

# 2011 Teijin Group CSR Report

[Achievements in FY2010]



# **Consolidating our Position as a Corporate Group** with a Strong Global Presence...

The Teijin Group established its corporate philosophy in June 1993, 75 years after its founding. In April 2003, we changed to a holding company system and established "Human Chemistry, Human Solutions" as our brand statement to represent the Teijin Group's commitment to customers and society. We will continue striving to fulfill this commitment, developing and enhancing our "Quality of Life" corporate philosophy, and acting as a corporate group that can be trusted by society and by our customers.

# Corporate Philosophy

# In Harmony with Society

Our aim is to grow and evolve in harmony with the progress of society, thus justifying the trust of our shareholders, customers, and the public at large. To this end, we strive constantly to raise corporate value and place our highest priority on safety and the environment.

# **Quality of Life**

The Teijin Group's purpose is to enhance the quality of life through a deep insight into human nature and needs, together with the application of our creative abilities.

# **Empowering Our People**

We encourage our employees to achieve self-realization by developing and exercising their abilities to the fullest. We nurture a corporate community with a wide variety of abilities and personalities to foster creative innovation



# **Brand Statement**

# Human Chemistry, Human Solutions

The promise of the Teijin brand is summed up in the resonant statement: "Human Chemistry, Human Solutions." Our promise is to continue to develop chemical technologies that are friendly to both people and the global environment and to provide solutions that deliver real value to our customers and society.

"Chemistry" and "Solutions" summarize the Teijin Group's strategy for the 21st century focusing on chemical materials and provision of services that create added value.

Chemistry also refers to good relationships, expressing the importance of trust, goodwill, and mutual benefit.

#### **CSR Basic Policy (2009-2011)**

- 1. Formalize and upgrade Sustainable Environmental Initiatives to help increase the value of our corporate brand.
- 2. Endeavor to reduce risks continuously by further enhancing safety management and disaster prevention management.
- 3. Promote the further spread of compliance and risk management activities to support enhanced corporate governance.
- 4. Reconsider the operation of the TRM Committee\*, and further enhance the ability of the Teijin Group as a whole to cope with various risks.
- 5. Provide appropriate advice and support concerning CSR for the human resources and purchasing/procurement departments.
- 6. Check performance for product liability and quality assurance from the viewpoint of going back to basics, and implement further reforms to reduce risks.
- 7. Promote planning and implementation of social contribution activities with the aim of further expansion.
- 8. Recruit and nurture human resources effectively and upgrade the internal organization for group-wide CSR activities.

<sup>\*</sup> TRM Committee: see the figure at the bottom of page 21.

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#### **Publishing Date and Schedule for Next Report**

Published in September, 2011 (next report scheduled for publishing in June, 2012).

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## Explanatory Note

In creating the 2011 Teijin Group Corporate Social Responsibility (CSR) Report, we have considered the following points, aiming to increase the report's audience and their understanding of the Teijin Group's CSR activities.

#### ■ Completeness and Materiality

The contents of this year's CSR Report have been chosen according to strict criteria, referring to the following guidelines and questionnaires on socially responsible investment (SRI), and considering the business conditions of our group. Notably, the features section describes initiatives relating to themes that are important to both the Teijin Group and society.

#### Clarity

This report predominately targets readers who are interested in CSR, and at the same time endeavors to promote understanding of our activities across a wide audience. To this end, we have minimized the report's length as much as possible, and adopted a layout arranged according to specific features of our group's CSR management. In addition, to facilitate ease of reading and referencing, we have adopted language appropriate to the content of information and incorporated features such as cross-referenced pages. Where reference information is not listed due to space limitations, the relevant website is provided to enable quick referencing.

#### Reliability

Emphasizing transparency in all aspects of management, the Teijin Group is committed to active disclosure of information that can be trusted. On this basis, this report has been independently reviewed by KPMG AZSA Sustainability Co., Ltd., who have provided assurance of its reliability. Indicators on which assurance is provided are marked with a red star (★).

#### □ Time Period/boundaries

In principle, this report includes information corresponding to the period from April 2010 to March 2011. However, some information corresponds to the 2010 calendar year. Furthermore, information in this report generally refers to all Teijin Group companies (Teijin Limited, plus 71 in Japan and 75 overseas). However, in some sections, such as environment, safety and health management and human resource management, we have included notes indicating the use of a separate time period and boundaries.

#### ▶ Additional Information

Detailed information on topics such as our business activities, social contributions, financial data and environmentally friendly products is published and regularly updated on our company website. In addition, the following documents are available for reference.

- · CSR Report (Japanese)
- Teijin Group Company Profile (Japanese/English)
- Annual Report (Japanese/English)
- Fact Book (Japanese/English)
- Financial Statements (Japanese/English)
- Shareholders' Report (Japanese)

## **Reference Guidelines:**

- "Environmental Reporting Guidelines, 2007" (Ministry of the Environment, Government of Japan)
- "Sustainability Reporting Guidelines, 2006" (Global Reporting Initiative)

URL: http://www.teijin.co.jp/english/

# Our Mission: Enhance Worldwide Quality of Life

# **CSR** in Management

The earthquake and subsequent tsunami that hit the Tohoku region on March 11, 2011 caused devastating destruction in Japan. We would like to express our deepest condolences to those who lost loved ones in the earthquake and heartfelt sympathies to all those suffering from the devastation.

Damage was sustained by the Teijin Group at some business sites, and by some of our employees and their families. The operations of both the Utsunomiya and Ibaraki Plants of Teijin DuPont Films Japan Limited, were temporarily suspended due to earthquake-related damage to the manufacturing facilities, but have returned to normal as of June 29. In addition, the sales area of our Medical & Pharmaceutical Business covers the whole disaster-affected area. Through the combined efforts of the Teijin Group, we provided as much support as possible to clients and users, many of whom suffered substantial damage due to the disaster. In particular, we extended support to users of our home health care oxygen concentrator to ensure they were not inconvenienced in the event of an emergency. To this end, support personnel were assembled from branch offices throughout Japan, and portable oxygen cylinders were distributed to specific areas as a measure to prepare for a power outage.

Many of the serious problems that have followed the earthquake, such as those related to the nuclear power plant accident, are still yet to be fully resolved. These problems have raised questions that relate directly to the true nature of CSR in management such as issues of responsibility in supplying products and protecting safety and the environment. Our corporate philosophy is "To enhance the quality of life through a deep insight into human nature and needs, together with the application of our creative abilities. In Harmony with Society. Empowering Our People." Reflecting on these ideals as our starting point for CSR, with renewed resolve we will apply ourselves to creating value that can answer future needs in society.

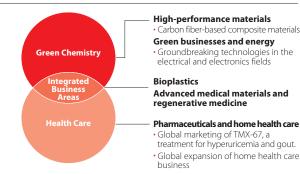
# Structural Reforms and Mid- to Long-term Growth **Strategies**

Viewing FY2010 as a year for completing structural reforms and restoring profitability, we implemented sweeping reforms of our financial structure, and made purposeful efforts to reduce the break-even point of all business group companies. At the end of the fiscal year, we notified all group employees that the state of emergency declared almost two years ago is now over, and we have set forth a policy to the effect that we will now shift to a proactive strategy for growth.

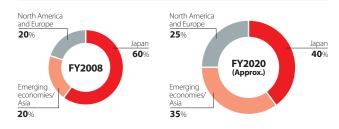
Throughout the period of structural reform, we have continued to invest in R&D in fields where sustainable growth is expected, and made decisions that will lead to the creation of new businesses. In our materials businesses, we developed carbon fiber composite materials and aramid pulp for high-performance materials, and new products based on high-performance polyethylene. In our Medical & Pharmaceutical Business, we launched a new treatment for hyperuricemia and gout, initially in North America and Europe, and later in Japan. Furthermore, in New Business Development, we increased R&D in the advanced medical materials field, while continuing to position bioplastics, new carbon fiber composite materials, high-performance electronics materials, high thermal conductivity materials, and water treatment as priority fields.

In FY2011, we will formulate our mid-to long-term plan based on the future vision of the Teijin Group. For this purpose, we have designated business fields that we envision will be sustainable for many years to come, and are currently discussing detailed strategic plans for

## **Reform of Business Portfolios**



#### **Reform of Regional Portfolios**



expansion that will be driven by technological innovation. The Teijin Group is committed to accelerating growth. Our basic concept for achieving this is to increase the input of managerial resources, and pursue innovative changes in technology, business and market portfolios; actions that we believe will drive our future growth.

# **CSR Activities Supporting Our Strategy for Growth**

Business growth requires more than management strategies; the culture and capabilities existing within the organization must be enhanced and developed in order to support the implementation of these strategies. The Teijin Group positions management strategies, corporate governance and CSR as pillars of corporate management. From the viewpoint of enhancing organizational capabilities to support business expansion, we have set three key themes: Global, Marketing Reform, and Diversity. To develop into a truly global corporation, we will focus on fostering and securing human resources, and proceed with systematic reforms from various perspectives. To help us in achieving this, we have the pleasure of welcoming Dr. Ei-ichi Negishi as a Teijin Group Distinguished Fellow. Dr. Negishi is a former employee of Teijin, winner of the 2010 Nobel Prize in chemistry and a Distinguished Professor at Purdue University. Specifically, Dr. Negishi will offer guidance in advanced R&D and in fostering a diverse range of human resources. Our aspiration is to foster human resources that can contribute to the sustainable development of Teijin Group, Japan and the whole world.

Furthermore, as a corporation with globally expanding businesses, in order to raise our CSR management to the next level, in March, 2011, we announced our support for and participation in the United Nations Global Compact. In September 2010, we also declared our support for the Women's Empowerment Principles created by the UN Development Fund for Women. Our goal is continue providing a workplace that prioritizes competence and motivation irrespective of race, gender or age.

To enhance worldwide quality of life, the Teijin Group will make further efforts to achieve higher levels of CSR management. In this, we ask for your continued support and understanding.

September 2011



Shigeo Ohyagi

President and CEO Teiiin Limited

# Global Expansion in Diverse Businesses

The Teijin Group's key statement, "Human Chemistry, Human Solutions," signifies the deep integration of our diversified, advanced technologies, and vast "solutions knowledge" in the lives of people, achieved through the help of our business partners and their activities

# **Expansion of the Teijin Group's Businesses**

The Teijin Group was established in 1918 as the first manufacturer of rayon yarn in Japan. Starting with the launch of our polyester business, and building on the foundation of our strong technological prowess in fibers, we have expanded to become a diverse business group active in a broad range of fields.

Today, Teijin Limited and 149 group companies are active in our Synthetic Fibers, Films and Plastics, Medical & Pharmaceutical, Fiber Products Marketing, and IT businesses. We continue to expand these businesses on a global scale in Asia, the USA and Europe.

The restructuring of our business has led to changes in the number of our employees. Currently, there are 17,542 group company employees, including of 7,588 overseas (approximately 200 transferred from Japan). In FY2010, the average annual number of temporary employees in companies in Japan and overseas was 2,373.

The Teijin Group is primarily involved in business activities in which we do not have direct contact with consumers, such as the production of materials. Despite this, through our involvement in various industrial fields, our innovative and numerous products and services have become strongly integrated in the lives of consumers.

## **□** Teijin Limited Corporate Profile

(As of March 31, 2011)

Established: June 17, 1918 Capital: 70,816 million yen

Osaka Head Office

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Representative

Shigeo Ohyagi, President and CEO

URL: http://www.teijin.co.jp/english

# Profile of the Teijin Group

(As of March 31, 2011)

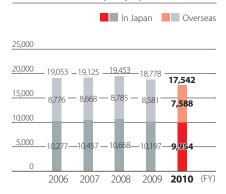
Holding company: 1 Group companies in Japan: 71 Group companies overseas: 78 Total: 150

Number of employees in Japan: 9,954\* Number of employees overseas: 7,588\*

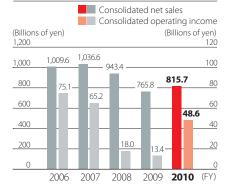
\* Excluding temporary employees.

# Consumers TEIJIN

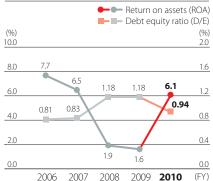
## **Trends in No. of Group Employees**



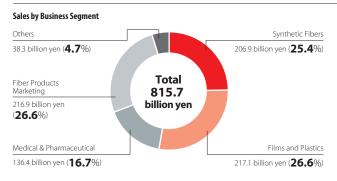
#### **Trends in Consolidated Net Sales and Operating Income**



# Trends in Main Management Indexes



#### **Breakdown of FY2010 Consolidated Net Sales**



# Sales by Business Location Europe/Other Japan 59.1 billion yen (**7.2**%) 512.2 billion yen (**62.8**%) The Americas **Total** 64.1 billion yen (7.9%) 815.7 billion yen 180.2 billion yen (22.1%)

# Synthetic Fibers Business (53 companies)

#### Aramid Fibers Business Group

#### Core company: Teijin Techno Products Limited

This group is engaged in the manufacturing and marketing of high-strength, high-tensile para-aramid fibers, and high heat- and flame-resistant meta-aramid fibers. Notably, the group holds an approximate 50% share of the global para-aramid fiber market.

Teijinconex®, a meta-aramid-fiber, has superior long-lasting heat and flame resistance, and is used in firefighting uniforms and industrial materials, a prime example being heat-resistant filters.



#### **Carbon Fibers & Composites Business Group**

#### Core company: Toho Tenax Co., Ltd.

This group is engaged in the manufacturing and marketing of Tenax® carbon fiber and its application, carbon fiber reinforced plastics (CFRP). The carbon fiber production capacity of this group is the world's second largest.

Tenax® is used in aircraft, the blades of wind turbine generators and other similar applications owing to its light weight, high strength and high tenacity. Through use of thermoplastic resin in CFRP, the Teijin Composites Innovation Center (TCIC) has established a

world-first technology that enables mold production in less than one minute and is now concentrating on developing applications of molded parts made of CFRP.



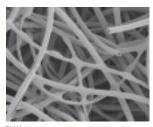
Structure of concept car made entirely of thermoplastic-CFRP

#### **Polyester Fibers Business Group**

#### Core company: Teijin Fibers Limited

In addition to manufacture/sales of apparel and interior household materials, this group is responsible for global expansion of the ECO CIRCLE™ closed-loop recycling system.

ELK® is a functional cushioning material with superior elasticity, durability and ventilation. After use, ELK® products can be recycled as part of the ECO CIRCLE™ system, and toxic gas emissions during combustion are minimized.



# lical & Pharmaceutical Business

#### Medical & Pharmaceutical Business Group

## Core company: Teijin Pharma Limited

These companies are engaged in manufacturing and marketing of pharmaceuticals, as well as the manufacture of home health care products and provision of related services. Home health care devices and a treatment for hyperuricemia and gout continue to be expanded internationally.

In July 2010, Teijin Pharma launched Hi-Sanso™ 7R, a home health care oxygen concentrator that is highly functional and energy efficient. This new Hi-Sanso™ Series model focuses on energy savings, safety and anxiety-free performance.



Hi-Sanso™ 7R

# Films and Plastics Business (30 companies)

#### Films Business Group

#### Core company: Teiiin Films Limited

This group is the world's second largest manufacturer of polyester films, which are used in back sheets of solar battery panels and LCD televisions. Through in-house development of polyethylene naphthalate (PEN) film, this group's share of the global PEN film market is almost 100%.

Teijin Chemicals Ltd. manufactures and sells ELECLEAR®, a film for resistive touch panels. This thin, lightweight and transparent electroconductive film is produced from the base of two materials, a polycarbonate film produced by Teijin Chemicals Ltd. and a polyester film produced by Teijin DuPoint Films Japan Limited.



ELECLEAR® film for touch panels

## Plastics Business Group

#### Core company: Teijin Chemicals Ltd.

As Asia's No. 1 manufacturer of polycarbonate resin, this group takes advantage of compounding, processing and other technologies in producing various products, such as resin windows for Shinkansen trains and automobiles, LED lighting, and films for touch panels.

# er Products Marketing Business

# Fiber Products Marketing Business Group

#### Core company: N.I. Teijin Shoji Co., Ltd.

This group handles the total planning and sales of fiber apparel and industrial materials films and plastics, and other miscellaneous household products.

AEROSHELTER®II is an ultralight and compact large-scale temporary tent made using PowerRip®, a lightweight, high-strength polyester fabric, as the base material. Owing to its ability to restrict the passage of outside air and excellent flame resistance, it has applications including at events and as an initial relief facility during disasters.



AEROSHELTER® II

# Others (29 companies)

#### IT Business Group

# **Core company: Infocom Corporation**

This group provides operation, development and maintenance services for information systems

Emergency Call™ is a system developed to enable confirmation of the safety of others, and to secure quick and accurate mutual communication. Evaluated highly for its effectiveness in protecting children against risks such as those posed by natural disasters or crime, this system has been adopted in many private elementary schools in Japan.

## How *Emergency Call*™ Works

(1) Emergency contact General notice of disaster ser le phone, PHS, e-mail Confirm information on safety of user

(2) Safety confirmation

#### **New Business Development Group**

Established within Teijin Limited, this group promotes activities to create and develop new businesses in cooperation with other group companies.

BIOFRONT® is a new bioplastic with heat resistance/molding characteristics comparable to those of petroleum-derived plastics. The applications of BIOFRONT® are expected to increase in diverse areas ranging from apparel to electrical appliances.



Eyeglasses made using BIOFRONT®

# **How Should Environmental Initiatives for China be Structured?**

# In the rapidly developing economy of China, what kind of environmental preservation initiatives will be required? What action is needed?

The Teijin Group has continually endeavored to reduce the amount of CO<sub>2</sub>, chemical substances and waste produced as a result of our business activities. Owing to these efforts, emissions have been reduced year by year and we are advancing toward the achievement of mid-/long-term targets. We will continue to take up the challenge to identify and reduce substances that have a high impact on the environment. At the same time, the Teijin Group is expanding production and sales in the rapidly developing economy of China, and it must be said that this expansion will result in increased impact on the environment. As a response to this situation, we have invited environmental policy experts from China for their opinions regarding what kind of environmental initiatives should be implemented in China.

- \*1 "Waste with no effective use" refers to waste that is either put directly into landfill or incinerated without heat recovery.
- \*2 LIME2 is the second version of LIME, the Life Cycle Impact Assessment Method Based on Endpoint Modeling, developed in the second phase of the LCA national project (April 2003 to March 2006). It involves use of a technique to measure and assess overall environmental impact according to 15 categories of environmental impact; for example, global warming.

# The Teijin Group's Environmental Initiatives – Achievements and Plans

The Teijin Group has set, and is working hard to achieve, specific targets for the reduction of CO<sub>2</sub>, chemical substances and waste. The results of our efforts are as follows. In FY2010, CO<sub>2</sub> emissions were reduced 40%, achieving our target of a 20% reduction from the FY1990 level by FY2020 (in Japan). In addition, the target for China to reduce CO<sub>2</sub> emissions by 1% per year per production unit has been achieved by all companies. Regarding chemical substance emissions, we achieved a 62.2% reduction in emissions. The target for Japan is an 80% reduction from the FY1998 level by FY2020. For "waste with no effective use,"\*1 that is, waste which cannot be reused or recycled, we achieved an 89% reduction. The target for Japan is an 85% reduction from the FY1998 level by FY2020.

Given this progress, the Teijin Group formulated a new plan in December 2010 to further reduce environmental impact. In this plan, while the total volumes for 2020 targets have not changed, the environmental impact of individual chemical substances are "visualized" in order to strengthen management of substances with significant impact. Utilizing the LIME2\*2 life cycle assessment method (LCA) method established by the Ministry of Economy, Trade and Industry, Japan, and the Japan Environmental Management Association for Industry, we will identify substances that have significant environmental impact, even in small amounts, and endeavor to reduce these substances.

We are also striving to reduce chemical substances that have a large impact in terms of air pollution even in small amounts, such as nitrogen oxides (NOx) and sulfur oxides (SOx).

At plants in China too, we will identify and try to reduce substances with high environmental impact while moving forward with efforts to reduce total plant emissions. A relevant upcoming issue will be how to respond to stricter emissions regulations which the government will likely put in place as economic growth continues.



## Relevant Leaders from Teijin Group Chinese Companies Discuss Future Environmental Challenges

# Future Challenges: Effective Use of Office Waste in Synthetic Resin Production, and Reducing/Recycling Wastewater from Textile Production

Mr. Goto: Let's begin with a question directed to Mr. Muraoka, Manager of the Environment, Safety and Health Office. Please tell us about the group-wide approach to environmental issues, and the present status and issues in China.

Mr. Muraoka: Thanks to continued group-wide efforts, we have made progress in reducing the total waste produced and total CO<sub>2</sub> and chemical substances emissions. In China too, we have achieved annual targets through the outstanding efforts of all companies and offices. In this context, despite the difficultly in setting even stricter total emissions targets, we obviously hope to reduce our environmental impact even further.

Specifically, we are considering using the LCA method to identify substances that have high environmental impact for small amounts emitted. Through reducing such substances, we will be able to reduce the total environmental impact for the same total emissions. Furthermore, in China, where industrial output continues to increase, future regulations on total emissions are anticipated to become stricter and stricter. The challenge will be meeting these stricter restrictions. Mr. Goto: To all of you working hard for environmental preservation at Teijin Group Chinese companies, do you have any comments?

Ms. Xin: Teijin Chemicals Plastic Compounds Shanghai





Goto Sustainability Forum Japan

Ltd., a manufacturer of composite resin, is focusing attention on reducing waste. In 2006, we received the Production Streamlining Award from the Pudong New-area Science and Technology Committee for our proposal of a dust collector "Dust Recycler." In 2007, we achieved zero emissions: that is, a stable ratio for "waste with no effective use" of 1% or less of the total waste. Continuing to improve, in 2008, we obtained approval to use the China Environmental Label (Type II)\*3 for plastic waste and wastewater recycling systems. Furthermore, in 2010, we received high appraisal of our environmental performance in terms of both energy savings and reduced use of resources enabling us to pass the "clean-production" inspection.

We have three challenges for the future. The first is to increase the number of waste disposal contractors. Since there are few waste disposal contractors in China, effective use of certain types of waste, such as used copier cartridges and batteries, has not been achieved. This waste amounts to several tens of kilograms each year. The second challenge is reduce waste even further. The third challenge is strengthening internal waste management of processes such as sorting waste. Mr. Rong: Nantong Teijin Co., Ltd. situated in Jiangsu manufactures textiles. As our manufacturing involves dyeing processes, treatment of wastewater is a big

#### **Profile**

#### Mr. Toshihiko Goto

Mr. Goto has had roles including Representative Secretary of the Environmental Auditing Research Group, and as a member of the Environmental Quality Control Standard Committee EPE subcommittee and 14005WG committee, and committee reviewing matters relating to the state of disclosure of environmental information by corporations.

\*3 China Environmental Label (Type II) is an environmental label used in China. For type II, inspections are performed based on the self-proclaimed environmental statements of a company. If the statements conform to ISO14021 standards, use of the label is permitted.





\*4 Chemical oxygen demand is the amount of oxygen consumed when organic matter in the water is dissolved by an oxidant. It is a common indicator used to measure the quality of seawater, and water in lakes and marshes according to the extent of pollution resulting from organic matter.

issue. After initial processing, wastewater is sent to the secondary treatment site, a public facility adjacent to our plant. However, of late, the Environmental Agency's management of wastewater from the dyeing plant has become much stricter. For instance, they have installed inspection equipment at our treatment site to collect daily chemical oxygen demand\*4 data, and inspections without prior notice are also conducted. Taking steps to improve wastewater treatment, we started wastewater recycling the year before last and now recycle 15% of the total wastewater.

In addition, we are implementing energy-saving measures that take thoroughness to a new level. Based on expert advice, we replaced old transformers, air



Mr. Rong Shikun Dye Plant No. 1 Production ntong Teijin , Ltd.

Ms. Xin Guifeng



conditioners, and even lighting with energy-efficient models, and invested in filters and heat-recovery systems. The combined effect of these measures is an approximate 30% reduction in power consumption. For the past several years, we have taken thorough measures covering every aspect of energy savings, to the extent that it seems we have exhausted all means (smiles). Coupled with this, I am also in charge of cost management, so as you can imagine, there are difficult issues to grapple with. Finally, although chemical substance emissions in FY2010 were reduced 43.0% compared to those in 2005, and "waste with no effective use" was reduced 4.6% compared to the previous year, further efforts are required.

#### Chinese Expert Discusses Future Environmental Challenges

# Environmental Pollution Regulations: The No. 1 Priority in China Compliance with Total Emission Regulations Will Also be Important

Mr. Goto: We have heard about the challenges of the Teijin Group in China. Now, let's ask Dr. Chang of Tsinghua University about the characteristics of Chinese environmental administration.

Dr. Chang Miao



Dr. Chang: Above all, I would like you to understand that environmental administration in China prioritizes environmental pollution regulations. This places the Chinese approach in a different phase to the approach in Japan. Currently in China, environmental countermeasures are needed most for pollutants emitted as a result of corporate activities and daily life. Specifically, this means countermeasures for water, air, waste, soil and noise pollution.

Three systems already established are the Environmental Impact Assessment System, the Three-step System, and the Pollutant Emissions Fee Collection System. The Three-step System is a measure to reduce new sources of pollution through requiring pollution-preventing facilities to be installed when a new business starts. The Pollutant Emissions Fee Collection System is a system enabling collection of fees from organizations which discharge more pollutants than the standard values. There are also five relatively new systems that focus on measures to reduce pollution.

Mr. Goto: You are saying that the present situation in China corresponds to the time when environmental pollution became a problem in Japan?

**Dr. Chang:** Yes. CO<sub>2</sub> reduction is considered less important than the environmental pollution measures. At the moment, demand for energy is increasing rapidly, so there is a focus on energy savings. Although CO2 emissions are reduced as a result of energy savings, the priority is definitely on energy savings. At the same time, the most important environmental policy in China now relates to total emission regulations. As part of this, a Pollutant Emissions Permit System has been implemented. In this system, companies apply to a local Environmental Agency office for approval on the types and amount of pollutant to be emitted. There is also a time-limit-based system for areas of high pollution whereby non-complying companies may be forced to suspend operations for a certain time, with resumption of operations subject to improvement.

Regulations governing both the total sulfur dioxide (SO<sub>2</sub>) emitted into the atmosphere and the COD level, which is used to determine water quality, were successful policies of the 11th Five-year Plan\*5

# **Profile** Dr. Chang Miao

stage as a staff member of the Institute for Global Environmental Strategies, She also has a central role in environmental policy exchanges between Japan and China.

Dr. Chang has been engaged

in water-related infrastructure

issues in Japan from an early

(2006–2010). In this plan, the central government set total emissions targets and allocated them to local governments. In the 12th Five-year Plan (2011–2015), an Emissions Trading System is expected to be implemented. I'm currently engaged in research on the Emissions Trading System, and I am designing the systems for Shandong, Shanxi, and Tangshan in Hebei. In this system, emission quota such as for SO<sub>2</sub> and COD are set for each company and trading is based on this quota. A growing emphasis is expected on substances such as ammonia nitrogen\*6, heavy metals and NOx. Mr. Goto: Which areas you think the Teijin Group Chinese companies should focus on in the future? **Dr. Chang:** In relation to Nantong Teijin, I would say that plant wastewater treatment will remain important. With increasing demand for industrial water, water recycling technology should be enhanced. I think Teijin's membrane processing is very promising.

In view of the ever-increasing industrial output and consumption in China, the 3Rs\*7 relating to resources are also important and I expect

recycle-oriented statutory regulations to be enforced successively. Teijin Chemicals has indicated that they are looking for waste disposal contractors who can effectively use waste such as used copier cartridges. Moreover, I think there will be an increase in waste disposal contractors who can respond to such needs in the future. While still few in number, there are reportedly Japanese waste disposal contactors who already provide these services.

Attention must also be paid to the total power-consumption regulations relating to energy. In 2010, there were areas where power outages were necessary in order to achieve the energy-saving targets for the final year of the 11th Five-year Plan.



- ▶ \*5 11th Five-year Plan: Mid-term plan for the five-year period from 2006 to 2010 that includes goals for the development of society and the Chinese economy, and incorporates priority projects, measures and industrial policies that aim to achieve these goals.
- \*6 Ammonia nitrogen: Nitrogen that is found in water as an ammonium salt. The source is industrial wastewater, and decomposed human excrement and organic matter in household sewage. Ammonia nitrogen is an important indicator of water pollution, and is one substance that causes eutrophication of ocean areas, lakes and other bodies of water.
- \*7 3Rs: Reduce, Reuse and Recycle. The 3Rs is an important concept in realizing a recycling-oriented society and minimized environmental impact.

#### **Chinese Experts Discuss Future Environmental Challenges**

# Guidelines for Reporting Corporate Environmental Information to the Public and the Corporate Environmental Supervisor System

Mr. Goto: Mr. Tateba, from the viewpoint of JICA, what do you think deserves our attention in relation to corporate activities for environmental preservation in China?



Mr. Masao Tateba Chief Advisor, Recycling-oriented Economic Promotion Project Japan International Cooperation Agency (JICA)

Mr. Tateba: China has taken a positive approach to environmental issues, as evidenced by the Environmental Protection Law established in 1989, and the Japanese government has supported these efforts. JICA established the Sino-Japan Friendship Center for Environmental Protection, which is now being used as a base for various cooperative projects in four fields; corporate activities from the input of resources through to production and sales; education to enhance environmental awareness, mainly focusing on consumers; recycling and reuse of resources from consumer waste; and appropriate disposal and management of waste.

Recent movements related to corporate activities are the formulation of Guidelines for Reporting Corporate Environmental Information to the Public (draft) and support for the creation of a Corporate

Environmental Supervisor System. This latter system corresponds to the Pollution Control Manager System in Japan.

These two measures are an important part of cooperative efforts for the Recycling-oriented Economic Promotion Project that I am engaged in. Mr. Goto: Both these measures closely concern Japanese companies operating in China, don't they? Mr. Tateba: That's right. The Guidelines for Reporting Corporate Environmental Information to the Public (draft), which were started during your visit to China in September, 2009, have been completed. For listed companies, we also invite public comment relating to these guidelines on our website. In addition, there are discussions among relevant departments and agencies relating to the introduction of environmental accounting. This will involve technical difficulties, and we are now discussing how to make it practical.

Meanwhile, support for the Corporate Environmental Supervisor System, which uses the Japan's Pollution Control Manager System as a reference, is underway with trial training already initiated at 7,000 companies (so far 6,678 people have attended lectures). The training is currently centered on large, major Chinese companies in the electric power and steel industries, but when the systems reaches full-scale, many more companies are expected to be included in the initiative.

#### **Profile**

#### Mr. Masao Tateba

Mr. Tateba joins the present project with a wealth of experience at JICA in the Training Center, Medical Cooperation Department. Social Development and Research Department. Thailand Office, and the Sino-Japan Friendship Clinic Project.

#### What Kind of Environmental Initiatives are Required in China?

# Reinforce Capability to Comply with Total Emissions Regulations, and Communicate Corporate Opinions to Policymakers



Mr. Wang Xuxiang Manager, General Affairs & Personnel
Department
Nantong Teijin
Co., Ltd.

Mr. Goto: Thank you for your contributions, Dr. Chang from Tsinghua University and Mr. Tateba from JICA. Now there will be an opportunity for those of you from Teijin Group companies to express your opinion or ask questions.

Mr. Wang: As a manager at Nantong Teijin, I have recently become acutely aware of the importance of preventing wastewater pollution. In the 17 years since Nantong Teijin was established, management of water quality is now at its strictest level. When the company was established, the dyeing industry was still in its initial stages. The situation has changed dramatically. Nantong City is still eager to invite companies, but the dyeing industry is refusing.

Mr. Shimizu: Currently in China, COD regulations imposed on the dyeing industry are levels up to 100mg for class 1, 180mg for class 2, and 500mg for class 3. Nantong Teijin, situated adjacent to the secondary treatment site, is subject to class 3 regulations. However, there have been recent opinions voiced by the relevant authorities that permissible emissions should be reduced from 500mg to 100mg. Is there a possibility that regulations will become this strict?

Dr. Chang: Nantong City in Jiangsu is near Lake Tai. Regulations as strict as this are quite possible in the vicinity of important lakes, marshes and rivers.

Mr. Goto: Water pollution has become a significant issue globally. Solutions emphasize environmental impact on water rather than the amount of pollutants released. Therefore, in areas where water pollution is severe or where there is a high necessity for preserving water quality, it is quite possible that regulations stricter than the national standard will be imposed.

Mr. Nakagawa: Considering the total emissions regulations that Dr. Chang stressed, thought must be



given to how we should respond to these regulations while increasing production output. This will be an issue not only for Nantong Teijin but all Teijin Group Chinese companies. A clear group-wide policy of the Teijin Group is to expand activities in China. As such, we need to quickly understand Chinese environmental regulation trends and share the information with all group companies.



Mr. Hirotaka Nakagawa Presiden Nantong Teijin Co., Ltd.

Mr. Yamamoto (Regional CEO for China/

Participating as an observer): In China, our plastics business includes our Zhejiang plant and Teijin Chemicals Plastic Compounds Shanghai Ltd. The Zhejiang plant uses a lot of water, so we have been focusing on measures to reduce/recycle wastewater in addition to our efforts to reach the various environmental targets of the Teijin Group. However, we may have to change our stance depending on the future environmental regulations in China. Earlier, Mr. Tateba spoke about the possibility of the public commenting on the Guidelines for Reporting Corporate Environmental Information to the Public (draft). Adding to this, I feel that corporate opinions should be reflected in the environmental regulations. This has already started to some extent with the subcommittee of the Japan Chamber of Commerce and Industry in Beijing and Shanghai submitting proposals to the Chinese government via the Japanese Embassy.

Mr. Goto: I think it very important that opinions of the industry are reflected in government policies. Dr. Chang and Mr. Tateba, what are your opinions? **Dr. Chang:** An effective way of achieving this may be to direct opinions to organizations such as the research institution of our university. Research institutes are usually involved in policy research and drawing up policy drafts to be deliberated on. The Sino-Japan Friendship Center for Environmental Protection to which Mr. Tateba belongs is another of these institutions.

Mr. Tateba: I would like Japanese corporate members to understand that when the Japanese government extends assistance relating to design of institutional systems in China through JICA and others, reference is made to past experiences in

Japan, the current situation and future orientations. This approach benefits China, Japan and the rest of the world. Bearing this in mind, it is necessary to resolve issues on a case-by-case basis, through actively keeping a close eye on government websites, maintaining close relations with local

Environmental Agencies, and approaching university and other research institutions.

Mr. Goto: Thank you all very much for a lively discussion.

Mr. Muraoka: We appreciate your valuable comments. Thank you very much.

### Summary by the Coordinator

#### Mr. Toshihiko Goto

Representative Secretary, Environmental Auditing Research Group

As Mr. Tateba of JICA mentioned, in the capacity of JICA temporary advisor, I officially support the formulation of Guidelines for Reporting Corporate Environmental Information to the Public set by the Chinese government. The 2010 training team was received by Teijin for a half-day visit and an explanation of initiatives was provided. Teijin also participated in the Chinese CSR Investigative Team organized by CBCC of Keidanren (Japan Business Federation) to observe and rank CSR report initiatives of the Chinese Academy of Social Sciences. On this basis, the necessity of creating a Chinese version of the CSR report and a dialogue in China was recognized. Subsequently, a dialogue in Shanghai was arranged. Although similar dialogues have been conducted by several Japanese companies in the past, I would like to express my deep respect for Teijin for their wise decision and highly advanced efforts. Based on the experiences above, I agreed to act as a coordinator and had the pleasure of working with long-time acquaintances, Dr. Chang and Mr. Tateba.

I am pleased to say that the dialogue was very effective and is something to be proud of. I consider the largest contributing factor to be the fact that Teijin deployed local personnel responsible for environmental issues rather than the local Japanese management personnel. This decision was a manifestation of the company's policy to value and select local people. I was deeply impressed by the local people involved. They reminded me of the Japanese people making sincere efforts to tackle pollution problems during the years of steep economic growth in Japan.

Points emphasized in the dialogue were that China has had a serious stance on environmental issues for quite a few years, and that under the 12th Five-year Plan starting this year, the reduction of pollution and water pollution measures in particular, will be extremely important. Although not mentioned in the main text, I was also surprised to find that China closely follows world trends, even closer than Japan; for example the Bluesign Standard certification\*8.

▶ \*8 Bluesign Standard certification: Standards for evaluating the environmental impact resulting from dyeing and final processing in the fiber/textiles field. The standards relate to five areas: resources and productivity, wastewater, atmospheric emissions, workplace hygiene and workplace environments.

# **Comment from Teijin**

# **Opinions and Requests Received from Stakeholders**

For the stakeholder dialogue this time, we adopted the theme "Efforts for Environmental Preservation in China," invited Chinese environmental policy experts, had our activities evaluated, and created an opportunity to learn about future orientations.

From Dr. Chang of Tsinghua University, Mr. Tateba of JICA, and the coordinator Mr. Goto, we heard timely and frank opinions from broad spectrum of viewpoints regarding environmental policy trends in areas such as reducing CO<sub>2</sub>, regulations on total SO<sub>2</sub> emissions and wastewater COD levels, the 3Rs of resources, and environmental education. The dialogue was an extremely valuable time in which a lively exchange of views with local personnel responsible for environment was possible. We would like to express our sincere appreciation to

those involved for taking time out of busy schedules to participate.

Many challenges still remain for our environmental preservation activities. One such challenge will be to consider the overall reduction in environmental impact achieved through identifying substances with high environmental impact. How we respond to changes in total emissions regulations that accompany economic growth will also be important. Referring to the valuable opinions we received, we will make all possible efforts to make further improvements in terms of reducing/recycling wastewater and energy-saving measures at production and marketing sites in China. The Teijin Group appreciates your continued guidance and support.

# **News Flash**

Major topics relating to the Teijin Group in FY2010 are presented below.

This year we received high appraisal and various awards for group company CSR initiatives and originality in environmental technologies.

# Joined United Nations Global Compact

In March 2011, we announced our participation in the UN Global Compact\*. Participation in this global initiative for sustainable development is voluntary. Participating companies are required to follow the 10 basic principles of the Global Compact relating to "the protection of human rights," "the elimination of all forms of forced and compulsory labor," initiatives to promote greater environmental responsibility," and "anti-corruption."

Leveraging our participation in Global Compact, we will further concentrate efforts on realizing a high-quality standard of CSR management as a global corporation.

\* The United Nations Global Compact is a set of voluntary corporate-action principles proposed by the former Secretary General Kofi Annan during the World Economic Forum (Davos Forum) held in January, 1999.



# Award Award-winning CSR Report

In January 2011, the 2010 Teijin Group CSR Report received the Award for Excellence in the Sustainability Report Awards section of the 14th Environmental/ Sustainability Report Awards. In February 2011, we received the Award for Excellence (Global Environmental Forum President's Award) in the Environmental Report section of the 14th Environmental Communication Awards.

FY2010 marks the third consecutive year in which we have received high evaluations in these two awards.

#### Received Award for Excellence in 2011 Award **Japan Internal Control Awards**

In February 2011, we received the Award for Excellence in the 2011 Japan Internal Control Awards. These awards recognize progressive companies with excellent internal control and compliance systems.

The Teijin Group received the Award for Excellence based on high evaluations of the "implementation of CSR-based management according to corporate ethics," promotion of the corporate code of conduct including in overseas group companies," "public announcement of information in internal reports, and willing attitude to make improvements in this area," "group promotion of CSR procurement and cooperation in the industry," and "stance of proactively announcing human resources data"

# **Two Textile Group Companies in Thailand Presented with Safety Award** for 6th/8th Consecutive Year

In July 2010, Teijin Polyester (Thailand) Limited (TPL) and Teijin (Thailand) Limited (TJT), companies engaged in the manufacture and marketing of polyesters, received the National Occupation Safety and Health Award, the most prestigious safety award in Thailand. This year marks the 8th/6th consecutive year that TPL and TJT have received this award, respectively.

This award, which has been presented annually since 1986, is

given to companies after inspection of 143 items relating to environmental, safety and health policies, safety, health, and work environment by the Thai government Ministry of Labor. In 2010, a total of 900 companies applied, and 90 Japanese companies were selected.



#### ECO CIRCLE™ Receives ICIS Award **Innovation Award**

In October 2010, the ECO CIRCLE™ closed-loop recycling system (see page 34) developed by Teijin Fibers Limited received the Environment Division Award in the ICIS Innovation Awards 2010. ICIS, who sponsors the awards, is an influential U.K.-based journal in the chemical industry.

Judges, consisting of global chemical manufacturing and research company management, highly evaluated Teijin Fibers' activities to establish the recycling system and contributions to reducing environmental impact through the chemical recycling technology unique to ECO CIRCLE™.

# Award Received FY2010 Polymer Science Award

In May 2011, copolymerized polycarbonate optical film developed by Teijin Limited and Teijin Chemicals Ltd. received the 2010 Annual Polymer Science Award (Technology).

This technology is the first time in the world that film with these optical characteristics has been realized/produced. The technical originality leading to this achievement and the impact on academic institutes and the industry were highly evaluated. This was the 5th time the Teijin Group has won this award.

#### Society

#### Continue to be Listed in SRI Indexes

Teijin Limited is listed in the Dow Jones Sustainability World Index, the Dow Jones Sustainability Asia-Pacific Index, the FTSE4 Good Index series, and the Ethibel Investment Register, which are recognized global indicators of socially responsible investment (SRI). We also continue to be listed in the Morningstar Socially Responsible Investment Index, a representative SRI index in Japan.

Another honor we received was acquisition of a "Silver Class" rating in the CSR assessments by Sustainable Asset Management, a globally recognized SRI rating company. Teijin Limited is the only Japanese firm in the chemical industry sector that has acquired a rating.



# Environment Participant in the Industry Forum, Part of the China/Japan/Korea Tripartite **Environment Ministers' Meeting**

The 13th Tripartite Environment Ministers' Meeting (TEMM13) between China, Japan and Korea was held on 28–29 April, 2011 in Busan, South Korea. Representatives from each country were Mr. Zhou, the Chinese Minister of Environmental Protection, Mr. Kondo, the Japanese Senior Vice-minister of the Environment and Mr. Lee, the Korean Minister of the Environment.

As part of TEMM13, an industry forum was held between representative companies from China, Japan and Korea. Teijin Limited was one of the companies representing Japan. In the forum, information was shared with the goal of expanding the eco-business market, and opinions were exchanged regarding joint ventures designed to improve the environment in developing countries. The outcome of the forum was summarized in a report. and a question-and-answer and reporting session was held with the three ministers on the 29th.

Additionally, the participating companies from Japan made a formal visit to Mr.Kondo and Mr.Lee, and discussed further cooperation between the three countries' governments and companies in regard to the promotion of eco-business.



China/Japan/Korea Tripartite **Environment Ministers' Meeting** 



Formal visit to Mr.Kondo, the Japanese Senior Vice-minister of the Environment

# Environment Japan's First Closed-loop Curtain **Recycling System for Hospitals and Welfare Facilities**

The Amended Green Purchasing Law that came into effect in February 2010 clearly lists "the existence of a recycling system" and "use of recycled fiber" as criteria to decide which curtains to procure. In January 2011, in a joint initiative with Kingrun Co., Ltd. engaged in the curtain leasing business for medical and welfare facilities, Teijin Fibers Limited started Japan's first closed-loop curtain recycling system for hospitals and welfare facilities.

Under this system, Kingrun leases/sells curtains made of Teijin fibers conforming to the Amended Green Purchasing Law and collects the curtains after use. Teijin Fibers then recycles the curtains into new polyester fibers as part of the the ECO CIRCLE™ system.

# Flow Diagram of KG Recycling System



#### Environment

# **Teijin Factory Effluent Treatment Equipment Adopted by Chinese** Fluorescent Dye Manufacturer

In May 2011, our wastewater treatment system was adopted for a fluorescent dye factory in Jiangsu Province, China by Zhaoyuan Advanced Chemical Co., Ltd., a Chinese company part of the Nippon Kayaku Group.

Zhaoyuan Advanced Chemical has been using large amounts of dilution water to treat wastewater containing fluorescent dye. However, in view of anticipated water shortages due to China's rapidly growing economy, the need for water conservation and the reuse of industrial wastewater is growing. As a response, through use of our Multi-stage Activated Biological Process (MSABP®) (see page 34) and our *ELCAT*™ wastewater treatment system (see page 34) consisting of electrolytic and catalytic tanks, we succeeded in realizing a wastewater treatment system that complies with local environmental regulations while reducing the amount of dilution water significantly. The company will become the first company in China to use Teijin's *ELCAT™* system.



Multi-stage Activated Biological Process (MSARP®)



Electrolytic-Catalytic treatment system (ELCAT™)

# **CSR Management System**

We have appointed a Chief Social Responsibility Officer (CSRO) under whose strong leadership we are implementing comprehensive group-wide CSR management. We classify various CSR issues into three fields, and have created a CSR management system that is appropriate to each respective field.

#### **Activities to Promote CSR**

We consider CSR to be an important element of corporate management, and aim to promote CSR as an integral part of management. In 2005, the Teijin Group created the new post of Chief Social Responsibility Officer (CSRO). The CSRO acts as proxy for the Chief Executive Officer (CEO) in overseeing all CSR-related affairs. Since being appointed, the CSRO has been showing strong leadership in promoting the Teijin Group's CSR activities.

To implement the Teijin Group's CSR management in a unified, efficient manner, various CSR issues are classified into three fields, "basic," "expansive" and "selective." A main division/ organization in charge is specified for each field, and starting with mid- and short-term planning, we implement the Plan, Do, Check, Act (PDCA) approach.

#### ■ Basic CSR

The Teijin Group's "Basic" CSR is directly controlled and supervised by the CSRO.

This field includes (1) Corporate ethics and compliance, (2) Risk management, (3) Environmental preservation, Safety and disaster prevention, and Health activities, and (4) Product liability/Quality assurance. While observing laws and international standards, we are striving to achieve results that exceed the level of these standards.

#### **Expansive CSR**

"Expansive" CSR issues have traditionally been handled under the leadership of the Chief Human-resources Officer (CHO) and Chief Financial Officer (CFO).

This field includes (1) Human resources/ Labor, and (2) Purchasing/Procurement (to meet supply chain needs). As of recently, in order to respond to advancing social needs, the CSRO advises/supports the CHO and CFO on "expansive" CSR issues.

#### Selective CSR

In "selective" CSR, companies conduct voluntary activities irrespective of legal obligations.

The Teijin Group is proactively engaged in this field and is strongly committed to various philanthropic activities.

# **Teijin Group CSR Committee**

The Teijin Group has established the Group CSR Committee to discuss and take action on key issues and initiatives relating to group-wide CSR. The Committee meets twice a year: in FY2010, meetings were held in April and October.

Chaired by the CSRO, the Group CSR Committee consists of the Business Group General Managers (presidents of eight core companies and the General Manager of the New Business Development Group), the CHO, the Chief Marketing Officer (CMO), the Chief Technology Officer (CTO), the CSRO's Assistant (in charge of disaster prevention), and the General Managers of the Public Relations/Investor Relations Office, the Legal Affairs Office, and the Management Auditing Office.

Under the Group CSR Committee, there are five subcommittees or conferences (see page 16: The Teijin Group's CSR Management System). Four of these subcommittees discuss and address "basic" CSR issues – a focus of the Teijin Group such as compliance, environmental preservation, safety and disaster prevention, and health. The fifth subcommittee is the Group CSR Promotion Subcommittee consisting of staff from the holding company and representatives of the nine Business Groups. This subcommittee is engaged in discussing and taking action on major CSR-related issues other than those dealt with by the four subcommittees above. These include human resources/labor, procurement (supply chain), logistics and social contributions.

#### ■ Abbreviations for Position Titles

CEO: Chief Executive Officer

CSRO: Chief Social Responsibility Officer

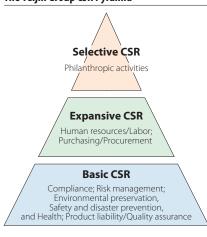
CTO: Chief Technology Officer

CMO: Chief Marketing Officer

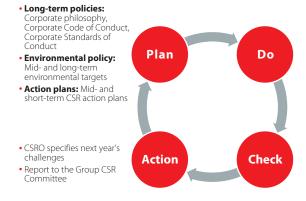
CFO: Chief Financial Officer

CHO: Chief Human-resources Officer

#### The Teijin Group CSR Pyramid



#### **PDCA Approach to CSR Activities**

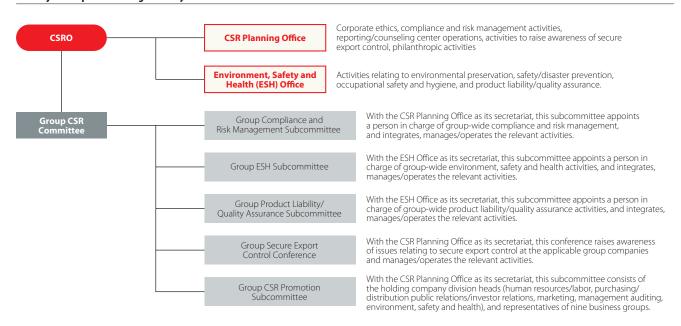


Holding company programs:

implements measures relating to environmental protection, safety/disaste prevention, product liability/quality assurance, compliance, risk management, human resources/labor, purchasing/ procurement, and social contributions

**Group company programs:** individual companies.

- Self-check by CSR-related division of the holding company (included in the CSR Report)
- Self-check by group companies
- Assurance by an assurance provider
- · CSRO audit (hearing) (see page 41) · Assessment and guidance by four
- external experts SRI assessment



# **Towards High Quality CSR Management**

The large earthquake which hit the Tohoku and Kanto regions on March 11, 2011 not only left tremendous damage as a result of the tremors and the tsunami, but led to the radioactive exposure problems at the Fukushima No. 1 Nuclear Power Plant and subsequent power-shortage problems. All these factors have caused unrest and hardship for many people and businesses. We would like to convey our deepest sympathies to those suffering from the devastation and express respect to those who are engaged in the strenuous recovery and reconstruction work.

The Teijin Group has extended support in a number of ways; making donations through the Central Community Chest of Japan, providing relief goods as needed in collaboration with emergency headquarters in three Tohoku prefectures/NPOs working in the affected areas, and giving assistance to our employees who put their hand up for volunteer activities. In addition, we have acted on the principle of putting our internal and external stakeholders first even in an emergency, through prompt checking of employees' whereabouts and safety, and strict regulation of the accumulated radiation exposure for employees working in the affected areas.

Our group-wide CSR activities are progressing steadily in a wide variety of fields such as environmental preservation, safety and disaster prevention, corporate ethics, risk management, contribution to society, and work-life balance. Our activities have been well-received externally. I would like to introduce some activities worthy of special mention.

First, in environmental preservation, safety and disaster prevention, and health, we are engaged in efforts that suitably reflect the importance of this element as it relates to all business activities. In 2005, in order to take an expert's perspective in supporting disaster prevention activities in chemical and other plants, we set-up a Special Disaster Prevention Team consisting of leading employees with vast knowledge and experience in this area. We also provided training and specialist information relating to disaster prevention and support for disaster prevention activity plans. Combined, these efforts have resulted in enhanced disaster prevention capabilities and zero serious accidents in Japan in FY2010. The next step will be to expand these activities to our overseas bases.

With regard to environmental management, we held a stakeholder dialogue in Shanghai in February 2011 under the theme of environmental preservation activities in China. There was a lively exchange of opinions between participants, consisting of an environmental policy expert in China, an advisor to the Japan International

Cooperation Agency (JICA), and local staff from Teijin Group companies in China in charge of environmental preservation. We plan to continue active efforts to expand our CSR activities globally.

As part of social contribution activities, we have embarked on a new trial in FY2011, a "Volunteer support program." The aim of this program is to financially support volunteer activities undertaken by Teijin Group employees with a view to nurturing volunteer personnel. Our support will enable employees to be actively engaged in contributions to society, regional areas and other public activities.

CSR activities are the foundation of business activities. We will continue to strive for better CSR management with the goal of enhanced satisfaction for various stakeholders.

September 2011



Nishikawa Senior Executive Officer, Member of the Board, CSRO

# FY2010 Plan, Target and Achievements, and Self-evaluations

The Teijin Group organizes CSR issues into three categories; Basic, Expansive and Selective, and sets mid- and long-term goals for each fiscal year. In FY2010, as an attempt to organize the Teijin Group's CSR activities from external point of view, we integrated the core or main principles of ISO26000 into our approach. Paying due attention to international standards and guidelines such as ISO26000, we will consolidate the orientation of our activities, and seek to make further improvements.

			FY2010 targets	FY2010 challenges and plans		
				Conduct a systematic review of corporate governance regulations		
Corporate governance		;	Enhance corporate governance and ensure compliance with laws and regulations	Harmonize the effectiveness and efficiency of internal controls regarding financial reporting		
			Keep careful track of social demands and use the knowledge gained to enhance management	Identify issues through stakeholder dialogues		
Group-wide (	CSR		Promote CSR education	Continue to hold environmental forums		
			Ensure cooperation between relevant departments in group companies	Apply CSR management indexes to group companies in Japan		
			Corporate ethics activities in Japan	Make continued efforts to increase recognition and awareness of the Code of Conduct and Standards of Conduct		
	Corporate Compliar		Corporate ethics activities overseas	Continue to conduct thorough corporate ethics education activities		
			Operate hotline	Continue to promote use of hotlines in Japan and overseas		
			Risk management activities	Implement earthquake response drills, and review the earthquake manual		
	Risk management		Business continuity plans (BCPs)	Formulate BCPs at business groups (with earthquakes in mind)		
	Group-wide environment safety and health (ESH)			Implement strict management overseas and correct differences among group companies		
			Enhance ESH management	Make cooperative efforts with local communities in regards to biodiversity		
			Long-term targets (by FY2020)	FY2010 challenges and plans		
Basic CSR		Efforts to prevent global warming	Japan: Reduce CO <sub>2</sub> emissions* <sup>1</sup> by 20% or more compared to the FY1990 level by FY2020.  Overseas (Europe & USA): Reduce CO <sub>2</sub> emissions* <sup>1</sup> by 10% or more compared to the FY2010 level by FY2020.  Overseas (Asia): Reduce CO <sub>2</sub> emissions* <sup>1</sup> per unit of production amount by 10% or more compared to the FY2010 level by FY2020.  Group: Reduce CO <sub>2</sub> emissions* <sup>1</sup> per unit of production amount by 1% or more compared to the preceding fiscal year (evaluate the effect of energy-saving and other projects while excluding the influence of increased/decreased production). New Target	Review the FY2020 targets, and improve performance in relation to targets on CO <sub>2</sub> emissions per unit of production amount for overseas group companies.  Japan: Reduce CO <sub>2</sub> emissions*1 by 10% or more compared to the FY1990 level by FY2010.  Overseas: Reduce CO <sub>2</sub> emissions*1 per unit of production amount by 1% or more compared to the preceding fiscal year.		
		Reducing	Managing/ Reducing	<b>Group:</b> Reduce chemical substance*2 emissions by 80% or more compared to the FY1998 level by FY2020. Adopt LIME2, the second, Japanese version of the Life Cycle Impact Assessment Method Based on Endpoint Modeling, as a method of risk	Respond to the Amendments to the Chemical Substance Management Law and the Law Concerning the Examination and Regulation of Manufacture, etc., of Chemical Substances.  Implement training for relevant departments, review specified chemical substances, and update the data compilation system.	
		chemical substance emissions	assessment that considers the impact of business activities on humans, ecosystems, and the environment as a result of exposure to chemical substances, and focus on reducing chemical substances that have a large environmental impact.  New Target	Create standards and a manual for the risk management system		
						Japan: Reduce emissions of volatile organic compounds (VOCs) by 50% or more compared to the FY2000 level by FY2010.
		Waste reduction	Group: Reduce "waste with no effective use" (waste that is either put directly into landfill or incinerated without heat recovery) by 85% or more compared to the FY1998 level by FY2020.  Group: Achieve zero emissions at all major business sites in Japan and overseas.  New Target  Japan: Excluding coal ash and similar waste, endeavor to reduce the amount of waste generated, and achieve zero emissions* for group companies in Japan.  Japan: Reduce the total waste generated per unit of production amount by 1% compared to the preceding fiscal year.	Conduct audits to manage the promotion of activities to reduce waste at overseas group companies. Review training and standards concerning amendments to the Soil Contamination Countermeasures Law. Reduce residual polychlorinated biphenyls (PCBs), and collect information on disposal of trace PCBs.		
			incinerated without heat recovery) by 85% or more compared to the FY1998 level by FY2020.  Group: Achieve zero emissions at all major business sites in Japan and overseas.  New Target  Japan: Excluding coal ash and similar waste, endeavor to reduce the amount of waste generated, and achieve zero emissions* for group companies in Japan.  Japan: Reduce the total waste generated per unit of production amount by 1%	reduce waste at overseas group companies. Review training and standards concerning amendments to the Soil Contamination Countermeasures Law. Reduce residual polychlorinated biphenyls (PCBs), and		

<sup>\*1</sup> CO2 emissions include methane and N2O emissions.
\*2 Chemical substances listed as Class 1 chemical substances in the Chemical Substances Management Law revised in April 2010, and those specified by the Japan Chemical Industry Association. Excluding duplicated listings, there are 575 specified chemical substances.
\*3 Zero emissions: Reducing the ratio of "waste with no effective use" to 1% or less of the total waste generated.

# The Teijin Group CSR Pyramid Expansive CSR ······· Human resources/Labor; Purchasing/Procurement Compliance; Risk management; Environmental preservation, Safety and disaster prevention, and Health; Product liability/Quality assurance

Vision and Strategy Environment, Safety and Health Report Social Report

FY2010 performance and results	Self- evaluation	FY2011 challenges	ISO26000 core principles	Reference page
A total of six independent outside directors/corporate auditors who	A	Conduct a systematic review of corporate		
met our criteria for independence were registered as independent officials based on the Tokyo Stock Exchange criteria	A	governance		P21 )
Internal controls of financial reporting as of March 31, 2011 were effective (submitted "internal control report" in June 2011)	Respond to the announcement by the Financial Services Agency and Business Accounting Council entitled, "Council Opinions on the Revision of the Standards for Management Assessment and Audits for Internal Control of Financial Reporting" on March 30, 2011 (maintain effectiveness and promote efficiency)		Corporate governance	P21
Held stakeholder dialogue under the theme "How Should Environmental Initiatives for China be Structured?" in February 2011 in Shanghai, China	А	Identify issues through stakeholder dialogues	Corporate governance/ Environment	P7-12
Held environmental forum at the Tokyo head office on September 15, 2010. Twelve sites at group companies in Japan were connected to the forum via the web and approx. 900 employees participated.	А	Continue to hold environmental forums	Environment	P28
Have not applied CSR management indexes to group companies in Japan	С	Apply CSR management indexes to group companies in Japan	Corporate governance	P15
In addition to level-based workshop training, workshops were held for all employees during the Corporate Ethics Month and a read-through of the Teijin Group Corporate Ethics Handbook was conducted	А	Revise the Teijin Group Corporate Ethics Handbook	Human rights/ Fair operating practices	P41
Conducted a read-through of the Teijin Group Corporate Code of Conduct during the Corporate Ethics Month Campaign. Distributed posters (this year, a German version was added to the existing English, Chinese, Thai and Indonesian versions).	А	Continue to conduct thorough corporate ethics education activities	Human Rights/ Fair operating practices	P41
Responded to 38 cases of reporting or consultation in Japan, and internal disclosure of information relating to the operating status (twice a year) was continued	В	Continue to promote use of hotlines in Japan and overseas	Human rights/ Fair operating practices	P42
Implemented earthquake response drills and Emergency Call® drills. Partially reviewed the earthquake manual.	А	Implement earthquake response drills, and review the earthquake manual	Corporate governance	P43
A BCP was formulated to supplement the manual.  The organization and important tasks in relation to formulating a BCP were confirmed at each business group.	В	Formulate BCPs at business groups (with earthquakes in mind)	Corporate governance	P43
Management was performed based on ESH audits in Japan and overseas, ESH workshops and similar means	В	Strengthen group-wide ESH management	Corporate governance	P38
Measures for biodiversity were presented at information-exchange meetings in local communities (Matsuyama, Mihara, Mishima, Gifu, Ibigawa)	В	Continue with activities at each business site and hold information-exchange meetings in local communities to explain activities	Environment	P28
FY2010 performance and results	Self- evaluation	FY2011 challenges	ISO26000 core principles	Reference page
Japan: Achieved a 40% reduction in CO <sub>2</sub> emissions compared to the FY1990 level.  Overseas: Achieved target at 12 out of 17 business sites.	В	Group: Prepare for the new target based on CO2 emissions per unit of production amount from FY2012.  Japan: Cut CO2 emissions by 20% or more compared to the 1990 level by FY2020.		P25-26
Even before the amendment, provided information as appropriate to relevant departments and also implemented training. The review of the specified substances after the April 2010 amendment is almost completed, and we are responding without problems. The data compilation system has been automated for streamlined work and to eliminate transcription and other human errors.	А	Group: Reduce chemical substance emissions by 30% or more compared to the FY2005 level by FY2011. Using the chemical substance emissions in FY2010 as a model case, specify representative chemical substances that affect humans and the environment. Discuss plans with relevant businesses to reduce emissions. Using the chemical substance emissions. amodel case, specify representative chemical substances		P27
As part of risk management, we adopted LIME2, an LCA technique, as an index that considers and assesses the impact of our business activities on humans and the environment resulting from exposure to chemical substances.	В	that affect humans and the environment, and discuss emission reduction plans with relevant businesses. Regarding proposals of reduction targets in the FY2011 mid-term plan and long-term plan up to FY2020 (80% reduction of chemical substance emissions compared to the FY1998 level), check the	Environment	P27
Reduced emissions of VOC substances by 51.8% compared to the FY2000 level.	А	mid- and long-term plans of each business and investigate whether reductions of chemical substance emissions should also incorporate units of production		P27
		amount (for improved production efficiency).		
Group: Reduced the amount of "waste with no effective use" by 89% compared to the FY1998 level.  Japan: Achieved zero emissions at all business sites.	А	amount (for improved production efficiency).  Group: Reduce the amount of "waste with no effective use" (waste that is either put directly into landfill or incinerated without heat recovery) by 50% or more compared to the FY2005 level by FY2011.  Japan: For business sites/plants emitting over 500 tons of waste per year, achieve zero emissions by the end of FY2011.		P27-28
Group: Reduced the amount of "waste with no effective use" by 89% compared to the FY1998 level.	A Self-evaluation	Group: Reduce the amount of 'waste with no effective use' (waste that is either put directly into landfill or incinerated without heat recovery) by 50% or more compared to the FY2005 level by FY2011.  Japan: For business sites/plants emitting over 500 tons of waste per year, achieve zero	15026000 core principles	P27-28  Reference page

Self-evaluation Ratings A: Goals achieved B: Goals achieved to a certain extent C: Inadequate

# FY2010 Plan, Target and Achievements, and Self-evaluations

			EVANA	EVOCA I II	
			FY2010 targets	FY2010 challenges and plans	
			Implement disaster prevention measures at high-risk facilities	Continue to prevent the recurrence of accidents similar to previous ones by identifying the underlying causes of accidents, and sharing information on accidents	
	D: .		mpenerical disaster prevention measures at mg/ 15k demites	Reduce risks through more effective disaster prevention assessments	
	Disaste	r prevention		Identify potential fire risks and implement preventive measures	
			Improve group-wide disaster prevention capabilities	Implement earthquake-resistance measures for 19 buildings newly identified as requiring measures under the 2006 amendment to the law. These buildings include gyms and buildings where hazardous substances are handled.	
D : 660	Health	and hygiene	Formulate and promote measures to prevent mental disorders	Promote mitigation of work stress and strengthen the system for supporting remote districts	
Basic CSR			Prevent damage to health due to hazardous chemical substances	Establish a method of risk assessment for chemical substances	
			Mid-term targets	FY2010 challenges and plans	
	Safety	Promote activities to prevent workplace accidents	Maintain the frequency of workplace accidents to under 0.3	Carefully examine the content of the three major workplace accident prevention guidelines, and notify/implement at group companies	
	Product liability/ Quality	Prevent product liability- related incidents and serious	Achieve zero product liability claims and zero serious quality claims	Formalize activities of the Product Liability/Quality Assurance Unit System and continue to apply it to activities at overseas group companies. Formalize the reporting system through implementing special audits.	
	assurance quality claims			Continue to consider and promote chemical substance management throughout the supply chain	
			FY2010 targets	FY2010 challenges and plans	
			Promote a work–life balance for employees	Expand systems to ensure a work—life balance for employees (e.g. increase the number of companies with a work-at-home system, and expand childcare support measures), and continue to implement	
				measures under an action plan based on the next-generation law (e.g. activities to raise awareness of maintaining a work–life balance).	
	l l			next-generation law (e.g. activities to raise awareness	
Fynansiva	Humar and lab	n resources oor	Promote diversity	next-generation law (e.g., activities to raise awareness of maintaining a work–life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program	
Expansive CSR			Promote diversity	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core	
CCD			Promote diversity	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability	
CCD			Promote diversity  Compliance	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments	
CCD				next-generation law (e.g., activities to raise awareness of maintaining a work–life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm	
CCD				next-generation law (e.g., activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments  Appoint employees on a limited-term contract to appropriate positions at group companies  Follow-up establishment of a central management system and promote subsequent improvements	
CCD	and lab	sing and	Compliance  Improve management systems and operating flows and promote adoption by companies across the group	next-generation law (e.g., activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments  Appoint employees on a limited-term contract to appropriate positions at group companies  Follow-up establishment of a central management	
CCD	and lab	sing and	Compliance  Improve management systems and operating flows and promote adoption by	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments  Appoint employees on a limited-term contract to appropriate positions at group companies  Follow-up establishment of a central management system and promote subsequent improvements	
CCD	and lab	sing and	Compliance  Improve management systems and operating flows and promote adoption by companies across the group  Expand and formalize CSR procurement management within the group and promote	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments  Appoint employees on a limited-term contract to appropriate positions at group companies  Follow-up establishment of a central management system and promote subsequent improvements  Provide support for improved CSR at suppliers and improve the follow-up system  Implement measures to reduce the environmental	
CCD	Purcha: distribu	sing and	Compliance  Improve management systems and operating flows and promote adoption by companies across the group  Expand and formalize CSR procurement management within the group and promote	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments Appoint employees on a limited-term contract to appropriate positions at group companies  Follow-up establishment of a central management system and promote subsequent improvements  Provide support for improved CSR at suppliers and improve the follow-up system  Implement measures to reduce the environmental impact of logistics in response to customers' needs	
CSR	Purcha: distribu	sing and ution	Compliance  Improve management systems and operating flows and promote adoption by companies across the group  Expand and formalize CSR procurement management within the group and promote standardization in the industry	next-generation law (e.g. activities to raise awareness of maintaining a work-life balance).  Increase recruitment of female employees (maintain the ratio of newly recruited career-minded female university graduates at 30% or more, and increase the ratios of career-minded female employees and females in managerial positions)  Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program  Increase the re-employment rate for those who desire to be re-employed  At group companies, achieve the employment rate required by law for people with a disability  Check each group company's rules and personnel management systems regularly, and confirm compliance with law amendments  Appoint employees on a limited-term contract to appropriate positions at group companies  Follow-up establishment of a central management system and promote subsequent improvements  Provide support for improved CSR at suppliers and improve the follow-up system  Implement measures to reduce the environmental impact of logistics in response to customers' needs  Continue to spend at least 1% of ordinary profit (converted to a cash amount) on philanthropic activities	

# The Teijin Group CSR Pyramid Expansive CSR ······ Human resources/Labor; Purchasing/Procurement Compliance; Risk management; Environmental preservation, Safety and disaster prevention, and Health; Product liability/Quality assurance

Vision and Strategy Environment, Safety and Health Report Social Report

FY2010 performance and results	Self- evaluation	FY2011 challenges	ISO26000 core principles	Reference page
Achieved zero serious accidents through recurrence prevention activities and sharing of information	А	Enhance measures against earthquakes and tsunamis at high-risk business sites/plants		P35
On a trial basis, a specialist Teijin Group chemical accident prevention (TCAP) team participated in disaster prevention assessments with favorable results	В	Enhance disaster prevention assessments for overseas plants	- Labor practices	P35
As part of the Teijin Group Fire Prevention Day activities, potential fire risks were identified and preventive measures were taken.  Achieved zero fires.	А	Enhance activities of fire prevention management communication meetings	Labor practices/	P35
Earthquake-resistance measures are being implemented systematically	В	Review measures with a view to completion in 2015	- Labor practices/ Environment	P35
Workplace improvement activities were undertaken based on assessments of work stress. Retired employees visited remote areas and we introduced an employee assistance program incorporating face-to-face counseling.	А	Assess work stress after workplace improvement activities. Assess changes in risk values and continue efforts to improve workplaces. Review system for enhanced individual counseling functions.	Labor practices	P37
Investigations are in progress	В	Review nano-material handling guidelines		P37
FY2010 performance and results	Self- evaluation	FY2011 challenges	ISO26000 core principles	Reference page
On a trial basis, the three major workplace accident prevention guidelines were implemented at three business sites in Japan (Matsuyama, Tokuyama, Gifu). Maintained a lost time injury frequency rates of 0.25.	В	Expand implementation of the three major workplace accident prevention guidelines to other business sites in Japan.  Maintain a lost time injury frequency rates of under 0.25.	Labor practices	P36
The operating system was reviewed. The reporting system based on special audits was formalized.	В	Enhance product liability and quality assurance assessments. Enhance operations of business group product liability and quality assurance organizations. Conduct thorough education of product liability and quality assurance.	Consumer issues	P45-46
We responded appropriately to REACH and CLP regulations. Information was communicated appropriately throughout the supply chain. Information on chemical substances management and controls in Japan and overseas was monitored.	В	Respond to chemical legislation in Japan and overseas. Ensure appropriate information is communicated throughout the supply chain.	Environment	P46
FY2010 performance and results	Self- evaluation	FY2011 challenges	ISO26000 core principles	Reference page
Expanded the childcare support system (childcare leave for fathers can be taken in portions; childcare leave when a child is sick or has an injury has been expanded, nursing care leave has been newly established). Ten group companies in Japan have introduced a work-at-home system (up from nine companies in FY2009), and there are 16 registrants, including five males). Including 38 males, 171 employees took childcare leave (also 171 in FY2009) including 54 males).	C	Raise employees' awareness of work–life balance and increase system registrants and users		P50
Of employees who joined in April 2011, the ratio of career-minded female university graduates was 19% (28% in FY2009). The overall ratio of career-minded females was 16% (also 16% in FY2009) and the ratio of females in managerial positions was 3.15% (3.11% in FY2009).	С	Increase recruitment of female employees (maintain the hiring ratio of newly recruited career-minded female university graduates to 30% or more for FY2010 and FY2011 combined, and increase the ratios of career-minded female employees and females in managerial positions)		P49
The Global Human Resources Office of Teijin Creative Staff Co., Ltd. developed EaGLES, a standardized leadership training program for the Teijin Group conducted in four languages.  Ten overseas employees are registrants of the core human resources training program (out of 146 registrants) (11 out of 129 in FY2009).	С	Enhance the personnel management system through the Global Human Resources Office, and increase the number of overseas employees selected for the core human resources training program	Labor practices	P47,49
The re-employment rate for those wishing to be re-employed was 78% (65% in FY2009)	В	Increase the re-employment rate for those wishing to be re-employed		P51
The hiring rate for 33 group companies in Japan who hired 56 or more employees was 1.8%, the rate required by law. However, nine companies did not reach this ratio.	С	Comply with the hiring rate required by law at all group companies in Japan		P49
The rules and personnel management system of all group companies were checked regularly, and compliance with law amendments were confirmed	А	Regularly check the rules and personnel management system of all group companies, and confirm compliance with law amendments		P51
Progress was regularly confirmed at each group company	В	Regularly confirm progress at each company		P51
Established a central management system and made subsequent improvements as necessary (e.g. improved green purchasing ratio calculating system)	А	Develop CSR management at suppliers on a group-wide/global basis		P53-54
Provided support for improved CSR at suppliers, created direct guidance system, and provided guidance	А	Develop and expand CSR management at suppliers on a group-wide/global basis	Human rights/ Fair operating practices/	P53-54
Through steadily implementing measures to reduce environmental impact, we achieved a 4.4% reduction in CO <sub>2</sub> emissions, thus achieving the target of 1% or more reduction per unit of transportation amount compared to the preceding fiscal year	А	Achieve target through further enhancing measures to reduce the environmental impact of logistics	Environment	P53
Spending on philanthropic activities totaled 0.93 billion yen (1.8% of ordinary profit, 50.3 billion yen)	А	Continue to spend at least 1% of ordinary profit (converted to a cash amount) on philanthropic activities		P55
We collected and donated 88 used picture books worth 91,546 yen, and donated 50,000 yen towards operational expenses of a library in Thailand. Preparations were made for introducing the volunteer support program.	А	Continue to collect and donate picture books Implement the volunteer support program	Community involvement and development	P55-56
A nature observation leader workshop was held, as well as seven nature observation programs and one bird watching program.	А	Continue to hold nature observation leader workshops, and nature observation and bird watching programs		P56
I .	1	1		

# Corporate Governance

The Teijin Group positions corporate governance as an essential element in realizing sustainable improvements in shareholder value and fulfilling our responsibility to stakeholders including employees, customers, the local community and residents, and we are implementing measures to strengthen corporate governance.

# **History of Corporate Governance Improvements**

In 1999, the Teijin Group began a series of groundbreaking management reforms with the aim of achieving corporate governance that is built on fairness, transparency, quick decision-making, and ensuring objectivity. These reforms include establishing the Advisory Board, reducing the number of directors, introducing a corporate officers' system and establishing a compensation system for directors in accordance with consolidated return on assets (ROA).

Further evidence of our progressive actions was our pioneering release of the Corporate Governance Guide 2003, guidelines that integrated the Teijin Group's corporate governance and the supporting areas of compliance and risk management. In response to changes in social and legal circumstances, we have continued to revise these guidelines to reflect the appointment of independent outside directors and an increased number of independent outside corporate auditors. These guidelines are now published as the Teijin Group Corporate Governance Guide.

#### **Internal Control**

Our internal control system was created and operates according to decisions made by the Board of Directors. The Board performs annual reviews of the system and makes

necessary reforms for improvements. An annual internal control report is also published. In accordance with the Financial Investments & Exchange Act, this report includes the opinions of an accounting auditor and helps to ensure the reliability of financial reporting. In addition, a body under the direct control of the CEO has been established in order to increase the effectiveness of our internal control activities.

# Separation and Strengthening of **Decision-making, Internal Operation** and Monitoring/Supervision Roles

Our articles of incorporation limit the size of the holding company's (Teijin Limited's) Board of Directors to ten members with the goal of realizing quick decision-making and clear accountability. We have also introduced a corporate officers' system and delegated considerable authority and responsibility to corporate officers. Three directors are independent individuals appointed from outside the Group. To separate responsibilities for monitoring/supervision and those for internal operations, the Teijin Limited Chairman of the Board is not involved as a corporate officer.

The Board of Corporate Auditors consists of five members and is in charge of overseeing and auditing management. The majority (three) of the Corporate Auditors are independent and appointed from outside the Group to ensure outward

transparency in management. Additionally, we have established the Committee of Teijin Group Corporate Auditors consisting of auditors of group companies. This board, which integrates management of the group, seeks to increase the effectiveness of group-wide monitoring/auditing and maintain fair auditing.

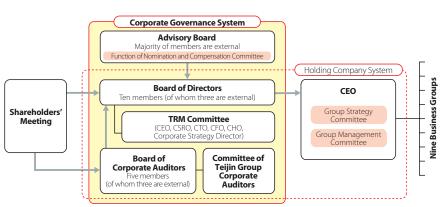
# **Total Risk Management**

A Total Risk Management (TRM) Committee has been established within the Board of Directors based on our view that it is important to evaluate, manage and counter all uncertainties or risk that may be faced by the Teijin Group in an integrated and efficient manner. The system we have established allows quick decision-making and a group-wide approach to managing risk from strategic and operating perspectives.

## **Advisory Board**

We have established an Advisory Board, consisting of members from Japan and overseas, which provides advice to the Board of Directors. The board, which meets twice a year (May and November in 2010), has members including five or six independent outside advisors (3 from Japan, 2 or 3 from overseas), the Chairperson and the President (CEO). Its role is to give advice and make proposals regarding overall management, and it also function of nomination and compensation committee. Three specific tasks of the Board are as follows: 1) handling a change of president and nomination of successor, 2) discussing the Teijin Group's compensation system for directors and levels, and 3) evaluating the president and representative director.

#### Teijin Group's Corporate Governance System



\* Please see page 15 for explanations of position-title abbreviations.

# Distribution of Added Value to Stakeholders

There are a wide range of stakeholders in the Teijin Group. With this in mind, as the social responsibility of the Teijin Group, we place importance on maintaining a profit through our business, and distributing the resulting added value to stakeholders in an appropriate manner.

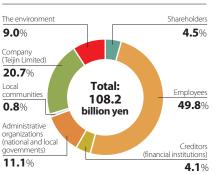
# **Distribution of Added Value to Stakeholders**

The added value obtained in FY2010 was distributed to major stakeholders as follows.

The total amount of added value was calculated by subtracting expenses for transportation/tariffs, depreciation, R&D, marketing promotion, tenancy, and other sales management from gross operating profit (net sales minus manufacturing cost), and adding independently calculated social contribution expenses and environmental preservation expenses.

These final two expenses are included in either other sales management expenses or manufacturing costs. Additionally, social contribution expenses include the use of company facilities by local residents and services provided by employees converted to a monetary value.

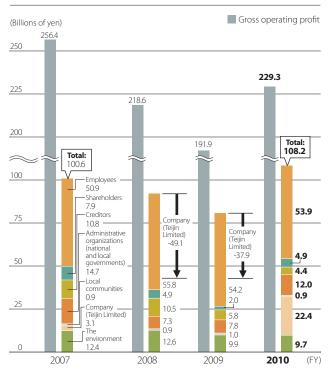
#### Percent allocation of added value to stakeholders



#### Distribution of Added Value to Stakeholders \*

Stakeholders	Amount (billions of yen)	Breakdown	Remarks
Shareholders	4.9	Dividend	Figures are shown in financial statements (in the Dividends table of the Consolidated Financial Statements Summary [For the year ended March 31, 2011])
Employees	53.9	Salaries/Wages, bonuses and retirement allowances	Figures are shown in portfolio reports. Note that the amounts shown above do not include personnel expenses, which are calculated as part of production costs.
Creditors (financial institutions)	4.4	Interest paid	Figures are shown in financial statements (as Interest expenses in the Consolidated Financial Statements Summary [For the year ended March 31, 2011])
Administrative organizations (national and local governments)	12.0	Taxes paid, such as corporation, local and business taxes	Figures are shown in financial statements (as Income taxes in the Consolidated Financial Statements Summary [For the year ended March 31, 2011])
Local communities	0.9	Monetary donations, and article donations, free renting of company facilities, and services provided by employees converted to a monetary value using the Nippon Keidanren (Japan Business Federation) method.	Calculated by the CSR Planning Office (see page 55)
Company (Teijin Limited)	22.4	Increase in retained earnings	Figures are shown in financial statements (as Retained earnings in the Consolidated Financial Statements Summary [For the year ended March 31, 2011])
The environment	9.7	Expenses for environmental preservation	Calculated by the Environment, Safety and Health Office (see page 39)
Total amount	108.2		

#### **Trends in Added Value Distribution to Stakeholders**



# Teijin Group's Stakeholders





# Promoting Group-wide Environmental Preservation, Safety and Disaster Prevention, and Health Activities

The Teijin Group positions the environment, safety and health (ESH) as a key area relating to all business operations. The Group ESH Subcommittee has established an integrated system for management of issues concerning environmental preservation, safety and disaster prevention, and health.

# **Group ESH Management System**

The Teijin Group positions ESH as a key issue relating to all business operations. As basic management policies that relate to ESH, and on the basis of our corporate philosophy, we have established the Teijin Group Global Environmental Charter, the Teijin Group Global Environmental Activity Goals and the ESH Basic Policies.

In addition, in order to manage ESH, we have set-up the Group CSR Committee. This committee is chaired by the CSRO who has authority and responsibility delegated from the CEO. Under the Group CSR Committee, is the Group ESH Subcommittee, which is chaired by the General Manager of the Teijin Limited ESH Office and has members including corporate staff leaders and the chairperson of each business group's ESH committee. The subcommittee discusses and makes decisions on various measures and activities regarding ESH management, and oversees the expansion of these measures/activities to each business group.

# **ESH Auditing, Report Meetings and Training Sessions**

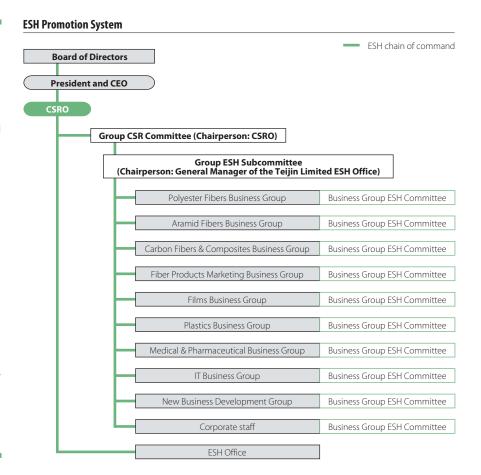
#### **ESH** Auditing

ESH Audits I, II, and III are conducted according to our ESH Auditing Rules (see table on page 24).

In ESH Audits I and II, the chairpersons of each business group's ESH committee conduct audits on the ESH activities of production sites and group companies within their respective business group in Japan and overseas. The CSRO conducts ESH Audit III on the basis of the results of Audits I and II, thus realizing a double-audit system.

## ■ Group ESH Debriefing Session and Business **Group Annual ESH General Assembly**

Group ESH Debriefing Session is held once every year, providing an opportunity for the Business Group General Managers to report to the CEO. In addition, the Business Group Annual ESH General Assembly is held to allow information-sharing and discussions



between the heads of business groups, the chairperson of the Business Group ESH Committee, and the ESH Office. Respective procedures for the implementation of these meetings are specified in the Implementation Guidelines for Group ESH Debriefing Session and Business Group Annual ESH General Assembly.

The Group ESH Report Meeting for FY2010 was held at the Tokyo head office in July 2010, with 43 participants. The General Manager of the ESH Office gave an overview of the group-wide ESH management in FY2009, and the heads of all business groups reported on the results of ESH activities in their business groups and other matters of special note.

# ■ Group ESH Education

To enhance group-wide ESH management, we established the ESH Education Program for presidents and executives involved in ESH management, ESH staff, and production line managers in individual group companies. We hold a workshop once a year for group companies in Japan, and every two years for overseas group companies.

In July, FY2010, an ESH education workshop for group companies in Japan was held at the Osaka head office, with the participation of 177 managers (65 in the management class, 60 in the staff class, and 52 in the advanced class)★. Workshops for overseas group companies were held in the USA in July, in Singapore and Netherlands in September, and in China in October.

#### ■ Training Seminar for Internal Auditors of **ESH Compliance**

To enhance compliance with laws and regulations related to ESH, we held an ESH compliance training seminar for internal auditors at the Osaka head office in

### ■ The Teijin Group Global **Environmental Charter**

To fulfill the Teijin Group's corporate philosophy "We place the highest priority on safety and the preservation of our natural environment" to ensure society's sustainable development, we will:

- 1. Strive to promote efficient use of resources and energy and reduction of environmental impact to preserve the global environment.
- 2. Provide products and services that reduce the environmental impact for society through progress in science and technology with a focus on global environmental consciousness.
- 3. Participate in social activities aiming at conserving the global environment through education and raising awareness for group employees, and cooperation with local communities involved in our business activities.

(Established in December 1992; revised in July 2007)

#### ■ Teijin Group ESH Basic Policies

- 1) Safety is our highest priority, in accordance with our philosophy of protecting human life.
- 2) ESH is the responsibility of every production line manager.
- 3) ESH efforts are an integral part of every stage of business activities

## ■ The Teijin Group Global Environmental Activity Goals

## **Promotion of Environmental Preservation Activities**

- 1. Throughout our business operations, we will make efforts to reduce our environmental impact, including the reduction of CO2 emissions, conserve energy and resources, and make effective use of waste.
- 2. We will appropriately manage biological and chemical substances in compliance with the related laws and regulations to ensure that our use of these substances will not cause damage to the environment or to the
- 3. We will provide as many people as possible with appropriate information and support so that our products will be transported, used, and disposed of in a safe and environmentally friendly manner.

#### **Promotion of Design for Environment and Environmental Business**

- 4. We will design products in an environmentally friendly manner in cooperation with our customers and suppliers, while promoting green purchasing and procurement as well as green transportation. In addition, we will conduct necessary assessment at the planning stage of business projects, thereby reducing potential risks to human health and the environment.
- 5. We will further develop technologies for environmental preservation and environmental improvement. including technologies that contribute to energy conservation and 3R activities (activities to promote the reduction, reuse, and recycling of materials) and will expand our environmental business taking advantage of our Group's proprietary technologies and strong market presence.

#### **Expansion of Environmental Communication and Social Contribution Activities**

- 6. We will clearly show our commitment to making contributions to society by such measures as setting and announcing environmental impact reduction targets and will engage in communication with a range of our stakeholders, including local communities in which we conduct business.
- 7. We will raise the awareness of all Group employees and provide them with education on environmental preservation as well as support them in conducting environmental preservation activities, such as energy conservation activities at their households and in their local communities.

(Established in December 1992; revised in July 2007)

### Mid- and Long-term Environmental Preservation Targets

Classification	Coverage	The Teijin Group Targets for FY2010/2011 (established in April 2006)	The Teijin Group Targets for FY2020 (established in December 2007)
Global warming (CO <sub>2</sub> emissions	Japan	Reduce CO <sub>2</sub> emissions by 10% or more compared to the FY1990 level by FY2010.	Reduce CO <sub>2</sub> emissions by 20% or more compared to the FY1990 level by FY2020.
reduction)	Overseas	Reduce CO <sub>2</sub> emissions per unit of production amount by 1% or more compared to the preceding fiscal year.	Europe and USA: Reduce CO2 emissions by 10% or more compared to the FY2010 level by FY2020. Asia: Reduce CO2 emissions per unit of production amount by 10% or more compared to the FY2010 level by FY2020.
Chemical substances	Group	Reduce chemical substance emissions by 30% or more compared to the FY2005 level by FY2011.	Reduce chemical substance emissions by 80% or more compared to the FY1998 level by FY2020.     Establish a method of risk assessment and set numerical targets by FY2011.
	Japan	Reduce emissions of volatile organic compounds (VOCs) by 50% or more compared to the FY2000 level by FY2010.	_
Waste	Group	Reduce "waste with no effective use*1" by 50% or more compared to the FY2005 level by FY2011.	Reduce "waste with no effective use*1" by 85% or more compared to the FY1998 level by FY2020.
	Japan	For business sites/plants emitting over 500 tons of waste per year, achieve zero emissions*2 by the end of FY2011.	Excluding coal ash and similar waste, endeavor to reduce the amount of waste generated, and achieve zero emissions*2 for group companies in Japan.

<sup>\*1 &</sup>quot;Waste with no effective use" refers to waste that is either put directly into landfill or incinerated without heat recovery.

\*2 Zero emissions: Reducing the ratio of "waste with no effective use" to 1% or less of the total waste.

## January, 2011.

A total of 63\* employees were newly approved as 1st-grade or 2nd-grade auditors. Since the system started in 2005, there have been a total of 612 internal auditors of ESH compliance\*.

\* 1st-grade: 47 employees; 2nd-grade: 16 employees.

## Outline of the ESH Audits \*

	Outline of the audits	Auditors	FY2010 audit results
ESH Audit I	ESH audits at production sites	Chairperson of Business Group ESH Committee	24 in Japan, 12 overseas
ESH Audit <b>II</b>	Audits mainly concerning environmental activities	Chairperson of Business Group ESH Committee	One annual audit for each of the eight business groups
ESH Audit <b>III</b>	Audits of the results of ESH Audits I and II	CSRO	One annual audit of eight business groups and independently managed companies

# Reducing Environmental Impact over the Entire Product Life Cycle

Environmental preservation is one of the three core elements of the Teijin Group's Sustainable Environment Initiatives. With the goals of reducing waste and emissions of CO2 and chemical substances, as well as managing waste more effectively, we evaluate the environmental impact of our business activities over the entire life cycle of each product and take positive measures to reduce our environmental impact.

# **Initiatives to Reduce Environmental Impact in All Processes from Procurement to Disposal**

The Teijin Group's operations affect the environment in various ways; in processes such as manufacturing and processing, the environment is affected through handling of chemical substances, fuel and other energy usage, water consumption and generation of "waste with no effective use.\*1" In addition to compliance with rules and regulations and agreements with local governments relating to environmental impact, the group is carrying out various voluntary activities aiming to further reduce the overall environmental impact of our business activities. These include efficient use of resources and energy, minimizing chemical substance emissions, efficient use of waste, and preventing soil and groundwater pollution.

For processes other than manufacturing and processing, it is necessary to consider the environmental impact caused by the use, consumption, and disposal of products by customers of the Teijin Group. For this reason, we have established a system to assess the environmental impact of each product through its life cycle including raw materials, production, use and disposal. We are also pursuing the creation of products that can be easily recycled and reused, and developing new functions for products to reduce environmental impact

based on the Teijin Group Design for Environment system (see page 29).

\*1 "Waste with no effective use" refers to waste that is either put directly into landfill or incinerated without heat recovery.

# **Climate Change Initiatives**

#### ■ Targets for FY2006-2010

Japan: Cut CO<sub>2</sub> emissions by 10% or more compared to the 1990 level by FY2010.

Overseas: Reduce CO2 emissions per unit of production amount by 1% or more compared to the preceding fiscal year.

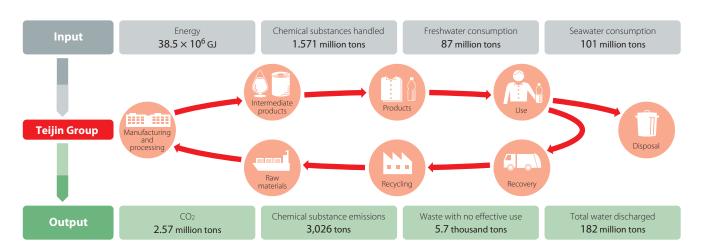
## □ Reducing Greenhouse Gases Emitted **During Manufacturing**

The Teijin Group is a long-time promoter of energy-saving initiatives. In response to the enforcement of the Kyoto Protocol in February 2005, we set targets to reduce the total CO<sub>2</sub> emissions for group companies in Japan (see Targets for FY2006-2010 above) and are shifting to renewable energy sources such as biomass fuel, and fuels that emit less CO2.

In FY2010, in Japan, we implemented energy-saving measures to reduce CO<sub>2</sub> emissions, including introduction of optimized output control of turbo-compressors at Teijin Fibers Tokuyama Plant and inverter-based water pumps and air conditioners at Matsuyama Plant. However, as a result of increased production caused by the economic recovery, CO<sub>2</sub> emissions for group companies in Japan for FY2010 were 1.57 million tons, a 3% increase from the FY2009 level of 1.52 million tons. While we are still able to achieve the target based on a 40% decrease compared to the FY1990 level, we will continue with our efforts for energy savings and conversion to substitute fuels to further reduce CO2 emissions. From FY2012, in addition to the conventional total emissions targets, targets for CO<sub>2</sub> emissions will be set per unit of production (1% improvement every year) to assess the effects of energy-saving projects while excluding the effects of production.

Meanwhile, for overseas group companies, we have improved energy efficiency through replacing air conditioners at Thai Namsiri Intertex Co. Ltd. (Thailand) with water-cooled models, and replacing air conditioner consumable parts at Teijin Chemicals Plastic Compound (Shanghai) Co., Ltd. (China) as necessary. As production recovered and was possible at many sites in FY2010, the CO<sub>2</sub> emissions per unit of production improved. The target for FY2010 was reached by 12 of the 17 sites. Mainly due to P.T. Teijin Indonesia Fiber Corporation (TIFICO) being excluded from calculations, the CO<sub>2</sub> emissions for overseas group companies amounted to one million tons in FY2010, a 25% decrease from the FY2009 level. Teijin

# Environmental Impact of the Teijin Group in FY2010 \*



business sites are currently not involved in the EU-ETS\*2, but we will keep track of the post-Kyoto Protocol trends in amendments to the scheme, and take action as necessary.

The group-wide CO<sub>2</sub> emissions amounted to 2.57 million tons in FY2010, a 10% decrease from the FY2009 level.

\*2 EU-ETS: European Union Emissions Trading Scheme

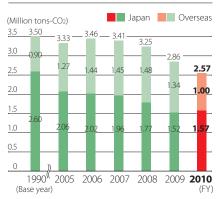
# **■** Efforts to Reduce CO<sub>2</sub> Emissions from **Offices and Company Vehicles**

At our Osaka head office, a building which we own, we have implemented building-wide energy-saving activities. Similarly, at our Tokyo head office, business group offices, and other sales offices, we have set measures to improve the efficiency of energy consumption. At our Tokyo research center we have installed energy-efficiency monitors to realize improved "visualization" of energy use. In addition, since the Great East Japan Earthquake in March 2011, we have take measures to dim or turn off lighting throughout the Tokyo head office building to save power (see page 44).

Company vehicles are also being targeted as part of our efforts to reduce CO<sub>2</sub> emissions. For example, at Teijin Pharma Limited we are replacing vehicles used for marketing activities with hybrid vehicles and other eco-cars with low emissions, and encouraging employees to drive in a fuel-efficient manner through a system of recording fuel consumed and distance driven.

In FY2008, we began collecting data on CO<sub>2</sub> emissions from our offices and company vehicles. We set independent numerical

#### **Trends in Greenhouse Gas Emissions from** Manufacturing Operations \*



- \* Includes CO<sub>2</sub>, methane and dinitrogen monoxide.
  \* Calorific values and CO<sub>2</sub> emissions are calculated according to the coefficient specified in the Law Concerning the Promotion of Measures to Cope with Global Warming (an emissions factor for electricity of 0.55 kg-CO<sub>2</sub>/kWh is used for every fiscal year). For power purchased overseas, where known, the relevant emissions factor is used for acquilitions.
- relevant emissions factor is used for calculations.
  \*There was a substantial decrease in FY2010 because TIFICO, who emitted 470,000 tons of CO<sub>2</sub> in FY2009, was excluded from the calculations.

targets for each site in FY2009, and are promoting activities to cut CO<sub>2</sub> emissions.

In FY2010, CO<sub>2</sub> emissions from offices were 13 thousand tons, a 18% decrease from the FY2009 level, while for company vehicles, the result was nearly the same as the 8,300 tons emitted in FY2009★.

#### ■ Reducing Environmental Impact in Logistics

In FY2010, CO<sub>2</sub> emissions by the Teijin Group's specific consignors, Teijin Fibers Limited, Teijin Dupont Films Japan Limited, and Teijin Chemicals Ltd., amounted to 18.5 thousand tons, which corresponds to a unit index of 0.087 per thousand ton-kilometers. This result translates to a 4.4% improvement, thus achieving the annual target of reducing CO<sub>2</sub> emissions per unit of transportation amount by 1% or more compared to the previous year's level.

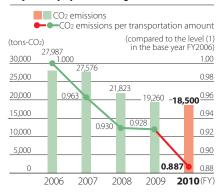
The main contributing factor was to expand a shift from transporting by truck to transporting by ship and container transportation through the Japan Freight Railway Company (JR Freight). CO2 emissions have decreased by 9,487 tons compared to the level in FY2006 when management of CO<sub>2</sub> emissions from logistics started. Per unit of transportation amount, this corresponds to an 11.3% reduction.

The Teijin Group is taking the following measures to reduce CO2:

- Modal shift

Shift from truck transportation to sea/rail transportation (use of Japanese domestic ships, JR Freight containers)

#### Trends in CO2 Emissions and the Unit Index for Teijin Group Specific Consignors \*



- \* Although the raw materials and polymer business were transferred from Teijin Fibers Limited to Teijin Limited in April 2010, for comparison purposes, the figures for these businesses have been included in those of Teijin Fibers.
- The calorific value of light oil was changed to 37.7GJ/kL in FY2010 (38.2GJ/kL till FY2009)

- Reduce transportation frequency (e.g. bulk transportation, cooperative transport with other companies)
- Improve loading efficiency (e.g. innovative methods for loading and receiving orders from customers)
- Minimize Japanese domestic transportation (load/unload exports/imports at the nearest port)
- Review transportation routes

In FY2011, these activities to reduce the environmental impact from logistic operations were affected by the Great East Japan Earthquake. For example, due to damage to ports used by Japanese domestic ships, we were forced to revert to truck transportation. In addition, the reduced size of shipments resulting from the substantial decrease in Japanese domestic production lowered the transportation efficiency of some businesses.

Despite these difficulties, we will continue take measures as required by the situation and exhaust all possible means to reduce our environmental impact in logistics.

### ■ Raising Employees' Awareness Regarding CO<sub>2</sub> Reductions

To raise employees' awareness of environmental issues in daily life, we designated July, 2010 as "ecomoti" month and held employee-oriented environmental activities. The name "Eco-moti" derives from the words "eco" and "motivation" and signifies the concept of attempts to raise motivation in relation to environmental action. Operated by the Fuluhashi Environmental Institute, "ecomoti" is a website-based system of awarding points to participants for environment-conscious actions in daily life, such as turning off computer monitors when they are not in use, and carrying reusable chopsticks for personal use (rather than using disposable ones). Participants can donate their accumulated points to NPOs and NGOs, thereby contributing to international society and the local community.

In total, 200 Teijin Group employees participated in the program, and their environmental action resulted in a 10kg CO<sub>2</sub> reduction per person. Based on the success of this program, we are making plans for more employee-oriented events in the future, including tree-planting volunteer activities.

## **Reducing Chemical Substance Emissions**

#### ■ Targets for FY2006-2011

Group-wide: Reduce chemical substance emissions by 30% or more compared to the FY2005 level by FY2011.

Japan: Reduce emissions of volatile organic compounds (VOCs) by 50% or more compared to the FY2000 level by FY2010.

The Teijin Group is actively committed to reducing emissions of all chemical substances listed as Class 1 chemical substances in the Chemical Substances Management Law\*1 revised in April 2010, and those specified by the Japan Chemical Industry Association. Excluding duplicated listings, there are 575 specified chemical substances.

At group companies in Japan, in addition to the efforts mentioned above, we are striving to reduce the emissions of volatile organic compounds (VOCs) by 50% or more compared to the FY2000 level by the end of FY2010 (by 72% or more compared to the FY1998 level). We have also established a long-term goal for reducing emissions of chemical substances by 80% or more compared to the FY1998 level by FY2020.

To date, regarding the issue of reducing chemical substances, the Teijin Group has focused on the hazardous properties of substances. As of FY2010, we are also considering this issue from the perspective of "risk" to humans, the ecosystem and the environment. Using LIME2\*2, a life cycle assessment (LCA) method, as an evaluation index, we will also concentrate our efforts on reducing chemical substances, which have a large influence in terms of environmental impact.

- \*1 Chemical Substance Management Law: Law Concerning Reporting, etc., of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management.
- \*2 LIME2: The second, Japanese version of the Life Cycle Impact Assessment Method Based on Endpoint Modeling.

#### ▶ Details of Chemical Substance Emissions

In Japan, the Teijin Group emitted 1,752 tons of chemical substances in FY2010, a 29.9% increase from the FY2009 level. Factors that contributed to this increase were the recovery of demand and the effects of structural reforms, which led to increased production, as well as delays in the emission-reduction measures associated with the so-called "Lehman Shock." Overseas, even though production increased, we emitted 1,274 tons, a level comparable to FY2009. This can be attributed to the sale of some group companies, which were excluded from calculations. Group-wide, emissions increased by 13.0% compared to the FY2009 level. Compared to the FY2005 level, there was a 12.1% reduction, which falls short of the 30% target.

Of the total chemical substances emitted into the environment, 98.7% was released into the atmosphere, 1.3% into the water, and 0% into landfill or the soil. Emissions of Class 1 chemical substances specified in the Chemical Substance Management Law were 2,173 tons, a 12.0% increased compared to the FY2009 level.

The VOCs emitted at group companies in Japan in FY2010 totaled 1,648 tons, achieving the target with a 51.8% reduction compared to the FY2000 level★.

### SOx Emissions and Wastewater Loading (COD, BOD)

In FY2010, group companies in Japan generated 4.8 thousand tons of SOx as a result of fuel use, a 5.9% decrease compared to the FY2009 level. Overseas group companies generated 0.3 thousand tons, a substantial 86.4% decrease compared to the FY2009 level due in part to TIFICO, a company with high SOx emissions, being excluded from calculations due to its sale.

Group-wide, we generated 5.1 thousand tons of SOx in FY2010, a decrease of 30.1% compared to the FY2009 level.

The Teijin Group used a total of 87 million tons of tap water/industrial water (including ground water) in FY2010, including 74.5 million tons in Japan and 12.8 million tons overseas. The amount of seawater consumed as a coolant to reduce freshwater consumption at group companies in Japan was 100 million tons. The total amount of water discharged group-wide, including seawater, was 182 million tons, a 7.1% reduction compared to the FY2009 level.

The total amount of chemical oxygen demand (COD) load and biochemical oxygen demand (BOD) load associated with the water discharged group-wide was 809 tons, a slight increase on the FY2009 level.

# **Reducing/Managing Waste**

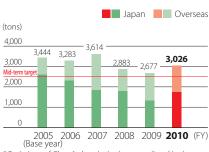
#### □ Targets for FY2006-2011

Reduce "waste with no effective use\*3" by 50% or more compared to the FY2005 level bv FY2011.

The Teijin Group has made a strong commitment to reducing the amount of waste generated, and also reducing the "waste with no effective use." This is manifested in promoting reuse of waste, and shifting from simple incineration/landfill to material, chemical, and thermal recycling.

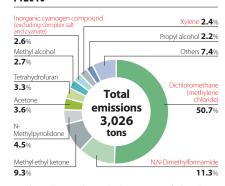
Our mid-term target for "waste with no effective use" is a reduction of 50% or more compared to the FY2005 level by FY2011. When compared to FY1998, this represents a reduction of 81%. In our long-term target for FY2020, we aim to achieve a reduction of 85% or more compared to FY1998. In FY2010, group-wide, we generated 5.7 thousand tons of "waste with no effective use," 6.9% of the total 82 thousand tons

#### Trends in Chemical Substance Emissions \*



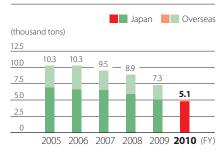
\* Emissions of Class 1 chemical substances listed in the Chemical Substances Management Law and chemical substances specified by the Japan Chemical Industry Association. The figures shown are the total of emissions into the atmosphere, soil and water, and landfill amount within business sites

#### **Top 10 Chemicals Substance Emissions in** FY2010\*



\* Red text denotes chemical substances specified as Class 1 in the Chemical Substances Management Law.

#### Trends in SOx Emissions \*



of waste generated. Efforts at each business site/plant to reduce "waste with no effective use," combined with decreased production, resulted in a reduction of 68% compared to the FY2005 level, thus achieving the mid-term target. We will continue persevering to ensure this standard is maintained.

An additional goal for individual business sites and plants is achieving zero emissions, which is defined as reducing the ratio of "waste with no effective use" to 1% or less of the total waste generated. As a mid-term target, we aim to achieve zero emissions by the end of FY2011 for 23 business sites and plants in Japan that emit over 500 tons of waste in one year.

In FY2010, five business sites/factories newly achieved zero emissions: Teijin Chemicals Mihara Plant and Plastic Technical Center, Kinkai Chemicals, Teijin Chemicals Matsuyama Plant, and Teijin Cordley Shimane Plant. This result was in line with zero emission targets for the year. In Japan, "waste with no effective use" totaled 334 tons, a reduction of 38% compared to the FY2009 level. Basing future steps on the 3Rs principle, we will strive for further reduction of total waste generated. For FY2012 onward, we have set a target of reducing total waste generated per unit of production by 1% or more every year.

At overseas group companies, three business sites/plants achieved zero emissions, the same result as in the previous year. "Waste with no effective use" amounted to 5.4 thousand tons, representing a 5% reduction compared to the FY2009 level. Although progress on finding effective uses for this waste has been advancing steadily at group companies in Japan, this is not the case at overseas group companies. We will focus on improving the situation through action such as searching for suitable recycling companies.

# **Water Purification and Preventing Soil/Groundwater Pollution**

In FY2006, the Teijin Group formulated guidelines for preventing soil and groundwater pollution. Under the guidelines, we are striving to prevent soil and groundwater pollution resulting from our business operations in Japan and overseas. In the future, we will continue taking pollutionpreventing measures as appropriate.

# **Initiatives to Preserve Biodiversity**

## ■ Basic Perspective and Aims Regarding **Biodiversity**

#### 1. Promote Sustainable Management

Actively promote sustainable management based on recognition of the fact that biodiversity is critically important to preserving and reducing impact on the global environment.

#### 2. Encourage Full Participation of All **Employees**

Increase employees' awareness and understanding of biodiversity and support voluntary activities relating to biodiversity.

#### 3. Build Strong Bonds with Society

Through communication and cooperation with local communities, express a high priority on the relationship between local residents and the environment.

The teijin Group has set the following aims regarding biodiversity: (1) Promote sustainable management, (2) Encourage full participation of all employees, and (3) Build strong bonds with society.

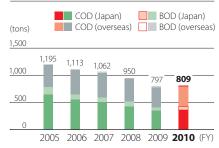
The first step in our efforts was to prepare a "map" of how our business activities are related to biodiversity and the environment. Understanding how the environment and biodiversity are affected by greenhouse gases, chemical substances and other emissions from our business activities is the basis for expanding preservation activities. Another aspect of sustainable management is our Earth Symphony® certification system (see page 29), which considers the impact that our products have on biodiversity. Under the system, a figure corresponding to effect on biodiversity enables the environmental impact to be quantified and is used in the evaluations and certification of products.

Aiming to raise environmental awareness of employees, the Teijin Group: holds an environmental forum once a year to deepen understanding and interest in the global environment and biodiversity; organizes cicada exuviae surveys from environment-education and investigative perspectives; co-sponsors a Nature Observation Leader Workshop to nurture leaders who are able to lead naturepreservation education (see page 56); and supports employees' voluntary activities such as planting cherry trees.

Thirdly, to build strong bonds with society, we implement "local risk communication," that is, information-exchange meetings in local communities. We invite representatives from community associations, and other concerned parties from nearby schools, companies and government organizations to these meetings and explain issues such as the impact of our business activities on our ecosystem, our production activities and our management of chemical substances.

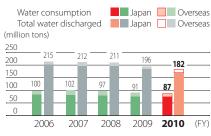
As a leading environment-oriented corporate group, we will continue to assertively promote sustainable management and biodiversity, and thereby contribute to both improving living standards and preserving the global environment.

#### Trends in COD/BOD Load ★



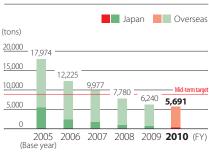
- \* Applies to wastewater discharged into rivers, oceans and
- \* COD data is used in cases where both COD and BOD data are available

#### Trends in Water Consumption and Total Water Discharged 🖈



- \* Water consumption amount includes industrial water, groundwater and tap water
- \* Total water discharged includes seawater used for cooling.

#### Trends in "Waste with no Effective Use\*3" ★



\*3 Waste with no effective use: Waste that is either put directly into landfill or incinerated without heat recovery.

# Product and Manufacturing Process Design Contributing to Reduced **Environmental Impact**

All products, manufacturing processes, and IT services are designed based on evaluations of the environmental impact throughout the product's life cycle. As an original initiative, products approved by the Teijin Group as having an environment-conscious design are labeled with the "Earth Symphony®" logo, aiming to raise public awareness of our Design for Environment products.

# What is Design for Environment?

The Teijin Group positions Design for Environment as one of the three core elements of environmental management. Design for Environment is defined as: "Product design that aims to reduce the environmental impact of each product through evaluating the overall environmental impact throughout the product life cycle including raw materials, production, use and disposal." (Environmental impact includes release of CO<sub>2</sub>/sulfur oxides that contribute to global warming/air pollution.) Based on this definition, in January 2008, we established the Teijin Group Design for Environment Guidelines, which apply to six areas; safety, energy saving, resource saving, environmental conservation, provision of information, and environmental impact reduction in the manufacturing stage.

When a product, manufacturing process or IT service is newly designed or the design is improved, the guidelines and a special checklist are used to evaluate the design. Various measures to reduce the environmental impact are investigated, and the results are reflected in the design of new products, manufacturing processes and IT services. The evaluation also incorporates items, such as those relating to the safety of chemical substances, that show consideration for biodiversity.

## ■ Summary of the Design for **Environment Evaluation Checklist**

- 1 Safety
- 2 Energy saving
- 3 Resource saving
- 4 Environmental conservation
- 5 Provision of information
- 6 Environmental impact reduction in the manufacturing stage

Under the six major items, there are sub-items and spaces for scoring evaluations. The checklist is available in three versions with sub-items/spaces for scoring evaluation relating to either raw materials/materials, finished products, or IT services.

# **Design for Environment Approval** System

The Teijin Group has an original system for approving Design for Environment products, in place since January 2008.

The approval system applies to products and IT services for which sales are expected to exceed a specified amount, or products, IT services or manufacturing processes for which there is a specific desire to obtain Design for Environment approval. The first step is for the relevant department head to conduct a five-stage self-evaluation using the checklist. The department head can apply for approval provided that the product, IT service, or process is shown to have no ratings of 1 for any key items, plus either a rating of 5 for at least one key item or a rating of 4 for two or more key items\*. The results of the self-evaluation are verified by the Business Group Product Liability/ Quality Assurance Committee, and an application for approval is submitted to the Expert committee for Promoting Design for Environment. This committee examines the application, and if successful, approval is granted by the committee chairman.

Even after approval, compliance is checked periodically through product

liability/quality assurance audits, and decisions on whether to renew or withdraw approvals are made.

\* Key items: Important safety-related items or items relating to compliance with laws and internal regulations.

# **Design for Environment Approved Products** "Earth Symphony®

In July 2007, we developed the "Earth Symphony®" concept, a logo to be displayed on products that have received Design for Environment approval. In June 2010, "Earth Symphony®" became a registered trademark of the Teijin Group.

Through use of this standardized brand logo, we aim to promote awareness of our Design for Environment activities and design products that can penetrate global markets. Furthermore, by FY2020, we aim to substantially increase the ratio of total net sales accounted for by products with the Earth Symphony® logo.

#### Design for Environment Bodies and Approval System





This logo is used to promote awareness among the general public of our initiative for harmonization with the global environment through environmentally conscious corporate activities based on the Teijin Group Design for Environment Guidelines.

# **Reviewing the Guidelines**

The United Nations declared 2010 as the International Year of Biodiversity, and in October of the same year, the Convention on Biological Diversity held the 10th Conference of the Parties (COP10) meeting in Nagoya, Japan.

Against this background, we decided to review the Design for Environment Guidelines for FY2010, aiming to conduct an even more detailed evaluation of the impact on biodiversity in relation to the item. "environmental impact reduction in the manufacturing stage."

# **Results of In-house Questionnaire** and Future Plans

In November 2010, employees in Japan were surveyed to evaluate the Design for Environment approval system.

The survey results revealed that the system has not gained sufficient recognition. On this basis, we plan to review the extent and mechanisms of training in order to increase awareness.

# Comments on Design for Environment

The Teijin Group has consulted with external experts to maintain and increase the effectiveness of our Design for Environment activities.

The Teijin Group's Design for Environment initiative has significant benefits: it is a group-wide initiative with a scope from materials through to finished goods and IT services; common guidelines make it easier to set goals and address issues; the approval system enables evaluations both internally and externally. Products of ten group companies have already received Design for Environment approval. These products are the fruitful results of a system with such benefits. I anticipate further expansion of the voluntary PDCA system to realize the change to all products being designed and manufactured according to the Design for Environment Guidelines.

However, the Design for Environment objectives cannot be realized by one company or division alone. As I commented last year, expanding the Design for Environment initiative requires coordinated efforts in supply chains that go beyond individual companies or divisions. Examples of these coordinated efforts include carbon fibers and heat-reflective/insulating film for windows, products/services such as virtual hosting services that contribute to reducing environmental impact when used by

consumers, materials such as bio-polycarbonates that enable reduced use of fossil resources in the material procurement stage, and materials such as ECO CIRCLE™ FIBERS which provide the final link for a closed-loop recycling system that includes consumers. These coordinated efforts with users and suppliers result in more than simply Design for Environment products; in a world where further environmental consideration will be required, these efforts also represent significant business opportunities. A good example is laminating film for canned beverages, a Design for Environment product which was produced via joint efforts with a beverage can manufacturer. We need to take advantage of the Teijin Group's strength of having businesses that span from materials to assembled products.

The approach to life cycle assessment (LCA), which is based on the same concept as that of a supply chain, still seems to be in its initial stages. Carrying out LCA makes the Design for Environment initiative a quantitative and effective activity both internally and externally. The sole fact that a material is biomass-based no longer qualifies



Masahiko Hirao Professor The University of Tokyo's Graduate School of Engineering

it as being environment-friendly. Regarding biodiversity too, gaining societal trust through LCA-based quantitative evaluations will be required.

Based on the report on the results of the 2011 internal survey I received, although the Teijin Group is recognized in society as an environment-oriented manufacturer, internally, the level of full participation in activities has not been reached. On the other hand, I also found that the initiative is better understood by the management and new business divisions. I sincerely hope that the image of Teijin as an environment-oriented corporation held by those outside the company will also permeate internally to the full participation in activities by all employees.

# TOPICS

# **Products that Received Design for Environment Approval in FY2010** (*Earth Symphony*® Certified Products)

## Cordley®, Artificial Leather Using ECOPET®

Cordley\*, an artificial leather using ECOPET\* and manufactured by Teijin Cordley Limited was newly approved in FY2010. To date, mainly existing products of core companies have received approval. Now Cordley®, a group company product has been approved, evidence of the steady progress of the initiative.



#### List of Products and Processes that have Received Design for Environment Approval (Earth Symphony® Certification)

(Products in red are those approved in FY2010)



This logo is used to promote awareness among the general public of our initiative for harmonization with the global environment through environmentally conscious corporate activities based on the Teijin Group Design for Environment Guidelines.

Name of company	Name of product, process or service	Applications/Features		
	PET resin (heavy metal-free)	Bottles (Sb→Ge)		
	PC resin (chemical recycling)	Utilization of sheet waste		
	PC resin (material recycling)	PC-COM (headlamp lenses, laptop computers, laser printers and copying machines)		
Teijin Chemicals Ltd.	PC resin molded plate	Windows of Tokaido Shinkansen: Series N700 (substitute for glass, absorbs heat and ultraviolet rays)		
	Nonhalogen flame resistant PC	PC-COM (electromagnetic wave shielding: laptop computers, digital cameras/game consoles, optical components)		
	Bio-PC	PC made using raw materials originating from plant life (reduction in CO <sub>2</sub> through change in raw fuel)		
	ECO CIRCLE™ FIBERS	Polyester fiber regenerated by chemical recycling technology		
	PURITY®	PET containing no heavy metals		
Teijin Fibers Limited	ECOPET® Spin-dyeing	Civil engineering materials (bottle units, filter units)		
	ELK*	Cushioning polyester material used as a substitute for urethane foam		
	ECOPET® SF	Uniforms, daily life supplies (drain bags, wipers), etc.		
	Para-aramid fibers	Sheet for anti-seismic reinforcement (weight-saving)		
Teijin Techno Products Limited	Para-aramid fibers	Geotextile-reinforced embankment Adem (longer lifecycle)		
	Para-aramid fibers	Automotive belt reinforcement (weight-saving, smaller)		
Teijin DuPont Films Japan Limited	Laminating films for canned beverages	Substitute for paints (eliminate painting, cooling and drainage treatment process)		
	Hi-Sanso™ 2U	Energy-efficient oxygen concentrator (good mass balance, decreased power consumption, lighter weight)		
Teijin Pharma Limited	Hi-Sanso™ 3R	Energy-efficient oxygen concentrator (good mass balance, decreased power consumption, lighter weight)		
	AutoSet™ C	CPAP apparatus–automatic pressure adjustment model (compact and lightweight)		
	Pyromex® (Oxidized PAN fiber)	Brake lining for aircraft (weight-saving, higher performance)		
		Blades for wind turbine generation (glass fiber substitute: energy saving at the time of use, resource saving)		
Toho Tenax Co., Ltd.		Aircraft: interior material, etc. (glass fiber substitute: energy saving at the time of use, resource saving)		
	Tenax® (Carbon fiber)	Aircraft: structural material, etc. (duralumin substitute: energy saving at the time of use, resource saving)		
		Pressure vessel bodies (glass fiber substitute: energy saving at the time of use, resource saving)		
N.I. Teijin Shoji Co.,Ltd.	REFTEL®	Highly transparent heat-reflective insulating films (energy saving)		
Infocom Corporation	Virtualization hosting services	On one server, several different operating systems and application services can be run (energy saving, space saving)		
Teijin Cordley Limited	Cordley® artificial leather (100% use of ECOPET® SF)	Artificial leather using ECOPET® (reduced use of resources, environmental preservation)		
Teijin Limited	PET production process ★ Process approval	Major reduction of CO <sub>2</sub> emissions compared to production from petroleum		

PET: polyester, PC: polycarbonate, PC-COM: polycarbonate compound, DMT: dimethyl terephthalate

# Promoting Businesses Contributing to Reduced Environmental Impact

With the ultimate aim of helping solve global environmental issues, we are utilizing our technologies cultivated over many years to focus efforts on developing cutting-edge materials that contribute to reducing CO<sub>2</sub> emissions, and recycling technologies that enable reuse of water and other resources.

# Teijin Group's Environmental **Businesses**

The Teijin Group Global Environmental Charter was established in 1992. Subsequently, in 2007, we announced the Declaration of Sustainable Environment Initiatives. Recognizing the substantial impact of our business activities on the global environment, we are striving to preserve the environment through providing products and services that reduce environmental impact.

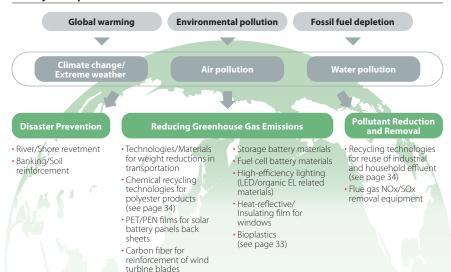
Influencing the situation are environmental pollution controls, mandatory reduction of greenhouse gas emissions aiming to prevent global warming, and various resource issues such as depletion of oil reserves and the uneven distribution of rare metals. In response to these issues, we are strengthening development of bioplastics, which help reduce CO<sub>2</sub> emissions, and advanced and composite materials, which contribute to energy-savings and reduced use of resources.

# Contributing to Reduced CO<sub>2</sub> **Emissions (1): Weight Reductions in Transportation**

In the automotive and aircraft industries, initiatives to improve fuel efficiency and reduce CO<sub>2</sub> emissions are continuing. In the automotive sector, particularly in advanced countries, regulations relating to fuel efficiency and emissions have been tightened. In the aircraft industry, one of the resolutions adopted at an international environmental preservation conference of the International Civil Aviation Organization (ICAO) held in February 2010 was to establish CO<sub>2</sub> emission standards by 2013 and improve fuel efficiency every year by 2% until 2050.

In this context, the Teijin Group is working hard to develop and increase the widespread use of carbon fiber and polycarbonate resin, materials which are more lightweight and stronger than conventional materials such as iron, aluminum and glass. Use of these materials realizes weight savings for finished products, and contributes to improved fuel

#### The Teijin Group's Environmental Businesses



#### Carbon Fiber Life Cycle Assessment (LCA), a Japan Carbon Fiber Manufacturers Association Model

CO<sub>2</sub> Reduction through Adopting Carbon Fiber Reinforced Plastics (CFRPs)

# Overall product life cycle (10 years)

(unit: t)					re cycle (10 years)	Overall product in
	Disposal	Operation (10 years)	Assembly I	Raw materials	Condition	Туре
Effect in reducing CO <sub>2</sub> (10 years)	0.3	26.0	1.2	3.9	Conventional	
-5	0.3	20.2	0.8	5.1	30% weight reduction 17% CFRP use	Automobiles
Effect in reducing CO <sub>2</sub> (10 years)	_	390,000	3,800	700	Conventional	L
-27,000	_	364,000	3,000	900	20% weight reduction 50% CFRP use*	Aircraft
· (avaludas apaipa apal interior)			* A I*			

# CO2 reduction per ton of carbon fiber

Applies to structural components (excludes engine and interior)

cor reduction per	ton or tarbon riber		
Î	CO <sub>2</sub> emissions during manufacturing of carbon fiber		20
Automobiles	Life cycle CO <sub>2</sub> reduction (including emissions during manufacturing)	-50	Effect in reducing CO <sub>2</sub> -30
Aircraft	Life cycle CO <sub>2</sub> reduction (including emissions during manufacturing)	-1,400	Effect in reducing CO2 -1,380

Calculations were made under the conditions shown below

Automobiles Body weight: 1,380kg (gasoline-fueled, 4-door, FF; source: Japan Automobile Manufacturers Association),  $actual-driving \ fuel \ efficiency: 9.8 \ km/L \ (source: Japan \ Automobile \ Manufacturers \ Association), \ total \ mileage: 94,000 km$ (average for vehicles in use for 10 years, source: Ministry of Land, Infrastructure, Transport and Tourism, Japan) Aircraft Aircraft body size: medium-sized transport plane (B767) with Japanese domestic route specifications, operation: Japanese domestic route (Haneda to Chitose [500 miles]), total distance flown based on 2,000 flights per year for 10 years (source: All Nippon Airways)

efficiency and reduced CO<sub>2</sub> emissions.

Applications of carbon fiber include wind generator blades and the upper-deck floor cross beam of the AIRBUS A380.

Polycarbonate resin is used in the window panels of the N700 Series Shinkansen trains and automobile windows. In addition to being lightweight, polycarbonate resin has superior

# TOPICS

# Award-winning Technical Contributions to the Lexus LFA

In January 2011, Toho Tenax Co., Ltd. received an award from Toyota Motor Corporation in the Technical Section of the Toyota Project Awards. This award is given to suppliers who have made outstanding technical contributions. We received high evaluations of our new carbon fiber material, Semipreg, which is used in the Lexus LFA. Semipreg, a refined version of Toho Tenax's own large mold manufacturing technology, was a joint development with Toyota Motor Corporation. It is used as the most suitable material for the vehicle cabin structure, the area requiring the highest level of reliability.

Use of this molding material has made it possible to achieve performance equivalent to that of composite materials, which have conventionally been used in the primary structure of aircraft for their high reliability. Furthermore, applying this technology to carbon fiber, which is highly versatile, realizes a stable supply at low cost.



Taken at Toho Tenax Ibigawa Plant upon the completion of the production system for the LFA

processing characteristics, raising expectations of further improvements in design.

As we move forward, we will continue to appeal the weight-saving benefits our materials to customers, and seek to provide solutions that contribute to curbing global warming.

# **Contributing to Reduced CO**<sub>2</sub> **Emissions (2): Diversification of Raw Materials**

Bioplastics, which are made from renewable feedstock, are regarded as carbon-neutral. Using plants, which capture CO<sub>2</sub> during their growth, as a feedstock, contributes to less consumption of fossil resources and inhibits increases in CO2 concentration in the atmosphere.

The Teijin Group will continue to promote the introduction of bioplastics into the engineering plastics field.

## **ECO CIRCLE™ Plantfiber** (Bio-PET)

ECO CIRCLE™ Plantfiber is a partially bio-derived PET fiber. Ethylene glycol, one of the components of PET resin, is made from biofuels derived from biomass such as sugarcane.

The bio-content of ECO CIRCLE™ Plantfiber is roughly 30% and it has the same characteristics and quality of oil-derived PET. Recycling is also possible via the ECO CIRCLE™ closed-loop recycling system (see page 34).

With full-scale production expected to start in April 2012, we are focusing on applications ranging from apparel and car seats/interiors, to personal hygiene products, and as a raw material for polyester fiber products. This will be the world's first commercial production of a bio-derived PET fiber.

#### **■** BIOFRONT®

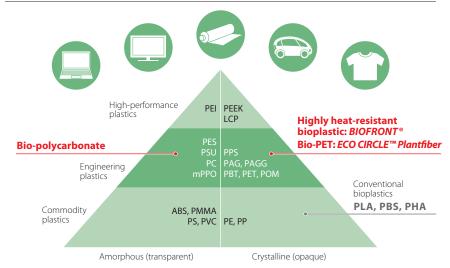
Compared to conventional bioplastics, BIOFRONT® has superior heat resistance, durability and molding characteristics. Taking advantage of these benefits, we intend to develop the applications of BIOFRONT® to the electronics and automotive fields.

## ▶ Plant-derived Polycarbonate (Bio-polycarbonate)

Plant-derived polycarbonate is an eco-friendly polycarbonate-like resin, containing isosorbide made from corn and other plants. The bio-content is as high as 70%. It has excellent transparency, chemical resistance, scratch resistance and durability. There are numerous applications that take advantage of these features, including those in the automotive/electronics, medical, food, and cosmetics industries.

Extending further, we are fully utilizing our compounding and alloying technologies to develop high-performance bio-polycarbonate resins, thus taking up the challenge of pioneering development of new markets.

# **Development of Teijin's Bioplastics**





Gowns made of BIOFRONT® worn by the wives of world leaders who visited Japan for APEC JAPAN 2010



Eyeglasses designed by Katharine E. Hamnett. All plastic parts are made of BIOFRONT®

# **ECO CIRCLE™ Closed-loop Polyester Recycling System**

ECO CIRCLE™ is a closed-loop recycling system based on a world-first chemical recycling technology developed by Teijin Fibers Limited. In the mid-1990s, we began recycling polyester products to cope with growing waste issues such as disposal of PET bottles. First, we began marketing ECOPET®, a fiber recycled from PET bottles. Later, we expanded the scope of our recycling initiative to include all polyester products, and, with the aim of realizing a closed-loop recycling system, we developed a chemical recycling technology that allows polyester products to be recycled into a highly pure raw material. Chemical recycling of polyester products enables repeated regeneration of new products without quality deterioration. In addition to reducing the volume of waste, ECO-CIRCLE™ recycling realizes an approximate 80%\* reduction in energy consumption and CO<sub>2</sub> emissions compared to newly producing polyester feedstock (DMT) from petroleum.

Product development, collection and recycling are now in progress in cooperation with more than 150 apparel and retailers in Japan and overseas.

\* 80% reduction: Source: Report on "Textile Goods Life Cycle Assessment (LCA) Survey," Ministry of Economy, Trade and Industry, Japan. CO<sub>2</sub> emissions includes those produced during incineration.

# **Wastewater Recycling/Reuse** through Biological Processes

Water shortages and water pollution are becoming increasingly serious problems in various areas of the world. Raising hopes of a solution are Japan's outstanding water purification treatment technologies. The Teijin Group hopes to be a part of this solution to alleviate water shortages problems around the world. To this end, we are proactively promoting our water purification treatment business under the concept of recycling and reuse of wastewater.

The core technology of our wastewater purification treatment system is the multistage activated biological process (MSABP®). As well as purifying wastewater via microorganisms, MSABP® uses the microbial food chain to control the generation of excess sludge. As a result, compared to ordinary activated sludge equipment, energy savings and cost reductions are realized.

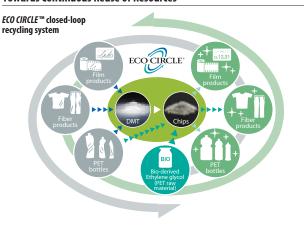
We have also developed sophisticated technologies for wastewater reuse, including *ELCAT™*, an electro catalytic method and HiPOx®, an advanced oxidation water treatment.

# **Environmental Impact Surveys and** Monitoring

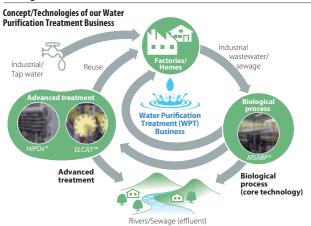
Teijin Eco-Science Limited links its three departments, Environmental Surveying, Environmental Analysis and Environmental Consulting as part of efforts to handle environmental issues on an integrated basis. This company provides highly reliable analysis of soil, water quality, air and microchemical substances such as dioxins, and proposes solutions to environmental issues.

Furthermore, in response to a request from the Ministry of the Environment, Japan, from the base of the Teijin Group's structural analytical technology, we established a method for determining whether asbestos has been detoxified using transmission electron microscopy (TEM). This analytical method involves a special technology that is possessed by a select few companies in Japan.

# **Towards Continuous Reuse of Resources**



## **Aiming for Reuse of Water**



# Participation in Environment-oriented Exhibitions in China and India

Global coordinated efforts are required to reduce CO<sub>2</sub> emissions. Particularly, in fast-growing China and India, economic growth needs to go hand in hand with environmental preservation. Of key importance to achieving this are "green" manufacturing processes and raising environmental awareness.

With this in mind, the Teijin Group participated in environmental exhibitions held in China and India in FY2010. As we continue to consolidate our products, materials, and technologies, we will continue contributing to sustainable development of these two nations.



China: China International Green Industry Expo (November 2010)



India: Eco-products International Fair 2011 (February 2011)

# **Protecting Local Communities and Employees from Disasters**

In order to prevent accidents and disasters such as explosions, fires, leaks and spills, we are enhancing disaster prevention management including fire prevention and earthquake countermeasures.

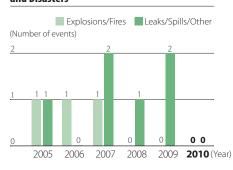
# **Promoting Disaster Prevention** Management

Our disaster prevention activities are based on the group-wide Disaster Prevention Guidelines. Our efforts range from preventative measures such as disaster prevention assessment and fire prevention, as well as earthquake countermeasures and activities to prevent the expansion of damage, including disaster prevention training, drills and upgrading of fire prevention equipment.

In 2010, these activities resulted in the number of serious accidents at group companies in Japan and overseas group companies being zero\*1. We will continue our efforts to maintain this record of no serious accidents.

\*1 Serious accident: Any accident involving an explosion, fire (excluding fires extinguished in their initial stages) or external leak of hazardous substances.

#### **Trends in the Number of Serious Accidents** and Disasters\*



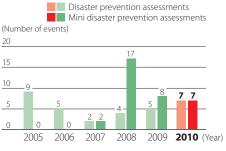
# **Implementing Disaster Prevention** Assessments

The Teijin Group has been conducting disaster prevention assessments in line with our own independent standards since 1980. Safety is assessed every five years by experts in manufacturing, facilities and environment, safety and health at a total of 27 plants in Japan and internationally. These are plants where large amounts of high-pressure gases or hazardous substances are handled. Experts review and upgrade the safety and disaster prevention measures. In FY2010, five domestic plants and two overseas plants were identified as needing measures to verify and

strengthen the disaster prevention system.

We have also performed mini disaster prevention assessments since 2008 at locations where there may be a risk of small-scale fires, such as near boilers and places where hazardous materials and combustibles are stored. In FY2010, mini disaster prevention assessments took place at 7 business sites in Japan.

## Trends in the Number of Disaster-prevention-assessed Plants \*



# **Activities of the Specialist Disaster Prevention Team**

The Teijin Group has set-up a Specialist Disaster Prevention Team consisting of leading experts who have vast knowledge and experience in this field. The team works to upgrade disaster prevention in the Teijin Group, through providing technical support for voluntary disaster prevention activities at our chemical plants and in-house power generation plants.

In 2010, we provided technical support for disaster prevention assessments and disaster prevention management for each plant. We also prepared an English version of the "List of Don'ts Regarding Disaster Prevention," a disaster prevention guidebook originally compiled in 2009 including case examples within the group, which is now being utilized worldwide as an instructional material.

# **Disaster Prevention Management** and Technical Training

Since 2007, we have conducted disaster prevention management and technical training for managers at chemical plants and power generation plants. Sixteen managers

completed the training course in FY2010★.

The wide-ranging program includes topics such as technologies related to disaster prevention in operation and facility management, and perception training. Furthermore, with a view to providing training that is practical and sustainable, opportunities for discussions are provided in addition to lectures. Trainees are required to prepare a short essay on "How I will apply what I learned in my workplace," and to submit a report on the results of their efforts one year later.

#### Fire Prevention Activities

November 10 is the Teijin Group Fire Prevention Day. On this day each company's own fire prevention activities and group-wide activities such as the periodical fire prevention 2009 **2010** (Year) check are carried out. Since starting Fire Prevention Day in 2008, shared group-wide activities have continued to develop and the fire prevention system has been strengthened.

### **Earthquake Countermeasures**

We have set-up countermeasures to minimize the possible damage resulting from a large earthquake.

As part of earthquake-resistance measures, we took action for group company buildings in Japan that were built before the Building Standards Law was revised in 1981, and completed demolishing and earthquake-resistance reinforcing work in 2009.

In addition, under a 2006 revision of the Promotion of Building Earthquake-resistance Reinforcement Law, 19\*2 company buildings were classified as having inadequate earthquake resistance. To date, as part of planned measures, reinforcement of earthquake-resistance has been completed at one of these 19 buildings.

\*2 19 company buildings: In 2010, we reported this figure as 21 buildings. However, two buildings are no longer used as part of the business.

# Creating a Safe and Secure Workplace Environment

Aiming to realize zero serious workplace accidents and to upgrade group-wide safety, we implement both preventative and recurrence-prevention measures.

# **Occupational Safety Initiatives**

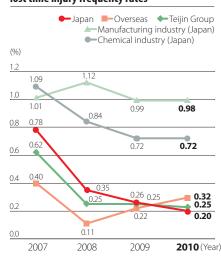
The Teijin Group places a strong emphasis on accident prevention activities. In 2008, one of the targets set in the mid-term plan was to maintain the lost time injury frequency rates\*1 to under 0.3. We achieved this target in both 2008 and 2009 with a workplace-accident frequency of 0.25. Attempting to raise the standard one level higher in FY2010, we implemented group-wide environment, safety and health training/quidance and other measures. The result was a workplace-accident frequency of 0.20 in Japan and 0.25 overall, once again achieving the target. The figure of 0.20 for Japan is well below the FY2010 average value of 0.72 for the chemical industry in Japan.

Other measures range from preventative actions such as reducing risk in the workplace based on compliance with OHSAS18001 (standards for occupational health and safety management systems), and promoting the three pillars of safety activities, to recurrence-prevention such as sharing workplace-accident information and applying it group-wide.

With the twin goals of zero serious workplace accidents and reducing lost time injury frequency rates, we will seek to further strengthen our efforts.

\*1 lost time injury frequency rates: The number of workplace accidents resulting in leave of absence per one million labor hours.

# lost time injury frequency rates \*



# **OHSAS18001 Certification Acquired** at 41 Sites

To reduce risk in the workplace, the Teijin Group encourages all of its manufacturing and processing sites to comply with OHSAS18001 occupational health and safety management system standards.

As of March 2010, a total of 41 sites (34 in Japan and 7 overseas) had acquired approval, accounting for 76% (81% in Japan, 58% overseas) of the applicable business sites.

# **Promoting the Three Pillars of Safety Activities**

In order to prevent workplace accidents, the Teijin Group has established three pillars of safety activities: the "5S" initiative (5 Japanese words [Seiri, Seiton, Seisou, Seiketsu and Shitsuke] which correspond to organization, tidiness, cleaning, hygiene and discipline), the "Hiyari-Hatto" (meaning close call or near miss) initiative and safety patrols.

Utilizing the information obtained through these activities, we aim to enhance individual awareness of risks, and communication in the workplace.

# **Sharing Workplace Accident Information and Preventing** Recurrences

Information relating to all workplace accidents that occur at Teijin Group companies is distributed group-wide to enable these experiences to be used as a reference, and to help prevent the recurrence of similar accidents.

The three major kinds of workplace accidents have been specified as: 1) accidents involving being caught in rotating machinery, 2) accidents involving contact or collision with transport equipment, and 3) falls or slips on walkways or staircases. In an attempt to prevent these kinds of accidents, we have established prevention guidelines for these three major

kinds of workplace accidents, and machinery safety assessment standards.

For serious accidents, which are defined in our rules for reporting accidents related to the environment, safety and health (ESH), measures to prevent recurrence of similar accidents are implemented group-wide. In 2010, there were zero serious workplace accidents at Teijin Group companies.

# **Response to Workplace Accidents**

For "very serious accidents," which are defined in our ESH auditing rules, and accidents attributable to an elementary problem, the Teijin Group conducts a special audit supervised by the General Manager of the ESH Office. The cause of the accident is investigated on-site, and support is provided for recurrencepreventative measures and planning.

In FY2010, we conducted the special audit\*2 of an accident involving being caught in a machine that occurred at a business site in the Setouchi region.

\*2 Special audit: Accidents subject to a special audit include accidents attributable to an elementary problem, even if the extent of damage is small.



Safety activities (TEIJIN POLYCARBONATE CHINA Ltd.)



Safety activities (Nantong Teijin Co., Ltd.)

# Fostering Employees with Healthy Mind and Body

To foster employees with ongoing vigor and enthusiasm for work, we are focusing on integrated management of health status and mental-health measures, thereby offering support for a healthy mind and body.

# **Enhancing Mental Health Measures**

In addition to the Health Care Administration Office established in April 2009, each group company in Japan has elected a person in charge of health administration, and an integrated system to manage the health status of employees has been created. A focus in FY2010 was measures relating to the mental health of employees. In October 2010, the Health Care Administration Office established a system to collect monthly information on the mental health status of employees in group companies in Japan, and, according on the situation, to use this information as part of group-wide mental health measures.

In FY2010, other main activities for group companies in Japan were: determining mental health status, reducing workplace stress, improving the counseling system, and stimulating increased communication.

Every March, we perform an investigation into stress in the workplace at all group companies in Japan. For workplaces where risk to health is found to be relatively high, we implement activities for a period of six months aiming to improve the workplace environment. The effectiveness of these activities are then checked in the following March as part of the attempt to create workplaces that are open and easy to work in.

Furthermore, with the assistance of an external Employee Assistance Program (EAP) organization, it was previously possible for employees to consult with a counselor about mental health issues via telephone or e-mail. However, after a review of the contract with the EAP organization, in April 2010, we started a new face-to-face counseling service for employees at remote branches and sales offices. In addition, we distributed cards and displayed posters to encourage active use of the counseling service, and provided managers with guidance booklets.

The Teijin Group Health Walk\*1 is an event held every October. Participants in this event "earn" a certain number of steps for verbal praise or appreciation given at the home or workplace. The aim is to encourage

communication in the workplace and at home and promote a healthy mind and body.

After the Great East Japan Earthquake in March 2011, through the coordinated efforts of the related internal departments, internal industrial health staff, and the EAP organization, we collected/provided health-related information and offered support and counseling for employees and their families.

\*1 The Teijin Group Health Walk: An employee-oriented annual event implemented in October in cooperation with the Teijin Group Health Insurance Association. Employees enter the number of steps earned every day on a special website. These steps are then converted into a distance, allowing employees to move along a virtual version of the "Fifty-three Stations of the Tokaido".



A poster to promote use of the hotline

# **Promoting Health Management and Prevention of Lifestyle-related Diseases**

In April 2008, it became mandatory for health insurance providers in Japan to provide specific health check-ups and guidance. In cooperation with the Teijin Group Health Insurance Association, we responded quickly to these changes. Group or individual guidance is mainly provided by industry medical staff at the head offices and other business sites, and we are supporting constant improvements.

While continuing to promote the annual Teijin Group Health Walk, we changed the previous arrangement of voluntary participation, and have positioned the event as a group-wide initiative to promote good health, reduce the ratio of health check-up reports with an abnormal finding and prevent lifestyle-related diseases.

# Approach to the Asbestos Issue

Since 2005, when asbestos-related health problems hit the headlines as a social issue in Japan, we have been taking measures to help in this regard. For example, we have set voluntary standards, such as exposure-prevention standards, and operating standards for asbestos-related health check-ups of employees, both current and retired.

Group-wide, all friable asbestos has been removed from any equipment which people are in contact with ordinarily. We are also continuing to take appropriate measures for the friable asbestos that remains in locations where it is not ordinarily in contact with people, and semi-friable asbestos in equipment completely isolated, such as thermal materials and heat insulators. For example, we are removing the remaining asbestos during periodical maintenance and switching to substitute materials.

There are no current employees affected by asbestos. However, in FY2010, two former employees were newly found to have asbestos-related health problems. Since FY2005, the cumulative number of employees found to have asbestos-related health problems is 22. Health check-ups for former employees are to be conducted until the end of 2011.

# **Preventing Nano-material-related Health Problems**

In July 2008, we established guidelines to prevent damage to health caused by work involving the production or handling of nano-materials in response to a notice issued by the Ministry of Health, Labor and Welfare, Japan.\*2

In March 2009, the relevant authorities issued a further three notices relating to nano-materials. In response, in June 2009, we expanded the scope of our guidelines to apply not only to nano-materials, but also recycling of nano-materials, added enhanced safety measures and clarified issues such as how information is communicated. In line with these revised guidelines, we are expanding our effects to prevent nano-material-related damage to health.

\*2 Notice issued by the Ministry of Health, Labor and Welfare: "Measures to Prevent Exposure to Nano-materials at Workplaces Where They Are Produced or Handled."

# Implementation of ESH Activities According to Regional Characteristics

We are actively raising awareness of workplace safety and disaster prevention and conducting other ESH activities at companies and plants in all countries, for example China, Thailand and Singapore, through events and campaigns designed to match the regional and national characteristics of each country.

#### **ESH Activities in Thailand**

**Environment, Safety** 

Each of the four group companies (five plants) in Thailand conduct distinctive ESH activities. All companies/plants are situated close to the capital city Bangkok, and are important players in the polyester business of the Teijin Group.

### **■** Enthusiastic Participation of All Members in Safety Activities at TPL

Teijin Polyester (Thailand) Limited (TPL) has a history in Thailand spanning more than 40 years. It has been commended for its excellence in safety, health and work environment by the Thai Labor Minister for eight consecutive years. As part of its activities, TPL is promoting "visualization" of work procedures to prevent workplace accidents through various measures including easy-to-understand displays in the workplace.

TPL also holds an exhibition during ESH week once a year in which all departments present the results of ESH activities using panels, thereby boosting the awareness and attitude towards safety.

### ■ Happy 8 Activities at TJT to Increase **Employee Satisfaction**

Teijin (Thailand) Limited (TJT) aims to create happy workplace environments based on eight factors relating to workplace happiness. These activities help to increase satisfaction with the company, ensure safety and productivity, and develop employee loyalty.

### ■ Intensive Training at TNI Relating to **Safety and Disaster Prevention**

At Thai Namsiri Intertex Co., Ltd. (TNI), a company engaged in textile manufacturing and dyeing, many spinning elements and dangerous items are used. To raise awareness of the danger among employees, simulations are performed to show the actual effect of an object being caught in a spinning element.

In addition, new recruits are expected to take part in fire drills four times a year under the new and enhanced employee training program.

### ▶ Reinforced Hivari-Hatto (Close Call) Activities and Reference to Accidents at Other Companies at TCT

At Teijin Cord (Thailand) Co., Ltd. (TCT), a manufacturer of cable cords for transmission belts situated in Ayutthaya, the strengthening of Hiyari-Hatto activities, which started in 2007, is showing good results. The submission rate, which was previously approx. 0.5 cases per month per employee has risen to over 2 cases per month per employee in FY2010, a relatively high submission rate even compared to the Teijin Group companies in Japan.

Aiming to prevent disasters, the company is also pointing out potential disaster areas at its own plant through referring to disasters that have occurred at other companies and raising awareness among employees.

#### **BBS** Activities for All Business Groups

The Polyester Fibers Business Group, which includes the four group companies in Thailand, has adopted the concept of Behavior for Basic Safety (BBS) as the base for its safety activities. Safety activities are designed to fit the national characteristics specific to Thailand. Examples are the daily safety meeting at TNI and a safety song before the start of work at TCT. The goal is for employees to enjoy participating in safety activities.

# **Activities in China and Singapore**

TEIJIN POLYCARBONATE CHINA Ltd. (TPC) in Zhejiang, China is raising safety awareness through constant display of safety information on electronic billboards in the office and a streamlined plant lavout.

A safety awareness campaign is planned at TEIJIN POLYCARBONATE SINGAPORE PTE Ltd. (TPS) to share safety awareness information and raise awareness levels of all employees, especially considering the high turnover and multiracial composition of employees. Besides holding safety presentations, safety meetings are held before work to explain safety precautions.

# Safety Workshop and Evacuation Drill at Sewing Plant in Vietnam

Environment, safety and health issues are actively promoted at FASHION FORCE NO.1 FACTORY Co., Ltd., a sewing plant under the direct management of N.I. Teijin Shoji Group, and situated at Long Binh Techno Park (LOTECO) in Vietnam. A nurse is employed full-time to manage the health and hygiene of the approximate 400 employees, and hold fire evacuation drills, safety workshops and meetings to explain company policies on safety and related issues.

The evacuation drill is supported by the local fire department which deploys an actual fire engine to make the drill more realistic. Employees must cooperate with each other to complete the drill as quickly as possible. Training in emergency procedures such as cardiac massage and bandaging wounds is provided, and the enthusiastic participation of employees is expected.





An evacuation drill

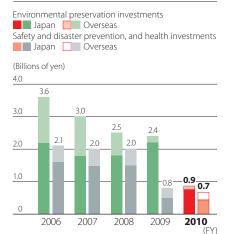
# For Constant, Efficient Improvements of ESH Activities

We quantify ESH-related investments/expenses and link this to promoting and improving ESH activities in an efficient manner. We are also building an environmental management system based on ISO and Eco-Action 21 to promote steady group-wide improvements in ESH activities.

# **ESH-related Accounting**

The Teijin Group calculates the investments, expenses, and effect of ESH activities at all group companies. The investments, expenses and effect of activities for environmental preservation, energy savings, reduced use of natural resources, and recycling are calculated with reference to the environmental accounting guidelines published by the Ministry of the Environment of Japan. We also calculate the investments and expenses for safety and disaster prevention, and health.

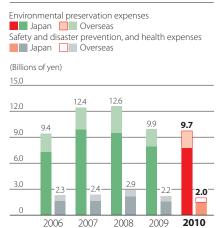
#### **Trends in ESH-related Investments**



Group-wide environmental preservation investments totaled 0.9 billion yen in FY2010, a considerable decrease of 64% compared to the previous year. This decrease resulted from reduced investment in R&D in Japan, even despite increased group-wide investments in pollution control and global environmental preservation.

Group-wide investments related to disaster prevention, safety and health totaled 0.7 billion ven in FY2010, a decrease of 11% compared to the previous year. This was mainly due to the influence of the economic downturn, and occurred even despite increased investments for occupational safety measures overseas.

#### **Trends in ESH-related Expenses**



Group-wide, FY2010 environmental preservation expenses were 9.7 billion yen, a decrease of 3% compared to the previous year. This result occurred due to decreased resource recycling expenses in Japan, and despite increased group-wide global conservation expenses and increased R&D expenses in Japan.

For disaster prevention, safety and health expenses, although occupational safety expenses increased in Japan, group-wide disaster prevention expenses decreased. Expenses for disaster prevention, safety and health in FY2010 were 2 billion yen, a decrease of 12% compared to the previous year.

#### Breakdown of ESH-related Costs of the Teijin Group in FY2010 ★

(Unit: Hundreds of millions of yen)

	Ite	m	Main activities	Investment	Expenses	Economic benefit*	Actual effect
	Pollution prevention		Measures to prevent pollution (air, water, soil, groundwater, noise, odor and other) and reduce chemical substance emissions	3.16	20.66	0.14	Reduced chemical substance emissions (see page 27)     Management of SOx emissions and COD load (see pages 27–28)
	Business area	Global environmental conservation	Measures such as those relating to energy savings and prevention of global warming	3.61	5.27	4.83	Measures to help prevent global warming and promote energy-saving and other activities (see pages 25–26)
		Resource recycling	Measures to increase effective use of waste, including promotion of waste recycling and solvent recovery	0.19	17.48	5.87	• Reduced "waste with no effective use" (see pages 27-28)
Pi	roducts a	and services	Measures such as those to promote used-product recycling	0.01	2.14	2.15	
	dministr	ation	Establishment and maintenance of an environmental management system, including costs for administrative personnel	_	6.24	_	_
R	R&D		Expenses for R&D of products and technologies designed to reduce environmental impact	1.56	38.49	_	_
	Social activities		Disclosure of environmental information at exhibitions; payment of SOx levy, environmental association memberships and other fees	_	6.03	_	_
	epairing amage	environmental	Investigation and measures to deal with soil, groundwater and other pollution	_	0.27	_	• Investigation of soil and groundwater pollution, and necessa measures for decontamination (see page 28)
$\perp$			Total	8.52	96.58	12.99	_
	Ite	m	Main activities	Investment	Expenses	Economic benefit*	Actual effect
	Occupational safety		Ensuring occupational safety	4.01	3.99	_	<ul> <li>Understanding conditions that can cause workplace injuries (see page 36)</li> </ul>
			3				(see page 50)
W		e environment nent	Activities relating to ventilation, lighting, and evaluating, maintaining and improving the workplace environment	0.81	0.88	_	——————————————————————————————————————
W in	Vorkplace	nent	Activities relating to ventilation, lighting, and evaluating,	0.81	0.88	_ _	——————————————————————————————————————
W im	Vorkplace mprovem lealth pro	nent	Activities relating to ventilation, lighting, and evaluating, maintaining and improving the workplace environment Physical examinations and other measures to				Disaster prevention activities (e.g. preventing explosions/fire (see pages 35-36)
W in H	Vorkplace mprovem lealth pro	omotion	Activities relating to ventilation, lighting, and evaluating, maintaining and improving the workplace environment Physical examinations and other measures to promote health Investigation of the seismic resistance of buildings, maintenance, and improvement of fire prevention	0.31	4.94		Disaster prevention activities (e.g. preventing explosions/fire
W in H	Vorkplace mprovem lealth pro Disaster p	ment omotion revention	Activities relating to ventilation, lighting, and evaluating, maintaining and improving the workplace environment Physical examinations and other measures to promote health Investigation of the seismic resistance of buildings, maintenance, and improvement of fire prevention and extinguishing systems  R&D of equipment and systems for safety and	0.31	4.94 3.29	_	Disaster prevention activities (e.g. preventing explosions/fire

<sup>\*</sup> Monetary effect: Only those items that had a substantial effect are included in the calculations.

# **Obtaining Management System Certifications**

In the Teijin Group, each group company creates an environmental management system (EMS) based on ISO14001 and Eco-Action 21 proposed by the Ministry of the Environment of Japan (and equivalent standards overseas if applicable). In doing this, we aim to take our independent activities for environmental preservation to the next level through continuous improvements.

#### **Current Status of ISO14001 Certification**

#### Japan (28 companies, 48 business sites)

Teijin (Iwakuni, Matsuyama, Mihara, Osaka Research Center), Teijin Fibers (Tokuyama), Teijin DuPont Films (Gifu, Utsunomiya, Ibaraki), Teijin Chemicals (Matsuyama, Mihara, Chiba), Hiroshima Plastic, Teiyo, Toho Tenax (Mishima, Tokushima, Ibigawa), Teijin Monofilament, Teijin Modern Yarn (Komatsu, Kaga, Mihara), Teijin Tecloth, Owari Seisen, Wako, Teijin Nestex, Otsuka Polymer Industry, Teijin Tedy, Teijin Cordley (Shimane), Teijin Pharma (Tokyo Research Center), Teisan Pharmaceuticals, Union Tire Cord, Unisel, Teijin Logistics (Iwakuni, Ehime, Mihara), Infocom (head office, Kansai, Yodoyabashi, Nishihonmachi, Shinyokohama, Kasumigaseki, Akasaka), Infocom East Japan (Shin-Yokohama), Infocom West Japan (Matsuyama), Teijin Eco-Science (Matsuyama), Teijin Kosan (Ehime, Mihara), N.I. Textile, Naps

#### Overseas (14 companies, 17 business sites)

The Netherlands: Teijin Aramid (Delfzijl, Arnhem, Emmen) Indonesia: P.T. Teijin Indonesia Fiber, P.T. INDONESIA TEIJIN DUPONT FILMS China: Nantong Teijin, Teijin Chemicals Plastic Compounds Shanghai, TEIJIN POLYCARBONATE CHINA Thailand: Teijin Polyester (Thailand), Teijin (Thailand), Thai Namsiri Intertex (Weaving, Dyeing), TEIJIN CORD(THAILAND) Singapore: TEIJIN POLYCARBONATE SINGAPORE USA: Teijin Monofilament U.S. Germany: Teijin Monofilament Germany, Toho Tenax Europe, NTA

#### Current Status of OHSAS18001 Certification

#### Japan

Teijin (Iwakuni, Matsuyama, Mihara), Teijin Cordley (Mihara), Teijin Fibers (Tokuyama), Teijin Chemicals (Matsuyama, Mihara), Teijin DuPont Films (Gifu, Utsunomiya, Ibaraki), Teijin Modern Yarn (Mihara), Union Tire Cord, Unisel, Teijin Tedy, Teijin Monofilament, Hiroshima Plastic, Teisan Pharmaceuticals, Kure Kogyo (Matsuyama, Iwakuni), Teijin Eco-Science (Matsuyama), Teijin Logistics (Iwakuni, Ehime, Mihara), Teijin Kosan (Ehime, Mihara), Teijin Engineering (Matsuyama Post), Toho Tenax (Mishima, Tokushima, Ibigawa), Toho Textile, Toho Chemical Engineering & Construction (Mishima, Gifu, Tokushima), Toho Machinery

#### Overseas

The Netherlands: Teijin Aramid (Delfzijl, Arnhem, Emmen) Thailand: Teijin Polyester (Thailand), Teijin (Thailand) Singapore: TEIJIN POLYCARBONATE SINGAPORE Germany: Toho Tenax Europe

# Current Status of ISO9001, ISO13485, ISO16949 and Other Certifications

(Blue text signifies facilities that newly obtained certification in FY2010)

#### Japan

Teijin (Polymer Plant 1, Polymer Plant 2, Matsuyama Raw Materials, Tokuyama Raw Materials & Polymer Plant, HFC Production Department), TS Aromatics, Teijin Fibers (Yarn, Cotton, Iwakuni Kosen), Teijin Tedy, Teijin Modern Yarn, Teijin Monofilament, Union Tire Cord, Unisel, Wako, Teijin Techno Products (Conex, Technora), Teijin Cordley (Mihara, Shimane), Toho Tenax (head office, Mishima Plant, Tokushima Plant, Ibigawa Plant, R&D Institute), Toho Chemical Engineering & Construction (Mishima, Tokushima), Toho Machinery, Teijin DuPont Films (Gifu, Utsunomiya, KF, Ibaraki), Film Process, Teijin Chemicals (Matsuyama, Mihara, Plastic Technical Center, TF, LCD Materials), Hiroshima Plastic, Teiyo, Kinkai Chemicals, Teijin Pharma (Iwakuni Medical Plant, Home Medical Care Technical Service Center), Infocom, Infocom East Japan, Infocom West Japan, Infovec, Teijin Engineering (Osaka, Matsuyama), Kure Kogyo (Iwakuni, Matsuyama), Teijin Eco-Science (Ibaragi, Hamura, Matsuyama, High Performance Analysis Center), Teijin Entech (Matsuyama Utility Center), Teijin Logistics (Osaka, Ehime, Tokuyama, Tokyo)

#### Overseas

China: Nantong Teijin, Teijin Chemicals Plastic Compounds Shanghai, TEIJIN POLYCARBONATE CHINA, Nantong Teijin Automotive Fabrics Finishing Thailand: Teijin Polyester (Thailand), TEIJIN (THAILAND), TEIJIN CORD (THAILAND), Thai Namsiri Intertex Indonesia: P.T. INDONESIA TEIJIN DUPONT FILMS USA: Toho Tenax America (TTA), Diversified Structural Composites Germany: Teijin Monofilament Germany, Teijin Aramid (Wuppe), Toho Tenax Europe The Netherlands: Teijin Aramid (Emmen, Arnhem, Delfzijl, QRI, Arnhem Central Office), Teijin Kasei Europe Singapore: TEIJIN POLYCARBONATE SINGAPORE

#### Scope of ESH Report (Plants/Business Sites)

(Blue text signifies facilities newly added in FY2011)

#### **Polyester Fibers**

- Japan: Teijin Fibers, Teijin Tedy, Teijin Modern Yarn, Wako, Teijin Monofilament, Union Tire Cord, Unisel
- Overseas: Teijin Polyester (Thailand), TEIJIN(THAILAND), TEIJIN CORD(THAILAND), Thai Namsiri Intertex, Nantong Teijin, Teijin Modern Yarn (Nantong), Nantong Teijin Automotive Fabrics Finishing, Teijin Monofilament Germany

#### **Aramid Fibers**

- Japan: Teijin Techno Products, Teijin Cordley
- Overseas: Teijin Aramid

#### **Carbon Fibers**

- Japan: Toho Tenax, Toho Textile, Toho Chemical Engineering & Construction, Toho Machinery
- Overseas: Toho Tenax Furope, Toho Tenax America, Diversified Structural Composites

- Japan: Teijin DuPont Films, Gifu Kosan, Film
- Overseas: P.T. INDONESIA TEIJIN DUPONT **FILMS**

#### **Plastics**

- Japan: Teijin Chemicals, Hiroshima Plastic, Kinkai Chemicals, Teiyo
- Overseas: TEIJIN POLYCARBONATE SINGAPORE, Teijin Chemicals Plastic Compounds Shanghai, TEIJIN POLYCARBONATE CHINA

### Medical & Pharmaceutical

Japan: Teijin Pharma, Teisan Pharmaceuticals, Teijin Home Healthcare

# **Trading and Retail**

- Japan: N.I. Teijin Shoji, Teijin Associa Retail, Shinwa Gosen, Teikyo Lace, Teisho Sangyo,
- Overseas: FASHION FORCE NO.1 FACTORY

# IT

Japan: Infocom

#### **Individual Management Companies**

■ Japan: Teijin Kosan, Kure Kogyo, Teijin Logistics, Teijin Eco-Science, Teijin Engineering

# **Corporate Staff and Others**

■ Japan: Teijin Creative Staff, Teijin Entech

Company names are correct as of September 2011. \* Limited (Ltd.), Co., Ltd., Inc., GmbH, Corporation, B.V. and the like have been omitted from the company

# **Promoting Compliance and Risk Management**

We believe that compliance and risk management are the basis for sound corporate governance and our CSR activities are focused on these two elements of internal control. We are working hard to ensure that our Corporate Code of Conduct and Corporate Standards of Conduct are followed closely at all group companies and we are implementing business continuity plans that assess the major risks.

# **Compliance and Risk Management**

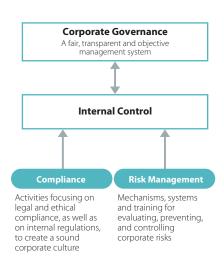
The Teijin Group considers compliance and risk management to be pillars of internal control that support corporate governance. Operations relating to these two elements are combined, and company executives and employees are unified in efforts to raise awareness and complete tasks thoroughly.

Compliance is essential for creating a sound corporate culture. With this in mind, we not only comply with internal rules and laws relevant to our business, but also carry out various educational programs on corporate ethics. Recognizing that risk management is a key to successfully assessing and preventing corporate risks, we are conducting training and implementing risk control systems.

### Results of CSRO Audits (Law Violations and Occurrence of Accidents)

Since FY2003, every February, the Chief Social Responsibility Officer (CSRO) has been in charge of an audit to assess the compliance and risk management activities of the previous calendar year. The CSRO audit assesses whether there were any serious violations of laws or accidents in this area, and confirms the compliance and risk

#### **Positioning of Compliance and** Risk Management



management activities of each group company and each business group on the basis of the compliance and risk management activity survey submitted. In FY2010, 54 of 72 companies in Japan and 40 of 78 companies overseas submitted a survey form.

In 2010, there were no serious accidents reported to the CEO and CSRO. However, there was one sexual harassment case which was viewed to be a problem in terms of internal rules relating to "making comments that constitute sexual harassment and knowingly repeating such comments." Disciplinary action was taken for the person concerned, and managers were given guidance relating to appropriate workplace management.

The prompt for reporting this case (reported via the hotline [see page 42]) was the routine Corporate Ethics Month campaign, part of workplace training, a fact which reaffirms the significance of continued ethics-related awareness-raising activities.

# **Group-wide Application of Corporate Ethics and Compliance**

The Teijin Group's Corporate Code of Conduct and Corporate Standards of Conduct were revised in 2006 and 2007, respectively, to reflect the changing social demands on corporations. Furthermore, since 2006, major overseas group companies have created US, EU, Chinese, Thai, and Indonesian versions of the Corporate Standards of Conduct. We are also working to ensure that all group companies perform training on these corporate ethics standards at least once a year.

In the Corporate Ethics Month campaign in October 2010, a message from the CEO and campaign posters were prepared in six languages (Japanese, English, Chinese, Thai,

Indonesian and German) and distributed to all group companies. In addition to displaying the posters. workshops involving all employees were held at individual companies.



Corporate Ethics Month campaign poster

#### **PDCA Cycle of Compliance and Risk Management Activities**



CSRO Audit: Once a year **Corporate Ethics Awareness Survey:** Once a year

#### **Develop and Maintain of Educational Materials**

Improve the content, and update the Q&A and case-study lists

#### **Implement Training**

- Workshops for corporate ethics staff
- E-learning about compliance
- Level-based workshops

### Approach to Risk

- Training relating to verifying safety in emergencies
- · Clarifying and evaluating risks
- Creating business continuity plans
- Earthquake response drills

#### **Corporate Ethics Month Campaign**

- Display corporate ethics posters
- Display posters aiming to prevent abuse of authority
- · Workshops for all employees
- Conduct surveys of all employees using check

#### Information Disclosure

- Set up a corporate ethics website on the corporate intranet
- · Disclose the results of corporate ethics surveys

#### **Operate Hotline**

- Notices to all group employees and individual
- Disclose hotline information (every six months)

# E-learning about compliance

Since 2004, we have performed e-learning about compliance, mainly for those in managerial and mid-level positions who have not taken the course. In Japan, since 2008, we have provided a mini e-learning course with abridged training materials, aiming to increase the number of people taking the course.

# **Check Sheets to Survey All Employees** at the Corporate Ethics Workshop

To increase the interest and awareness of all group employees in relation to the Corporate Code of Conduct and Corporate Standards of Conduct, we have conducted a guestionnaire on the Teijin Group Corporate Ethics Handbook since FY2007. As of FY2009, we use check sheets, which have further improved upon the questionnaire.

The check sheet contains six questions directed at group company executives and employees in managerial positions, and another six for general employees. Some examples of questions are: "Have you read the handbook?""Do you report violations?" and "Do you observe the Code of Conduct and the Standards of Conduct?"The survey, which requires all respondents to write their name, was completed by a total of 11,152 executives, and full-time and contract employees at group companies in Japan in FY2010. Of these, a total of 10,578 responses (approx. 95% response rate) were obtained\*. The response rate for executives and full-time employees was 96%. The survey for FY2011 will be conducted in the same manner as FY2010.



Teijin Group corporate ethics monthly check sheet distributed to all employees

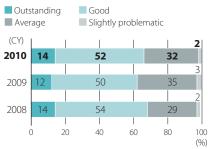
# **Corporate Ethics Awareness Survey**

To monitor employees' awareness of corporate ethics, we have conducted anonymous questionnaires on random samples of group employees in Japan (approx. 10%) every year since 1999.

In FY2010, 1,272 employees (including contract employees and part-timers, but excluding temporary staff) were asked to take part in the survey, and 1,069 responded (84% response rate)★. The results revealed that 66% of respondents answered "Outstanding" or "Good" to the guestion, "What do you think about the Teijin Group's awareness of ethical issues?" This represents a slight increase on the FY2009 level of 62%.

### **Results of Corporate Ethics Awareness Survey**

Question: What do you think about the Teijin Group's awareness of ethical issues?



# **Counseling and Reporting System** (Hotline) Operations

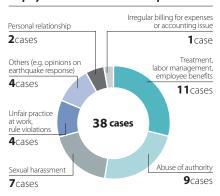
The aim of the Teijin Group counseling and reporting system (hotline) is for early detection of legal or ethical problems within the group which can then be resolved through our internal mechanisms. As well as having the obvious function of a corporate risk management tool, the hotline is very

useful for helping employees solve issues.

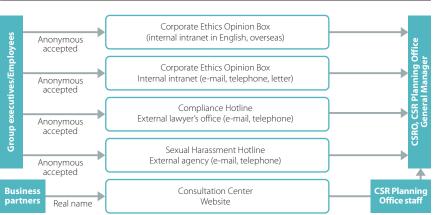
The Teijin Group internal counseling and reporting system was launched in 1999 on the intranet and via a consultation center operated through a contract with an external organization. The system is not limited to full-time employees; it is also open to contract and temporary employees. Since 2006, a consultation link for business partners has been available on our website.

The hotline system is operated under the direction of the CSRO in accordance with legal and ethical compliance and internal regulations, giving due consideration to protecting those who ask for consultation or seek to file a report. Major risk issues are reported to the Total Risk Management Committee (see page 21), and are handled by top management. While protecting the privacy of individuals, the content and details of responses to issues raised by employees via consultation/reports are summarized and disclosed to group companies every six months for educational purposes. In FY2010, there were 38 cases of reporting/consultation by employees and others outside the group.

#### **Content of Reports/Consultation From** Employees/Those Outside the Group in FY2010★



# Teijin Group's Hotline



# **Activities to Promote Corporate Ethics at Overseas Group Companies**

We have been making steady progress in overseas corporate ethics activities while maintaining the Teijin Group's basic policies and considering the culture and traditions of each country. To enhance compliance and risk management in overseas group companies, we hold compliance and risk management meetings in major overseas regions every year.

For FY2010, meetings were held in Wuppertal, Germany in September 2010, in Shanghai, China and Singapore in October 2010, in Tennessee, USA in January 2011, and in Bangkok, Thailand in February 2011.

# **Risk Management Activities**

Since FY2003, to strengthen its risk management according to the COSO\*1 guidelines, the Teijin Group has been focusing on clarifying risks, assessing risks based on frequency and effect, risk prevention and control, and response training.

In FY2010, each group company implemented risk management activities. Risk that is common to many companies was selected as important risk for the Teijin Group, and measures to deal with the risk are being put in place across the entire group.

\*1 COSO: Global standards for internal control systems created by the Committee of Sponsoring Organizations of the Treadway Commission.

# **Progress of Business Continuity Plans**

A business continuity plan (BCP) refers to "an action plan by which a company can protect itself from loss of corporate value in emergencies, such as accidents and disasters, by preventing interruption of its business activities or by quickly restoring the activities if interrupted." In recent years, companies have been facing a broader range of risks; in addition to earthquakes, and other accidents and disasters, these risks include threats of terrorism and the H1N1 swine flu. It is crucial that business activities can continue or quickly be restored if interrupted, even in such emergencies.

The Teijin Group established BCP basic policies in FY2006 and first formulated a BCP for central management (top-level management under the CEO) to prepare for large earthquakes in metropolitan areas. We are gradually expanding the application of BCPs to group companies. Since the Great East Japan Earthquake in March 2011, which exceeded our expectations in its effects, we are reviewing our simulations and countermeasures. Moreover, as a part of the BCP to respond to large earthquakes, we are considering measures such as shifting the functions of head office temporarily and setting up a work-at-home system in the case of scheduled power outages in Tokyo.

### ■ A Business Continuity Plan to Respond to Large Earthquakes

To ensure that the important functions of decision-making and internal operations are maintained even in the event of a serious disaster, such as a major earthquake in the greater metropolitan areas of Tokyo or Osaka, we formulated a BCP for central management in FY2006. Since then, training has been conducted and the program has been updated as necessary.

In FY2010, we established earthquake response headquarters at the Tokyo and Osaka head offices to prepare for a major earthquake in the greater metropolitan areas. We conducted initial response drills, which included verification of employees' safety and reports by regional teams\*2, and communication drills using satellite telephones and the Emergency Call<sup>TM</sup> system.

\*2 Regional team: In the Tokyo head office, we have established disaster prevention teams for each block (a specific area on each floor) consisting of a block leader, area leader, disaster prevention leader and fire warden.



A drill in the Tokyo head office simulating a large earthquake

# ■ Utilizing Emergency Call<sup>™</sup>

Emergency Call<sup>TM</sup> (see page 6) is a system to verify employees' safety in emergencies. It is operated by the Teijin Group company, Infocom Corporation. In the event of a

disaster, the emergency headquarters simultaneously sends emergency information to all employees. Upon receiving the information, employees respond by reporting their situation, including family details, and whether they can come to work. The information is sent up to 100 times to six previously registered addresses for mobile phones e-mail, and fixed telephones.

The Teijin Group introduced the Emergency Call<sup>TM</sup> system in FY2005. As of FY2010, approximately 12,000 employees of group companies in Japan have registered. Two safety-verification drills are performed annually for each business group and company.

### How *Emergency Call* ™ Works



(2) Safety confirmation

# **Information Security**

In the Teijin Group, the IT Planning Office promotes information security and protection of personal information under the supervision of the Chief Information Officer (CIO).

In addition to voluntary activities by each company, we make it compulsory for all group companies to take an e-learning course on information security in order to enhance the standard of group-wide management.

The IT Planning Office also conducts annual audits regarding the protection of personal information and information security. For group companies handling highly confidential personal information, we conduct special periodical audits on the protection of personal information.

After taking the e-learning course, all full-time employees and new ID holders who have applied to use the Teijin network are required to take a verification test and continue training until reaching the specified standard.

# Response to the Great East Japan Earthquake

After the Great East Japan Earthquake in March 2011, we immediately established the Teijin Group Earthquake Response Headquarters headed by the CEO at the Tokyo head office. The intensity of the earthquake was upper-5 in the Tokyo head office, so the first step was to check the safety of employees and visitors in the building, and the extent of damage. Following this, we checked the safety of group company employees and damage to the company dormitories, and gathered all available earthquake information.

Soon after the earthquake, telephone lines were blocked due to too much traffic. However, through use of Emergency Call<sup>TM</sup>, our emergency safety confirmation system, we were able to secure communication via satellite phone and confirm the safety of our employees. Via Emergency Call<sup>TM</sup>, we transmitted a total of 11 reports to approximately 3,800 employees in areas where intensity was lower-6 or more, and within six hours, we were able to confirm the safety of over 80% of employees. The system also proved useful for communicating emergency information regarding attendance at work at times of scheduled power outages or transit system delays.

Fortunately, there were no casualties and only slight damage at the Tokyo head office, but stopped traffic systems forced approximately 650 employees to stay overnight in the office building. Past training sessions proved effective in the initial response, which included verifying safety and measures for those who could not go home. Nevertheless, several issues remain regarding large-scale earthquakes that cause damage over a wide area. For example, how to avoid confusion in collecting information. Through measures such as reviewing the BCP, we will address these issues and aim for improvement.

#### Impact of the Great East Japan Earthquake on the Teijin Group and **Relief Work**

The Teijin Group Earthquake Response Headquarters exercised group functions and input human resources to assist employees and business sites affected by the disaster, working hard to ensure a quick recovery.

### 1. Extent of Damage and Support Activities

#### (1) Teijin DuPont Films Japan Limited: Utsunomiya and Ibaraki Plants

At Utsunomiya and Ibaraki Plants, infrastructure for electricity, water, communications and other services could not be used, which forced the plants to suspend production from March 11, the day the earthquake struck. The extent of damage was reported to the response headquarters at the head office. Response headquarters were also established regionally to confirm evacuation routes and take measures to prevent secondary disasters.

Every possible effort was made by the Teijin Group to ensure a quick recovery. Experts in power transmission, machinery, electric equipment, construction and purchasing from respective departments and affiliates were called upon to assist in the recovery. In addition to dispatching personnel to work sites, we held daily meetings to check the progress of recovery at the Osaka head office, and provided support in terms of logistics, including technical assistance and human resources. Amid

continuing aftershocks, recovery work involving over 400 construction personnel per day went ahead without incident. Operations were resumed at Ibaraki Plant on March 25 and Utsunomiya Plant on June 29.



Repair of cable ducts

#### (2) Medical & Pharmaceutical Business Group

For the Medical and Pharmaceutical Business Group, at the Sendai and Takasaki branches, damaged was sustained at sales and satellite offices in the form of power outages, flooding, ground subsidence, submerged company vehicles and other effects of the tsunami.

Notable efforts were made by the home health care business to promptly check the safety of approximately 24,000 patients living in areas hit by tremors of lower-5 or higher intensity. This was achieved through use of a disaster response and support map system, a Teijin original development, and through increased staff at call centers to enable 24-hour assistance. Each day, between 30 and 45 support personnel were dispatched to the disaster areas from branch offices throughout the country. In addition, approximately 17,000 portable oxygen cylinders were sent from all over the country, and

approximately 600 oxygen enrichers and 280 batteries for respirators were procured and delivered to patients.

We also provided oxygen enrichers to medical institutions that continued to provide medical services despite sustaining damage from the tsunami.



Provision of oxygen cylinders to patients

### 2. Support for Affected Areas

The Teijin Group donated 100 million yen through the Central Community Chest of Japan, and relief goods such as blankets, emergency mats, futons, masks, antiseptic, and men's and children's clothing. The total amount of support, including the oxygen cylinders mentioned above, amounted to approximately 500 million yen.

Voluntary donations were also made by employees at group companies in Japan and overseas, and we joined the following programs as part of the Nippon Keidanren's 1% Club:

- (1) Program to collect necessities for affected areas and pack them in bags for distribution to each family group
- (2) Volunteer program for activities in affected areas such as Iwate, Miyagi and Fukushima according to local needs.

#### 3. Response to Aftershocks and Power Outages

Anticipating large aftershocks and disruption in public transit systems due to scheduled power outages, to secure the safety of employees working in the metropolitan area, we recommended a work-at-home system, and continually maintained an environment to enable more than 2,000 employees to work at home in an emergency. In addition, as a measure to respond to power usage restrictions, we fully utilized our in-house power generators, and to conserve electricity, we recommend turning off air conditioners, dimming lighting, reducing standby power, and avoiding overtime whenever possible.

We also changed the venue for the company orientation held on April 1 from the Tokyo head office to the Osaka head office.

#### 4. Response to the Radiation Issue

Considering the safety of its employees as its highest priority, in response to the radiation issue, the Teijin Group promptly prepared management guidelines related to work performed in radiationaffected areas, and is monitoring radiation levels at business sites, and branch and sales offices. As of September 2011, we are continuing to record and calculate the accumulated exposure to radiation of employees.

The International Commission on Radiological Protection (ICRP) states that the maximum accumulated exposure to radiation per

year with no influence to an individual's health is 100mSv. The Teijin Group has set its managerial level to 1mSv, or one-hundredth of this value (the standard maximum for radiation exposure per year for the general public).



Measuring radiation levels

# Creating a Secure Quality Assurance System and Improving Customer Satisfaction

To provide products that are safe for our customers to use, and to ensure customer satisfaction, we promote product liability/quality assurance activities under an independent management system.

# **Group-wide Product Liability/ Quality Assurance Management**

The Teijin Group Product Liability/Quality Assurance Regulations apply to all Teijin Group products and services and can be considered the base for our product safety and quality assurance activities.

Based on these regulations, we are promoting product liability/quality assurance activities for our business groups through basic policies and associated targets set by the Group Product Liability/Quality Assurance Subcommittee (see figure at bottom left).

We also examine group-wide activities through evaluations carried out by the chairman of the Product Liability/Quality Assurance Subcommittee, link these evaluations to our actions, and make recommendations to any business group that requires guidance.

Through performing these activities, we are able to offer quick responses to a diversifying social environment, and ensure that the products we provide are safe for our customers to use.

# **Product Liability/Quality Assurance** Management for the Product Line-up of Each Business Group

The Product Liability/Quality Assurance Unit System is a quality-assurance management system unique to the Teijin Group. Its purpose is to increase customer satisfaction, prevent product defects, and ensure an appropriate response in the event a product defect occurs. This system has been established for the product line-up of all business groups, and is applied consistently throughout the life cycle of the product, from R&D through to sales.

The Product Liability/Quality Assurance Unit System covers the whole scope of the ISO standards for quality management systems, and incorporates perspectives on product liability/quality assurance such as responses to customers and product safety. This approach allows us to create and operate a system in which both quality management and quality assurance are fully functioning. We also implement the PDCA approach including checking for and improving on weak points (see figure at bottom right).

# **Response to Claims**

# ▶ Product Liability/Quality Assurance Goals

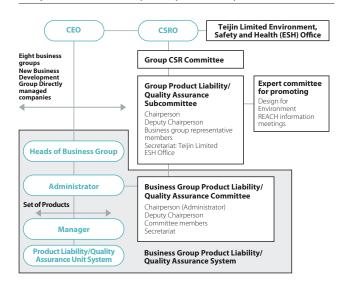
Product liability claims\*1 Zero Serious quality claims\*2 Zero

In 2010, we once again achieved zero product liability claims★. This result was possible based on the guidance and support provided through auditing, the Product Liability/Quality Assurance Committee and other processes.

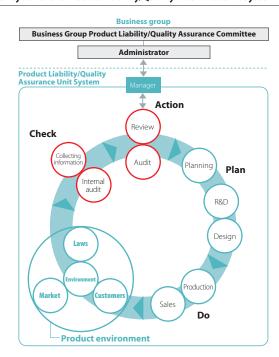
Despite this, there were 12 serious quality claims★. We took each claim very seriously and we are continuing with measures to prevent recurrence while aiming for closer ties with our customers. The results of these measures will be described in future CSR reports and other documents.

- \*1 Product liability claim: A claim involving (large-scale) damage to property or people caused by a product defect, where a cause-and-effect relationship is established between the damage and the defect.
- \*2 Serious quality claim: A claim relating to a product defect where there is no related damage but a strong possibility that there may be, or a defect that causes or is likely to cause loss of trust in the Teijin Group.

#### Group-wide Product Liability/Quality Assurance System



#### PDCA Cycle for the Product Liability/Quality Assurance Unit System



# **Product Liability/ Quality Assurance Assessment**

Before new products are released, they pass through our Product Liability/Quality Assurance Assessment System where we check the product's safety and quality over its whole life cycle. We are now consolidating the system, including adoption of a simplified assessment method.

In FY2010, we made approximately 1,000 assessments, consisting of roughly 900 new product assessments and 100 reviews of already-launched products\*.

# **Product Liability/ Quality Assurance Audits**

Since FY2005, the chairman of Product Liability/Quality Assurance Subcommittee has performed audits on all business groups that have introduced the Product Liability/Quality Assurance Unit System (eight business groups, the New Business Development Group and four directly managed companies as of March 2010). We have also carried out audits to check how the system is working and to verify its effectiveness.

In FY2010 audits uncovered some issues in various business groups. In response, we have implemented periodical audits to maintain and improve product liability/quality assurance activities. In addition, we carried out special audits of three business groups who did not report on serious quality claims at an appropriate time, and we are now checking whether improvements have been made.

Based on the audit results, we will undertake the following activities from FY2011 to improve the reliability of product liability/quality assurance.

- Improve the functioning of Product **Liability/Quality Assurance assessment**
- Improve management/organization of business group product liability/ quality assurance
- Implement thorough product liability/quality assurance training
- Respond to new chemical substance regulations

# **Compliance with New Regulations** Regarding Chemical Substances (e.g. REACH/CLP)

In June 2006, in order to achieve compliance with REACH, new regulations relating to chemical substances in Europe, we set-up a special subcommittee within the Group Product Liability/Quality Assurance Subcommittee. Since establishment, this special subcommittee has been working hard to ensure compliance with REACH. As a result of these efforts, we can confirm the completion of necessary procedures before the applicable deadlines; November 30, 2010 for primary registration under REACH regulations\*3, and January 3, 2011 for procedures relating to existing chemical substances under CLP regulations\*4. In the future, we will continue striving for compliance with these regulations.

Through this compliance with REACH, CLP and other regulations in Japan and overseas, we plan to create a chemical substance information management

system that includes supply chain management. In doing this we will take measures to proactively disclose information to customers.

- \*3 REACH: Registration, Evaluation, Authorization and Restriction of Chemicals (EC No.1907/2006)
- \*4 CLP: Classification, Labeling and Packaging of Substances and Mixtures (EC No. 1272/2008)

# **Efforts of Teijin Chemicals to Ensure Customer Satisfaction**

As a measure for strengthening marketing capabilities, Teijin Chemicals Ltd. has prepared a Marketing Handbook. This handbook, which adopts the style of an online encyclopedia, allows each employee to search and obtain useful basic knowledge on the intranet. It will serve as a useful tool for new employees to build basic marketing skills. In parallel with the sharing of basic information, its utilization will help strengthen marketing capabilities even further. The handbook is full of technical information and is a useful resource enabling quick responses to customers' inquiries and requests.

We plan to issue English and Chinese versions of the Marketing Handbook for group companies in Singapore and China, and aim to reinforce our customer-orientated approach on a global basis.

# Overall Ranking of 16th in the 6th JUSE Examination of Quality Management Level

Teijin Limited received an overall ranking of 16th in the 6th Union of Japanese Scientists and Engineers (JUSE) Examination of Quality Management Level sponsored by Nikkei Inc. In addition, we were placed 2nd in the chemical industry section. The examination involves objective evaluations for a total of six factors relating to corporate initiatives to improve quality and the progress of these initiatives. Examples of these factors are quality training and human resource development, and customer service and quality assurance. Teijin's quality management is also introduced in the following publications.

- Monozukuri Nihon no Hinshitsu-chikara "Kiqyou no Hinshitsu Keiei-do" Chousa ni Miru Geniou to Kadai
- (High Level of Quality in Japanese Manufacturing Present Status and Issues Revealed by JUSE Examination of Quality Management Level); Author: Hiroshi Nagata.
- JUSE Examination of Quality Management Level; edited by Planning Committee.



# Allowing Employees to Grow and Achieve Work—Life Balance

The Teijin Group makes continual efforts to improve the quality of life of our employees. In FY2010, in spite of the tough economic circumstances, we made all possible efforts to secure employment at group companies. We also worked to further develop human resources and to help employees realize work-life balance.

# Mid- and Long-term Goals and Measures

#### ▼ Teijin Group Basic Human **Resources Policy**

#### **Goals of Human Resources Management**

- · Fulfill the corporate philosophy of "Empowering Our People"
- · Realize continuous improvements in employees' productivity and enhance their quality of life

#### **Basic Principles**

- 1) Take all possible measures to secure employment based on company-wide efforts to improve corporate performance and employees' efforts to increase productivity
- 2) Base the treatment of employees on factors relating to the employees' duties, achievements, capabilities and action while pursuing transparency, fairness and responsibility
- 3) Actively support the development of employees' capabilities
- 4) Assign employees to positions based on suitability for that position
- 5) Evaluate employees objectively and use evaluation as a tool for determining benefits and developing abilities
- 6) Respect for diversity

Since changing to a holding company system in 2003, we have established the Teijin Group Basic Human Resources Policy aiming to improve employees' quality of life under our corporate philosophy of "empowering our people."

As stated in the mid-term management plan, one of the most important policies of Teijin Group is to hire, train and cultivate human resources. To this end, we have set the following five ideals as the focus of human resources management: promote global expansion of our business, strengthen group management, review personnel management to stay ahead of changes in the business environment, increase the vitality of employees and the organization, and ensure appropriate management of company-owned facilities. As part of this management, which is being carried out from group-wide and global perspectives, we are pushing ahead with group-wide measures to secure employment, promote diversity and realize work-life balance while considering the sense of value of all group employees, and aiming for a smooth handover of technologies and skills to the next generation.

# **Human Resources Development**

#### ■ Group Core Human Resources Development **Systems**

In 2003, we instituted the STRETCH I and II group-wide core human resources development systems. Taking a global perspective, the systems target the development of employees at all group

companies including overseas.

We also launched the Strategic Leader Development Program (SLP) in 2006 with the aim of fostering leaders. This program has evolved to the Strategic Three-year Human Resources Development System.

#### **☐** The Teijin Group Human Resources **Development Policies**

#### 1) The source of growth is within oneself

Growth comes from employees identifying challenging issues for themselves, setting far-reaching goals, and endeavoring to accomplish these goals, which in turn leads to improved abilities and allows employees to have a real sense of growth.

#### 2) Creating a culture of learning

The role of managers and supervisors is to set shared goals, motivate each trainee, and provide support in order to allow each member to grow as part of the team.

#### 3) Development through on-the-job training

We view on-the-job training (OJT) as a key for human resources development in accordance with the basic concept, "People grow of their own accord through doing work that carries responsibility.

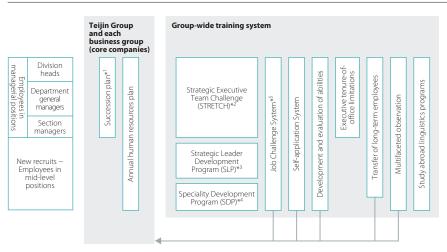
### 4) Development through job rotation/appointment system supported by OJT

Through a planned job rotation/ appointment system supported by OJT, we seek to take a long-term perspective in the development of career-minded human resources

#### 5) Personal development through off-the-job training

We view off-the-job training as an opportunity to promote employee growth and foster more ambitious and broader perspectives away from the workplace.

# The Teijin Group Training and Job Rotation/ Appointment System



- \*1 Succession plan: A plan to foster successors to important posts from the viewpoint of business continuity.
- \*2 Strategic Executive Team Challenge (Stretch): A group core human resources development system for leaders of business sites.
- \*3 Strategic Leader Development Program (SLP): Leadership skills development program for employees in mid-level positions with a desire to become key staff in the future.
- \*4 Speciality Development Program (SDP): An educational program designed to enable career-minded employees to gain specialized knowledge relating to marketing, engineering or clerical work.
- \*5 Job Challenge System: An in-house staff recruitment system. Any employee can file an application for a position without permission from the division manager, and the manager cannot overrule decisions

# The CSR Planning Office has conducted

**Employee Satisfaction Survey** 

To raise group employees' awareness of human rights, we conduct training for all a comprehensive employee satisfaction employees at every department of all group survey\* for all group companies in Japan companies during the Corporate Ethics every year since 2003.

> In this survey, we emphasize two items that relate to respect for individuality and character, and creating a comfortable work environment. Over the past four years, the degree of satisfaction has increased gradually for both items (see graph below).

# **Job Rotation/Appointment System**

We have set a range of measures to ensure that employees are assigned to positions based on employees' desires and suitability for positions.

In relation to personnel transfers, we have established an annual personnel plan for employees, aiming to realize objectivity and transparency in relation to transfers. At group companies in Japan we have added a self-application system\*6 that respects each employee's views regarding transfers and new appointments. Additionally, in as early as 1988, we introduced an in-house staff recruitment system (Job Challenge System\*6 see figure on page 47: The Teijin Group's Training and Job Rotation/Appointment System) that was pioneering for Japanese companies at the time. Every year, the system is utilized by several people (no positions were advertised in FY2009 and FY2010).

# ■ Career Challenge System

From 2007, rather than individual group companies recruiting and assigning people to positions, under a new recruitment system, Teijin Limited is responsible for hiring all new career-minded recruits. Five years after joining the company, recruits are then assigned to group companies.

We have also created a system in which employees can arrange a meeting with their division manager and request a transfer to a particular business. For employees who joined the company in FY2006 or before, this system came into effect together with the self-application system in FY2007 and forms part of the Career Challenge System\*6.

# **Maintaining Sound Working Relationships**

of human rights and corporate ethics.

**Human Rights Protection** 

Month campaign in October (see page 41).

from the CEO (Japanese, English, Chinese,

German, Thai and Indonesian versions) is

distributed to each workplace for the purpose

of stimulating discussion and raising awareness

During Corporate Ethics Month, a message

The Teijin Group sees the labor union as an important stakeholder, and we are working to maintain and improve our good relationship with the union. As fundamental concepts in industrial relations, we emphasize "mutual understanding and thorough prior consultation."

Amid the structural reforms to cope with the sudden economic changes in FY2009 and FY2010, we held repeated consultations to secure continued employment, and maintain and improve the work environment.

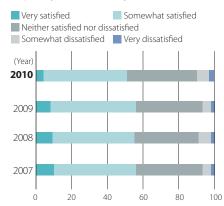
At group companies in Japan, to discourage long working hours and promote good work-life balance, we have been working to ensure strict implementation of the no-overtime-day rule, including patrols on no-overtime days in close cooperation with the labor unions at the Osaka and Tokyo head offices since 2008. Under the same objective, since January 2009, all lights are turned off at a designated time in selected areas of the Osaka and Tokyo head offices.

#### Preamble to the Labor Agreement between Teijin Limited and Seven Other Group Companies, and the Teijin Labor Union\*7

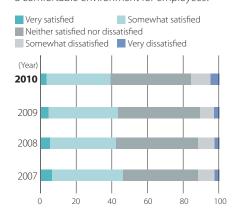
Teijin Limited and seven other group companies, and the Teijin Labor Union shall respect each other's presence and work together for the benefit and development of business. Both groups shall work to ensure the social welfare of union members, establish industrial peace, and sincerely respect each others' viewpoints. This statement is a declaration that all parties to Teijin Labor Agreement shall observe the agreement in good faith.

# **Employee Satisfaction Survey**

"Are you satisfied that the Teijin Group respects your individuality and character?"



"Are you satisfied that the Teijin Group has realized a comfortable environment for employees?"



<sup>\*</sup> Temporary staff are included.

<sup>\*6</sup> Currently, the Self-application/Job Challenge/Career Challenge Systems are mainly in operation at group companies in Japan but we are working to gradually introduce similar systems for overseas group companies in a form most suitable for the employment practices of each country.

<sup>\*7</sup> The Teijin Labor Union: The largest labor union in the Teijin Group.

# **Promoting Diversity Among Employees**

Since December 1999, efforts to promote and support female employees to work to the best of their abilities have been undertaken by the Teijin Group. From FY2007, we have stepped up our efforts to a focus on promoting diversity. While we are naturally continuing our activities to promote and support female employees, we are also focusing on enabling good work-life balance to be achieved by male and female employees alike.

The Teijin Group respects the character and individuality of all employees irrespective of gender, age, nationality, race, disability or other forms of discrimination, in all facets of our business, but particularly in recruiting, employment and promotion. We aim to put people in suitable positions, where they can attain job satisfaction and realize their full potential.

We employ experienced workers and run a year-round recruitment program for foreign students and foreign nationals in Japan. We also promote the recruitment of those with a disability; as of April 1, 2011, at 33 group companies in Japan, the number of employees with a disability was equivalent to 216.5 full-time positions exceeding the figure of 205 required by law for a corporate group of our size★. Despite this, nine individual companies have not met the legal requirement★. Seeking to remedy this, we will continue to promote the employment of people with a disability.

In relation to all future appointments and promotions, we will set specific goals for all our businesses and aim to employ a diverse range of people in managerial positions.

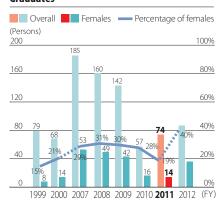
# ▶ Progress of Measures to Promote Female **Career Development**

For recruitment at 12 core group companies in Japan\*1, we have set a goal of maintaining the ratio of newly recruited career-minded female university graduates at 30% or more. Since FY2001, we have achieved or come close to achieving this goal every year. Unfortunately, in FY2010 and FY2011, this goal was not achieved. To compensate, we aim to increase the ratio to beyond 30% in FY2012 and thus improve the overall ratio.

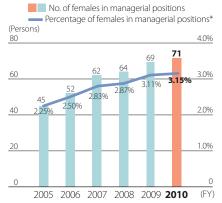
We have also set a goal of increasing the

total number of women in managerial positions, that is, section manager level or above, at 12 core group companies in Japan\*1 to 60, triple the FY2002 level. We

#### Changes in the Number and Ratio of Newly **Recruited Career-minded Female University Graduates\***



#### **Changes in the Number of Female Employees** in Managerial Positions \*



\* Percentage of female employees in managerial positions of the total number of managerial positions in the company.

reached this goal in FY2007 with 62 females in managerial positions, and the figure rose to 71 at the end of FY2010.

In the mid-term plan for 2009–2011, we have set the goal of increasing the number of women in managerial positions by 1.5-fold the number at the end of FY2008, which was 19.

\*1 Twelve core group companies in Japan, accounting for 80% of all Teijin Group employees in Japan.

# ☐ Global Management of Human Resources

In line with the global expansion of our businesses, we established the Global Human Resources Office in the Personnel Management Department in April 2009.

The Global Human Resources Office is structured as a project with the mission of enhancing human resources who are able to respond to global trends. Led by a German general manager, project members are working to create globally focused personnel management and appointment systems for group employees overseas and in Japan.

For example, we are creating the infrastructure to enable sharing of the group personnel information overseas and in Japan, running workshops aiming to foster human resources with a global perspective, and planning training/education to enhance communication and language-learning skills. A more specific example is the group-wide leader training program, EaGLES (see column below). We are conducting training in four languages (English, Chinese, Thai and Japanese) for employees in managerial

# TOPICS

# **Developing the EaGLES Leadership Training Standards**

From the viewpoint of the increased diversity of employees in terms of nationality and race owing to our global focus in regard to human resources and business, it is essential that all group employees understand and share the basic concept of the company, as expressed in our corporate philosophy and our sense of value. There is also a growing need to foster managers capable of responding to our global expansion.

It was in this context that we developed the Teijin Group leadership training standards, EaGLES, in 2011. The name EaGLES is derived from "Global Leadership Excellence Standard for Early newly assigned Managers."

This training consists of three steps: e-learning, group training, and measurement of learning outcomes. As of March 2011, this program is implemented in four languages for managers in five areas; EU, US, China, Thailand and Japan.



A training session in the USA

positions in five areas; EU, US, China, Thailand and Japan.



# VOICE Aya Nishimoto

Teijin Creative staff Co., Ltd. Global Human Resource office

#### Our efforts have been well paid off!

This global program was developed by a global team. We, over 10 HR specialists from 6 companies in 7 countries got together and spent our energy on making one comprehensible and practical program for all managers in multiple Business Groups and countries. Therefore, I was so excited when the participants in different regions gave us the same feedback telling this program provided them "very practical leadership skills and good information of Teijin Group overall."

#### Measures to Promote Work-Life Balance

The Teijin Group views the ability to respond to employees' diversified perspectives on work as one facet of CSR. With this in mind, we are focusing on activities that facilitate work-life balance, in order that employees can feel a sense of accomplishment and happiness with their work.

For example, Teijin Limited and other group companies in Japan are proceeding with the following activities aiming to decrease the number of working hours.

- Enforcing system of prior application for overtime work
- Reorganization of duties to increase workplace efficiency
- Strict implementation of the no-overtime-day rule
- Raising awareness through the intranet and printed materials
- Setting recommended days for annual paid holidays (to ensure paid holidays are used)

Through these activities, the average overtime per month for employees at 12 core group companies in Japan\*2 in FY2010 was 13.8 hours, and the rate of taking annual paid holidays was 64%\*, a negative change of 1.9 hours and five percentage points compared to the FY2009 results of 11.9 hours and 69% for employees at eight core group companies in Japan\*3.

In addition, in April 2008, we implemented a work-at-home system at nine group companies in Japan to increase the work options for employees. One more company introduced the system in April 2010, and we are currently working on increasing the flexibility of the system for users.

We have also introduced a re-employment system for employees who left Teijin for family or other reasons (see page 51), as well as a flex-time system, and we are considering expanding the scope of these systems.

- \*2 Twelve core group companies in Japan, accounting for 80% of all Teijin Group employees in Japan.
- \*3 Eight core group companies in Japan, accounting for 55% of all Teijin Group employees in Japan.

#### Number of the Work-at-home System Registrants (FY2010) \*

Registrants		Women	11
		Men	5
		Total	16
		Tokyo/Osaka head offices	14
By workplace	Research centers	1	
		Plants	1
Ву	reason for	Childcare	15
ар	plication	Nursing care	1
		Utilized almost every month	5
By status of utilization		Utilized several times a year according to need	7
		No opportunity to use yet	4

### Promoting Childcare Leave for Male Employees

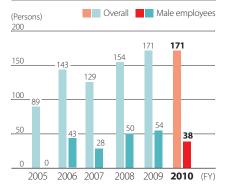
Creating a work environment where it is easy for male employees to participate in child-rearing is becoming increasingly important. For example, under the Act for Measures to Support the Development of the Next Generation, (the Next-generation Law) which came into effect in Japan in April 2005, one of the requirements of acquiring the relevant certification is to have at least one male employee who took childcare leave in the specified period.

To promote childcare leave for male employees, 12 core group companies in Japan\*4 have submitted an action plan based on the next-generation law (stage 1: FY2005-2006; stage 2: FY2007-2011). As specific measures, this action plan lists expanding the system for promoting short-term childcare leave and awareness-raising activities. The result for FY2010 was 38 male employees who took childcare leave. This is a decrease compared to the FY2009 level. We will seek to rectify this in FY2011 through reinforced awareness-raising measures.

Although the length of childcare leave taken by male employees is short, we believe this action plan is highly significant as a measure for promoting awareness of work-life balance. A total of 10 out of 12 core group companies in Japan have acquired certification under the Next-generation Law. For female employees, the average length of childcare leave is approximately 1 year, and a high percentage of women return to work after taking childcare leave.



#### Trends in the Number of Employees Taking Childcare Leave\*4



\*4 Twelve core group companies in Japan, accounting for 80% of all Teijin Group employees in Japan.

#### ■ Re-employment Systems

As part of diversified employment formats, the Teijin Group operates two re-employment systems, the Hello Again System operating at eight core group companies in Japan\*1 and the Senior Partner System operating at all group companies in Japan.

The Hello Again System targets those employees who left the company for reasons including marriage, pregnancy, child-rearing, nursing care, or work transfer of their spouse. Employees in this situation who wish to return to Teijin due to the reason for leaving no longer applying will be rehired as full-time employees on the condition that it is not more than 10 years since they left and provided that the need exists. To date, seven people have been rehired under this system. Additionally, regardless of whether the employee's spouse is an employee of the Teijin Group, if an employee wishes to accompany his/her spouse to a transfer destination, we will try to arrange the employee's transfer to an appropriate location to avoid the employee having to leave his/her job. Overall, there have been over 20 instances of such cases.

The Senior Partner System aims to facilitate re-employment of former employees after mandatory retirement if they wish to rejoin the company. In FY2010, 104 employees who retired at the fixed age wished to be re-employed, and 81 (78%) were re-employed (total for 47 group companies)★.

#### **■** Expanding the Nursing Care Leave System

In May 2010, our nursing care leave system operating at nine group companies in Japan was expanded. Substantially exceeding the 93 days of leave specified under the Child Care and Family Care Leave Law, each applicant can take up to 730 days of nursing care leave per reason, which can be taken in portions.

In FY2010, a total of five group employees (including three men) used the system★.

#### ■ Volunteer Leave System

To promote volunteer activities, the Teijin Group has implemented a Volunteer Leave System (paid) for 10 core group companies in Japan (see page 55).

As of March 31, 2011, there were 12 employees using the Volunteer Leave System★.

# **Determining the Status of Group-wide Labor Management**

The Teijin Group carries out regular surveys on labor management at group companies. To fulfill our social responsibility, we identify management issues in our group personnel management system and implement effective measures as required, particularly from the viewpoint of labor CSR.

Two survey forms are sent to 70 group companies, 58 in Japan and 12 overseas. From the survey, we obtain data on basic labor CSR indicators and the status of labor management.

The results of the FY2010 survey on labor management at group companies led to a thorough inspection of the work rules and personnel management systems of all group companies in Japan as in FY2009. We made the necessary corrections in relation to the amendment of the Labor Standards Law and completion of the special exception period for the Law Concerning Stabilization of Employment of Older Persons.

Based on the survey results, we also provide guidance for improvements, and in FY2010, we followed up on several companies where no leave systems for pregnancy, childcare and nursing care have been set due to the absence of applicable employees.

The results of the FY2010 survey for basic labor CSR indicators are shown in the Data on Human Resources table. In 2009 and 2010, we implemented structural reforms and endeavored to secure continued employment through transfers to other positions at group companies or placements outside the group. Our stance in regard to retiring employees is to support them in continuing employment.

As of March 31, 2010, approximately 630 temporary employees were employed at 12 core group companies in Japan\*2★.

- \*1 Eight core group companies in Japan,accounting for 55% of all Teijin Group employees in Japan.
- \*2 Twelve core group companies in Japan, accounting for 80% of all Teijin Group employees in Japan.

#### Survey Items (group companies in Japan)

### 1) Basic labor CSR indicators

- 1: Number of employees (by position/gender)
- 2: Average years at company and average age
- 3: Number of newly recruited employees (by position/gender/career stage (new versus mid-career)/type of work (clerical versus technical)
- 4: Number of retired employees (by position/reason)
- 5: Data on re-employment after age-limit retirement (by position)
- 6: Number of executives (by gender)
- 7: Number of fixed-term recruits
- 8: Overtime hours (per month)
- 9: Rate of taking annual paid holidays/Number of annual paid holidays taken
- 10: Use of childcare leave/childcare part-time work system
- 11: Use of nursing care leave/nursing care part-time work system

# 2) Status of labor management

#### [Legal compliance]

- 1: Employment of the elderly
- 2: Work hours
- 3 :Temporary/Contract workers

#### [Labor affairs measures]

- 1: Work-life balance (e.g. overtime work hours/annual paid holidays/flex-time system)
- 2 :Retirement allowance system
- 3: Progress in promoting diversity

- 4: Maternity protection and childcare
- 5: Care and nursing
- 6: Equal-opportunity employment
- 4: Recruitment and education
- 5: Health and welfare system (dormitories/other issues)
- 6: Other issues (e.g. existing issues for which demand for support exists)
- \* For overseas group companies, we determine the following basic labor CSR indicators: 1) Number of employees, 2) Average years at company and average age, 3) Number of new recruits, 4) Number of retired employees, 5) Number of fixed-term recruits

#### Data on Human Resources\*

Data on	47.	Iraiin	compa	nioc in	lanai	who	hira	omnl		direc	thu (a	c of	March	21	201	1
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(including companies other than the consolidated companies listed on page 5)

	1) Number of regular employees	Employees in managerial positions out of 1)	2) Number of temporary employees	3) Number of recruits	New graduate recruits out of 3)
Male	8,830	2,486	669	301	79
Female	2,152	90	1,083	103	35
Total	10,982	2,576	1,752	404	114

	4) Number of retiring employees	Employees who retired at fixed age out of 4)	Employees who retired for company reasons out of 4)*3	Employees who retired for their own reasons out of 4)
Employees in managerial positions	121	76	3	32
General employees	409	123	15	237
Total	530	199	18	269

	Number of employees who took childcare leave	Number of employees who took nursing care leave	Average age	Average years at company
Male	40	3	40.4	15.5
Female	163	2	37.1	11.5
Total	203	5	39.8	14.7

<sup>\*3</sup> The number of employees who retired for company reasons includes those re-employed at contractors and other companies outside the Teijin Group. Reasons for retirement other than those above include personnel transfers within the group and deaths.

#### Data on 12 core group companies overseas

	1) Number of employees	2) Temporary employees	Employees in managerial positions out of 1)	
Male	4,379	553	431	
Female	2,302	129	153	
Total	6,681	682	584	

	3) Number of recruits	4) Number of retired employees	Average age	Average years at company
Employees in managerial positions	65	85	_	_
General employees	879	776	_	_
Total	944	861	37.1	9.0

# TOPICS

# Women's Networking Forum Held in Osaka and Tokyo

The Women's Networking Forum, which was held in Osaka and Tokyo on August 28, 2010 and February 5, 2011, was jointly organized by five companies: Sharp Corporation, Daikin Industries, Ltd., Panasonic Corporation, PanaHome Corporation, and the Teijin Group. Other companies were also invited to participate in the event. In total, there were approximately 600 participants.

The objective of the forum is to create a cross-company network for women, and provide a place for women to reaffirm their own value, consolidate their vision in relation to work, and improve motivation to take the initiative and positively affect others. As a result of this, we aim to enable women to take actions that will lead to the growth of the organization. At the forum in Osaka, each

participant made an action plan in a letter format under the theme: "Self-leadership – Actions for my future and the future of the organization." These letters were then sent to participants at a later date.





# Focusing on CSR Throughout the Supply Chain in Cooperation with Suppliers

To promote factors such as environmental consideration, legal compliance, and protection of human rights in supply chain management, the Teijin Group has established and is putting into practice CSR procurement guidelines. Regular surveys of suppliers are performed to actively provide guidance and support for the CSR activities of these suppliers.

# **Viewpoints/Standards Relating to CSR Procurement**

To manufacture and distribute its products, the Teijin Group procures a wide variety of raw materials, equipment, components and services from many companies around the world.

As part of CSR in supply chain management, we clarify and publicize our viewpoints and standards relating to CSR procurement and purchasing. Examples of this relate to improving the environmental performance of procured goods, encouraging environmental consideration, legal compliance and protection of human rights by suppliers, and also promoting fair trade practices with suppliers.

Since FY2006, the Teijin Group's basic policies for purchasing and procurement activities have been posted on the Teijin

Group's website (in Japanese & English). These policies deal with matters such as procedures prior to the start of dealing with a new supplier and purchasing/procurement flows. CSR procurement guidelines have been posted on our website in Japanese since FY2006, and in English since FY2007 as part of our global expansion.

# **Ongoing Surveys and Ratings of Suppliers**

Simply outlining procurement policies and standards in a one-sided manner is not sufficient to ensure CSR in supply chain management. From this perspective, in FY2007, we launched an originally developed system to manage the CSR of suppliers.

Under the system, we run online surveys of suppliers regarding CSR activities, and

suppliers are graded from I to V with reference to specified standards. These ratings are then put into a database, thus creating an ongoing system to rate the CSR activities of suppliers.

The questionnaire consists of approximately 50 questions and confirms whether the standards of the Teijin Group CSR procurement guidelines are met.

In FY2008, Fiberfrontier Co., Ltd.\*1 took over operations of the system to manage the CSR of suppliers, and we began jointmanagement/cooperation with Toray Industries, Inc. for CSR procurement. This marked the beginning of evaluating the CSR performance throughout supply chains of the whole chemical synthetic fiber industry as well as our own supply chain.

\*1 Fiberfrontier Co., Ltd.: An electronic commerce textile sales and procurement management company jointly established by chemical synthetic fiber companies in Japan.

### □ CSR Procurement Guideline

Regarding the Teijin Group's procurement activities, we ask our suppliers to meet the following requirements.

#### 1. Quality and safety

- Inclusion of items concerning "quality and safety" in company-wide policies, code of conduct, etc.
- Proper management of "quality and safety" through establishment of a promoting department and manager.

#### 2. Human rights and labor

- Inclusion of items concerning "human rights and labor" in company-wide policies, code of conduct, etc.
- Proper management of "human rights and labor" through establishment of a promoting department and manager.

## 3. Safety and health

- Inclusion of items concerning "safety and health" in company-wide policies, code of conduct, etc.
- Proper management concerning "safety and health" through establishment of a promoting department and manager.

#### 4. Fair trade and ethics

- Inclusion of items concerning "fair trade and ethics" in company-wide policies, code of conduct, etc
- · Proper management concerning "fair trade and ethics" through establishment of a promoting department and manager.

#### 5. Information security

- Inclusion of items concerning "information security" in company-wide policies, code of conduct, etc.
- · Proper management concerning social responsibility for "information security" through establishment of a promoting department and manager.

#### 6. Philanthropy

- Inclusion of items concerning "philanthropy" in company-wide policies, code of conduct, etc.
- Proper management concerning "philanthropy" through establishment of a promoting department and manager.

#### 7. Environment

- Inclusion of items concerning the "environment" in company-wide policies, code of conduct, etc.
- Proper management of the "environment" through establishment of a promoting department and manager.
- Official announcement of the policy or code that has provided matters concerning the "environment".

# 8. Management of chemicals contained in products

· Recognition of the latest information on the chemicals prohibited by law and regulations to be contained, and proper management of such chemicals based on facts and data obtained through in-house surveys etc.

#### 9. Management of chemicals used in the manufacturing process

• Recognition of the latest information on the chemicals prohibited by law or regulation to be used, and proper management of such chemicals based on facts and data obtained through in-house surveys, etc.

#### 10. Approval and license concerning environmental conservation (air, wastewater, noise, vibration, etc.)

 Proper management for notification on facilities or work for which appropriateness is required and election of administers, etc., as required by law and regulations.

#### 11. Environmental management system

• Establishment and operation, and continual improvement of environmental management system.

#### 12. Minimize impact on the environment (air, wastewater, soil)

· Recognition of current status with facts and data obtained from in-house surveys, etc. through formulation of self-imposed standards.

#### 13. Reduce the discharge of chemicals into the environment

· Recognition of current status with facts and data obtained from in-house surveys, etc. through formulation of self-imposed standards.

# 14. Effective use of resources/energy

• Recognition of current status with facts and data obtained from in-house surveys, etc. through formulation of self-imposed standards.

# 15. Reduce greenhouse gas emissions

• Recognition of current status with facts and data obtained from in-house surveys, etc. through formulation of self-imposed standards.

#### 16. Waste reduction (3R)

• Recognition of current status with facts and data obtained from in-house surveys, etc. through formulation of self-imposed standards.

#### 17. Disclosure of commitment to environmental conservation

 Periodical summarization and disclosure of commitment to environmental conservation.

# **Data Relating to Supplier Surveys**

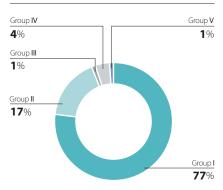
In FY2010, under the system to manage the CSR of suppliers, 406 major suppliers, accounting for 75% of all purchases, completed the survey. This was an increase of 32 suppliers and 3% improvement in coverage of all suppliers compared to FY2009.

Major reasons for this increase were the addition of new suppliers, and a wider evaluation scope at Teijin Chemicals Ltd., Toho Tenax Co., Ltd., and Teijin Pharma Limited.

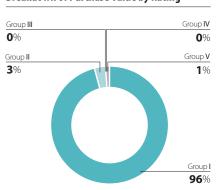
The results of the survey revealed that 94% of suppliers corresponded to groups I and II, compared to 93% in FY2009. There was judged to be no problems in continuing to do business with these suppliers. Moreover, the ratio of purchases from group I and II suppliers increased from 98% in FY2009 to 99% in FY2010. In FY2009, there were 18 suppliers classified as group IV and V that did not meet our criteria. However, in FY2010, seven of these suppliers improved their rating to group III or higher.

Possible reasons for this outcome are activities for CSR procurement further instilled across the group, and the effect of the directly demanding improvements and strengthening support for group  $\mbox{\rm IV}$  and  $\mbox{\rm V}$ 

# Breakdown of Suppliers by Rating \*



#### Breakdown of Purchase Value by Rating



suppliers on an individual basis, a practice which started in FY2010.

At the same time, new group IV and V suppliers have appeared, mostly from among new suppliers and suppliers surveyed for the first time. We will continue to guide these suppliers to ensure improvements.

# **Strengthening Guidance and Support** to Improve the CSR Performance of **Suppliers**

In FY2010, we strengthened guidance and support of individual suppliers to assist improvements in CSR performance. One measure was to prepare a model for CSR guidelines. Using this model, we provided guidance and support to group IV and Vsuppliers to enable them to establish their own CSR guidelines and approach to CSR, ultimately helping them improve their CSR performance. At the same time, we revised the existing "Improvement Declaration" to make it more realistic and ensure steady improvements.

To the basic business agreement, we also added clauses on legal compliance, respect for human rights and environmental and safety-related activities. The new agreement will be used for new suppliers and when a current agreement with existing suppliers expires.

In this area, we are cooperating with Toray Industries, Inc. through exchanging information and opinions.

# **Green Procurement/Purchasing**

Since establishing the Green Procurement Guidelines in FY2003, suppliers who provide specified substances are required to operate an environmental management system, which is then checked by the Teijin Group. Since FY2007, our green procurement standards have been posted on our website (in Japanese & English) to ensure that the suppliers are fully aware of and comply with our environmental quality standards.

The purchasing of stationery and other office supplies is based on the Green Purchasing Guidelines. In FY2010, the green purchasing ratio was 87%, an increase of 6% compared to FY2009.

We are also focusing on management of

hazardous substances found in raw materials that may become contained in our products, strengthening our controls on chemical substance purchasing, such as those relating to substances specified in the RoHS regulations and the Law Concerning the Examination and Regulation of Manufacture, etc., of Chemical Substances. We have listed prohibited substances including those prohibited in principle on our website to ensure that suppliers are fully aware of these substances.

# **Consideration for Contractors and** Work Contracts

The Teijin Group is focusing on maintaining proper work contracts based on mutual trust and cooperation with contractors. In FY2007, we implemented a series of independent inspections of work contracts. By FY2008, we completed actions to voluntarily improve contracts which are legally correct but require revisions to more closely reflect the demands of society (applying to 32% of all work). This particularly applied to contracts for non-regular work\*2. Since FY2008, no contract has been judged to need revising and proper work contracts have been maintained.

To cope with the sudden economic slowdown and changing market environment due to the so-called "Lehman shock," since FY2009, we have been implementing structural reforms of our business and considering the impact of these reforms on contractors, regional employment, and other areas. At the end of FY2010, we took several measures in response to contracted work in the Setouchi area being reduced by approximately 25% compared to before the structural reforms. Aiming to minimize the effect on our contractors and employment in regional areas, these measures centered on major contractors with high dependence on the Teijin Group, and included providing immediate information on likely future orders and contract cancellations, and actions that consider the cost and easing the sudden impact of contract cancellations.

\*2 Non-regular work: Maintenance, repair or other work that are not part of regular duties. The number of workplace accidents that occur during this kind of work is relatively high.

# **Promoting Group-wide Social Contributions**

Together with group-wide social contribution activities, we offer comprehensive support systems for each plant and group company making use of their unique characteristics to conduct their own social contribution activities.

# **Promoting Social Contribution Activities**

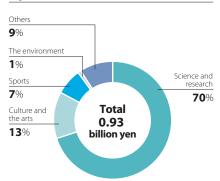
We are engaged in social contribution activities making the most of the distinctive characteristics of each business group and each region. In FY2010, we spent approximately 0.93 billion yen on social contribution activities. The Group CSR Promotion Subcommittee holds two meeting annually to discuss and promote group-wide social contribution activities.

In compliance with our Corporate Code of Conduct and Corporate Standards of Conduct, the Teijin Group set basic policies for social contributions in FY2006.

### □ Corporate Standards of Conduct: Item 3 (Social Contribution Policy)

We shall contribute to society through our business activities, form symbiotic relationships with society and engage in appropriate social contribution activities as a good corporate citizen.

#### Expenses of Social Contribution Activities\*



# The Teijin Group's Initiatives

We joined the Keidanren (Japan Business Federation) 1% Club in March 2003, and since then we have been setting aside at least 1% of our current profits for social contribution costs.

To help each employee engage in volunteer activities, we run various support systems, including a volunteer leave system, a leave system for bone marrow transplant donors and registered firefighters, and holidays reserved for volunteer activities. In FY2011, we established the Volunteer Support Program (see page 56) as a system for encouraging employees to join social contribution activities and nurturing volunteer personnel. Under this program, part of the expenses for volunteer activities undertaken by the Teijin Group employees is supported by the fund of donations from volunteer employees and company officers. As a good corporate citizen, we will continue to make appropriate social contributions.

#### Systems for Leave/Paid Holidays for Social **Contributions (in Japan)**

- Volunteer Leave System
- Volunteer Leave System Based on **Backup Holidays**
- Leave of Absence to Join Japan Overseas **Cooperation Volunteers**
- Leave of Absence to Be a Bone Marrow Donor (Bone Marrow Bank)
- Leave of Absence for Local Fire Station Activities

In FY2006, we established the Teijin CEO Social Contributions Award in the Teijin Limited Commendation Rules to award employees and organizations which demonstrated good performance in social contribution activities. There were no suitable applicants that matched the requirements in FY2010, but in FY2011 (as of June 2011), the activities of the Home Health Care Business to help those affected by the Great East Japan Earthquake were commended.

# Supporting the Arts, Culture and

#### ■ Supporting Amateur Sports

Through our sponsorship of the All-Japan High School Soccer Tournament since 1991, we have been supporting amateur and youth sports. Since 1996 we have been donating footballs made from Teijin Cordley's artificial leather to schools representing their respective prefectures.

# **Group-wide Social Contributions**

Three themes of our group-wide social contributions are the environment. international exchange, and social education. Of these, we have specified the environment as a key theme. We are implementing the following programs based on group employee volunteer activities.

#### ■ Group-wide Programs

Programs based on group employee volunteer activities

- 1. Nature observation program Nature observation leader workshop
- 2. Bird-watching program
- 3. Picture book donation activities –Book Dream Project-

# Spending on Social Contribution Activities\*★

Item	Description	Amount (millions of yen)
Monetary	Monetary donations and other expenses for social contribution activities	800
Donations of goods	Donations of our products and other goods to social welfare organizations	4
Free renting of company facilities	Expenses for free renting of company facilities such as gyms and playgrounds	39
Participation/Dispa tch of employees	Personnel expenses for employees who participated in philanthropic activities during their work hours, such as joining local events as part of their work, and employees who gave lectures at meetings	86
Total		929

<sup>\*</sup> Data for all group companies, based on the Keidanren "Procedures for Implementing FY2009 Survey on Results of Corporate Philanthropic Activities".

<sup>\*</sup> Money used to support the areas affected by the Great East Japan Earthquake is not included.

# **Nurturing Environmental Volunteers**

#### Co-sponsors of a Nature Observation Leader Workshop

Since FY2007, we have co-sponsored a program for nurturing leaders who are able to register with the Nature Conservation Society of Japan (NACS-J) and conduct nature conservation education. In FY2010, two group employees participated in the workshop. During the school holidays last summer, with the help of local leaders, employees registered as Nature Observation Leaders held a nature observation program called the Cicada Exuviae Survey.



# ■ Bird Watching at Business Sites

We run bird watching sessions close to our business sites with the cooperation of the Wild Bird Society of Japan. At Toho Tenax Mishima Plant, this activity, which is popular among employees, is run every year.





# VOICE

### Masayuki Kokubo Teijin Pharma Limited

Academic Information

#### **Protecting Nature through Observing Nature**

After taking the nature observation leader workshop, a group-wide program run jointly by the Teijin Group and the Nature Conservation Society of Japan (NAC-J), I acquired certification as a nature observation leader. Based on the catch-phrase "protecting nature through observing nature," I am personally involved as a volunteer leader of nature observation programs in local communities to protect nature and make friends who join me in this task. I also belong to the Nature Conservation Society of Tokyo (NACOT) in a private capacity, holding various nature observation programs open on a casual basis to anyone living and working in or near Tokyo who wants to join.

# **Employee Volunteer Activities in International Exchange and Social Education**

### ▶ Picture Book Donation Activities -Book Dream Project-

The Book Dream Project is a social contribution program to donate picture books to libraries in Indonesia now in its third year since starting in FY2008.

As in the past, we collected used books, CDs, DVDs and other materials from group

employees, and converted them into cash through the "Takuhonbin" visiting used-book collection service operated by Bookoff Online Corporation. With the money earned, we bought picture books, added translated caption sheets, and donated them to libraries in Indonesia.

In the FY2009 program, 2,692 used books and other materials were collected, and converted into 121,531 yen. In FY2010, 88 picture books were donated. In FY2010, the collection of used books yielded a total of 91,546 yen. In FY2011, we will buy and donate more than 50 picture books.

Of the total amount converted in FY2010, 50,000 yen was donated to support libraries in Thailand through the Shanti Volunteer Association.

# TOPICS

# Starting the Volunteer Support **Program**

In FY2011, we plan to introduce the Volunteer Support Program, a new initiative aimed at nurturing volunteer personnel. This is a program to financially support volunteer activities of the Teijin Group company employees. We will extend our full support so that employees can be proactively engaged in social and community contributions, and other public activities.

### Picture Book Donation Activities -Book Dream Project-

Project Period	Content	Results		
May 25–October 31	Application of translated caption sheets	More than 36 employees participated		
December 13–January 31	Collection of used books	3,887 books collected, packaged in 71 cardboard boxes; 14 employees volunteered time to participate in the project		

# Nature Observation Program (Cicada Exuviae Survey)

Project Period	Locations in Japan	Total number of participating employees (volunteer leaders)	Total number of employees (other than volunteer leaders)	Cooperating Organization
July 2–September 4	lwakuni, Yamaguchi; Nagaizumi, Shizuoka; Chiyoda/Koganei/Hino, Tokyo; Yokohama, Kanagawa; Hokuto, Yamanashi	160	49	Nature Conservation Society of Japan (support by members of local nature observation groups)

# OPICS

# Provision of Eco-bags with "Ganbare! Japan" Logo at **US-Japan Cultural Exchange Event in New York**

Teijin Holdings USA, Inc. (THUS), the U.S. holding company of the Teijin Group, provided 600 eco-bags to the organizers of Japan Day held on May 22, 2011 at Central Park, New York, USA.

Japan Day is a Japan–US cultural exchange event that has been held every May since 2007. This year approximately 30,000 people attended. As a part of social contributions, THUS has been providing eco-bags every year since 2008. This year in line with the theme of the event, we added the "Ganbare! Japan" logo to the bags.

The eco-bags are made of ECO CIRCLE™FIBERS, a recycled polyester fiber made from used polyester products. The used eco-bags are recovered by the ECO CIRCLE™ system and recycled to a new polyester fiber at the Teijin Fibers Matsuyama Plant in Ehime, Japan.

# Local-production, Local-consumption Carbon Offsetting

Teijin Matsuyama Plant in Ehime has been implementing local-production local-consumption carbon offsetting since November 2010. Infocom Corporation, part of the Teijin Group, developed the scheme. Under the scheme, the power consumed in two years by the commercial billboard at the Matsuvama Plant is offset via two methods. Half the power or approximately 10,000kWh, is offset by purchasing 170,000 yen worth of Matsuyama Green Power Certificates created in Matsuyama. The other half of power consumed, which is equivalent to approximately six tons of CO<sub>2</sub> emissions, is offset by purchasing Uchikocho J-VER\* created in Uchikocho, Ehime.

In addition, CO<sub>2</sub> emissions resulting from the manufacture of 200 soccer uniforms for elementary and junior high school students belonging to the Teijin Junior Soccer School were calculated. The result of approximately one ton is offset via Uchikocho J-VER. We also held a "learn through the environment" session for 150 children at the soccer school covering topics such as forest thinning, tree planting and clearing undergrowth.

This carbon offset scheme in cooperation with the local community was selected as a Carbon Offset Model Project for 2010.

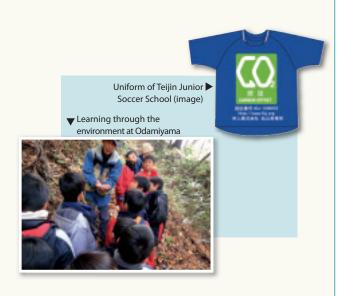
\* Uchikocho J-VER: Supported by the Ministry of the Environment, Japan, a service to support businesses in utilizing the offset and credit system. Its main activities are increasing CO<sub>2</sub> absorption through forest management activities and promoting forest-thinning.

# **Established Scholarship System in China**

As part of activities in China to promote and support science and technology and foster outstanding human resources, the Teijin Group has implemented projects to support academic cooperation between Tokyo Institute of Technology and Tsinghua University, and the Nantong Teijin Scholarship for high school students run through the Shanghai Charity Foundation. In addition, we established a new scholarship system in June 2010, for which there is no repayment obligation.

In FY2010, we provided 12 technical master's degree students of Tsinghua University, Beijing University, and Fudan University with an annual scholarship of 8,000 yuan (about 110,000 yen) per student. In FY2011, we will expand the scholarship to include four universities and 24 recipients, and continue to gradually increase the scale in the future.











# **Feature**

# Fostering Young Scientists through the Teijin Kumura Scholarship

In 1953, Teijin Limited established the Japan's first scholarship by a private company, the Teijin Kumura Scholarship. We have since supported science and technology students of academic excellence for almost 60 years, and contributed to fostering human resources to play leading roles in Japanese national and social development.

# **Our Focus: Fostering Human Resources to Play Leading Roles** in Japanese National and Social Development



"Father of the Japanese rayon industry," Seita Kumura

One of the Teijin Group's scientific and cultural promotion activities is the Teijin Kumura Scholarship. The scholarship was named after Seita Kumura, the 4th president of Teikoku Jinzo Kenshi (the current Teijin), who independently established the first manufacturing technology of artificial silk (rayon). Seita Kumura is known as the "Father of the Japanese rayon industry."The scholarship

aims to pass on and develop an original R&D spirit, as well as foster young scientists who will contribute to Japanese national and social development and the creation of new culture. The scholarship was set-up in 1953 to commemorate the 35th anniversary of the company, and was followed by the establishment of the Teijin Foundation in 1954, a further development of the scholarship system.

The Teijin Kumura Scholarship was Japan's first scholarship created by a private company, and approximately 1,500 science and technological students have so far benefited from the scholarship over a period of almost 60 years. The scholarship now applies to a wide range of fields, such as medical and pharmaceutical, bio-science, science and technology, engineering and information science. In FY2010, 43 graduate students (22 in master's courses, 21 in doctoral courses) received funds totaling 46 million yen.

This scholarship is not intended to benefit Teijin Limited directly; its main purpose is to foster human resources who will play leading roles in future Japanese national and social development. As such, scholarship students who continue their research in universities or public research institutes after graduation are exempt from scholarship repayment, thereby freeing students from binding obligations. The scholarship is open to students with an excellent academic record and there are no economic conditions set for eligibility.

# Dr. Negishi, Recipient of the Scholarship in its Fifth Year, is Awarded Honorary Fellowship

Dr. Ei-ichi Negishi, Distinguished Professor at PURDUE University and a 2010 Nobel laureate in chemistry was a recipient of the Teijin Kumura Scholarship in its fifth year. Dr. Negishi worked at Teijin's research institutes in Iwakuni, Yamaguchi and Hino, Tokyo from 1958 to 1969 and was engaged in various research

including on viscose rayon, a recycled fiber.

In November 2010, we had the pleasure of making Dr. Negishi a Teijin Group Distinguished Fellow. With a view to enhancing R&D and the technical development capabilities of the Teijin Group, as well as to enhancing our presence both internally and externally, we plan to seek his advice and suggestions on overall matters relating to R&D and technical developments of the group, drawing on his great insight and broad perspective.



Shigeo Ohyagi, CEO (left), Dr. Ei-ichi Negishi (right)

### Message from Dr. Ei-ichi Negishi

Teijin Limited has shown remarkable developments in recent years, particularly in the field of life science. Even when I was working at Teijin I saw these early signs of this.

When I joined Teijin, the then president Mr. Shinzo Ohya told us, "The young should go abroad. If you master one language in ten years, you will have mastered three languages in 30 years, and you will have developed world-class talent." The origin of my career is in these words of President Ohya.

When I decided to leave Teijin, I was asked many times to reconsider my resignation. I eventually left Teijin, saying "I would look forward to the opportunity of reciprocating your kindness with what I will have learned through further honing myself and taking a broader view of matters."

Time has flown since then, and now, I have the honor of becoming a Distinguished Fellow. I am very grateful to Teijin for extending a warm welcome to a "runaway son" like me. Through research in my field of specialization, organic synthetic chemistry, I sincerely hope that I can be of some help to Teijin in the future.

August, 2011

Ei-ichi Negishi



# Plans and Targets Need to be Specific and Self-evaluation Ratings Defined

In reading this report, so far I have found that the "CSR Management" and "Corporate Governance" of the Teijin Group are consistent with each other, creating a set of clearly defined structures. CSR activities are also classified into "Basic," "Expansive" and "Selective," and the consistency of this classification throughout the report make it easier for readers and employees to understand the contents.

However, there is some ambiguity in the section regarding plans, targets, performance and self-evaluations. In the challenges for "Corporate Governance" in FY2011, it is written that a "systematic review" is planned but, unless the contents to be reviewed are stated specifically, you may end up describing the same thing year after year. Additionally, in the issues for "Group-wide CSR" in the next fiscal year, it is written, "Identify issues through stakeholder dialogues" every year. Here, a specific theme for dialogue each fiscal year should be described. Furthermore, the ambiguity in the

"self-evaluation ratings" needs to be addressed. For example, it states the challenges and targets for "Corporate Ethics/Compliance" in fiscal 2010 are to "Make continued efforts to increase recognition and awareness of the Code of Conduct and Standards of Conduct," but what is the basis of judgment for increasing recognition and awareness? I think some ingenuity is needed here such as using an analytical index based on the results of an internal survey.

These are problems commonly found in many corporate CSR reports. Unlike environmental conservation issues where targets and performance can be defined in numerical values, it is rather difficult to do this in terms of compliance. I would like the Teijin Group to overcome this problem. Since the CSR structure is already consistent and easy to understand, further efforts in embodying issues and goals, as well as better defining self-evaluation ratings, will result in a clear and concise report.

#### Mainly on Corporate Governance and Corporate Ethics



Dr. Yoshinari Koyama, Ph.D. (Commerce) Professor of Business Administration, College of Economics Kanto Gakuin University

After serving as an assistant professor at the School of Commerce of Yamanashi Gakuin University and associate professor at the College of Economics of Kanto Gakuin University, Professor Koyama assumed his current position in 2010. He is also a part-time lecturer at the School of Business Administration of Yokohama National University and a concurrent lecturer at the School of Commerce of Meiji University. He is the author of many literary works including "CSR Management (forthcoming)" published by HAKUTO-SHOBO Publishing Co., "Gendai CSR Keiei Youron" (Modern CSR Management Summary) published by SOSEISHA Co. and "Nihon no Kigyou Rinri" (Corporate Ethics in Japan) published by HAKUTO-SHOBO Publishing Co.

# A Clear Way Forward through a Broad Perspective

The impression of the corporate characteristics and culture I had after reading this report can be summed up in two words: sincere and precise. I was particularly impressed by the boundaries and collection of data used in the report, and the fact that the data collection for accounting included overseas subsidiaries.

However, although the report is sincere and precise, there is a feeling that the report lacks a broad perspective in terms of a view for the distant long-term and consideration of world trends. For instance, the environmental goals only apply up to 2020; there is no information relating to goals for the much longer term up to 2050. In future reports, broad strategies and targets should be clarified further relating to where Teijin will position itself and what role it will take when the depletion of resources and the world population, which is continuing to increase mainly in developing countries, reach a critical point.

Here are several other points I noted with concern. In the PDCA circle, there is a larger section for P and D than there is for C and A. There is no report on the BCP verification results which should have been implemented after the earthquake. In addition, perhaps the following stems from being sincere and precise, but CO<sub>2</sub> emissions would be better understood if there were a total report (chart) inclusive of emissions from production, offices and logistics. Finally, on the whole, I suggest that more conceptual diagrams and other schematics be inserted instead of giving details in written form.

Of course, there are many good points. In particular, the stakeholder dialogue on the environmental preservation in China is excellent. Experts as well as local staff actively participated in the dialogue and expressed their opinions, which made the content realistic.

In the future, in addition to being sincere and precise, I hope that Teijin will be able to take a much broader perspective considering major world trends, and create a report defining a clear way forward for environmental management (including environmental business) and CSR management.

#### **Regarding Environmental Preservation Activities**



Masahiko Kawamura Senior Research Fellow, Insurance Research Group, NLI

Mr. Kawamura graduated from the Graduate School of Engineering, Kyushu University. After being engaged in offshore oil-related project management at MODEC, Inc., he joined NLI Research Institute in 1988. His research has centered on environmental management. environmental ratings, corporate social responsibility, and environmental business. Mr. Kawamura is the author of many papers including "CSR Keiei de Nani wo Mezasu no ka?" (What to Aim for in CSR Management), and other publications such as "Kankyou Keiei Nyuumon – Sustainable Management wo Mezashite' (An Introduction to Environmental Management – Aiming for Sustainable Management) (Nippon Kogyo Shimbun), "SRI to Atarashii Kigyou/Kinyuu" (SRI and New Corporate Finance) (Toyo Keizai Inc.), and "Carbon Disclosure" (Zeimukeiri Kyokai Co., Ltd.)

# Focus on Enhancing Employees' Quality of Life

The characteristics of the Teijin Group are evident in the clear aims to "Improve Quality of Life" and "Empower Our People," stated in the Corporate Philosophy and basic corporate mission, respectively. I can also identify with use of the Chinese character for "fortune" in the word for human resources, which expresses Teijin's philosophy of valuing and treating each employee with respect.

Notably, efforts to increase the number of female employees in managerial positions could serve as a model for other companies. Even within a society which is gender-equal in principle, it is still a big challenge for Japanese companies to increase the number of female managers.

The Teijin Group has come close to achieving its target of maintaining the hiring ratio of newly employed career-oriented female university graduates at 30% or more. The next challenge will be to increase female employees in managerial positions, and maintain a high ratio. I was very impressed when I heard that female managers in the group are provided

with opportunities to exchange opinions among themselves. Maintaining a culture and climate for female employees to further utilize such a system may further increase the number of female managers.

The report should consciously include more detailed information on employee training. The Teijin Group is focusing on training and education in safety, ethics and other areas; I recommend details of this training be disclosed. In other words, there should be more information on empowering people not only in a business sense but also as members of society. Acquiring general knowledge as a member of society as well as technical knowledge and skills is directly linked to the growth and career advancement of employees. Particularly in emerging countries, employee training is considered to be an important part of corporate responsibility.

I hope that Teijin will be able to lead other Japanese companies in efforts to enhance employees' quality of life.

#### Regarding Human Resources and Labor Management



Dr. Kohji Okubayashi, Ph.D. (Business Administration) Vice President & Professor, Faculty of Business Administration, DBA, Setsunan University

After serving as a visiting researcher at the University of California, Berkeley, Mr. Okubayashi was a visiting fellow at the Industrial Relations Research Institute, the University of Wisconsin, a professor at the School of Business Administration at Kobe University, and a visiting professor at Aix Marseille Universite. He assumed his present post in 2008. Mr. Okubayashi is the author of many publications including "Nyuumon. Jinteki Shigen Kanri" (Introduction to Human Resources Management) and "Kyuu-Sorenpo no Roudou" (Labor in the Former Soviet Union), and co-author of "Flat-gata Soshiki no Jinji Seido" (Flat Organization of Personnel Systems) (all published by Chuokeizai-sha).

# **Promote Social Contribution Activities Together With Suppliers**

The Teijin Group is developing its business activities under the corporate philosophy of "In Harmony with Society" and "Empowering Our People." In this report, the focus on "Empowering Our People" in social contribution activities is clear. The program newly launched in FY2011 on a trial basis to support employees' volunteer activities matches the corporate philosophy and I have high expectations for the program.

It is a slightly regrettable that the report presents details of social contribution activities by the Teijin Group, but does not explain the reasons for the activities in depth. Clarifying the reason for activities will help to educate employees and promote activities, and support from the people outside the group can be expected.

Furthermore, in the future I hope that social contribution activities will be promoted together with stakeholders outside of the group, particularly with suppliers. Questionnaires

conducted to manage suppliers' CSR are a very important part of Expansive CSR and I highly admire the implementation. In the future, it will become important to not only evaluate suppliers but also promote activities together with suppliers in the area of Selective CSR. If the burden of activities can be shared with suppliers, activities with double or triple the effect of those that can be performed by the Teijin Group alone will be possible. Joint studies with suppliers and further cooperation with NGOs and NPOs may also lead to activities based on innovative ideas.

Social contribution activities, whether promoted together with employees or suppliers, should prove to be beneficial to business as well. Through social contribution activities, communication will be enlivened and teamwork strengthened.

I hope both the business and social contributions of the Teijin Group can assist in revitalizing society and employees.

#### **Regarding Social Contribution Activities**



Yoko Takahashi President, Japan Philanthropic Association

Ms. Takahashi joined the Japan Philanthropic Association in 1991 after serving as a high school teacher and a psychologist. After positions as a director and the secretary-general, she assumed her present post in 2001. Ms. Takahashi is the author of "Philanthropy Nyuumon" (Introduction to Philanthropy) (Kainan Shobo) and "Rokujuusai Kara no Iki-iki Volunteer Nyuumon" (Introduction to Becoming an Active Volunteer After Reaching Sixty) (Nippon Kajo Shuppan).



# Independent Assurance Report

To the President and CEO of Teijin Limited

#### **Purpose and Scope**

We were engaged by Teijin Limited (the "Company") to provide limited assurance on its CSR Report 2011 (the "Report") for the fiscal year ended March 31, 2011. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether:

- 1) the environmental and social performance indicators and environment, safety and health accounting indicators marked with a red star ★ (the "Indicators") for the period from April 1, 2010 to March 31, 2011 included in the Report are prepared, in all material respects, in accordance with the Company's reporting criteria; and
- all the material sustainability information defined by the Japanese Association of Assurance Organizations for Sustainability Information ("J-SUS") is included in the Report.

The content of the Report is the responsibility of the Company's management. Our responsibility is to carry out a limited assurance engagement and to express our conclusion based on the work performed.

The Company applies its own reporting criteria as described in the Report. These are derived, among others, from the Environmental Reporting Guidelines 2007 of Japan's Ministry of the Environment and Sustainability Reporting Guidelines 2006 of the Global Reporting Initiative. We used these criteria to evaluate the Indicators. For the completeness of material sustainability information, we used the 'Criteria for Granting a Sustainability Report Assurance and Registration Symbol' of J-SUS.

#### **Procedures Performed**

We conducted our engagement in accordance with 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines of Sustainability Information Assurance' of J-SUS. The limited assurance engagement on the Report consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviews with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the
- Reviews of the Company's reporting criteria.
- Inquiries about the design of the systems and methods used to collect and process the Indicators.
- Analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and also a recalculation of the Indicators.
- Visit to the Company's overseas factory selected on the basis of a risk analysis.
- Assessment of whether or not all the material sustainability information defined by J-SUS is included in the Report.
- Evaluating the overall statement in which the Indicators are expressed.

KPMG AZSA Sustainability Co., Ltd.

#### Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that:

- the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report; and
- all the material sustainability information defined by J-SUS is not included in the Report.

We have no conflict of interest relationships with the Company that are specified in the Code of Ethics of J-SUS.

KPMG AZSA Sustainability Co., Ltd. Tokyo, Japan

September 5, 2011

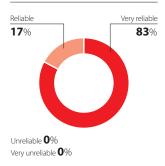
# **Opinions from Readers**

Responses to a questionnaire on the 2010 Teijin Group CSR Report were received from readers. We appreciate and highly value the opinions we received, and we would like to use these opinions positively to promote future CSR activities and improve the report. Here, we introduce some of the opinions.

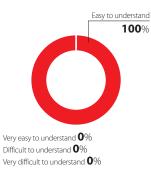
#### **Major Remarks**

- Some pages have too much text so it is a little hard to read.
- The report is full of information with a lot of blank space (white area) making it look neat, but there may be some people who find it rather hard to read because of the small font size.
- The report clearly shows how hard Teijin is working in areas such as increasing the ratio of female employees in managerial positions. However, globally, this has moved on to efforts to increase the ratio of female directors. This is a field where Japanese companies are still well behind, and I hope there will be further efforts made.
- In regard to the environment, the active efforts being made to reduce CO<sub>2</sub> emission were very clear, and the large amount of accompanying data helped. I think it is excellent. As for water issues, which are a focus worldwide, there will soon be demand for quantified targets and
- achievements as in the case of CO<sub>2</sub> emissions. I am looking forward to further efforts by Teijin in this regard.
- The present net sales ratio stands at 70% for Japan and 30% for overseas. If the overseas portion is to be increased, I hope the report will contain case examples of overseas activities and stakeholder dialogues.
- I am impressed that even fiscal year targets not achieved were disclosed in figures and strict self-evaluations have been made. I think describing the reason, countermeasures and similar aspects more clearly on the items evaluated as insufficient may help deepen the readers' understanding of your CSR activities.
- I am interested to know what kind of report this would be if real efforts were made to assume a wider range of readers and further promote ease of reading.

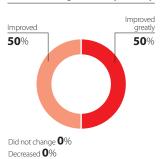
# **Reliability of contents**



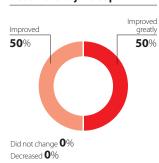
#### Ease of understanding



#### **Understanding of the Teijin Group**



# **Trust in the Teijin Group**



### **Editor's Postscript**

First of all, I would like to express my heartfelt sympathies for all victims of the Great East Japan Earthquake. We sincerely hope for a quick recovery and reconstruction of the disaster-affected areas.

It is very gratifying to know that the 2010 Teijin Group CSR Report was awarded the 14th Environmental Communication Grand Prize and the 14th Sustainability Report Award. This marks the third consecutive year that Teijin has received these awards. Some comments from evaluators were as follows: "The high-quality and level of information disclosure, including value-added information, were evaluated highly" and "In addition to independent assurance by an assurance provider, the opinions from third parties comprising four stakeholders of different positions added to the reliability of the report."

This report would not have been possible without the perspectives of expert advisors over the five years since 2006. At times, these advisors gave with strict directions and at other times words of encouragement. I wish to take this opportunity to express my heartfelt appreciation for the valuable guidance given by Mr. Mitsuhiro Umezu (Faculty of Business & Commerce, Keio University), Mr. Mitsutsune Yamaguchi (Research Center for Advanced Science and Technology, the University of Tokyo), Mr. Yoshiki Midorikawa (The Valdez Society), and Mr. Noboru Hayase (Osaka Voluntary Action Center). From FY2011, the Teijin Group has asked four new experts for their remarks. Referring to the opinions given, we will strive to overcome new challenges and continue strengthening our CSR activities.

This time, we held a stakeholder dialogue in Shanghai, adopting the theme of "Efforts for Environmental Preservation in China" and inviting Chinese environmental policy experts. In China, where rapid economic development is continuing, the Teijin Group has nine bases for production and marketing. We have taken various measures for the reduction of environmental impact caused by our activities in China. The dialogue was an extremely valuable opportunity enabling a lively exchange of views with the management and local personnel responsible for environmental conservation (Chinese staff) of the group companies in China. We will make the most of this experience to achieve further improvements.

Finally, this year, we were once again permitted to use the real names of many individuals, suppliers, NPOs and other organizations. All of these groups and individuals understand the objectives of our CSR reports well, and willingly cooperated in enabling us to disclose this information. We would like to take this opportunity to thank everyone for their cooperation and support.

Teijin Limited CSR Planning Office

J-SUS: Regarding the reliability of the sustainability information published in this CSR report, the J-SUS mark on the back cover is registration proof that the report satisfies the J-SUS mark standards formulated by the Japanese Association of Assurance Organizations for Sustainability Information (http://j-sus.org/english.html).



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