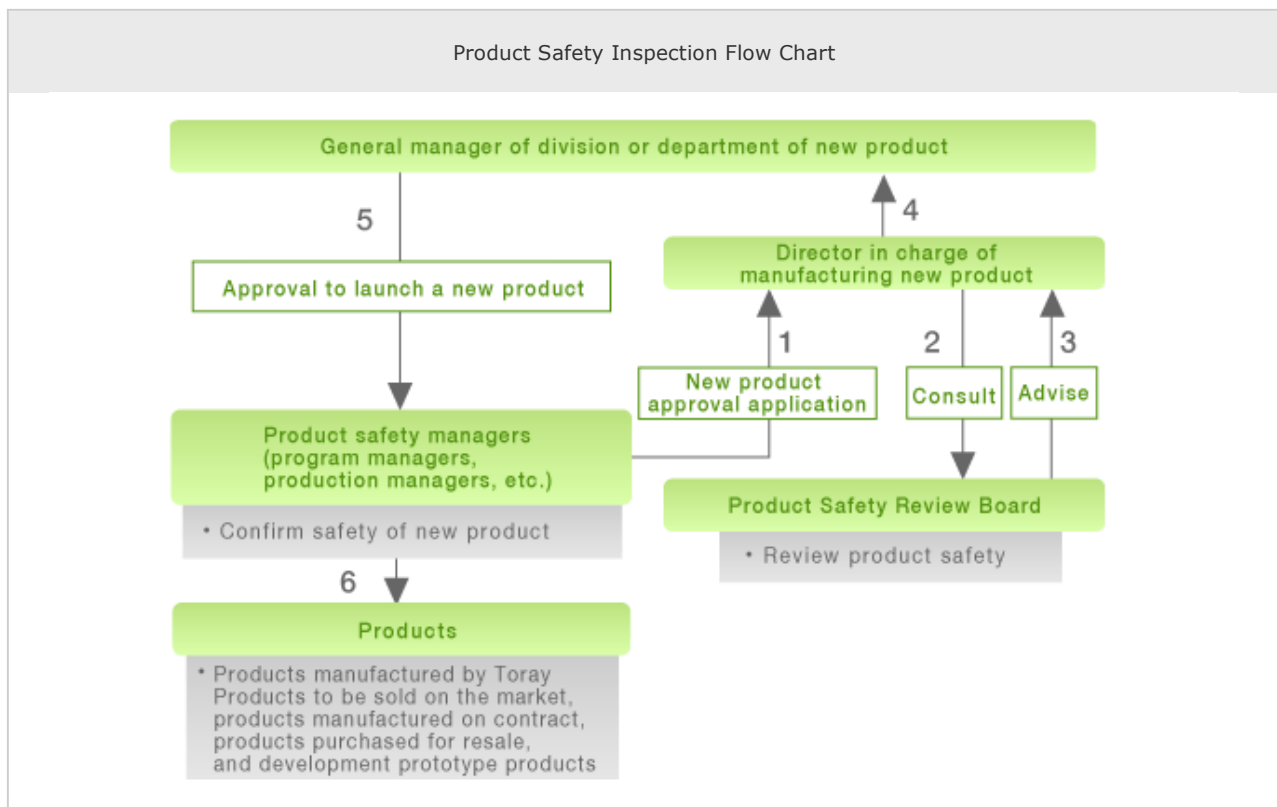
Toray has established Product Safety Accident Response Standards, and has been working to minimize damage caused by product accidents and prevent the reoccurrence of such incidents. In FY 2007, for example, an overheating incident was

caused by an electrically heated floor mat manufactured by the Company over 20 years ago. Toray strengthened the relevant measures in response. In May 2009, it revised its internal standards, expanding their scope to cover all products manufactured and sold by the Company, past and present, to improve its management system regarding product accidents.

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 of the Product Safety Review Board consisting of a group of impartial experts from in and outside the Company is held. The product must pass this review before launch.

In FY 2008, Toray improved mechanisms for confirming of the above the product development stage onward, in order to ensure the reliable and efficient implementation of reviews. In FY 2009, the Company verified that the mechanisms are being reliably implemented.



Providing Product Safety Information

Toray Group provides product safety information along with its many products and services, in ways that match the characteristics of 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, it strives to improve its accessibility to users of its most popular consumer goods, by, for example, manning a toll-free product inquiry phone.

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

Cooperating with Suppliers in their Environmental and Social Initiatives
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 management of production facilities, raw materials and materials procured by the Company. Toray established its Basic Purchasing Policies to guide its upstream management and ensure fair transactions. In addition, the Company creates a supply chain with suppliers that fulfills its corporate social responsibility, and has established CSR Procurement Guidelines in order to provide customers with environmentally and socially friendly material.

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

PDCA Cycle in Toray's CSR Procurement

Toray employs a PDCA cycle as shown below in its CSR procurement activities.

PDCA Cycle in CSR Procurement



Toray has established internal regulations for advancing its CSR procurement activities, which include conducting questionnaire surveys to verify suppliers' CSR initiatives. Evaluation results are forwarded to suppliers and processing vendors, some of whom receive inspections from Company employees and improvement suggestions aimed at creating a stronger partnership. This process is repeated in a PDCA cycle.

In addition, Toray has established and implemented Company-wide procurement compliance rules to accurately report the status of CSR-related activities to customers.

| Promoting CSR Procurement by Companies to Sales Agencies and Manufacturing Subcontractors

In order to promote CSR procurement throughout the value chain, Toray conducts questionnaire surveys, provides feedback, performs on-site inspections, and offers CSR compliance support for sales agencies in addition to suppliers and manufacturing subcontractors.

Cooperating with Suppliers in their Environmental and Social Initiatives
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 impact, Toray also promotes understanding of its distribution policies. This is done through Basic Distribution Policy Briefings, held annually for distribution-partner companies, with the aim of improving performance and enhancing overall quality by sharing examples of successful initiatives with all distribution partners.

In FY 2009, the Company gave awards to eight distribution-partner companies that significantly contributed to quality improvement, and halved incidents such as product damage during shipment or storage, and delivery errors or delays, compared to FY 2005.

Two initiatives undertaken by Toray and its distribution partners were adopted by the Japanese government as a Green Logistic Partnership Promotion Project in FY 2009.



Basic Distribution Policies Briefing

Distribution-partner companies awarded in FY 2009

Highest award: Kusatsu Soko Co., Ltd.; Shikoku Meitetsu Transport Co., Ltd.; Nagahama Reizo Co., Ltd.; Nippo Butsuruyu Service Co., Ltd.; Fukui-souko Corporation

Award for excellence: Senko Co., Ltd.; Sukagawa Toubu Unsou Co., Ltd.;

Improvement award: Japan Transcity Corporation

Basic Distribution Policy

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 impacts.
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.

Related Information

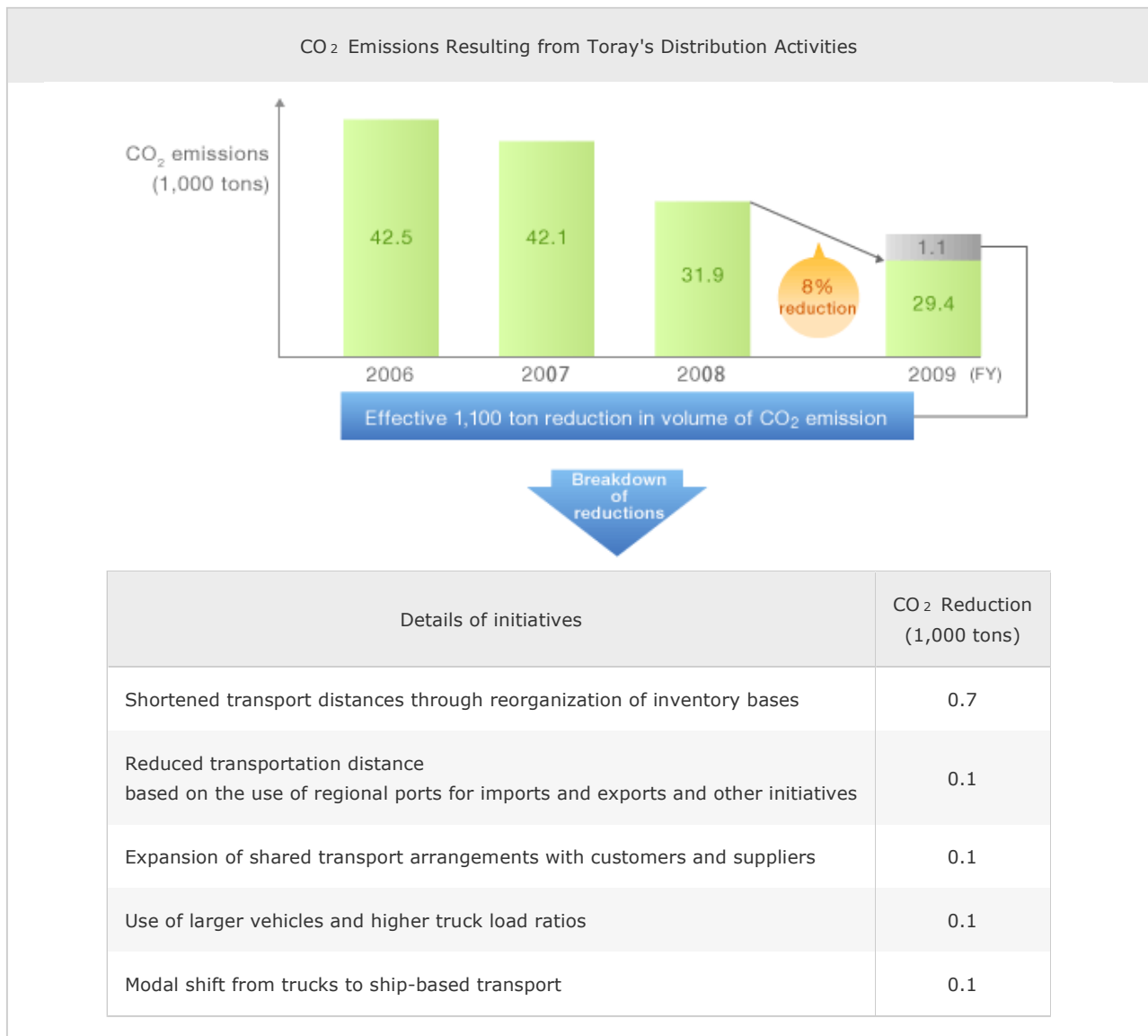
- [Green Logistics Partnership Promotion Project](#)

Cooperating with Suppliers in their Environmental and Social Initiatives
A "Specified Consignor" 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 its distribution measures accordingly. In FY 2009, Toray reduced its CO₂ emissions by about 2,500 tons, or 8%. Of this, a reduction of about 1,100 tons was the result of efforts including modal shift and shortening transport distances through adjustment of inventory locations, and active use of regional ports. In addition, the Company reduced CO₂ emissions per unit of sales by 1% compared to FY 2008, and by 15% compared to FY 2006. During the next three years through 2012, Toray will expand similar initiatives to Group companies in and outside Japan in an effort to reduce CO₂ emissions on a consolidated base.

Toray is promoting initiatives together with its distribution partners by encouraging the acquisition of environmental management certifications.*

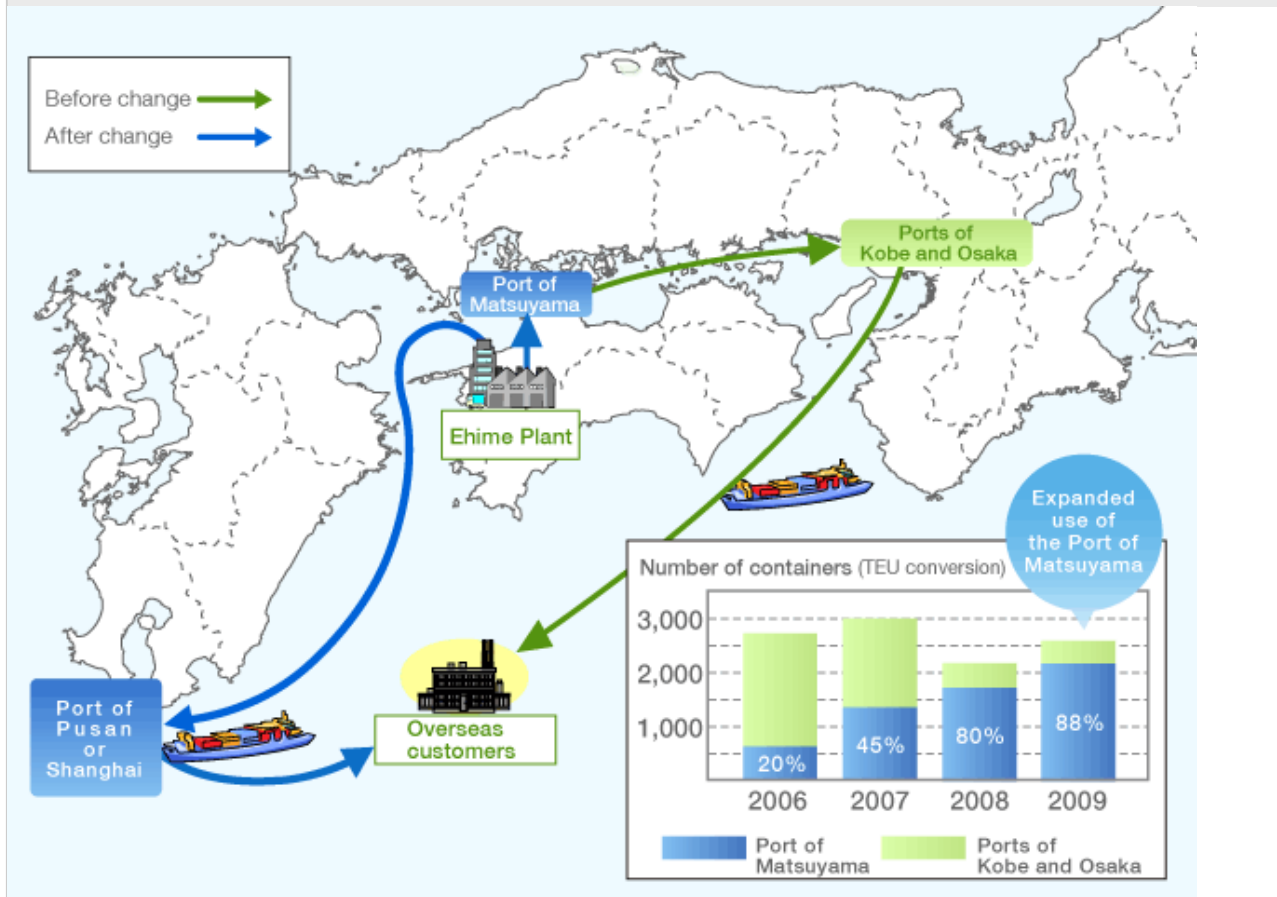
* Environmental management certification:
ISO 14000, Green Management Certification, Eco Stage, and other certifications.



Utilizing Regional Ports for Exports and Imports

Previously, Toray used the Ports of Kobe and Osaka for its daily export shipping of staple fiber products produced at Toray Ehime Plant. After negotiating delivery dates with the customers involved, the Company began using the smaller but closer Port of Matsuyama, which was not used due to the limited number of shipments twice a week. As a result, the transport distance within Japan was shortened, thereby greatly reducing CO₂ emissions. By expanding similar measures to a total of

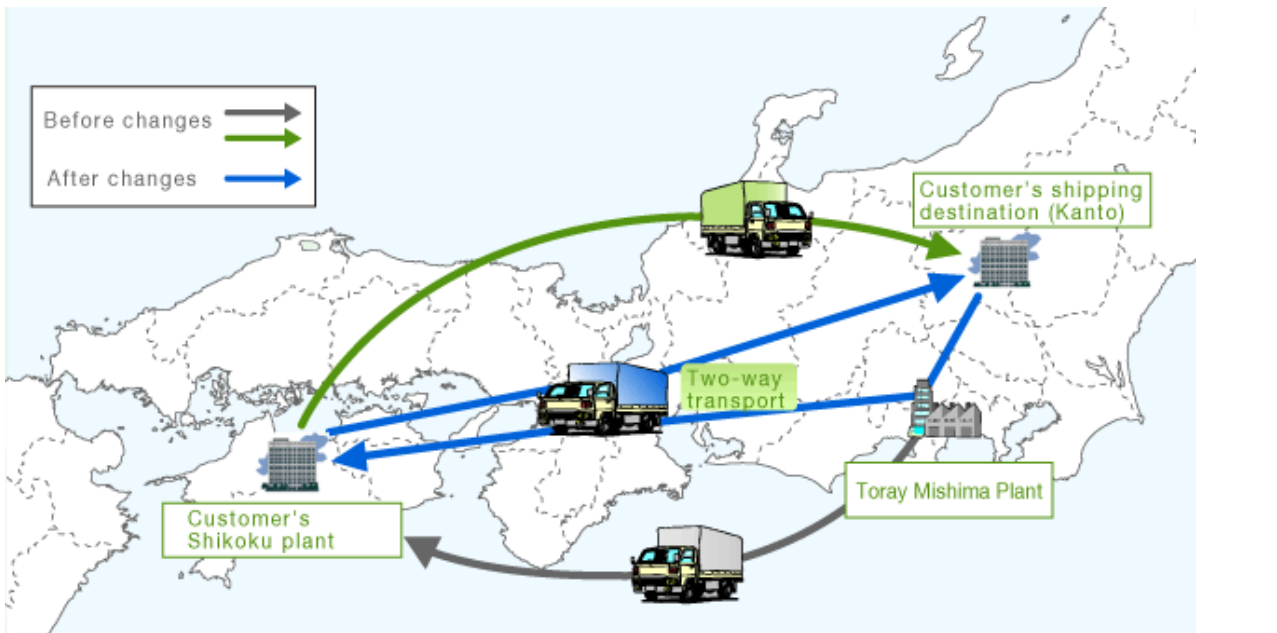
Example: Exporting Ehime Plant's staple fiber products from the Port of Matsuyama



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 166 tons in total by FY 2009.

Example: Sharing Trucking Services with a Customer through Two-way Transport



Green Logistics Partnership Promotion

Toray is promoting CO₂ emission reduction initiatives with its distribution partners. In FY 2009, the Japanese government adopted two of Toray's initiatives with distribution partners as Green Logistics Partnership Promotion Projects. See the following column for details.



Large truck for chip transport



COLUMN

Distribution Division, Toray Industries, Inc.

Reducing Environmental Impact in Distribution through Strengthened Cooperation Beyond the Group

Toray is reducing its environmental impact by streamlining distribution through a variety of approaches such as the revision of load efficiency, in addition to modal shifts and the use of regional ports in transportation.

The Green Logistics Partnership Conference operated by the Ministry of Economy, Trade and Industry; the Ministry of Land, Infrastructure, Transport and Tourism; and Nippon Keidanren, supports projects in which cargo owners and logistics businesses cooperate to reduce CO₂ emissions and save energy. Projects authorized by the Conference have part of their necessary implementation expenses subsidized by the New Energy and Industrial Technology Development Organization (NEDO).

There are a number of hurdles for businesses wishing to obtain the subsidy, including a condition where projects are monitored for five years to ascertain whether the logistics effects submitted during application are maintained. Furthermore, the number of projects authorized is limited to only about 20 per year. Currently, Toray has three subsidized projects: one authorized in FY 2008 and two in FY 2009.



Left: Tomoyuki Suitsu, Manager, 1st Logistics Section
Center: Shigeru Yano, Manager, 2nd Logistics Section
Right: Tamon Kihara, Manager, Osaka Logistics Section

One of the newly authorized initiatives is joint transportation by Toray and Toyo Logistics Service between the Tokai Plant and Okazaki Plant. The size of the tankers used to transport resin chips was increased from 14 to 19 tons; this reduces the number of transports needed, which decreases environmental impact.

The other new initiative is the consolidation of dispersed storage facilities. Previously, Toray warehouses were spread out in five locations in Ehime Prefecture, with their contents separated according to product type, such as carbon fiber and water treatment membranes. The products were consolidated into two warehouses leased from Iyoshoun Co., Ltd., in order to reduce transportation distances and thus help decrease environmental impact.

The logistics division will continue improving efficiency throughout the supply chain and strengthening cooperation with other companies in the same industry, in efforts to reduce CO₂ emissions through comprehensive logistical streamlining that goes beyond the Toray Group.

Safety and Energy Conservation Initiatives

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

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

Expanded Collection and Reuse of Packaging Materials

Toray designs its packaging materials based on the 3R* 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.

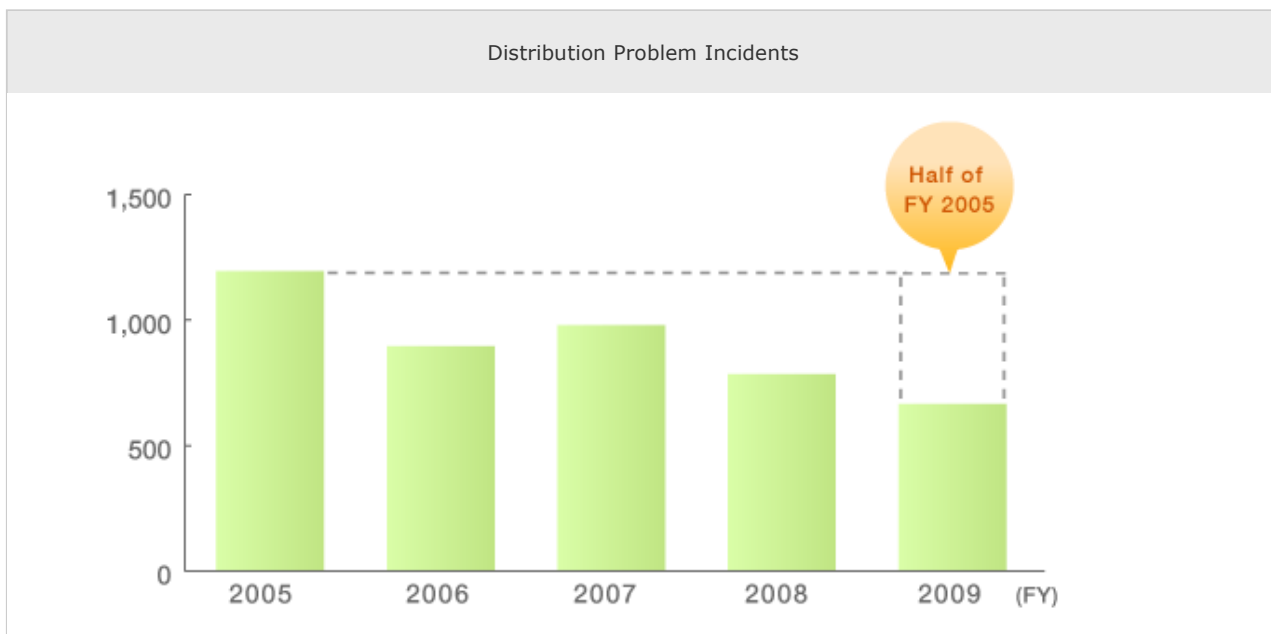
*3R: Reduce, Reuse, and Recycle

Cooperating with Suppliers in their Environmental and Social Initiatives
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.

Problems are analyzed by office and content, on-site inspections are carried out, and efforts are made with distribution partners to prevent their recurrence. In FY 2009, Toray began publishing a Distribution Quality Improvement Report called the Mail Magazine, which tracks statistics of distribution problems and provides measures for their prevention. The report is helping to laterally spread preventative measures through information sharing, and to inform readers of impending busy periods. With the cooperation of distribution partners, by FY 2009 Toray achieved its goal of halving distribution problems compared to FY 2005.



Yellow Card Emergency Response Measures

Drivers of shipping vehicles carry a yellow card* 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.

* 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.



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, US subsidiary Toray International, Inc. enrolled in C-TPAT¹ with the aim of strengthening global supply chain compliance. In order to realize more efficient imports and exports and to strengthen supply chain compliance and security measures, Toray is also encouraging its worldwide distribution partners to obtain AEO² status.

1. 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.

2. 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 seek to 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 accident, in order to maintain safe and healthy workplaces.

FOR 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 EMPLOYEES

Occupational Safety

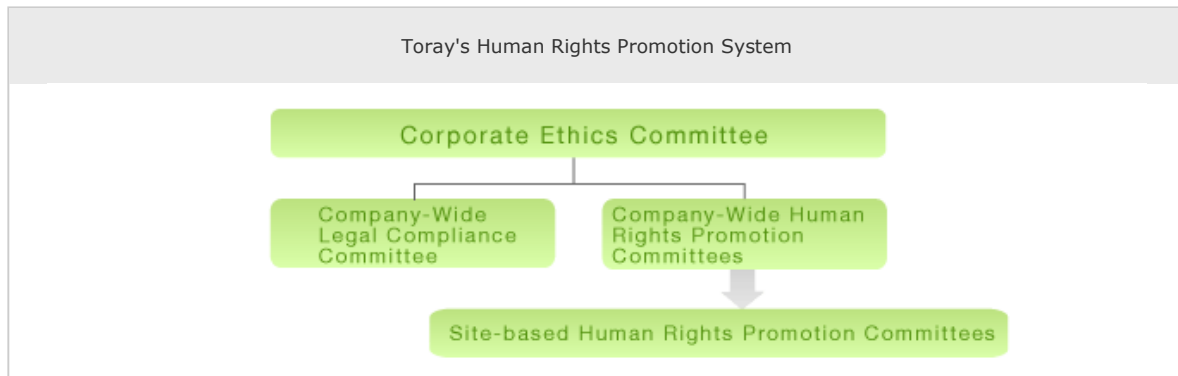
In accordance with the Group's safety slogan, all employees thoroughly practice safety basics at the workplace, and strive to achieve zero accident.

Human Resources Development and Human Rights Promotion
Efforts to Promote Human Rights

Toray Group believes that respect for human rights is a fundamental principle, essential to the management of the company. The Group therefore strives to promote and increase awareness of human rights issues, while prohibiting 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, prohibiting 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 to each workplace; some 300 such officers dedicate themselves to making the work environment more pleasant and productive. Toray has also established a Human Rights Promotion Section in its Industrial Relations Department. In FY 2009, the Company pursued initiatives to strengthen employee communication and create pleasant, energetic, and considerate working environments. Measures were also taken to address issues such as sexual and power harassment.



Implementation of Human Rights Training Workshops

Toray holds human rights promotion campaigns each year to help increase awareness and promote a clear understanding of human rights issues. The action goal for the FY 2009 campaign called on employees to prevent harassment and create a considerate workplace by deepening communication and fostering respect for others. As part of this effort, the Company promoted a return to the fundamentals of human rights by asking employees to be mindful of how they interact with 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 2009, the Human Rights Promotion Section Manager visited all 15 Toray offices, plants and laboratories as part of the campaign, and held workshops for the Human Rights Promotion Officers.

FY 2009 Human Rights Training and Seminars		
Type of training	Number of sessions	Number of participants
Training at head office	29	1,750
Training at offices and plants	1,592	18,532
Training at outside company	76	160

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.

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.

- Cultivation of fair-minded members of society who act with high ethical standards and a sense of responsibility
- Training of professionals who solve problems with advanced expertise, technical skills and originality
- Cultivation of leaders who act with foresight and a sense of balance

Rational and Well-Organized Training System

The Toray Group employee education system represents a rational, systematic approach to human resources responding to various needs in every field. The Group conducts many types of training for employees of all levels and in all areas to improve management performance, sales performance, production management skills, professional skills, and international operations. For example, the voluntary Challenge Training Program helps motivated employees develop their own talents while the Overseas Junior Training Program develops employees with a global mindset.

Beginning in FY 2007, Toray has implemented a human resources training program based on consistent training objectives to strengthen the development of sales personnel. Personnel receive training for a designated initial period spanning their first three years at the Company.

Company-Wide Training Course Enrollment	
Training Category	Persons enrolled
Management	600
Technical	341
Sales & Marketing	63
International	12
General	347
Total	1,363

Early Leadership Development

To promote unified management across Toray Group, courses at the Toray Management School, designed for middle-ranking managers to develop into future executives, have been held since 1991.

Toray is currently seeking to give section and unit managers coaching skills* and boost their problem-solving skills. The Company has also established the Toray School of Technology and Business for training mid-level employees at plants. This initiative offers selected employees a year's full-time education in a live-in schooling environment.

In FY 2007, Toray also established a new higher-level management training program for managers and senior administrators, with full-scale implementation beginning in FY 2008.

*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 strive to explore new possibilities to contribute to the Company.

Toray's Personnel System	
Management-by-objectives system	Each employee establishes annual objectives under this system. 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	This system is designed to facilitate a fair appraisal of employee contributions in terms of duties, responsibilities, capabilities, and performance.
Individual meeting system	Under this system, employees meet with their supervisors twice a year in a one-on-one setting. Supervisors work to develop their subordinates' skills and ensure that the latter accept the validity of their evaluations.
Self-assessment system (for managers, occupational specialists, and general staff)	This system surveys employees 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	The system gives employees 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.

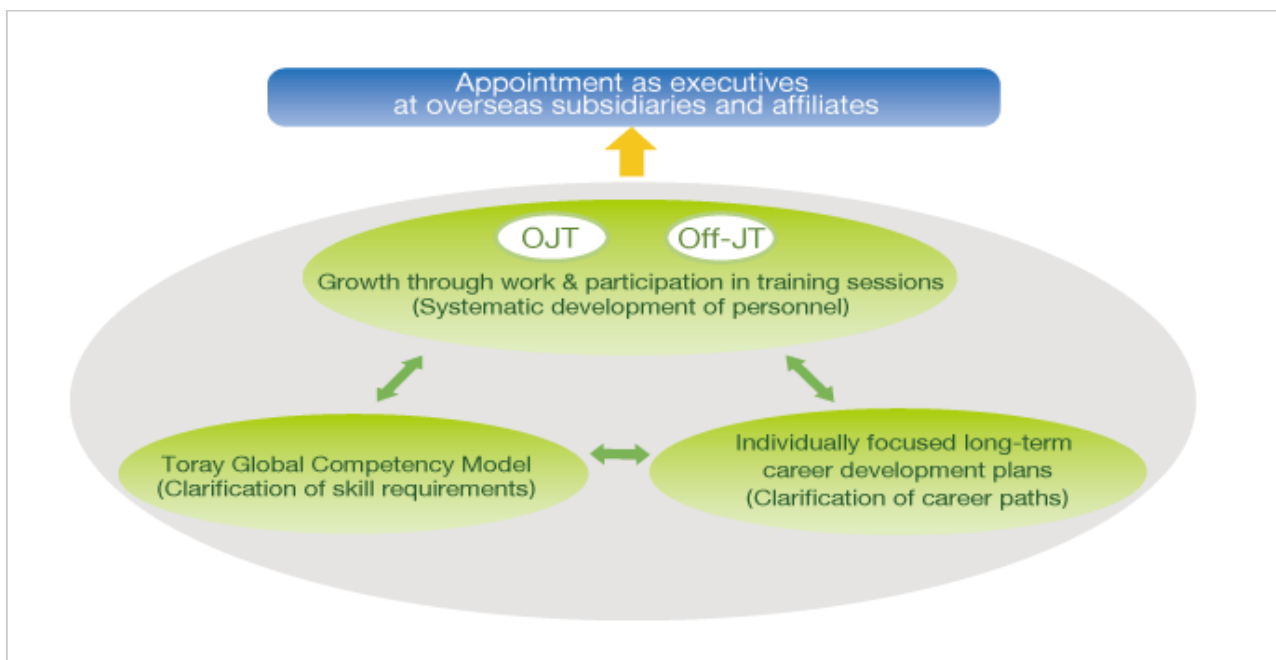
Human Resources Development and Human Rights Promotion
Development and Promotion of Local Key Staff

Toray Group regards the development of key employees at overseas subsidiaries and affiliates as one of its major business challenges. The Group conducts training for local staff, in addition to the promotion of local employees to 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 common standard. Toray head office is working with overseas subsidiaries and affiliates to develop and promote local staff in these positions. These 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. Based on this, the Company pursues career development by creating individually focused long-term career development plans. To facilitate information sharing Toray also established the Toray Global Database, allowing employees worldwide to have access to information related to the Company.



Development and Training of Key Local Employees

To ensure that key local employees at overseas subsidiaries and affiliates are familiarized with Toray's Management Philosophy and policies, they participate in training programs in Japan, organized according to managerial rank. These training programs are linked with individually focused long-term career development plans. In FY 2009, the Company enhanced supplemental teaching materials for training programs, including the preparation of six types of learning aids for self-study.

Toray's head office also participates in planning management training programs conducted in each country and region, and strives to support personnel development efforts. In FY 2009, a five-month management training program for executive candidates in Indonesia was revised to accelerate promotion.



Training local overseas personnel

Training System for Local Managers



Training Courses held for Overseas Employees during FY 2009 (Toray Group)		
Japan-Based courses	Toray Group Senior Management Seminar	12
	National Engineer Training Program	3
	Toray Group Supervisors' Seminar	1
Courses held overseas	6th Europe Senior Management Seminar	15
	4th U.S. Senior Management Seminar	16
	3rd China Senior Management Seminar	21

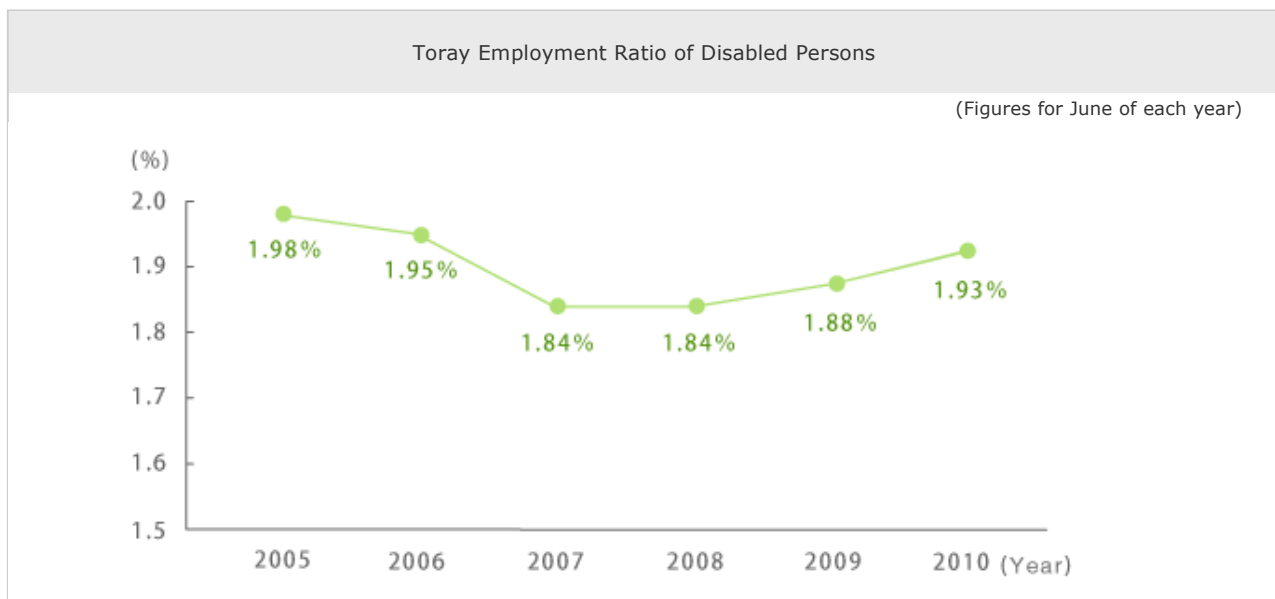
	3rd Thailand Management Seminar	33
	3rd Indonesia Management Seminar	12

Human Resources Development and Human Rights Promotion
Initiatives Encouraging Diversity in Employment

Toray Group's approach to diversity in employment is one that encourages the individual talents of employees from many different backgrounds. The approach aims to create workplaces where everyone can perform their duties in a lively and enthusiastic manner.

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.



Reemployment System

As part of its initiatives to encourage full utilization of skilled individuals over age 60, 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 in December 2005 to expand coverage 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 reemployment period will be extended to age 65 after April 2013. The Company offers counseling to employees prior to reemployment.

Mid-Career Recruitment and Employment of International Students

Toray promotes the mid-career recruitment of experienced individuals with specialized knowledge and skills, the employment of international students who have graduated from Japanese universities, and Japanese students who have graduated from overseas universities. Company workplaces provide opportunities for graduates to make the most of their skills and personal qualities.

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

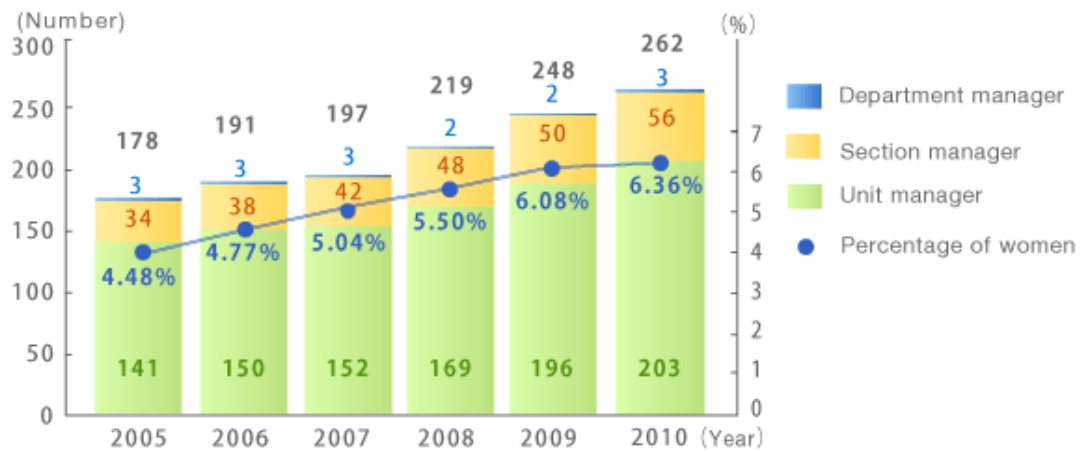
Creating an Organizational Culture Conducive to the Career Advancement of Women

employment of women, and offer women 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. Toray has continued to improve its advancement systems and programs, and initiated its 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 6.36% in April 2010.

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

(as of April each year)



Toray Assists Employees in Achieving a Balance between Work and Family Life

Toray has been working to further improve systems that can assist employees in achieving a harmonious balance between work and family life, by offering a wider variety of lifestyle options for men and women. Support systems that go beyond those legally mandated for childcare, family-care, and maternity protection are provided, based on Toray's commitment to make them as accessible and responsive to a diverse range of employee needs as possible.

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 system changes aimed at encouraging men to take childcare leave, in accordance with revisions made to the Child and Family Care Leave Law.



Toray Utilization of Childcare and Family-Care Leave Systems

Fiscal Year		2005	2006	2007	2008	2009
Employees taking childcare leave	Women	76	75	73	91	67
	Men	4	3	1	0	3
	Women	4	2	4	1	1

Employees taking family-care leave	Men	0	1	0	1	0
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Notes:

1. Figures show the number of employees taking leave.
2. The figures for FY 2007 were previously mistaken and have been corrected.

In April 2008, Toray established a Labor-Management Committee to Promote Balanced Work and Family Life. The committee's efforts resulted in the positioning of work-life balance as an initiative for workplace innovation, and labor and management have become more unified in its promotion. The aim is to increase the productivity of each employee and workplace by revising work methods, and further energize Toray's work environments.

Toray Assists Employees in Achieving a Balance between Work and Family Life

Changing awareness

Discussions are held in each workplace on how to revise work methods as well as ensuring thorough management of working hours and striving to create a workplace culture that aims for efficient and highly productive work methods, based on individuals improving their own work habits.

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

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

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

Note: Since April 2009, Toray has increased efforts to meet the goal of zero overtime and holiday work.

Major Changes in Support Systems for Employee Work and Family Life Balance ⁽³⁾

Action	Description of changes	Before changes
Established a system to help employees pay for childcare services. (From April 2007)	Toray provided a corporate child care program for employees at a subsidized rate of 900 yen per hour, compared to the standard rate of 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. 14 of the 52 employees registered in the program are using it (as of March 2010).	-
Reviewed the registration system for reemployment.* (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 2010).	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,	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.

and night work limits. (From April 2007)		
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.	-

*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.



INTERVIEW

Mai Yonenaga
General Affairs Department
Toray Research Center, Inc.

Achieving Work-Life Balance with the Help of a Supportive Workplace

After the birth of my third child I went back to work at Toray Research Center, Inc. in April 2009, and I am now working on a flexible schedule. At present, 75 of the 147 female employees including managers at the company are raising children. About half of those have two or more children, and eight women have three children [as of January 2010].

I am thankful for a supportive workplace that allows me to work while raising a family. As there are time limits, I try to share information to get ahead with my tasks in order to finish them efficiently.

There was no subsidy program for babysitter fees when my first two children were born in Osaka, but the Company developed this program, and has been improving systems every year that support balance between home life and work at Toray Group. In the future, I think that more people will work while raising children or providing nursing care for their family.



Occupational Safety

Occupational Safety and Accident Prevention Activities

Toray Group regards safety, accident prevention, and environmental preservation as the foremost item of its Corporate Guiding Principles. All employees are united in their efforts to achieve zero accidents, and an action plan based on annual Group-wide safety slogans and priority activities is established.

Through the Toray Group Safety Meeting, the Group ensures that activities are coherent and united. Toray Group implements unified management through safety, health, accident prevention, and environmental audits by directors. By these means, the Group is striving to increase occupational safety efforts at each company, office and plant.

2009 Safety Slogan

IT-II Certain Achievement of Zero Accident Through “Safety Action” by Oneself!

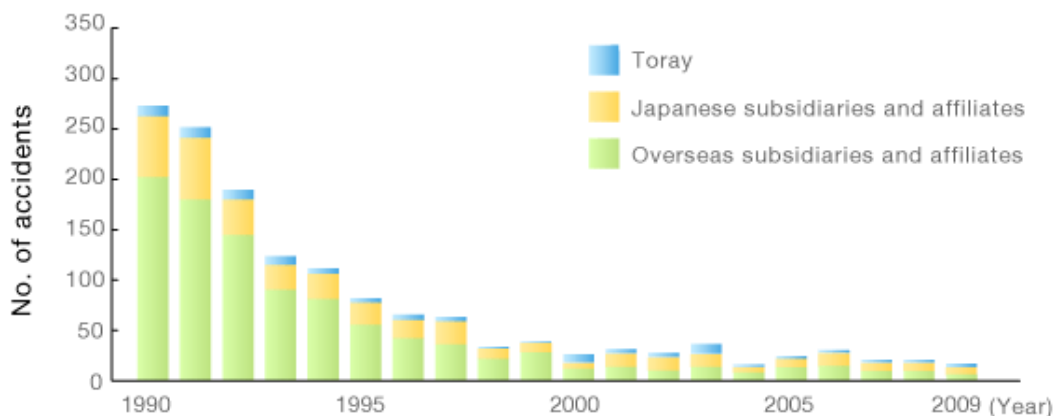
Main Priority Activities in 2009

- Enhance safety measures against rotating object, moving machine part, and heavy material
- Thoroughness in basic action
- Strengthen prevention measures against recurrence of similar accidents

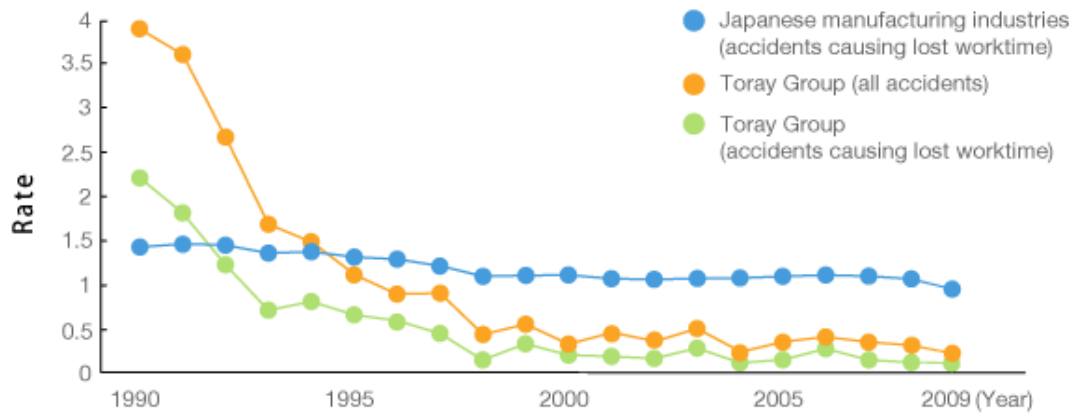
Information on occupational accidents and fires at all Toray Group companies, offices and plants is shared Group-wide, and used to prevent similar incidents from occurring in the future. In 2009, the number of labor accidents (resulting in either lost work time or no lost work time) reached an all-time low level of 14 cases across the Toray Group. The labor accident frequency rate* was 0.13 for Toray, and 0.36 and 0.09 for its subsidiaries and affiliates in Japan and overseas, respectively, for an overall Group rate of 0.18. This Group rate is lower than the average rate in the Japanese manufacturing industry.

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

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



Labor Accident Frequency Rate: Toray Group



Raising Safety and Accident Prevention Awareness

Toray Group conducts a range of specialized and level-specific organizational training related to occupational safety and accident prevention. Direct safety training is one method used, and is effective for raising hazard awareness by having employees actually experience crisis situations. Each Toray affiliate company, office, and plant uses sophisticated training methods; some plants have established a Safety Dojo with simulation devices that can be used at any time to demonstrate hazards.

Additionally, Toray Group accident prevention specialists conduct fire and explosion experiments at each plant to improve employees' accident prevention awareness, by having them experience of the threat of fires and explosions, and understand related fundamental safety principles.



A demonstration that simulates being caught in machinery at the Aichi Plant



A fire and explosion demonstration at the Nagoya Plant

Accident Prevention Initiatives

Toray Group has prepared a FP checklist (fire prevention checklist) for fire and explosion hazard inspections at each of its companies, offices, and plants. The checklist consists of 906 items including items related to previous cases of accidents. Priority items were independently selected from the list and inspections were conducted accordingly in FY 2009. The Group also conducts fire prevention drills such as reporting, evacuation, firefighting, and other accident prevention activities. Particular effort is paid to rescue measures and comprehensive fire prevention drills in the event of a major earthquake.



Comprehensive fire prevention drill at the Ishikawa Plant

Distribution Safety Initiatives

As part of its safety management efforts in the transportation of hazardous substances, Toray signs security agreements with transporters, raw material manufacturers and customers in order to outline specific safety responsibilities and roles.

Related Information

- [Distribution Safety Initiatives](#)

Health Effects and Response to Asbestos

Toray Group has manufactured and imported building materials containing asbestos in the past, and some of its 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 3,780 current and past 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 helping them apply 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 past and present Toray Group employees as of March 31, 2010, are described in the table below.

	Number of individuals (Fatalities)
Certified occupational accidents (Toray Group)	41 (26)
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 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 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.

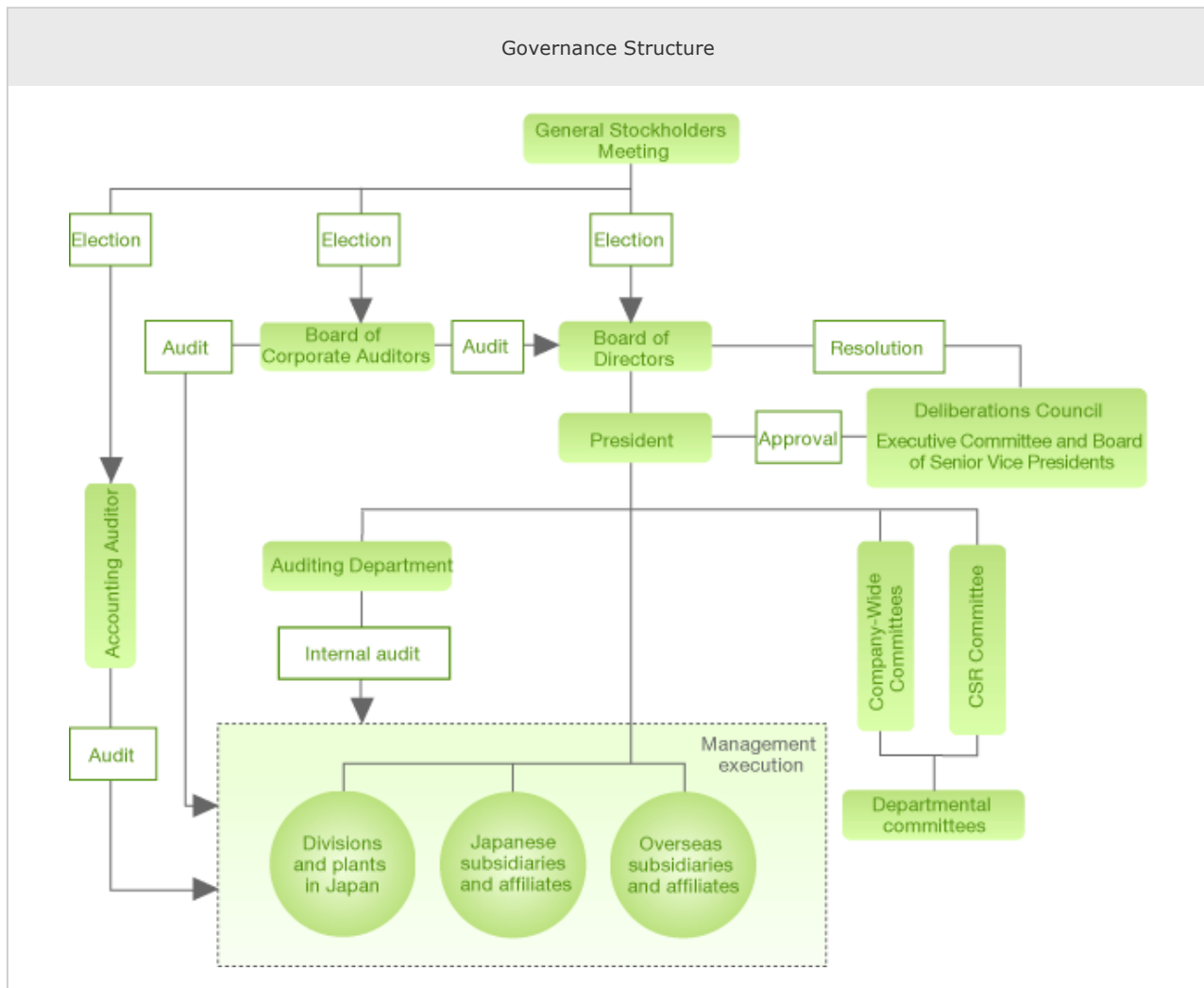
FOR SHAREHOLDERS

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 deserving 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 2009, 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.

Appointment of Independent Directors

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, as of March 31, 2010, Toray reported the appointment of two external auditors to the Tokyo Stock Exchange and four other stock exchanges in Japan where the

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.

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

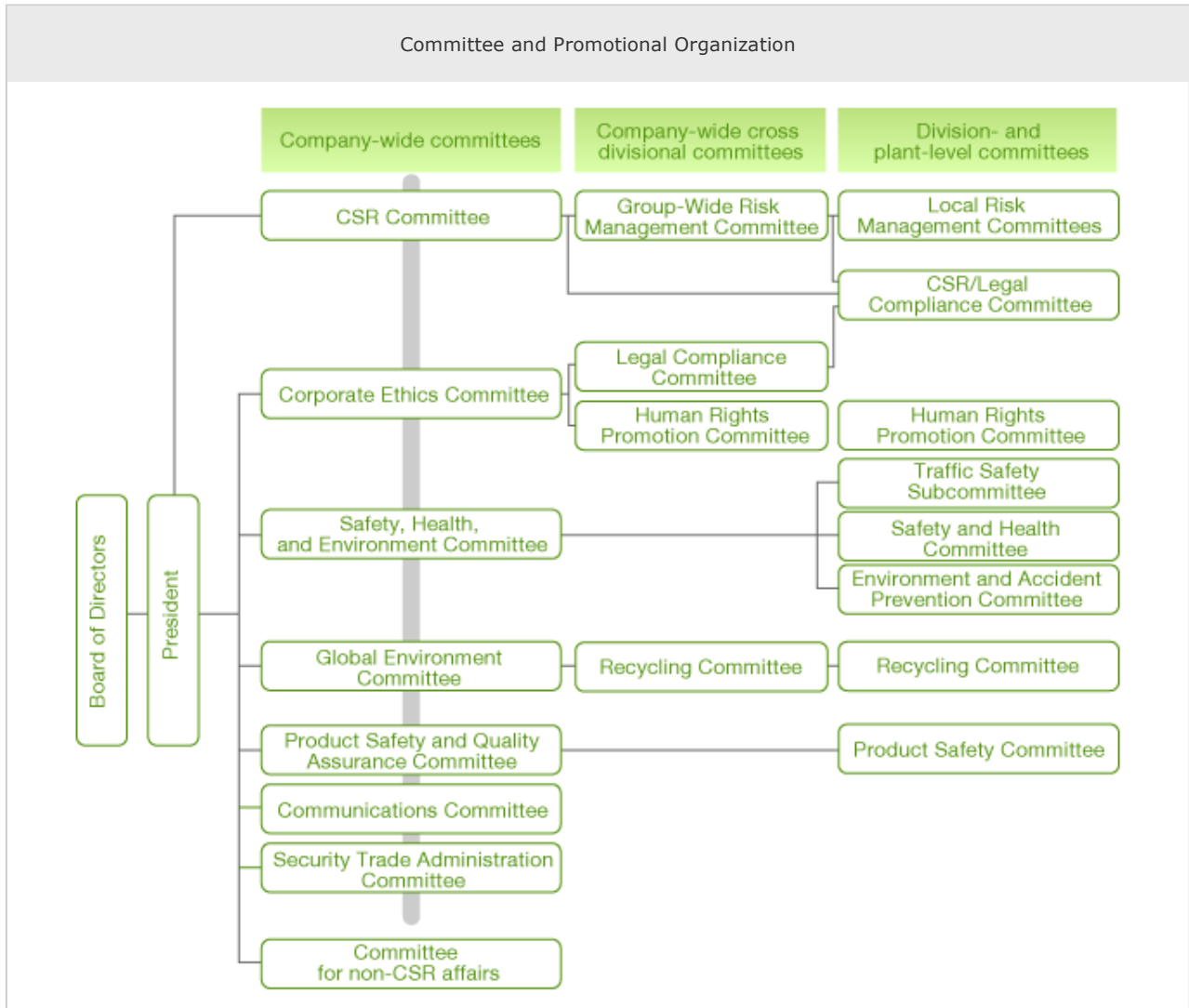
As required under Japan's Financial Instruments and Exchange Act as of the fiscal year ending March 31, 2009, Toray established an internal control system for financial reporting, and began its full-scale implementation in April 2008. The implemented financial reporting controls for FY 2009 were confirmed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

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 Group is improving CSR education with efforts such as the inclusion of CSR material in training for those promoted to management positions. In FY 2009, about 13,000 Toray employees (including part-time and temporary personnel) underwent training through an intranet CSR e-learning* course.

* 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 agreement. The social responsibilities affecting information disclosure must be fairly fulfilled for our stakeholders including customers, suppliers, employees, stockholders, investors and local communities, on the following principles.

Information Disclosure Principles (adopted January 2004)

1. Information Disclosure Principle:

Do not avoid reality, conceal facts, or like 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.

In its Corporate Guiding Principles of Management Philosophy, Toray expresses “ethics and fairness,” and also states: “We will obtain the trust of society and meet expectations by acting fairly while maintaining 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 optimize 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 subsidiary 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 contains a detailed explanation of the Company's Code of Conduct. 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 information for Japanese employees and those at overseas subsidiaries and affiliates that have CSR/Legal Compliance Committees.

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 its 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 reports of instances of corporate misconduct are reviewed at monthly meetings held in 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 and all 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.

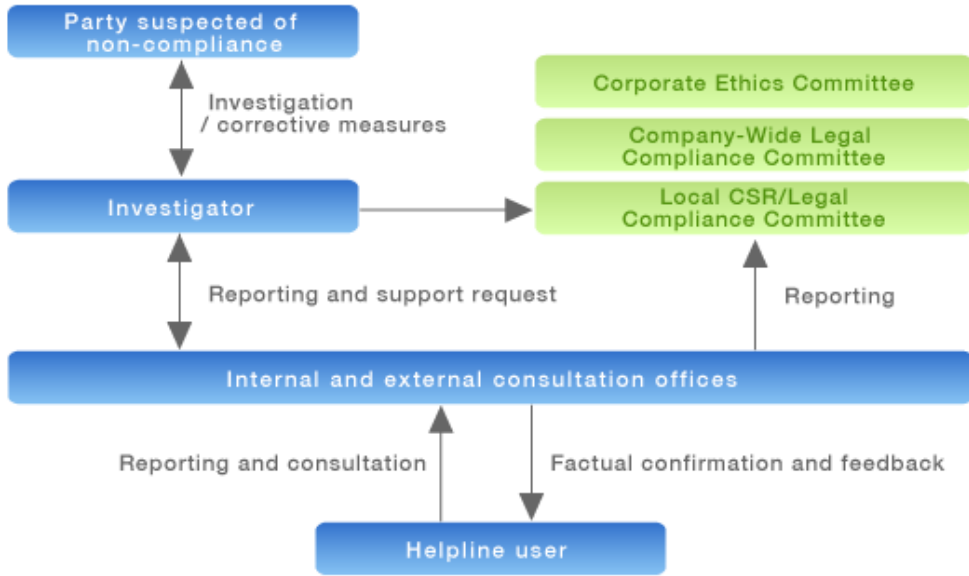
Enhancement of the Internal Hotline System

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.

In 2009, Toray verified the operating conditions for its internal hotline system, including those at Japanese subsidiaries and affiliates. As part of efforts to strengthen measures to prevent non-compliance, Toray created a Corporate Ethics and Legal Compliance Helpline, which began operation in April 2010.

The new helpline offers an expanded non-compliance reporting system for the Toray Group. In addition to internal consultation offices at each company, a new external consultation service was provided for the entire Toray Group, allowing problems to be reported and discovered with greater ease.

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



Company-Wide Activities in FY 2009

In FY 2009, Toray established or undertook the following company-wide activities:

- Provided thorough training on security trade administration
- Maintained internal controls for financial reporting
- Made thorough efforts to promote awareness on Antitrust Law compliance
- Verified conditions and sought improvement of the internal hotline system
- Strengthened audit functions at Japanese subsidiaries and affiliates

Strengthening Security Trade Administration

In order to ensure peaceful and secure international free trade, Toray Group performs strict management for security trade administration, in accordance with laws such as Japan's Foreign Exchange and Foreign Trade Act, and as part of the company's social responsibilities.

In FY 2009, the Group strengthened regular audits to verify its management approach, based on newly established audit standards and manuals.

With the revision of relevant laws such as the Foreign Exchange and Foreign Trade Act, which took effect in November 2009, Toray revised its procedures to ensure thorough management of technology provision. Training was provided to employees involved in this area at principal subsidiaries, affiliates, offices and plants. Thorough measures are being taken to continue such training in the future.

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, and is making thorough efforts to raise awareness of them among employees.

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 desisted 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 this incident with great seriousness and sincerity, Toray continued efforts in FY 2009 to strengthen measures to prevent 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.

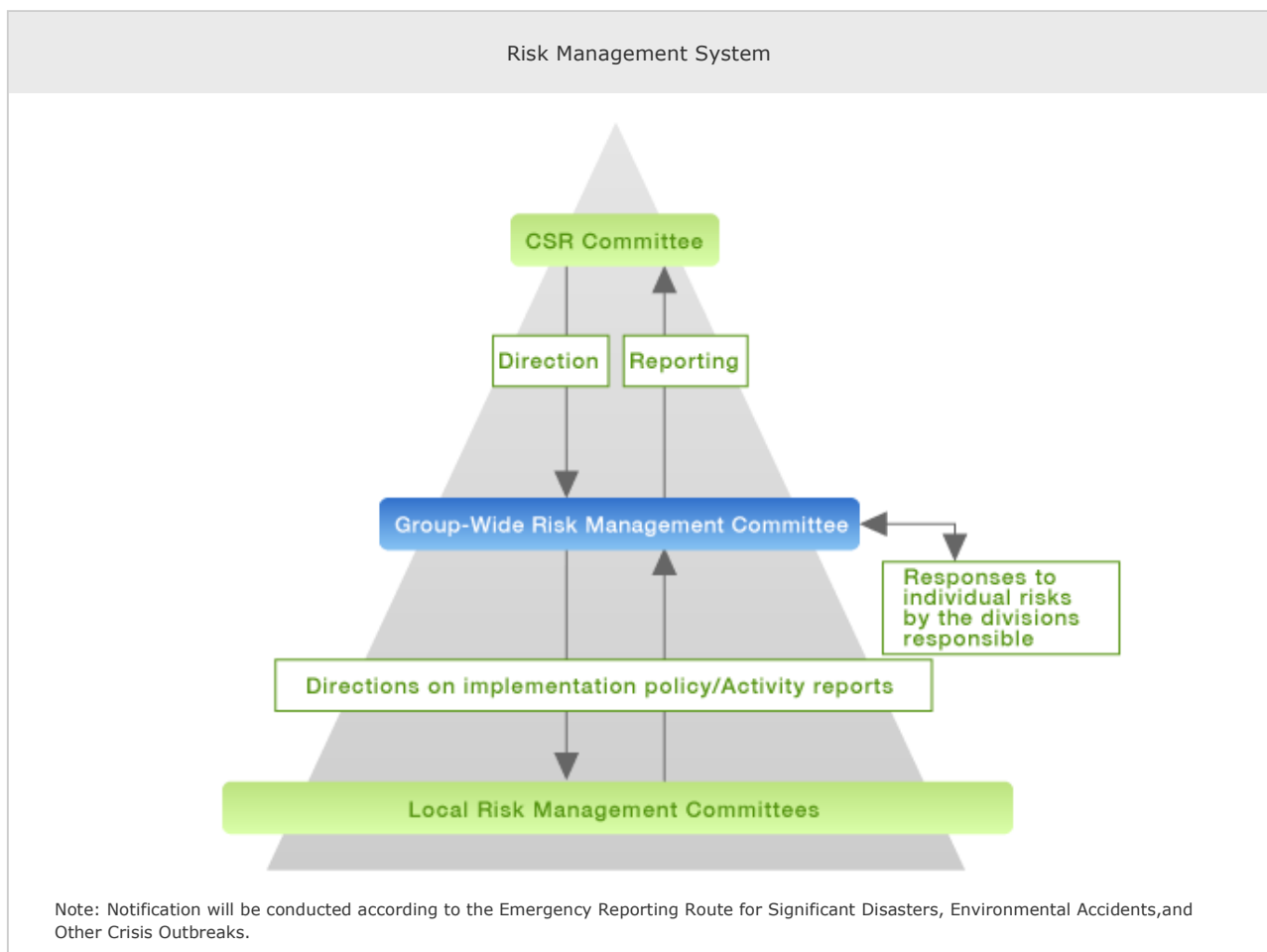
Toray will continue to perform these internal audits Group-wide.

Risk Management
Promoting Risk Reduction Activities

Toray Group believes risk management is a fundamental pillar of corporate management. Toray strives to identify potential risks in its operations under normal conditions, in order to proactively prevent and reduce the effects of risk events before they occur. Furthermore, the Company established a set of Crisis Management Regulations. Accordingly, Toray prepared an Emergency Quick Response System that is deployed in the event of a major crisis, in order to prevent crisis expansion 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 management across all Group companies, and conducts integrated planning and promotion of company-wide measures. Each division, department, office, and plant also has organized Local Risk Management Committees. In accordance with the company-wide measures, these subordinate committees work to minimize specific risks relevant to the particular business area or plant, while taking activities to prevent incidents from occurring. In conjunction with specific risk reduction measures at each division or plant, coordinated risk management is also carried out. The activity progress made by each local committee is notified to the Group-Wide Risk Management Committee, before being periodically reported to the CSR Committee.



Promotion of Enterprise Risk Management

Toray evaluates management risk from a company-wide perspective, and promotes risk management by investigating measures for the entire Group. In FY 2009, risk management was also promoted at Toray's Japanese and overseas subsidiaries and affiliates, and specific initiatives commenced at each company. Specific risk reduction measures were promoted for serious risks identified as priority issues in FY 2009. The Group-Wide Risk Management Committee conducts

Working groups were established and measures promoted for the following priority risks.

1.H1N1 Influenza Outbreak Countermeasures Plan

A H1N1 Influenza Outbreak Countermeasures Plan was established to deal with a potential global H1N1 influenza pandemic. Specific preparations were made, such as the notification of all employees and arrangements for necessary supplies.

2.Maintaining information security

Information security measures were further strengthened for document, data, and facility management.

3.Supply chain risk reduction

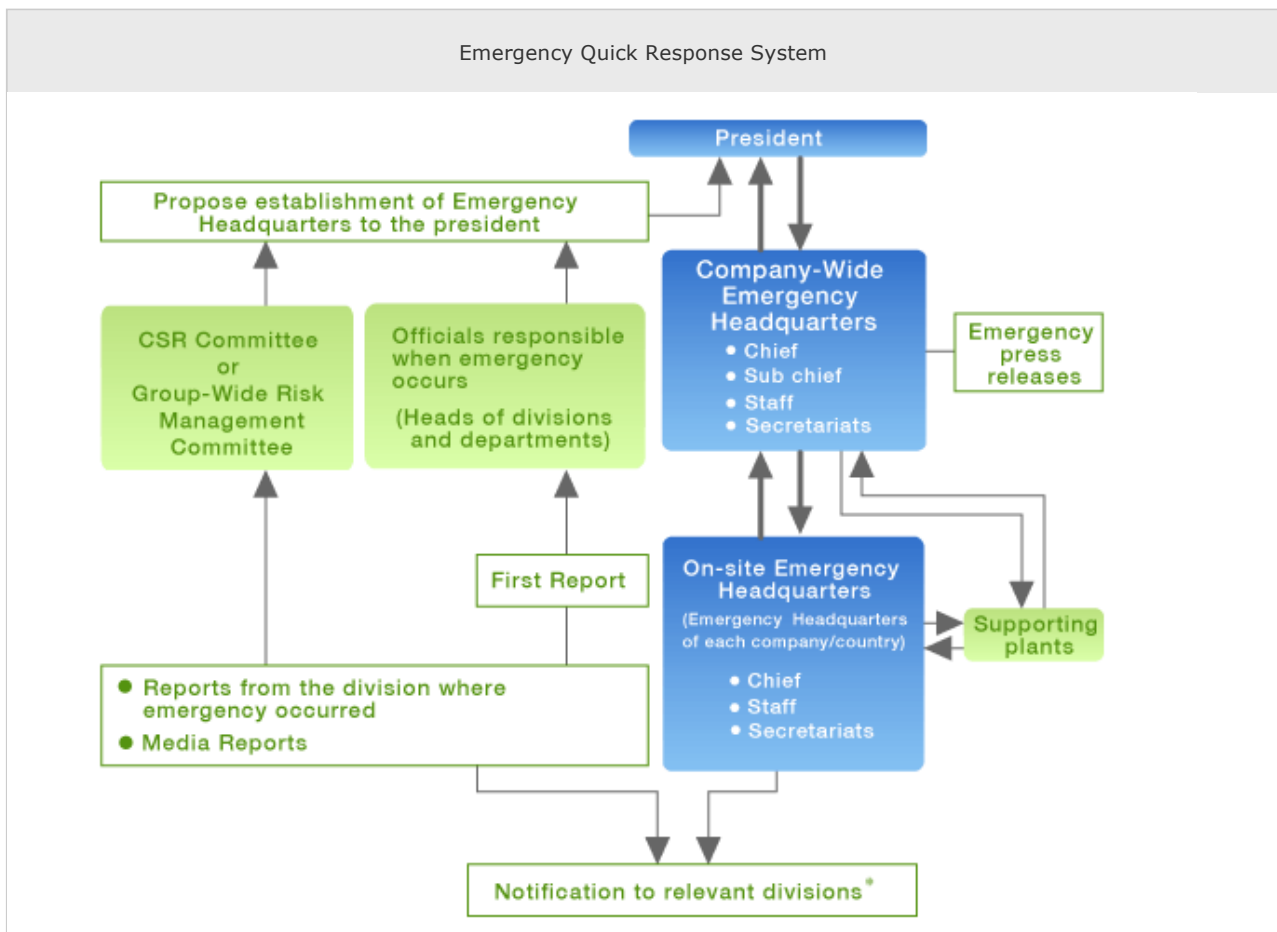
Internal rules were created and additional measures were investigated for the reduction of risk across Toray's entire supply chain. CSR initiative progress at each company was verified, and included visits to some suppliers and processing vendors. Improvement requests were made for the further enhancement of partnerships.

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 during a crisis.

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 set up, 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.

In response to the global H1N1 influenza epidemic that began in April 2009, the Company-Wide Emergency headquarters was set up in accordance with regulations. This enabled rapid and appropriate action to be taken.



Related Information

- [Environmental Risk Management](#)

Risk Management
Implementing the Business Continuity Plan (BCP)

Toray has long taken seriously the risk of a destructive earthquake, and has been carrying out initiatives based on a Major Earthquake Business Continuity Plan. In FY 2009, the following activities were carried out based on this plan.

1. Head Office Initiatives

Toray carried out a drill using its system for confirming employee safety in the event of an emergency via mobile phones and the Internet. The system was implemented at the head office and branch office area, in preparation for a major earthquake or other crisis. The Company also established and commenced implementation of reporting guidelines for confirming earthquake damage conditions at supply chain locations. When the Suruga Bay earthquake struck in Japan on August 11, 2009, Toray was able to receive rapid confirmation and take appropriate action.

2. Information Systems

Toray continued to implement measures in response to an earthquake registering level six and above on the Japanese seismic scale, enabling the rapid recovery of the Shiga Information Systems Center, the Company's primary information system facility.

3. Suppliers and Processing Vendors

In order to minimize the risk of business interruption due to a halt in raw materials supply, Toray identified all relevant procurement items and their suppliers through a joint effort by the Purchasing & Logistics Division and the business divisions. By assigning priority to items based on their importance, Toray promoted the diversification of suppliers for procurement items supplied by a single company.



Emergency Response Plan for Severe Earthquakes (Tokyo Head Office)

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 in order to organize personal information held in the company. All personal information held by each department is registered in the database and strictly managed. In addition, regular inspections are conducted by the relevant office.



Toray Group strives to engage with stakeholders in trusting relationships and fulfill its environmental responsibilities as a materials manufacturer. The Group aspires to be an entity 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 is working to further reduce its environmental load, including greenhouse gas emissions, in all its business activities.

Communication

Toray Group Stakeholder Dialogue Aims

Under its Basic Policies to Promote Dialogue with Stakeholders, Toray Group clearly states its aim to promote dialogue and collaboration with, and improve the satisfaction of, all stakeholders. Based on these basic policies, Toray Group employees are promoting a range of communication activities 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

In FY 2009, Toray implemented a new Medium-term Management Program "Project IT-II," to address the rapidly changing economic climate. In order to promote understanding of this project, the company president and executives held internal and external briefings, and information was actively provided on the Toray website and in the Company magazine.

Dialogue and Collaboration between Stakeholders and Toray Group				
	Basic stance	Communication tools	Communication opportunities	Reflect dialogue / Promote collaboration
Customers	Foster trust by listening to customer feedback, through making products, and providing 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 reflect dialogue with customers
Stockholders and investors	Provide accurate business information and ensure smooth communication.	<ul style="list-style-type: none"> ● Website ● Financial Results ● Financial Report ● Business Report for Toray stockholders ● Annual Report 	<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
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 Edition and English Edition) 	<ul style="list-style-type: none"> ● Business Results briefings ● IT-2010 Management Meetings ● Medium-term Management Program "Project IT-II" Briefing ● 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	Promote interaction with people living near plants, to explain its 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 to exchange opinions 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 common perceptions with people who are indirect customers, by taking their wishes into account.	<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(Japan, 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 playing its part in shaping public opinion.	<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 through its marketing and sales departments. In FY 2009, Toray held numerous exhibits and briefings for customers, including a booth at Eco-Products 2009.

At the request of Panasonic Corporation and its subsidiary AVC Networks Company, Toray participated in an exhibition in February 2010 to offer a comprehensive overview of the Company's products. Numerous development and purchasing staff from Panasonic visited Toray's booth, and enjoyed stimulating discussions with Toray employees about the products.



Eco-Products 2009



Toray products exhibited at a Panasonic Corporation event



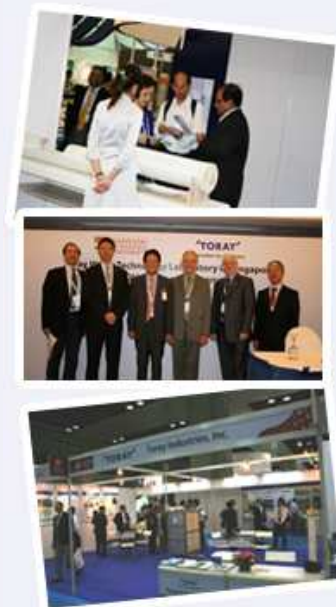
COLUMN

**Water Treatment Division
Toray Industries, Inc.**

**Reaching Out to Customers Worldwide
The 2nd Singapore International Water Week**

In June 2009, Toray participated in the 2nd Singapore International Water Week, a comprehensive event for water treatment businesses sponsored by the government of Singapore. The event attracted approximately 10,000 industry and organization representatives involved in the water treatment business from around the world. In addition to business introductions, sales talks, and information exchange at the various booths, a range of seminars was held by experts.

Global Sales Team members of the water treatment business in Toray Group engaged in conversation with visitors and customers from over the world, answering their questions, exchanging opinions on issues, and evaluating Toray products.



Communication

Communication with Stockholders and Investors

Under its policy for information disclosure, Toray does its utmost to fairly, timely and appropriately disclose information, which is not limited to that required by laws and regulations. The Company also strives to reach out to stockholders and investors at every possible opportunity, and to reflect their opinions in its management and business activities.

Active Communication through Briefings for Investors

Toray hosts quarterly briefings for institutional investors and securities analysts on the same day that it announces its financial results. Several times a year, the Company also holds business strategy briefings concerning individual business sectors. Toray participates in company briefings held by various stock exchanges in order to communicate directly with individual investors.

The Group's major IR activities in FY2009 are as follows:

Activities	Attendees from Toray	Number of events	Approximate number of participants/ instances
Briefings on business results announcements	President, Executive Vice President, Executive in charge of Investor Relations Department, Executive in charge of finance and controller's division	4	673 participants
Briefings on individual business sectors for institutional investors	Executives in charge of individual business divisions	1	68 participants
Briefings for individual investors	General Manager of the Investor Relations Department	2	267 participants
Meetings and conference calls with investors and analysts	Executive in charge of Investor Relations Department, Staff of Investor Relations Department	As required	660 instances

IR Information Disclosure and Corporate Ratings

On the Investor Relations link of the Toray website, there is useful information for stockholders and investors, including contents on management policies and strategies, as well as financial results data. The Company strives for fair information disclosure by quickly posting IR information such as presentation materials disclosed at briefings for institutional investors as well as English translations of these materials.

Awards for Toray IR activities and its corporate ratings in FY 2009 are as follows:

Evaluating 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 2009
enterprise.com (e.com) (Belgium)	72nd place in the Best Annual Reports 2009 Top 500 Annual Reports (8th place among Japanese companies)

The following are Toray's ratings by SRI survey organizations in FY2009:

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 and 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 the indexes based on publicly available data and questionnaire surveys.

As of March 2010, Toray is included in the following SRI indexes:

• **Dow Jones Sustainability World Index (DJSI)**

The Dow Jones Sustainability World Index (DJSI) comprises more than 300 companies around the world that represent the top 10% of leading companies committed to sustainability.



• **FTSE KLD Global Climate 100 Index**

Global Climate 100 Index, which is made up 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 the Voice of Stockholders and Investors

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 at the Company-Wide Communications Committee that is composed of members of management, as the Company endeavors to ensure the opinions of stockholders and investors are reflected in its management and business activities.

General Stockholders Meetings convenient to Stockholders

For the convenience of its stockholders, Toray avoids holding Stockholders Meetings on the date when the majority of companies hold their Stockholders Meetings. Notices of General Stockholders Meetings are sent out as early as possible in order to ensure that all stockholders have enough time to consider scheduled proposals — in FY 2009, the notice was sent out approximately three weeks prior to the date of the meeting.

Related Information

- [General Stockholders Meeting Information](#)

Communication

Communication with Business Partners

As a partner involved in joint business activities, the Group holds policy briefings with its business partners and carries out surveys of their CSR procurement, in addition to routine communication, as a way of deepening mutual understanding.

Related Information

- [Cooperating with Suppliers in Their Environmental and Social Initiatives](#)

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.

In FY 2009, the Company distributed printed materials to employees to promote understanding of the new Medium-term Management Program "Project IT-II," which began in April. The Company president and executives held briefings at all Toray offices, plants and laboratories. Dialogue at the briefings helped promote understanding of the project.



COLUMN

Corporate Communications Department,
Toray Industries, Inc.

Employee Opinions and Feedback Aids CSR Report Publication

In April 2010, an in-house study group was held on the Toray Group CSR Report 2009, with the aim of making the publication more accessible. Previously held at the Tokyo head office, the event took place at the Shiga Plant in FY 2009.

Suggestions for improving the report were discussed, along with employees' views on CSR in relation to their work.

Toray will continue to improve its CSR Reports and communication with stakeholders through these activities.



Communication

Communication with Local Communities

Toray Group companies hold regular community meetings with residents living near their plants. The Group also participates 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 is working to foster good communication with local residents.

As part of a meeting with the mayors of Nagoya and surrounding municipalities, Toray conducted a tour of the Automotive Center at the Nagoya Plant in August 2009 for the community leaders, in order to deepen understanding of Toray Group activities. The activities of the Toray Okazaki Plant were included in a supplementary geography textbook about Okazaki for the city's junior high school students. Edited by the Okazaki board of education, the textbook is being used as education material in the region.



The textbook includes the history, overview and products of Toray Okazaki plant.

Communication

Communication with NPOs

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

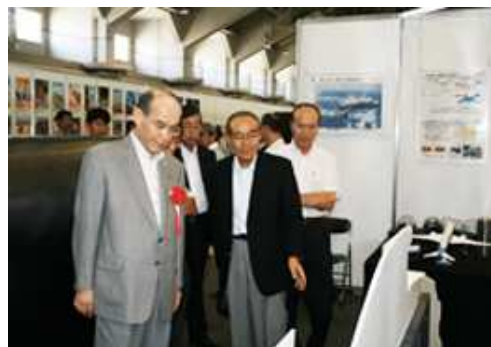
On May 31, 2009, Toray's Kyushu branch participated in the Love Earth Clean-up 2009, a volunteer cleanup activity held under the slogan, "Let's Do It: Spring Cleaning for the Global Environment." The event was organized by the non-profit Clean Fukuoka Association and the Home Refuse Reduction Section of the Environment Bureau, City of Fukuoka. The Toray Kyushu branch participates in the event every year. In FY 2009, participants cleaned up Kego Park, located in a busy shopping area of Hakata City.



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.

On August 22 and 23, 2009, the Ishikawa Environment Fair 2009 was held at the Ishikawa Prefectural Industrial Exhibition Center. Together with Ichimura Sangyo Co., Ltd, the Toray Ishikawa Plant exhibited automotive parts, prepreg materials and carbon fiber, based on the concept of reducing CO₂ through the use of carbon fiber. The fair attracted over 20,000 visitors during two days, and many of them stopped by the Toray and Ichimura Sangyo booth to view the exhibits and panel displays, and ask questions. The visitors were able to deepen their understanding of how carbon fiber can potentially help to contribute toward environmental preservation.



Governor Masanori Tanimoto of Ishikawa Prefecture (left) listens to Plant Manager Shunsuke Komichi explaining an exhibit at the Ishikawa Environment Fair

On October 24 and 25, 2009, the Toray Tsuchiura Plant exhibited at the Tsuchiura Industry Festival as a member of the Kandatsu District Industry Association. The Toray booth featured a science experiment using the Company's products. Carbon fiber products used in automobiles and aircrafts, as well as polylactic-acid textiles and recycled fibers were also exhibited. Visitors to the booth saw PICASUS* Metallic Luster-Forming Film, products made by UNIQLO Co., Ltd. and Pip-Fujimoto Co., Ltd. using Toray materials, as well as film produced by the Tsuchiura Plant. A demonstration experiment was conducted using hollow fibers to filter a beverage, which proved extremely popular with the over 500 booth visitors of all ages. Overall, the Toray booth attracted a great deal of interest. There was even a visit from the mayor of Tsuchiura City, who listened intently to an explanation by the Tsuchiura Plant Manager.



Crowd in front of the Toray booth at the Tsuchiura Industry Festival

* PICASUS is a registered trademark of Toray Industries, Inc.

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 major media activities in FY 2009 were as follows:

Press conferences	171
Press interviews given	323
Surveys conducted	400

Related Information

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

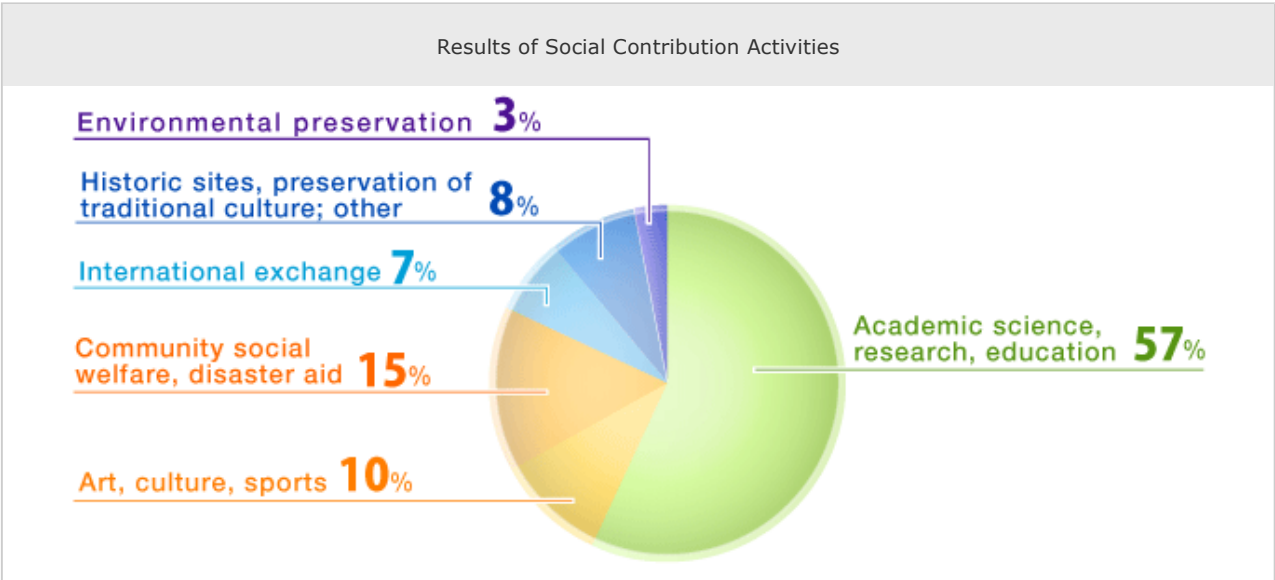
Social Contribution Activities
Toray Group Social Contribution Activities

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 2009, sustained implementation of social contribution activities at Toray Group generated approximately one billion yen, or about 11%, of its consolidated ordinary income, in donations. Toray contributed approximately 700 million yen in donations on a non-consolidated basis. 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 City in Shizuoka Prefecture, Japan where Toray Group provides water for irrigation, firefighting, and a water park.



Social Contribution Activities
Promoting of Science and Technology

Toray Science Foundation

Established by Toray in 1960, Toray Science Foundation aims to assist and promote basic research in science and technology, and to contribute to the improvement and development of science, technology, and culture. The foundation, which generated considerable interest at the time of its inception, is one of the pioneering private research foundations in Japan and continues to be highly acclaimed for its activities. For example, two of the winners of its Toray Science and Technology Prize have gone on to receive Nobel Prizes. The main activities of the foundation in FY 2009 are outlined on the right.

Related Information

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

Principal Toray Science Foundation Activities
(Figures in parentheses refer to number of award recipients in FY 2009.)

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

Providing Classes that Feature Toray Products and Technologies

In order to help address a declining interest in science among Japanese children, Toray believes it is vital that kids experience the fun of learning science, and discover its significance in relation to technology, the global environment, and daily life. Accordingly, Toray sends guest instructors to schools to teach classes on the environment and conduct experiments utilizing the Company's products and technologies. In FY 2009, Toray instructors visited a total of eight elementary schools: three in Tokyo, two in Chiba, one in Shizuoka, and two in Osaka. They conducted laboratory science classes focused on filtration experiments using hollow fiber membranes used for water treatment. Another 14 schools received laboratory experiment equipment from Toray for their own classes.



Laboratory science class at an elementary school

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 for children to experience classical music. They also hold concerts at community halls near the schools, and assist institutions that provide work to persons with disabilities.



INTERVIEW

Kyoko Yoshida, Violinist

Touched by People's Warmth Fureai Trio Program

I frequently witnessed the power of music during the Fureai Concert activities that began in 2003.

On one occasion I met a troubled little girl who did not enjoy going to school. Upon attending class and listening to our music, however, she sat with her classmates and started to enjoy the concert with them. Music also helped encourage another problematic child to gain confidence. On another occasion, I saw the joy of people with disabilities. When they heard musical instruments in a live performance for the first time, their faces broke into smiles filled with happiness. Then there was the concert where I saw family members shed tears of joy as they sat with patients



in the hospital.

Music can touch people's hearts, instantly dissolve tension, and even convey the power of hope essential for overcoming hardship. The Fureai Trio is involved in a community support project in three areas: performing in community halls, performing at schools, and supporting persons with disabilities. When I talk to children at the places where I perform, it is like seeing a reflection of today's Japan.

My wish is that these children who represent our future will grow up to be strong and self-reliant. If the music of the Fureai Trio can help create the right environment for these kids to do so, then I will feel satisfied. I hope to continue our efforts to create better communities rooted in culture, with the support of the wonderful people of Toray and other companies.

Other Major Activities in FY 2009

- Supported the 20th International Biology Olympiad
- Supported the Japan Science & Engineering Challenge (sponsored by the Asahi Shimbun Company), which aims to nurture high school students for 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 public master classes offered by the Shanghai Quartet and the Julliard String Quartet.
- Supported art programs such as Setagaya Public Theatre @ School, a joint program instituted by Setagaya Public Theatre in collaboration with schools
- Supported Hokkoku Shinbun Kids' School 2009 (sponsored by the Hokkoku Shinbun Kids' School Executive Committee), which provides social education programs to elementary school students
- Participated in the Monozukuri Taikan Stadium 2009 (sponsored by the Monozukuri Taikan Stadium 2009 Executive Committee)
- Supported the Sustainable Environment Educational Support Project that presents a book earth code to elementary and junior high schools across Japan (sponsored by Diamond, Inc.)

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 and performances in Japan by the Shanghai Quartet, the Juilliard String Quartet and the Orchestra Asia. Toray also continues to implement activities to keep traditional arts alive, such as providing support for domestic and overseas performances of Youkiza, a type of marionette theater with a history of over 370 years.

Social Contribution Activities
Contributing to Local Communities

CSR Activities 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 (Okazaki City)



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

Welfare Facility Visits and Cleanup Activities

Volunteer activities at Toray 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 2009 Activities

- Kanorigawa plant drainage canal cleanup by Toray Okazaki Plant (Sept. 28, 2009)
- City Clean Day in Chuo-ku, Tokyo by Ichimura Sangyo Co., Ltd. (October 9, 2009)
- Nanatsudaki Cleanup Volunteer Activity by Toray Ishikawa Plant (October 17, 2009)
- Yahagi River Embankment Cleanup by Toray Okazaki Plant (October 25, 2009)

As a Major Sponsor of Sporting Events

While the 2009 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 carries out special activities such as the collection of tennis rackets for donation to developing countries

Donating Rackets Worldwide

Since 2003, Toray PPO has been collecting used rackets from tournament spectators and donating them to developing countries worldwide through the Japan International Cooperation Agency (JICA). Kimiko Date Krumm, a JICA Official Supporter, visits recipient countries and creates opportunities for children to experience tennis. A total of 2,321 rackets have been collected to date, and Ms. Date Krumm has visited over six countries as part of this

initiative. (As of the end of the 2009 tournament)



Racket collection booth set up at the tournament venue

Related Information

- [2010 Toray Cup Shanghai International Marathon](#)
- [Toray Pan Pacific Tennis Tournament 2010](#)

Social Contribution Activities
Disaster Relief

In order to aid victims of the September 2009 earthquake in Sumatra, Indonesia, Toray Group companies supported fundraising activities conducted by the union and employees of Indonesian Synthetic Textile Mills and Acrylic Textile Mills. A donation was made in November through a local TV station that was supporting the fundraising activities.

Social Contribution Activities

Major Social Contribution Activities

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)
2007	Supported Corot: Souvenirs et Variations exhibit (sponsored by the Yomiuri Shimbun) (Japan)
	Supported L'art de Monet et sa Postérité exhibit (Japan)
	Supported performances of Quatuor Voce in Japan (Japan)
2006	Supported art programs such as Setagaya Public Theatre @ School (Japan)
	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.
2005	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 Chikamatsuzo of Shochiku Grand Kabuki. (U.S.)
	Sponsored Art Deco Exhibit. (Japan)
	Sponsored the Umewaka Kennohkai Europe Tour. (Germany, Latvia, France, Belgium)
	Sponsored "Napoleon and Versailles" exhibition. (Japan)
	Sponsored "Flemish and Dutch Paintings from the Collection of the Kunsthistorisches Museum WienVienna" exhibition (Japan)

2004	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)
	Sponsored "Mohri's Colored Space Part5, SAYOKO" (Japan)
2001	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)
2000	Sponsored "The public and the private in the Age of Vermeer". (Japan)
	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)
	Sponsored "History and Imagination in Goya's Etching" exhibition. (Japan)

	Sponsored "les coulisses de la mode" exhibition. (Japan)
1999	Sponsored "Masterpieces of The National Gallery of Art, Washington" exhibition. (Japan)
	Sponsored concerts in Tokyo by "the Vermeer Quartet" (Japan)
	Sponsored the "Treasures of Celtic Art" exhibition. (Japan)
1998	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.)
	Sponsored The Toray Corp Shanghai International Marathon. (China)
1997	Sponsored Coutauld Institute Collection. (Japan)
	Sponsored the first China performance of "Orchestra Asia". (China)
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 from 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)
	Sponsorship provided for the Courtauld Institute of Art's first exhibition of drawings. (U.K.)

1991	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)
	Through Toray Science Foundation, fostered basic studies of natural science carried out by Indonesian, Thai and Malaysian universities. (Indonesia, Thailand and Malaysia)
1989	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.)
	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)
1988	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)

1. Prioritize environmental preservation

We shall comply with all laws, regulations, and agreements in all of our business activities while placing 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. Promote recycling

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

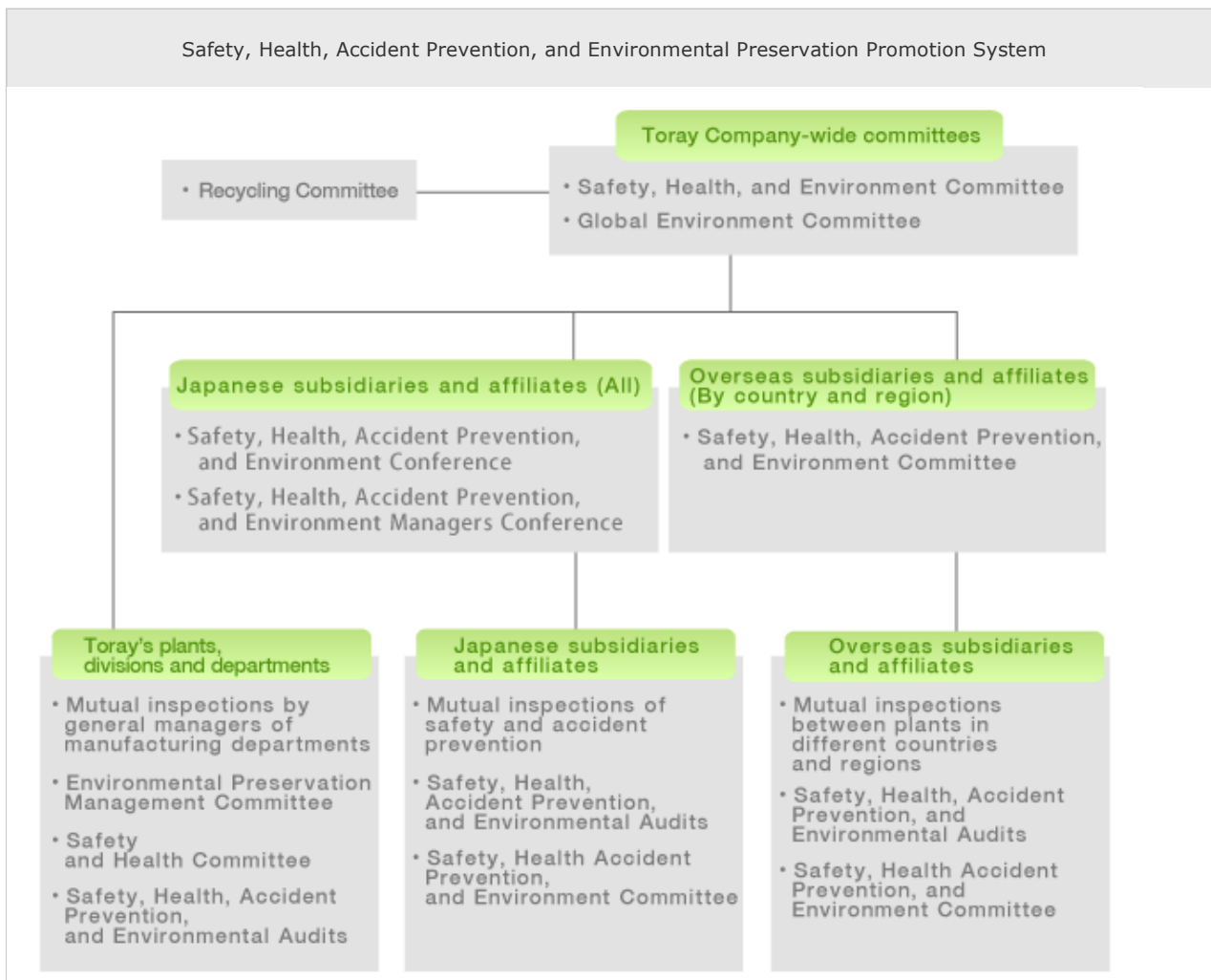
We shall strive to improve our employees' awareness of environmental issues through environmental education, social activities, internal communications activities, and other means.

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.

Safety and the Environment
Safety, Health Accident Prevention and Environmental Preservation Management

Toray Group conducts globally integrated management for health, accident prevention and environmental preservation. The Group-wide Safety, Health, and Environment Committee discusses and determines future policies and measures based on the assessment of activities and results at Toray Group companies, offices and plants. Furthermore, the committee establishes Safety, Health, Accident Prevention, and Environmental Action Policies every year. 14 priority activities were implemented during 2009, as shown in the table below. In addition, the Global Environment Committee discussed and determined environmentally friendly products, product recycling, and initiatives to fight global warming.



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. The Safety, Health, Accident Prevention, and Environmental Audits are carried out by company executives; in FY 2009, they were conducted at all 12 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 safety concerning rotating objects, and the revision of protective equipment for handling harmful chemical substances.

The Toray Group Safety Meeting is also convened annually, and was held in December 2009. Toray Group presidents, executives and plant managers from around the world attended, bringing the number of participants to 140. Thorough efforts were made to raise safety awareness Group-wide.



The Toray Group Safety Meeting

	Action Policy	Main Activities
Common	<ul style="list-style-type: none"> Promote 3Z¹ 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"> Emphasize safety action 	<ul style="list-style-type: none"> Enhance safety measures against rotating object, moving machine part, and heavy material <ul style="list-style-type: none"> - Make improvement for safe and workable operation standard manual and strictly follow through with it - Thoroughness in basic action <ul style="list-style-type: none"> - Pointing & Calling, KY², Pay attention to each other, & 3S³ - Strengthen prevention measures against recurrence of similar accidents
Health	<ul style="list-style-type: none"> Emphasize occupational health management 	<ul style="list-style-type: none"> Thoroughness in management of mutagenic substance 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 activity Strengthen disaster prevention and environment measures of chemical facility <ul style="list-style-type: none"> - Thoroughness of risk assessment when new establishment/remodeling/serious HHT⁴ - Implement BCP against large-scale earthquake
Environment	<ul style="list-style-type: none"> Promote "Third Three-Year Environmental Plan" Promote global warming countermeasures 	<ul style="list-style-type: none"> Promote environmental emission reduction Promote reduction of greenhouse gas

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

Related Information

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

Responsible Care (RC) Program

RC activities focus on measures that address safety, health and the environment. The program sets responsibilities for those who handle chemical substances at every stage of the process. Toray has participated in the Japan Responsible Care Council (JRCC) since its foundation, and undertook the promotion of GHS* measures and thorough management of mutagenic substances as priority activities in FY 2009. In FY 2010, the Company will address thorough management of nano-material safety as the priority issue.

*GHS: Globally Harmonized System of Classification and Labeling of Chemicals

ISO14001

Toray Group is working toward the acquisition of ISO 14001 certification, and is making the necessary improvements to its environmental management structure. At the end of 2000, all 12 Toray plants had obtained the certification. Additionally, two plants at two overseas subsidiaries and affiliates received certification in FY 2009. This brings the total number of

Sites with ISO 14001 Certification (As of March 2010)

Notes:

1. Names in blue indicate companies or plants that first obtained certification in FY 2009
2. 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.

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

Overseas subsidiaries and affiliates: 36 plants at 28 companies

USA	Toray Plastics (America), Inc. [Rhode Island, Virginia], Toray Resin Co., Toray Fluorofibers (America), Inc., Toray Carbon Fibers 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 pathom], Luckytex (Thailand) Public Company Limited [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]
South Korea	Toray Advanced Materials Korea Inc., STECO, Ltd.

All Toray business divisions and subsidiaries and affiliates in Japan as well as overseas have initiated and are independently carrying out projects for complying with REACH regulations. Toray Group is steadily promoting measures for the registration of substances by the deadline of November 30, 2010.

Safety and the Environment
Promoting the Third Three-Year Environmental Plan

FY 2010 is the final year of the Third Three-Year Environmental Plan that was initiated in FY 2007. Toray was able to achieve substantial results in FY 2009 for the reduction of greenhouse gas (GHG) emissions and atmospheric emissions of chemical substances. The Company will make further improvements for the achievement of FY 2010 targets. A new plan is scheduled to commence in FY 2011.

Third Three-Year Environmental Plan Progress Chart			
Area	Toray Group FY 2010 target	FY 2009 results	Related links
Prevent global warming	Toray: 6% or greater reduction in GHG emissions compared to FY 1990	25% 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	69% reduction	Voluntary Reduction of Atmospheric Emissions of Chemical Substances
	Atmospheric emissions of volatile organic compounds (VOCs): 55% reduction compared to FY 2000	70% reduction	
Waste reduction	Pursue the goal of zero emissions	Achieved at 20 plants at 11 subsidiaries/affiliates	Initiatives to Reduce Waste
	Rate of simply disposed waste: 34% or lower	31%	
	Recycling rate: 85% or higher	82%	
	Landfill rate, Toray Group (Japan): 5% or lower	1.5%	

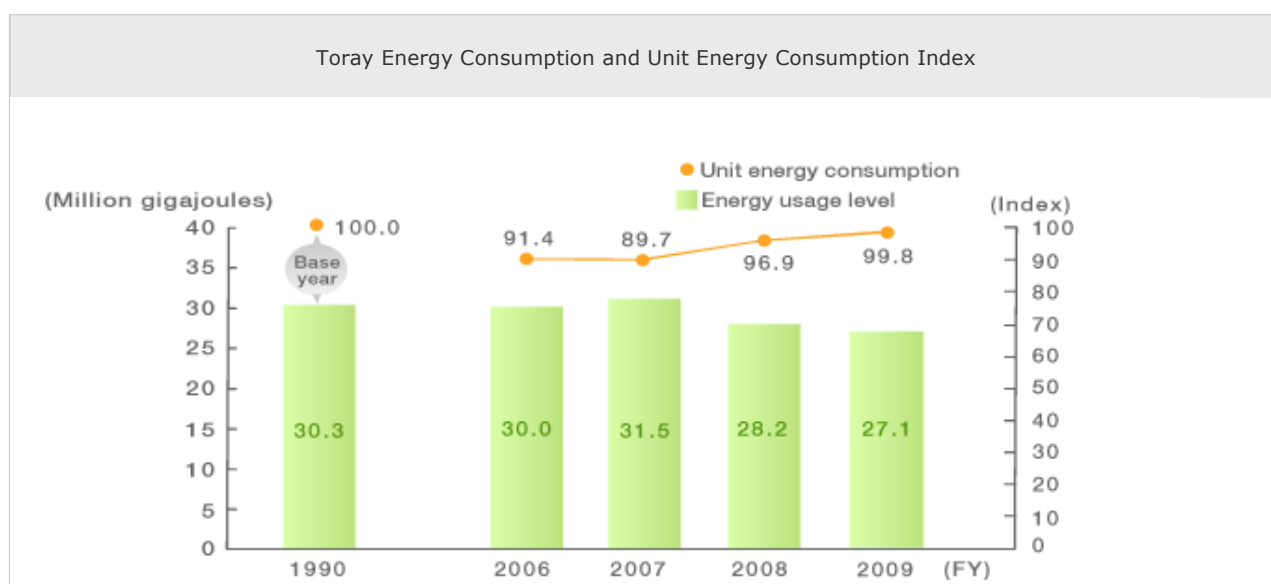
Safety and the Environment
Initiatives to Fight Global Warming

In order to take action against global warming, Toray Group is 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. The Group 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.

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.

In FY 2009, Toray implemented 20 energy conservation initiatives, including improvement of energy efficiency in evaporation processes. As a result, Toray reduced its energy usage by 3.6% compared to the previous year. Production efficiency was substantially reduced, due to a drop in production resulting from the global economic downturn. Consequently, unit energy consumption increased by 3.0% compared to the previous year.



In-House Electrical Power Plant

In order to achieve more efficient energy consumption and reduce annual CO₂ emissions by 80,000 tons, the Nagoya Plant is switching from heavy oil to natural gas while introducing a cogeneration facility. It is expected to begin operation in September 2010.



Cogeneration facility at the Nagoya Plant

Promoting Energy Conservation Diagnostics

Toray Group organizes energy conservation teams to help carry out its energy conservation diagnostic activities each year at both domestic and overseas plants as it strives to reduce GHG emissions. In FY 2009, these activities were carried out at four Japanese plants as well as at two plants in Malaysia. GHG emissions were reduced by 2,000 tons of CO₂ per year as a result.

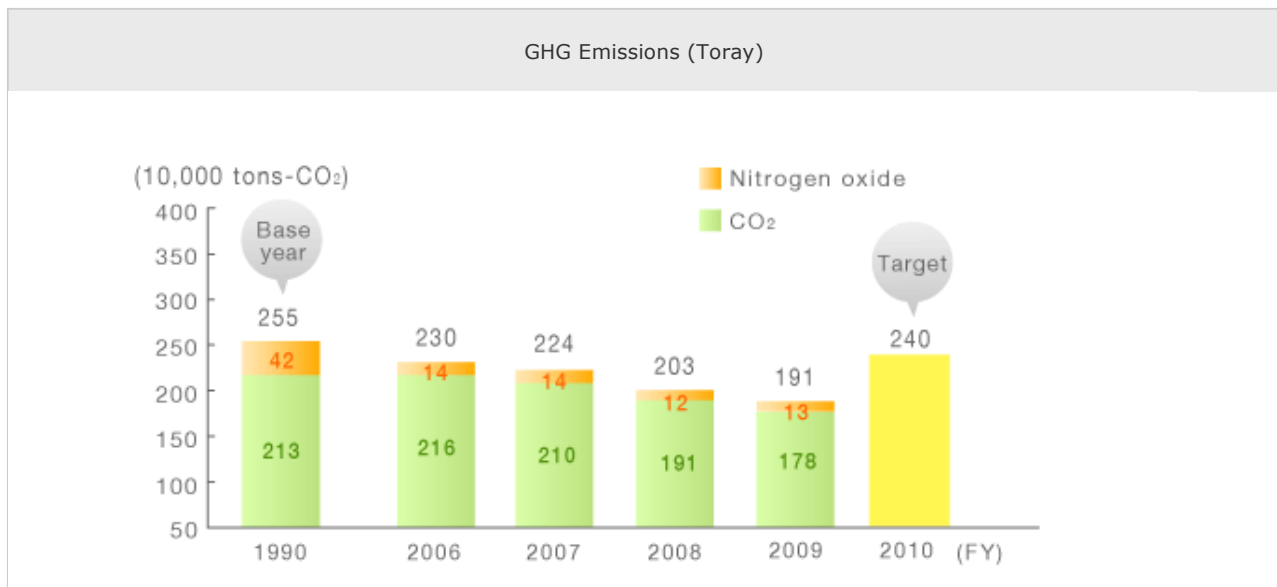


Energy Conservation Diagnostics meeting at Ehime Plant, Toray ACE Co., Ltd.

Toray Actions on Global Warming Initiatives

In order to help fight global warming, Toray has set a FY 2010 goal of a more than 6% reduction in GHG emissions compared to FY 1990 levels.

In FY 2009, Toray implemented process improvements at the Ehime Plant and Mishima Plant, and reduced GHG emissions by approximately 7,000 tons of CO₂ per year. As a result of a drop in production, and activities such as reducing the amount of standby energy consumed by machines through power management strengthening, GHG emissions were reduced by 25% compared to FY 1990, enabling Toray to substantially surpass its target.

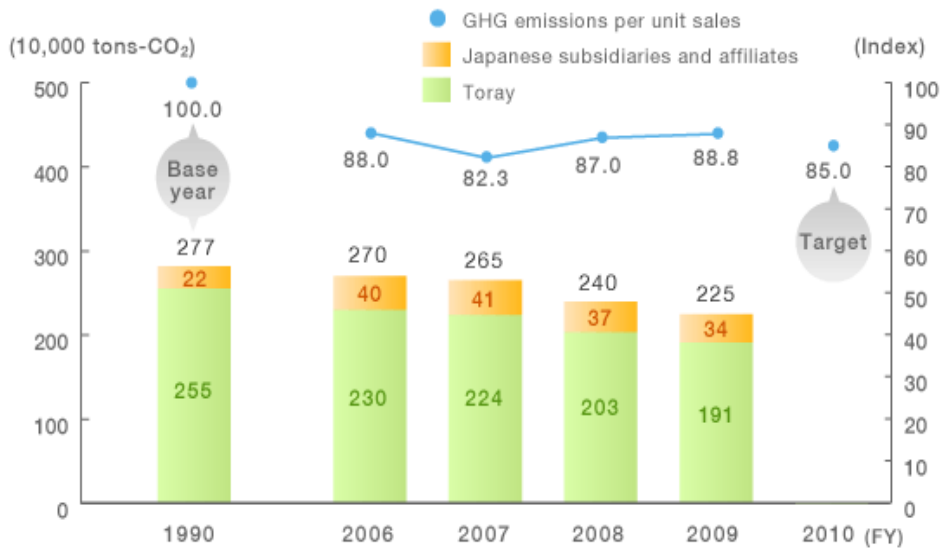


Toray Group in Japan Initiatives to Fight Global Warming

In an effort to help fight global warming, Toray Group in Japan has set a FY 2010 goal of a 15% reduction in GHG emissions per unit of sales over FY 1990 levels, under the Third Three-Year Environmental Plan.

In FY 2009, a GHG emissions reduction of 6.3% compared to the previous year was achieved. However, due to the drop in sales resulting from poor global economic conditions, GHG emissions per unit of sales increased by 2.0% compared to the previous year. Nevertheless, it still represented an 11% reduction over FY 1990.

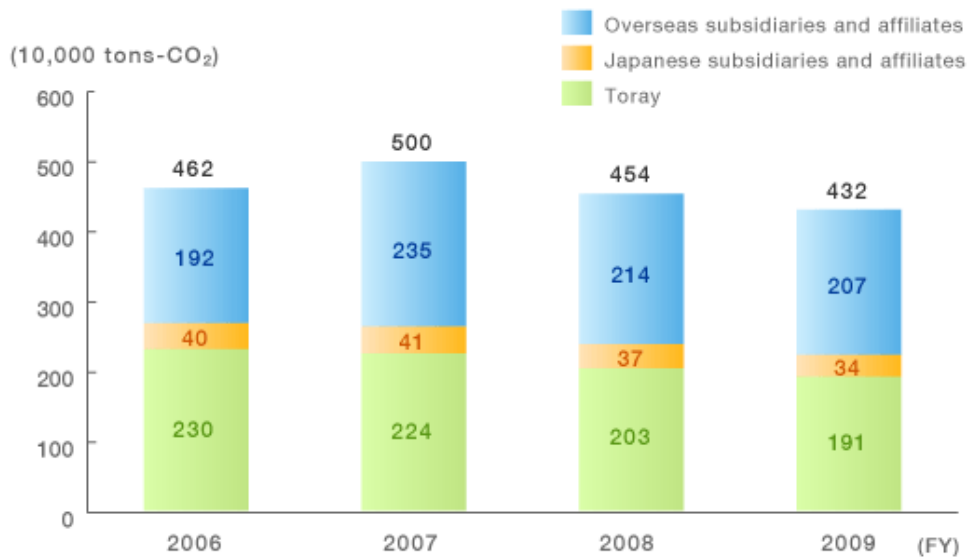
Toray Group in Japan GHG Emissions and GHG Emissions Per Unit of Sales



Toray Group GHG Emissions

FY 2009 GHG emissions for Toray Group worldwide were 4.32 million tons of CO₂, a decrease of 4.8% compared to the previous year. All Toray Group plants will continue initiatives to reduce the unit energy consumption rate by 2.0.

Toray Group GHG Emissions



Household Eco-Account Book Program

With the aim of raising environmental awareness among employees and reducing the GHG emissions in households, Toray Group (Japan) initiated a Household Eco-Account Book program in August 2008. Under the program, employees keep monthly records of their electricity, natural gas, gasoline and other usage amounts online. This enables them to calculate their household CO₂ emissions and provides motivation to reduce their carbon footprint. As of March 31, 2010, 2,700 households are participating in the program, and the number is steadily increasing. Toray plans to increase the program's scope in order to fight global warming.

**INTERVIEW**

Kimiko Terada
Environment Department,
Tokyo Electric Power Company, Inc.

We Have Great Expectations for Toray Group's Household Eco-Account Book Program.

Toray Group's Household Eco-Account Book program uses our "CO₂ Household Account" system, which allows participants to input their household electricity, gas, water, gasoline and other usage amounts via the internet. In addition to automatically calculating household CO₂ emissions, the system also makes graphs of the data, allowing users to compare their results with an average value of all program participants, as well as results from the previous year. This enables users to evaluate their household CO₂ emissions and work to reduce them. According to a questionnaire for participants, 70.8% of them reduced CO₂ emissions at home primarily by having the family spend most of their time in the same room, to reduce energy use throughout the rest of the home. In addition to managing power consumption, the method allows opportunities for family togetherness, and can help increase the number of happy eco-families.

The key to reducing CO₂ emissions is to control the use of automobiles and heating equipment during winter. I would encourage families to have fun while reducing CO₂ emissions through eco-driving techniques, by walking or riding a bicycle for better health, and various other ideas for dealing with cold weather.

**Initiatives to Protect the Ozone Layer**

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 2009, the Nagoya Plant operated high-efficiency alternatives to CFC refrigerators, which use a coolant compound with zero ozone depletion potential.

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, Toray expects to achieve its FY 2010 reduction targets for Pollutant Release and Transfer Register (PRTR) Law-specified substances and volatile organic compounds (VOCs), as established under the Third Three-Year Environmental Plan.

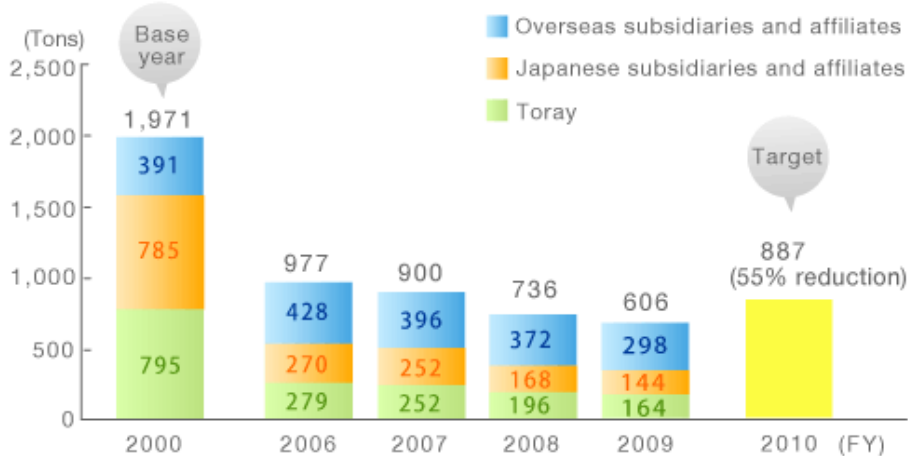
Related Information

- [Third Three-Year Environmental Plan](#)

Reducing Atmospheric Emissions of PRTR Law-Specified Substances

In FY 2009, Toray Group reduced its atmospheric emissions of PRTR Law-specified substances by 18% compared to the previous year (or by 69% compared to 2000), and achieved the FY 2010 reduction target. Toray Plastics (Malaysia) Sdn. Berhad carried out an incremental introduction of measures to strengthen recovery of organic gas emissions. With measures implemented at the end of FY 2008, the company reduced its atmospheric emissions by 70 tons compared to the previous year. Measures were also implemented at the end of FY 2009, and a reduction of 36 tons is expected in FY 2010.

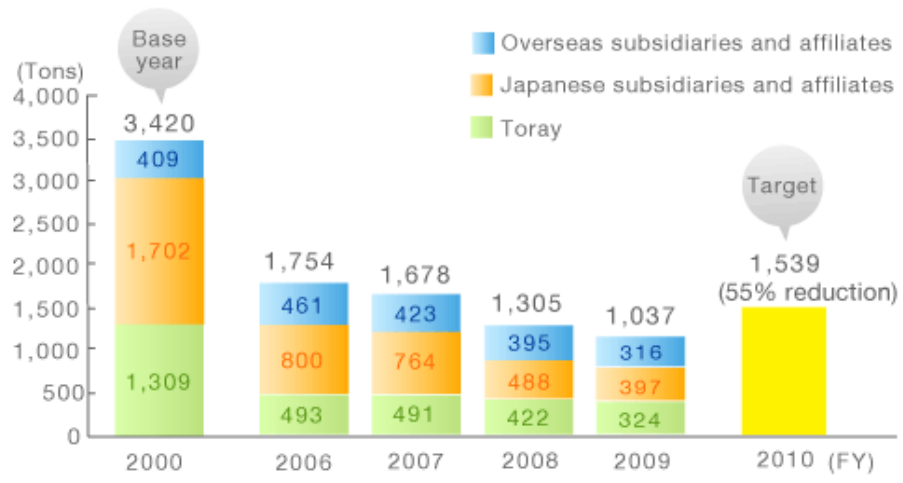
Atmospheric Emissions of PRTR Law-Specified Substances



Reducing Atmospheric Emissions of VOCs

Toray Group introduced voluntary initiatives to meet its Group-wide goal by FY 2010, of a 55% reduction in VOC atmospheric emissions compared to FY 2000 levels. In FY 2009, Toray implemented measures such as the installation of regenerative combustion facilities at the Toray Okazaki Plant, which reduced emissions by 20% compared to the previous year (or a 70% reduction compared to FY 2000).

VOC Atmospheric Emissions



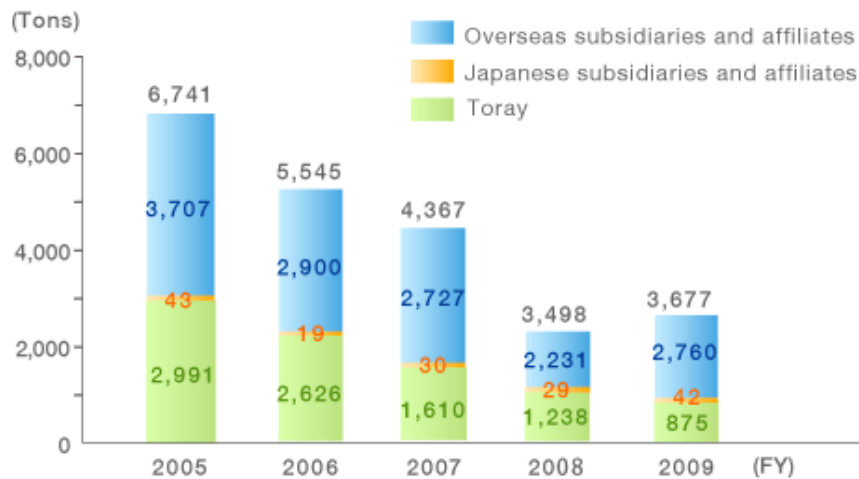
Safety and the Environment
Initiatives to Prevent Air and Water Pollution

Toray Group has ongoing environmental initiatives in place for the prevention of air and water pollution during production. 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.

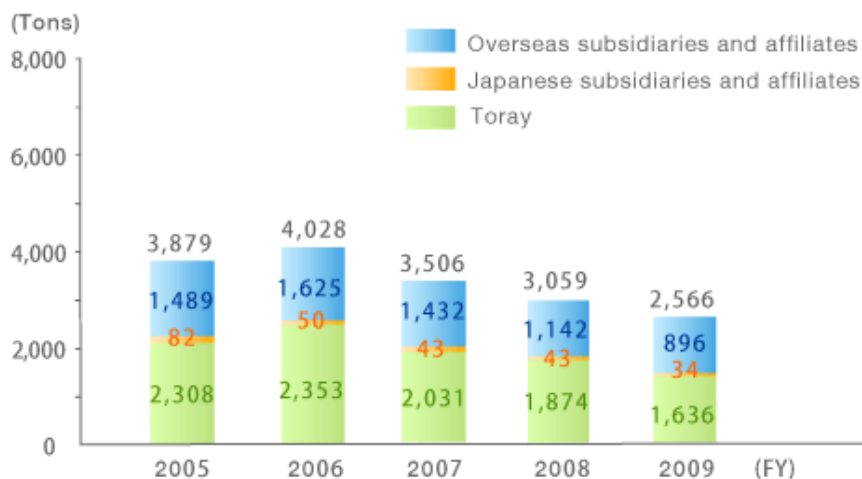
Atmospheric Emissions Management

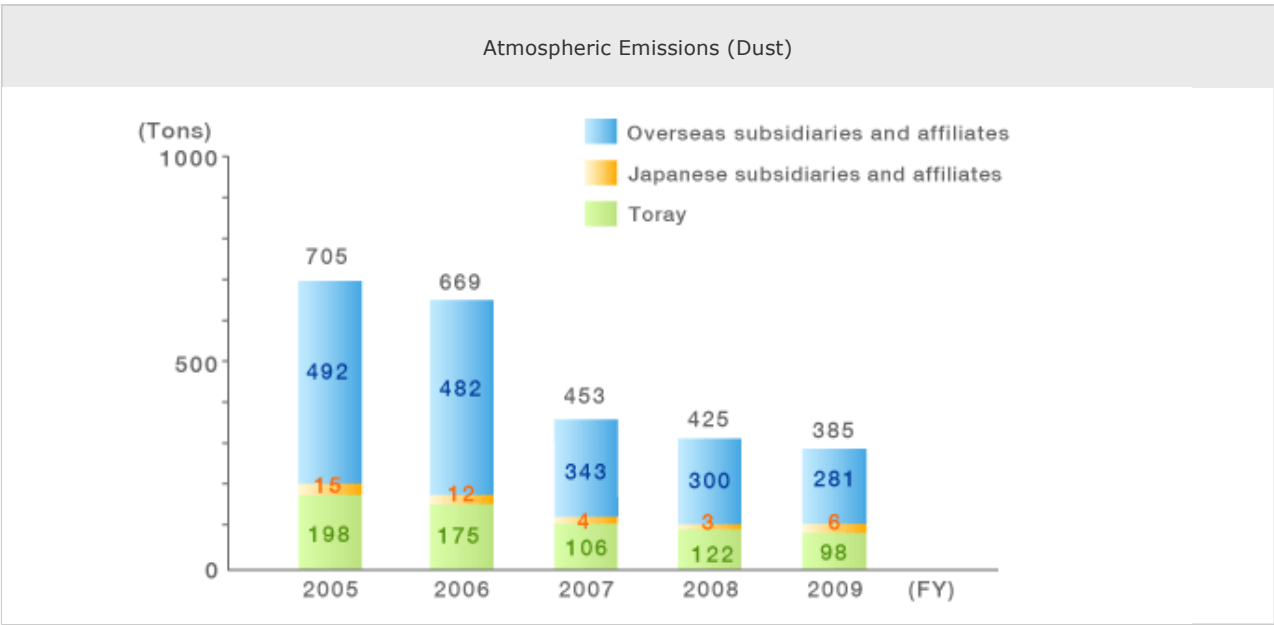
Toray Group emitted 3,677 tons of SOx, 2,566 tons of NOx, and 385 tons of dust emissions. SOx and dust emissions increased by 5% and 9%, respectively, while Nox emissions decreased by 16%, compared to the previous year. Due to a conversion to purchased electricity at the Ishikawa Plant and a drop in production resulting from the economic downturn, Toray reduced its SOx, NOx, and dust emissions by 363, 238, and 24 tons, respectively. Toray's overseas subsidiaries and affiliates recorded a 529-ton increase in SOx emissions, due to the increased use of high-sulfur coal at Indonesia Toray Synthetics.

Atmospheric Emissions (SOx)



Atmospheric Emissions (NOx)



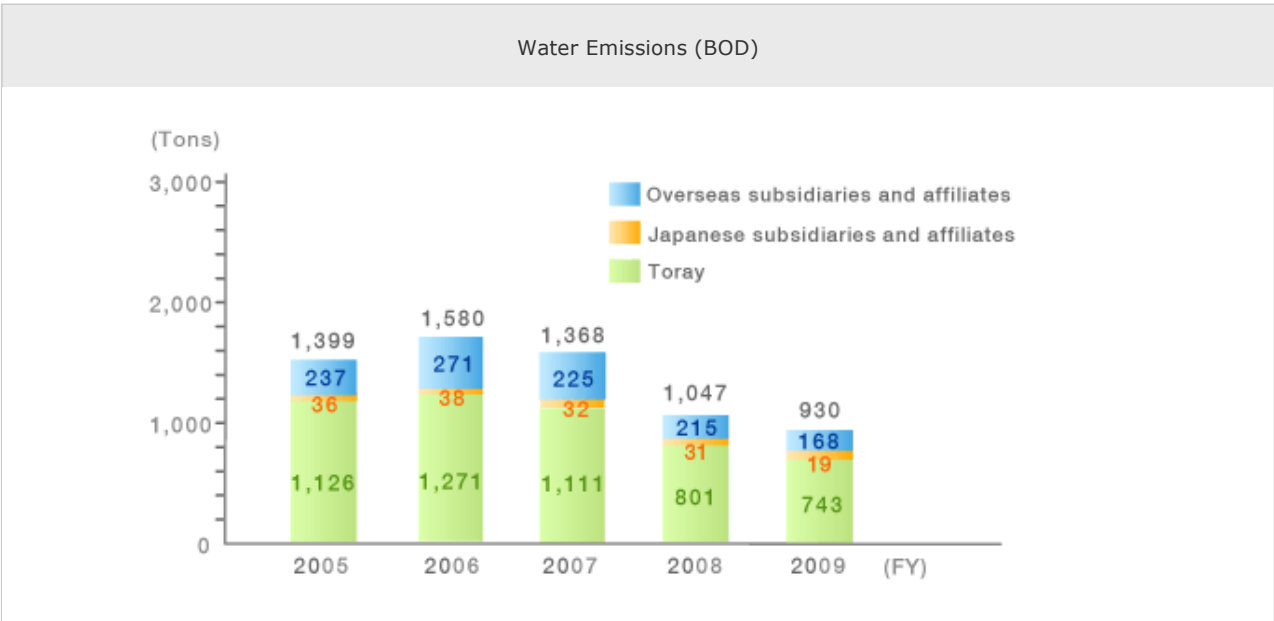


Water Quality Management

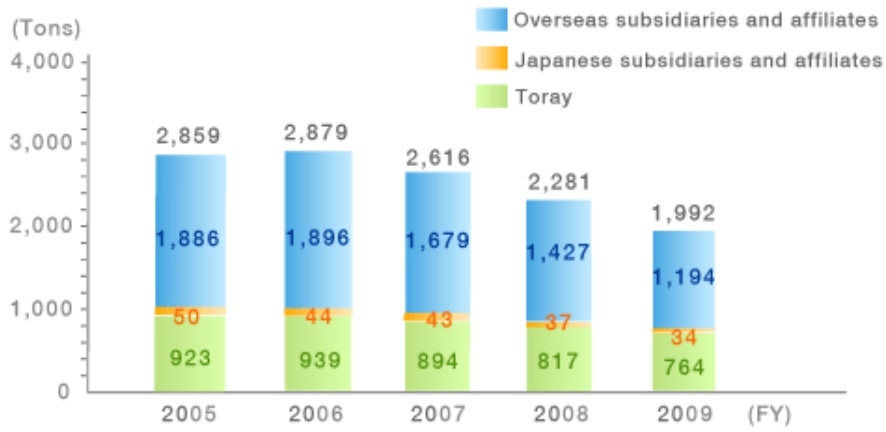
Toray Group reduced its biochemical oxygen demand (BOD) and COD emissions by 930 and 1,992 tons, respectively, which represented reductions of 11% and 13% compared to the previous year.

As a result of decreased production, Toray reduced its BOD and COD emissions by 58 and 53 tons, respectively. The Shiga Plant installed a membrane bioreactor (MBR*) developed by Toray, and improved its water quality as a result. In order to raise the management level at wastewater treatment facilities of Toray and its Japanese subsidiaries and affiliates, wastewater treatment staff and engineers (a total of 280 employees at 8 Toray plants and 2 subsidiaries/affiliates) received training on the operation and management of facilities, troubleshooting, and the design and selection of equipment.

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



Water Emissions (COD)



* A calculation error concerning Toray's FY 2008 COD emissions has been corrected here



New MBR wastewater treatment facility at the Shiga Plant



Training for wastewater treatment staff

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. In the Third Three-Year Environmental Plan, Toray Group has set numeric targets for the rates of simply disposed waste¹, landfill waste² and recycled waste³, which are indicators for measuring zero emissions initiatives. Toray is working toward the achievement of these targets.

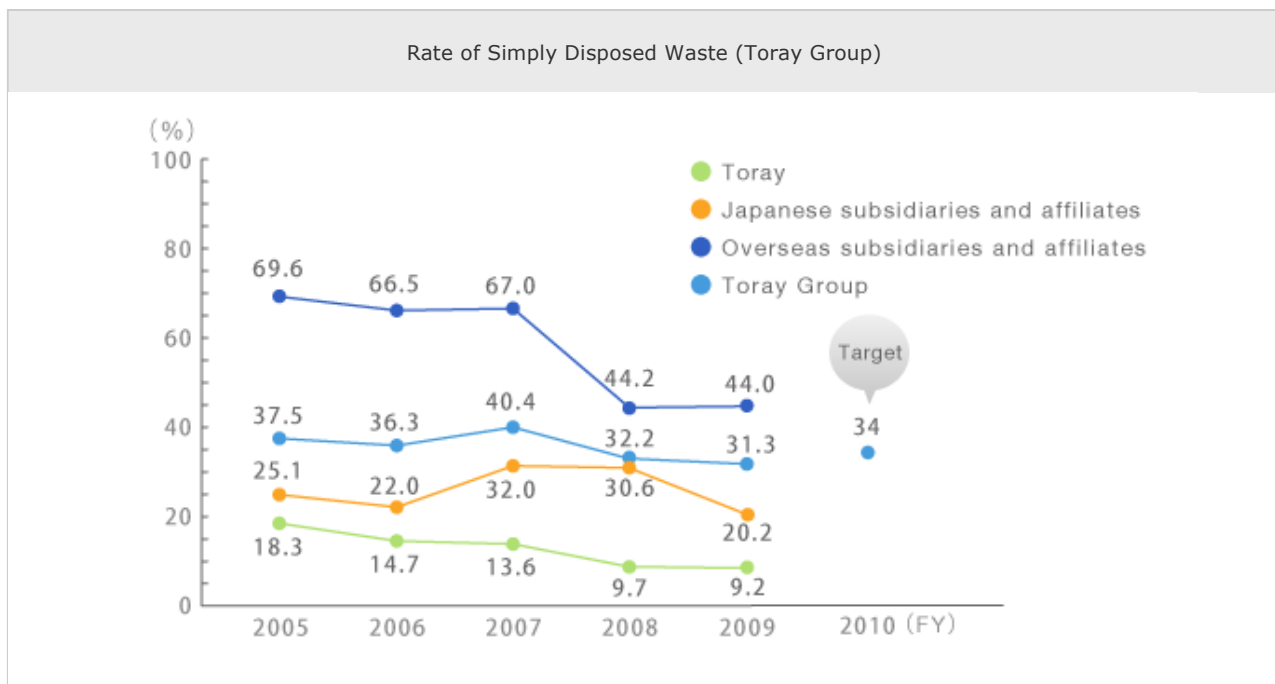
1. Simply disposed waste rate: (Incineration + landfill)/ Total waste
2. Landfill rate: Landfill waste/Total waste
3. Recycling rate: (Recycled resources + resources with monetary worth)/ (Total waste + resources with monetary worth)

Related Information

- [Third Three-Year Environmental Plan](#)

Simply Disposed Waste Rate

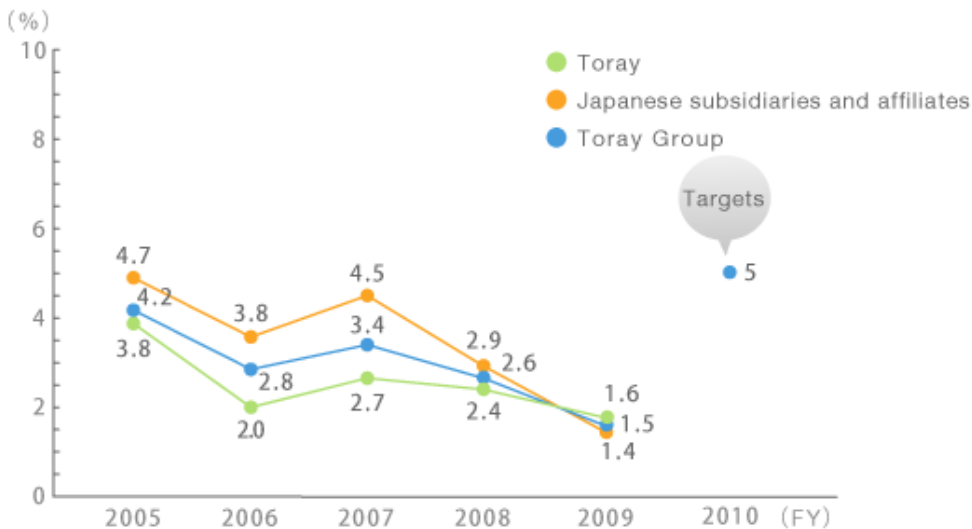
As a result of improvements to the simply disposed waste rate at Toray and its Japanese and overseas subsidiaries and affiliates, the rate for Toray Group improved by 0.9 points over the previous year to 31.3%. This enabled the early achievement of the FY 2010 target of 34% or less.



Landfill Rate

As a result of improvements over prior year performance at Toray and its Japanese subsidiaries and affiliates, Toray Group improved its landfill rate by 1.1 points over the previous year to 1.5%. This marked an early achievement of the FY 2010 target of 5% or lower, for the third year in a row.

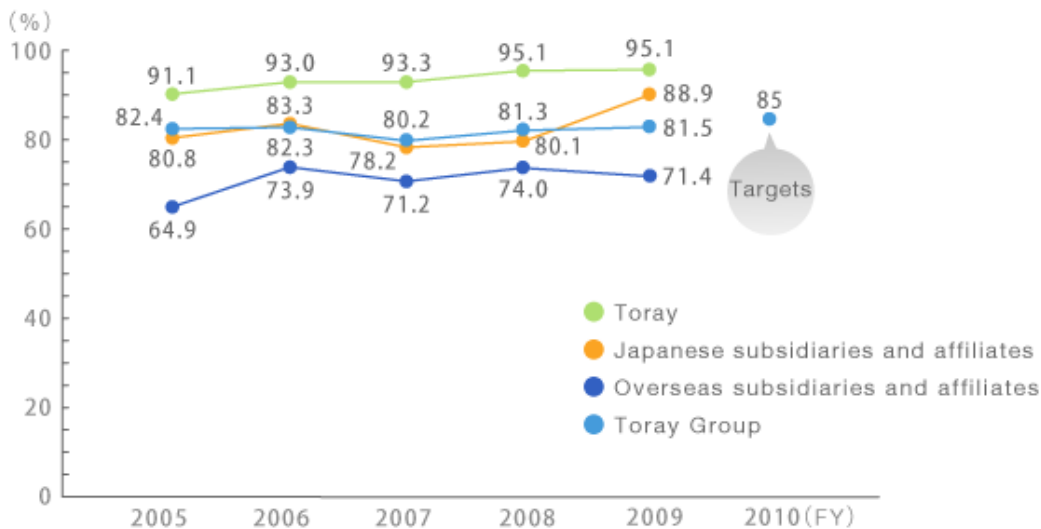
Landfill Rate (Toray and its Japanese Subsidiaries and Affiliates)



Recycling Rate

Despite a decline in the recycling rate at Toray’s overseas subsidiaries and affiliates, Toray and its Japanese subsidiaries and affiliates boosted their rates, improving the recycling rate for Toray Group by 0.2 points over the prior year to 81.5%. These activities will be continued in an effort to achieve the FY 2010 target of 85% or higher.

Recycling Rate (Toray Group)



Zero Emissions Activity Initiatives

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 2009, four more plants achieved zero emissions, bringing the total to 20 plants at 11 companies.

Zero Emission Companies and Plants in FY 2009

Notes:

- Names in blue indicates companies and plants that achieved zero emissions in FY 2009
- Information in brackets refers to the names of the plants

Toray	Seta Plant, Ehime Plant, Aichi Plant , Okazaki Plant, Gifu Plant, Tsuchiura Plant
Japanese Subsidiaries	Toray Opelontex Co., Ltd., Toray Textiles [Kiryu], Toray Coatex Co., Ltd., Toyo Plastic Seiko Co., Ltd. [Mishima, Okazaki], Toray PEF Products Inc. [Konan, Tsukuba], Toray Advanced Film Co., Ltd. [Fukushima, Nakatsugawa], Dow Corning Toray Co., Ltd. [Chiba] , Toray ACE Co., Ltd. [Fukushima] , Toray Engineering Co., Ltd. [Shiga, Seta], Toray Precision Co., Ltd.

| Initiatives at Chiba Plant of Dow Corning Toray Co., Ltd.

Zero emissions were achieved through the recycling of glass and used filters that were previously disposed as waste. The company also reduced waste through the sale of discharged solvents with monetary value.

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 purify soil contamination at the Nagoya Plant (refer to CSR Annual Report 2005) and groundwater contamination at Toray Monofilament Co., Ltd. discovered by Toray's own investigations appear to be making headway. Toray Group is committed to conducting voluntary surveys, reporting and otherwise disclosing survey results, and undertaking adequate purification measures in the event that any pollution is discovered.

Related Information

- [CSR Reports Download](#)



INTERVIEW

Kiyoshi Inoue
Environment and Safety Section, Mishima Plant,
Toray Industries, Inc.

The Mishima Plant is Carrying Out Environmental Protection Activities in Our Local Neighborhoods.

Situated near the slopes of breathtaking Mt. Fuji, Toray's Mishima Plant is blessed with a flourishing natural environment and abundant underground water resources. In addition to lowering CO₂ and SO_x emissions by switching from heavy oil to natural gas, the Mishima Plant is promoting greening and participation in the Genbei River Water Project, in order to help protect this remarkable local environment.

In particular the plant is putting effort into the preservation of water resources, and has installed equipments to infiltrate rainwater into ground. We are continuing to carry out initiatives for thorough management of the quality of wastewater released into the Genbei River and the Daiba River.

I am in charge of running the Onkochisui Seseragi Tour, a learning program that began in August 2009. The tour shows participants the entire water usage process at Mishima Plant, from water intake to treated wastewater release; participants include not only the plant's employees, but also local residents. I believe the tour contributes greatly to raising awareness among all employees on water resources and the Company's consideration of the local environment. It is also a great opportunity for deepening the local residents' understanding of Toray's water quality preservation activities. The Mishima Plant will continue to actively engage in environmental preservation activities near its facilities, while communicating these efforts to local communities.

Note: Similar plant tours are also being conducted at the Toray Shiga Plant and Okazaki Plant, and are helpful in raising the environmental awareness of employees.



Viewing water treatment facilities at the Mishima Plant as part of the *Onkochisui Seseragi* Tour

In FY 2009, 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, three incidents occurred where standard values were slightly exceeded temporarily, including wastewater irregularities at Toray's Ehime Plant. All incidents were reported to the authorities, and countermeasures were implemented to prevent their reoccurrence. A total of eight 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 2009	
Administrative disposition due to violations of laws or ordinances ¹	0
Accidents (fires, explosions, environmental accidents, etc.) ²	0
Standard values slightly exceeding temporarily ³	3
Complaints/requests (noise, odor, etc.)	8

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

2. Improvement guidance and recommendations are included in accident figures.

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

Safety and the Environment
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 2009 Accounting Results

In FY 2009, environment-related investment amounted to 2.44 billion yen, a 770 million yen increase compared to the previous year. Major contributions to this total included measures to reduce atmospheric emissions of chemical substances, wastewater treatment facilities, and equipment for the reduction of waste.

Costs totaled 6.76 billion yen, a decrease of 1.36 billion yen compared to the previous year. Of this amount, atmospheric costs totaled 1.31 billion, while water quality costs amounted to 2.08 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 910 million yen in energy cost reductions, 90 million yen in waste disposal cost reductions, and gained 350 million yen on the sales of valuable recycled resources.

Toray FY 2009 Environmental Accounting

Costs				
Item		Subcategory and description	Investment (million yen)	Investment expenses (million yen)
Business area costs	Pollution prevention costs	Air (including CFC countermeasures)	1,050	1,315
		Water quality	563	2,083
		Noise and vibration	2	598
		Greening	0	308
		Foul odors and other	99	214
	Global environment conservation costs	Energy conservation and combating global warming	590	—
	Resource recycling costs	Waste reduction, recycling, disposal, and PCB waste disposal services	74	1,548
Upstream and downstream costs		Product recycling	12	14
		Container and package recycling	50	1
Management activity costs		Indirect labor costs, ISO certification and maintenance, environmental communications, and education	0	381
Social initiative costs		Regional initiatives, support for organizations, etc.	0	20

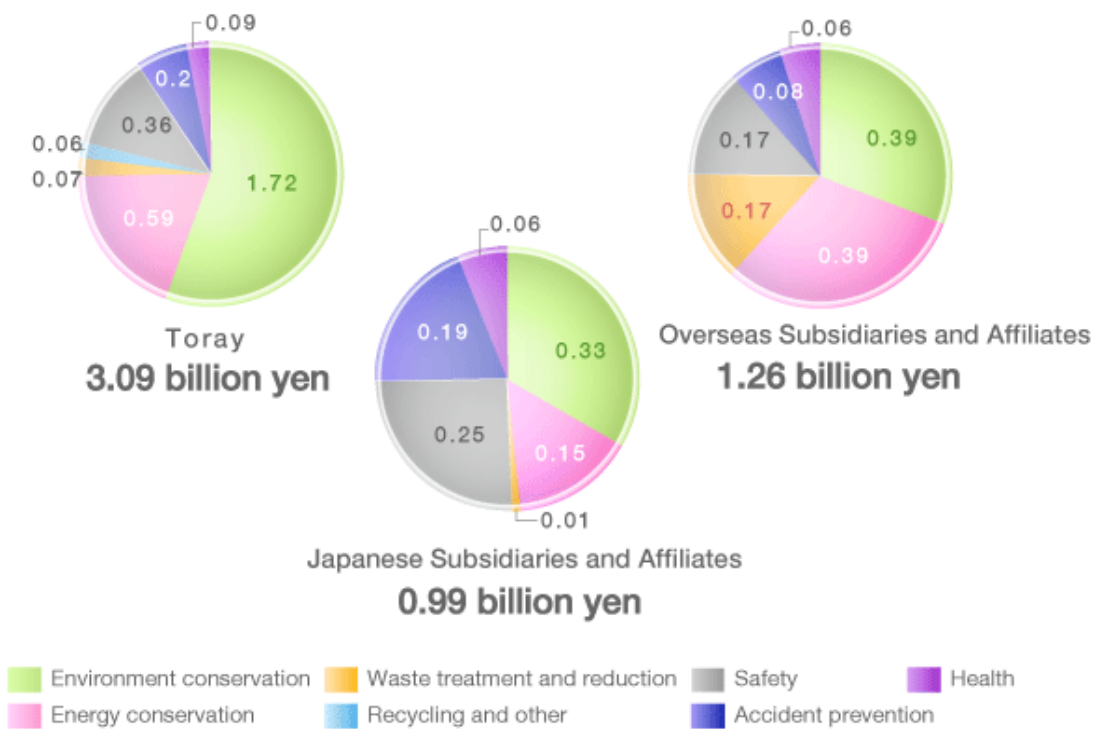
Environmental damage costs	SOx fines, soil purification, etc.	0	279
Total		2,440	6,761

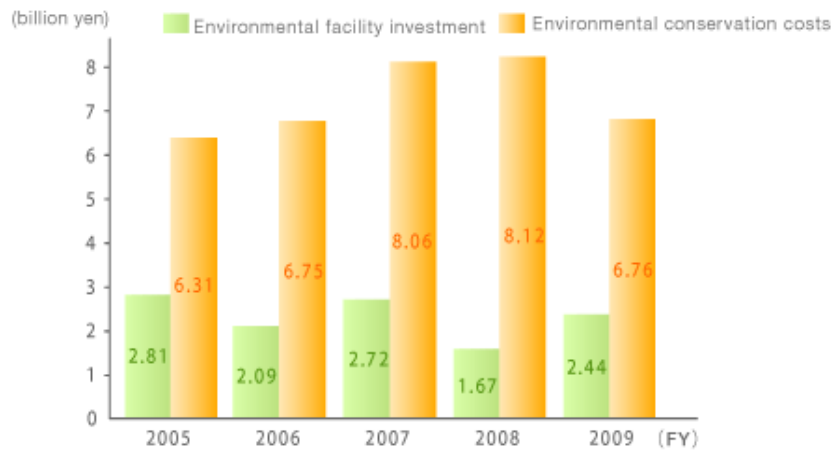
Effectiveness	
Policy	Amount (million yen)
Reduction in energy costs	906
Reduction in waste disposal costs	92
Sale of valuable (i.e. with monetary worth) recycled resources	349

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

In addition to the subjects of environmental accounting, Toray Group reports its investments relating to safety, accident prevention, and health. The total amount of equipment investment in FY 2009 was 3.09 billion yen for Toray, 990 million yen for Japanese subsidiaries and affiliates, and 1.26 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, Toray Advanced Film Co., Ltd. and Toray Fine Chemicals Co., Ltd. have been taking steps to reduce atmospheric emissions of chemical substances. Overseas, Luckytex (Thailand) Public Company Limited also strengthened the capacity of its wastewater treatment facilities.

Toray Group Facilities' Investment in Safety, Health, Accident Prevention, and Environmental Preservation Projects (billion yen)





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 because 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.
- Costs for PCB waste disposal and other costs are applied to the fiscal year in which they were incurred. Accordingly, a new cost allowance of 798 million yen established in FY 2009 as a result of a substantial increase in Japan Environmental Safety Corporation (JESCO) processing fees is not shown here.

Safety and the Environment
Environmental Data

Environmental Impact Overview FY 2009

[PDF Download](#) (31KB)

	Toray			Japanese Subsidiaries and Affiliates			Overseas Subsidiaries and Affiliates		
	FY 2008	FY 2009	Compared to the previous year (%)	FY 2008	FY 2009	Compared to the previous year (%)	FY 2008	FY 2009	Compared to the previous year (%)
INPUT									
Energy (1,000,000 kg(oleoil))	28.2	27.1	-3.9	5.9	6.4	8.5	24.4	22.5	-2.6
Water (1,000,000 tons)	186	179	-3.8	15	16	6.7	35	31	-11.4
OUTPUT									
GHG (10,000 tons CO ₂ e)									
6 gases including CO ₂	20.3	19.1	-5.9	37	38	-8.6	252	207	-2.4
PRTR Law-specified substances (tons)									
Atmospheric emissions									
Water emissions	196	164	-16.3	188	164	-14.3	372	298	-19.9
Waste transfers	23	28	21.7	0	0	0	0	0	0
Waste transfers	898	708	-21.2	1,056	1,067	1	736	735	-0.1
Air pollutants (tons)									
SOx	1,238	875	-29.3	29	42	44.8	2,231	2,760	23.7
NOx	1,874	1,626	-13.2	43	38	-11.6	1,542	896	-41.9
Other	122	98	-19.7	3	6	100	300	281	-6.3
Industrial wastewater (1,000,000 tons)									
	179	169	-5.6	12	11	-8.3	22	20	-9.1
Water pollutants (tons)									
BOD									
	80.1	74.3	-7.2	31	19	-38.7	215	188	-12.6
COD									
	81.7	76.4	-6.5	37	36	-2.7	1,427	1,194	-16.3
Nitrogen									
	58.5	56.7	-3.1	21	18	-14.3	-	-	-
Phosphorus									
	4.1	2.8	-31.5	1	2	100	-	-	-
Waste (1,000 tons)									
Recycled									
	30.2	25.9	-14.2	15.9	15.9	0	26.9	26.8	-0.2
Incinerated and other									
	2.4	2.1	-12.5	6.3	3.9	-38.1	6.6	9.1	37.9
Direct landfill disposal									
	0.8	0.5	-37.5	0.7	0.3	-57.1	22.7	19.8	-12.8
Coal ash (1,000 tons)									
Recycled									
	56.8	47.8	-15.8	-	-	-	22.4	28.8	25.9
Direct landfill disposal									
	1.2	0.9	-25	-	-	-	3.3	0.3	-90.9

* Calculation and recording errors concerning FY 2008 amounts of energy and COD for Toray; energy for Japanese subsidiaries/affiliates; and incineration and direct landfill disposal for overseas subsidiaries/affiliates 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 25 companies
COD*	10 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)	31 plants at 42 companies
Nitrogen and phosphorus	All 12 plants and 1 research laboratory	16 plants at 15 companies	None

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

Chemical Substance Emissions and Transfer Data
PRTR Law-specified substance emissions and transfer data for FY 2009

[PDF Download](#) (29KB)

Substance name	Tons (dioxin: mg-TEQ)			
	Atmospheric emissions	Water emissions	Soil emissions (except for lead)	Waste transfers
Methyl acrylate	0.2	0.3	0	0
Acrylonitrile	30.8	2.6	0	194.6
Acetaldehyde	4.9	0	0	0
Acetonitrile	0	0	0	1
Antimony and antimony compounds	0	0	0	0.7
Bisphenol-A type epoxy resin	0	0	0	18.6
Ethylene glycol	0.6	0	0	92.4
Ethylene glycol monoethyl ether	0.4	0	0	0.2
ε-Caprolactam	0.3	18.9	0	18.4
Xylene	9.8	0	0	0.3
Other and other water-soluble compounds	0	0	0	2.5
Chlorine and chlorine (Cl ₂) compounds	0	0	0	0.1
o-chlorotoluene	0.6	0	0	0
Chlorobenzene	1.8	0	0	36.1
Chloroform	1.4	0	0	26.7
Cobalt and cobalt compounds	0	0.1	0	4.4
Inorganic cyanide	26	0	0	0
1,4-Dioxane	0	2.7	0	0
Diamin	0	0	0	2.1
p-Dichlorobenzene	4.1	0	0	0.7
Dichloromethane	1.7	0	0	3.7
N, N-dimethylformamide	13.9	0.6	0	26.4
Styrene	13.6	0	0	1.5
Terephthalic acid	0	0	0	160.5
Dimethyl terephthalate	0	0	0	0.6
Trichloroethylene	0.2	0	0	0.2
Toluene	1.4	0	0	67.7
Nitrobenzene	0	0	0	32
Hydrazine	0	0.1	0	0
Pyridine	0	0	0	2.8
m-Phenylenediamine	0	1.8	0	0
Bis (2-ethylhexyl) phthalate	0	0	0	0.3
Bromomethane	43	0	0	0
Benzene	0.9	0.9	0	0
Boron and boron compounds	0	0	0	7.7
Poly (oxyethylene) alkyl ether	1.2	0	0	1.3
Manganese and manganese compounds	0	0.4	0	2.8
Mathacrylic acid 2,3-Epoxypropyl	0	0	0	1.6
Methyl methacrylate	7.4	0	0	9.6
Dioxins	3.5	18.3	0	13.8
Total	164	28	0	708

Note: The List shows emissions and transfers of 39 substances (out of Toray's 54 PRTR Law-specified substances) exceeding 50 kg and dioxins

Substance name	Tons (dioxin: mg-TEQ)			
	Atmospheric emissions	Water emissions	Soil emissions (except for lead)	Waste transfers
Acetonitrile	0	0	0	6.5
2-aminoethanol	0	0	0	91.8
1-Allyloxy-2,3-epoxy propane	0	0	0	0.5
Bisphenol-A type epoxy resin	0	0	0	0.5
Ethylbenzene	3	0	0	1.2
Ethylene oxide	0.8	0	0	0
Ethylene glycol	0	0	0	2.7
Ethylene glycol monoethyl ether	3.1	0	0	0.3
Epichlorohydrin	18.9	0	0	25.6
Ethylendiamine	0	0	0	0.1
Nylene	25.9	0	0	26.2
2-Ethoxyethyl Acetate	0	0	0	0.8
1,3-Dichloro-2-propanol	0	0	0	8.9
Dichloromethane	2.9	0	0	0.2
N, N-dimethylformamide	19.3	0	0	164.1
Styrene	0	0	0	0.4
Dioxinodiphenyl ether	0	0	0	0.1
Toluene	65.6	0	0	677
Carbon disulfide	0.9	0	0	0
Hydroquinone	0	0	0	0.1
Bis (2-ethylhexyl) phthalate	0	0	0	1.2
Poly (oxyethylene) alkyl ether	0	0	0	32.6
Formaldehyde	0.1	0	0	0.2
Maleic anhydride	0	0	0	5.6
Mathacrylic acid	0	0	0	2
N-butyl methacrylate	0.1	0	0	0
Methyl methacrylate	0.2	0	0	0
3-Methylpyridine	1.7	0	0	7.8
o-Methyl styrene	0	0	0	0.1
Hydroquinone and polyphenols compounds	0	0	0	0.2
Dioxins	1.6	0	0	11.2
Total	144	0	0	507

Note: The List shows emissions and transfers of the above 30 substances (out of the 46 PRTR Law-specified substances for domestic subsidiaries and affiliates) exceeding 50 kg and dioxins

Environmental Data for 12 Toray Plants and Principal Subsidiaries and Affiliates

[PDF Download](#) (50KB)

Unit	GHG emissions 10,000tce CO ₂ /year	Emission volume											Principal manufactured products			
		PRTR				Gas emissions			Water emissions			Waste				
		Air	Water	soil & leach	Waste	SOx	NOx	Dust	BOD	COD	Water	Recycled		Waste incineration	Landfill disposal	
Japan	Shiga Plant	9.7	2	0	0	81	0	39	0	90	106	28.5	3,214	160	1	Ecoleone® man-made suede, Lumirror® polyester film, TOPTICAL® color film, Electronics & information materials
Japan	Saba Plant	0.3	0	0	0	0	0	0	0	0	0	0.2	69	0	0	Toraylon® blended yarn, Medical products (Inoue balloon catheters and Antisone® P-U catheters)
Japan	Shima Plant	36.9	44	7	0	323	359	556	50	48	110	26.9	7,600	37	27	Tetoron® staple fiber, Toraylon® carbon fiber, Romembra® reverse osmosis membrane-module, Toraycon® PBT resin
Japan	Nagoya Plant	18.0	12	0	0	52	3	324	9	155	182	27.5	1,731	1,800	220	Amilan® nylon resin, Toraycon® PBT resin, Gypsum Various fine chemicals
Japan	Tokai Plant	74.8	49	21	0	162	14	304	4	367	370	17.8	5,289	77	127	Caprolactam terephthalic acid, Tetoron® chips, Toralene® PPS resin
Japan	Aichi Plant	2.4	0	0	0	9	0	0	0	3	-	2.0	149	0	1	Nylon filament yarn, Raylela® plastic optical fiber
Japan	Okazaki Plant	10.0	13	0	0	31	102	39	18	13	29	6.9	3,081	0	3	Nylon filament yarn, Toray Waterless Plate® printing plate, Filnyse® artificial kidney, Torayvivo® home water purifier
Japan	Nishina Plant	17.8	3	0	0	5	19	274	1	40	42	36.6	683	59	45	Lumirror® polyester film, Tetoron® filament yarn, Domec® (Oral Administration Protracyclin [PG2] Derivative), Faron® natural interferon-β preparation
Japan	Chiba Plant	1.8	42	0	0	3	0	12	0	6	67	4.3	2,721	27	18	Toyolac® ABS resin
Japan	Tsushima Plant	2.4	0	0	0	0	0	0	0	1	-	0.4	362	0	0	Torayfan® 80 polypropylene film
Japan	Gifu Plant	8.7	0	0	0	3	362	62	3	14	6	8.6	399	0	2	Ecoleone® man-made suede, Lumirror® polyester film, Toralene® PPS film
Japan	Ishikawa Plant	5.9	1	0	0	38	15	29	5	7	5	9.5	392	10	10	Tetoron® filament yarn, Nylon filament yarn
Japan	Toyo Tire Cord Co., Ltd.	1.4	1	0	0	1	0	1	0	1	2	0.7	148	6	0	Tire cord, Carpet pile fiber
Japan	Toray Advanced Film Co., Ltd. [Hitachi]	0.6	22	0	0	54	0	1	0	0	0	0.3	434	7	3	Cerespal® (release film)
USA	Pentfabric Sdn. Berhad [M&M]	6.2	0	0	0	0	0	0	1	33	361	2.2	0	324	43	Polyester-cotton blend textile
U.S.A.	Toray Plastics (America), Inc. [Rhode Island]	12.0	3	0	0	6	1	27	8	2	19	0.2	1,369	3,254	12	Torayfan® polypropylene film, Lumirror® polyester film

Note:
1. Information in brackets refers to the name of the plant.
2. * A Toray Group registered trademark, or trademark pending registration

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 global 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 the comprehensive brand name for its environmentally friendly products. It is actively promoting Project EcoChallenge, an initiative that recognizes the comprehensive nature of ecological concerns, and strives to take the lead in conserving resources and protecting the environment. Looking ahead, Toray will place the utmost priority on realizing a sustainable low-carbon society by expanding its environmentally friendly products business and providing solutions to global environmental issues.

* Ecodream is a registered trademark of Toray Group

Initiatives for Developing Environmentally Friendly Products

1. [Product Life Cycle Based Environmental Management](#)
 - (1) [Life Cycle Management](#)
 - (2) [Contribution Factor of CO₂ Reduction](#)
 - (3) [T-E2A](#)
 - (4) [Project EcoChallenge and LCM](#)
2. [Life Cycle Management Promotion](#)
3. [Pursuing "Environmental Design" to Create Environmentally Friendly Products](#)
4. [Project EcoChallenge Promotion](#)
5. [Solutions for Global Environment Business](#)
6. [Promoting Recycling](#)

Safety and the Environment

1. [Ten Basic Environmental Rules](#)
2. [Safety, Health, Accident Prevention and Environmental Preservation Management System](#)
3. [Initiatives to Fight Global Warming](#)
4. [Voluntary Reduction of Atmospheric Emissions of Chemical Substances](#)
5. [Initiatives to Prevent Air and Water Pollution](#)
6. [Initiatives to Reduce Waste](#)

[Cooperating with Suppliers in their Environmental and Social Initiatives](#)

[Occupational Safety](#)

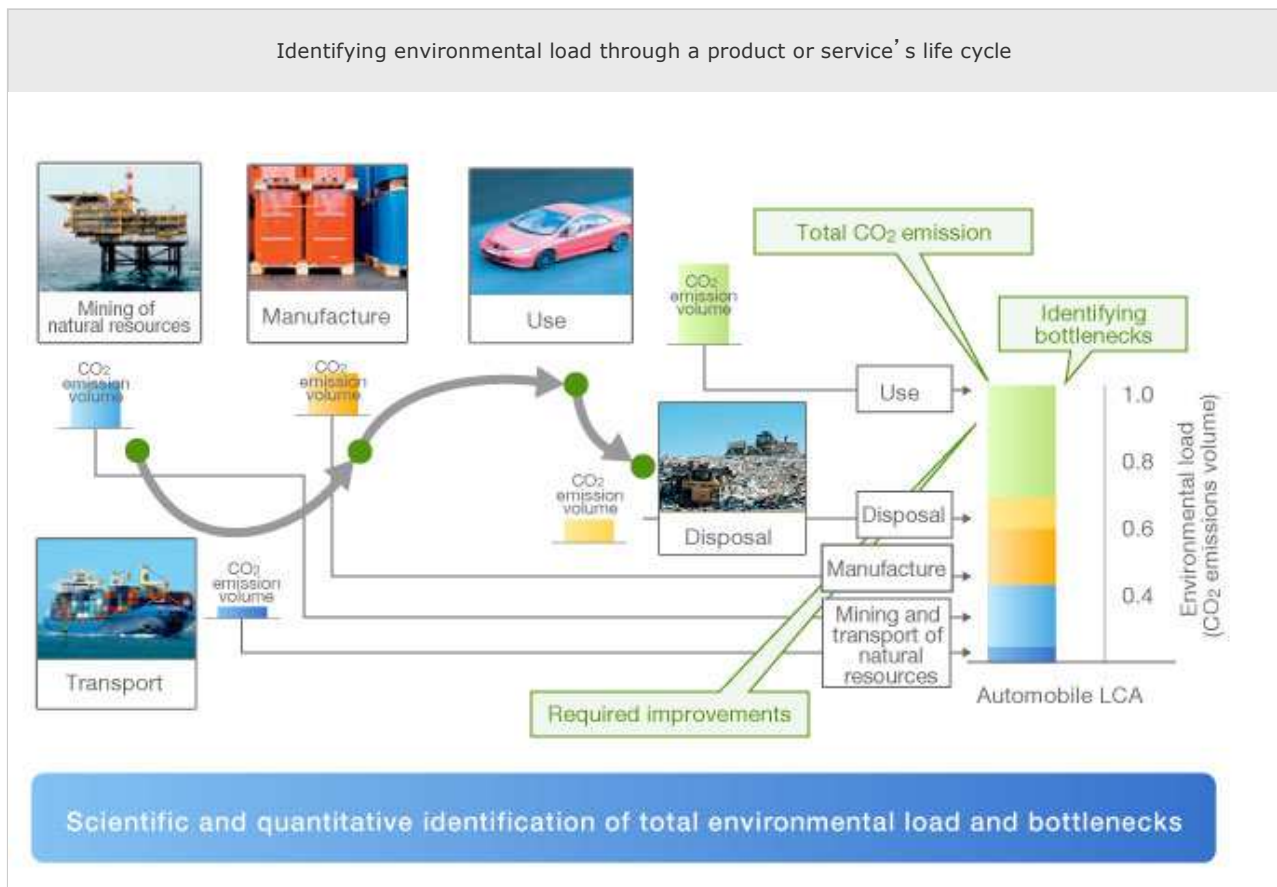
Social Responsibility
**Global Environment Activities:
Product Life Cycle Based Environmental Management**

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.

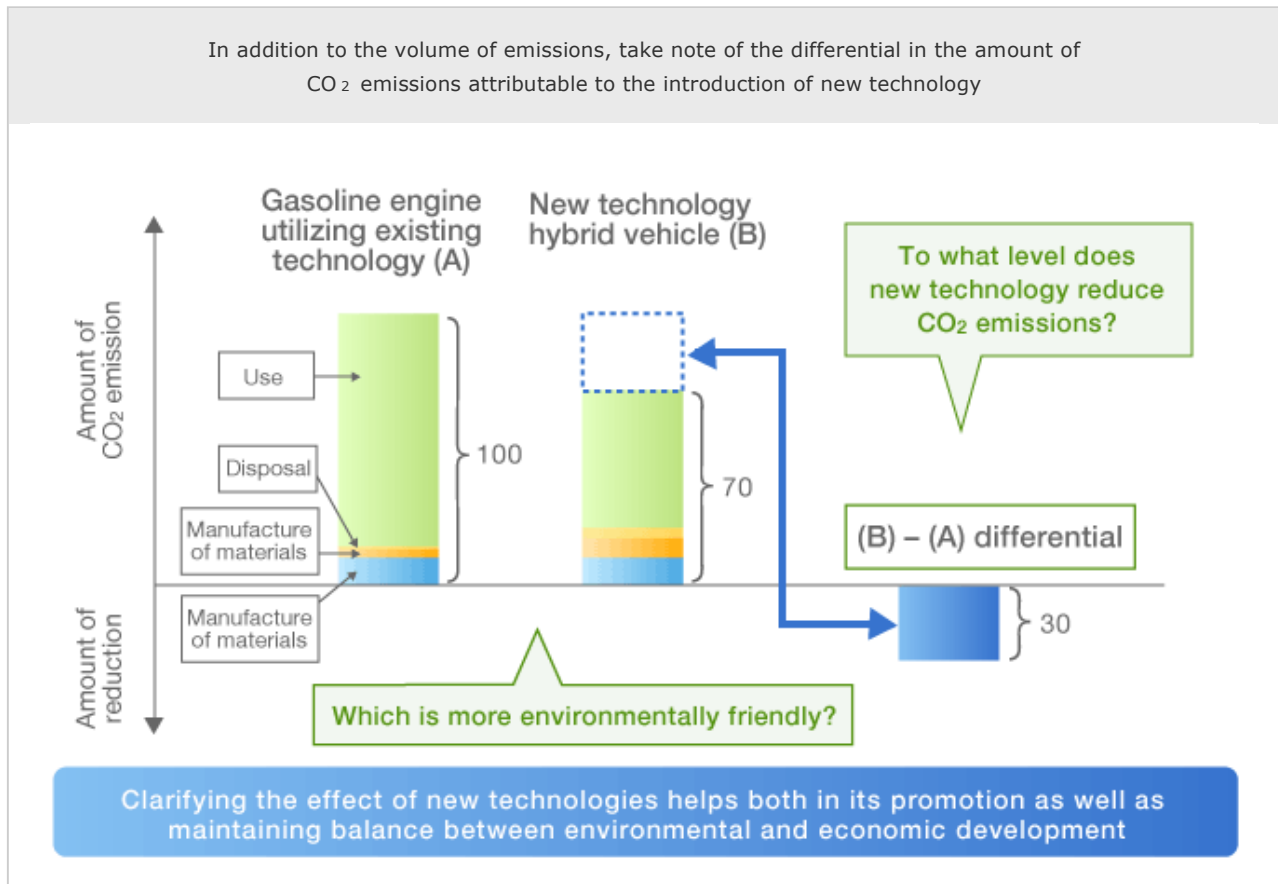
LCM Approach 1

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.



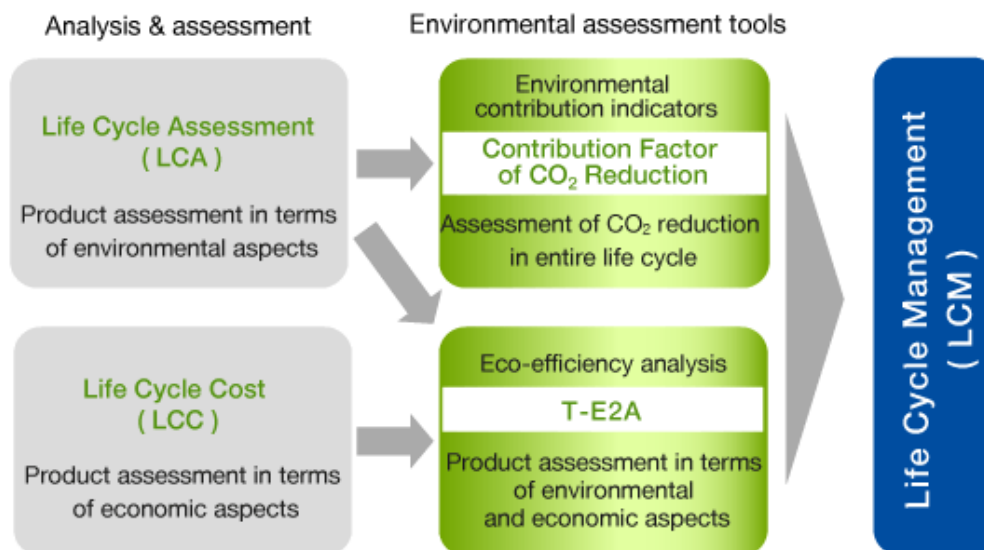
LCM Approach 2

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



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. Contribution Factor of CO₂ Reduction

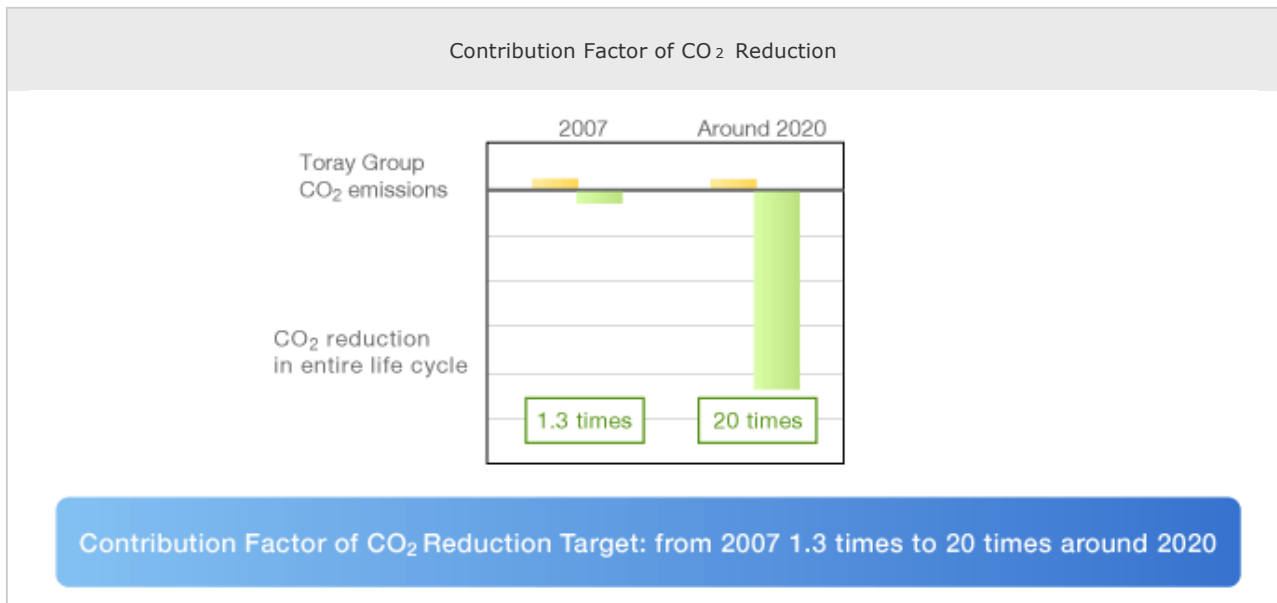
Contribution Factor of CO₂ Reduction

The Contribution Factor of CO₂ Reduction measures the reduction of CO₂ and takes into consideration the total balance of profit and cost for individual products. Devised by the Company, the indicator shows the efficiency of alternative approaches for CO₂ reduction. Specifically, it compares CO₂ reduction throughout the entire life cycle of environmentally friendly products, including reduction during periods of use against emissions at each product stage, from feedstock through production to disposal. The greater the amount of CO₂ reduction, the lower the product's burden on the environment.

$$\text{Contribution Factor of CO}_2 \text{ Reduction} = \frac{\text{CO}_2 \text{ Reduction in Entire Life Cycle}}{\text{CO}_2 \text{ Emission in Feedstock, Production and Disposal}}$$

Target

The target is to improve the Contribution Factor of CO₂ Reduction level of 1.3 times recorded in 2007, to 20 times or more by around 2020.



Environmentally Friendly Products	
Classification	Environmentally friendly products and services
Reduction of greenhouse gas (GHG) emissions	Carbon fibers for automobiles, aircrafts, wind turbine blades, and compressor tanks; engineering plastics for automobiles; cooling and insulating micro fibers; heat reflective films; films and devices for solar cells; films and devices for lithium ion batteries; polylactic acid for textiles, plastics, and film; 3GT fibers and textiles
Water treatment	RO/UF/MF membranes, base materials for water treatment, water treatment system business, Torayvino* home-use water filter
Air purification	Dust collector filters, bag filters, and air filters

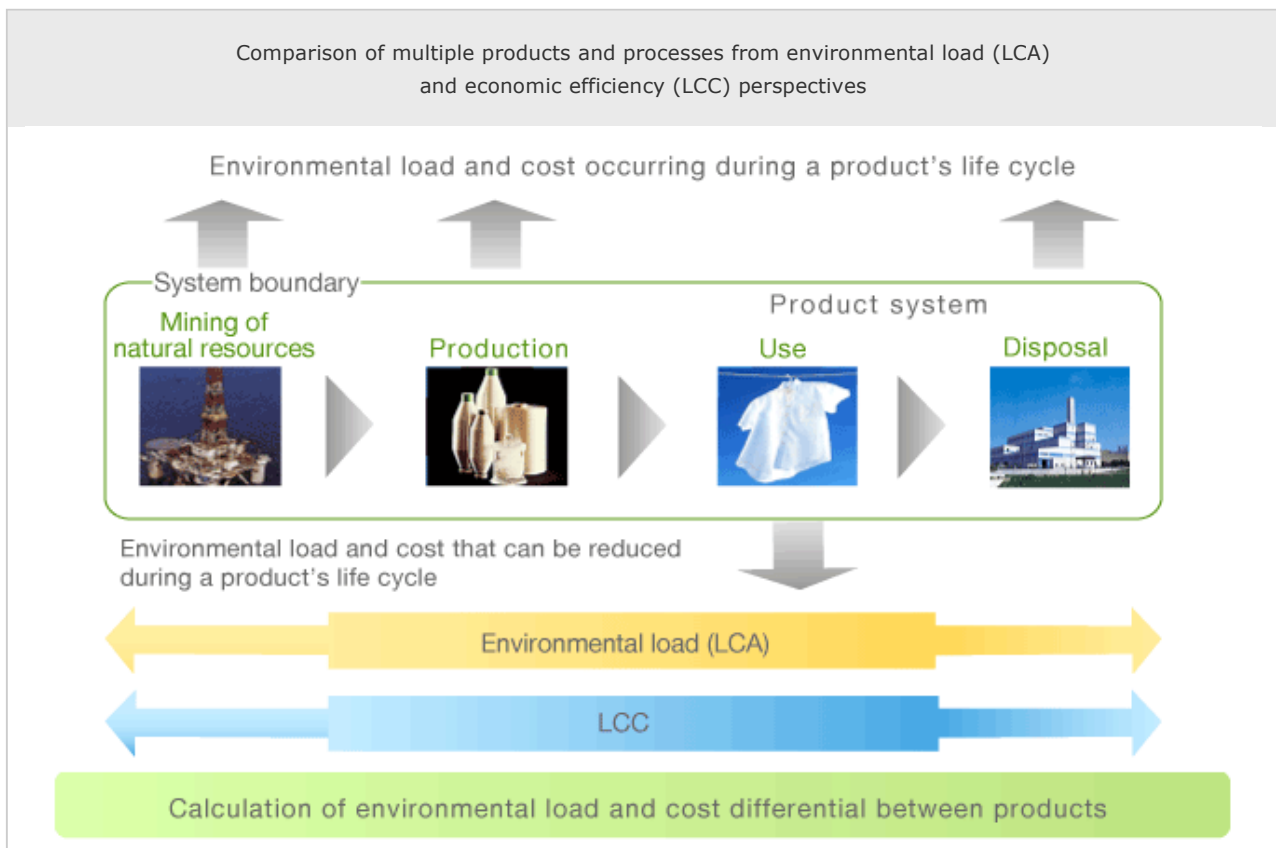
Low environmental load	Non-halogen flame retardants for fibers, textiles, plastics, and films; Toray Waterless Plate;* slit coaters; positive type Photoneece*
Recycling	ECOUSE,* CYCLEAD,* and material chemical recycling
Environmental measurement, surveys, and consulting	

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

3. T-E2A

T-E2A: Eco Efficiency Analysis

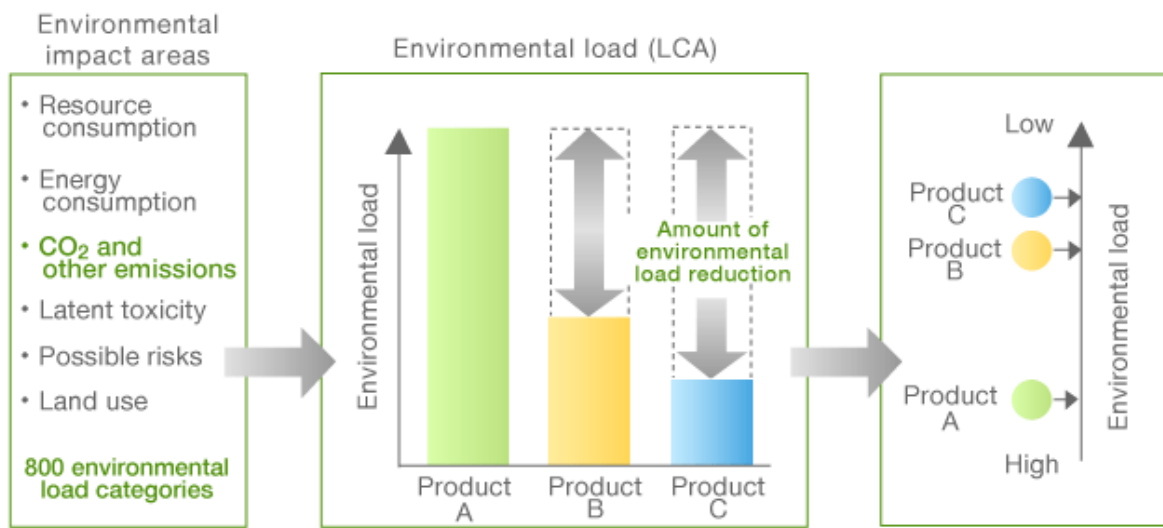
The T-E2A is an analysis tool that provides a comparative evaluation of the environmental load and economic efficiency of multiple products and processes. Specifically, it offers (1) a life cycle assessment (LCA) function, quantitatively evaluating environmental load that occurs throughout the life cycle 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.

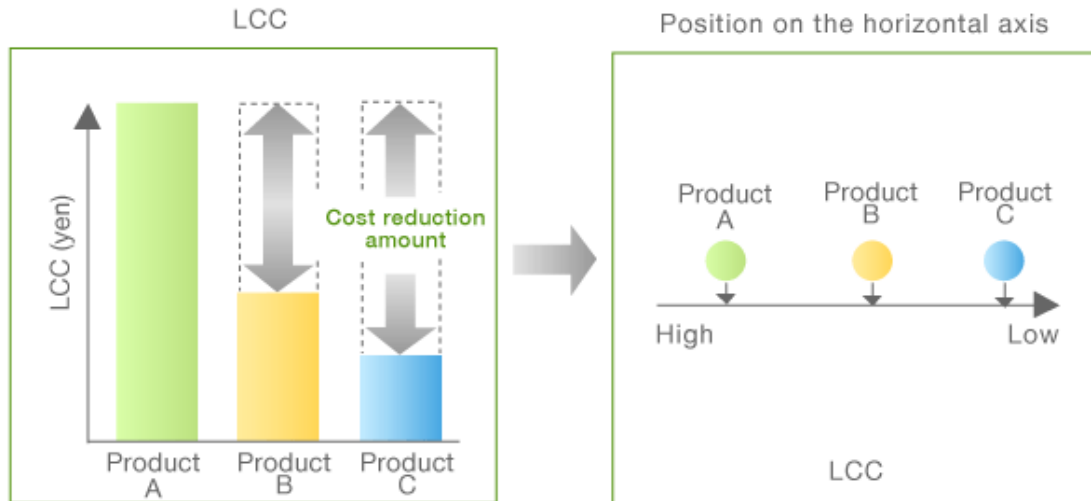
The lower the environmental load (or the larger the volume of environmental load reduction), the higher the product is plotted along the vertical axis.



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.

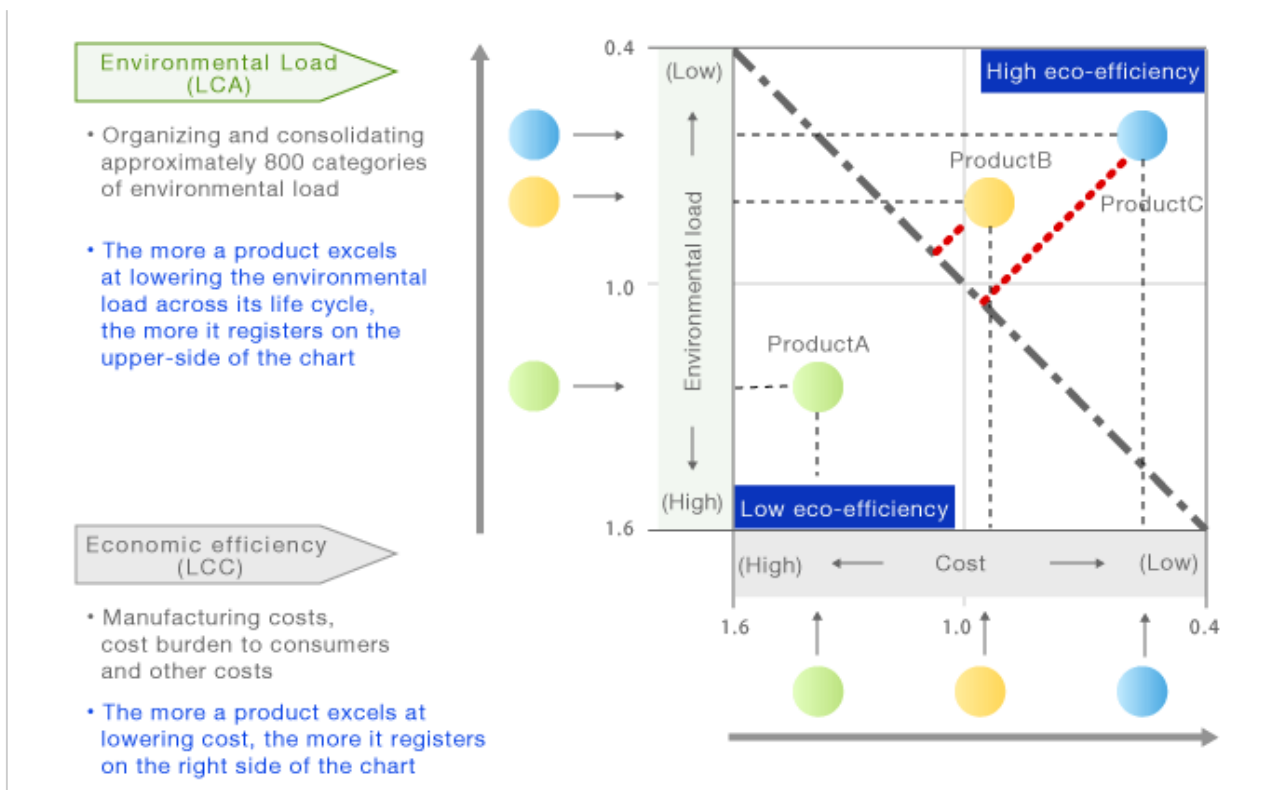
The lower the LCC (or the larger the cost reduction volume) for a particular product, the further it is plotted on the right of the horizontal axis.



Eco-Efficiency Map

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.

Social Responsibility

Global Environment Activities: Product Life Cycle Based Environmental Management

4. Project EcoChallenge and LCM

Toray Group has adopted the approach that all of its business strategies must place priority on the global environment. Accordingly, the Group is promoting Project EcoChallenge, which strives to realize a sustainable low-carbon society through forward-looking resource and energy conservation, as well as global environment protection activities.

Factors that currently constrain economic growth include the regulation of CO₂ emissions, depletion of fossil and energy resources, and the need to secure water and food supply resources. Under Project EcoChallenge, Toray Group will pursue solutions that contribute to energy conservation, the reduction of environmental load, new energy and other critical concerns through the development of environmentally friendly products and technologies. Moreover, the Group has formulated a roadmap from both short- and medium-term perspectives that aims to help resolve global environmental issues.

Project EcoChallenge is based on the principles of LCM. It has employed the use of the environmental analysis tool T-E2A to achieve its overarching goal of environmentally friendly technology reform. Steps are taken to identify and analyze the life cycle environmental load of many of Toray's and other companies' products. The T-E2A is also used in the calculation of Contribution Factor of CO₂ Reduction, the environmental improvement benchmark and common goal for all of the Company's activities.

In addition to reducing the amount of CO₂ emission from its manufacturing processes, Toray is focusing on the replacement of existing systems with advanced technologies and products. Through these means, the Company aims to contribute substantially to the reduction of CO₂.

CSR Report Highlight

As a global manufacturer of advanced materials, Toray Group is working to help address global issues.



CSR Report Highlight 2010



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](#)



2. Mitigating Water Resource Issues

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

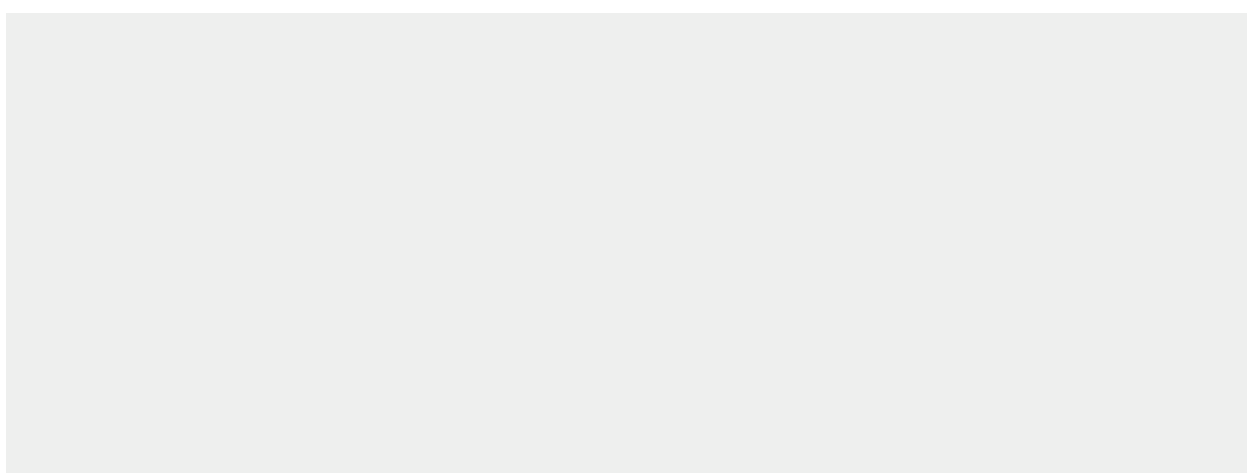
- (1) [Proprietary Seawater Desalination Technology for Solving Water Shortages on Small Islands](#)
- (2) [Water Recycling: New Technology for Wastewater Reuse](#)
- (3) [Global Water Resource Issues and Expansion of Toray's Water Treatment Business](#)



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



Back Number

CSR Report Highlight 2009

CSR REPORT 2009 HIGHLIGHT 1


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.

CSR REPORT 2009 HIGHLIGHT 2

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

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.



Toray Group has engaged in environmental protection activities since the 1970s, and the Group has actively pursued environmental management systematically and continuously. As society enters a period of transition, the Group has reaffirmed its commitment to place the global environment firmly at the center of its management priorities. All Group companies will work together to bolster life cycle based environmental management.

In this section, six Toray representatives engaged in environmental management activities discuss appropriate courses of action and the future of the Group's environmental endeavors.

Participants (Note: Divisions and titles are current as of May 2010.)

- Kenichiro Oka (General Manager, Global Environment Business Strategic Planning Department, Toray Industries, Inc.)
- Masahiro Minami (Deputy General Manager, Global Environment Business Strategic Planning Department, Toray Industries, Inc.)
- Toshiyuki Nonaka (General Manager on Special Assignment, Global Environment Business Strategic Planning Department, Toray Industries, Inc.)
- Hiroyuki Harada (Deputy General Manager, Planning Department, Technology Center, Toray Industries, Inc.)
- Kazuya Matsumura (General Manager, Environmental Materials Development Department, Toray Industries, Inc.)
- Keisuke Ishii (General Manager, Aerospace Business Department, Torayca Division, Toray Industries, Inc.)

(1) Establishment of the Global Environment Business Strategic Planning Department

Launching a Dedicated Office to Facilitate Environmental Management

Oka: From a global environment perspective, humankind is currently entering a period of crisis. This is the price paid for the dramatic advances made in science and technology, and the rapid economic growth of the 20th century. Over the past century, the global population has grown from 1.6 billion to 6.5 billion people. It is estimated that this figure will exceed 9.1 billion in 2050. Energy consumption has increased more than twenty-fold over the same period, and it is unlikely that this trend will change considering that economic development will continue in the future. Looking at the future from the perspectives of population growth and energy consumption alone, it is clear that the earth won't be able to withstand these burdens for long.

Amid calls for action, Toray Group launched Project EcoChallenge in 2007 in an effort to further accelerate the development of green technologies. The Group also established the Global Environment Business Strategic Planning Department in May 2009, to coordinate the project and promote Toray's environmental initiatives Group-wide.

Minami: The Global Environment Business Strategic Planning Department is engaged in wide-ranging activities. In addition to our ongoing approach toward environmental issues, the Department is charged with such missions as proactively seeking out opportunities to expand the Group's new energy resource and energy saving businesses, and increase sales of environmentally friendly products. The Department has also implemented environmental measures across the entire organization.



Nonaka: Reducing CO₂ emissions is naturally an important issue for us all. The goal, however, extends well beyond the creation of a low-carbon society. Multifaceted solutions play a vital role in realizing a sustainable society; we must collaborate with various global companies and institutions, and consistently deliver new solutions if we are to fulfill the heavy burden of expectations.

Harada: In concert with sustainability, it is the corporate sector's duty to realize a vibrant and dynamic society. Only through developing and implementing the appropriate measures will we fulfill our corporate social responsibilities as a company. As a member of the Project EcoChallenge team from its inception, I have become increasingly aware of society's growing demands on the corporate sector.

The Global Environment Business Strategic Planning Department

In conjunction with the launch of Project EcoChallenge, Toray established the Global Environment Business Strategic Planning Department. Reporting directly to the president, the Department plans and proposes relevant strategies on a company-wide basis and strives to promote and support the commercialization of environmental businesses. Operations commenced in July 2009. In order to successfully achieve the two targets under Project EcoChallenge, the Department will coordinate with the Technology Center, which is itself engaged in the cross-sectional integration of technology development.

The two targets under Project EcoChallenge

- Target 1** Contribution Factor of CO₂ Reduction: 20 times by around 2020
- Target 2** Sales of Environmentally Friendly Products: 1 trillion yen by around 2020

Mission of the Global Environment Business Strategic Planning Department to achieve Project EcoChallenge targets

1. To create global environmental businesses encompassing such wide-ranging fields as new energy resources and energy saving; to plan and draw up proposals for their strategic expansion; and to promote and support their commercialization
2. To formulate and support strategies aimed at achieving environmentally friendly product business expansion
3. To ensure company-wide planning and promotion of initiatives aimed at addressing global environmental issues internal and external to the Company

Related Information

- [For Our Customers: Initiatives for Developing Environmentally Friendly Products](#)
[Project EcoChallenge Promotion](#)



(2) Promotion of Life Cycle Management

Finding the Most Effective Way to Improve the Environment through the Practice and Promotion of Life Cycle Management

Matsumura: The most important issue confronting both society and the corporate sector today is how to ensure a transition to a sustainable recycling-based society. To this end, an equally important requirement is how to raise the efficiency of environmental measures. We believe that life cycle management (LCM) provides a solution to this issue. Underpinning the LCM premise is the life cycle concept* espoused under the United Nations Environmental Program (UNEP). Based on this concept, it is therefore imperative that we incorporate LCM throughout Toray's management and business activities.



*Life cycle concept: Entails companies, consumers and governmental authorities adopting a comprehensive approach when determining manufacturing and consumption methods; and public policies that incorporate environmental impact for each and every stage of a product's life cycle, from raw material procurement through production to application and disposal.

Harada: What then is the aggregate burden on the environment of all stages of a product's life cycle? What are the pros and cons of replacing old technology with new technology? LCM provides answers to these and other questions.

Matsumura: In broad terms, LCM is defined by two core attributes. Firstly, LCM provides the tools to scientifically and quantitatively assess a particular product or service's impact on the environment across its entire life cycle. Secondly, LCM allows us to focus not only on a single product or service, but also to compare and verify the efficacy of multiple measures for other products and services. As Mr. Harada has pointed out, with this information we can engage in beneficial discussion of topics, such as the levels of environmental contribution and CO₂ reduction compared with conventional products. Put simply, LCM allows us to shift from a partial optimization approach to a total optimization approach.

Nonaka: Actually, we have only adopted a partial life cycle assessment (LCA) * optimization approach to date. Regulations relating to CO₂ emissions are a good example: discussions generally tend to focus solely on the production stage. Generally, there should be more companies that consider CO₂ emission regulations across the entire life cycle of a product. Without employing a total optimization approach, a company cannot truly claim to have adopted the most effective environmental improvement measures.

*Life cycle assessment (LCA): A method to evaluate the environmental impact of each stage of a product's life cycle.

Matsumura: As Mr. Nonaka mentioned, we need to question whether this is indeed the best and most effective method. It is imperative that we also engage in cross-organizational LCM practices.

Ishii : The importance of LCM is generally accepted, so why is it not practiced more widely? I believe this is due to the significant hurdles faced when engaging in development activities that encroach into other companies' domains, as well as the substantial costs incurred. Demand for carbon fiber reinforced plastics (CFRPs) for use in the new energy resource, aircraft and automotive fields is increasing rapidly, where customers generally have a high awareness of the environment and a growing understanding of LCA. And yet, the response we tend to get from them focuses largely on economic concerns. I often hear comments such as: "Yes, LCA is a commendable initiative. It helps to secure improved fuel

efficiency. But, what about the price?"

Harada: This is a key point for Toray. Assuming that cost is a major hurdle for our ability to expand the environmentally friendly products business, should we incorporate life cycle cost (LCC) to our LCA considerations? In our efforts to ensure sustainable development, we must engage in discussions that encompass both environmental and economic concerns—this is critical to ascertaining a truly feasible and effective method. Our ultimate goal is to develop affordable products that reduce environmental load. In addition, only environmentally friendly products with perceivable benefits are likely to gain wide market acceptance. Not only will it become essential to quantify the positive attributes of a particular product, I expect the market will increasingly require a measure that will allow a comparative evaluation. In this regard, Toray's eco-efficiency analysis tool T-E2A* is expected to play a key role.



*T-E2A : TORAY Eco-Efficiency Analysis

Related Information

- [Global Environment Activities](#)
 - [1. Product Life Cycle Based Environmental Management](#)
 - [\(1\) Life cycle Management](#)



(3) Eco-Efficiency Analysis Tool: T-E2A

Development of the Eco-efficiency Analysis Tool T-E2A for Practicing LCM

Matsumura: The recently developed T-E2A is an LCM tool that facilitates the evaluation and comparison of multiple products from LCA and LCC perspectives. While the T-E2A indeed helps to quantitatively visualize environmentally friendly products, the addition of the aforementioned LCC economic concerns promote Toray's concept of sustainability. I agree with Mr. Ishii's assertion that the success of a business cannot be assured solely by how its operations reduce environmental impact. The business will not be feasible if it requires huge investments and its products end up being expensive.

Ishii: In accounting for both LCA and LCC concerns, T-E2A allows us to discuss the value of a product not only in conceptual terms, but also from a quantitative perspective. I believe this will be particularly useful in the CFRP field, where we are already developing forming technologies in partnership with customers. At various facilities including the Automotive & Aircraft Center in Nagoya, we are working together with customers in the aircraft, automotive, and other fields. I believe that joint development activities with our customers is the way forward for Toray Group, and have high expectations that T-E2A will contribute to extremely effective communication, allowing us to better provide customers with multiple solutions.

Our Aim is for T-E2A to Stimulate Lively Discussions

Matsumura: As personnel responsible for development, we also recognize T-E2A as one of several communication tools, and I hope that it will be used across a full range of worksites. In addition to CO₂, T-E2A has been set up to evaluate approximately 800 different categories of environmental impact. Not only is T-E2A an effective tool for analyzing the wide-ranging environmental issues of each customer, it also facilitates onsite discussion.

Minami: Without question, there are numerous companies struggling with the issue of environmental assessment. Just the other day, I came across a residential properties builder concerned with how to best convey the merits of the company's products regarding CO₂ reduction, to customers in an easy-to-understand manner. The T-E2A is an ideal tool in identifying solutions for this very issue.

Harada: T-E2A is not just an evaluation tool. It also helps to shape people's perceptions and awareness. Utilizing the T-E2A at engineering worksites, for example, will enable structural analysis of both the environmental impact of materials, as well as costs. This is likely to help identify methods for improving technology, which in turn will lead to enhancing competitive advantages from technology development and cost perspectives.



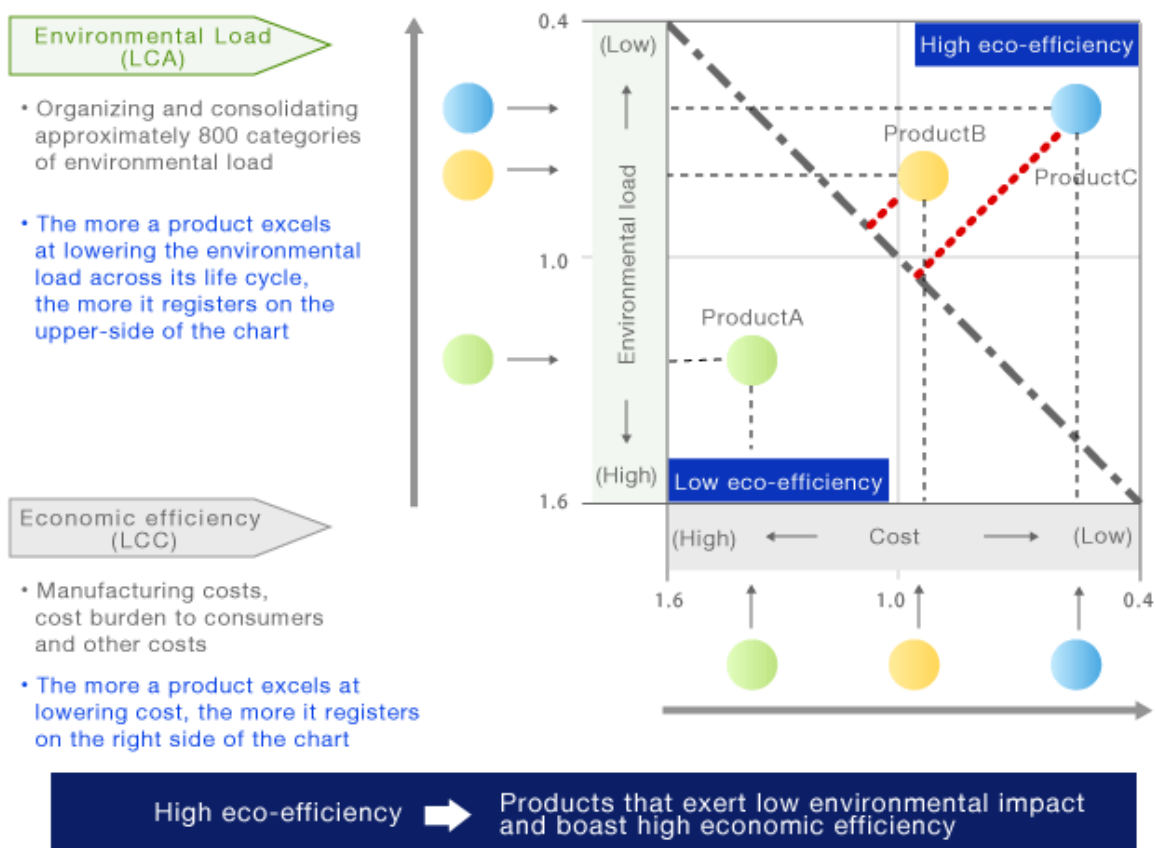
Oka: During the second half of FY 2009, in-house LCA analysis execution teams were established across the Company. At the same time, Toray launched LCA analysis of its principal products on an individual business basis. The goal is for employees to view environmental issues with the same importance as concerns for safety. I would hope that sales staff in

particular engage in marketing activities that place equal weight on price, quality and the environment. The establishment of a company-wide LCA framework and its growing awareness and practice throughout the Group is one of several major achievements attributable to the launch of the Global Environment Business Strategic Planning Department. Moving forward, Toray Group will engage in LCM based environmental management with LCA and T-E2A evaluations of its products and technologies. It is imperative that we become a corporate group that can offer the appropriate choice of materials to society. As the T-E2A tool facilitates innovation, we are confident that several interesting concepts and products will emerge during FY 2010. Moreover, we are committed to advancing the merits of LCM based environmental management beyond the Group, to industry and society at large. In promoting its wider acceptance and use, we see this as an effective method for realizing a sustainable society.

Eco-Efficiency Analysis Tool: T-E2A

T-E2A is a practical-application LCM tool developed by Toray in 2009. It enables users to evaluate and compare multiple products from both the LCA and LCC perspectives, and ultimately create an eco-efficiency map. The T-E2A is expected to facilitate new material and product development, manufacturing innovation, marketing, investment decisions, as well as the formulation of business strategies. It also allows users to adjust weighting and instantaneously plot the environmental impact of approximately 800 factors including CO₂ across a wide range of perspectives.

T-E2A eco-efficiency map (analysis diagram)



Related Information

- [Global Environment Activities](#)
1. [Product Life Cycle Based Environmental Management](#) (3) T-E2A
- [CSR Report Highlight 2009](#)
1. [Tackling Climate Change](#)
(2) [Establishment of Automotive & Aircraft Center and Our Technological Innovation](#)
- [Press Release](#)
[Toray, Daimler Agree to Jointly Develop CFRP Automobile Parts](#)

[To be adopted in Mercedes-Benz models\(April 28, 2010\)](#)

- [Press Release](#)
[Toray Signs Long-term Basic Supply Agreement with EADS \(Airbus\)](#)
[to Supply Carbon Fiber Prepreg \(May 10, 2010\)](#)

CSR Report Highlight 2010

2. Mitigating Water Resource Issues

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

Population increase and climate change are having a negative impact on the quality of water, while at the same time causing serious water shortages. Currently, among the approximately 6.5 billion people living on this planet, 2.6 billion live in regions without sewer systems or water treatment facilities, and 1.1 billion do not have access to safe drinking water.

Harnessing the benefits of its scalable water treatment membrane technology for households to major public facilities, Toray is contributing towards the supply of water to a variety of regions from the most isolated of islands to the largest of cities.

(1) Proprietary Seawater Desalination Technology for Solving Water Shortages on Small Islands

Tsurushima, an island 20 minutes by boat from Matsuyama City in Ehime Prefecture, is located in the Seto Inland Sea. Currently inhabited by about 80 people, the principal activities that support the island are fishing and cultivation of citrus fruits. During the early Meiji period, the Japanese government constructed the Tsurushima Lighthouse in 1873 as a symbol of the nation's entry into the modern maritime era. Used at the time as a residence for lighthouse keepers, it is currently designated a cultural property of Matsuyama City.

Since 2002, the island has been employing Toray's reverse osmosis (RO) membranes in conjunction with seawater desalination equipment. Residents of the island had long suffered a chronic shortage of water in the past. Household needs were met by water transported from the mainland together with rainwater collected in tanks, but despite the digging of wells, water supply was insufficient to meet daily requirements. For the most part, the well water also contained a high saline content and was contaminated by fungus. This gave rise to many disputes. Toward the end of the 1980's, an undersea pipe was laid from the mainland to the adjoining island Gogoshima. Water was transported from there by boat every second day, but it was problematic during inclement weather.

With the advancing age of Tsurushima's residents and little or no progress in resolving the island's water supply shortage, construction of a seawater desalination facility began in 2000 at the residents' strong request. With the water produced in this facility, the residents of Tsurushima can finally live without concerns about their water supply.



The well used in the past (above) and the seawater desalination facility (below).



In addition to Tsurushima, Toray's RO membranes are currently being used in seawater desalination equipment at Sekizen Village (presently Imabari City) on the islands of Okamurajima, Oogejima and Futagamijima.

Water is the Essence of Life. Constantly Aware of Water's Importance, We Hope to Contribute towards a Recycling-Based Island.

In the past, people took turns at fixed hours of the day to draw water

from the three wells on the island. At certain times, however, water levels were quite low and caused many disputes.

Upon first hearing that a desalination facility was to be constructed, I had doubts about the process of turning seawater into drinking water for use in the kitchen. But when I took a bath in the treated seawater, I was pleasantly surprised at how fresh and relaxing it was compared to well water.

Water truly is the essence of life for everyone on this island. Bearing in mind the importance of water, I hope to promote the reuse of purified sewage water for agriculture use in the future, to contribute towards a fully water recycling-based island.



Tamotsu Koike
Chairman of the Neighborhood
Association of Tsurushima

As a Leading Company in Water Treatment Membranes, Toray Continues to Develop Water Recycling Technologies

Toray first undertook research and development into water treatment membranes in 1968. Triggered by growth in the semiconductor business during the 1980s, as well as the commercialization of RO membranes to create ultra-pure water necessary in semiconductor manufacturing, Toray went on to expand applications in such fields as seawater and brackish water desalination, and water purification for use in wide-ranging industrial processes. In recent years, RO membranes have seen extensive application in areas related to wastewater reuse.



Toray's Romembra* RO membrane elements

Toray's RO membrane technology application track record

Year	1960	1970	1980	1990	2000 ~	
Research and development			1968	Commenced research into the development of RO membrane technology		
			1980	Commenced sale of RO membrane elements targeting ultra-pure water plants		
				2003	Developed RO membrane elements for wastewater reuse application	
Track record					2005	Developed high boron removal RO membrane element for seawater desalination application
					2000	Toray's RO membranes have been successfully employed at a plant in the Arabian Gulf in Saudi Arabia, where seawater desalination is highly challenging
					2001	Employed in the first large-scale seawater desalination plant in Trinidad and Tobago with a capacity to produce over 100,000 m ³ of fresh water per day
					2003	Products delivered to the world's largest wastewater reuse plant in Kuwait
					2005	Delivery of high boron removal RO membrane elements for seawater desalination to a plant in Singapore for the first time
					2009	Order received for supply to the world's largest seawater desalination plant in Algeria

Toray currently holds a leading share in the global RO membrane market. Based on the amount of cumulative orders received to date, seawater desalination facilities that use Toray's RO membranes have the capacity to produce more than 3.8 million m³ of fresh water per day (as of December 2009).

Due to its high concentration of salt and excessive levels of microorganisms, the desalination of seawater in the Arabian Gulf was extremely problematic. Nevertheless, in employing Toray's RO membranes, successful and stable operations were achieved in 2000. Other plants to extensively use the Company's RO membranes are located in Trinidad and Tobago, Singapore,



Seawater desalination plant in Trinidad and Tobago

Algeria and Saudi Arabia. More recently in 2009, a plant in Bahrain benefited from Toray's products. The decision to use the Company's RO membranes at a facility in Algeria has also been made, which on completion will be the largest facility of its kind in the world.

The market has been experiencing a sharp increase in demand for wastewater reuse in recent years. Toray was a pioneer in this area, placing considerable emphasis on the development of specially designed RO membranes. Beginning with the world's largest plant in Kuwait, a large number of facilities are utilizing Toray's special-purpose RO membranes in the effective reuse of wastewater.

*Romembra is a registered trademark of Toray Industries, Inc.

Related Information

- [Press Release](#)
[Toray Wins Order to Supply RO Membranes for World's Largest RO Seawater Desalination Plant in Algeria \(September 29, 2009\)](#)

CSR Report Highlight 2010

2. Mitigating Water Resource Issues

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

(2) Water Recycling: New Technology for Wastewater Reuse

Drinkable Water from Wastewater using RO Membranes

-New Technologies Hold the Key to a Water Recycling-based Society



© The Sembcorp NEWater Plant, Singapore

NEWater plant in Singapore that uses Toray's low fouling RO membrane

Industrialization and population growth are two major causes for the scarcity of water. The steady depletion of water resources and surge in wastewater are inevitable by-products of urban development. Under these circumstances, demand for technologies that facilitate the reuse of limited resources continues to grow, especially from inland areas.

Anticipating an increase in demand for wastewater reuse, Toray developed the RO membrane, which is particularly efficient in the treatment of polluted effluents. Toray's products are currently used in the world's largest wastewater reuse plant in Kuwait, which has the capacity to produce 320,000 m³ of fresh water per day. In addition to Singapore, a leader in the field of wastewater reuse, Toray's products are used in such countries as China and Australia in large-scale plants.



Wastewater reuse plant in Kuwait that uses Toray's low fouling RO membrane

RO membranes enable wastewater to be converted into water that can be used for household needs, and wastewater reuse technology requires less energy and cost to produce fresh drinking water compared to seawater desalination. The technology also enables water recycling for industrial and agricultural use. Currently, treated river and lake water as well as desalinated seawater is being used to meet household water supply needs. On this basis, wastewater is steadily emerging as a valuable water source.

MBR, a Space Efficient Membrane Wastewater Treatment Technology Produces High-Quality Water

In the wastewater treatment field, the membrane bioreactor (MBR), a wastewater treatment technology that combines the

use of a microfiltration (MF) membrane with the conventional activated sludge method, has been attracting growing interest in recent years. This interest is largely attributable to its lower space requirement to produce quality water. Recycled wastewater produced utilizing MBR technology can be discharged safely into rivers as effluent. It can also be used for agriculture and irrigation, and as cleaning water for toilets. In employing RO membranes to MBR technology, recycled wastewater can be used as drinking water or in sophisticated industrial processes.

In 2004, Toray commenced business development of its MBR-use MF membrane module in earnest. Utilizing proprietary technology, the module has demonstrated superior performance both in terms of permeability and stain resistance. Wastewater treatment facilities that employ MBR can be found around the world including Europe, the United States, China, the Middle East and Asia, with 230 plants producing a cumulative total of 400,000 m³ of treated wastewater per day. MBR was also adopted at sewage treatment facilities in the United Arab Emirates (UAE) and Saudi Arabia in 2009.



MF membrane modules for MBR (left) and the MBR plant in UAE (right)

Aspiring to Help Resolve the Water Issues of Southeast Asia

Recognizing that the survival of the nation was at stake, the Singapore government has taken steps to secure stable supplies of water and establish a self-sufficient structure and system since the 1980s. In addition to rainwater utilization and seawater desalination, public authorities have placed considerable emphasis on research into such fields as "NEWater" wastewater reuse.

As a member of Toray's global water treatment business sales team, I share water treatment membrane technology know-how and information with research officers in Singapore while endeavoring to address the sophisticated needs of customers.

Looking ahead, I plan to leverage the high level of expertise gained in the competitive Singapore market to develop opportunities and business globally.

Since Southeast Asia is a region prone to natural disasters such as tidal waves and floods, I hope to provide water treatment membrane technology as a part of the Group's humanitarian support in the future. Toray Group is aspiring to contribute to resolve the water resource issues of the region.



Yuhendy Leevin
Toray Asia Pte. Ltd.

Responsible for water treatment business sales support throughout the Southeast Asian region including Singapore, Thailand and Vietnam. Based at Toray Asia Pte. Ltd. in Singapore.

Related Information

- [Press Release](#)
[Toray to Supply Reverse Osmosis Membranes for the Second Largest Wastewater Recycling Plant in the World \(June 12, 2008\)](#)

CSR Report Highlight 2010

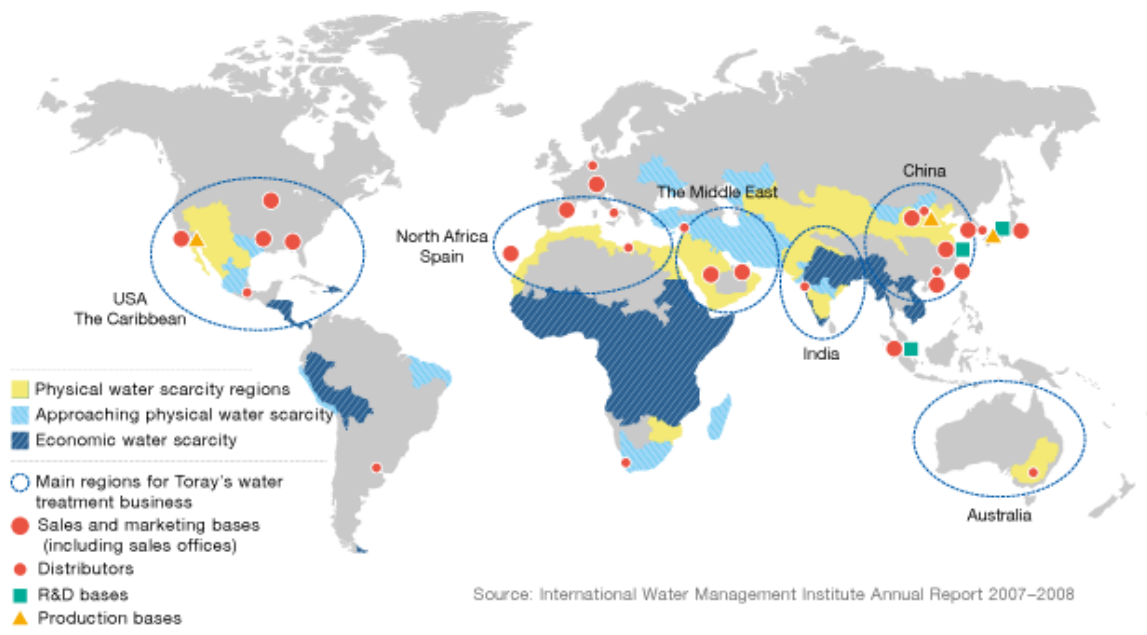
2. Mitigating Water Resource Issues

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

(3) Global Water Resource Issues and Expansion of Toray's Water Treatment Business

Toray's Global Water Treatment Business Structure and Systems Help Solve Issues around the World

In addition to countries and regions historically prone to water shortages such as the Middle East, the Caribbean coast, Spain and North Africa, other nations including India, China and Australia have experienced water resource issues in recent years. Toray's technicians and sales staff over the world are actively working to address this problem. The Company takes pride in its global sales teams set up in over 20 locations worldwide. Each team is well versed in its region's conditions, culture and language, and takes every care in proposing optimal water treatment membrane technology while considering specific local characteristics. Staff at each base ensures that technological information and advanced case study data are shared through detailed and thorough communication.



Ramping Up Production Capacity in Response to Increased Demand

Drawing on its established world-class water treatment membrane technologies, Toray Group actively engages in water treatment businesses both in Japan and overseas. The Group's efforts are particularly robust in RO membrane markets that recognize that issues such as water scarcity and the need for environmentally conscious solutions to water resource security will only grow in the future. Accordingly, Toray is anticipating a continued upswing in demand. To address this demand, Toray Group doubled its production capacity in Japan and the U.S. in 2007. With the commencement of operations at a new plant in China in 2010, plans are in place for the Group to boost aggregate production capacity by 1.5 times. This is expected to contribute significantly to the mass supply of water. Drawing on its advanced technological



A factory in the U.S. began operations in 2007



Groundbreaking ceremony for a factory in China held in August 2009

Establishment of Water Treatment Research Laboratories in China and Singapore

As a group that supports global research and technology development in the water treatment business, Toray engages in R&D activities through an organized structure comprising the Membrane Production Department, Global Environment Research Laboratories, and the Water Treatment and Membrane Technical Department. Every effort is made to coordinate with water treatment subsidiaries and affiliates both in Japan and overseas as well as the Toray Research Center Inc. (TRC), which is recognized domestically as a leading company in analytical technology.

Overseas, Toray Group has established a water treatment research laboratory within Toray Fibers & Textiles Research Laboratories (China) Co. Ltd., in Shanghai. The laboratory engages in surveys, as well as research and development in water treatment membrane technology and water treatment products suitable for China. Bolstering its network of research facilities, Toray Group newly established the Toray Singapore Water Research Center (TSWRC) in Singapore in August 2009. The Center has commenced joint research with Nanyang Technological University.



The TSWRC opening ceremony held in June 2010



Research laboratory in TSWRC

Related Information

- [Press Release](#)
[Inauguration of Toray Singapore Water Research Center \(June 29, 2010\)](#)
- [Press Release](#)
[Toray, China BlueStar Establishes Water Treatment Joint Venture in China, to Hold Groundbreaking Ceremony \(August 25, 2009\)](#)

CSR Report Highlight 2010

3. CSR Initiatives in Education

Helping to foster future generations through science education support



Toray Group engages in social contribution activities over a wide range of fields in accordance with its Corporate Mission that states: "For society: To establish ties and develop mutual trust as a responsible corporate citizen."

The Group has a longstanding history in science and technology promotion and providing science education support, through financial assistance to the Toray Science Foundations in Japan and overseas. Amid increasingly intense international competition in scientific and technological development, the growing lack of interest in science among children is becoming a major issue. In this regard, Toray Group recognizes the education of future generations as one of its corporate social responsibilities. The Group will work with society towards addressing this concern.

Developing Study Programs and Providing Classes that Feature Toray Products and Technologies

As a part of the fiscal 2007 Laboratory Sciences Project of Japan's Ministry of Economy, Trade and Industry, Toray developed a science and environment education program based on the theme "Water Filtration and the Global Environment." A joint activity between Toray employees and teachers, the program comprises advanced classes mainly for fifth grade elementary school students. During FY 2009, classes were held at three schools in Tokyo, two in Chiba, one in Shizuoka and two in Osaka.



Laboratory science classes on water filtration. Hand-made tools are used to examine water purification by Toray's hollow fiber membranes.

Moved by Children's Enthusiasm

Harnessing the strengths of its products and technologies in combination with employees' expertise and enthusiasm, Toray Group has been conducting classroom activities since FY 2007 to teach the value and joy of science to children. While there are limits to what a corporate entity can achieve, the initiative embodies the Group's aspiration to assist teachers at the classroom level by introducing children to technologies that support today's social infrastructure.

Seeing the happy and enthusiastic children gave me a strong sense of achievement. Drawing on the feedback of teachers and students, we will endeavor to continuously improve the program. Our goals are to make classes easier to understand while expanding the activities.



Kazuaki Takabayashi
General Manager,
Corporate Marketing and Planning
Department,
Toray Industries, Inc.

Supporting "Science Camp," a Hands-On Science and Technology Program

Toray regularly supports "Science Camp," a program sponsored by the Japan Science and Technology Agency. Based on the theme "Improving the Global Environment in the 21st Century through Water Treatment and Separation Membrane Technology," Toray accepted eight high school students in FY 2009. In addition to preparing and evaluating the separation properties and performance of microfiltration membranes, students undertook an analysis of filtrate water, examined the structures of membranes and engaged in discussions focusing on environmental issues.



High school students evaluating the performance of microfiltration membranes at Toray's Global Environment Research Laboratories

Supporting the International Science Olympiads

Toray has long been providing support to the International Science Olympiads through donations to the Japan Science Foundation. Furthermore, the Company contributed to the 20th International Biology Olympiad in July 2009 and the 42nd International Chemistry Olympiad in July 2010, both of which were held in Japan for the first time. Toray encourages the younger generation to participate in international competitions.

The Toray Science Education Prize: Recognizing Creative and Innovative Contributions to Effective Science Education

As a part of character-building and encouragement endeavors carried out by the Toray Group in science education, an annual ceremony is held to present the Minister of Education, Culture, Sports, Science and Technology Award; the Toray Science Education Prize; and several honorable mention and encouragement awards to junior and senior high school teachers who have shown outstanding creativity and innovation. A booklet is published concurrently with details of prizewinners' works and distributed free-of-charge to junior and senior high schools throughout Japan.



One of the awarded works was a device that observes the propagation of waves. By using an LED to light two circular wave patterns from below the water's surface, ripples are projected and enlarged onto the ceiling.

Using Self-Invented Laboratory Equipment to Convey the Joy and Pleasure of Learning to Students

I couldn't believe it when I was told that I had received an award. It was only when attending the awards ceremony that it finally hit me. Even now, I am overwhelmed with joy.

Looking back, I recall the rush of excitement when I first saw the collection of prizewinners' works. It was a treat to discover that so many teachers across the nation were engaged in such wide-ranging activities. Inspired by the challenge, I decided to apply, and after a while I came up with some ideas. After submitting my application, I



Osamu Nakamura

received a number of incisive comments from the panel of judges. This only lifted my appreciation of the high esteem in which the award is held. For teachers, such a commendation is indeed a source of great encouragement, providing the impetus for harder work and effort.

I find great pleasure in the art of making things . In introducing this simple idea and device to my classes, I hope to convey to my students the joy and pleasure of making things—the learning process is best served when they are interested. Moving forward, I will continue to promote science education through methods that are enjoyable for students.

Tochigi Prefectural Moka Girls' Senior High School

The Minister of Education, Culture, Sports, Science and Technology Award of the Toray Science Education Prize in FY2007

The award winning theme, "Development of General-Purpose Physics Laboratory Equipment and its Application in Wave Experiment Device " was based on high school physics.

Related Information

- [Toray Science Education Prize](#)

Promoting Science and Technology Development Through the Toray Science Foundation

The Toray Science Foundation was established in 1960 and is regarded as a pioneering initiative by the private sector. Between 1993 and 1994, foundations were established in Malaysia, Thailand and Indonesia. In addition to providing awards and grants to researchers and teachers, the Foundation is active in promoting science and technology development both in Japan and overseas.

Principal activities of the Toray Science Foundation:

1. Toray Science and Technology Prize
(An award honoring outstanding achievements in science and technology)
2. Toray Science and Technology Grant
(Grants to young researchers engaged in basic research projects in science and technology)
3. Toray Science Education Prize
(A prize presented to junior and senior high school science teachers)
4. Science Lecture Meetings



The 50th Toray Science Foundation Award presentation ceremony

Related Information

- [Toray Science Foundation](#)