#### ABOUT THE COVER



## An Indigenous Forest Raised from Acorns— The Toray Mishima Plant Forest

In the autumn of 1973, 4,000 Toray employees kicked off the company's project to create a forest reserve in the area surrounding the Mishima Plant by collecting fallen acorns from area temples, shrines and mountains.

Under the guidance of Yokohama National University bioecologist Professor Akira Miyawaki (now professor emeritus), the acorns they gathered were raised to seedlings at each workplace and then planted by the employees themselves. Miyawaki argues that indigenous plant species are best able to survive and prosper even when earthquakes, fires or landslides bring difficult conditions—that the ancient groves of trees remaining at temples and shrines around the country are Japan's true botanical heritage, capable of covering the earth even without excessive human intervention.

Today, over thirty years later, the laurel, camphor, white oak and other trees that were planted have grown into a magnificent grove covering more than 10,000 square meters.

Toray's 13 offices and plants including the Mishima Plant, have worked towards environmental preservation through their contributions to the afforestation of approximately 190,000 square meters in total, using methods akin to that of the ancient groves.

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

Nihonbashi Mitsui Tower 1-1 Nihonbashi-Muromachi 2-chome, Chuo-ku, Tokyo 103-8666, JAPAN

Telephone: 81 (3) 3245-5111 Telephone: 81 (3) 3245-5115 (Product Information)

Facsimile: 81 (3) 3245-5115 (Product Information

The information in this report is available on our website: http://www.toray.com

Contact: CSR Operations Department Telephone: 81 (3) 3245-5143 Facsimile: 81 (3) 3245-5134

Issued: December 2007 Next scheduled issue: December 2008

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



Dow Jones Sustainability Indexes

MS-SRI, the Morningstar Socially Responsible Investment Index, tracks the share performance of 150 selected Japanese companies based on their commitment to CSR.



The KLD Global Climate 100SM Index is made up of companies that are leaders in providing solutions to global warming and offsetting its long-term effects.

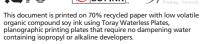


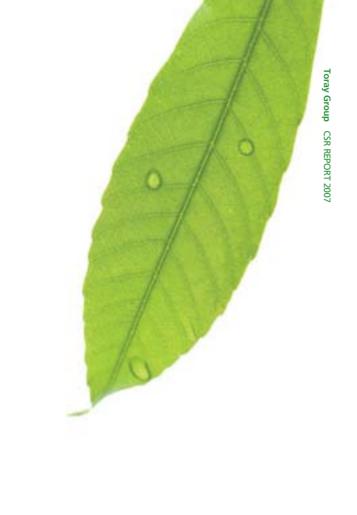
**Toray Group** 

CSR REPORT 2007

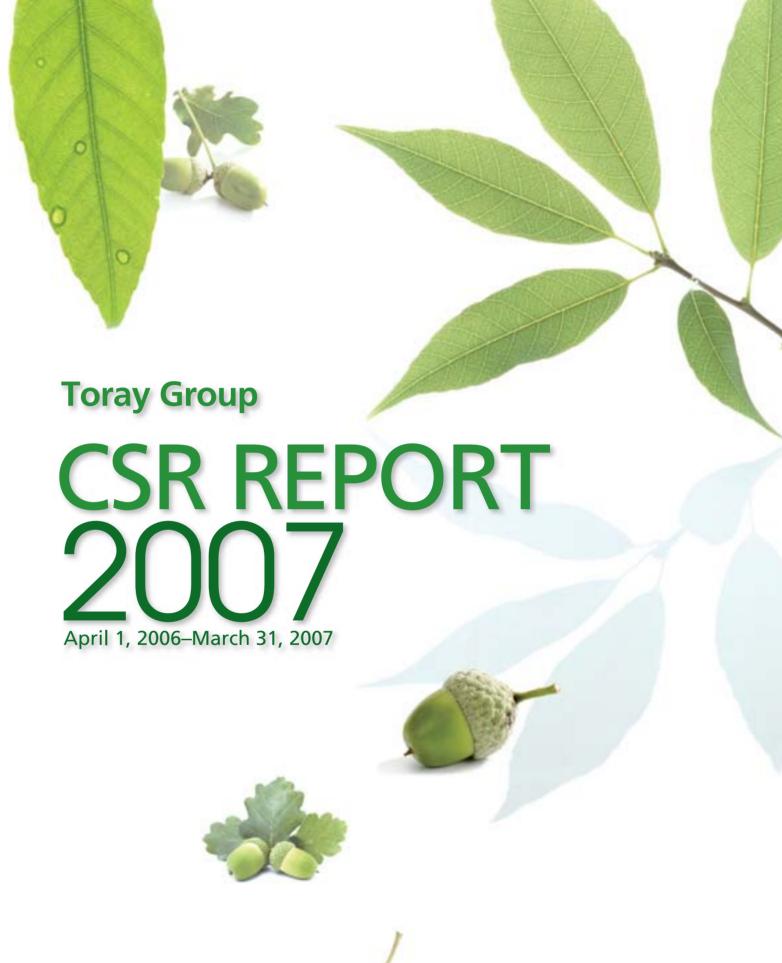
















## Innovation by Chemistry

#### The thinking behind our corporate slogan

Having marked the 80th anniversary of our founding in 2006, we at Toray Group believe that building a stronger management foundation and continuing to evolve through continuous innovation is increasingly important to enable us to achieve sustainable growth, at the same time as we are continuing to adapt quickly to changes in the external environment.

As we pursue new approaches, strategies and bold policies, we look to continue on our path of dynamic evolution and sustainable growth based on the keyword "Innovation." Toray Group incorporated these ambitions into a new long-term corporate vision called "AP-Innovation TORAY 21" that was launched in April 2006. The plan adopts "Innovation by Chemistry" as our corporate slogan and leads the Group to becoming "a global top company of advanced materials" within 10 years by pursuing technological innovation with "Chemistry" as the its core.

We will rise to the challenge of "Innovation" not only in technology, but also in every aspect of our corporate activities as we realize our corporate philosophy of "contributing to society through the creation of new values with innovative ideas, technologies and products" by putting the ideal of "Innovation" into practice.

## **Management Philosophy**

#### **Corporate Philosophy**

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

#### **Corporate Missions**

#### •For our customers

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

#### For our employees

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

#### For our shareholders

To provide our shareholders with dependable and trustworthy management

#### For society

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

#### **Corporate Guiding Principles**

#### Safety and Environment

Placing top priority on safety, accident prevention and environmental preservation, ensuring the safety and health of our employees, our customers and local communities, and actively promoting environmental preservation

#### Ethics and Fairness

Obtaining the trust of society and meeting the expectations by acting fairly while maintaining high ethical standards and a strong sense of responsibility and maintaining transparency in management

#### Customer-focus

Providing customers with new values and solutions, and achieving sustainable growth together

#### Innovation

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

#### Fieldwork and Initiative

Strengthening fieldwork abilities and initiative, the foundations of our corporate activities, through consistently learning from one another and constant self-driven efforts

#### Global Competitiveness

Pursuing competitiveness through global top quality standards and cost management, and achieving growth and expansion in the global marketplace

#### Global Coalition

Developing global coalition through integrated internal linkages and strategic alliances with external parties

#### • Emphasis on Human Resources

Providing an environment where employees find value in their work, and building positive, energetic relationships between people and the organization (Adopted April 1995)

## Companies Covered in this

The environmental reporting in this CSR Repor covers Toray Industries, Inc., as well as Toray Group manufacturing companies in Japan and overseas that conduct safety, health, accident prevention, and environmental audits. Safety data not only include the manufacturing compa-nies listed below but also non-manufacturing companies. Statistics are presented for Toray Industries, Inc. as well as 62 Japanese sub sidiaries and affiliates and 33 overseas sub-sidiaries and affiliates.

#### Japanese Subsidiaries and Affiliates 26 Companies

Du Pont-Toray Co., Ltd. Toray PEF Products Inc Opelontex Co., Ltd.
Ogaki Fuso Spinning Co., Ltd.
Toray Textiles, Inc.
Inami Textiles, Inc. Matsumoto Textiles Co. Ltd. Toray Coatex Co., Ltd.
Towa Orimono Co., Ltd. Toray Monofilament Co., Ltd. Toyo Tire Cord Co., Ltd.
Toyo Flocking Co., Ltd.
Maruichi Fiber Co., Ltd. Sowa Textile Co., Ltd. Toyo Plastic Seiko Co., Ltd.

Toray Fine Chemicals Co., Toray ACE Co., Ltd. Toray Engineering Co., Ltd

Toray Advanced Film Co.

Toray Precision Co., Ltd. Suido Kiko Kaisha, Ltd. Toray Medical Co., Ltd. Toray Research Center, In

#### Overseas Subsidiaries and Affiliates 29 Companies

Toray Plastics (America), Inc. Toray Resin Co. Toray Carbon Fibers America, Inc. Toray Composites (America), Inc. Toray Fluorofibers (America), Inc. Toray Textiles Europe Ltd. Alcantara S.p.A. Toray Textiles Central Europe s.r.o.
Toray Plastics Europe S.A.
Société des Fibres de Carbone S.A. P.T. Acryl Textile Mills P.T. Century Textile Industry Tbk
P.T. Easterntex
P.T. Indonesia Synthetic Textile Mills P.T. Indonesia Toray Synthetics Luckytex (Thailand) Public Co., Ltd. Thai Toray Textile Mills Public Co., Ltd. Thai Toray Synthetics Co., Ltd. Penfahric Sdn Berhad Penfibre Sdn. Berhad Toray Plastics (Malaysia) Sdn. Berhad Toray Fibers (Nantong) Co., Ltd. Toray Sakai Weaving & Dyeing (Nantong) Co., Ltd.
Toray Fibers & Textiles Research Laboratories (Ch TALTEX (Zhuhai) Ltd.

company of Toray Group

Toray Plastics (Shenzhen) Ltd.
Toray Film Products (Zhongshan) Ltd.
Toray Sanko Precision (Zhongshan) Ltd.

Toray Saehan Inc. (Korea)

## Corporate Slogan and Management Philosophy .....

Contents

Message from the President	04
Toray Group Overview	
Business Activities: Through the Practice of Innovation	06
History: Toray's 80 Years and Innovation	80
Product Areas: Toray Products, Surprisingly Nearby	10
CSR Activity Highlights	42
Action on Global Warming Initiatives	]2
Activities for Overcoming Water Resource Issues	14
Pursing the Advancement of Women and Work-life Balance	16
Toray Group CSR: Today and Tomorrow	18
CSR Guideline 1	
Basic Policy & Enhance Corporate Governance and Management Transparency	20
CSR Guideline 2	
Uphold Corporate Ethics and Comply with Laws and Regulations	22
CSR Guideline 3	
Emphasize Safety, Accident Prevention, and Environmental Preservation  CSR Guideline 4	<b>∠</b> 4
Ensure Product Safety and Quality	36
CSR Guideline 5	
Performance Management	38
USB Guideline 6	
Promote Dialogue with Stakeholders	40
Step Up Environmental and Recycling Efforts	44
USK fallideline 8	
Secure and Train Personnel and Promote Human Rights	48
CSR Guideline 9 Cooperate with Suppliers in their Environmental and Social Initiatives	52
CSR Guideline 10	
Pursue Social Initiatives	54
Environmentally Friendly Products and Technologies	56
Environmental Impact Overview	58
Chemical Substance Emissions and Transfer Data	59
Environmental Data for 12 Toray Plants	60
External Commendations	62
External Evaluation	64
Third Party Comments	65
Global Reporting Initiative Guidelines Reference Chart	66
Chronology of CSR Initiatives	67

#### **Editorial Policy**

In 2003, Toray Group created the CSR Committee and formulated a three-year CSR road map. In December 2004, the CSR Committee drew up the Group's CSR Guidelines and created respective Action Programs. Since then, CSR Reports are published annually to review CSR activities and initiatives in accordance with the ten guidelines.

As part of an effort to rise to the challenge of "Innovation" in every domain of our corporate activities, Toray Group is pursuing "CSR Innovation" as a priority management issue. For these reasons, this Report incorporates "Innovation" as one of its themes in describing progress in Toray Group's CSR activities.

Toray and 55 manufacturing subsidiaries and affiliates that conduct safety, health, accident prevention, and environmental audits as listed

Primarily Toray, with coverage of subsidiaries and affiliates according to the status of their initiatives in various areas Toray and 242 consolidated companies (a total of 243 companies)

#### Target period

FY 2006 (April 1, 2006, to March 31, 2007)

This Report also includes more recent information up to June 2007

Environmental Reporting Guidelines (2003 Edition), published by Japan's Ministry of the Environment Sustainability Reporting Guidelines 2002, issued by the Global Reporting Initiative

This Report complies with the Japan Responsible Care Council's Responsible Care Code.



.02

## **Message from the President**

# Through "Innovation," Toray Group strives to high value to all stakeholders by playing a

# become a business group offering leading role in contributing to society.



#### Introduction

In 1926, Toray was originally founded under the name Toyo Rayon as a manufacturer of the synthetic fiber viscous rayon. We celebrated our 80th anniversary in 2006.

Since our founding, our corporate culture has been forged under the concept of "Safety First" along with the fundamental philosophy of "aiming for strength and discipline, we place importance on the development of our human resources and our contribution to society," reflecting our tradition of "R&D-centered management" and "management with a pioneering spirit."

This management philosophy bore fruit in the commercialization of the three major synthetic fibers of nylon, polyester, and acrylic. Since 1970, when the company name was changed to Toray, we have progressively expanded operations to include plastic resins, films, and chemical products, as well as carbon fiber composite materials, IT-related products, pharmaceuticals and medical products, water treatment, and more.

### **Using History and Experience as Assets**

As Toray Group looks toward the future, our history and experience provide numerous assets to be deployed and utilized. One of these is our "power of know-how accumulated in the workplace" in R&D, manufacturing technologies, and marketing and sales; another is our "power of management" with a high degree of flexibility to adapt to changing times to promote greater progress.

One form taken by this "power of know-how accumulated in the workplace" is the core technology cultivated by the business of synthetic fibers, which are organic synthetic chemistry, polymer chemistry, and biotechnology. Furthermore, we have broadened the domain of our proprietary technology by integrating leading-edge nanotechnology with these core technologies and thereby accelerated the development of new products and technologies. Other important assets include manufacturing technologies and capabilities which have enabled us to steadily improve quality and productivity with an emphasis on the details, and sales and marketing capability in the form of a corporate culture that seeks to provide new value from the customer's

Our management capability incorporates three significant aspects. First is our adoption of a stance that seeks to strengthen our profit base through self-improvement effort. Through the company's daily operations we have created a robust business model that is not easily affected

by inevitable economic fluctuations; you might call it a "self-improvement management style." In doing so we have sought to incorporate what we believe to be the most important aspect of management capability, namely, the wisdom to take steps to cope with difficult times while avoiding complacency in times of prosperity.

The second aspect of our management capability is the "development of global operations." Starting with fibers & textiles, Toray Group has been developing its businesses on a global scale for more than 50 years. Subsequently we expanded our global operations in plastic resins and films, followed by carbon fiber composite materials, which are increasingly used as structural materials for aircraft. As a result of these efforts, we are now securing significant profits in regions of the world that are experiencing growth in demand.

The third aspect is the practice of adhering at all times to the approach of "continual cultivation of strategic businesses," a strategy for facilitating sustainable growth by consistently developing medium- and long-term earnings pillar. Specifically, we are moving to effect a strategic expansion of our businesses in carbon fiber composite materials and IT-related products as drivers of near-term profitability, while cultivating operations that are expected to develop into the pillars of future business: life science including pharmaceuticals and medical products; our water treatment, which is closely involved in resolving the planet's environmental challenges; and new businesses utilizing non-petrochemical raw materials.

### **Environmental Change** as a Positive Opportunity

Today, the social and economic environment in which Toray Group operates continues to change at an extraordinary pace. In all manufacturing industries, there is unprecedented competition on a global scale, as well as soaring prices in crude oil. Critical issues such as energy and the natural resource agenda, the global environment problems, and rising demand for corporate social responsibility, require each of us to effectively respond to these diverse changes.

We see our most important task as coping with these changes in the external environment and treating them as opportunities for securing sustainable growth. For this reason, we continue to take steps to create a strong management foundation for our operations while pursuing "Innovation" to create new value. This forward-looking evolution is of great importance to our future.

Toray Group celebrated its 80th anniversary in 2006,

formulating the long-term corporate vision "AP-Innovation TORAY 21" with the goal of securing sustainable growth and further leap. We have adopted the corporate slogan of "Innovation by Chemistry" based on our corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products" and reflecting our aim of becoming "a global top company of advanced materials."

In addition to pursuing technological innovation, we seek to achieve high profitability, evolve dynamically, and grow sustainably by rising to the challenge of "Innovation" in every aspect of our corporate activities.

#### **Toward More Active CSR Initiatives**

In addition to seeking to expand our businesses and increase profitability, we are dedicated to the principles of corporate social responsibility through the active pursuit of safety, accident prevention, environmental preservation, corporate ethics, and legal compliance programs. Toray Group has always practiced management with an emphasis on social responsibility, and we believe that playing an active role through social contributions and striving to offer high value to all stakeholders are important factors to fulfill our long-term corporate vision.

I am pleased to reaffirm our commitment to achieving bold yet sustainable development in the 21st century by building a robust management foundation and evolving through the theme of "Innovation."

For corporations, the fulfillment of CSR is a constant imperative. This CSR Report summarizes the accomplishments of Toray Group's CSR activities during FY 2006, and I am confident that it will enable you to gain an understanding of how we are making steady, step-by-step progress.

I look forward to your understanding and support for Toray Group's corporate activities, now and in the future.

September 2007

President, CEO and COO, **Representative Director** Toray Industries, Inc.

Anlugati Salatilia

# Through the Practice of Innovation

#### Overview of Toray Industries, Inc. (as of March 31, 2007)

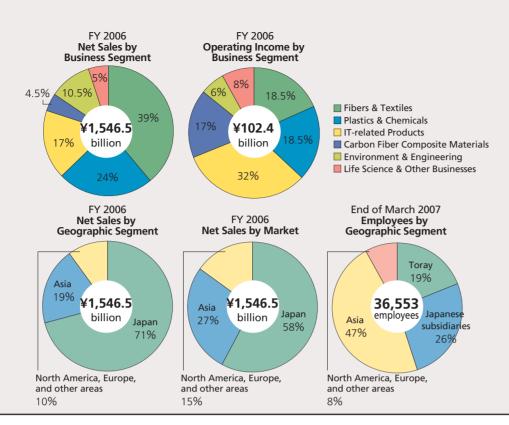
Established	January 1926
Paid-in capital	¥96,937,230,771
Number of employees	36,553 (consolidated)

#### Number of consolidated companies (as of March 31, 2007)

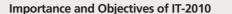
	Japan	Overseas	Total
Consolidated subsidiaries	67	77	144
Equity method subsidiaries	35	22	57
Equity method affiliates	16	25	41
Total	118	124	242

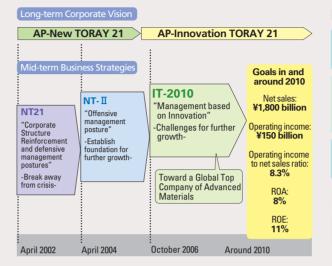
## **Consolidated business results**

(FY 2006)	Million yen
Net sales	1,546,461
Operating income	102,423
Ordinary income	97,520
Net income	58,577



#### Overview of the Mid-term Business Strategies "Project Innovation TORAY 2010 (IT-2010)"





#### **Five Innovations and Eight Projects**



#### **Toray Group Business Strategy and Current Status**

Since 2002, we have been working to strengthen our business constitution and reform our business structures through the "Project NT21" and "Project NT-II" mid-term management reform programs. Moreover, we have been aggressively promoting projects such as "Expanding Advanced Material Businesses", "Expanding No. 1 Businesses", and "Expanding Businesses Outside Japan," and these efforts have underpinned a process of steady recovery and improvement in our business results.

Toray Group is involved in a wide range of business activities. Throughout all of our operations we have sought to develop and cultivate markets by taking advantage of core technologies — organic synthetic chemistry, polymer chemistry, biotechnology, and nanotechnology — as well as advanced materials developed by combining these technologies. It is a distinctive characteristic of Toray Group that we have deployed these businesses globally.

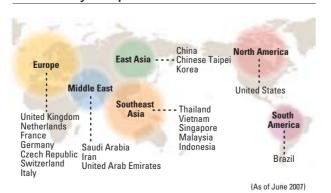
Even as our Foundation Businesses in "Fibers & Textiles" and "Plastics & Chemicals" continue to secure earnings, we have broadened our focus on what we term Strategically Expanding Businesses, including "IT-related Products" and "Carbon Fiber Composite Materials," to augment its income and profit. At the same time, we have grown Strategically Developing Businesses, nextgeneration businesses in areas such as "Environment" and "Life Science" that will drive sustainable growth in the future.

#### **Toray Group Global Network**

With bases in 21 countries and regions including Japan, Toray Group continues to expand globally. In our Foundation Businesses of "Fibers & Textiles" and "Plastics & Chemicals," global operations utilizing a worldwide network of production facilities anchor a fundamental strategy for ensuring earnings stability.

We are also developing Strategically Expanding Businesses that focus on advanced materials worldwide with close links to growing markets, including "IT-related Products" that are expanding actively in Korea and "Carbon Fiber Composite Materials" in which we are simultaneously expanding manufacturing capacity in the three key regions of Japan, the U.S., and Europe.

#### Main Countries and Regions with Toray Group Subsidiaries and Affiliates



#### **Long-term Corporate Vision and** Mid-term Business Strategies

In April 2006, Toray Group formulated a new longterm corporate vision called "AP-Innovation TORAY 21" designed to ensure sustainable growth and new advances. In October of the same year we developed the mid-term business strategies IT-2010 to rise to the challenge of "Innovation" not only in technology, but in every aspect of our corporate activities, while creating new value and actively contributing to sustainable development and environmental preservation.

IT-2010 identifies the development of the five innovations of business structure, technologies, competitiveness, business-awareness, and CSR as key challenges while seeking to dramatically transform our management with the "Innovation" theme by implementing eight company-wide projects.

We aim to realize our corporate philosophy of "contributing to society through the creation of new values with innovative ideas, technologies and products" by practicing "Innovation" based on the "AP-Innovation TORAY 21" long-term corporate vision and IT-2010 mid-term business strategies.

## "IT-2010" Basic Strategies

#### 1. Transformation to a highly profitable business group

(1) Transforming to a highly profitable business group -Transform to a highly profitable -Improve capital efficiency.

#### (2) Expanding Strategically Expanding Businesses (profit growth driver)

Increase profits by expanding Strategically Expanding Businesses while securing stable profit by Foundation Businesses.

#### (3) Expanding Strategically Developing Businesses (next profit growth driver)

#### (4) Advancing business structure reform

-Advance business structure reform by expanding Strategically Expanding Businesses and Strategically Developing Businesses.

#### (5) Expanding advanced materials

terial businesses in every segment and increase their ratio of net sales

#### 2. Expansion of advanced materials in four maior growing business fields

#### (1) Information / Telecommunications / Electronics

ness expansion in the digital network-related product markets including flat panel display televisions, cellular phones, and personal computers.

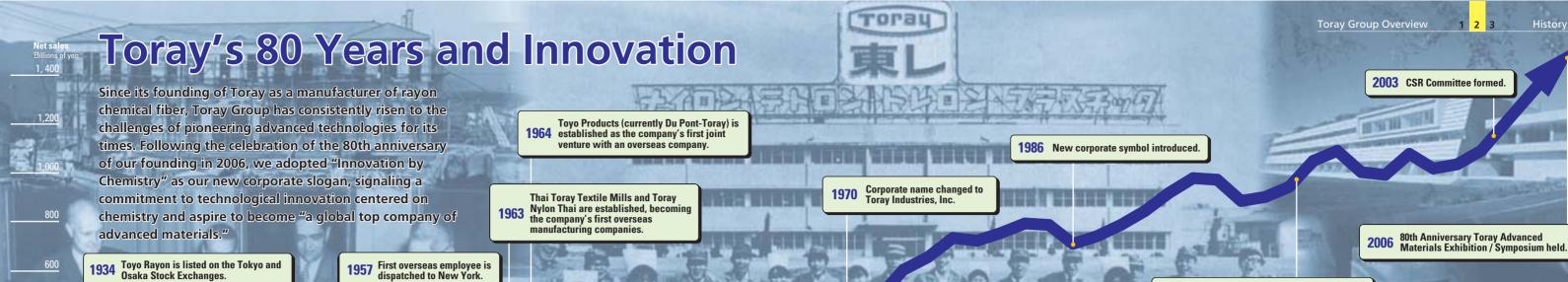
#### (2) Automobiles / Aircraft

Development of products to meet expanding markets in hybrid cars and car electronics. -Expansion of application parts by widening advanced functional availability of carbon fiber composite materials and engineering plastics.

Creation of innovative bio-tools through bio/nano-technological integration

#### (4) Environment / Water-related / Energy

- non-petrochemical raw materials.
- -Global expansion of water treatment businesses with a core of high-performance separation membranes.
- -Development of new materials for next-generation energy systems including solar cells, fuel cells, and wind power generation.



1995 New management philosophy formulated

1926 Toyo Rayon Co., Ltd., founded

**1955** Company milestones Company creed "Toyo Rayon

The trading company Trilon is founded, becoming Toray's first overseas investment.

> **1951** Fibers & Textiles Toyo Rayon launches Japan's

serves society" adopted.



1941 Fibers & Textiles Toyo Rayon succeeds in synthesizing Nylon 6, a first in Japan.

1927 Fibers & Textiles

Production of rayon begins at Toray Shiga Plant.





**1966** Company milestones Timecards are abandoned in

1963 Fibers & Textiles Toyo Rayon starts production of Japan's



**1962** Company milestones

Toyo Rayon School of Technology and Business pace of technological innovation (name changed

1960 Social contributions Tovo Rayon Science Foundation (now Toray Science Foundation), a pioneering private research support organization, is founded.

**1958** Company milestones Toyo Rayon begins promoting female employees to management positions, a move that is ahead of its time in Japan.

favor of employee self-reporting of work attendance.

first modified cross-section silky-touch Tetoron filament Sillook\*



opens to train technicians to deal with the rapid to Gisen School in 1978).

> 1971 Fibers & Textiles Toray starts to market Ecsaine\*, the world's first suede-like man-made microfibers.



1981 Amenity Toray introduces Breath-0\* Japan's first soft contact lens designed for continuous wear.



1979 Electronics & Information Materials Toray introduces the Toray Waterless Plate\*. the world's first printing plate material that does not generate liquid waste.

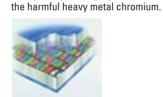
1974 Company milestones

Toray introduces a maternity leave program to help employees balance work and family life. anticipating the subsequent legislation of such programs in 1991.

**1971** Carbon Fiber Composite Materials Toray starts production of world's first PAN-based carbon fiber Torayca\*



1993 Electronics & Information Materials Toray starts to market Toptical\*, a color filter for liquid crystal displays that does not use



1992 Pharmaceuticals & Medical Products Toray begins synthesizing and marketing Dorner\*, the world's first prostacyclin (PGI<sub>2</sub>) derivative formulated for oral administration.



1985 Pharmaceuticals & Medical Products Toray starts to market Feron\*, the world's first natural interferon  $\mathcal{B}$  preparation.



2006 Pharmaceuticals & Medical Products

Toray starts to market 3D-Gene\*, an ultra high-sensitive DNA chip that opens up the possibility of tailor-made clinical treatments.



2005 Water Treatment

Southeast Asia's largest water treatment facility commence operation in Singapore using the advanced Toray Romembra\* reverse osmosis membrane elements.

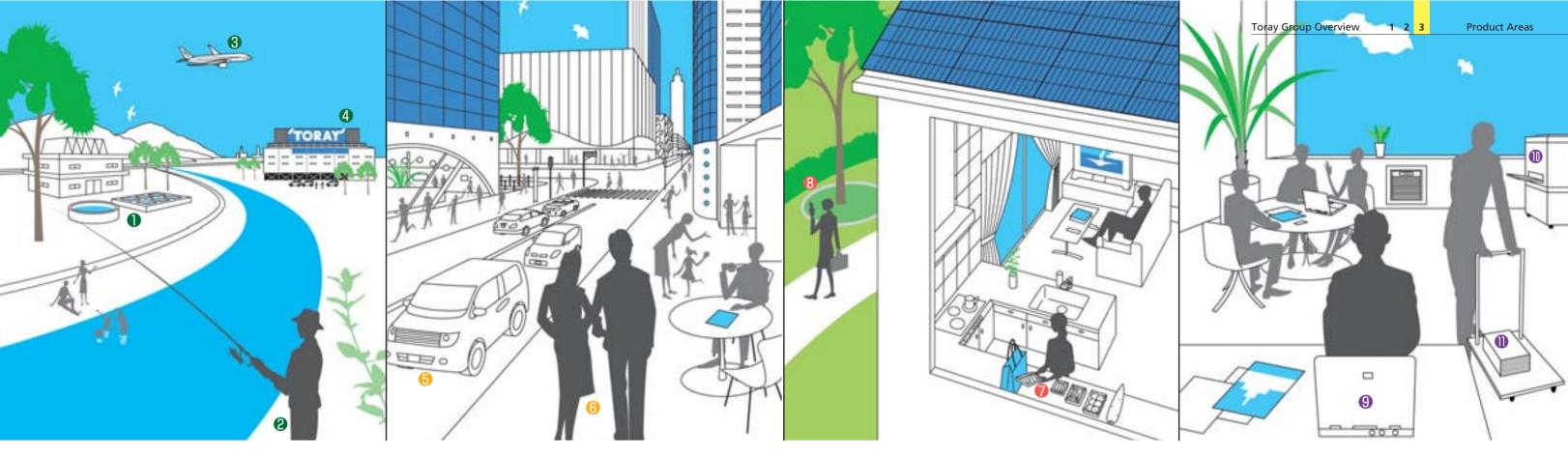
2004 Plastics Toray develops the world's first flexible polylactic acid (PLA) film.



1996 Fibers & Textiles Toray starts to market Fieldmate\* biodegradable fishing line.







# **Toray Products, Surprisingly Nearby**

Toray products support your life and make it secure, creating a picture of your future. From the very beginning, Toray fibers clothe people, serving to protect them and helping them realize their dreams.

Toray materials have a virtually endless array of uses.

Ultimately, Toray products evolve with the times to create new lifestyle choices.

#### **Outdoors**

#### Water treatment facilities

Water treatment facilities use a variety of advanced separation membranes to convert seawater into freshwater and to help make effective use of water resources by treating and recycling tap water and



Seawater desalination plant (Okinawa)

#### **2**Fishing line

The world's first biodegradable fishing line. Fieldmate\* reverts to nature by breaking down into water and carbon dioxide gas due to the biological activity of bacteria found in water and soil



Fieldmate\* biodegradable fishing line

#### **3** Aircraft materials

Use of the carbon fiber composite material Toravca\* in airframe components enables dramatic improvements in fuel economy and passenger comfort for next-generation aircraft



Artist image of the next-generation

#### **4** Solar cells

Lumirror\* polyester film is used as back sheeting for outdoor solar panels, where it helps collect energy from sunlight.



Billboard incorporating solar cells at Toray Mishima Plant

#### In town

#### Automobile parts

Developing more lightweight cars is a key theme in the drive to save energy. Various engineering plastics and Toravca\* carbon fiber composite materials are increasingly used as alternatives to steel parts.



Automobile parts manufactured using Toray products

#### (i) Clothing

Toray is developing products that use carbon-neutral, non-petrochemical raw materials such as SOTAKE\* bamboo-based fiber, Ecodear\* corn-based biological fiber, and Aminos\* sov protein fiber



SOTAKE\* bamboo composite fiber

## Household

#### Container and packaging materials

Toray is working to commercialize Ecodear\*, a polylactic acid PLA material manufactured using corn and other 100% plant-based raw materials, for use in packaging films and other products.



## Cellular phone components

Cellular phone manufacturers are increasingly turning to Toptical\*, a proprietary Toray color filter for liquid crystal displays that eliminates use of the environmentally harmful heavy metal



### Office

#### **9**Office equipment

The polylactic acid material Ecodear\* is also used to manufacture computer cases.



Computer with an Ecodear\* case

#### Fire-retardant plastic resin parts

Halogen-free engineering plastic materials that are resistant to high temperatures are used in products such as printers and electric/electronic connectors.



Electric/electronic connector made of Toray engineering

#### Innovative printing technologies

Toray Waterless Plate\* is a printing plate material for offset printing that helps improve printing efficiency while contributing to environmental preservation thanks to a printing process that generates no liquid waste. Materials printed using this technology bear the Butterfly Mark.





Toray Waterless Plate printing plate material

## **CSR Activity Highlights Action on Global Warming Initiatives**

## Toray recognizes global warming as a critical challenge and is working to reduce Green House Gas (GHG) emissions.

Toray Group has steadily lowered GHG emissions thanks to a combination of consistent energy conservation efforts dating to the aftermath of the 1973 oil embargo and more recent actions such as moves as conversion to more environment friendly fuels. As a manufacturer responsible for supplying materials to a range of industries, we anticipate that our own initiatives will be augmented in the years to come by increased market demand for products that help lower energy use and GHG emissions.

#### **Establishing New Targets for Global Warming Countermeasures**

In FY 2005, we set global warming initiative targets of reducing GHG emissions 10% over FY1990 levels by FY 2008 and holding CO<sub>2</sub> emissions to 1990 levels. We formulated new targets in FY 2007 in response to forecasts indicating that we would be able to meet these targets through converting fuel used in boilers from oil to natural gas, and consistent energy conservation activities such as reducing heat loss. The target selection process took into account expected expansions in the scale of our operations under our mid-term business strategies and incorporated the following goals into our basic approach:

- Toray will set targets in terms of absolute quantities and at a minimum will maintain Japan's reduction ratio as established by the Kyoto Protocol.
- Toray Group (Japan) will manage targets using unit energy consumption.

#### **New Targets**

- 1. Toray will reduce GHG emissions by at least 6% over FY 1990 levels by FY 2010.
- 2. Toray Group (Japan) will reduce unit GHG emissions (per net sales) by at least 15% over FY 1990 levels by FY 2010.
- 3. Toray Group (including overseas subsidiaries and affiliates) will raise its targets for reducing unit energy consumption by at least 2% annually.

#### **Reduction Plan for Meeting the New Targets**

In terms of specific reduction countermeasures, Toray is giving the highest priority to internal efforts to reduce emissions rather than relying on emissions trading.

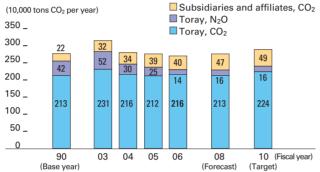
- Reductions through energy conservation
- Development of new industrial processes improving efficiency
- Reductions through converting to more environmentally friendly fuels
- Expansion of energy conservation activities overseas



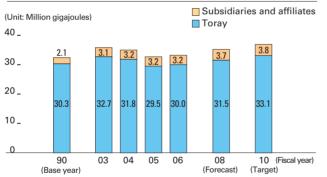
Related article

See page 27 for examples of initiatives in FY 2006.

## Toray Group (Japan) GHG Emissions



#### Toray Group (Japan) Energy Consumption



## GHG reduction by converting to more

Part of an initiative to reduce emissions by annual 60kt of CO2 by converting from fuel oil to natural gas, this gas-fired boiler became operational in July 2007.

Natural gas boiler at the



#### In search of biofuel solutions

We are seeking to further reduce 27kt CO<sub>2</sub> annually by powering boilers with a mixture of wood chips and coal. Operation is expected to begin in January 2010 after trial at the Fhime Plant.

specting wood chips at Imabari-Kako

#### **Providing Products That Help Lower Energy Use and GHG Emissions**

Toray launched the "Ecodream" Project in FY 2005 with the target of doubling FY 2005 net sales of environmentally friendly products by FY 2010. In keeping with the project's key themes of saving energy and lowering GHG emissions, we are focusing our efforts on carbon fiber composite materials and products derived from non-petrochemical raw materials.

On one hand, increasing net sales of environmentally friendly products (i.e., increasing production volumes) has the effect of driving up our emissions of GHG. The production of carbon fiber, a light, strong, and corrosion-resistant material, involves considerable energy use and GHG emissions due to high temperatures required in the manufacturing process. However, the material's significant contribution to more lightweight aircraft and automobile designs, which ultimately help to conserve energy and lower CO<sub>2</sub> emissions will offset the increase in the environmental impact caused by the manufacturing process.

Toray is aware of these tradeoffs. We are committed to helping reduce emissions throughout the lifecycle of carbon fiber end products such as aircraft and automobiles while meeting our own goals for lowering GHG emissions during the manufacturing process.

#### Improvements in Next-generation Aircraft Fuel **Economy and Reductions in CO<sub>2</sub> Emissions**

Demand for carbon fiber reinforced plastic (CFRP)\*1 is growing in the aviation industry, where fuel economy and environmental countermeasures are increasingly seen as important considerations. Lightweight designs are expected to yield benefits in the form of improved fuel economy and reduced CO<sub>2</sub> emissions.

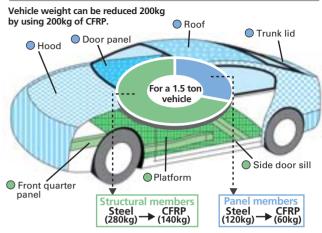
\*1 Carbon fiber reinforced plastic (CFRP): A composite material that is cured and molded after impregnating carbon fibers with plastics resin. Exceptionally strong, CFRP characteristically allows designs that weigh less while offering the same strength and rigidity as metals such as steel and aluminum.

#### CFRP Parts in the Boeing 787

Weight reductions of more than 20% over a comparable aluminum design can be achieved by using CFRP for 50% of airframe structural materials by weight.

> Used in combination with advanced engines, this approach yields 20% better fuel economy and lower CO<sub>2</sub> emissions.

## Use of CFRP Components in Automobiles and Associated Weight Savings



Source: "Innovative Global Warming Technological Program," Ministry of Economy Trade and Industry (FY 2003 to 2007)

#### **Reducing CO<sub>2</sub> Emissions with Lighter Cars**

The use of CFRP can lower the weight of the mild steel sheets used in automobiles by 50%, yet this highly safe material can absorb 1.5 times more energy than steel. Use of CRFP is expected to expand in the automotive field in coming years.

Simulations by the Ultra Light Steel Auto Body, Ultra Light Steel Auto Closures, and Ultra Light Steel Auto Suspension Project indicate that widespread adoption of lighter-weight cars using CFRP would reduce annual CO2 emissions by 3.88 million tons by 2030. Conversely, a reduction of approximately 3 tons of CO<sub>2</sub> could be expected per vehicle over the course of 10 years. In other words, CFRP automobiles also have an environmental contribution to make from the standpoint of CO<sub>2</sub> balance.

#### **Estimated Energy Savings and** CO<sub>2</sub> Emission Reductions by 2030

Total		Energy	CO <sub>2</sub> emissions	
	vehicles	Gasoline equivalent	Crude equivalent	reductions
2010	200,000	22,000 kl/year	20,000 kl/year	51,000 tons-CO <sub>2</sub> /year
2020	2,600,000	690,000 kl/year	630,000 kl/year	1,590,000 tons-CO <sub>2</sub> /year
2030	6,300,000	1,680,000 kl/year	1,530,000 kl/year	3,880,000 tons-CO <sub>2</sub> /year

Source: "R&D of Carbon Fiber-reinforced Composite Materials to Reduce Automobile Weight project under NEDO's New Global Warming Prevention Technology Program. (Assumptions: 10 year vehicle useful life; 2.5 km/l improvement in fuel economy per 200 kg reduction in weight; total of 6,300,000 vehicles in use by 2030; technology used in



## **Activities for Overcoming Water Resource Issues**

## Toray is addressing issues on water shortages and safety from a global viewpoint.

Many countries are currently experiencing water shortages due to the rapid pace of population growth and social development. These shortages exert a serious effect not only on everyday lives but also on food production and natural ecosystems. Observers also fear that problems involving the safety of the water supply, for example water pollution caused by inadequate wastewater treatment facilities, are becoming increasingly serious. Toray is working to address these problems from a global perspective to ensure it remains responsive to the needs of society.

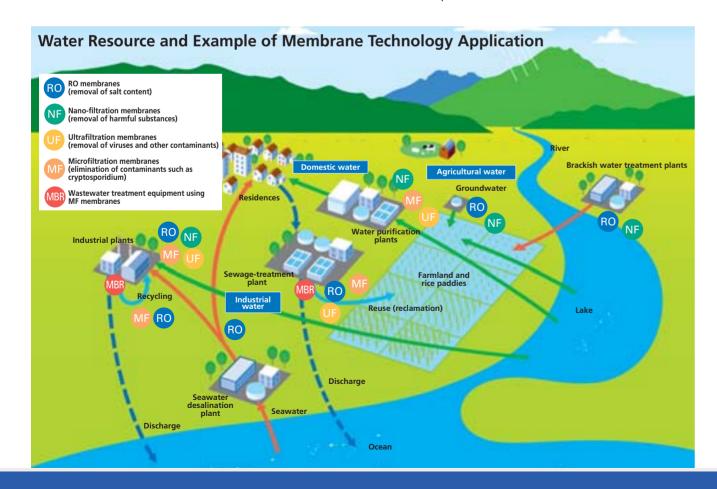
#### Water Issues Around the Globe

With seawater accounting for 97.5% of the water on Earth. the freshwater required to maintain human life is only 2.5% of the total. Moreover, because most freshwater is locked up in glaciers and underground aquifers, experts believe that only 0.01% of freshwater is accessible for use by people. Today this invaluable supply of water is experiencing a range of problems. Worldwide, 1.1 billion people must walk at least 30 minutes to obtain the water they require each day, and 2.6 billion people live without access to toilets and other hygienic facilities. Ecosystem damage caused by deteriorating water quality is also a fear. More recently, alarms are being sounded about water shortages caused by the effects of global warming and falling groundwater levels due to development.

#### **Membrane Technology Contributing** to Water Environment Issues

Human beings require water for a range of applications including agriculture, industry, and daily life. For example, we need membranes for extracting pure water from seawater and for drinking water, membranes to remove the bacterium cryptosporidium, which cannot be killed by chlorine.

Toray developed and brought to market RO membrane (reverse osmosis membrane) for manufacturing ultrapure water for industrial applications in 1980 and later applied the technology to seawater desalination. We have developed a variety of separation membranes based on our core competencies of organic synthetic chemistry, polymer chemistry, biotechnology, and nanotechnology. Used in combination, these products deliver the membrane technologies that are needed to implement efficient water treatment.



#### **Increasing Demand for Seawater Desalination**

As worldwide water shortages intensify, Toray expects demand for effective use of seawater and wastewater will increase to secure sustainable water sources, in addition to the use of limited river and groundwater resources.

Until now, the methods of evaporation and electrodialysis have been used to desalinate seawater. However, RO is becoming the preferred approach thanks to the development of technologies for improving RO membrane performance (water permeability and salt rejection), lowering the RO membrane cost per unit of freshwater generated as well as operational energy consumption.

Toray has accumulated significant expertise in seawater desalination with exceptional RO membranes, and our products are used by water treatment plants worldwide. As a result, we help desalinate a total of 2 million cubic meters of seawater each day (as of June 2007), enough water to sustain approximately 8 million people in their daily lives.



Sulaibiya (Kuwait), the world's largest wastewater reclamation Capacity: 320,000 m<sup>3</sup>/day

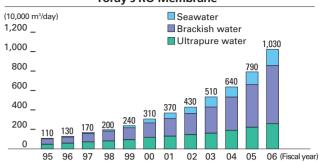


Tuas (Singapore), Reverse Osmosis Building, SingSpring Desalination Plant, Hyflux Ltd. one of the world's largest seawater reverse osmosis desalination plants Capacity: 136,000 m<sup>3</sup>/day Photograph: Hyflux Ltd (Singapore



Kinuta & Kinuta-shimo Purification Plants (Tamagawa/Tokyo, Japan), one of Japan's largest filtration facilities Capacity: 88,000 m3/day Photograph: Suido Kiko Kaisha, Ltd. (Japan)

## Total Water Production Capacity of Plants Using Toray's RO Membrane



#### **Participation in the World Water Forum and Other Activities**

Although efforts to combat global warming have begun in the world's major countries, international partnerships and initiatives to address water problems continue to lag. As part of our efforts to increase partnerships with relevant entities in order to address the world's water problems, Toray has participated in the World Water Forum, a gathering sponsored by the World Water Council, UNESCO, and related Japanese government agencies, since its third meeting in 2003. We also actively support the Japan Water Forum, a non-profit organization that operates primarily in Japan.

In an effort to address the world's water and its hygienic problems, Toray Group is committed to making an international contribution consistent with these support activities by providing membranes and other advanced water treatment technologies.



Hiromu Takeuchi General Manager, Special Assignment Water Treatment & Environment Business Planning & Administration Dept.



Few nations are as blessed with high-quality water and an absence of urgent water source problems as Japan. Regions around the world are experiencing problems such as water shortages and water-related environmental pollution in the face of rapid population growth and industrial development on a global scale. These problems are also having an increasing impact in the form of water-related food shortages and hygiene issues. Global warming is also affecting the Earth's water environment, and observers point out that damage from flooding and drought conditions is growing more frequent.

To solve the world's water problems, it is necessary to develop water treatment technologies that meet the different water quality and infrastructure conditions in each country and region. Loca problems must be addressed in the context of existing regional policy. As a membrane manufacturer, we are developing our water treatment business through global partnerships with organizations involved in constructing and maintaining water-related infrastructure. The successful development of four advanced separation membrane products (RO, NF, UF and MF), advanced technologies such as the membrane bioreactor MBR method, and technologies for ensuring efficient facility operation attests to our ability to meet a variety of water source and water treatment

## **CSR Activity Highlights Pursing the Advancement of Women and Work-life Balance**

Toray works with employees to create workplace environments that facilitate participation by women while implementing programs that promote work-life balance.

Issues of equal employment opportunity and female participation is a common theme to the world. Japan's aging population and diminishing birthrate are making it more important for corporations to help employees balance their responsibilities at work and at home. Our aggressive efforts to advance women's roles while balancing work and personal life are created to both meet these needs and increase the Group's medium- and long-term human resources competitiveness.

#### **Advancement of Women Project**

Toray has led Japanese companies in proactively offering employment and work opportunities to women as well as in providing equal compensation to male and female employees.

The Advancement of Women Project launched in FY

2004 is geared to create structures that enables women to pursue even more fulfilling careers by making our history of steady accomplishment in female participation a key part of our corporate culture.

#### Advancement of Women Project Initiatives

	Advancement of Women Project initiatives				
Date	Action	Description			
October 2004	Formed Working Team.	Formulated various proposals for the advancement of women. In FY 2006, summarized 2 years of activities and reported to executive committees.			
August and September 2005	Implementation leader conducted enlightenment rounds.	General Manager of the Personnel & Industrial Relations Division, who serves as the implementation leader for this project, visited all plants. Participants discussed and shared views on topics including the purpose of the project and key considerations in training female employees.			
November 2005	Provided consultant services.	Responds to questions and consultations concerning various programs, canvas employee opinions, and apply their views to the policy formulation process.			
December 2005 to February 2006	Held Advancement of Women Forum with workshops and lectures (first session).	The forum aims to foster the development of female leaders, reform female employee awareness and boost morale, and build networks. Six workshops and lectures were held for female employees at the Tokyo head office and Osaka head office with about 300 employees in total participating.			
December 2006 to February 2007	Held Advancement of Women Forum with workshops and lectures (second session).	Total of three workshops and lectures for female employees at the Tokyo Head Office (open to individuals who were unable to participate in the first session) with 120 employees in total participating.			
From January 2007	Began an ongoing series of articles in the internal company newsletter introducing examples of female career development.	Articles to introduce examples of female employees who have developed careers in Toray Group, balanced the demands of work and personal life, and the support offered to them in their workplaces.			
Up to March 2007	Enhanced policies designed to help employees achieve work-life balance and reviewed associated programs.	Planned new programs and reviewed existing programs based on discussions held by the Working Team. These programs will be launched in FY 2007.			



The Working Team for the Advancement of Women Project was launched with 12 women and 6 men



Workshops provided an opportunity to reflect on their future goals



Work-life balance and mental health were important themes in the lectures

#### **Toward Balancing Work and Family Life**

#### **Systems Designed to Help Employees Balance Work and Family Life**

We are working to enhance these systems as we work to create a culture in which employees can make energetic contributions while balancing the demands of work and family life. We are particularly proud of either meeting or exceeding legally mandated provisions in systems related to childcare, family-care, leave and maternity protection, and we are working to make systems accessible and responsive to the individuals who wish to use them.

Several new systems to ensure good working conditions that were designed in FY 2006, were launched in FY 2007. Specifically, we established a new system to help employees pay for babysitter services, reviewed the system for registering employees seeking reemployment, and reviewed our shorttime and flextime work systems.

Pursing the Advancement of Women and Work-life Balance

#### Compliance with the Law to Promote Measures to **Support the Development of the Next Generation**

We established a First Action Plan in FY 2005 based on Japan's Law to Promote Measures to Support the Development of the Next Generation, which took effect in April 2005, and had implemented the provisions of the plan by the end of FY 2006. As a result of these efforts, in May 2007 we received certification that confirmed the First Action Plan meets the standards set by the Next Generation Law.

Starting in FY 2007, we plan to establish a Second Action Plan and pursue new initiatives



#### Systems Designed to Help Employees Balance Work and Family Life (Key Changes in April 2007)

1 2

Action	Description of changes	Before changes
Established new system to help employees pay for babysitter services.	The company signed a contract to give employees access to babysitter services at a discounted rate (employees can use services that typically cost individuals ¥2,000 per hour for ¥900 per hour). Employees (male and female alike) are eligible to participate until the end of the fiscal year in which their children enter the third grade of elementary school.	New program
Reviewed the system for registering employees seeking reemployment*1.	The registration period for reemployment was extended to 10 years. Reemployment as full-time employees is now available immediately for some employees depending on the nature of their job, their desired role, and their personal circumstances.	The registration period had been 3 years, and compensation was limited to non-regular employee levels for six months, after which individuals could become full-time employees.
Enabled concurrent use of short-time work systems designed to give employees time off for childcare, family-care leave, and maternity protection with flextime systems.	All short-time and flextime work systems can now be used concurrently.	Employees were unable to use these systems in combination.
Extended employee eligibility for childcare short-time work systems, flextime systems, overtime/holiday work limits, and night work limits.	The period of time over which employees are eligible for these systems was extended until the end of the fiscal year in which their children enter the third grade.	These systems had been available only until children began elementary school.

\*1 This system provides reemployment opportunities for employees who must leave the company to get married, have children, care for children, care for sick or elderly family members, or accompany a spousi who has been transferred.



See page 50 for more information about Toray's efforts to create a corporate culture that facilitates participation by female employees



## from the Field Couple takes childcare leave together

#### Takahiro Maeda

Pharmaceuticals & Medical Products Division, Administration Dept. Toray Industries, Inc.

Ayumi Maeda Shiga Plant



#### The mom's view

I took maternity and childcare leave from October 2005 to September 2006. Afterwards it was easy for me to return to my original job because my husband also took childcare leave.

When I hurried home at the end of my first day back, I was surprised to see my husband getting ready for dinner with our son in a carrier on his childcare leave, but I hope that more will consider workplace

#### The dad's view

I took six months of childcare leave from October 2006, when my wife went back to work after her childcare leave. We took full advantage of the company's system, which allows employees to take childcare leave until the end of the fiscal year in which the child reaches the age of 1. As for my impressions of my time as a stay-at-home dad, I think back. I respected my husband's decision to take the idea of fathers helping raise their children childcare leave, but I never imagined that he includes sharing responsibility for household chores. would actually become a stay-at-home dad! It Each partner must do what they can, when they can. seems that only a few male employees take When your partner does something for you, you must show appreciation. I feel that I came to this option in the future in order to encourage appreciate the secret to balancing work and family life women to participate more actively in the and ensuring a harmonious home during the time I spent on childcare leave. It was a great experience for my wife and I to both take childcare leave

# **Toray Group CSR: Today and Tomorrow**

Toray Group carries on a legacy of CSR activities by creating action programs and reviewing them annually based on CSR Guidelines that broadly incorporate tomorrow's CSR. We emphasize practicing CSR at each workplace and have launched CSR line activities at subsidiaries and affiliates.

## **Steady Pursuit of CSR Activities**

Toray Group has long pursued corporate activities by paying dues to stakeholders — customers, employees, shareholders, and local communities — in an effort to fulfill our corporate philosophy of "contributing to society through the creation of new value with innovative ideas, technologies and products."

Current CSR activities can be traced back to the creation of the CSR Committee as an entity reporting directly to the president. After the original mid-term action plan was completed, we adopted a new three-year CSR road map in March 2006. The action programs for each guideline are implemented and revised each year.

The CSR line activities launched at Toray in 2005 are being promoted in companies throughout the entire Group, For Japanese subsidiaries and affiliates, we began with six model companies, later extending the program to all Japanese subsidiaries and affiliates by the end of FY 2006. For overseas subsidiaries and affiliates, we have appointed model companies in the Southeast Asia region, and we plan to steadily extend the program. We have also been active on the organizational front by creating a framework for promoting CSR, for example by establishing a department responsible for promoting CSR activities. Progress in internal control systems includes the creation

of the Internal Control Department in October 2006 in order to comply with the Financial Instruments and Exchange Law.

See page 21 for more information about the CSR promotion framework.

#### Towards the Next Step

CSR Innovation is one of the Five Innovations identified by Toray Group's IT-2010 Mid-term Business Strategies. which establish targets as we approach 2010. We are seeking to achieve sustainable growth while meeting society's demands by pursuing activities established to achieve our company-wide strategy in accordance with the CSR Guidelines, as well as department-specific CSR line activities designed to address issues selected by individual departments.

Our CSR road map is designed to set general directions and specific targets for the entire Group with an emphasis on materiality and viability. We believe that the pursuit of Toray Group's CSR activities through the PDCA management cycle and the steady implementation of the road map will enable us to earn and maintain the trust of our stakeholder communities continuously into the future.

CSR Road Map (Mid-term Action Plan)								
	Company-wide Issues (excluding department-specific issues and separate themes)				FY 2006	FY 2007	FY 2008	Progress (as of March 31, 2007)
1	Improvement of promotion system	Reorganization of committee sy Establishment of dedicated organization		Planned Implemented	☆ ©			Established CSR Operations Group within Corporate Planning Dept. (September 2006)
2	Plan-Act	2. Review of CSR Guidelines and A	Action Programs	Planned Implemented	<b>☆</b> O	☆	☆	Created 2006 edition and put it into practice
		3-1. Deploy CSR Line Activities at J	and affiliates	Planned Implemented	☆ ©	☆	☆	Began company-wide promotion of CSR activities at subsidiaries and affiliates
	3 Do	and overseas subsidiaries and affiliates Overseas subsidiaries and affiliates and affiliates		Planned Implemented	0	☆	☆	Started CSR line activities at overseas subsidiaries and affiliates in the ASEAN region
_		3-2. Implement dialogue with stakeholders		Planned Implemented	<b>☆</b>	☆	☆	Began strengthening communication with local communities through CSR line activities
3		3-3. Establish CSR data management system		Planned Implemented	0	☆	☆	Created and backed systems for promoting legal compliance and CSR line activities, for example by integrating internal company BBS
		3-4. Develop and implement measures for spreading and promoting CSR activities		Planned Implemented	<b>☆</b>	☆	☆	Began CSR lectures in training programs, including seminars for overseas employees
	4-1. Formulate CSR self-evaluation sta		standards	Planned Implemented	Δ	☆		Currently investigating evaluation areas based on rating and survey items
_	Check	4-2. Implement CSR audits		Planned Implemented	<b>☆</b> △	☆	☆	Continued to investigate how to best implement this step
		4-3. Fixed-point observation (CSR awareness surveys)		Planned Implemented	☆ △	☆	☆	Continued to investigate how to best implement this step
_		ther laws and internal control systems Con	Internal control system	Planned Implemented	☆ ©			Established the Internal Control Department in October 2006
_	Other		Compliance with Japanese SOX regulations	Planned Implemented	0		☆	Began recordkeeping in pilot divisions to implement compliance with the Financial Instruments and Exchange Law
				■Plan/invest	•		mplement/ Olmplen	deploy nented according to plan △Delayed slightly

#### Corporate Ethics and Legal Compliance Code of Conduct

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

#### **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.

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

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.

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

6 Improve the level of environmental management

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

7 Contribute to society through environmental

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

8 Improve the environmental management of our overseas

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

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

#### **CSR Guidelines**

#### **■** Basic Policy & Enhance Corporate Governance and **Management Transparency**

Sincerely pursue CSR activities to help create a sustainable society by fulfilling our Corporate Philosophy, Corporate Missions, and Guiding Principles, and strive to enhance corporate governance and management transparency.

## ■ Uphold Corporate Ethics and Comply with Laws

Earn the trust of society by all executives and employees upholding our Corporate Ethics and Legal Compliance Code of Conduct and acting with fairness, high ethical standards, and a sense of responsibility.

#### **■** Emphasize Safety, Accident Prevention. and **Environmental Preservation**

Give safety, accident prevention, and environmental preservation top priority above all other management issues, and work to ensure the safety and health of society and employees while protecting the environment in all of our business activities, from procuring raw materials to manufacturing, supplying, and disposing of products.

#### ■ Ensure 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.

#### Perform Risk Management

Seek to reduce potential risk, develop a system capable of responding quickly to unexpected situations and disclosing accurate information, and work to inform all employees about this system.

#### **■** Promote Dialogue with Stakeholders

Encourage dialogue and cooperation with employees, shareholders, investors, business partners, consumers, local communities, non-profit organizations, government and administrative agencies, mass media, analysts, and other

#### ■ Step Up Environmental and Recycling Efforts

Pursue research and technological development related to environmentally friendly products and recycling, and contribute to improving the global environment by developing and expanding environmental, safety, and amenity husinesses.

#### ■ Secure and 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

#### **Cooperate with Suppliers in their Environmental and** Social Initiatives

Cooperate with suppliers in promoting CSR activities, including environmental consideration, compliance with laws and regulations, and promotion of human

#### Pursue Social Initiatives

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.

## **Basic Policy & Enhance Corporate Governance** and Management Transparency



#### **Action Program (FY 2006)**

Toray Group will implement the PDCA Cycle by building a CSR management system. We will also maintain and enhance management transparency by bolstering accountability with corporate governance and internal control systems.

#### **Action Program Results**

- 1. All Japanese subsidiaries and affiliates finished establishing CSR tasks and training all employees, and overseas subsidiaries and affiliates began similar efforts.
- 2. The Group established the Internal Control Department and began building an internal control system for ensuring compliance with J-SOX regulations.
- 3. The Group established the CSR Operations Group in the Corporate Planning Division.

#### Commitment

Toray's basic approach to CSR consists of working to fulfill the social responsibilities we have as a company, striving together with society to achieve sustainable development, and becoming an "Excellent Company" with global reach. I believe my role as CSR Committee chairman is to spread CSR activities throughout Toray Group in order to increase the transparency of management while working to enhance internal controls and staying abreast of the latest legal and ISO developments.

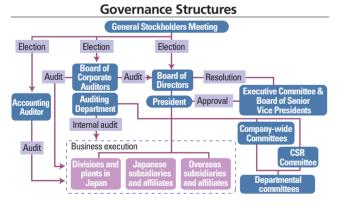
#### **Toray Group Governance Structures**

Toray Group has established unique governance structures based on an overriding goal of pursuing a style of management that brings accountability to society, maintains transparency, and responds in good faith to the trust of our communities.

Toray Group has established a set of Information Disclosure Principles in order to ensure the independent and fair disclosure of relevant information. The Principles are available online.



The complete text of the Information Disclosure Principles is available on the Toray website



#### Implementation by the Board of Directors and **Executive Committees**

The Board of Directors consists of 30 members. Because Toray Group believes that the fulfillment of management responsibility and transparency are best served by basing management judgments and decision-making on a specialized knowledge of local operations, our governance structures do not include external or executive directors. Rather, we follow an independent approach to governance founded on strict adher-

ence to the authority of top management, a system that reserves specific decision-making rights for each organizational entity.

To ensure operational efficiency, the Executive Committee and Board of Senior Vice Presidents together play a deliberative role in facilitating resolutions by the Board of Directors and decisions by the president. The Executive Committee is responsible for the general direction of policy, while the Board of Senior Vice Presidents concerns itself with issues in implementation. Additionally, company-wide committees established to oversee key management themes play a supplementary role in management execution along with the CSR Committee.

#### Monitoring by the Board of Corporate Auditors

The Board of Corporate Auditors which serves to enhance monitoring of the Group's management is comprised of four auditors, including two external auditors.

In addition to regular attendance at meetings of the Board of Directors by all auditors, the Board of Auditors met 11 times in FY 2006. Toray maintains an organizational capability for monitoring directors' execution of Group operations through periodic meetings with all directors and general managers combined with regular audits of all worksites, plants, and Japanese and overseas subsidiaries and affiliates in accordance with the policies and plans adopted by the Board of Corporate Auditors for each fiscal year. The Auditing Department assists in audits when requested by auditors.

#### **Internal Control Department Established**

Starting with the first fiscal year beginning from April 2008, Japan's Financial Instruments and Exchange Law will require companies to submit reports detailing internal control over financial reporting and independent audits by outside auditors. As part of our efforts to build an effective internal control system and comply with the new law's requirements, we

established the Internal Control Department in October 2006 as an entity reporting directly to the president.

We continue to steadily expand efforts to implement recordkeeping and other control mechanisms that were originally developed in pilot divisions in our head office and consolidated subsidiaries, and we expect associated internal controls to be operational by the end of FY 2007.

#### **Dialogue with Labor Unions**

Members of management at the Senior Vice President level and higher meet with labor representatives at the union head level and higher at the biannual Central Labor and Management Council, where they exchange management information and engage in dialogue with the labor union.

In order to resolve each labor-related issue, Labor and Management Council meet separately. In FY 2006, input from the union played a role in enhancing the Group's programs for helping employees balance work and family life.

#### **CSR Promotion Framework**

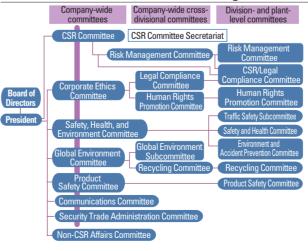
Toray Group considers the promotion of CSR and growth in profitability as twin pillars of equal and central importance in management.

#### Promotion of CSR on the Company-wide, Subsidiary/Affiliate, Division, and Facility Level

The CSR Committee, which reports directly to the president and is chaired by the vice president, coordinates the activities of six company-wide committees. CSR/Legal Compliance Committees have been established in each subsidiary and affiliate, division, and plant, where they promote CSR activities and serve as task force units of the CSR Committee.

One unique aspect of Toray Group's approach is CSR line activities, a program that emphasizes on-site action with 100% employee participation. Specifically, each worksite defines CSR issues based on the viewpoint of multi-stakeholders, CSR Guidelines, and Action Programs and then addresses them through the PDCA Cycle.

#### **CSR Committee and Promotional Organization**



#### **PDCA Cycle in CSR Management**



We established the CSR Operations Group in the Corporate Strategic Planning Division in September 2006 to strengthen CSR line activities and extend them throughout the Toray Group. The CSR Operations Group was spun off to become the CSR Operations Department in June 2007.

#### **CSR Activities at Subsidiaries and Affiliates**

The entire Toray Group seeks to pursue CSR activities as defined by the CSR Guidelines and Action Programs in combination with the basic approach to management laid out in the Corporate Philosophy, Corporate Missions, and Corporate Guidina Principles.

In April 2006, we launched CSR line activities by training key individuals at six model companies in Japan (Towa Orimono, Toray Monofilament, Ichimura Sangyo, Toray International, Toray Construction, and Soda Aromatic). We subsequently began training key individuals at remaining Japanese subsidiaries and affiliates in September 2006 and launched CSR line activities in March 2007.

We also began extending CSR activities to our overseas subsidiaries and affiliates, starting with three countries in Southeast Asia (specifically, in Thailand, Malaysia, and Indonesia).



We aim to become an ideal CSR model company by encouraging understanding and participation on the part of all employees.

#### **Action Program (FY 2006)**

Toray Group will conduct ongoing educational activities concerning corporate ethics and legal compliance while taking action as necessary to adjust to legal and other changes in the environment in which we operate.

#### **Action Program Results**

- 1. The Group continued educational activities at Toray and 115 Japanese and overseas subsidiaries and affiliates.
- 2. The Group implemented "FY 2006 CSR and legal Compliance Line Activities" in all workplaces
- 3. The Group sought to enhance security trade administration training, build internal control systems, and develop a distribution system for legal reform information on a company-wide basis.

#### Commitment

In extensive business operations in 21 countries and regions worldwide, Toray Group considers corporate ethics and legal compliance to be among its most important management issues. Observing applicable laws and regulations in international society and in each of the countries within which we operate is critical, as is contributing to society as a good corporate citizen through programs that are grounded in local conditions. Going forward, we are committed to acting as a model in steady, thoughtful action by fostering an understanding of the importance of corporate ethics and legal compliance on the part of every employee and ensuring that the imperative of compliance is put into practice throughout the Group's everyday activities.

#### **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, Toray Group works together toward this goal.

#### **Framework for Promoting Corporate Ethics** and Legal Compliance

Members of the Board and Chair of Toray Labor Union

Auditors Personnel Department

Executive Vice President and Representative Member of the Board in Charge of CSR Members
Executive Vice Presidents and Representative Member of the Board,

Senior Vice President and Representative Member of the Board; General Manager of Manufacturing Division, General Managers of General Administration and Legal Divisions, General Manager of Internal Control Department, and representatives from the division- and plant-level CSR/Legal Compliance Committees

> Auditors Personnel Department

Division and Plant-level CSR/Legal Compliance Committees

Division or plant general manager

In principle, the general managers of each department, but additional members can be added as needed.
Plant-level committees also include branch labor union leaders.

#### **Promoting Corporate Ethics and Legal Compliance**

The figure to the lower left illustrates the framework within which Toray promotes corporate ethics and legal compliance.

The Corporate Ethics Committee, which is chaired by the president, discusses policies related to corporate ethics and the employee code of conduct, and encourages labor and management to work together for CSR efforts. The Legal Compliance Committee is primarily composed of front-line section managers and works to facilitate closer communication with top management. The Division- and plant-level CSR/Legal Compliance Committees develop on-site activities based on individual employees' awareness of related issues.

During FY 2006, the Group sought to augment the activities by creating a new Corporate Ethics and Legal Compliance Group in Toray's Affiliated Companies Division to oversee the promotion of related activities, added to the previously established CSR/Legal Compliance Committees at each Japanese subsidiary and affiliate. We also strengthened our compliance framework by appointing directors and section heads in charge of legal compliance at all subsidiaries and affiliates.

We also continued to establish CSR/Legal Compliance Committees at overseas affiliates, and as of March 31, 2007. committees have been established at 63 overseas companies.

#### **Corporate Ethics and Legal Compliance Code of** Conduct and the Handbook

All Toray Group executives and employees are obligated to observe the specific provisions of the Corporate Ethics and Legal Compliance Code of Conduct adopted in October 2003 in all of their corporate activities, both in Japan and overseas.

Violations of these rules result in strict punishment pending an inquiry conducted by the Rewards and Sanctions Committee and are followed by disclosure of relevant information, an investigation of cause, and action to prevent a recurrence.

All Toray executives and employees (including part-time and temporary personnel) receive the Corporate Ethics and Legal Compliance Handbook, which indicates the Code of Conduct and detailed explanations and notes. The second edition of the Handbook was published in April 2007 in response to revisions of the Group's Management Philosophy. changes in applicable laws and regulations, and other new information.

The Group also creates similar codes of conduct, guide-

lines, handbooks, and other information for Japanese and overseas subsidiaries and affiliates with CSR/Legal Compliance Committees.





Corporate Ethics and Legal Compliance

Related article

See page 19 for the complete text of the Corporate Ethics and Legal Compliance Code of Conduct.

#### **Corporate Culture Based on Ethics and Legal Compliance**

Toray encourages autonomous and voluntary educational activities in every workplace to help spread employee awareness of corporate ethics and legal compliance issues. Workplaces regularly discuss such issues at monthly meetings, conduct study groups, and research case studies in corporate misdeeds reported by the media.

Company-wide activities and initiatives in FY 2006 included efforts to enhance legal compliance training in security trade administration and the deployment in November of a Legal Reform Information Distribution System through which information about changes in laws that are applicable to the Group's activities is sent out to all divisions as well as Japanese subsidiaries and affiliates in a weekly email. We also launched a Company-wide CSR/Legal Compliance Bulletin Board system on the Company intranet in February 2007 as part of an effort to strengthen our ability to distribute information about legal compliance issues.



Legal Focus, Toray's legal reform information website (operated by Dai-Ichi Hoki Co., Ltd.)

#### **Establishing and Operating Reporting and Consultation Channels**

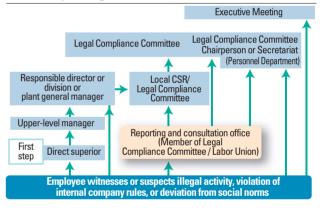
3 4 5 6 7 8 9 10

Uphold Corporate Ethics and Comply with Laws

Employees who witness or suspect a corporate ethics or legal compliance violation are, in principle, to first report to or consult with their direct superior. If unable to do so, they may opt to take the issue to the consultation office operated by their division or plant, or directly contact the chairperson or secretariat of the Legal Compliance Committee by means of a special hotline or email. During FY 2006, at the request of the labor union in response to the enactment of the Whistleblower Protection Act, we added representatives of the labor union to reporting and consultation offices. The Executive Meeting, attended by representative directors, also accepts a range of proposals and opinions from employees regarding corporate ethics and legal compliance.

We are aggressive about protecting the confidentiality of employees reporting possible violations. During FY 2006, provisions prohibiting discrimination against employees making such reports or seeking advice, and establishing disciplinary action for false accusations, were added to labor contracts and company regulations.

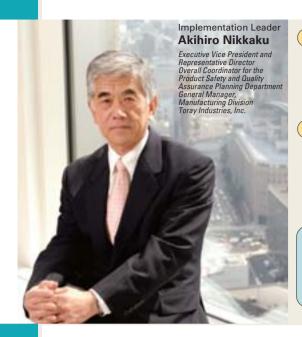
#### **Reporting and Consultation Channels**



#### **Strengthening Security Trade Administration**

Following a warning issued in May 2006 by the Ministry of Economy, Trade and Industry regarding an application for authorization to export certain products to Taiwan, Toray and Toray International immediately established the Security Trade Administration Countermeasures Division and the Security Trade Administration Department. These new organizational entities were created to form the basis of a framework for administering exports via third countries, three-country transactions, and imports by overseas affiliates in response to increasingly strict domestic and international regulations. Other FY 2006 initiatives saw the Group conducting training for all offices and plants, surveying relevant divisions and departments, and providing guidance in implementing improvements. We also continued to build organizational frameworks for Japanese and overseas subsidiaries and affiliates that handle listed (controlled) substances and provide relevant training.

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



#### Action Program (FY 2006)

The Safety, Health, and Environment Committee will spearhead implementation of the 2006 company-wide Safety, Health, and Environment Action Policy. Environmental preservation efforts will focus on meeting the targets laid out in the Second Three-year Environmental Plan and formulating the Third Three-year Environmental Plan.

#### **Action Program Results**

- 1. The Group met targets in the Second Three-year Environmental Plan, which ended with FY 2006, in reducing emissions of greenhouse gases, SOx and NOx, and PRTR chemical substances.
- 2. The Group redoubled Zero Accident Program efforts in light of 31 industrial accidents, two of which were serious.

#### Commitment

In the critical area of safety, we are striving to achieve the world's lowest rate of lost-worktime injuries by pursuing the Step-up 3Z (Zero Accident Program), an important part of the IT-2010 Manufacturing Technology Innovation Project. Environmentally, we are working to further lower the impact of our operations and contribute to the realization of a recycling-based society by achieving the targets set forth in the Third Three-year Environmental Plan adopted in FY 2007.

#### **Unified Management of Safety,** Health, Accident Prevention, and **Environmental Preservation Issues**

Toray Group seeks to manage safety, health, accident prevention, and environmental preservation issues in a unified, Group-wide manner that includes Japanese and overseas subsidiaries and affiliates. Each year we identify Safety, Health, Accident Prevention, and Environmental Action Policies and pursue their implementation throughout the Group; in 2006, we addressed the 16 Priority Actions listed in the table to the lower right. The company-wide Safety, Health, and Environment Committee reviews conditions at all Group companies and plants as well as associated performance in these areas to discuss and determine future directions and policies. Issues involving environmentally friendly products, product recycling, and global warming countermeasures are the responsibility of the Global Environment Committee.

Each November we host the Toray Group Safety Meeting in Japan to promote safety awareness. This educational program is typically attended by more than 200 guests including the president and other directors of the Board of Toray and its Japanese subsidiaries and affiliates, as well as plant general managers and other employees.

Related article

See page 32 for more information about workplace safety.



2007 Safety, Health, Accident Prevention, and Environment Conference for Japanese

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



	Toray Group Safety, Health, Accident Prevention, and Environmental Action Policies for 2006				
	Policies	Priority Actions			
Common	Improve workplace discipline     Enhance risk management	Hold meetings before and after work     Enhance education and management structures (laws, SOP)     Execute Business Continuity Plan (BCP) in the event of a major earthquake     Enhance risk management and strengthen response capability			
Safety	Follow basic safety rules     Eliminate near- accidents	Strictly follow SOP Enforce use of protective equipment and enhance associated management Develop countermeasures for serious near-accidents and apply horizontally throughout organization (increase safety of rotating parts and moving parts on machinery)			
Health	Rigorously manage occupational health	Emphasis on handling and management of chemical substances     Promote mental health management     Pursue asbestos countermeasures			
Accident Prevention	Enhance accident prevention measures	Systematically promote anti-earthquake measures (using both "hardware" and "software")     Review fire prevention equipment and associated management methods     Review and improve accident prevention and environmental measures at chemical plants			
Environment	Achieve targets established by the Second Three-year Environmental Plan	Achieve targets for reducing environmentally harmful emissions     Strive to achieve zero emissions     Pursue green procurement and green purchasing			

#### **Responsible Care (RC) Activities**

Although chemical substances play an indispensable role in modern society, they can have adverse effects on human health and the natural environment if handled improperly. Responsible Care refers to the responsible and voluntary implementation of appropriate safety, health, and environmental measures when handling chemical substances throughout the product lifecycle, from development and manufacturing to distribution, use, and disposal. Toray has been an active member of the Japan Responsible Care Council (JRCC) since its establishment in 1995. FY 2006 initiatives focused on reviewing and rebuilding a new chemical substance notification system and pursuing GHS\*1 compliance.

\*1 The Globally Harmonized System of chemical product categories and

#### ISO14001 Certification

As part of our RC activities, we have been working to acquire certification under the ISO14001 international standards for environmental management. All 12 of Toray's plants have already been certified. During FY 2006, 1 Japanese subsidiary as well as 6 overseas subsidiaries/affiliates and 7 associated plants were certified, bringing the total to 42 subsidiaries/affiliates and 58 plants.

#### ISO14001 Certification (As of March 31, 2007)

#### Toray: All 12 plants Shiga, Seta, Ehime, Nagoya, Tokai, Aichi, Okazaki, Mishima, Chiba, Tsuchiura, Gifu, Ishikawa Jananese subsidiaries and affiliates: 30 plants at 18 companies\* Du Pont-Toray Co., Ltd.; Opelontex Co., Ltd.; Toray Textiles, Inc.; Toray Coatex Co., Ltd. (Kyoto, Chemical Products Plant); Toray Monofilament Co., Ltd., Toyo Tire Cord Co., Ltd.; Toyo Plastic Seiko Co., Ltd. (Mishima, Koriyama); Toray PEF Products Inc. (Konan, Tsukuba); Toray Advanced Film Co., Ltd. (Mishima, Takatsuki, Fukushima, Nakatsugawa); Dow Corning Toray Co., Ltd. (Chiba, Fukui); 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); Suido Kiko Kaisha, Ltd.; Ichimura Sangyo Co., Ltd.; Toray International, Inc.; Chori Co., Ltd.

#### Overseas subsidiaries and affiliates: 28 plants at 24 companies Toray Plastics (America), Inc. (Rhode Island, Virginia);

	Toray Resin Co.; Toray Fluorofibers (America), Inc.
UK:	Toray Textiles Europe Ltd.
France:	Toray Plastics Europe S.A.
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
Thailand:	Thai Toray Textile Mills Public Co., Ltd.; Thai Toray Synthetics Co., Ltd.
	(Bangkok, Ayutthaya); Luckytex (Thailand) Public Co., Ltd. (Mill-2)
Malaysia:	Penfibre Sdn. Berhad (Mill-3); Penfabric Sdn. Berhad (Mill-3, Mill-4);
	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 Fibers & Textiles Research Laboratories (China) Co., Ltd.
Korea:	Toray Saehan Inc.; STECO, Ltd.

Colored companies and plants gained certification during FY 2006.

#### Safety, Health, Accident Prevention, and **Environmental Audits**

Toray Group conducts annual Safety, Health, Accident Prevention, and Environmental Audits to evaluate and improve conditions and management at all manufacturing companies and plants. Specifically, the audit process encompasses three stages: an internal audit at each plant using a uniform auditing checklist, a preliminary on-site audit or document audit by the auditing staff, and an executive audit by Toray's board of directors and representatives or supervisory company presidents for each region or country. During FY 2006, audits conducted at a total of 13 Toray plants and laboratories, 25 plants at Japanese subsidiaries and affiliates, and 40 plants at overseas subsidiaries and affiliates focused on issues such as the dangers of oxygen deficiency and forklift safety countermeasures.





#### **REACH Regulation Compliance**

The European Union's new REACH\*2 chemical regulations took effect in December 2006, extending comprehensive controls to existing chemical substances. Toray Group formed a REACH Countermeasure Promotion Department to oversee compliance with the new regime and established structures to pursue compliance at all Toray divisions and departments as well as Japanese and overseas subsidiaries and affiliates. We are currently identifying targeted products in preparation for preliminary registration, which starts in June 2008.

\*2 REACH: Registration, Evaluation, Authorization and Restriction of

#### **Examining Environmental Efficiency Indicators**

A variety of environmental efficiency indicators have been proposed recently to express the relationship between business activities and their environmental impact. Because no standard approach has yet been determined for calculating an integrated indicator that incorporates various environmental impacts, Toray Group is experimenting with expressing the results of environmental initiatives by calculating separate environmental efficiency indicators for principal environmental evaluation items instead of using an integrated indicator.



Related article

See pages 58 to 59 for more information about environmental

#### **Three-Year Environmental Plans**

Toray Group is pursuing systematic efforts to reduce its environmental footprint by setting a basic environmental policy for the medium-term.

The Second Three-Year Environmental Plan ended in FY 2006 after guiding dramatic progress in reducing emissions

of greenhouse gases (GHG), chemical substances, SOx, NOx, and dust. Overseas subsidiaries and affiliates could not achieve the plan's targets due to production increases, although they made efforts to reduce atmospheric emissions of chemical substances and total waste.

#### Results of the Second Three-Year Environmental Plan

Theme	FY 2006 Target	Results	Evaluation	Reference Page
Prevention of global	(1) Reduce greenhouse gas emissions (FY 2008 target compared to FY 1990) Toray GHG: 10% reduction CO <sub>2</sub> : Reduce to FY 1990 levels	GHG: 9.6% reduction (FY 2008 forecast: 12% reduction) CO <sub>2</sub> : 1.7% increase	О Д	27
warming	(2) Energy conservation Toray: <b>Reduce unit energy consumption by 1% annually</b> Japanese subsidiaries and affiliates*1: <b>Reduce unit energy consumption by 1% annually</b>	Toray: 3.5% reduction in unit energy consumption Japanese subsidiaries and affiliates: 1% reduction at 11 plants	0	27
	Reduce chemical substances emitted to atmosphere Toray (compared to FY 1995) PRTR Law substances: 80% reduction JCIA PRTR substances: 70% reduction	PRTR Law substance emissions: 74% reduction JCIA PRTR substance emissions: 78% reduction	<u> </u>	28
Manegement of chemical substances	Japanese subsidiaries and affiliates (compared to FY 1998) PRTR Law substances: <b>60% reduction</b> JCIA PRTR substances: <b>60% reduction</b>	PRTR Law substance emissions: 66% reduction JCIA PRTR substance emissions: 62% reduction	0	28
	Overseas subsidiaries and affiliates (compared to FY 2000) PRTR Law substances: 30% reduction JCIA PRTR substances: 30% reduction	PRTR Law substance emissions: 9% increase JCIA PRTR s substance emissions: 12% increase	×	28
Air quality	Toray (compared to FY 1998) S0x emissions: <b>40% reduction</b> N0x emissions: <b>15% reduction</b> Dust emissions: <b>40% reduction</b>	SOx: 2,626 tons (48% reduction) NOx: 2,353 tons (18% reduction) Dust: 175 tons (45% reduction)	000	29
Water quality	Toray (compared to FY 1998) BOD emissions: 20% reduction COD emissions: 20% reduction	BOD: 1,271 tons (19% reduction) COD: 940 tons (11% reduction)	$\triangle$	30
Waste	Toray Total waste generated: 27% reduction over FY 1998 Landfill waste: 5% or lower of total waste generated Recycling rate: 95% or higher	Total waste generated: 0.6% increase Landfill waste: 2.0% Recycling rate: 93.0%	X O A	31
reduction	Japanese subsidiaries and affiliates Total waste generated: 20% reduction over FY 1998 Landfill waste: 5% or lower of total waste generated Recycling rate: 75% or higher	Total waste generated: 15% increase Landfill waste: 3.8% Recycling rate: 83.3%	×	31

<sup>\*1</sup> Type 1 energy control designated plants

#### Third Three-Year Environmental Plan

The Third Three-Year Environmental Plan that took effect in FY 2007 articulates Toray Group's overall approach to environmental issues by establishing Group-wide targets.

We are committed to reducing the environmental effect of our operations and pursuing steps to achieve a recycling-based society even as we plan for increased production by implementing environmental countermeasures on an ongoing basis.

△▲: Nearly achieved X: Target not achieved

Area	New Targets (FY 2010 targets)
Prevention of global warming	Toray: 6% or greater reduction in greenhouse gases over FY 1990 Toray Group (Japan): 15% or greater reduction in greenhouse gases per unit sales over FY 1990 Individual target for subsidiaries and plants (including overseas): 2% or greater annual reduction in unit energy consumption
Manegement of chemical substances	Atmospheric emissions of PRTR Law target substances, Toray Group: 55% reduction over FY 2000 Atmospheric emissions of volatile organic compounds (VOCs), Toray Group: 55% reduction over FY 2000
Waste reduction	Pursue the goal of zero emissions Percentage of simply disposed waste* <sup>2</sup> , Toray Group: <b>34% or lower</b> Percentage of landfill waste, Toray Group (Japan): <b>5% or lower</b> Recycling rate* <sup>3</sup> , Toray Group: <b>85% or higher</b>

: Target achieved

#### **Action on Global Warming Initiatives**

Toray is working systemically to reduce greenhouse gas emissions and prevent global warming through measures such as conserving energy and converting to more environmentally friendly fuels.

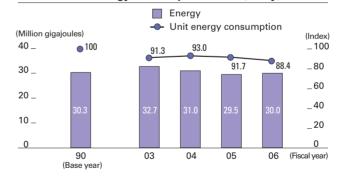
#### Toray's action on Global Warming Initiatives

Toray has established the goal of reducing GHG emissions by 10% compared to FY 1990 levels by FY 2008. Steady energy conservation efforts during FY 2006, including the conversion of boilers at the Shiga Plant and a cogeneration system at the Chiba Plant to city gas and reductions in heat loss, generated steady progress as we reduced emissions by 9.6% compared to FY 1990 levels.

Toray has also set a target of a 1% annual reduction in unit energy consumption, and in FY 2006 we achieved a 3.5% reduction. Steady efforts at each plant and energy conservation assessments by company experts contributed to this success.

#### **GHG Emissions (Toray)** N<sub>2</sub>O emissions (10,000 tons, CO<sub>2</sub>) CO<sub>2</sub> emissions 300 200 -100\_ 90 03 04 05 08 (Fiscal year) (Base year

Energy Consumption and Unit Energy Consumption Index (Toray)



#### **Deployment of a Natural Gas Cogeneration** System at the Shiga Plant

Construction is ongoing on a project to increase overall efficiency by conversion from fuel oil to natural gas and deploying a cogeneration system. The new system, which is designed to reduce emissions by another 40ktCO2, should come online in Shiga Plant January 2008.



#### **Taking Energy Conservation Activities Overseas**

Toray Sanko Precision (Zhongshan) Ltd. is continuing energy conservation activities with the goal of reducing power consumption by 1,200 megawatt-hours per year under the guidance of a senior expert from Toray.



Joint activities by Toray Sanko Precision (Zhongshan) and Toray Industries (South

#### **Developing New Manufacturing Processes to Improve Efficiency**

Carbon fiber composite materials help reduce fossil fuel consumption by enabling more lightweight designs for aircraft and automobiles. We are working to develop manufacturing processes that use at least 10% less energy compared Discussion at the Torayca\* to conventional processes.



Technical Department

### Related article

See page 13 for more information about the contribution of carbon fiber composite materials to energy conservation.

### **Initiatives to Protect the Ozone Layer**

Toray halted use of chlorofluorocarbons (CFCs) in all manufacturing processes in 1994. We have also stopped purchasing CFCs for use in refrigerators and are working to replace existing CFCs with alternative compounds.

#### FY 2006 Results and FY 2007 Plan (Initiatives to Prevent Global Warming)

	Second Three-Year Environmental Plan (FY 2006 targets)	FY 2006 progress	FY 2007 plan
Toray	1% annual reduction in unit energy consumption 10% reduction in GHG emissions over FY 1990*1 CO <sub>2</sub> reduction to FY 1990 level	3.5% year-on-year reduction 9.6% reduction in GHG emissions over FY 1990 1.7% increase in CO <sub>2</sub> emissions over FY 1990	Continue regular energy conservation activities and energy conservation assessments Install natural gas cogeneration system at the Shiga Plant Complete fuel conversion for the boilers at the Mishima Plant
Japan	1% annual reduction in unit energy consumption	1% or greater reduction at 11 plants	Continue regular energy conservation activities and energy conservation assessments
Overseas >	Separate targets by company	Conducted an energy conservation assessment at 6 plants	Continue regular energy conservation activities and energy conservation assessments

<sup>\*1</sup> FY 2008 target

<sup>\*2</sup> Percentage of waste not put to effective use (i.e., waste disposed of in landfills, by simple incineration, etc.).

<sup>\*3</sup> Recycling rate (%) = (recycled wastes + valuable resources) + (total waste generated + valuable resources) x 100

#### **Voluntary Initiatives to Reduce Atmospheric Emissions of Chemical** Substances

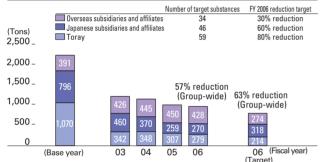
Consistent with its emphasis on the importance of reducing atmospheric emissions of chemical substances, the Group has reduced emissions of PRTR Law substances by 57%. The Third Three-Year Environmental Plan also incorporates initiatives to reduce atmospheric emissions of volatile organic compounds (VOCs)\*1.

### **Toray Group Performance and Future Initiatives**

#### OReducing Atmospheric Emissions of PRTR Law\*2 **Substances**

Toray achieved a year-on-year reduction in emissions of 9% in FY 2006, although it couldn't completely reach the Second Three-Year Environmental Plan's target of a 74% reduction over the base year FY 1995. Japanese subsidiaries and affiliates achieved their targets for the second year in a row with a 66% reduction over FY 1998 levels. Overseas subsidiaries and affiliates reduced emissions 5% compared to the previous year, although increases in production since 2003 make that equivalent to a 9% increase in emissions over FY 2000 levels.

#### **Atmospheric Emissions of PRTR Law Substances**



Note: The base year is the fiscal year in which surveys began (Toray: 1995; Japanese subsidiarie: and affiliates: 1998: overseas subsidiaries and affiliates: 2000)

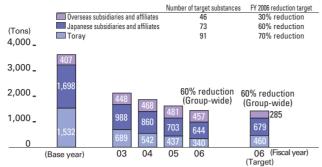
#### OReducing Atmospheric Emissions of JCIA\*3 PRTR Substances

Toray and its Japanese subsidiaries and affiliates achieved year-on-year reductions of 22% and 8%, respectively, during FY 2006, achieved Second Three-Year Environmental Plan targets. Overall the Group reduced emissions by 60% over the base year.

#### **OVoluntary Reductions Under the Third Three-Year Environmental Plan**

The Third Three-Year Environmental Plan established the target of reducing Group-wide atmospheric emissions of PRTR Law substances by 55% over FY 2000 levels, reflecting

#### **Atmospheric Emissions of JCIA PRTR Substances**



Note: The base year is the fiscal year in which surveys began (Toray: 1995; Jan

our commitment to continue to pursue voluntary reductions. We are also extending our reduction efforts from JCIA PRTR substances to include all VOCs, with the goal of cutting overall Group emissions by 55% compared to FY 2000 levels.

- \*1 VOCs: Japan's Air Pollution Control Law was revised in 2004 to establish the target of cutting nationwide atmospheric VOC emissions by FY 2010 by 30% compared to FY 2000, through emissions regulations and voluntary efforts by emitters.
- \*2 Law designed to assess environmental emissions of certain designated chemical substances and encourage improvements in their manage
- \*3 Japan Chemical Industry Association

#### **Initiatives at Toray**

During FY 2006 we completed the installation (2nd stage) of a regenerative combustion facility for organic exhaust gases at the Chiba Plant. The new facility, which will enable the plant to reduce emissions by 14 tons, is expected to become fully operational during FY 2007.

Efforts to boost recovery of process exhaust gases at the Ehime Plant reduced emissions stage) at the Chiba Plant by 7 tons.



Regenerative combustion facility (2nd

#### **Initiatives at Overseas Subsidiaries and Affiliates**

Toray Plastics (Malaysia) Sdn. Berhad continued efforts begun last year to boost recovery of organic exhaust gases during FY 2006.

The initiative is expected to yield maximum results during FY 2007 by reducing emissions by 63 tons, and the company plans to systematically implement similar initiatives in the future.

#### FY 2006 Results and FY 2007 Plan (Initiatives to Reduce Atmospheric Emissions of Chemical Substances)

	Second Three-Year Environmental Plan (FY 2006 targets)	FY 2006 progress	FY 2007 plan
Toray	70% reduction in JCIA PRTR substances over FY 1995	78% reduction	Utilize catalytic combustion facility at the Ehime Plant.
Japan	60% reduction in JCIA PRTR substances over FY 1998	62% reduction	Implement measures at Toray Advanced Film Co., Ltd.
Overseas >	30% reduction in JCIA PRTR substances over FY 2000	12% increase	Implement measures at Toray Plastics (Malaysia) Sdn. Berhad.

#### **Initiatives to Prevent Air Pollution**

**CSR Guidelines** 

We met all voluntary reduction targets laid out in the Second Three-Year Environmental Plan thanks to active efforts at the Shiga Plant, Chiba Plant, and other facilities to convert from fuel oil to city gas.

#### **Toray Group Performance**

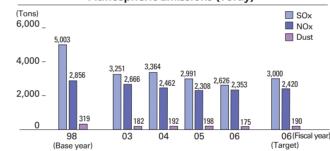
Toray Group met the reduction targets laid out in the Second Three-Year Environmental Plan with FY 2006 emissions of SOx and NOx each falling by 12% and emissions of dust rising by 2%. The conversion of fuel oil boilers at the Shiga Plant and Chiba Plant to use city gas enabled particularly significant reductions in SOx and dust emissions.

Efforts to switch to low-sulfur fuels and strengthen operational management at Japanese subsidiaries and affiliates helped lower emissions compared to the previous fiscal year.

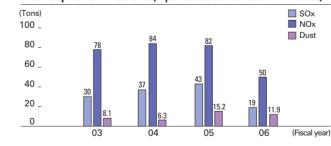
At overseas subsidiaries and affiliates, aggressive efforts over the last two or three years to convert boiler operation from fuel oil to natural gas at companies in Southeast Asia drove dramatic reductions of 56% for SOx, 50% for NOx, and 56% for dust compared to the base year FY 2001.

As a result, the entire Group posted significant reductions of 52% for SOx, 39% for NOx, and 53% for dust compared to the base year (Toray: 1998; Japanese and overseas subsidiaries and affiliates: 2001).

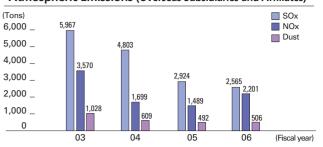
#### **Atmospheric Emissions (Toray)**



#### Atmospheric Emissions (Japanese Subsidiaries and Affiliates)



#### Atmospheric Emissions (Overseas Subsidiaries and Affiliates)



#### **Initiatives at Toray**

4 5 6 7 8 9 10

During FY 2006, boilers at the Shiga Plant were converted to city gas began operation in November 2006, reducing the environmental impact of Toray operations by cutting emissions of SOx by 338 tons, NOx by 89 tons, and dust by

7 tons over approximately six months of use.

Starting in FY 2007, yearround operation of the Shiga Plant's city gas boilers and the conversion from heavy fuel oil to city gas at the Mishima Plant (operational in July 2007) are expected to further reduce SOx emissions over FY 2006 levels by 360 tons at the Shiga Plant and 800 tons at the Mishima Plant. Overall Group emissions are expected to decrease by 56% compared to FY 2006 levels.



Emphasize Safety, Accident Prevention,

and Environmental Preservation

Natural gas boiler at the Mishima Plant

#### **Initiatives at Overseas Subsidiaries and Affiliates**

FY 2006 saw a dramatic reduction in emissions in Thailand, Indonesia, and Malaysia due primarily to the completion of efforts to convert companies with high atmospheric emissions to the use of natural gas. We plan to continue working aggressively to convert equipment to natural gas use.

We checked measurement of exhaust gas concentrations for companies in Southeast Asia and China using the instrumental analysis method, and we are working to enhance operational management.



Measurement of exhaust gas concentrations at Perfabric Sdn. Berhad

#### FY 2006 Results and FY 2007 Plan (Initiatives to Prevent Air Pollution)

		Second Three-Year Environmental Plan (FY 2006 targets)	FY 2006 progress	FY 2007 plan
		40% reduction in SOx emissions over FY 1998	48% reduction	Convert fuel for boilers at the Mishima Plant
To	ray	15% reduction in NOx emissions over FY 1998	18% reduction	Lower fuel-triggered NOx by converting fuel for boilers to natural gas
		40% reduction in dust emissions over FY 1998	45% reduction	Convert fuel for boilers at the Mishima Plant

Toray Group CSR REPORT 2007 28-29

#### **Initiatives to Prevent Water Pollution**

Toray Group purifies all wastewater from plant production activities with activated sludge treatment and other systems before release. Although we were not able to meet COD targets, we came extremely close to meeting BOD targets because of improvements in manufacturing processes and wastewater treatment facilities.

#### **Toray Group Performance**

Efforts to meet the Second Three-Year Environmental Plan target of reducing BOD emissions by 20% were only able to achieve a 19% reduction due to an emissions increase of 150 tons over FY 2006.

Although we reduced COD emissions by 11% compared to the base year, a year-on-year increase of 1.7% prevented us from reaching our voluntary reduction target. Going forward, we will be redoubling process improvements and wastewater stabilization.

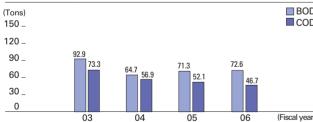
BOD emissions at Japanese subsidiaries and affiliates increased 2% year-on-year due to increasing production, while COD emissions fell 10%.

BOD emissions at overseas subsidiaries and affiliates rose 3% year-on-year in Southeast Asia and China, while COD emissions fell 5%.

#### 

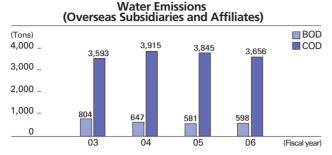
Note: BOD figures include all 12 plants and 1 research center. COD figures include the 6 plants subject to

## Water Emissions (Japanese Subsidiaries and Affiliates)



Note: BOD figures include 24 plants at 19 companies. COD figures include the 7 plants subject to Total Pollutant Load Control.

As a result, overall BOD emissions for Toray Group fell 34% compared to the base year (Toray: 1998; Japanese and overseas subsidiaries and affiliates: 2001).



Note: BOD and COD figures reflect totals for 33 plants at 24 companies

#### **Initiatives at Toray**

Water quality improvement efforts at the Ehime Plant included the construction of a new MBR treatment facility,

which began operation in August 2006. Compared to conventional treatment facilities, the plant's high throughput allows it to output treated water at a higher level of purity while maintaining higher activated sludge concentrations.



The Ehime Plant's new MBR treatment facility

#### **Initiatives at Japanese Subsidiaries and Affiliates**

Zero emissions initiatives at the Chiba Plant of Toray Fine Chemicals Co., Ltd. (TFC) include completely breaking down highly concentrated organic liquid waste in spray combus-

tion equipment and treating liquid waste generated during the polysulfide polymer manufacturing process with activated sludge and activated carbon adsorption equipment to reduce COD concentrations to 5 mg/l or lower levels.



Liquid waste spray combustion equipment at TFC (Chiba)

#### **Initiatives at Overseas Subsidiaries and Affiliates**

Toray Plastics (Shenzhen) Ltd. (TPSZ) constructed a new anaerobic coagulation treatment facility capable of processing 300 cubic meters of wastewater from its resin compound manufacturing process daily.



New wastewater treatment facility at TPS7 in China

#### FY 2006 Results and FY 2007 Plan (Initiatives to Prevent Water Pollution)

	Second Three-Year Environmental Plan (FY 2006 targets)	FY 2006 progress	FY 2007 plan
Toray	20% reduction in BOD emissions over FY 1998 20% reduction in COD emissions over FY 1998	19% reduction 11% reduction	Reduce BOD and COD at the Ehime, Nagoya, and Tokai Plants, and other plants

## CSR Guidelines 1 2 3 4 5 6 7 8 9 10 Emphasize Safety, Accident Prevention, and Environmental Preservation

#### **Initiatives to Reduce Waste**

Toray Group is redoubling initiatives to improve recycling rates and achieve zero emissions as part of larger efforts to bring about a recycling-based society.

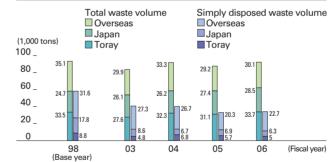
#### **Waste Reduction Activities**

Despite reduction activities such as process stabilization and recycling of waste products, the total volume of waste generated by Toray Group grew 5,000 tons over the previous year to 9,300 tons, approximately 7,000 tons of which were due primarily to increased production. Key reduction activities included the construction of a sludge dryer at the Okazaki Plant to reduce waste volume, efforts to increase throughput at TFC's Chiba Plant wastewater treatment facility to reduce the volume of wastewater that must be treated at outside facilities, and the achievement of more stable production at Indonesia Toray Synthetics through enhanced cleaning at the company's facilities to reduce varn waste.

During FY 2006, Toray Group reduced landfill waste by 3,000 tons compared to the previous year to 19,000 tons. Toray's landfill rate for FY 2006 was 2.0%, marking the fourth straight year we have achieved the target of 5.0%. Japanese subsidiaries and affiliates met targets for the second straight year with a landfill rate of 3.8%.

Our recycling rate improved 1.9% over the previous year to 93.0%, barely missing the target of 95%, while Japanese subsidiaries and affiliates posted a recycling rate of 83.3% to meet the target of 75% for the second year in a row. The recycling rate for overseas subsidiaries and affiliates was 65.7%, an improvement of 0.8% over the previous year.

## Total Waste Generated and Simply Disposed Waste (Toray Group)



#### **Zero Emissions Activities**

Toray Group defines zero emissions as a waste stream where simply disposed waste accounts for 1% or less of total waste generated, and each of our Group companies and plants works to achieve zero emissions by pursuing waste reduction activities. During FY 2006, 4 plants achieved zero emissions for the first time to bring the total to 13 plants at 9 companies, an increase of 2 plants over the previous year.

#### Olnitiatives at Opelontex Co., Ltd.

Building on ongoing recovery and recycling of materials including yarn waste and waste paper tubes, we achieved zero emissions by implementing thermal recycling of waste cloth contaminated with machine oil.

## Olnitiatives at Maruichi Fiber Co., Ltd. (Nou Plant, Itoigawa Plant)

We achieved emissions by augmenting existing recycling of materials such as waste yarn with efforts to utilize a neighboring recycling center to generate electricity from waste incineration and to recover and recycle unburnable waste as a raw material for cement production.

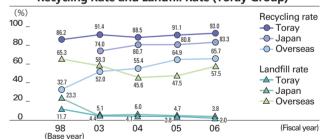
We share innovations at plants that have achieved zero emissions among Group companies and plants to enable more companies and plants to achieve that goal in the future.

#### Zero Emission Companies and Plants in FY 2006

Toray	Seta Plant, Okazaki Plant, Gifu Plant, Tsuchiura Plant
Japan	Matsumoto Textiles, Toray Coatex, Maruichi Fiber (Nou Plant, Itoigawa Plant), Toyo Plastic Seiko (Mishima Plant), Du Pont-Toray, Opelontex, Soda Aromatic (Koriyama Plant)
<b>O</b> verseas	Toray Film Products (Zhongshan)

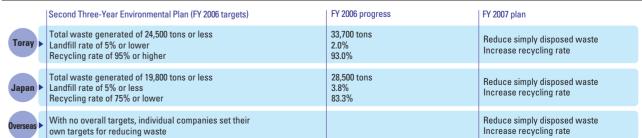
(Colored companies and plants achieved zero emissions for the first time during FY 2006.)

#### Recycling Rate and Landfill Rate (Toray Group)



Note: Overseas figures do not include Toray Saehan, which began tracking waste statistics in FY 2006. The inclusion of data for Toray Saehan improves the overseas recycling rate to 73.9% and the landfill rate to 50.3%.

#### FY 2006 Results and FY 2007 Plan (Waste Reduction)



Toray Group CSR REPORT 2007 30-31

#### **Occupational Safety Initiatives**

Toray Group is working to completely eliminate serious accidents and achieve the world's lowest rate of lost-worktime injuries through Zero Accident.

#### **Group-wide Safety Activities**

#### Key Toray Group safety policies are determined by the Safety, Health, and **Environment Committee** and communicated to Japanese and overseas subsidiaries and affiliates through the Safety, Health,



Accident Prevention, and 25th Toray Group Japan Safety Meetingt

**Environment Conference** for subsidiaries and affiliates. The annual Toray Group Safety Meeting, which is attended by Toray's president, board members, office and plant general managers, presidents of Japanese subsidiaries and affiliates, and other employees, provides an opportunity for participants to listen first-hand to the policy objectives of top management, hear reports on safety activities by Toray and Japanese subsidiaries and affiliates, and work together toward safety activities and safety management, for example by applying their respective strengths and innovations horizontally across the Group.

#### 2006 Safety Slogan

IT-2010 Achieve Zero Accident. **Everyone Keep the Basic Rule!** 

#### **Principal 2006 initiatives**

- Observe work standards
- Enforce use of protective equipment and enhance associated management
- Develop countermeasures for serious near-accidents and apply laterally throughout the organization



See page 24 for more information about Toray's system for promoting safety, health, accident prevention, and environmental preservation.

#### **Introduction of Automated External Defibrillators (AED)**

Toray placed AEDs, which were recently approved for general use by the government, in all offices, plants, and laboratories. Employees at all worksites are preparing for accidents by undergoing training on how to use the devices as well as in CPR techniques.







Lifesaving drill with an AFD (Nagova Plant)

#### **Zero Accident Initiatives**

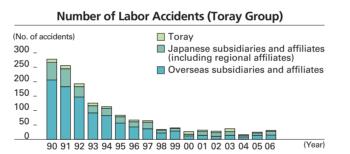
The first item in the Corporate Guiding Principles of Toray's Management Philosophy is "Safety and Environment," reflecting the top priority we give to creating a safe workplace culture and working environment. Since 2006 we have been pursuing zero accident activities as one of the Manufacturing Technology Innovation Projects under the IT-2010 mid-term business strategies. The entire Group is working together to meet the project's target of completely eliminating serious accidents and achieving the world's lowest rate of lost-worktime injuries\*1 (0.05 or lower). To do so, all companies, offices, and plants create annual plans, and directors responsible for the project manage plants' efforts across the organization.

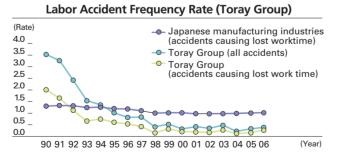
Similarly, responsible directors bring a perspective that cuts across individual businesses to bear in creating and pursuing plans to address business-specific issues.

\*1 Number of fatalities and injuries causing lost work days per 1 million

#### **Toray Group Safety Achievements**

Toray Group experienced a total of 31 accidents in 2006 (Lost work time and Non-lost work time), of which 3 occurred at Toray, 13 at Japanese subsidiaries and affiliates, and 15 at overseas subsidiaries and affiliates. The rate of lost-worktime injuries was 0.27 (Toray parent: 0.20), and the overall accident rate including accidents that did not cause lost worktime was 0.39 (Toray parent: 0.27). These numbers compare favorably to Japan's overall manufacturing industry rate of 1.02.





#### **Accident Prevention Initiatives**

In addition to conducting accident preparedness drills, Toray pursues a variety of voluntary safety activities to prevent accidents involving fires and explosions.

#### **Voluntary Safety Inspections with Toray's Proprietary Checklist**

Toray Group has prepared the FP Checklist, a proprietary checklist of 550 items relating to fire and explosion accident prevention. The entire Group, including subsidiaries and affiliates, works to prevent fire and explosion accidents by utilizing the checklist to conduct voluntary annual inspec-

#### **Preventing Recurrences by Sharing Accident** Information

In the event of a fire accident or near-accident, a Fire Accident/Near-accident Report is issued as a means of sharing information throughout the Group to prevent similar accidents from occurring in the future. The entire Group implemented countermeasures to prevent recurring accidents following two serious accidents in 2006, when a heat medium circulation pump caught fire at the Nagoya Plant (see CSR Report 2006 for more information) and a lightning strike sparked a fire at the Seta Plant.



Related article

See page 35 for more information about the lightning strike and fire at the Seta Plant

#### **Accident Prevention Education and Drills**

Toray Group companies believe that giving employees firsthand experience of the potential dangers of the chemicals they handle and the frightening potential of fires and

explosions with test devices increases the effectiveness of accident prevention efforts. To this end, we systematically conduct experimental demonstrations of fires and explosions.

We also conduct systematic fire prevention drills covering communications, evacuation, firefighting,

and other activities to minimize damage in the event of an accident. We conducted comprehensive fire drills, emergency task force drills, and emergency communication drills last year.



Dust explosion experiment







Emergency drill (Okazaki Plant)

#### **Distribution Safety Initiatives**

Toray works to ensure shipping safety by maintaining a system that facilitates emergency communications in the event of shipping accidents and conducting emergency drills.

#### **Safety Management of Hazardous Substances**

A variety of legal regulations such as the Fire Service Law, High Pressure Gas Safety Law, and Poisonous and Deleterious Substances Control Law require the assurance of safety when transporting hazardous substances. Toray's Hazardous Substance Transport Safety Management Regulations govern matters related to the safe transport of combustible or hazardous materials. We are working to conclude safety agreements with customers, suppliers of raw materials and resources, and distribution partners to define the specific division of safety management roles and responsibilities during shipment and material handling.

#### **Initiatives to Reduce Distribution Accidents**

The Transport Safety Law\*2 enacted in October 2006 mandates improvements in distribution and transport safety. As part of its responsibility as a shipper, Toray has long asked distribution partners involved in shipping Toray products to work aggressively to prevent overloading, and during FY 2006 we sought to increase the effectiveness of those efforts by conducting random checks of truck weight at each of our plants. In the future we will continue to work with our distribution partners to reduce distribution accidents by regularly conducting similar activities.

\*2 A law requiring shippers to establish and strengthen safety management systems.

#### **Emergency Response**

Toray maintains emergency communication systems and conducts emergency drills to prepare for accidents that might occur during the shipment of its products. In the event that such an accident were to occur, our response systems are capable of dispatching support personnel to the accident site immediately. In addition, drivers of shipping vehicles carry Yellow Cards\*3 bearing descriptions of emergency measures for minimizing Yellow card damage at accident sites.



\*3 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 information

#### **Environmental Accounting**

Toray introduced environmental accounting in FY 1999 to record environment-related investments and costs and calculate their effectiveness.

#### **Accounting Results for FY 2006**

Capital investment totaled 2.09 billion yen, primarily for updating electrostatic precipitators on boilers, reducing atmospheric emissions of chemical substances, enhancing wastewater treatment facilities, and renovating product recycling facilities.

Costs totaled 6.75 billion ven. of which 1.79 billion ven. was allocated to air quality efforts and 2.28 billion ven for water quality efforts. Operating costs for existing exhaust gas and wastewater treatment facilities accounted for the majority of those charges.

These expenditures saved 570 million yen in energy costs and 30 million yen in waste disposal costs while netting 980 million yen in sales of valuable recycled resources.

#### Toray FY 2006 Environmental Accounting

Со	sts			
	Item	Subcategory and description	Investments (million yen)	InvestmeExpenses (million yen))
Business area costs	Pollution prevention costs	Air (including CFC countermeasures) Water quality Noise and vibration Greening Foul odor and other	704 726 7 2 215	1,794 2,282 29 278 17
ess are	Global environment preservation costs	Energy conservation and global warming prevention	246	n/a
Busine	Resource recycling costs	Industrial waste reduction, recycling, disposal, and PCB waste disposal services	119	1,311
	stream and wnstream costs	Product recycling Container and packaging recycling	68 0	34 4
	anagement tivity costs	Indirect labor costs, ISO certification and maintenance, environmental communications, and education	0	406
So	cial initiative costs	Regional initiatives, support for organizations, etc.	0	34
	vironmental mage costs	SOx fines, soil purification, etc.	0	558
To	tal		2,087	6,747

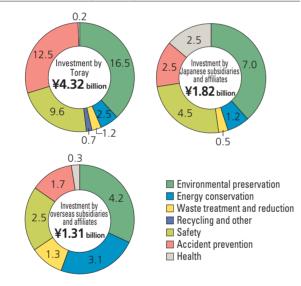
Item	Amount (million yen)
Reduction in energy costs	574
Reduction in industrial waste disposal costs	31
Sales of valuable recycled resources	975

#### Toray Group Facility Investment in Safety, Health, **Accident Prevention, and Environmental Preservation Projects**

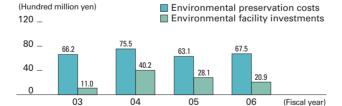
In addition to the environmental preservation, energy conservation, recycling, and other areas targeted by environmental accounting, Toray tabulates facility investment related to safety, accident prevention, and health. FY 2006 investment in this category totaled 4.3 billion yen for Toray, 1.3 billion for Japanese subsidiaries and affiliates, and 1.8 billion yen for overseas subsidiaries and affiliates.

Safety investments centered on retrofitting existing equipment to improve fundamental safety, while accident prevention investments sought to strengthen buildings to increase resistance to earthquakes. For domestic affiliates, to reduce atmospheric emissions of chemical substances at Toray Advanced Film Co., Ltd., while overseas investments included boosting wastewater treatment facility capacity at Penfabric Sdn. Berhad (Malaysia) and installing an exhaust gas desulphurization facility on coal boilers at Toray Fibers (Nantong) Co., Ltd.

#### **Toray Facility Investment**



## Toray Facility Investments and Environmental Preservation Costs



#### **Toray Environmental Accounting Standards**

- •Some categories were changed based on the Ministry of the Environment's
- Only economic effects that can be determined with a high degree of certainty are calculated. Presumed effects are not calculated
- Capital investment also includes 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
- Energy cost reduction figures show the amount of reduction for 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
- In allocating reserves to cover anticipated future expenses for PCB waste disposal and other matters, the entire amount is expensed in the year the

#### **Environmental Risk Management**

Toray Group seeks to control and reduce environmental risk in order to fulfill the "Safety and Environment" priorities that occupy the top position in the Corporate Guiding Principles of Toray's Management Philosophy.

#### Managing Environmental Risk

Toray Group considers environmental risk management to be a critical priority. The Safety, Health, and Environment Committee deals with Group-wide directions and policies. while individual plants strive to manage and reduce environmental risks. These activities are reviewed during annual Safety, Health, Accident Prevention, and Environmental Audits.

In addition to conducting emergency response drills, we work to increase individual employees' awareness of environmental issues by offering "wastewater eduction tours" designed to show workers where the wastewater they wash down the drain ends up.

#### "Wastewater education tours" at the Okazaki Plant



Employees observe the route followed by wastewater at their workplace



Wastewater treatment facility



Discharge outside of the plant

#### **Soil and Groundwater Pollution Prevention**

Toray Group constructs 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.

We continue to deal with soil pollution that was discovered at the Nagoya Plant (see CSR Report 2005 for more information) and have currently installed 71 purification wells. Similarly, we have installed 57 purification wells at Toray Monofilament Co., Ltd. (see Toray Group Environmental Report 2002 for more information), where we continue to purify groundwater by pumping it up to

the surface and aerating it. Neither facility has fallen below environmental standards, but steady cleanup work is making a difference.

We are committed to conducting voluntary surveys, reporting and otherwise disclosing survey results, and undertaking purification measures in the event that any pollution is discovered.



Pumping and aeration facility at the

#### **Environmental and Accident Prevention Compliance and Accident Report**

The Virginia Plant operated by Toray Plastics (America). Inc. was cited with one violation in FY 2006 when the contracted waste treatment volume exceeded the level for which the plant had received a permit. Upon being informed by the relevant regulatory agency of the mistake, the company immediately took corrective action and implemented a system of checks to ensure that the problem would not recur.

Five accidents occurred at Toray Group facilities during FY 2006, including a lightning-triggered fire at the Seta Plant (see sidebar below). All were reported immediately to the relevant local government which implemented countermeasures to prevent a recurrence. In addition, the Shiga Plant received a total of 18 complaints and requests from local residents concerning wastewater odor, noise, and other annoyances. We took these complaints seriously and responded in good faith by making improvements.

#### **Environmental and Accident Prevention Incidents** in FY 2006 (Toray Group)

Administrative punishments due to violations of laws and ordinances*1	1	
Accidents, etc. (fires, explosions, environmental accidents, etc.)	5	
Complaints/requests (noise, odor, etc.)	18	

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

#### Lightning-triggered Fire at Seta Plant

On August 12, 2006, a lightning strike sparked a fire at the Seta Plant's No. 2 Plant (Textile Development Center). The solid wood construction of the facility's roof and ceilings aggravated firefighting efforts, and approximately 11,000 square meters were destroyed in the blaze. No employees were injured, although one neighborhood resident was taken to the hospital for smoke inhalation as a precaution (she was not seriously injured). Smoke from the fire drifted into neighboring residential areas and inconvenienced residents, but we worked in good faith with the residents'association to wash cars and otherwise make amends

#### **Health Effects and Response to Asbestos**

Toray Group has manufactured and imported building materials containing asbestos in the past, and some of our buildings and facilities were constructed using building materials and thermal insulation containing asbestos.

Following our recognition in 2005 of asbestos as a serious

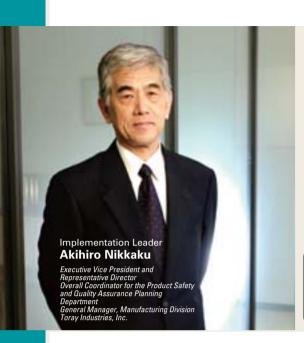
issue that was garnering increasing attention, we took action to address facilities containing it and launched a program of health examinations for approximately 3,000 interested current and past employees who had handled even small amounts of asbestos in the past. We are working in good faith with individuals diagnosed with asbestos-related health issues by helping them apply for workers' compensation and providing an ongoing program of medical examinations. Our understanding of the health effects on past and present Toray Group employees as of March 31, 2007, is described in the table below.

We have not been contacted about health issues by residents living near affected facilities.



## **CSR** Guideline

## **Ensure Product Safety and Quality**



#### Action Program (FY 2006)

Toray Group will continuously and systematically work to improve product safety management through the Product Safety Committee, a forum for promoting product safety issues throughout Toray Group, and maintain and improve our quality assurance program as well as continuously improve product quality by anticipating our customers' needs.

#### **Action Program Results**

- 1. In addition to conducting thorough product safety checks before a product is brought to market, The Group created a structure for following-up on product safety after products have been introduced to the market.
- 2. The Group reviewed product safety control system of affiliated companies and made appropriate changes where required.
- 3. To continue to improve product safety and quality assurance, a new organization covering the entire company was established, together with new Quality Assurance Departments in each business

#### Commitment

To implement an increased emphasis on product safety and quality which are critical to the company's success, we created the Product Safety and Quality Assurance Planning Department with a company-wide scope, as well as Quality Assurance Departments in each business area. This year we will focus on these activities as we build the "Quality" and "Customer-focus" aspects of the Toray Group corporate image in the 21st century.

#### **Product Safety and Quality Assurance at Torav**

As part of the "AP-Innovation TORAY 21" Long-term Corporate Vision, Toray Group created the "Quality" and "Customer-focus" aspects of its corporate image for the 21st century, as a focus for unifying and driving product safety and quality assurance.

#### **Quality Policy (revised June, 2007)**

We give top priority to the product quality offered to our customers as well as safety and environment in our corporate activities. We work on the quality management 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 quality and reliability of our product, in all our divisions such as sales, manufacturing and research and development.
- 3. We establish the quality at the stage of design and development, and ensure it in the manufacturing process to meet quality requirements.
- 4. We continuously strive to organize, maintain and improve our quality management system.

#### **Product Safety Management Basic Policy**

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

#### **Newly-established Product Safety and Quality Assurance Planning Department**

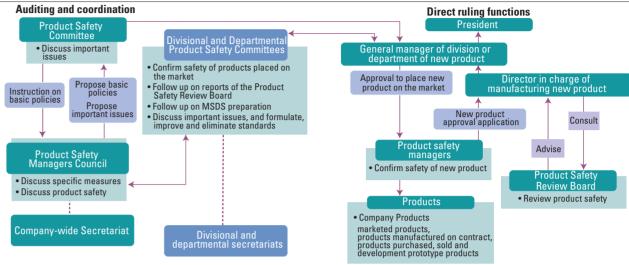
To strengthen the quality assurance program for our expanding international and OEM production activities, the Product Safety and Quality Assurance Planning Department, covering the entire Toray Group and under the direct supervision of the President, was established in December of 2006. At the same time, Quality Assurance Departments were established in each business division's Product Safety Secretariat, by adding the function of quality assurance. This is to further ensure product quality in a wide range of business areas-fibers and textiles, films, plastics, composite materials, electronics and information materials, pharmaceuticals and medical products.

The Product Safety and Quality Assurance Planning Department sets product safety and quality policy for the entire company, and provides guidance and management for the individual Quality Assurance Departments. During FY 2006, we reexamined the quality policy based on our Corporate Philosophy, focusing on a customer-first, qualityfirst approach.

#### **Thorough, Ongoing Product Safety Activities**

Toray Industries' product safety system is shown in the diagram on page 37. As the basis for product safety management, each year the Product Safety Committee sets out product safety issues common to the entire company; then, through discussions with the Product Safety Managers Council, the Divisional and Departmental Product Safety Committees plan comprehensive activities. During FY 2006 the product safety management systems at affiliated Japanese and overseas companies were reviewed and improvements put in place, including a move from GHS (a globally-unified system for the classification and labeling of

#### **Product Safety System**



chemicals) to MSDS (Material Safety Data Sheets). Divisional and departmental Product Safety Committees also meet with the Product Safety Managers Council to set annual product safety themes, and in close cooperation with those in charge of production, technology and sales, work to improve the level of product safety management.

To ensure both Japanese and overseas affiliates have the same safety management as Toray, all have enacted the product safety control regulations. The affiliated companies division, each division and department mainly provide support and guidance so that the product safety level of the entire Toray Group is improved.

#### **New Product Safety Confirmation**

New product safety checks are undertaken by the Director in charge of manufacturing new product. The examination includes a safety check of the product itself, the MSDS, an examination of the instruction manual (including warning labels), catalogs and other safety information sources used by the customer, as well as a confirmation of the environmental impact of the product. When any doubts about product safety emerge as a result of these checks, the Product Safety Review Board, a group of impartial, knowledgeable individuals from both inside and outside the company, will convene, and the product must pass their review before going to market. Safety is also followed-up after the product is delivered.

#### **Strengthening Approaches to Product Safety** Information

Regulations concerning product safety information are being strengthened in Japan, including revisions to the Industrial Safety and Health Law to enact more rigorous labeling and documentation, and a November 2006 revision to the Consumer Product Safety Law to require product accident reporting. In response to these changes, we are working to build and improve systems for dealing quickly and appropriately with product accidents, complaints, and near-accidents.

As we pursue a range of businesses that provide products and services to both consumers and other businesses, our respect for the "Eight Rights of the Consumer" is a fundamental and constant theme in our dealings with all customers. We strive to ensure product safety and quality by undertaking major programs and initiatives.

We are also working to improve accessibility for users of major consumer goods, for example by staffing a toll-free product inquiry number.



For more information on the "Eight Rights of the Consumer" please see our website.

#### **Acquiring Quality Certification**

As part of our quality assurance program, each production plant has acquired quality assurance certification to the ISO 9001 standard. In the same manner, our subsidiaries and affiliates in Japan and overseas have also obtained ISO9001 certification.

Because Toray Group manufactures a diverse range of products, various quality certifications are required to meet the respective characteristics of the individual products. For example, for the manufacture and sale of pharmaceuticals and medical products, GMP\*1 or the ISO13485\*2 certifications are acquired, while ISO/TS16949\*3 certification is required for automotive applications. For reinforced carbon fiber composite products for use in aircraft, plants must gain JIS Q9100\*4 certification. These are just a few examples of Toray's active pursuit of the appropriate certification for each office or plant.

- \*1 GMP: Good Manufacturing Practices for pharmaceutical production and quality control
- \*2 Quality management system standard for medical devices
- \*3 Quality management system standard for automotive applications
- \*4 Quality management system standard for aerospace applications

# **CSR** Guideline **Perform Risk Management**



#### **Action Program (FY 2006)**

- 1. Toray will promote systematic risk reduction activities at each division, department, office and plant, review current conditions, and propose future issues and policies through the Risk Management Committee.
- 2. In preparation for major earthquakes, a Business Continuity Plan (BCP) focusing on head office functions, information systems, and an early resumption of production will be developed.

#### **Action Program Results**

- 1. Each division, department, office and plant addressed a number of important risks and pursued systematic activities under the on-site lines initiative.
- 2. BCP for a major earthquake was developed, including an emergency response plan for the head office, information systems, and earthquake-resistant countermeasures for major production-related facilities.

#### Commitment

Risk management is at the very heart of business management. Because it is impossible to control every risk, it is essential to identify potential risks and minimize their effects before an incident occurs. We are committed to strengthening our risk management activities in the future in order to ensure Toray Group's sustainable development.

#### **Promoting Risk Reduction Activities**

Toray is actively working to reduce risk in business-as-usual conditions as well as to prevent future crises. At the same time, we are also preparing a crisis management framework by adopting Crisis Management Regulations to enable us to deal with crises that could have a dramatic impact on the continuation of management and business activities.

#### **Developing a Risk Management System**

Toray's risk management system is illustrated in the figure on page 39, and is divided between risks encountered in normal times and emergencies.

In normal times, the Risk Management Committee pursues company-wide risk management by following up on the risk management conditions resulting from the activities of the Risk Management Committees in each of Torav's divisions, departments, offices and plants and reports its findings to the CSR Committee. The Committee also handles the company-wide risk management policy, including the planning and execution of personnel education and training.

When an actual accident or environmental crisis occurs, information is transmitted along the emergency report route and the Crisis Management Regulations go into effect, causing emergency headquarters to be established both on-site and at the company level. The On-site Emergency Headquarters coordinates with the Companywide Emergency Headquarters to deal with the incident while bringing in support from other plants and divisions in the area. The Company-wide Emergency Headquarters makes and implements decisions from a company-wide perspective, for example dealing with government agencies and providing emergency information to individuals and organizations both inside and outside the company.

#### **Developing and Promoting a Major Activities Plan**

Each division, department, office and plant has established its own major activities plan, and developed its own risk management activities. The following outlines some of the main activities undertaken in FY 2006:

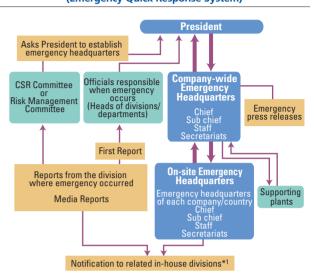
	Major Activity Plan						
Divisions, departments	Violation of corporate ethics and legal compliance     Information leak	Export control     Product safety, etc.					
Offices, plants	Earthquake countermeasure     Fire and explosion	Environmental accident     Response to suspicious persons, etc.					

	Risk	Activity condition
Divisions, departments	Violation of corporate ethics, and legal compliance	Executed education and study meeting related to laws and regulations
ns, de	Information leak	Implemented regular inspection of information security management
partm	Export control	Executed education and study meeting related to export control
ents	Product safety	Implemented product safety review
	Earthquake	Reevaluated earthquake protection standards and executed earthquake emergency training. Implemented earthquake-proofing of important buildings
Offices, plants	Fire and explosion	Undertook voluntary inspections based on an independent checklist of fire and explosion risks
ants	Environmental accident	Established standards and undertook training under abnormal drainage.
	Response to suspicious persons	Strengthened control of entry and exit, reviewed and reinforced crime prevention systems

#### Risk Management System (in Normal Times)



#### Risk Management System (in Emergencies) (Emergency Quick Response System)



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

#### **Promoting the Business Continuity** Plan (BCP)

Toray works to maintain a BCP for restoring operations more guickly and more comprehensively in the event of a stoppage due to a large-scale natural disaster or similar event. Specifically, we approach the task of formulating the BCP by assuming the occurrence of a major earthquake and examining operations from the standpoints of (1) Head Office functions (2) information systems, and (3) early resumption of pro-

As part of an effort to enhance existing production facilities in order to protect human life and minimize any impact outside the company, since 2002 we have been working to strengthen resistance to an earthquake measuring intensity Lower 6 through a series of countermeasures designed to prevent major damage and collapse. We have also worked where possible to strengthen utility and other buildings that are deemed to play an important role in the BCP so that they can withstand an earthquake measuring an intensity of Upper 6. New projects such as manufacturing facilities for important products have been designed to withstand an earthquake measuring an intensity of Upper 6.

Earthquake proofing has also been undertaken in the Shiga Information Systems Center.

To ensure that the company's head office can continue to function in case of a disaster, a plan has been made for the establishment of an emergency office in Tokyo, including identification of emergency task force personnel and individuals subject to emergency mobilization. In preparation for temporary shutdown of Tokyo head office, we have started compiling a manual for temporary transferring of head guarter function to Osaka head office and other plants.

#### The Following Head Office BCP Has **Been Executed:**

Emergency response plan for major earthquakes
 An emergency response plan for Tokyo head office has been created and

was explained at a meeting of the emergency task force personnel in December 2006. Seventy people were selected for the emergency mobilization team (those who will go to work immediately after securing their own safety and that of their family).

2. Preparation of manuals describing important business ations and their contin

Manuals describing important business operations and their continuation by different personnel in the event of an accident or disaster have been created by the divisions in question, and the content of both has been reviewed by outside specialists

S. Safety confirmation system A decision was made in early 2007 to test a system for using text messaging on mobile phones to verify employee safety at worksites in the Tokvo area.

#### **Initiatives to Protect Personal** Information

Toray put in place a system for protecting personal information by introducing a set of Personal Information Management Regulations in March 2005, predating the enactment of Japan's Personal Information Protection law in April of the same vear.

To better assess the individual information in our possession, we created a Personal Information Management Database on the company intranet and registered all personal information retained by the company departments. The database is subject to regular inspections.



Related article

For more on environmental risk management, please see page 35



mines its own issues.

#### **Action Program (FY 2006)**

Toray Group will review its corporate behavior and implement reforms through the practice of CSR line activities by promoting dialogue and cooperation with respective stakeholders.

#### **Action Program Results**

- 1. The development of CSR line activities has strengthened communication activities with stakeholders at the workplace level.
- 2. To commemorate the 80th anniversary of the company's foundation, the Toray Advanced Materials Exhibition and Toray Advanced Materials Symposium were held in September 2006 to facilitate communication with various stakeholders.

#### Commitment

Two-way communications with our stakeholders is seen as the basis for our business development. By providing information and listening to the voices of stakeholders—customers, employees, shareholders and local communities—our goal is to think first about responding to these voices and make them the basis for management activities.

**Stakeholder Communications Events Commemorating Through CSR Line Activities** One of the defining characteristics of Toray Group is our pur-

In September 2006, the company held the TORAY Advanced Materials Exhibition and TORAY Advanced Materials Symposium at the Tokyo International Forum in Tokyo's

the Company's 80th Anniversary

Yurakucho district as part of the commemoration of the 80th anniversary of its establishment. These events were conceived to provide a better understanding of TORAY Group and its future directions for our stakeholders represented by customers, representatives of the media, analysts, and Toray Group employees and their families.

Space at the TORAY Advanced Materials Exhibition was divided into 10 different themed zones, with displays and videos presenting the past, present and future of the Group. The more than 9,000 people who visited the Exhibition over two days gained a better understanding of Toray as an advanced materials company. Meanwhile, the TORAY Advanced Materials Symposium featured internationally renowned instructors in an event that was highly praised by the some 1,400 people attending.



Dr. Ryoji Noyori, President of the Institute of Physical and Chemical Research (RIKEN), speaks at the TORAY Advanced Materials Symposium



greets visitors at the TORAY Advanced Materials Symposium



Full-size mockup, Boeing 787 aircraft (TORAY Advanced Materials Exhibition



Demonstration with full-sized car built using Toray materials (TORAY Advanced Materials Exhibition)

The following chart summarizes dialogue and collaboration between stakeholders and Toray Group. See the indicated page numbers for more specific examples

	Customers	Shareholders and Investors	Business Partners	Employees	Government	Local Communities	NP0s	Citizens	International Community	Media	
Basic Stance	Create trust by listening to the voices of customers, through making products and providing services.	Provide accurate business information to ensure smooth communication.	Observe laws and regulations and consider impacts on the environment, and also open the doors to fair trade.	In response to the diversity of employment, create workplaces that are easy to work in.	Cooperate with each other, and work to maintain a sound relationship.	Promote interaction with people living near our plants, to explain our business practices and environmental activities.	Promote ties-up with people in NPOs to advance mutual cooperation.	Share common perceptions with people who are our indirect customers, by taking their wishes into account.	Actively expand our wave of global activities to create a better society.	Play a part in forming public opinion, through public accountability and transparent management.	
Communication Tools	Website     Press releases     Product pamphlets     Product descriptions     MSDS     Advertising	Website     Financial Results     Financial Report     Business Report     Annual Report	Website     Corporate Profile	Website     TorayNavi intranet     Company magazine     People	Website     Corporate Profile     CSR Report     Site Reports	Website     Corporate Profile     CSR Report     Site Reports	Website     Corporate Profile     CSR Report	Website     Advertising     Corporate Profile     CSR Report	Press releases Website Corporate Profile CSR Report	Press releases Website Corporate Profile CSR Report	
Communication Opportunities	Marketing and sales activities     Consumer service representatives  p.37	Stockholder meetings     Investor briefings     IR activities  p.42	• Purchasing activities • Surveys • Briefings	Results briefings     Labor-management consultation on corporate management      p.21, p.42	Plant tours     Producing and releasing various reports  p.35	Plant tours     Meetings to exchange opinions with local community associations     Volleyball clinic by Toray Arrows     p.43	Support NP0 activities  p.43	Exhibitions, events     Inquiries page on the website  p.40-41	International conferences     Toray Science Foundation (Japan, ASEAN)  p.55	• Press conferences • Press Interviews • Surveys	
Reflect Dialogue Promote Collaboration		Regular reporting and study of shareholders and investors opinions at board meetings      D.42	Joint operations and development     Green procurement and CSR procurement      D.52-53	Improve working conditions     Improving the workplace environment     Systems maintenance  p.16-17	Conclude individual agreements	Conclude individual agreements     Promote volunteer activities	Participate in NPO activities  D.43	Develop products with the end-users in mind     Support academic and cultural activities     D.54-55	Develop products that contribute to society and the environment     Support academic and cultural activities     D.15		

#### those seen as most important. The sum of these individual workplace CSR line activities is stakeholder communications in Toray Group, and dialogue with stakeholders is a critical requirement in pursuing CSR activities that are characterized by full participation.

suit of CSR line activities, an important and unique program

at the workplace level that involves all employees. CSR activi-

ties are promoted through stakeholder communications, as each workplace identifies its own stakeholders and deter-

Each workplace in Toray Group specifies its own personal stakeholders, determines the subjects to meet the expectations of this group, and actively works to find a solution to

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

(adopted September 2005)

- Toray Group will promote dialogue and collaboration with all stakeholders, including customers, shareholders & investors, business partners, employees, government, local communities, NPOs, citizens, international community and the media.
- 2. Each company in Toray Group, through dialogue and collaboration with stakeholders, will take steps to enact reforms designed to increase the satisfaction level of everyone.
- 3. All Toray Group employees, in their respective workplaces, shall create an environment conducive to CSR activities, and, in order to increase the satisfaction level of stakeholders, specific issues shall be determined, and steps taken to provide solutions.

To make its General Stockholders Meetings easier for investors to attend. Torav avoids scheduling them on dates when other companies' typically hold similar meetings. We also send out invitations as far in advance as possible to give stockholders adequate time to consider the meeting's proposals. In FY 2006, we sent out invitations four weeks prior to the date of the meeting.

#### **Explanatory Meetings for Investors**

On the day that business results are released, the president holds briefings to provide institutional investors and security analysts with an opportunity to hear opinions about the management directly from investors and securities analysts.

To enhance direct communication with individual investors, the chief IR officer and department staff attend briefings sponsored by the Nagoya and Fukuoka stock exchanges.

#### **Internet-based Information for Stockholders** and Investors

To promote information disclosure to stockholders and investors, Toray maintains an IR section on its website. This provides information such as notification of business results and other announcements to the securities exchange and the media, as well as materials from briefings, all with the immediacy of the web. These materials are also quickly translated into English and provided on the website. In February 2007, an additional section designed for individual investors was created, providing full information disclosure that is easy to understand.

#### **Major IR Activities in 2006**

Activity	Attendees from Toray	Number of meetings	Approximate number of participants
Business Results Announcements	President, Financial Accountant Director, Director in charge of investor relations	4	819
Briefings on Business Strategies for Institutional Investors	Directors in Charge of Manufacturing Division, General Managers of Divisions & Departments	1	36
Briefings for Individual Investors	Director in charge of investor relations	2	321
Interview Handling for Investors and Analysts	Director in charge of investor relations, Investor Relations Department staff	Always available	683

#### Reflecting the Voice of Stockholders and Investors in Management and Business Activities

The opinions of stockholders and investors received through the Investor Relations Department are regularly reported to the Board of Directors, and also regularly discussed with the companywide Communications Committee, and reflected in the company's management activities.

#### **Communication with Employees**

#### Presentation on "Innovation and Creativity at My Section"

To enable the entire Group to work together in implementing the IT-2010 Mid-term Business Strategies, labor and management co-sponsored a kickoff event entitled "Innovation and Creativity at My Section" in November 2006. Some 300 people, including the president, executives, Toray Labor Union chairman, union leadership, and other employees, attended the event and watched presentations

describing 12 activities selected from 570 entries submitted by workplaces throughout the company. Talks by Toray's president and the chairperson of the Toray Labor Union preceded the presentations and were broadcast live through Toray's internal network to all offices and plants.



At the presentations (November 2006)

#### **Results Briefings for Employees**

Following the announcement of annual and semi-annual business results, the president and other executives travel to each office and plant to present Results Briefings that are also attended by employees of subsidiaries and affiliates. The briefings include explanations of financial results and provide an opportunity for attendees to exchange opinions among themselves and with management.

During FY 2006, we held Results Briefings at 15 locations. The events facilitated energetic communication, including questions about initiatives for pursuing IT-2010 projects and steps for increasing profitability in the face of high prices of raw materials and fuels.



Business results briefing, Tokyo (November 2006)

#### **Communications with Local** Communities

#### **Interaction with Local Communities Through Sports and Events**

Sports were the vehicle for a wide range of interaction with local communities, such as volleyball training sessions with the TORAY ARROWS, and employees coaching judo and kendo at sports grounds and gyms around the country. As an example, the Okazaki Plant has held kendo training sessions since 1978; in FY 2006 the local primary and secondary school teams took part and scored highly in the national kendo competitions.

Visitors were also welcomed to the Shiga Plant and the Toray Human Resources Development Center in Mishima. In FY 2006 nearly 1,700 visitors in 240 groups visited the Shiga Plant, and nearly 500 visitors in 40 groups visited the Toray Human Resources Development Center. Toray proactively seeks communication with local communities such as invitations to the summer festivals held at each plant.

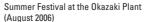


Special volleyball clinic by the TORAY ARROWS at the Numazu School for Children with Disabilities, Shizuoka Prefecture (July 2006)



Kendo training session at the Okazaki Plant







mployees of the Ishikawa Plant join in the 25th Jonkara Dance Contest (August 2006)

#### **Communications with NPOs**

1 2 3 4 5 6 7 8 9 10

In 2006, Toray was again a supporter of the Community Care Aid Program, sponsored by the Community Care Aid Center. This support is gradually beginning to generate results, and we are committed to continuing to actively foster communication with NPOs through the Center, which works to support NPOs seeking to bring about a society in which everyone can live in comfort and safety (social welfare in a broad sense).

Promote Dialogue with Stakeholders

#### **Communications with the Media**

The Corporate Communications Department serves as the interface between the company and various media organizations, providing them with press and publicity information. As well as fulfilling the company's responsibility for information disclosure, its activities are intended to proactively shape public opinion. Information disclosure means the active transmission of information, even that which might be sensitive or negative, based on Toray's Information Disclosure Principles.



For more on Toray's Information Disclosure Principles, please see our website

#### **Major Media Activities in 2006**

•
Press conferences
Press interviews given
Surveys conducted400

#### **Providing Information to** Stakeholders

#### **Providing Information Through the Website and Publications**

Toray provides a wide range of information — corporate, research and technology development, stockholders and investors, and CSR activity information — through our website, as well as with printed corporate profiles, CSR reports and other materials. To improve access for those visiting the website and provide quicker navigation for individuals looking for specific content, the Japanese website was updated in April 2007 and re-launched as two sites: http://www.toray.co.jp for corporate information, and http://www.torav.ip for product and service information. The Global site will also be revised in FY 2007.

# **Step Up Environmental and Recycling Efforts**



#### **Action Program (FY 2006)**

Toray Group will promote environmentally friendly products making clear the benefits of improvements in the global environment. We will also establish the role and future vision for recycling.

#### **Action Program Results**

- 1. The Group expanded applications for polylactic acid (PLA), a material that reduces CO<sub>2</sub> emissions and derived from plants.
- 2. The Group expanded case studies of recycling programs that are closely linked to customers, for example air conditioner fans.

#### Commitment

In the 21st century, it is important for corporate initiatives designed to help bring about a sustainable, recycling-based society. As a group of materials manufacturers founded on technology, Toray Group is committed to actively improving the global environment by promoting research and development into environmentally friendly products (including recycled products) and expanding our businesses in the fields of environment, water, and energy, which have been identified as key areas in the IT-2010 Mid-term Business

#### **Pursuing Environmental Design to Create Environmentally Friendly Products**

Toray Group pursues environmental design in order to develop environmentally friendly products. We incorporate the Life Cycle Assessment (LCA) approach into the product design, research and development, and production, as shown in the figure below.

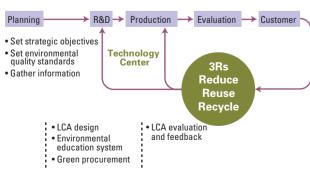
Before commercializing new products, divisions are required to create an Environmental Assessment Checklist as part of the Product Safety Review. Environmental data as well as product safety data are subject to review and verification before products are commercialized.



#### Related article

Please see pages 36 and 37 for more information about the Product

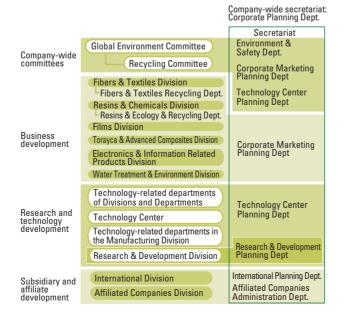
#### **Toray Environmental Product Design Process**



#### **Environmental and Recycling Initiatives**

In line with our vision of making a global contribution in conserving resources and protecting the environment to develop a sustainable, recycling-based society, we are working to reduce the environmental impact of Toray Group products. We are developing environmental products as well as recycled products and technologies with a reduced environmental load based on the concepts of "Clean" and "Less Energy."

#### **Structures for Promoting Environmental Recycling**

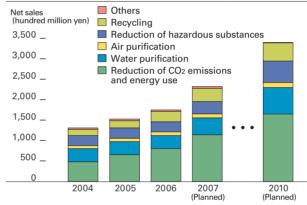


#### Promoting the "Ecodream" Project

Since the establishment of the Global Environment Research Laboratories in 1991, we have utilized all of the Group's resources and capabilities to reduce the environmental impact of our operations. These include resource and energy conservation, environmental clean-up, and recycling, and we have provided products and technologies designed to take advantage of the results of this research to society. "Ecodream" is the general name for our environmental conservation activities, and we are focusing Toray Group's resources and capabilities on enhancing and advancing associated initiatives.

We have adopted the name "Ecodream" Project to describe initiatives aimed at expanding our businesses by providing environmentally friendly products, including recycled products, and are seeking to double FY 2005 net sales of Toray Group's environmentally friendly products by FY 2010.

#### **Expanding Toray Businesses** Through the "Ecodream" Project





#### Related article

See pages 56 and 57 for a list of Toray Group's environmentally

Expected effects	Products
Reduction of CO <sub>2</sub> gas	PLA fibers, plastics and films, 3GT fibers & textiles, bamboo composite fibers, cellulose fibers, soy bean protein fibers, flexible heat-resistant films
Energy reduction	Carbon fiber composite materials for transport, machinery, engineering plastics, components for wind turbine generators, components for fuel cells, films for solar cells, capacitor films for hybrid cars
Water purification (water treatment)	RO, NF, UF, MF, and MBR membranes, water treatment system businesses, Torayvino*
Air purification	Heat-resistant bag filters (PPS, PTFE fibers), air filters
Reduction of hazardous substances	Non-halogen fire retardants (fibers & textiles, plastics, films), waterless CTP plates, non-halogen circuit materials, heavy-metal-free color filters
Recycling	PET, Nylon-6, PBT, ABS, PPS, CFRP, Toraysurou*, DMSO

#### **Initiatives to Design Environmentally Friendly Products**

Toray is working to develop and commercialize products and technologies based on the concepts of "Clean" and "Less Energy" with goals such as CO2 reduction, energy reduction, water purification, air purification, reductions in hazardous substances, and recycling.

#### **Development of Non-petro Chemical Products**

Toray is working to develop and commercialize non-petro chemical products in response to increasing interest in these materials from the standpoint of preventing global warming and dealing with resource depletion. Of these substances, PLA

is manufactured using plant-origin materials such as corn and is a carbon neutral material that does not increase CO2 levels. even when incinerated. We are developing PLA fibers, textiles, and plastic products under the Ecodear\* brand.



Ecodear fiber filling



Ecodear\* is the registered trademark for Toray's PLA materials.

In FY 2006, Hitachi, Ltd., selected Ecodear\* plastic for use in manufacturing a desktop mobile phone cradle. Nano-allov technology, which is capable of dispersing small amount of high-performance polymers throughout a PLA substrate at the nanometer level, dramatically improves PLA's heat resistance,

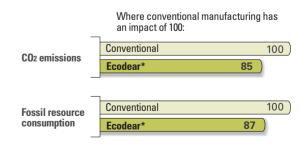
impact resistance, and formability, enabling its use in a variety of electric and electronics products.

Tomy Company, Ltd., chose PLA for its "Nohohon Family" toy because it is an environmentally friendly material capable of offering the safety required of a toy, along with the same strength as the petroleum-based ABS resin conventionally used.



Takara Tomy's "Nohohon Family" made from Ecodear

#### **Environmental Impact of Manufacturing** "Nohohon Family"



Toray Saehan, Toray Group's Korean subsidiary, began production of PLA sheet (non-oriented film) using a newly installed manufacturing facility with an annual production capacity of 5,000 tons.

Toray has been successful in creating a number of nonpetro chemical products other than PLA, including Foresse\*,

a new fiber manufactured using the world's first application of the melt spinning technique for cellulose; Aminos\*, a fiber made from vegetable protein; and SOTAKE\*, a textile produced using bamboo as a raw material. During FY 2006, we successfully produced textiles with Foresse\*, including super-lightweight textiles made with hollow fibers and super-soft textiles made with extra fine fibers.



A Foresse\* display created by Miyake Design Studio Co., Ltd., for the TORAY Advanced Materials Symposium

#### **Products That Help Reduce Hazardous Substances**

Toray Group technologies are also hard at work reducing the use of hazardous substances.

For example, the world's first Waterless CTP Plate\*1, developed and commercialized by Toray, enables images to be formed using a nearinfrared laser and offers exceptional printing capabilities for a wide range of fields. Moreover, this innovative technology reduces alkaline developer liquid waste and volatile organic compound (VOC) emissions by eliminating the need for dampening water during the printing process. The product received the Sixth (FY 2006) Green & Sustainable Waterless plate and the Chemistry (GSC) Award in recognition of its contribution to lowering environmental impacts.



In addition to providing material products, we develop highly regarded manufacturing equipment. The Toray Slit Coater, developed and commercialized by Toray, utilizes

film manufacturing nozzle technology to coat materials (photo resists) using only a slit nozzle. The system helps dramatically reduce loss of coating liquid while contributing to energy savings.



Toray Slit Coater

#### **Recycling Initiatives**

Toray's basic approach to recycling is known as "Less Energy Recycling." We strive to achieve waste-free and efficient recycling by employing a variety of technologies according to the properties of the material being recycled.

#### **Recycling Activities Principles** (adopted in March 2004)

- 1. We shall design, produce, and sell products that reduce the impact on the environment.
- 2. We shall purchase and use materials and products which will help reduce 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

#### **Recycling Vision** Approach recycling based on the concept of "Less Energy" Company-wide Pursue sustainable recycling through partnerships with customers Approach recycling based on the concepts of "Less Energy" and "Total Recycling" Fibers & Textiles recycling Expand efforts through partnerships with users Approach recycling based on the concept of "Less Energy" Plastic recycling Focus on profitable material recycling using the life cycle inventory (LCI) technique · Demonstrate a pilot recycling plant as part of Composite materials a national project Lead the carbon fiber industry by establishing recycling recycling methods

#### **Basic Approach to Recycling**

The Recycling Committee, a subcommittee of the Global Environment Committee, oversees recycling efforts in accordance with the Recycling Activities Principles adopted in 2004. Our goal is to pursue recycling in a sustainable manner through partnerships with customers.

In FY 2006 we established a Recycling Vision to pave the way for dramatic increases in awareness, and we have launched a variety of initiatives in order to implement this vision.

#### **Fibers & Textiles Recycling**

Toray established the Fibers & Textiles Recycling Department in the Fibers & Textiles Division to facilitate proactive recycling initiatives. For example, we developed technologies to turn Nylon-6 fiber in used clothes into new fiber, due to the fact that manufacturing Nylon-6 from crude oil requires more energy than polyester and other fibers.

During FY 2006, we signed an agreement with Patagonia Inc. to work together on Nylon-6 materials recycling. Under the new initiative, Toray will melt down non-standard materials generated during the manufacture of other products, form the resulting mixture into chips, and spin them into Nylon-6, which will then be used by Patagonia to manufacture clothing for sale. Garments made of this recycled material can be manufactured using approximately 1/6

the energy required to produce clothing using virgin Nylon-6 derived from crude oil. Moreover, CO2 emissions generated during the manufacturing process can be dramatically reduced to approximately 1/5 of the conventional production process.



Joint announcement with Patagonia

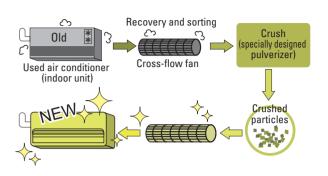
#### Comparison of Nylon-6 Material Recycling

CO2 emissions	Where conventional manufacturing has an impact of 100:
Conventional: Crude oil to Nylon-6 fibers	100
Toray System: Fiber waste to Nylon-6 fibers	20)
Fossil resource consumption	
Conventional: Crude oil to Nylon-6 fibers	100
Toray System: Fiber waste to Nylon-6 fibers	17)

#### **Plastic Recycling**

In recycling ABS, Nylon, PBT, PET, and PPS resins, Toray focuses on material recycling, an approach that allows plastic resins to be reused without undergoing a depolymerization process. We collaborated with Hitachi Appliances, Inc., to develop new technology for separating and recycling glass-fiber-reinforced AS resins used in fans in indoor residential air conditioner units. In addition, we shared the Wastech 2006 Awards Committee Chairperson's Special Award with Mitsubishi Electric Corporation and Hyper Cycle Systems Corporation in recognition of the success of a program that we have pursued in partnership with Mitsubishi Electric since 2005 to recycle cross-flow fans.

#### **Recycling Cross-flow Fan Materials from Air Conditioners**



#### **Composite Materials Recycling**

Since developing technology for recycling CFRP for use in reinforcing concrete in 2004, we have been working in conjunction with other carbon fiber manufacturers on the Recycling Committee of the Japan Carbon Fiber Manufacturers Association to promote recycling initiatives for carbon fiber, a material that is expected to see increased production and sales in coming years. During FY 2006, we finalized the specifications for a carbon fiber recycling system in preparation for the construction of a pilot carbon fiber recycling plant, and we look forward to demonstrating the viability of carbon fiber recycling technologies through the construction of this plant.



#### **CFRP Recycling Process**



<sup>\*1</sup> Computer-to-plate, a system for directly printing image data on printing plates with lasers.

# **CSR** Guideline

## **Secure and Train Personnel and Promote Human Rights**



#### Action Program (FY 2006)

We will initiate group-wide efforts in areas such as securing and training personnel, promoting human rights, diversifying employment, increasing opportunities for women, balancing the demands of work and home, and improving the workplace environment.

#### **Action Program Results**

- 1. The Group conducted a number of human rights training programs including the 2006 Human Rights Promotion Campaign.
- 2. The Group strengthened measures to achieve diversity in our human resources and to train our personnel, actively hiring both recent graduates and those with work experience.
- 3. The Group executed a Phase 1 Action Plan to maintain compliance with the Next Generation Law, strengthened our support system for balancing work and home, and held lectures and training sessions under our Advancement of Women Project.

#### Commitment

The most important factor for Toray Group in striving to become the world leader in advanced materials is working to secure, develop and retain talented personnel who can flourish on the global stage. Indeed, an emphasis on human resources is counted among our corporate guiding principles. Respecting each employee as a valuable resource, I personally commit myself to taking the lead in promoting various initiatives to create a happy, vibrant corporate group where all employees can find meaning in their work and the corporate culture encourages taking on new challenges.

#### **Human Rights Promotion Efforts**

Toray Group believes that respect for human rights is a fundamental rule indispensable to the management of the company. We therefore strive 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, we respect international rules such as the United Nations Universal Declaration of Human Rights, the ILO Treaty and the United Nations Global Compact, prohibiting forced labor and child labor under any circumstances, and comply with the laws and regulations of each country and region in which we operate.

#### **Human Rights Promotion System**

We have established a Human Rights Promotion Section within the Industrial Relations Department, as well as Human Rights Promotion Committees under the Corporate Ethics Committee that function both company-wide and at the office and plant level. In addition, we have appointed Human Rights Promotion Officers for each workplace; some 300 such officers dedicate themselves to making the work environment more pleasant and productive.

#### **Implementation of Human Rights Training Workshops**

To help increase awareness and promote a correct understanding of human rights issues, we held training workshops and campaigns both at head offices and at each office and plant. The FY 2006 campaign, which took as its theme "Broaden the Circle of Human Rights and Workplace Harmony at Your Workplace," focused primarily on prevention

of sexual harassment and bullying or "power harassment" in the workplace, as well as considering human rights issues in dealing with a diversifying workforce. In an effort to raise each employee's awareness of human rights issues we held training sessions for operational and administrative managers at each office and plant, and conducted workshops in conjunction with workplace study groups.

#### **Human Rights Promotion System**

President Members of the Board and Chair of Toray Labor Union Auditors Personnel Department

General Manager, Manufacturing Division General Manager, Personnel & Industrial Relations Division Office and Plant General Managers General Manager, Personnel Department, General Manager, Affiliated Companies Division

Chair of Toray Labor Union Industrial Relations Department, Human Rights Promotion Section

Office and Plant General Managers Assigned for each workplace. Labor union chapter officers also participate.

#### FY 2006 Human Right Training and Seminars

Held at head offices 19 events 1,520

Held at Offices and Plants **1,409** events 28,662

participants

Outside Seminars 57 events 135 participants







Promotion Campaign pamphlet (left) and posters (center and right)

For FY 2007 we will focus on responding to revisions to the Equal Employment Opportunity Law and, given the diversification of types of employment, on promoting human rights for non-regular employees such as temporary and part-time workers.

#### **Harassment Prevention**

Toray established Sexual Harassment Prevention Guidelines in 1999. When problems arise we swiftly launch an investigation and take firm steps both to help the victim and prevent a reoccurrence. In addition to educating our employees about sexual harassment through training seminars at each level of our organization, counseling services have been established and the Speak-Up Program (complaint box) adopted at each Toray office and plant

We also undertake educational activities aimed at preventing "power harassment."

#### **Developing Human Resources That Can Create New Value**

The development of human resources is one of Toray Group's most important managerial objectives. We conduct personnel training with three objectives: the cultivation of fair-minded members of society who have high ethical standards and a sense of responsibility; the training of professionals with advanced expertise, technical skills and originality; and the cultivation of leaders with foresight and a sense of balance.

#### **Rational and Well-organized Training System**

The Toray employee education system represents a rational, systematic approach to human resources responding to various needs in every field. We conduct 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 human resources suitable for employment globally.

Beginning in FY 2007, as a way to strengthen the development of sales personnel, we began implementing a human resources training program based on consistent training objectives for a designated "initial training period" spanning the first three years after joining the company.

#### **Early Leadership Development**

To cultivate future executives, courses to promote unified management have been held at the Toray Management School since 1991. Here section managers learn the knowledge and skills needed to become corporate executives.



Toray is also working to train section and unit managers in coaching skills\*1 and to improve their problem-solving skills through logical thinking\*2 concepts.

We also established the Toray School of Technology and Business, where mid-level employees at manufacturing plants are trained in a one-year live-in schooling environment.

- \*1. Communication skills to encourage independent action in subordinates.
- \*2. Skills to define and solve problems in a rational, logical manner.

#### FY 2006 Company-Wide Training Course Enrollment (Toray)

Training Category	Persons Enrolled	
Management	895	
Technical	645	
Sales	371	
International	74	
General	479	
Total	2,464	

Note: Excludes divisional and plant-level training

#### **Personnel Training Programs**

			-	_		
		Management	Technical	Sales	International	General
Leadership	Management leaders	Executive training Toray Management School Toray Group Management School	Strategic technology training	Marketing Executive Training	Toray Group Executive Seminar	General and specific outside studies in Japan or overseas Overseas Junior Training
Development	Business Area leaders	Section Management improvement training	Technological development leadership training	Sales Leadership Training	Toray Group Senior Management Seminar	Program Challenge Training Program (open
	Workplace leaders	Management supervisor training	Production management training	Sales Skills Improvement Training	Toray Group Management Seminar	enrollment)
	vvoikpiace leaders	Toray School of Business and Technology	Divisional and p	lant-level training	Toray Group Supervisor Seminar	IT education
	Knowledge and skills	Common management		Marketing Strategy Training	Overseas assignment basic training	Training outside the company  Cross-industry exchange
Professional	shared across divisions		Various technical courses	Sales Skills Improvement Training	Fauliahitian	seminars
Development			Management skill courses	Sales Practice Courses	English writing	
	Knowledge and skills	specific to each division	Divisional and plant-level	training		
Developing			Divisional and plant-level training		Language skills improvement	Distance learning
Responsible Members of Society		New employee training	Secondary technical training Primary technical training	Secondary sales training Primary sales training	training	

#### A Personnel System That Prizes Employee **Motivation and Accomplishment**

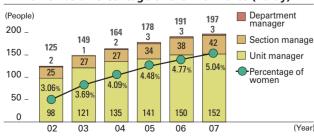
Toray adopts the following personnel systems to create a dynamic organizational culture that encourages individuals who dare to explore new possibilities to contribute to the company.

Management-by- objectives system	This system establishes annual objectives for each employee. At the end of the fiscal year, employees and their supervisors meet to review the extent to which they were able to meet their objectives.
Personnel evaluation system	This system is designed to facilitate a fair evaluation of employee contributions in terms of duties, responsibilities, capabilities, and results.
Individual meeting system	Under this system, employees meet with their supervisors twice yearly in a one-on-one setting. Supervisors work to develop their subordinates' skills and ensure that they accept the validity of their evaluations.
Self-assessment system (for managers, occupational specialists, and general staff)	Employees survey topics such as their own work experience and desires concerning topics such as job transfers in an annual process that is linked to individual personnel transfers.
Career Assessment System (for general staff)	Employees participate in a regular compound review consisting of work presentations and personnel interviews. We focus on the direction of their future growth.
Internal recruiting system	We recruit from inside the company as appropriate in order to ensure optimal staff assignments and support employees' autonomous efforts to direct their own careers.
Bonus system for employee inventions	We revised this system in April 2005 to boost awards above past levels in an effort to accelerate the creation of exceptional inventions.

#### **Creating an Organizational Culture Conductive to the Advancement of** Women

Toray initiatives to facilitate active participation by female employees reach back to at least 1958, when we began promoting women to management positions, making us a pioneer among Japanese companies. Our similarly deep-rooted commitment to create a workplace responsive to the needs of women is evidenced by our introduction of a childcare leave program in 1974, anticipating the legislation of such programs nearly 20 years later. In fact, a Toray subsidiary promoted a female employee to the position of president in 2003, and we launched the Advancement of Women Project in 2004 to redouble efforts to create a corporate culture conducive to the participation of female employees.

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



Note: Figures for April of each year

Thanks to the consistent pursuit of these initiatives, both the number and proportion of women ranked at the level of unit manager or higher has continued to increase, with 5.04% of supervisory or managerial positions held by women as of April 2007.

#### Initiatives to Balance Work and Family Life

Toray strives to enhance systems that help employees balance work and family life in order to both lay the groundwork for a corporate culture conducive to the advancement of women and empower both male and female employees to choose a variety of lifestyles.

In particular, we have exceeded legally mandated benefits for support systems related to childcare, family-care, and maternity protection, based on our commitment to keep systems responsive to a diverse range of employee needs and accessible to workers. Utilization of these programs by male employees is gradually becoming more common, and in FY 2006 three male employees took advantage of the childcare

In keeping with our goal of encouraging employee utilization of these systems, we provide information about new programs as well as program changes and benefits in internal company newsletters and on the company intranet.

#### **Utilization of Childcare and** Family-care Leave Systems (Toray)

	02	03	04	05	06	(Fiscal year)
Employees taking childcare leave	54 (0)	79 (0)	70 (0)	80 (4)	78 (3)	
Employees taking family-care leave	4 (0)	2 (0)	2 (1)	4 (0)	3 (1)	

Note: Number of employees beginning the leave (men)



Related article

See pages 16 and 17 for more information about advancement of women and work-life balance.

#### **Initiatives Encouraging Diversity in Employment**

Toray Group works to build workplaces in which employees from different backgrounds can coexist with one another while making the most of their respective skills and performing their jobs in an engaged, energetic manner.

#### **Reemployment System**

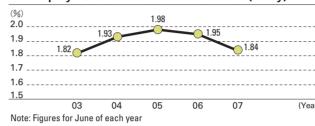
As part of its efforts to encourage the participation of individuals over age 60, Toray concluded a labor-management agreement for union members in 2001 and introduced a reemployment system that is open in principle to all employees who wish to continue working. The labor-management agreement concerning this reemployment system was revised in December 2005 to expand coverage to include employees in management and occupational specialist categories.

In November 2006 we finalized plans to progressively increase the maximum age for reemployment and concluded a new labor-management agreement. As a result, the reemployment period will be extended to age 65 by April 2013.

#### **Employment of Disabled Persons**

Toray has fulfilled its social obligations of employing disabled persons through achieving the legally required employment ratio of 1.8%. Our efforts to provide a work environment in which disabled individuals find it easy to perform their jobs encompass "hardware" steps such as providing barrier-free spaces as well as "software" aspects such as training at the time of hiring and refinements in the work environment based on suggestions and requests from disabled employees.

#### **Employment Ratio of Disabled Persons (Toray)**



#### Mid-career Recruitment and Employment of **International Students**

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

#### **Development and Promotion of Local Personnel Overseas**

To promote global management, Toray Group encourages the development of human resources at the local level, including promotion to executive positions. This approach grows from our identification of the localization of management personnel at overseas subsidiaries and affiliates as one of our business strategies.

#### 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, and head office is working with overseas subsidiaries and affiliates to develop and promote local staff in these positions, who are known as "National Core Staff."

For example, we have 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 we pursue career development by creating individually-focused long-term career development plans. Other priorities include the development of the Toray Global Database to facilitate information sharing.

#### Systems for Developing and Training **Local Personnel**

In order to implement global management, it is essential that core local personnel have a thorough understanding of Toray's management philosophy and guidelines. Development and promotion initiatives include organizing training programs in Japan for core local staff at their



Training overseas local personne

respective levels and incorporating an off-site training plan into the individually-focused long-term career development plans.

We held the first Toray Group Executive Seminar in Japan for local executives and board members in 2004 and the second seminar was held in 2006. The Toray head office also participated in training programs held in each country and region to help create networks among local participants and foster global leadership ability, including intercultural communication skills.

#### FY 2006 Overseas Local Personnel Training Results (Toray Group)

Training in Japan	Toray Group Management School Toray Group Senior Management Seminar Toray Group Management Seminar Toray Group Supervisor Seminar	12 16 16 13
Local Training (participated in by Toray)	3rd Europe Senior Management Seminar 1st U.S. Senior Management Seminar	12 19

#### Akiko Konishi

Manager, Personnel Employment Section Personnel Division Torav Industries, Inc.



Three years ago when I was assigned to the secretariat of the Advancement of Women Project, I was extremely confused about how to tackle my new job.

When I asked people in the company for their impressions about "Advancement of Women" and what it should mean, everyone had their own ideas. Some women even criticized us for placing too much emphasis on women in this day and age.

However, everything came together after the General Manager of the Personnel & Industrial Relations Division, the project leader, explained on visits to all plants and at working team meetings that the purpose of the initiative was to increase human resources competitiveness. By approaching this problem from the point of view of human resources competitiveness, it becomes clear that we must move beyond the current

There are still too few women in the corporate society, and they continue to work under various types of pressure. I believe that reducing this pressure, if only slightly, and helping women build solid careers is exactly the kind of "Innovation" we need to create a truly appealing company where men and women alike can pursue jobs they find personally and professionally fulfilling.

# **CSR** Guideline

## **Cooperate with Suppliers in their Environmental and Social Initiatives**



#### **Action Program (FY 2006)**

Toray Group will implement an internal approval process for CSR partners based on the results of surveys of CSR promotion efforts for procurement and purchasing. We will also encourage suppliers that do not meet our approval standards to improve their CSR

#### **Action Program Results**

- 1. The Group began registering suppliers whose CSR activities rise to Toray Group standards as CSR Procurement Partners.
- 2. Procurement from CSR Procurement Partners during FY 2006 accounted for approximately 90% of total purchases of principal raw materials.
- 3. The Group conducted a survey of CSR promotion efforts at suppliers.

#### Commitment

It is necessary to approach a company's social responsibility not only within the range of its own corporate operations but also throughout the entire value chain. Consequently, we believe that suppliers' CSR measures, including environmental and social considerations, are important criteria in purchases of raw materials. In the Purchasing & Logistics Division, we see our mission as promoting CSR procurement throughout Toray Group

#### **Toray Procurement and Purchasing Activities**

#### **Basic Purchasing Policies**

- 1. Toray does its best to select suppliers and determine individual purchases fairly and on the basis of economic rationality, with consideration for price, quality, ability to provide stable supplies, technological capabilities, reliability, and other factors
- 2.In selecting suppliers, Toray opens its doors to a wide range of companies inside and outside Japan. Toray does not rely solely on vendors it has existing or past relationships with, or on members of its corporate group.
- 3.In making purchases, Toray complies with relevant laws and regulations while taking environmental preservation and fulfilling corporate social responsibility (CSR) issues into account. Toray actively pursues green procurement and purchasing as part of its environmental efforts.
- 4. Toray works to maintain and improve the quality of purchased products through cooperation with its suppliers.
- 5. Toray works to uphold its corporate social responsibilities on a company-wide basis.

#### **Basic Purchasing Policies and CSR Procurement Guidelines**

Because most of Toray's products are used as materials for our customers' products, customer needs play an important part in guiding our purchases of raw materials, fuels, packaging materials, assembly component materials, and equipment. Toray has adopted a set of Basic Purchasing Policies in order to assure fair transactions based on these customer needs. We have also adopted CSR Procurement Guidelines to encourage business

partners (suppliers) to fulfill their social responsibilities in regards to issues such as environmental preservation, legal compliance, and respect for human rights. The CSR Procurement Guidelines address the kind of initiatives that corporations are being called upon to pursue in areas ranging from corporate ethics and risk management to product safety and human rights.

#### **Expanding Purchases from CSR Procurement Partners**

Toray believes that to achieve a sustainable society, it is important to undertake initiatives throughout the supply chain while building collaborative partnerships. As a concrete step toward strengthening of the CSR supply chain for our products, we conducted a survey to assess the status of CSR initiatives on the part of the approximately 2,800 suppliers from whom we regularly purchase raw materials and fuel, components, and packaging materials. We designated suppliers whose responses met our own standards as CSR Procurement Partners, and today we are working to increase the proportion of our overall purchasing from these suppliers.

#### **Implementing Green Procurement Guidelines**

Our Green Procurement Guidelines include our own lists of banned and controlled chemical substances and require assessments of the environmental control status for items

Procurement Guidelines were applied to the RPS purchasing system in April 2005, and we provide customers with Specific Chemical Substance Content Information Sheets.

See Toray's website for more on the CSR Procurement Guidelines.

we procure. The results of a survey including controlled chemical substances conducted in December 2004 based on the Green

#### Banned Chemical Substances 47 substance groups

#### Chemical substances whose use is prohibited in Japan

• Type I substances under the Chemical Substances Control Law (PCBs, etc.) Substances whose manufacture is prohibited by the Labor Safety and Health Law (asbestos, others) etc.

#### Controlled Chemical Substances 64 substance groups

- 1.Chemical substances whose manufacture is restricted in Japan (requiring approval for manufacture or reporting of use)
- 2.Chemical substances whose applications are restricted by overseas laws applicable to Toray products
- Type II substances under the Chemical Substances Control Law (trichloroethylene) etc
- Substances controlled by EU/RoHS directives (cadmium, others) etc.

#### **Initiatives with Distribution Partners**

#### **Basic Distribution Policies**

- 1.We shall select our transport and storage 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 storage 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 storage
- 4.We shall cooperate with our transport and storage providers in gauging and reducing the environmental impact of our transport and storage operations.

#### Strengthening Cooperative Ties with Distribution **Partners**

We have adopted a set of Basic Distribution Policies to guide continuing efforts to reduce the environmental impact of our domestic transport and storage operations. In addition to recommending that the transport and warehousing companies that act as our distribution partners acquire environmental management certifications such as ISO14001, Green Management, and Eco Stage, we have put into operation a system of joint initiatives such as a modal shift to reduce transport-related CO<sub>2</sub> emissions.

#### **Basic Distribution Policies Briefing**

Toray held a Basic Distribution Policies Briefing for managers and executives from distribution partners with the goal of deepening their understanding of our Basic Distribution Policies and current issues. The session served as an opportunity for participants to reaffirm that Toray and its distribution partners are pursuing environmental and

social measures from a common

perspective by providing useful

information for corporate man-

agement, including a lecture on

building internal controls by a

certified public accountant who attended as a quest lecturer.

Basic Distribution Policies Briefing

#### Reducing Transport-related CO<sub>2</sub> Emissions

Changes to the Rationalization in Energy Use Law enacted in April 2006 require businesses (Specified Consigner) outsourcing the transport of at least 30 million tons of freight per year to submit an energy conservation plan as well as regular reports detailing energy use.

To comply with these changes, Toray completed and began operating a system for gathering the requisite CO2 emissions data in FY 2006.

Toray has long undertaken a variety of initiatives to reduce transport-related CO2 emissions with the cooperation of distribution partners, including the use of larger transport vehicles. Going forward, we are committed to reducing CO<sub>2</sub> emissions as a Specified Consigner through distribution innovations such as modal shift.

During FY 2006, we reduced CO<sub>2</sub> emissions by approximately 800 tons by means of a modal shift away from truck transport.

## Examples of Key Initiatives to Reduce Transport-related CO<sub>2</sub> Emissions (FY 2006)

	(
	CO <sub>2</sub> reduction
<ul> <li>Import of products via the port in vicinity of usage site</li> </ul>	70%
<ul> <li>Direct shipment of products from plants to customers</li> </ul>	50%
<ul> <li>Joint vehicle operation with customers</li> </ul>	40%

#### **International Transport Initiatives**

Due to the globalization of our business, we have also been working to reduce the environmental impact of international shipping in the face of annual increases in shipments of products and raw materials, and the collection of packaging materials between countries. During FY 2006, these efforts included a transition to reusable steel frames for raw carbon fiber textiles exported from Japan to Europe

and the United States, and the adoption of a system for utilizing our domestic collection network to reuse core tube and steel frames for film products imported from Malaysia to Japan.

We plan to build similar systems for reusing packaging materials for products imported to Japan from other Asian countries.



#### **Initiatives for Improving Transport Quality**

In conjunction with its distribution partners, Toray launched a series of initiatives in FY 2006 to improve transport quality so as to avoid inconveniencing customers with freight losses or damages during product delivery. Toray employees visited worksites operated by distribution partners and worked to spread awareness by identifying potential problem areas in the handling of Toray products by using highly visible diagrams. This initiative succeeded in reducing product losses or damages during storage and transport in FY 2006 by 25% compared to the previous year.

Related article

See page 33 for more information about distribution safety initiatives.

# **Pursue Social Initiatives**



#### **Action Program (FY 2006)**

Toray Group will continue its program of autonomous social contribution activities in accordance with the Toray Group Social Initiative Policies, mainly through donations to the Toray Science Foundation. We will also support employee participation in volunteer activities.

#### **Action Program Results**

- 1. In keeping with the Toray Group Social Initiative Policies, the Group contributed at least 1% of its consolidated ordinary income in monetary and other gifts to social contribution activities during FY 2006.
- 2. Donations to relief efforts for the Noto Peninsula earthquake that occurred on March 25, 2007, were augmented by the volunteer efforts of employees from the Hokuriku Branch and Ishikawa Plant.

#### Commitment

As expressed in our Corporate Philosophy, the ultimate objective for our management is "contributing to society." We believe that the selection of which businesses will form the backbone of a company's management is responsible for determining the significance of that company's existence. Toray Group is committed to developing its businesses under the concept of "safety. health and environment" as we continue to support progress in areas such as science and technology, arts and culture, and sports.

#### **Toray Group Social Contribution Activities**

Toray Group has made "For society: to establish ties and develop mutual trust as a responsible corporate citizen" one of the Corporate Missions included in its Management Philosophy, and we have created a legacy of ongoing social contribution activities through donations to Toray Science Foundations in Japan and ASEAN countries. Based on these efforts, we have adopted the Toray Group Social Initiative Policies to serve as a guide and model for these activities.

These Policies describe our commitment to invest 1% of our consolidated ordinary income in social contribution activities in accordance with our membership in the 1% Club established by the Japan Federation of Economic Organizations (Keidanren) in 1990.

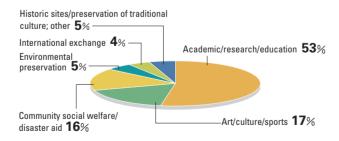
#### **Toray Group Social Initiative Policies** (adopted May 2005)

- 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 international society as a good corporate citizen while continuously supporting employee social initiatives.
- 2.We will pursue unique programs dedicated to 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 like volunteer activities, all the while performing aid activities with an eye to local needs.
- 4.We will examine all marketing and advertising activities from the perspective of social contribution before finaliz-
- 5.We will contribute funds amounting to about 1% of our consolidated ordinary income to social initiatives.

#### **Results of Social Contribution Activities in FY 2006**

Toray Group's ongoing program of social contribution activities included FY 2006 donations of about ¥1.040 million on a consolidated basis, or approximately 1.1% of its consolidated ordinary income. On a non-consolidated basis, Toray contributed about ¥770 million, or approximately 1.5% of its nonconsolidated ordinary income.

Principal activities included donations to the Toray Science Foundation and Toray Science Foundations in Malaysia, Thailand, and Indonesia; assistance for Mishima City in Shizuoka Prefecture, to whom we provide water for irrigation, firefighting, and a water park; co-sponsorship of the Musée d'Orsay Exhibition; and disaster relief following earthquakes in central Java, Indonesia, and on the Noto Peninsula, Ishikawa Prefecture.



#### **Toray Science Foundation**

Torav established the Foundation in 1960 to contribute to basic research in science technology and to the development of science technology and culture. The Foundation was hailed at the time as a pioneer in private research Technology Prize Award Ceremony



The 47th Toray Science and

grants, and its work continues to be highly regarded today. Two recipients of the Toray Science and Technology Prize have gone on to win the Nobel Prize.

#### **Principal Toray Science Foundation Activities**

#### (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 the fields of science and technology

#### (3) Toray Science Education Prize

A prize presented to junior and senior high school teachers who have given creative and innovative lessons in science with good results

(4) Science Lecture Meetings

#### **Toray Science Foundations in** Three ASEAN Countries

Toray Science Foundations were established from 1993 to 1994 in Malaysia, Thailand, and Indonesia to support and promote research in science and technology while working to

spread science and technology. These organizations undertake a variety of activities and programs each year.



Award ceremony at the Thailand Toray Science Foundation

#### **To Nurture Future Generations**

Toray conducts a variety of programs intended to help nurture future generations.

#### **Major Activities in FY 2006**

- Supported 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 the Japan Science and Technology Agency).
- Supported Master Class performances by the Shanghai Quartet.
- Supported the DCA JUNIOR Awards, in the Toray Digital Creation Awards (DCA).
- Supported 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.
- Supported Japan Tent (sponsored by the Japan Tent Steering Committee), an event held in Ishikawa Prefecture that promotes international exchange among students from around the world.



High school students conduct an experiment at Science Camp



DCA JUNIOR 2006 Grand

#### **Support for Cultural Events**

Toray's ongoing support for cultural activities include support for the Musée d'Orsav Exhibition held at the Kobe City Museum and the Tokyo Metropolitan Art Museum (sponsored by Nikkei Inc.); performances of the Shanghai Quartet in Japan; activities designed to promote international exchange in arts and culture; performances of the Youkiza in Japan, a theater that has been giving marionette performances for over 370 years; activities supporting the training of a new generation to keep cultural traditions alive.



Poster for the Musée d'Orsay

Japanese marionette performance at the Youkiza

#### **Sponsoring Crown Events**

Although the Toray Cup Shanghai International Marathon (sponsored by the City of Shanghai) and the Toray Pan Pacific Open (Toray PPO) tennis tournament (sponsored by Toray) are conducted as part of our advertising program, the purpose of such sponsorship is to give something back to society. The Toray PPO tennis tournament includes various activities, including exchanges between young Japanese and Korean tennis players and the presentation of rackets to people in Asian countries





Toray Cup Shanghai International

Toray PPO tennis tournament awards

#### Participating in Volunteer Relief Efforts for the Noto Peninsula Earthquake

A total of 54 Toray employees—48 from the Ishikawa Plant, including the general manager, and 6 from the Hokuriku Branch, including the branch general manager—

participated in volunteer activities sponsored by the Ishikawa Prefecture Disaster Relief Headquarters in the aftermath of the earthquake that struck the Noto Peninsula on March 25, 2007.



# Environmentally Friendly Products and Technologies Toray Group pursues environmental design practices in an effort to contribute to environmental preservation by reducing the environmental load of its products.

							tal ber			
Business	Product/technology	Description	<b>A</b>   <sub>*1</sub>	B  *	2	*3	)   <sub>*4</sub>	E   <sub>*5</sub>	F (	G 
	Torcon*, Toyoflon*, Teflon*, Tefaire*	PPS fibers and fluorofibers used to collect ash in the exhaust gas of garbage incinerators and coal-fired boilers.	ľ		2	,	7	J		
	Ecodear*	Environment friendly polylactic acid fiber made from corn or other plants.	•	•						
	SOTAKE*	Bamboo-based fiber combining the superior features of natural bamboo with Toray's technologies.	•							
	Foresse*	Fiber made from plant-based cellulose. Also, the spinning process does not involve organic solvents, but uses the melt spinning method.	•							
	Aminos*	Plant protein fiber made from proteins derived from soybeans.	•							
	UNFLA-ex*	Non-halogen fire resistant polyester material using phosphorous flame retardants.					1	•		
Fibers & Textiles	Warmsensor*	$\label{lem:model} \mbox{Moisture-absorbent, heat-generating, insulating material achieved through special fiber structure processing.}$		•						
TOXIIICS	Eco Dye process	Low-energy carpet fiber dyeing method that reduces the amount of water needed for dyeing and cuts the number of processes through consistent dyeing and heat treatment.		•						
	Fieldmate* biodegradable fishing line	Fishing line that largely breaks down into water and carbon dioxide to return to the natural environment if accidentally left in the water or on the ground after use.					1			
	Fieldmate* biodegradable material	$\label{thm:conditions} \textbf{Biodegradable tree wrapping material that returns to the natural environment over time.}$					1			
	Recyclon*	Recycled fiber made from used PET (polyethylene terephthalate) bottles and other materials.							ļ.	
	Nylon-6 recycling	Means for manufacturing new nylon-6 by depolymerizing spent nylon-6 products into their constituent monomers and then repolymerizing.							•	
	Acrylic recycling	Means for recycling acrylic fiber scrap from spinners, knitters, and other manufacturers by dissolving it to make new fibers.						ı		
	Ecodear*	Advanced plastic based on polylactic acid made from plant-origin materials like corn.	•	•						
	Non-halogen fire-retardant ABS, nylon, PBT resins	Non-halogen fire-retardant plastics that do not generate harmful bromine compounds during incineration or disposal.					1			
	Automotive engineering plastics	Plastics that can reduce weight and improve fuel economy when used in automotive parts.		•						
	Eco Toyolac*	Recycled ABS (acrylonitrile butadiene styrene copolymer) resin.							•	
	Eco Amilan*	Recycled nylon resin.							•	
	Eco Toraycon*	Recycled PBT (polybutylene terephthalate) resin.							•	
Plastics	Eco Torelina*	Recycled PPS (polyphenylene sulfide) resin.							•	
& Chemicals	PBT resin ceramic appearance grade	PBT resin for injection molding that can serve as a substitute for thermoset plastics and ceramics with exceptional texture and luster.								
	Thiokol LP*	Liquid polysulfide polymer that is used as a sealant material for laminated glass.		•						
	Cellulose sponge	Environmentally friendly sponge that is made from wood pulp, does not generate harmful gases when incinerated, and is biodegradable when buried in the ground.	•				1			
	Toraymicron*	Ultra-fine nonwoven fabric used in air filters and masks that trap microscopic particles.								
	Wosep* microfiber non- woven material	A non-woven fabric made from polypropylene microfibers that can separate the oil content of oil-contaminated wastewater and does not generate harmful gases after disposal.			•	ı	1			
	lonex*	$\label{lower-loss} \mbox{lon exchange fibers used in decontamination of water condensate in nuclear power, water quality testing filter papers, and water purification systems.}$			•					
	DMS0	Recyclable DMSO (Dimenthyl sulfoxide) used as a stripping agent and cleaning solution for electronic components.								
*1 Associate	d with reduced CO <sub>2</sub> emissions and ex	haustible resource use.	Δ	CO	redu	ıction	<del>*</del> 1			

- \*1 Associated with reduced CO<sub>2</sub> emissions and exhaustible resource use.
  \*2 Associated with reduced energy consumption or energy generation.
  \*3 Associated with water purification.
  \*4 Associated with air purification.
  \*5 Associated with reduction or prevention of hazardous substance emissions.
  \*6 Products and technologies associated with recycling.

- A CO<sub>2</sub> reduction\*1
  B Energy reduction\*2
  C Water purification\*3
  D Air purification\*4

- E Hazardous substances reduction\*5
  F Recycling\*6
  G Other





Television with a frame made of Ecodear\* plant-origin plastic



Clothing made with SOTAKE\* and other materials for use with the "Cool Biz" energy conservation campaign



Foresse\*

					nmen	tal ber	nefits		
Business area	Product/technology	Description	<b>A</b>  *1	<b>B</b>   *2	*3	D    *4	<b>E</b> ∣  ∗ <sub>5</sub>	*6	G
	Lumirror* ZV	Non-halogen fire-resistant PET film that does not generate harmful bromine compounds during incineration or disposal.							
	Steel sheet laminating films	Polyester films for laminating steel sheets as a replacement for PVC in unit bathrooms.							
	Food can laminating films	Polyester films ideal for laminating cans as a replacement for chemical coatings or plating.					•		
Films	Films for capacitors for hybrid cars	Ultra-thin polypropylene film that remains stable under the very high voltages needed to improve hybrid car efficiency.	•	•					
	Solar cell films	Polyester film ideal for use as the backing for solar cells.	•	•					
	Solar control films	Polyester film that helps reduce energy consumption in air conditioners and heaters by reflecting heat.	•	•					
	Transparent evaporating film Barrialox*	Transparent gas barrier film that does not generate chlorine- or nitrogen-based gases or aluminum residue when incinerated.							
	Ecodear*	Polylactic acid film made from plant-origin materials like corn.	•	•					
		DAN 1 (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
	Torayca* carbon fiber	PAN carbon fiber used in wind power generator blades and compressed natural gas (CNG) tanks for low-emission CNG vehicles, in addition to contributing to weight reduction for aircraft and automobiles.		•					
	Torayca* prepreg	Sheet-form carbon fiber used as a lightweight structural material for aircraft.		•					
Carbon Fiber	Torayca* advanced composite materials	Fabrication materials (CFRP).		•					
Composite Materials	Toray carbon paper	Electrode material for fuel cells, which are expected to offer a clean source of energy.		•					
	Torayca* fabric construction	A method for using <i>Torayca*</i> fabrics made from lightweight, reinforcing carbon fibers to extend the useful lives of existing buildings and bridges.		•					
	Torayca* laminate construction	A simple construction method consisting of bonding together surface-treated carbon fiber reinforced sheets, thereby shortening construction time and improving work environments.		•			1		
	Positive Photoneece*	Photosensitive polyimide that can be developed using an environmentally friendly alkali aqueous solution							
IT rolated	Type K, Type S Toray copper-clad	instead of organic developing fluids.  Non-halogen copper-clad polyimide film that does not generate harmful bromine compounds during inspiracy in participations.							
IT-related Products	polyimide laminate film  Toptical* LCD color filter	incineration or disposal.  Color filter manufactured using environmentally friendly black matrix resins instead of harmful heavy metals.							
	Toray Waterless Plate*	Offset printing plates that do not use any dampening water, which ends up as harmful wastewater after printing.					•		П
	Romembra*	Reverse osmosis membrane element used for the production of drinking water and ultrapure water for the semiconductor industry.							
	Water treatment systems	$Water \ purification \ systems \ that \ use \ reverse \ osmosis \ membranes \ to \ desalinate \ seawater \ and \ brackish \ water \ and \ water \ and \ brackish \ water \ and \ water \ and$							
	Ultrafiltration, microfiltration membrane modules	Ultrafiltration and microfiltration membrane modules used in the production of drinking water.			•				
	Membrane bioreactor (MBR) modules	Modules for MBR systems, which allow reuse of effluent and wastewater.			•				
Water treatment &	Torayvino*	Home-use water purification systems that remove residual chlorine, impurities, and common bacteria by combining hollow membrane fibers and activated carbon.			•				
Environment	Air filters  Loop Bonding* and	Air conditioning and industrial process filters that trap microscopic particles using electrolyte microfiber non-woven fabrics.							
	Tough Binder* construction Tekarisarari*	A technology that uses resin-molded fasteners and nylon-cut fibers to keep tiles on exterior walls from falling off.					1		
	oil-removing cloth	Oil-removing cloth made using microfiber technology that can be washed and reused.							
	Water-permeable ceramic blocks Toraysurou*	Recycled ceramic material with water permeability and water-retention qualities that is ideal for reducing the heat island effect and preventing urban flooding.		•			1		
	Toraycool*	A recycled product that uses 80% tile waste material whose water-retention capabilities help mitigate summer heat.					(		₽
	Toray Slit Coater	A coating system capable of applying films using only a slit nozzle to reduce material waste, production waste, and power consumption.							
Others	Environmental measurement and surveying	Services including surveys of various environmental problems; analysis of extremely low concentrations of dioxins, PCBs, endocrine disruptors, persistent organic pollutants, and perfluorocctanyl sulfonate; and report publishing.							
Others	Analysis and evaluation of industrial materials	Services including analysis of gases given off by materials, analysis of hazardous materials defined in RoHS directives in electric and electronic equipment, and combustion testing of various materials.							•
	Environmental consulting	Consulting services including statutory environmental assessments and surveys and analysis of other natural and living environments.							



Automotive part (manifold) made using engineering plastics



Installed Torayvino\* home-use water



Wind power generator blades made using Torayca\* carbon fiber

## **Environmental Impact Overview**

	Toray			Toray Japanese Subsidiaries and Affiliates							eas Sub nd Affili	sidiaries ates	
INPUT													
Energy (millions of gigajoules)		30.0				3.2							
Water (million of tons)		196		Г		14.8		П		34.2			
Raw materials													
OUTPUT													
	2005	2006	YoY (%)		2005	2006	YoY (%)		2005	2006	YoY (%)	Reference page	
Greenhouse gases (tens of thousands of tons-CO <sub>2</sub> )												p.27	
Six gases including CO <sub>2</sub>	237	230	-3.0		38.8	37.6	-3.1		124	142	14.5		
PRTR Law target substances (tons)												p.28	
Atmospheric emissions	307	279	-9.1		259	270	4.2		450	428	-4.9	p.zc	
Water emissions	32	27	-15.6		0	0	0		1	1	0		
Waste transfers	972	772	-20.6		1,284	1,404	9.3		902	837	-7.2		
Air pollutants (tons)												p.29	
S0x	2,991	2,626	-12.2	Г	42.9	18.8	-56.2		2,924	2,565	-12.3	T .	
NOx	2,308	2,353	1.9		82.4	49.6	-39.8		1,489	2,198	47.6		
Ash	198	175	-11.6		15.2	11.9	-21.7		492	505	2.6		
Industrial wastewater (millions of tons)													
maderial resistance (ministre or toric)	177	185	4.5	Г	11.4	12.3	7.9		19.8	20.2	2.0		
Water pollutants (tons)												p.30	
BOD	1,126	1,271	12.9	Г	71.3	72.6	1.8		581	599	3.1		
COD	924	940	1.7		34.2	32.8	-4.1		3,845	3,656	-4.9		
Nitrogen	727	748	2.9		18.4	17.0	-7.6		_	_	_		
Phosphorus	36	40	11.1		1.7	1.2	-29.4		_	_	_		
Waste (thousands of tons)												p.31	
Recycled	25.4	28.8	13.4		20.5	22.3	8.8		8.8	12.7	44.3		
Incinerated and other	4.5	3.8	-15.6		5.6	5.2	-7.1		6.4	6.1	-4.7		
Direct landfill disposal	1.2	0.7	-41.7		1.3	1.1	-15.4		13.9	19.0	36.7		
Coal ash (thousands of tons)													
Recycled	64.8	60.6	-6.5		_				14.5	10.6	-26.9		
Direct landfill disposal	0.4	1.3	225.0		_				5.1	8.1	58.8		

#### Water pollutant calculations include the following companies:

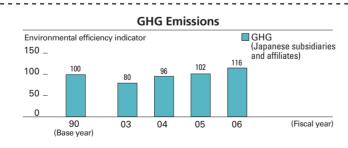
	BOD	COD*1	Nitrogen/phosphorus
Toray	All 12 plants and 1 laboratory	6 plants subject to Total Pollutant Load Control	All 12 plants and 1 research laboratory
Japanese subsidiaries and affiliates	24 plants at 19 companies	7 plants at 7 companies plants subject to Total Pollutant Load Control	24 plants at 19 companies
Overseas subsidiaries and affiliates	33 plants at 24 companies		

<sup>\*1</sup> COD figures for Toray, Japanese subsidiaries and affiliates, and facilities in Korea are given in CODmn (using the potassium permanganate method) COD figures for other overseas subsidiaries and affiliates are given in CODcr (using the potassium dichromate method).

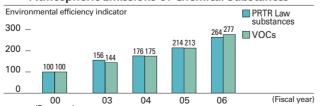
## Environmental **Efficiency Indicators**

A variety of environmental efficiency indicators have been proposed recently to express the relationship between business activities and their environmental impact. Such indicators are considered to have the advantage of enabling fluctuations in business activities to be excluded from evaluations of environmental preservation results.

Toray Group calculates separate environmental efficiency indicators for principal environmental evaluation items. All indicators showed improvements for FY 2006



## **Atmospheric Emissions of Chemical Substances**



## Chemical Substance Emissions and Transfer Data

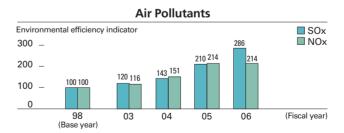
PRTR Law substance emissions and transfer data for FY 2006

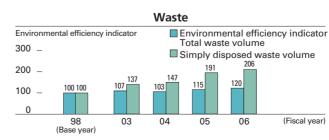
Т	oray			
			(Tons; dioxins	s: mg-TEQ)
Substance name	Atmospheric emissions		Soil emissions/ company landfill	
Methyl acrylate	0.4	0.6	0.0	0.0
Acrylonitrile	53.1	4.8	0.0	61.9
Acetaldehyde	8.2	0.0	0.0	0.0
Antimony and antimony compounds	0.0	0.0	0.0	0.5
Bisphenol-A type epoxy resin	0.0	0.0	0.0	18.5
Ethylbenzene	0.0	0.0	0.0	0.3
Ethylene glycol	0.7	0.0	0.0	105.8
Ethylene glycol monoethyl ether	5.6	0.2	0.0	0.0
€-Caprolactam	0.0	15.0	0.0	31.7
Xylene	13.1	0.0	0.0	0.7
o-Chlorotoluene	0.7	0.0	0.0	0.0
Chlorobenzene	3.6	0.0	0.0	72.4
Chloroform	4.1	0.0	0.0	42.1
Cobalt and cobalt compounds	0.0	1.0	0.0	6.5
Inorganic cyanide	36.0	0.0	0.0	0.0
1,4-Dioxane	0.0	0.3	0.0	0.0
Diuron	0.0	0.0	0.0	1.1
o-Dichlorobenzene	0.0	0.0	0.0	1.0
p-Dichlorobenzene	2.5	0.0	0.0	0.0
Dichloromethane	2.8	0.0	0.0	5.8
N,N-dimethylformamide	22.8	1.8	0.0	59.7
Styrene	27.0	0.0	0.0	2.0
Decabromodiphenyl ether	0.0	0.0	0.0	1.2
Terephthalic acid	0.0	0.0	0.0	237.0
Dimethyl terephthalate	0.0	0.0	0.0	1.4
Trichloroethylene	1.3	0.2	0.0	0.0
Toluene	1.5	0.0	0.0	41.8
Nickel	0.0	0.2	0.0	0.0
Nitrobenzene	0.0	0.0	0.0	28.4
Hydroquinone	0.0	0.0	0.0	0.1
Pyridine	0.0	0.0	0.0	2.8
m-Phenylenediamine	0.0	2.2	0.0	0.0
Bromomethane	72.0	0.0	0.0	0.0
Benzene	0.3	0.8	0.0	0.0
Boron and boron compounds	0.0	0.0	0.0	2.5
Poly (oxyethylene) alkyl ether	4.2	0.0	0.0	0.3
Poly (oxyethylene) nonylphenyl ether	0.0	0.0	0.0	3.6
Manganese and manganese compounds	0.0	0.2	0.0	2.5
Methyl methacrylate	18.6	0.0	0.0	40.6
Dioxins	3.2	35.0	0.0	306.6
Total	279	32	0	772

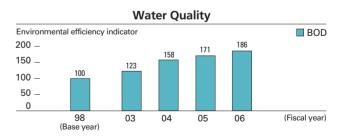
Substance name A	Atmospheric emissions 0.2 0.0	Water emissions	(Tons; dioxins Soil emissions/ company landfill	Waste
Substance name	emissions 0.2	emissions		
Ethyl acrylate		0.0		transiers
	0.0	0.0	0.0	0.0
2-aminoethanol		0.0	0.0	82.0
1-Allyloxy-2,3-epoxy propane	0.0	0.0	0.0	0.6
Linear alkylbenzene sulfonate and linear alkylbenzene sulfonate salts	0.0	0.0	0.0	0.9
Ethylbenzene	6.6	0.0	0.0	1.7
Ethylene oxide	1.2	0.0	0.0	0.0
Ethylene glycol	0.0	0.0	0.0	9.0
Ethylene glycol monoethyl ether	3.6	0.0	0.0	0.2
Ethylene diamine	0.0	0.0	0.0	0.1
Epichlorohydrin	0.2	0.0	0.0	5.4
Xylene	50.5	0.0	0.0	93.5
Chloroethene	0.0	0.0	0.0	0.1
Chlorobenzene	0.0	0.0	0.0	12.2
1,1-Dichloro-1-fluoroethane (HCFC-141b)	1.1	0.0	0.0	0.0
1,3-Dichloro-2-propanol	0.0	0.0	0.0	16.1
Dichloromethane	4.8	0.0	0.0	17.7
N,N-dimethylformamide	37.1	0.0	0.0	318.0
Styrene	0.0	0.0	0.0	0.2
Decabromodiphenyl ether	0.0	0.0	0.0	0.1
Toluene	158.7	0.0	0.0	780.6
Bis (2-ethylhexyl) phthalate	0.0	0.0	0.0	1.7
Hexamethylene di-isocyanate	0.0	0.0	0.0	0.1
Poly (oxyethylene) alkyl ether	0.0	0.0	0.0	50.2
Poly (oxyethylene) octylphenyl ether	0.0	0.0	0.0	0.2
Formaldehyde	0.1	0.0	0.0	0.4
Methacrylic acid	0.0	0.0	0.0	1.9
Methyl methacrylate	0.2	0.0	0.0	0.0
3-Methylpyridine	5.5	0.0	0.0	10.4
$\alpha$ -Methyl styrene	0.0	0.0	0.0	0.4
Molybdenum and molybdenum compounds	0.0	0.0	0.0	0.6
Dioxins	4.3	0.0	0.0	12.3
Total	270	0	0	1,404

Note: Of the 46 PRTR Law substances of Japanese subsidiaries and affiliates, emissions or transfers of the above 31 substances exceeded 50 kg.

Note: Of Toray's 59 PRTR Law substances, emissions or transfers of the above 40 substances exceeded 50 kg.





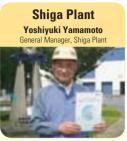


Note: Data reflects totals for Toray Group (Toray, Japanese subsidiaries and affiliates, and overseas subsidiaries and affiliates). Data for greenhouse gases reflects the Japanese Group (Toray and Japanese subsidiaries and affiliates).

Note: Environmental efficiency = Amount of sales / environmental impact Amount of sales refers to total sales for manufacturing companies included in environmental impact calculations. Environmental efficiency indicators are expressed using a value of 100 for the base year.

# Environmental Data for 12 Toray Plants

Each of 12 Toray plants publishes an annual site report.





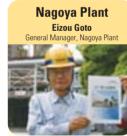








(	GHG Emissions	133,000 tons-CO <sub>2</sub> /year	5,000 tons-CO <sub>2</sub> /year	480,000 tons-CO <sub>2</sub> /year	GHG Emissions	131,000 tons-CO <sub>2</sub> /year	261,000 tons-CO <sub>2</sub> /year	24,000 tons-CO <sub>2</sub> /year
PRTR	Emissions Water Soil & landfill	4 tons/year 0 tons/year 0 tons/year	0 tons/year 0 tons/year 0 tons/year	80 tons/year 10 tons/year 0 tons/year	100	& landfill 0 tons/year	7 tons/year 0 tons/year 0 tons/year	67 tons/year 0 tons/year 0 tons/year
	Waste transfers	117 tons/year 469 tons/year	0 tons/year	219 tons/year 515 tons/year	Waste transfers	33 tons/year	36 tons/year 858 tons/year	3 tons/year
Gas emission	SOx NOx Ash	103 tons/year 22 tons/year	1.7 tons/year 0.3 tons/year	771 tons/year 40 tons/year	Gas NOx emissions Ash	162 tons/year 59 tons/year	377 tons/year 22 tons/year	15.7 tons/year 1.2 tons/year
Water	BOD	226 tons/year	0.7 tons/year	114 tons/year	Water BOD	46 tons/year	73 tons/year	7.3 tons/year
emission	s COD Wastewater	n/a 27.6 million m³/year	n/a 0.4 million m³/year	160 tons/year 35.6 million m³/year	emissions COD  Wastewater	58 tons/year	n/a 37 million m³/year	78 tons/year  4.4 million m³/year
	Recycled	2,725 tons/year	111 tons/year	7,056 tons/year	Recycled	5,156 tons/year	1,383 tons/year	3,548 tons/year
Waste	Simple incineration and other Landfill disposal	685 tons/year 6 tons/year	0.5 tons/ year 0 tons/year	260 tons/ year 102 tons/year	Waste Simple incinera Landfill disposa		105 tons/ year 67 tons/year	67 tons/ year 26 tons/year
Principal	manufactured products	Ecsaine* man-made suede Lumirror* polyester film Toptical* color filter Electronics & information materials	Toraylon* blended yarn Medical products Inoue balloon catheters and Anthrone* P-U catheters	Tetoron* staple fiber Torayca* carbon fiber Toraycon* PBT resin Romembra* reverse osmosis membrane module	Principal manufactured produ	Nylon filament yarn Filtryzer* artificial kidney Toray Waterless Plate* printing plate Torayvino* home water purifier	Tetoron* filament yarn Dorner* (prostacyclin [PGI2] derivative) Feron* natural interferon-& preparation Lumirror* polyester film	Toyolac* ABS resin













		The state of the s						A STANCE OF THE	15.00
GH	HG Emissions	225,000 tons-CO <sub>2</sub> /year	805,000 tons-CO <sub>2</sub> /year	35,000 tons-CO <sub>2</sub> /year	GI	HG Emissions	38,000 tons-CO <sub>2</sub> /year	99,000 tons-CO <sub>2</sub> /year	59,000 tons-CO <sub>2</sub> /year
	Air	1C tone have	70 tana haar	O topo hisos		Air	Otonolypor	Etanalinas	Otonohioov
	Emissions : Water	16 tons/year 2 tons/year	79 tons/year 18 tons/year	0 tons/year 0 tons/year		Emissions : Water	0 tons/year 0 tons/year	5 tons/year 0 tons/year	0 tons/year 0 tons/year
PRTR	Soil & landfill	0 tons/year	0 tons/year	0 tons/year	PRTR	Soil & landfill	0 tons/year	0 tons/year	0 tons/year
	Waste transfers	81 tons/year	236 tons/year	40 tons/year		Waste transfers	0 tons/year	12 tons/year	0 tons/year
	vvaste transfers	OT tollo/ your	200 (0113) your	40 (013) your		vvaste transfers	o toria, your	12 to113/ your	o tons/year
	SOx	5.6 tons/year	15.4 tons/year	18.6 tons/year		SOx	17 tons/year	403 tons/year	134 tons/year
Gas missions	NOx	297 tons/year	348 tons/year	25.7 tons/year	Gas emissions	NOx	1.8 tons/year	60 tons/year	186 tons/year
missions	Ash	7.3 tons/year	7.7 tons/year	1.6 tons/year	EIIISSIOIIS	Ash	0.3 tons/year	3.9 tons/year	10.5 tons/year
Water missions	BOD COD	369 tons/year	410 tons/year	3.4 tons/year	Water emissions	BOD	0.5 tons/year	12 tons/year	9.7 tons/year
missions	COD	222 tons/year	414 tons/year	n/a	emissions	COD	n/a	8.8 tons/year	n/a
V	Vastewater	31.6 million m³/year	16.9 million m³/year	2.1 million m³/year	V	Vastewater	0.3 million m³/year	11.2 million m³/year	9.6 million m³/year
	De suel e d	2.507.4	4.070 + 4	224 + 6		Described	04 + /	707 + /	104 + /
NA/ .	Recycled	2,507 tons/year	4,870 tons/year	234 tons/year	W.	Recycled	84 tons/year	787 tons/year	164 tons/year
Waste	Simple incineration and othe Landfill disposal	r 2,838 tons/ year 304 tons/year	302 tons/ year 153 tons/year	1 tons/ year 13 tons/year	Waste	Simple incineration and other Landfill disposal	0 tons/year 0 tons/year	0 tons/year 0 tons/year	0 tons/year 15 tons/year
	Lanunn uisposai	304 tolls/ year	155 tolls/yeal	13 tolis/ year		Lanumi disposai	U turis/ year	U tulis/ yeal	15 tolls/year
rincipal m	anufactured products	Amilan* nylon resin Toraycon* PBT resin Gypsum Various fine chemicals	Caprolactam Terephthalic acid Tetoron* chips Torelina* PPS resin	Nylon filament yarn Raytela* plastic optical fiber	Principal m	anufactured products	Torayfan* BO polypropylene film	Ecsaine* man-made suede Lumirror* polyester film Torelina* PPS film	Tetoron* filament yarn Nylon filament yarn

Note: Plant names and general managers are current as of August 2007.

## **External Commendations**

## **Environment and Social Responsibility**

#### Toray

Awarding institution	Commendation	Recipient company, plant, or individual
Shizuoka Prefectural Industrial Waste Management Association	Governor's Award for Distinguished Service in Promoting Proper Industrial Waste Disposal	Mishima Plant
Japan Industrial Safety & Health Association	Green Cross Award	Hideki Utsunomiya (Okazaki Plant) Michio Niwa (Manufacturing Division)
Ishikawa Prefecture Community Welfare Council	Ishikawa Prefecture Governor's Award (Volunteer Organization Category)	Ishikawa Branch, Toray Labor Union
Wastech Executive Committee	Awards Committee Chairperson's Special Award	Toyolac Department, Chiba Plant

#### Japanese Subsidiaries and Affiliates

Awarding institution	Commendation	Recipient company, plant, or individual
Fukushima Labour Bureau, Ministry of Health Labour and Welfare	Fukushima Labour Bureau Director's Excellence Award	Soda Aromatic Co., Ltd. (Koriyama Plant)
Governor of Shiga Prefecture	Shiga Prefecture Governor's Commendation for Businesses Demonstrating and Outstanding Commitment to Technical Skill Testing	Toray Precision
Aichi Prefecture	Aichi Prefecture Governor's Commendation	Chiryu Hotel Restaurant "Narihira"/"Matsuri"
Chiba Prefectural Police Chief	Safe Drivers Chiba 2006	Dow Corning Toray (Chiba Plant)
Kanazawa Chamber of Commerce and Industry	Fifth Kanazawa Eco Award Incentive Prize	Ichimura Sangyo (Kanazawa Head Office)

#### **Overseas Subsidiaries and Affiliates**

	Awarding institution	Commendation	Recipient company, plant, or individual
	Ministry of Labor and Social Welfare	Excellent Award on Safety, Occupational Heath and Work Environment	Thai Toray Synthetics (BKK, AYU)
Thailand	Ministry of Labor and Social Welfare	Excellent Award on Safety, Occupational Heath and Work Environment	Luckytex (Thailand) (Mill-1, Mill-2, and Mill-3)
	Ministry of Labor and Social Welfare	Excellent Award on Labor Relations and Labor Welfare	Luckytex (Thailand) (Mill-1, Mill-2, and Mill-3)
	Ministry of Commerce, Industry and Energy Presidential Award in Production Innovation	National Quality Management Convention	Toray Saehan
Korea	Korea Management Association Consulting Category Received at Korea Productivity Award	Hall of Fame Prize in Energy Innovation	Toray Saehan
	Korean Occupational Safety and Heath Agency Award	Zero Accidents 20 times Achievement	Daehan Precision
United States	Shelby County Chamber of Commerce and Solid Waste Management District	Recycler of the Year	Toray Resin

## **Research and Technical Development**

Awarding institution	Commendation	Recipient company, plant, or individual
Japan Society for Composite Materials	2006 Japan Society for Composite Materials Award (Technical Award)	Advanced Composites Development Center and Composite Materials Research Laboratories
Society of Fiber Science and Technology	32nd Society of Fiber Science and Technology Technical Award (2006)	Fibers and Textiles Research Laboratories
Japan Institute of Invention and Innovation	Incentive Award for Invention, Chubu Region, 2006 Local Commendation for Invention	Chemicals Research Laboratories
Japan Institute of Invention and Innovation	Incentive Award for Invention, Chugoku Region, 2006 Local Commendation for Invention	Composite Materials Research Laboratories
Green & Sustainable Chemistry Network	6th Green & Sustainable Chemistry Award (2006)	Electronic & Imaging Materials Research Laboratories
Chemical Society of Japan	12th CSJ Award for Technical Development (2006)	New Frontiers Research Laboratories
Information Science and Technology Association Japan	Distinguished Service Award for Training and Education	Tokiko Shindo (Information & Research Department)

#### **Governor's Award for Distinguished Service in Promoting Proper Industrial Waste Disposal**

Toray's Mishima Plant received the Governor's Award for Distinguished Service in Promoting Proper Industrial Waste Disposal in recognition of the Mishima Plant employees' efforts to "reduce, recycle, and reuse waste products and promote proper industrial waste disposal," including ISO 14001 initiatives.



#### **Green Cross Award**

Hideki Utsunomiya of the Environmental Security Section at Okazaki Plant and Michio Niwa of the Manufacturing Division, both short-term contract employees, received the Green Cross Award at the 65th meeting of the Japan Industrial Safety & Health Association in recognition of their long-term achievements in the cause of improving industrial safety and health.



#### **Awards Received by Japanese Subsidiaries and Affiliates**



Soda Aromatic Co., Ltd. (Koriyama Plant) won the Fukushima Labour Bureau Director's Excellence Award in recognition for its health assurance measures.



Toray Precision won the Shiga Prefecture Governor's Commendation for Businesses Demonstrating and Outstanding Commitment to Technical Skill Testing.



Ichimura Sangyo (Kanazawa Head Office) won the Fifth Kanazawa Eco Award

#### **Excellent Award on Safety, Occupational Heath and** Work Environment and Excellent Award on Labor Relation and **Lobor Welfare**

The government of Thailand recognized the Mill-1, Mill-2, and Mill-3 operated by Luckytex (Thailand) with the Excellent Award on Safety, Occupational Heath and Work Environment as well as the Excellent Award on Labor Relations and Labor Welfare.



#### **National Quality Management Presidential Award** in Production Innovation

Toray Saehan received the National Quality Management Convention from Korea's Ministry of Commerce, Industry and Energy.



## 2006 Japan Society for Composite Materials Award (Technical Award)

The Advanced Composites Development Center and Composite Materials Research Laboratories together received the 2006 Japan Society for Composite Materials Award (Technical Award) for work to develop short-cycle integrated RTM molding technology for large-scale CFRP.



#### 6th Green & Sustainable Chemistry Award (2006)

The Electronic & Imaging Materials Research Laboratories was recognized with the 6th Green & Sustainable Chemistry Award (2006) for their work on development of the environment friendly CTP waterless plate and printing system.



## **External Evaluation**

## Sustainable Management Rating for FY 2006

Since 2003, Toray Group has participated in the evaluation conducted by the Sustainable Management Rating Institute as a way to obtain an objective review of how well our activities meet and how closely we respond to society's needs.

As in the previous fiscal year, our FY 2006 evaluation was divided into 63 "leaves" arranged on a Sustainable Management Tree. Leaves are grouped in threes (for strategy, organization and performance) and arranged on 21 small branches. These small branches are further arranged along three larger branches representing management (5), environment (8) and society (8). Each leaf is colored according to the evaluation score for the category it represents: dark green (superior), standard green (excellent), pale green (good), yellow (acceptable) or brown (unacceptable).

Following our high marks from FY 2005, we also received a strong evaluation overall for FY 2006 as a company approaching the sustainable management ideal.

Seen by category, however, there were areas both where the evaluation improved over last year and where it declined. Causes for areas of decline are thought to be primarily the adoption of a strict interpretation of boundaries in evaluating global corporations.

The Toray Group is committed to working on these areas for improvement identified by external sources as we renew efforts to pursue CSR activities that meet the demands of society.

## Inclusion of Toray Stock in Socially Responsible Investment Funds

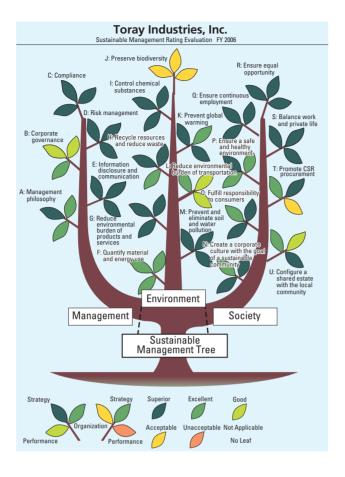
Socially Responsible Investment (SRI) is an investment approach that seeks stable profits by identifying and evaluating companies not only through traditional financial analysis but also from the standpoint of CSR, looking at their social and regional contribution, environmental factors, corporate governance, legal compliance, corporate ethics, employment practices, human rights issues and treatment of consumers.

SRI funds select corporations for inclusion in their portfolios based on various investigations. The Toray Group actively responds to such investigations with the goal of having its stock incorporated into these funds. The table to the right lists socially responsible investment funds in Japan that include Toray in their portfolios.

In addition, Toray stock is included in stock indexes of companies selected from a CSR perspective, including the Morningstar Socially Responsible Index (MS-SRI), which targets Japanese stocks, and the KLD Global Climate 100 Index, which targets global stocks.

#### **CSR Ranking**

		<b>J</b>	
Name of Media	Date Published	Name of Ranking	Toray Ranking
Nikkei Business Daily	December 1, 2006	10th Corporate Environmental Management Survey	115th
Newsweek Japan	July 4, 2007	Global Corporate Ranking "Newsweek Global 500" CSR + Financial Performance "Excellent Companies 500"	201st



#### Adoption of Toray Stock by Major Japanese SRI Funds

Name of Fund	Nickname	Operating Company
Asahi Life SRI Social Contribution Fund	Asu no Hane	Asahi Life Asset Management Co., Ltd
AIG/Resona Japan CSR Fund	Seijitsu no Mori	AIG Global Investment Corp.
AIG-SAIKYO Japan CSR Fund	Suiren	AIG Global Investment Corp.
AIG-Hirogin Japan Stocks CSR Fund	Class G	AIG Global Investment Corp.
Shinkin SRI Fund		Shinkin Asset Management Co., Ltd.
Fukoku SRI Fund		Shinkin Asset Management Co., Ltd.
Chikyuryoku		Shinko Investment Trust Management Co., Ltd.
STAM SRI Japan Open (SMA Only)		STB Asset Management Co., Ltd.
STB SRI Japan Open	Good Company	STB Asset Management Co., Ltd.
STB Japan Stock SRI Fund		STB Asset Management Co., Ltd.
Sumishin DC Good Company		STB Asset Management Co., Ltd.
Daiwa Eco Fund		Daiwa Asset Management Co., Ltd.
Daiwa SRI Fund		Daiwa Asset Management Co., Ltd.
Nikko Eco Fund		Nikko Asset Management Co., Ltd
Pension Reserve Eco Fund	DC Eco Fund	Nikko Asset Management Co., Ltd
Japan SRI Open	Kizuna	Japan Investment Trust Management Co., Ltd.
Morningstar SRI Index Open	Tsunagari	Nomura Asset Management Co., Ltd.
Eco Balance	Umi to Sora	Sumitomo Mitsui Asset Management Co., Ltd.
Eco Partners	Midori no Tsubasa	Mitsubishi UFJ Asset Management Co., Ltd.
Mitsubishi UFJ SRI Fund	Family Friendly	Mitsubishi UFJ Asset Management Co., Ltd

Note: The information in the above list is current as of March 31, 2007 based on the most recent prospectuses and fund-management reports published by each company over the previous year. It does not constitute a guarantee that these funds have subsequently continued to maintain Toray stock in their portfolios.

## Third Party Comments

#### Third-Party Comments on Toray Group CSR Report 2007

To: Mr. Sadayuki Sakakibara,

President and Chief Executive Officer and Chief Operation Officer

Toray Industries, Inc.

August 27, 2007

Akira Yamate, Chief Executive Officer, Aarata Sustainability Certification Co., Ltd.

This English language report is a translation of the original report in Japanese on third-party review on Toray Group's CSR Report 2007.

The objective of these comments is to express our independent view on the features, results, developments and future direction of key environmental and social initiatives described in the "Toray Group CSR Report 2007" (the "Report"). In preparing these comments, we performed the following procedures:

- 1. Interview with Mr. Norihito Saitou, Senior Vice President
- 2. Interview at CSR Operations Department and Environment and Safety Department
- 3. Site visit to the Mishima plant
- 4. Review of the final Japanese draft of the Report

These comments do not express any conclusion from an independent perspective concerning whether the information in the Report was collected in accordance with Toray's policies and standards, nor constitute an assurance or attestation of any kind.

#### 1. Promotion of CSR Activities

Corporate Social Responsibility ("CSR") is a key business priority for Toray Group, as expressed in the Group's Mid-term Business Strategies, Project Innovation Toray 2010 (IT-2010), where "CSR Innovation" constitutes one of its "Five Innovations". IT-2010 is based on the Group's Long-term Corporate Vision, AP-Innovation Toray 21, which was established on the occasion of Toray's 80<sup>th</sup> anniversary in 2006.

Toray Group has also identified 10 CSR priorities, for each of which specific implementation guidelines have been in place. Following these guidelines, the Group develops action programs each year to translate a group-wide three year action plan, CSR Roadmap, into practice. It also employs the Plan-Do-Check-Action ("PDCA") cycle to optimize the effectiveness of the programs. With a combination of the PDCA cycle and the "CSR Line Activities"- a program designed to facilitate site-level CSR practices by all employees, each workplace identifies improvement opportunities and takes necessary actions.

As described above, Toray Group addresses wide-ranging CSR issues with a variety of programs, time horizons, and participatory levels. We noticed that further clarification is needed in some relationships between the group-wide issues identified in the CSR Roadmap and the corresponding action programs. We recommend that CSR Operations Department, established this June, take the lead in reviewing and reorganizing the Group's programs, and prioritizing measures thereunder. Such practice would result in creating an enhanced CSR structure functioning more organically and effectively.

Another finding was that in fiscal 2006, some items in the CSR Roadmap failed to complete the plan, mainly in the "C (check)" phase of the PDCA cycle. We believe an effective checking process is a key to realize continual improvement through the PDCA cycle, and thus recommend Toray Group review and revise, if needed, its evaluation methodology of CSR performance.

#### 2. Measures to Combat Global Warming (p.12-13, and 27)

Toray Group has long strived to reduce greenhouse gas ("GHG") emissions, putting global warming at the top of its agenda. With a positive outlook for the achievement of existing reduction targets, the Group set more challenging reduction targets in fiscal 2007, which cover the overseas group companies. Toward the new targets, the Group promotes energy conservation activities, fuel switching and other emission reduction measures, rather than counting on carbon trading.

On the energy conservation front, Toray Group can draw upon a reservoir of high-quality technologies and expertise that it has steadily built since the oil crisis of the 1970s. A collection of real-life examples of potential or successful energy saving initiatives is available for relevant personnel to share information around the globe. In-house energy conservation specialists are also dispatched to overseas plants. To help achieve an ambitious target calling for an annual 2.0% reduction in unit energy consumption. Toray Group supports and encourages energy conservation efforts at its overseas plants.

In this connection, we recommend that data of overseas group companies be included in the charts presenting historical changes in the GHG emissions and energy consumption levels at the Group's domestic companies (p.12). The inclusion would enable a future Report to better communicate the Group's worldwide efforts to combat global warming and outcomes.

Toray Group's new GHG emission targets aim for a 6% reduction from the 1990 levels, compared with the 10% reduction target in the previous plan. The 6% target can still be called ambitious, especially considering an anticipated surge in GHG emissions resulting from growing production of carbon fiber reinforced plastic ("CFRP"). CFRP has been in higher demand because use of CFRP makes automobiles and aircrafts lighter, leading to less energy use and less GHG emissions. However, manufacturers of CFRP are facing a dilemma that more production will cause more GHG emissions. The manufacturing process entails high-temperature processing, and thus requires greater energy consumption. The Group needs to address this issue in light of growing public expectations for forward-looking companies to reduce their absolute GHG emissions through technological breakthroughs and other initiatives.

We hope the Toray Group, embracing innovation as in its corporate slogan, will continuously pursue innovative emission reduction measures with new ideas.

Toray Group CSR REPORT 2007 64-65

# Global Reporting Initiative Guidelines Reference Chart

	Guideline C:	SR Report I	Page
	Vision and strategy		
1.1	Statement of the organization's vision and strategy regarding its contribution to sustainable de	evelopment.	4-5
1.2	Statement from the CEO describing key elements of the report.		4-5
	Profile on reporting organization		
2.1	Name of reporting organization.		3
2.2	Major products and services.	10-11, 5	
2.3	Operational structure of the reporting organization.		6
2.4	Description of major divisions, operating companies, subsidiaries, and joint ventu	ires.	3
2.5	Countries in which the organization's operations are located.		3, 6
2.6	Nature of ownership (legal form).		6
2.7 2.8	Nature of markets served. Scale of the reporting organization.		6
2.0 2.9	List of stakeholders.	4	0-41
	Contact person(s) for the report.	Back c	
2.11	Reporting period for information provided.		3
	Scope of the report.		3
	Significant changes that have occurred since the previous report.		n/a
	Basis for reporting situations that can significantly affect comparability.  Nature, effect and reasons for any re-statements.		n/a n/a
	•	Refer to	
	Criteria and definitions used in any accounting for economic, environmental, and social costs and bei		34
2.19	Significant changes since issuing previous reports in the measurement methods applied to key economic, environmental, and social information $$		n/a
2.20	Policies and internal practices to enhance and provide assurance about the accuracy, completeness, and reliability that can be placed on the sustainability report.		5, 66
2.21	DESI	effort to c	over
2.22	Con	uideline ite Third F nments sec tal, Back c	tion
	and social aspects of the organization's activities, including facility-specific information.	•	J V C1
	Governance structure and management syst	ems	
3.1	Governance structure of the organization, including major committees under the bidirectors that are responsible for setting strategy and for oversight of the organization.		0-21
3.2	Percentage of the board of directors that are independent, non-executive directors	S.	20
3.4	Board-level processes for overseeing the organization's identification and management of economic, environmental, and social risks and opportunities.	21, 3	8-39
3.6	Organizational structure and key individuals responsible for oversight, implementation, and audit of economic, environmental, social, and related policies.	0, 21, 22, 24 39, 44	
3.7	Mission and values statements, internally developed codes of conduct or principles, and policies relevant to economic, environmental, and social performance and the status of implementation.	2, 19, 24 40, 46, 52	
3.8	$\label{lem:mechanisms} Mechanisms for shareholders to provide recommendations or direction to the board of the boa$	f directors.	42
3.9	Basis for identification and selection of major stakeholders.	18-19	9, 40
3.10		4	0-43
3.11	Type of information generated by stakeholder consultations.		0-43
3.12			0-43
	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	24, 3; 34, 3	
3.13	Externally developed, voluntary economic, environmental, and social charters, sets o or other initiatives to which the organization subscribes or which it endorses.	f principles,	3
3.14	Principal memberships in industry and business associations and national and international advocacy Policies and systems for managing upstream and downstream impacts, including		3 2-53
3.14			
3.14	supply chain management as it pertains to outsourcing and supplier environmenta and social performance, $ \\$	I	52
3.14		14, 2!	
3.14 3.15 3.16	and social performance,		
3.14	and social performance, and product and service stewardship initiatives.  Reporting organization's approach to managing indirect economic, environmental,	14, 29 13, 14-19	5, 36
3.14 3.15 3.16 3.17 3.18	and social performance, and product and service stewardship initiatives.  Reporting organizations approach to managing indirect economic, environmental, and social impacts resulting from its activities.  Major decisions during the reporting period regarding the location of, or changes in, or Programs and procedures pertaining to economic, environmental,	14, 29 13, 14-19 perations. 18, 20, 22	5, 36 5, 45 n/a
3.14 3.15 3.16 3.17 3.18	and social performance, and product and service stewardship initiatives.  Reporting organizations approach to managing indirect economic, environmental, and social impacts resulting from its activities.  Major decisions during the reporting period regarding the location of, or changes in, or	14, 29 13, 14-19 perations. 18, 20, 22 36, 38, 40	5, 36 5, 45 n/a 1, 24,
3.14 3.15 3.16 3.17 3.18 3.19	and social performance, and product and service stewardship initiatives.  Reporting organizations approach to managing indirect economic, environmental, and social impacts resulting from its activities.  Major decisions during the reporting period regarding the location of, or changes in, or Programs and procedures pertaining to economic, environmental, and social performance.	14, 29 13, 14-19 perations. 18, 20, 22 36, 38, 40 48, 53	n/a n/a , 24 , 44 2, 54
3.14 3.15 3.16 3.17 3.18 3.19	and social performance, and product and service stewardship initiatives.  Reporting organizations approach to managing indirect economic, environmental, and social impacts resulting from its activities.  Major decisions during the reporting period regarding the location of, or changes in, or Programs and procedures pertaining to economic, environmental, and social performance.  Status of certification pertaining to economic, environmental, and social management services.	14, 29 13, 14-19 perations. 18, 20, 22 36, 38, 40 48, 53	5, 36 5, 45 n/a 1, 24,
3.14 3.15 3.16 3.17 3.18 3.19	and social performance, and product and service stewardship initiatives.  Reporting organizations approach to managing indirect economic, environmental, and social impacts resulting from its activities.  Major decisions during the reporting period regarding the location of, or changes in, op Programs and procedures pertaining to economic, environmental, and social performance.  Status of certification pertaining to economic, environmental, and social management so  Economic performance indicators	14, 29 13, 14-19 perations. 18, 20, 22 36, 38, 40 48, 53	n/a n/a , 24, , 44, , 44, 37
3.14 3.15 3.16 3.17	and social performance, and product and service stewardship initiatives.  Reporting organizations approach to managing indirect economic, environmental, and social impacts resulting from its activities.  Major decisions during the reporting period regarding the location of, or changes in, or Programs and procedures pertaining to economic, environmental, and social performance.  Status of certification pertaining to economic, environmental, and social management services.	14, 29 13, 14-19 perations. 18, 20, 22 36, 38, 40 48, 53	n/a n/a , 24, , 44, 2, 54

Item		Guideline CSR Rep	ort Pag		
	Envi	ronmental performance indicators			
EN4	Lifetgy	Direct energy use Indirect energy use	12, 26		
EN5	Water	Total water use	58		
EN8	Emissions, effluents,	_	2, 26, 58		
TNIO	and waste	(CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub> )	60-61		
EN9 EN27	Biodiversity	Use and emissions of ozone-depleting substances.  Objectives, programs, and targets for protecting and restoring native	(27) Rack cover		
		ecosystems and species in degraded areas.	540K 55151		
N10			58, 60-61		
N11			58, 60-61		
N12		Significant discharges to water by type.  Water sources and related ecosystems/habitats significantly affected by	58, 60-61 (35)		
LIVOZ		discharges of water and runoff	(00)		
EN13		Significant spills of chemicals, oils, and fuels in terms of total number and total volume.	j n/a		
	Suppliers	Performance of suppliers relative to environmental components of programs and procedures described in response to Section 3.16.	52		
	Products & services	Significant environmental impacts of principal products and services. 13, 14-			
	Compliance Transport	Obligations and penalties for violating environmental regulations.  Significant environmental impacts of transportation used for logistical purposes	. 53 . 53		
	Overall	Total environmental expenditures by type.	34		
Social performance indicators					
A1	Employment	Breakdown of workforce.	6		
A12	. ,	Employee benefits beyond those legally mandated.	17		
	Labor and employee-	3	n 21		
	employer relations Health and safety	with employees over changes in the reporting organization's operations.	0.		
.Аб .А7	nealth and safety	Formal joint health and safety committees comprising management and worker representatives.  Standard injury, lost day, absentee rates and number of work-related fata	24		
	Training & Education	Average hours of training per year per employee by category of employe			
A16	Training & Education	Description of programs to support the continued employability of	49		
		employees and to manage career endings.			
_A17		Specific policies and programs for skills management or for lifelong learning.	49		
	Diversity & opportunity	Description of equal opportunity policies or programs, as well as monitoring systems to ensure compliance and results of monitoring.	16		
A11	оррогилису	Composition of senior management and corporate governance bodies, including	50		
		female/male ratio and other indicators of diversity as culturally appropriate.			
	Strategy &	Description of policies, guidelines, corporate structure, and procedures t	0 48		
IR2	Management	deal with all aspects of human rights relevant to operations.  Evidence of consideration of human rights impacts as part of	-		
inz		investment and procurement decisions.	52		
IR3		Description of policies and procedures to evaluate and address human	52		
		rights performance within the supply chain and contractors.			
HR8		Employee training on policies and practices concerning all aspects of	48		
HR4	Non-discrimination	human rights relevant to operations.  Description of global policy, procedures, and programs preventing all	48-49		
		forms of discrimination in operations.	40-40		
HR6	Child labor	Description of policy excluding child labor and of procedures and prograt to address this issue.	ms 48		
HR7	Forced labor	Description of policy to prevent forced and compulsory labor and of procedures and programs to address this issue.	48		
	Disciplinary practices		23		
IR10	0	Non-retaliation policy and effective, confidential employee grievance sys			
501	Community	Policies to manage impacts on communities in areas affected by the organization's activities and procedures and programs to address this iss	41, 43 ue.		
SO4		Awards relevant to social, ethical, and environmental performance.	62-63		
	Competition & Price setting	Description of policy, procedures, management systems, and compliance mechanisms for preventing anti-competitive behavior.	22-23		
	Customer health & Safety	Policy for preserving customer health and safety during use of products and services and procedures and programs to address this issue.	36-37		
	Products & Services	Policy for procedures, management systems and compliance mechanisms related to product information and labeling.	36-37		
		Policy, procedures, management systems, and compliance mechanisms for consumer privacy.	39		
		■ Indicates essential items and ind ■ Indicates optional ind			

# Chronology of CSR Initiatives

Business and CSR Activities		<b>Environment and Responsible Care Activities</b>
Toyo Rayon Co., Ltd. founded	1926	
Toyo Rayon Health Insurance Association established	1940	
Toyo Rayon Labor Union Federation established	1946	
Monthly company magazine Toray Newsletter first published (name changed to People in April 1986)	1953	
Company creed "Toyo Rayon serves society" adopted	1955	
Pension plan established	1956	
Central Production Committee convenes (reorganized into the Labor and Management Council in 1965)	1958	
Toyo Rayon Science Foundation established (now the Toray Science Foundation)	1960	
English annual report first published		
	1965	Accident Prevention Technology Section established (now the Environment & Safety Department)
Mandatory retirement age of 60 adopted	1966	
	1969	Environmental Pollution Prevention Committee established (now the Safety, Health, and Environment Committee)
Company name changed to Toray Industries, Inc.	1970	Environment Technology Section established at all Toray plants (now the Environment & Safety Section)
	1973	Environment Management Regulations and Basic Policy for Greening adopted;
		Plant greening work started
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	.0,4	Occupational Safety and Health Management Regulations enacted
Similar data of a appointed by definitional and a second of appointed and a second of a second of appointed and a second of a seco	1976	Accident Prevention and Safety Management Regulations enacted
	1979	Chemical Substance Safety Management Guidelines enacted
Toray Welfare Society established		
Totay Wellare Obciety established	<b>1980</b> 1981	Standard for the Prevention of Earthquake Disasters established
	1982	Energy Technology Department established
	1902	First Company-wide Grand Safety Meeting held
	1000	Product Safety Management Regulation enacted
	1983	First Energy Conservation Technology Presentation Meeting held
	1984	Environment, Accident Prevention, Safety, and Health Assessment system established at the equipment planning stage
Community Division in the second of the seco	4000	First Monday of each month established as a company-wide Safety and Accident Prevention Day
Corporate Philosophy, "contributing to society through the creation of new value by innovative ideas, technologies, and products," adopted	1986	
English language version of company magazine People first published	1989	Mutual inspections of safety and accident prevention start at Japanese subsidiaries and affiliates
Admitted into Keidanren's 1% Club	1990	First Grand Safety Meeting of Domestic Subsidiaries and Affiliates held
		Industrial Waste Reduction Project started
	1991	Global Environment Committee and Product Safety Committee established
Charles de la marcina de la descripción de la constitución de la const	4000	Global Environment Research Laboratory established (now Global Environment Research Laboratories)
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	1004	
Toray Science Foundation established in Thailand	1994	Safety, Health, Accident Prevention, and Environment Conference and Product Safety Conference created
		for Japanese subsidiaries and affiliates
Manager Dillegele (Canada Dillegele Canada Missier and Cuidin Director)	1005	Purchase and manufacturing use of certain chlorofluorocarbons abolished
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	1000	Safety, health, accident prevention, and environmental audits start at overseas subsidiaries and affiliates
Toray Human Resources Development Center opens	1996	
Toray Europe Labor and Management Council established		
Human Rights Promotion Committee established	4007	
Corporate Ethics Committee established	1997	
	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
	4000	overseas subsidiaries and affiliates
	1999	Environmental Report published
		Second Waste Reduction Plan prepared
		Toray Group Domestic Grand Safety Meeting held (first Group meeting)
	2000	Three-Year Environmental Plan started, Ten Basic Environmental Rules adopted
		Toray Group Environmental Management Standards established
		Environmental accounting results for FY 1999 announced
	0.07	All 12 Toray plants acquire ISO14001 certification
Reemployment system introduced	2001	Recycling Committee established
Compliance Committee established	2002	
CSR Committee established	2003	Second Three-Year Environmental Plan started
CSR Guidelines and Action Programs adopted	2004	CSR Annual Report published
CSR Line Activity started	2005	CSR Report published
CSR Operations Group established in the Corporate Planning Department	2006	
CSR Operations Department established	2007	Third Three-Year Environmental Plan started