

# **kura***ray*

# KURARAY CO., LTD.

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http://www.kuraray.co.jp/en/

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This report uses an easy-to-read font based on the Universal Design (UD) concept.

# kura*ray*

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# Kuraray CSR Report

Corporate Social Responsibility Report 2014

KURARAY CO., LTD.

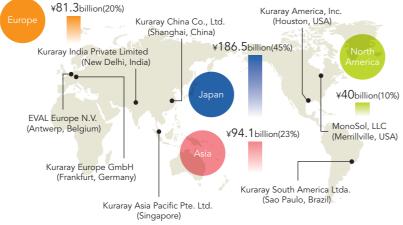


# **Overview of the Kuraray Group**

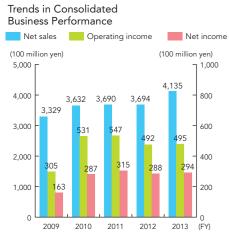
# Corporate Profile

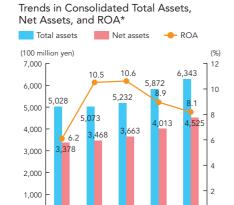
Company name	Kuraray Co., Ltd.
Representative Director and President	Fumio Ito
Date of establishment	June 1926
Capitalization	89 billion yen (as of March 31, 2014)
Number of employees (consolidated)	7,550 (as of March 31, 2014)
Head offices	Tokyo, Osaka
Plants and laboratories	Kurashiki, Saijo, Okayama, Niigata, Kashima, Tsukuba
Group companies	33 consolidated subsidiaries, 1 equity method affiliate (as of March 31, 2014)
Overseas operations	USA, Germany, Belgium, China, Singapore, India, Brazil

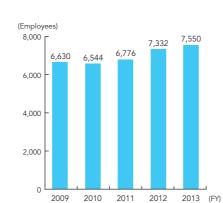
# Business by Region (business scale)



# Data on Economic Efficiency







Number of Employees

(Consolidated)

# **Editorial Policy**

This report conveys the CSR activities that the Kuraray Group implemented in fiscal 2013 with the aim of boosting understanding of them among all stakeholders.

\*ROA: Return on Assets (Operating Income to Total Assets)

2010 2011 2012 2013 (FY)

### Reporting Period

From April 1, 2013 to March 31, 2014 (Some activities conducted before or after the reporting period are included.)

### Scope of the Report

2009

Safety and Environment: Reports focus on Kuraray Co., Ltd. and domestic affiliated companies, but also include some overseas affiliated companies Social

Reports focus on Kuraray Co., Ltd., but also include some affiliated companies depending on their activities in the respective field Economic Kuraray Co., Ltd., consolidated subsidiaries, and equity method affiliates (total 35 companies)

### **Reference Guidelines**

GRI Sustainability Reporting Guidelines (Version 4.0).

Ministry of Environment's Environmental Report Guidelines (2012 Edition)

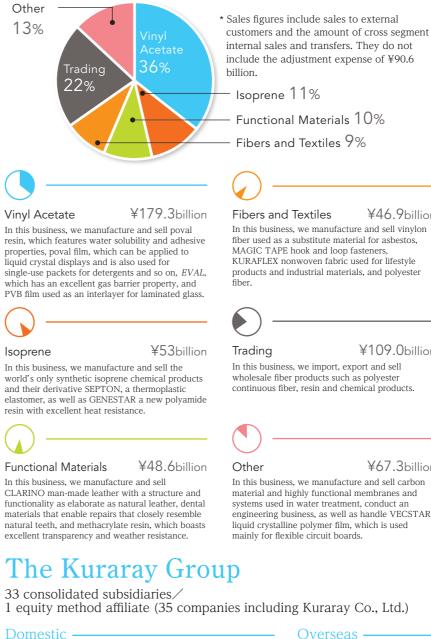
### Issue Date

October 2014 (Previous issue: October 2013: Next issue: July 2015 (planned))

# **Business Outline**

Kuraray was founded for the purpose of commercializing chemical fiber rayon in 1926 in Kurashiki City, Okayama Prefecture. Ever since becoming the first firm in the world to commercialize vinylon fibers and textiles after the war based on domestic technology as well as POVAL, the resin that is used as its raw material, we have made use of this unique technology and have delivered a variety of one and only and number-one products to the world as a specialty chemical manufacturer.

### Consolidated Net Sales Share by Segment (Fiscal 2013)\*



Domestic —		Overs
Kuraray Co., Ltd. 😑 🔺	Kuraray Kuraflex Co., Ltd. 😑 🔺	Kuraray H
Kuraray Engineering Co., Ltd. 😑 🔺	Kuraray Fastening Co., Ltd. 📕 🔺	Kuraray Ai
Kuraray Chemical Co., Ltd. 📕 🔺	Kuraray Tamashima Co., Ltd. 😑 🔺	MonoSol H
Kuraray Trading Co., Ltd. 📕 🔺	Iruma Country Club Co., Ltd. 📕 🔺	MonoSol, I
Kuraray Plastics Co., Ltd. 🔳 🔺	Okayama Rinkoh Co., Ltd. 📕 🔺	MonoSol A
Kuraray Living Co., Ltd.	Kuraray Noritake Dental Inc. 🛑 📕 🔺	Kuraray Eu
Kuraray Techno Co., Ltd. 😑 🔺	Kurashiki Kokusai Hotel Co., Ltd. 📕 🔺	EVAL Euro
Techno Soft Co., Ltd.	Kuraray Aqua Co., Ltd. 📕 🔺	OOO TRO
Kuraray Travel Service Corporation	Ibuki Kosan Co., Ltd.	Kuraray As
Kyosei Chemical Co., Ltd. 🔴 🔺	Okayama Rinkoh Warehouse and	Kuraray (S
Kuraray Saijo Co., Ltd. 🔴 🔺	Transport Co., Ltd.	Kuraray Ti
		Kuraray Ch
		Kuraray H
		,

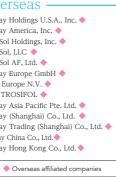
 Kuraray site
 Domestic affiliated companies Domestic Kuraray Group companies

All italicized product names in this report are trademarks of the Kuraray Group

¥46.9billion

¥109.0billion

¥67.3billion



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# Message from the President

# We deliver our Corporate Social Responsibility Report 2014 to all stakeholders.

In fiscal 2013, the global economy was generally weak. While the U.S. remained firm, this weakness was largely attributable to stagnant economic conditions in Europe and a slowdown in the rates of economic growth in emerging countries including China. In Japan, expectations, that the economy would enter a period of recovery and that the nation's deflationary spiral would break, ballooned on the back of pump-priming policies put forward by the Abe Administration, or so called Abenomics. Despite these endeavors and expectations, the market surrounding the Company did not reach a full-scale recovery. Under these circumstances, the Kuraray Group reported consolidated net sales for fiscal 2013 of ¥413.5 billion, an increase of 11.9% compared with the previous fiscal year. From a profit perspective, consolidated operating income edged up 0.7% year on year to ¥49.5 billion. While the Group was unable to achieve its anticipated level of profit, every effort was made to definitively put in place specific measures aimed promoting growth. Following on from the acquisition of MonoSol, LLC, a company that manufactures and markets water-soluble films in the U.S., in fiscal 2012, the Kuraray Group completed the acquisition of a vinyl acetate-related business in June 2014 based on an agreement with E.I. du Pont de Nemours and Company (DuPont) concluded in fiscal 2013.

Taking each of the aforementioned factors into consideration, the Kuraray Group will look to ensure that the results of all measures implemented to date are reflected in its performance in fiscal 2014, the final year of its GS-III medium-term management plan. At the same time, we will take steps to draw up the next medium-term management plan. Effective from fiscal 2015, Kuraray has decided to change its accounting year to the 12-month period from January to December. As a result, the accounting period for fiscal 2014 will be the nine-month period from April 2014 to December 2014. Over this transitional period, we will target consolidate net sales of ¥385.0 billion and operating income of ¥44.0 billion.

### Corporate Philosophy

Respect for Individuals Cooperation in Shared Goals Creation of Values

### Corporate

We in the Kuraray Group are committed to opening new fields of business using pioneering technology and contributing to an improved natural environment and quality of life.

### Principles for Bu

We will develop and provide products and services, giving full consideration to safety. We will conduct businesses in a free, fair and transparent manner. We will maintain good communications and build a sound relationship with society. We will strive to preserve and improve the global environment and to secure safety and health. We will respect intellectual properties including trade secrets and control information properly.

Kuraray was founded in 1926 for the purpose of commercializing rayon. Utilizing its innovative technologies, the Company succeeded in the commercial manufacture of the synthetic fiber *KURALON*, which is derived from the raw material POVAL in 1950. In the ensuing period, Kuraray has worked diligently to diversify and expand its business. The ability of today's employees to consistently develop and expand its business is based on the principles and policies put in place by their predecessors since foundation. It is therefore vital that we continue to hold these principles and policies to our hearts and to overcome every challenge in a bid to contribute to society through our business activities.

Kuraray's principles and policies are encapsulated in the Company's Corporate Philosophy, Guidelines for Action, Principles for Business Conduct, and Corporate Mission.

Kuraray's Corporate Philosophy places the utmost emphasis on "respect for individuals," "cooperation in shared goals," and "creation of values." These three key elements make up the basic spirit of each and every member of the Group. Our Guidelines for Action lay out the direction and manner in which to go about our daily activities and focus on "customer needs," "ideas in the working place," and "acts based on each individual's initiative."

While the Corporate Philosophy and Guidelines for Action provide the ground rules for the Group's principles and behavior, our Principles for Business Conduct outline the manner in which we interact harmoniously with a diverse society. As a result, providing products and services that give full consideration to safety, conducting business in a free, fair and transparent manner, keeping good communications and

### Guidelines for Action

Act on Customers' Needs Act on Ideas in the Working Place Act on Your Own Initiative



### Mission

### siness Conduct

maintaining a sound relationship with society, preserving and improving the global environment, and respecting intellectual properties including trade secrets and controlling information properly are integral components of the Kuraray Group's business activities.

Through each of its Corporate Philosophy, Guidelines for Action, and Group Code of Conduct, the Kuraray Group's will is committed to fulfilling its unwavering mission of opening new fields of business using pioneering technology and contributing to an improved natural environment and quality of life.

As a manufacturer of chemicals, safety is a paramount concern of the Kuraray Group. In recent years, Japan's chemical industry has experienced a succession of serious accidents. This has only served to further highlight the importance of maintaining safety. Recognizing that "safety is the cornerstone of everything we do," we will ramp up endeavors aimed at promoting process safety and disaster prevention as well as occupational safety and health.

Guided by these principles, the Kuraray Group will focus on promoting sustainable growth while working to fulfill its corporate social responsibility.

As we work toward achieving our established goals, I kindly request the continued support and understanding of all stakeholders.

F. Ito

Fumio Ito Representative Director and President Kuraray Co., Ltd.

# Kuraray Group's CSR Activities throughout the Product Lifecycle

# "Contributing to the World and Individual Well-being through Actions that Others are Unable to Produce."

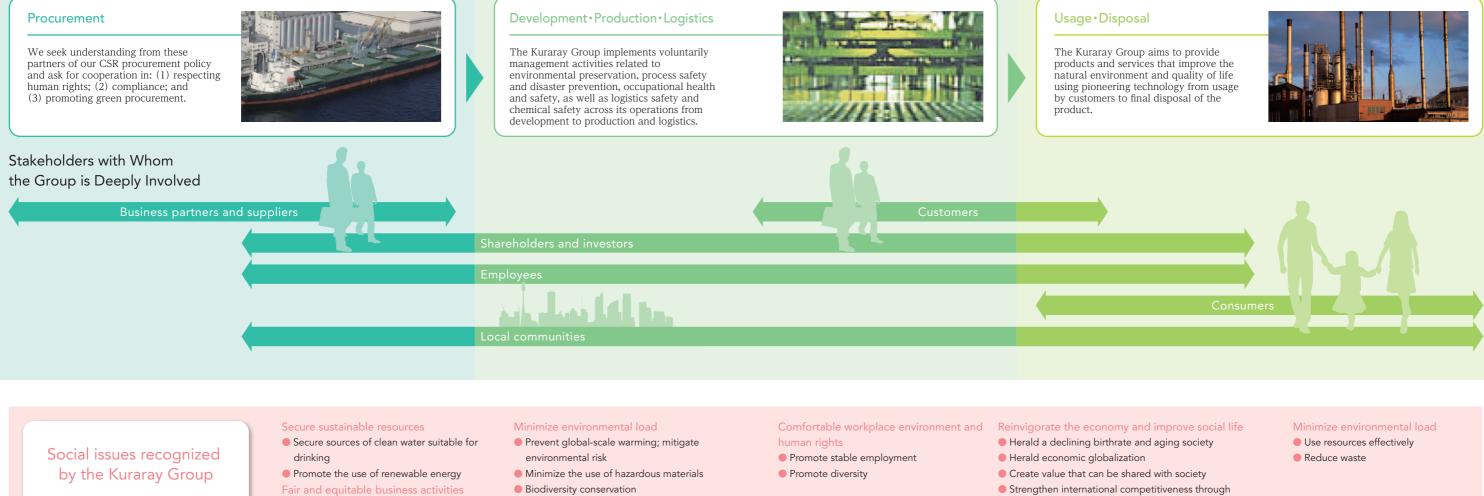
While respecting the interests of all stakeholders, Kuraray harnesses the strengths of its pioneering technologies to add value to the resources entrusted to it by society. Every effort is channeled toward helping people lead fulfilling and comfortable lives and to help realize a sustainable society by consistently delivering value.

### The Kuraray Group Code of Conduct

# We will develop and provide products and services, giving full

- 1. Safety of Products and Services
- duct business in a free, fair and tra
- 2. Compliance with Antitrust, Competition and Related Laws
- 3. Prevention of Unfair Competition
- 4. Compliance with Laws Related to Exports and Imports
- 5. Prohibition on Entertainment and Gifts in an Excessive Manner
- 6. Prohibition against Insider-Trading
- We will keep good communications and maintain a sound relationship
- 7. Respect for Human Rights, Enhancement of Diversity and Equal Opportunity, and Other Workplace Responsibilities
- 8. Contributions to Society
- 9. Disclosure of Corporate Information

### **Product Value Chain**



The Kuraray Group's initiatives and countermeasures

- Provide water purification technologies and
- products

Compliance

- Promote biomass power generation
- Promote CSR procurement
- Compliance Declaration
- Strengthen responsible care initiatives • Assess the degree to which the Group contributes to reducing GHG emissions
- Develop environmentally friendly products
- Put forward ballast water management systems
- Establish HR systems that uphold equality, fairness and transparency
- Promote work-life balance

innovation

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- 10. Compliance with Domestic and Foreign Anti-Bribery Regulations
- 11. Rules for Donations
- 12. No Relationship with Anti-Social Groups
- 13. Prohibition on Conflicts of Interest

We will strive to preserve and improve the global environment and to secure safety and health

- 14. Environmental Preservation
- 15. Safety and Disaster Prevention
- 16. Safe and Comfortable Workplace
- We will respect intellectual pro es including trade secrets and
- 17. Protecting Trade Secrets
- 18. Respecting Intellectual Property Rights



• Support local community cultural and sporting events • Help people with disabilities lead self-sufficient lives • Strengthen the global business foundation

- Participate in regional communication organized by the Responsible Care Committee
- Provide eco-products

# **Kuraray Technologies Support Development of** Various Eco Products

# EVAL Three Eco areas:

(3)Heat insulation

Eco-friendly Products are being Developed by a Broad array of Companies. Kuraray Materials and Technologies Support this Process behind the Scenes.

In the 21st Century, dubbed the "environment century," various eco-friendly products promoted as gentle on the environment are attracting market attention, while marketing focusing on buzzwords like "energy saving" and "eco" appear to motivate a significant number of consumer purchases. Why are TV commercials and other advertising featuring catchphrases such as "No. 1 energy-saving performance" and "friendly to the planet" seen most often?

As a chemical materials maker, Kuraray provides materials to manufacturers that contribute to energy savings and eco friendliness. It is very likely that the eco-friendly products you use everyday contain EVAL and other materials produced by Kuraray.

### **EVAL** Properties and Main Applications

Kuraray began selling EVAL in 1972 under the name Ethylene Vinyl Alcohol Copolymer resin. EVAL features high-level gas barrier properties as a plastic material, shutting unwanted gasses while preventing flavors and aromas from escaping.

EVAL is normally used in combination with other plastic resins, playing a useful role in preventing gasses from entering or escaping via microscopic holes at the molecular level.

In addition to a wide array of food packaging, EVAL is used in various products, including toothpaste tubes, plastic fuel tanks, wallpaper, and vacuum insulation panel film.

## Product Features

- High-gas barrier perform Blocks nearly all gasses, including oxygen
- 0 Highly resistant to oil and organic solvents • Ar
- Keeps aromas in and external odors out No
- Does not adsorb smells or medicinal ingredients

### Three Eco Areas (1) High-level Gas Barrier Properties Helping to Extend the Shelf Lives of Food Products

Using packaging made with EVAL enables the distribution of food products with short shelf lives that would otherwise be difficult thanks to its high-level gas barrier properties. This is but one of numerous examples of EVAL's usefulness.

Food waste has become a major environmental problem in recent years. In response, efforts have been made to extend the expiration dates of packaged vegetables and fresh meat sold at supermarkets and other stores. EVAL is being used to help achieve these aims. Food exposed to oxygen promotes oxygenation and the spread of dangerous bacteria that flourish in these conditions. In other words, minimizing oxygen exposure as much as possible during packaging can extend expiration dates. Yet, oxygen will seep in from outside if such packaging does not have gas barrier properties. Using EVAL in existing packaging prevents oxygen penetration, thereby making it possible to extend product shelf life.

### Three Eco Areas (2) Lightweight, Rustproof Plastic Fuel Tanks Using EVAL

Lightening the weight of automobile bodies is necessary to improve fuel efficiency. As a weight saving measure, metal fuel tanks are starting to be replaced with lighter plastic ones. However, there had been the issue of hydrocarbons emitted during fuel combustion, which could generate air pollution. To solve this problem, high-gas barrier plastic tanks with EVAL were developed to contain hydrocarbon emissions. In 1994, the United States became the first country to introduce these plastic fuel tanks, which subsequently went into production in Europe, Japan, and other regions. Currently, plastic fuel tanks are in the mainstream given their contribution to preventing air pollution and lightening automobile weight. Plastic fuel tanks made with EVAL also possess a myriad of eco-friendly features, including not requiring lead rust-prevention coating (unlike steel tanks) and not producing harmful substances when incinerated.

### Three Eco Areas (3) Using EVAL in Vacuum Insulation Panels Boosts **Refrigerator Cooling Efficiency**

Regarding heat insulating materials, it is well known that using vacuum insulation panels in which core materials like glass fiber are sealed by a multi-layer film boosts insulation efficiency several times compared to single insulation materials such as glass fiber and polyurethane. Although aluminum foil is primarily used as such air-proof materials, aluminum has a high degree of thermal conductivity, creating drawbacks in terms of directing heat into fridge interiors. Using EVAL—which features top-level gas barrier performance and extremely low thermal conductivity—as a barrier material for the outer envelope of vacuum insulation instead of aluminum foil nearly eliminates the heat bridge effect.

Currently, most 400 liter-plus large-sized refrigerators produced by major Japanese manufacturers use vacuum insulation panels containing EVAL. The use of these panels appears to be spreading worldwide, notably China, South Korea and Europe, and is gaining high marks in water heaters and other hot water tanks as well as vending machines that are becoming more eco friendly.

### VIP(Vacuum Insulation Panel)

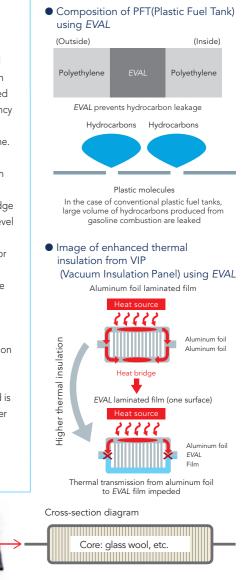
Vacuum insulation panels have over 10 times the insulation capability of standard glass wool and polyurethane foam insulation materials. This means insulation materials less than 1/10 thick are required to provide the same level of thermal insulation performance, thus contributing larger-capacity refrigerators.

### Voice

### Senior Staff Tomonori Murata Global Marketing Group EVAL Division

If problems are not solved by a significant margin, we cannot tackle social issues that need to be addressed. In that manner, our role at Kuraray begins when the R&D activities of client manufacturers become stalled.

Fortunately, we feel that awareness of EVAL is taking hold particularly among food and home electronics makers. My coworkers and I are deeply honored that Kuraray is the choice for those seeking guidance on issues including developing new energy-saving products using gas barrier capabilities



and reducing unnecessary food waste by extending expiration dates

On the other hand, while EVAL's gas barrier properties play a role in realizing the energy-saving and eco-friendly features of the products it is used in, many users are unfortunately not aware of this. Going forward, we will engage in aggressive PR activities to ensure as many people as possible know that everyday eco products actually use Kuraray materials and technologies behind the scenes.

Kuraray's official Facebook page, "What You Need to Know about EVAL Committee," communicates a wealth of information on EVAL's role in today's eco products.

⇒https://ja-jp.facebook.com/EVAL.jp

# **Kuraray Is Here to Help People with Diverse Abilities and Unique Personalities Succeed**

Diversity Initiatives at the Niigata Plant

### Kuraray Niigata Plant Receives the Minister Award of Outstanding Offices for the Employment of Persons with Disabilities

The Minister Award of Outstanding Offices for the Employment of Persons with Disabilities is awarded annually in September to coincide with Disabled Persons Employment Month. The award is intended to motivate persons with disabilities to achieve occupational independence as well as deepen the interest and understanding of business owners regarding the hiring of the disabled. The Kuraray Niigata Plant was awarded the fiscal 2013 Minister Award in recognition of its steady employment of mentally challenged individuals over many years.

Rather than being awarded for special initiatives taken in fiscal 2013, we regard this award as recognition of the steady efforts accumulated over many years to hire disabled persons since the Kuraray Workshop's opening in 1997. Kuraray promotes and works to deepen awareness of diversity in-house to be a company that enables all employees who have a diverse array of abilities and

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unique personalities—to succeed; this includes those with physical and mental disabilities.

### Kuraray Workshop Initiatives to the Present

Working to be a company with close ties with local communities, Kuraray undertakes activities in line with the actual conditions in the regions in which its facilities operate. In 1997, Kuraray was looking into extending the hiring of disabled persons to those with mental disabilities (which had been up to that point focused on the physically handicapped). At that time, the Niigata Plant general manager read an article in a local newspaper about the difficulties Rainbow House (a vocational aid center for the disabled located nearby) was having difficulties finding employment for its occupants. With the aim of employing individuals with mental disabilities, the Kuraray Workshop was established, kicking off the Plant's association with Rainbow House. In the 17 years since then, the Kuraray Niigata Plant and Rainbow House have together built a wide-ranging cooperative framework, including negotiations with government agencies

and passing along knowhow on managing workshops for the mentally challenged. Currently, 20 mentally challenged individuals work at the Kuraray Workshop, which has maintained long-serving staff members since most of the employees hired when the facility was established have remained on the job. Regarding workshop management, four instructors have received training from Rainbow House. These instructors check operational safety and job details while working to further improve work quality.

### Cultivating Responsibility, Pride and Unity as Part of Kuraray's Operations

The Kuraray Workshop is a part of Kuraray's operations. Overseeing around 30 jobs, workshop instructors basically select from in-house operations those jobs that pose minimal danger to mentally disabled employees. With workshop employees currently gaining a greater understanding of the production site, other production line workers have not been shy in stating how happy they are about sharing these operations with workshop employees. Workshop

employees are aware that their work is directly related to Kuraray's businesses. Instructors emphasize that the items being made are Kuraray products so sloppy work is unacceptable, and they must take responsibility for products just like every other production line. We think this sense of responsibility fosters employee pride and leads to a feeling of unity as full members of the Company.

Based on the idea that safe/steady work (including cleanup) is useful for helping the disabled leave independent lives, instructors insist that workshop employees be held to the same standards of quality as there non-disabled colleagues.

### Realizing Smooth Operations by Cooperating with Rainbow House As the Kuraray Workshop is located

adjacent to Rainbow House, workshop





▲Workshop is staffed with over 20 employees

▲Instructors provide respectful guidance

### Voice

Tomoaki Ishikawa Manager, General Affairs Department, Niigata Plant Kuraray Co., Ltd





When the Kuraray Workplace was founded, it was mistaken as just like any other welfare facilities for the disabled, only with Kuraray operated it. However, the Kuraray Workshop is in every way a part of the Company, operating in exactly the same manner as other production lines. Although workshop employees engage in light operations that pose minimal dangers, we expect them to perform their tasks in a strict and serious manner. We believe that treating workshop employees like everyone else instills a sense of pride in their work and makes them more independent. We have

employees participate in morning/closing meetings as well as vacation and field trip events organized by Rainbow House. In so doing, workshop employees gain experience not possible by only working in the Company. Along with smooth workshop operations, enabling mentally disabled employees to hone life skills as members of society is useful for making them more independent. In addition, workshop instructors participate in Rainbow House employee training, giving them the opportunity to learn about numerous topics, including operational knowhow. Turning to other activities, the Kuraray Fureai Soccer Tournament is held every May as an opportunity for members of the Niigata Plant, Kuraray Workshop and Rainbow House to interact. Workshop employees, Rainbow

House members and those at the Niigata

Plant wishing to participate form teams that play each other during the tournament. Moreover, new Kuraray employees undergo training at the Kuraray Workshop and Rainbow House to broaden their awareness of CSR. As part of the Niigata Plant's efforts to promote internal workplace interaction, employees from other departments take tours of the Kuraray Workshop to foster understanding of its purpose.



▲Kuraray Workshop (left) is adjacent to the Rainbow House (right)



▲16th Kuraray Fureai Soccer Tournament held in May 2014

worked to gain the understanding particularly of guardians on this point. Naturally job safety comes first, so we undertake hazard awareness checks prior to commencing operations. If we determine that operations cannot be undertaken safely, we immediately cease them, gather together all employees, and provide safety guidance.

Fostering economic independence is undoubtedly important. Yet, we believe that we can help employees become more independent by helping them acquire habits through work and cleanup activities as well as by learning interpersonal communication skills based on the teamwork of everyone in the workshop, including instructors.

For me, receiving Minister Award of Outstanding Offices for the Employment of Persons with Disabilities is recognition of employee efforts to hire people with disabilities since the founding of the Kuraray Workshop. Looking ahead, we will make every effort to help people with disabilities become more independent.

# Management

# **CSR** Management

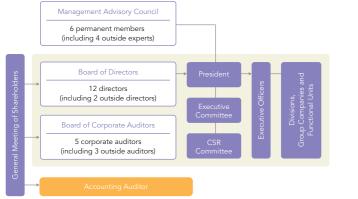
Guided by its Corporate Philosophy, Kuraray maintains a deep respect for each and every individual while creating materials that help improve people's lives through creative technologies. Through these means, the Company strives to contribute to society by providing value. The purpose of our business is to add value to the resources entrusted to us by society through the application of pioneering technologies and to then return this value through contributions to society. We believe that how we implement measures to achieve these goals while respecting the interests of all our stakeholders, including our shareholders, suppliers, consumers, local communities and employees, is important as a social responsibility of our company.

# Corporate Governance \_\_\_\_\_

We at Kuraray view corporate governance as necessary for the maintenance of sound relations with our shareholders and the various other parties in society with a stake in our company. We consider it vital not only for assisting in the improvement of our performance and sustained growth as a company but also for fulfilling our responsibility to society.

In fiscal 2003, we executed a program of reform in which we reinforced the Board of Auditors by adding more outside auditors, established the Management Advisory Council, reduced the prescribed number of directors while shortening their terms of office, and introduced an executive officer system in order to clearly separate the supervisory and executive functions. In fiscal 2008, we made further enhancements to the Company' system of corporate governance by appointing outside directors.

Corporate Governance Structure (as of June 30, 2014)



# CSR Promotion Structure —

In 2003, Kuraray instituted the CSR Committee by integrating the Philanthropy and Environment Committee and Inhouse Ethics Committee, and bolstered its CSR promotion structure on a Group level. Under the CSR Committee are arrayed four subordinate committees as specialized units on the management level (the Social Responsibility and Economic Subcommittee, Environmental and Industrial Safety Subcommittee, Global Warming Measures Subcommittee, and Risk Management and Compliance Subcommittee). These committees examine Companywide policies and targets and report on the same to management. The theme-specific working groups making up the subordinate committees collaborate with various Group units in addressing their respective agenda based on the CSR-related policies. By including responsible directors and the presidents of all Group companies as members of the CSR Committee we are taking steps to put in place a system that is capable of considering a host of issues from an increasingly wide range of dimensions.

### CSR Committee Organization



# Risk Management

To further enhance our management structure at the Group level, we are working to improve Companywide risk management. Based on self-assessments made by the heads of divisions, plants, subsidiaries, and administrative organizations, we are identifying actual risks facing each structure and identifying those judged to be major risks. The CSR Committee selects, evaluates and deliberates on those risks in particular that management ought to address and promotes appropriate responses. In addition, the President provides instructions to each structure with the aim of ensuring a swift response to changes in the risk environment through the annual Kuraray Group Basic Policy on Risk Management.

Since the Kuraray Group has many businesses that command large shares of the market and that are based on original technologies, we also create and take steps to enhance a business continuity plan (BCP) for core businesses taking the risk of a prolonged suspension in supply into consideration. In fiscal 2012, we formulated a Companywide policy related to our BCP.

### Kuraray Group Basic Policy on Risk Management for Fiscal 2014

 (1)Continually preserve operational skills and technology transfer between following items to prevent occupational incident and process accident;
 1)Experienced people to inexperienced people
 2)Domestic companies and overseas companies

(2)Formulate, verify effective business continuity plan (BCP) and extend coverage of the BCP

### Companywide Policies for BCP (Business Continuity Plan)

Give top priority to securing the safety of regional residents, employees
Aim for the early recovery/restoration of businesses/regions
Act in unison with regional society for recovery/restoration

### Compliance

Kuraray has built an organizational culture in which executives join with each and every employee in taking action underpinned by a keen sense of ethics as good citizens. We have mounted approaches to compliance that go beyond the mere observance of laws and regulations in order to ensure corporate transparency and fairness.

Year	Activity Details	
1998	Formulated Our Principles for Business Conduct	
2003	Compliance Declaration	
2003	Distributed Compliance Cards*1	
2005	Distributed the Compliance Handbook*2	
2009	Distributed the Compliance Handbook (2nd edition)	
2007-         Published and distributed Compliance Handbooks to overseas bases           2010         in the U.S., Germany, China, Belgium and Singapore		
2012	Commenced posting of compliance news on the Company's website	
2013	Commenced compliance education based on e-learning	

\*1. The compliance card contains the Company's Compliance Declaration, Corporate Philosophy and Principles for Business Conduct as well as contact details in connection with the internal reporting system

\*2. The Compliance Handbook contains details of the Kuraray Group Code of Conduct, which outlines the Group's specific Principles for Business Conduct as well as the Compliance Guidelines, which includes examples and a commentary. The Principles for Business Conduct and the Kuraray Group Code of Conduct are posted on the Company's website.

⇒URL: http://www.kuraray.co.jp/en/company/philosophy.html

### **Compliance Declaration**

- (1)We will comply with the laws and regulations or the Principles for Business Conduct.
- (2)We will give precedence to laws and regulations, and to the Principles for Business Conduct, over corporate profits.
- (3)We will strive to prevent any act that goes against laws and regulations or the Principles for Business Conduct, or that betrays the trust that society has placed in us.

### Promoting Compliance

As a part of efforts aimed at raising the awareness of employees toward compliance, the Kuraray Group regularly posts details of case studies from outside the Company that have become social issues on its internal website, providing the opportunity to think about and review how the organization and individuals can respond in an appropriate manner. (A total of 20 such case studies were posted on the Company's internal website in fiscal 2013.) In addition, we conduct compliance education (e-learning) on predetermined

# **Quality Management**

At the Kuraray Group, we have created a system that enables the consistent provision of products that satisfy the requirements of individual customers by way of quality management systems such as ISO9001 and ISO13485, which are primarily managed at the manufacturing site level, and quality management in accordance with the flow of goods in each business.

The Kuraray Group launched a project to bolster quality assurance in the *EVAL* business division with the aim of enhancing customer satisfaction via a three-year plan from fiscal 2012, the first year of GS-III, the new medium-term management plan. Going forward, we will strengthen quality management in each business and promote the standardization of content by expanding these activities across other divisions.

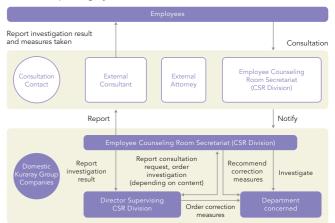
### Chemical Substance Management

In fiscal 2012, the Kuraray Group introduced a new IT system in order to manage chemical substances in an integrated manner that ensures there are no omissions. Information regarding the nature and safety of raw materials being used as well as the safety of products provided to themes and for specifically targeted personnel of the Group. For example, specific topics covered anti-trust laws, codes of conduct, export control and chemical product management targeting affiliated companies in fiscal 2013. In fiscal 2014, we plan to conduct compliance education focusing on labor management and workplace initiatives mainly for management personnel.

### Internal Reporting System

We set up the Kuraray Group Employee Counseling Room as the center of our internal reporting system for all employees of domestic Group companies (including contract-based, temporary and part-time staff). The system is aimed at preventing compliance violations as well as the early detection and resolution of the same. We also provide our employees with information on methods of internal reporting and rules for the protection of informants through our intranet and on the Compliance Card. In addition, our overseas affiliated companies have each set up their own internal reporting systems.

Furthermore, each of our offices is equipped with a special consultation office related to sexual harassment, staffed with personnel including female employees.



### Internal Reporting System

### Number of Consultations at the Kuraray Group Employee Counseling Room

FY		2011	2012	2013
Number of Consultations	2	2	5	1

customers and legal responsiveness is input into the system. This helps to improve the quality of information provided to customers across such areas as legal compliance, the distribution of Safety Data Sheets (SDSs) and labeling. In fiscal 2013, we put in place systems for the majority of notifications of amounts pursuant to the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

Looking ahead, the Kuraray Group will continue to use systems in a bid to raise the quality of product information provided to customers.

### Responding to Product Complaints

At the Kuraray Group, we are working to respond quickly to complaints and prevent reoccurrence through the integrated management of information on complaints. We respond to major cases in accordance with the Regulations on Product Liability-related Accident Response and Quality Complaint Report.

In fiscal 2013, there were no product recalls or accidents causing major health problems or damage to property such as fire.

## Communication

To ensure its accountability to society as a whole, Kuraray practices timely and appropriate disclosure of information to the whole spectrum of stakeholders (shareholders, customers, suppliers, employees, local communities, etc.) in line with the Kuraray Group Disclosure Policy formulated in May 2007.

⇒http://www.kuraray.co.jp/en/disclosure.html

### IR Activities

The Kuraray Group provides IR information for shareholders and investors based on a policy of emphasizing the reliability and fairness of investor information. In addition to conducting financial presentations for institutional investors, we are working to ensure timely, appropriate and fair information disclosure that includes the broadcasting of videos of financial presentations for the benefit of individual investors as well as general meeting of shareholders through our website. To facilitate investors' understanding of Kuraray, the Company holds briefings for general investors including companies and individual investors as well as explanatory sessions for individual shareholders.

In addition, Kuraray aims to improve the communication of business information by making available English translations of videos of results briefings and periodically meeting with overseas institutional investors in Europe, North America and Asia.



▲ Briefing for individual investors ⇒http://www.kuraray.co.jp/en/ir/

### Publicity and PR Activities

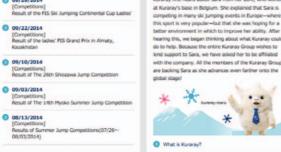
The Kuraray Group is engaged globally in publicity activities for the timely provision of information on our current status. Besides announcements of corporate news through regular news agencies in Japan and overseas, we have a full assortment of tools for this purpose, including the display of up-to-date company information on our websites in Japanese, English and Chinese, and the preparation of brochures and videos.

To raise recognition of our company and understanding of our business operations, we are promoting PR activities encompassing a corporate advertising campaign centered around TV commercials in Japan, and advertisements in chemistry journals overseas. We also strive to communicate with our stakeholders through appearances at exhibitions and events.

In June 2013, we began to sponsor the world-class ski jumper Sara Takanashi as a professional affiliation. In October 2013, we launched a website to support her career as an athlete, introducing on the website activities taken by Sara Takanashi, such as her debut in TV commercials, donations of schoolbags to children, and coordination of support from our own fan group.

# Ty Special Galary Kurrary Guersing Squad Purfix Carapitition About Skill what is kont V Kurraray Cheering Squad is here Image: Cheerin

KUraray Sara Takanashi Support / Fan Website @ Japanese



▲Landing web page for Sara Takanashi

Sara Takanashi's fan website ⇒http://www.kuraray.co.jp/en/sara/

### Communication with Local Communities Kuraray Friendship Recreation

At the Kashima Plant, where Aozora Works has a workplace for mentally disabled people, we held the Kuraray Friendship Recreation event for the first time in 2013. The aim of the event is to create opportunities for our employees to meet and interact with people with disabilities in order to gain a deeper appreciation of their needs. Held in collaboration with the social welfare organization Kamisu Keiaien and the Kashima People with Disabilities Work and Lifestyle Support Center "Matsubokkuri," the event was successful at deepening mutual understanding through recreation including volleyball games and other fun activities.



▲Kuraray Friendship Recreation (Kashima)

### Kuraray Okayama Festival

At the Okayama Plant, the Kuraray Okayama Festival is held once a year for residents living near the plant. In fiscal 2013, more than 12,000 people attended the two-day festival to enjoy the bazaars, game contests and food and beverages. We also offered bus tours of the plant to those interested, and worked to improve communications with local residents.



▲Kuraray Okayama Festival (Okayama)

# Regional Communication with the Responsible Care Committee

Kuraray is taking part in regional communication organized by the Responsible Care Committee of the Japan Chemical Industry Association. The regional communication is held around every two years in each of 15 areas and includes factory tours and an introduction to the disaster prevention activities and environmental conservation activities of each company as well as providing the opportunity for businesses, administrative agencies and local residents to exchange opinions directly.

In fiscal 2013, Kuraray's Niigata Plant hosted a regional communication event for Niigata district in March 2014. Kuraray reported on its measures to ensure safety and security at its business sites, and gave tours of its plant. We hope to continue engaging in communication with local residents in the future through opportunities such as these.



▲Regional Communication (Niigata Plant)



A Plant tour (Niigata Plant)

### Plant Tours and Briefing Sessions

Kuraray's plants as well as the plants of Kuraray Plastics Co., Ltd., Kuraray Chemical Co., Ltd. and Kuraray Fastening Co., Ltd. hold tours and regular briefing sessions for the purpose of communication with local residents. In fiscal 2013, a total of 2,854 people took part, which served to deepen understanding of the activities being implemented at our plants.



▲Plant tours (Kuraray Chemical Co., Ltd.)

### Interaction with the Local Community

Each of our business locations conducts activities rooted in the local community. Saijo Plant and Niigata Plant hold cherry blossom viewing parties when the blossoms are in full bloom on their grounds. In fiscal 2013, approximately 10,000 people came to the parties and really appreciated the blossoms in full bloom. In December, Kurashiki Plant held a Christmas fantasy event for local residents, where the night sky was lit up with a Himalayan cedar.



▲Cherry blossom viewing party (Saijo Plant)



▲Christmas fantasy (Kurashiki Plant)

# **Approaches to Safety**

The Kuraray Group has a safety management system for detecting risks of occupational incidents and process accidents to prevent any such occurrences. We operate this system to create workplaces that are safe and free of accidents and disasters by heightening the safety awareness of employees. Similarly, in preparation for the event of accidents and disasters, we conduct drills to curtail damage to the minimum. We also attempt to prevent any recurrence through sharing of information on actual cases and their lessons.

## **Basic Policy and Concepts**

and Disaster Prevention "Safety is the Cornerstone of Everything We Do"

## Disaster Prevention (Fiscal 2014) ①Ensuring "Safety First, Production (Construction, R&D) Second"

Basic Policy on Occupational Safety and

②Do "CHECK" to eliminate "RISK" before taking every action 3All employees act with determination for the achievement of zero accidents and disasters

### Safety Management

In accordance with the Safety Activity Management Regulations, the Kuraray Group formulates safety plans every fiscal year and operates them to ensure occupational safety, process safety, and disaster prevention. To be more specific, each year, at the Safety Promotion Committee attended by the President and the executives in charge, we make an overall assessment of safety activity performances and discuss policy for such safety activities in the coming fiscal year. In line with this policy, we are conducting safety activities that reflect the specific action plans of each plant and department. A group of safety representatives

from headquarters, including the executives in charge, visit each plant twice a year to conduct Safety Site Inspections in aspects such as the drafting of action plans, action taken based on these plans, and the results

Each department makes use of a Safety Level Evaluation System formulated as a tool to objectively assess the level of safety as well as weaknesses in each department for identifying the strengths and weakness relative to safety. In addition to these, each department has been carrying out PDCA cycles of safety activities efficiently and effectively.

### Safety Priorities

Evaluation O: achieved O: largely achieved  $\triangle$ : further effort required  $\times$ : not achieved

ltem		FY2014		
item	Target	Actual performances	Evaluation	112014
Process Safety	Comprehensive identification of risk without overlooking hazards and steady implementation of measures	We worked to improve facility countermeasures by identifying risks based on Japan Chemical Industry Association guidelines created in the wake of a rash of explosions at chemical plants	0	<ul> <li>Enhancement of individual safety awareness</li> <li>Comprehensive identification</li> </ul>
and Disaster Prevention	Passing on operation technologies from experienced persons to inexperienced persons (Know-Why) and steady continuation of these efforts	We aim to pass onto younger employees operational and technical expertise (Know-Why) through career development plans (CDP)	0	of risk without overlooking hazards and steady implementation of measures • Measures to prevent process accidents and raise awareness
Occupational Safety	Implementation of effective safety activities and appropriate evaluation of the effects of the safety activities	We have organized and reviewed safety activities relative to weak points identified quantitatively and objectively through use of the Safety Level Evaluation System.	0	<ul> <li>Pass on operation technologies from experienced persons to inexperienced persons (Know-Why) and steady continuation of these efforts</li> </ul>
Jalety	Enhancement of individual safety awareness	We encouraged individual safety via Hazardous Prediction, pointing and calling, holding stair handrails at all times, and inspection tours during morning meetings	0	<ul> <li>Improve awareness of a adherence to rules that should be followed</li> </ul>

### Numerical Targets

		FY2014 Target		
ltem	Target(Domestic Kuraray Group)	Actual performances(Domestic Kuraray Group)		(Domestic and overseas groups)
Process Safety and Disaster Prevention	Number of process accidents: 0 accidents	2 accidents	×	Number of process accidents: 0 accidents
	Number of Lost Time incidents: 0 incidents	4 incidents	×	Number of Lost Time incidents: 0 incidents
Occupational Safety	Frequency Rate of all occupational incidents: 1.0 or less	1.3	×	Frequency Rate of all occupational incidents: 1.5 or less

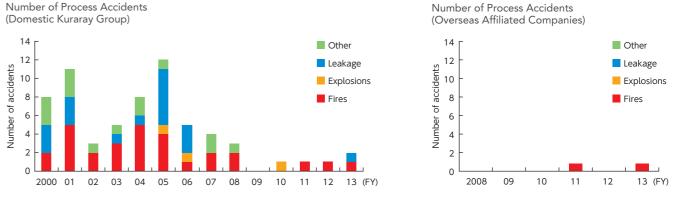
Scope of numerical targets for the number and frequency rate of incidents and accidents: Domestic Group (fiscal 2013) → domestic and overseas Group (fiscal 2014) Frequency Rate of all occupational incidents: Number of all occupational incidents per million work hours.

All occupational accidents of light severity and higher is defined as accidents requiring at least minor medical attention, based on the definition of a recordable incident by OSHA in the U.S.

# **Process Safety and Disaster Prevention**

At the Kuraray Group, we consider it a major responsibility to prevent the occurrence of explosions, fires, leakage of hazardous materials, and other accidents that could have an immense impact on society, as well as to curtail the damage in the event of any occurrence to the minimum level. For that reason, we have mounted Company-wide approaches in areas such as risk assessment related to safety and disaster prevention, quake-proofing measures for buildings and plants, and conditioning of the





# Kuraray's Action Plan with respect to Industrial Safety

In reference to the three accidents, which occurred at the plants of well-known Japanese chemical companies between 2011 and 2012, the Ministry of Economy, Trade and Industry made a recommendation to the Japan Petrochemical Industry Association (JPIA) to eradicate industrial-scale accidents. JPIA responded by formulating the Industrial Safety Action Plan. On top of this Action Plan, Kuraray also formulated its own Industrial Safety Action Plan as follows.

1. Commitment to Industrial Safety by the Company Driven by the President with the full commitment of top management, the Company makes an overall assessment of safety activities and discusses policies for the coming fiscal year. This assessment and discussion is based on the Basic Policy and Concepts in Occupational Safety and Disaster Prevention and is undertaken by the Safety Promotion Committee each year. Our policy for fiscal 2014 is shown in the Basic Policy on Occupational Safety and Disaster Prevention.

### 2. Safety Targets and Fiscal 2013 Results Set numerical targets and safety priorities.

3. Fiscal 2013 Results

·Measures to prevent accidents following accidents at chemical plants in Japan JCIA created safety guidelines to prevent accidents based on an analysis of factors behind the accidents at three chemicals companies. Each accident highlighted the need to address a variety of key areas including errors of judgment during irregular operations, abnormal and runway reactions, and the failure to notice abnormal situations. All in all, particular emphasis is now being placed on the passing on not only of technical skills, but the ability to make and carry out decisions based on tried and tested experience. As a member of JCIA, Kuraray has inspected its chemicals plants based on these safety guidelines to prevent accidents. The result of this inspection did not identify any major problems. Based on accidents at other chemical companies, brief details of which are presented as follows. Kuraray has implemented three key measures. 1) Kurarav has drawn from an accident that occurred at another chemical

company. The accident was largely attributable to the company's inability to identify abnormalities in a chemical storage tank due to the lack of a temperature gauge. If a temperature gauge had been present, there is a strong possibility that the accident and explosion could have been avoided. Drawing on the lessons to be learned from this accident, Kuraray undertook an inspection of its facilities to ensure that all appropriate measuring instruments were in fact installed as required. This inspection revealed that certain measuring instruments had not been installed. We then took immediate steps to install the necessary equipment so as to properly confirm the status of operations and to better measure such key parameters as temperature and pressure based on a review of the guidelines.

safety management system for facilities. We have especially dealt with safety assessment and change management, when the facilities are newly built or remodeled, and operating conditions will be changed.

In fiscal 2013, there was one fire and one leakage accident reported in Japan, as well as one minor fire reported overseas. However, the damage was minimal and there was no effect on local communities.

2) Following accidents at other chemical companies, Kurarav has reassessed who should have the authority to start and shut down operations as a part of efforts aimed at improving response measures during emergencies, particularly in the case of three-shift 24-hour operations.



▲ Training using a designated simulator

3) Moreover, Kuraray reassessed dangerous aspects of reaction runway caused by exothermal reactions

In risk assessments conducted during fiscal 2012, Kuraray reviewed measures for risks that are unlikely to occur but would cause serious accidents if they did occur. This review was undertaken from certain viewpoints including "is there a possibility of runway reaction attributable to polymerization as a result of foreign material contamination, lack of cooling, or dimerization reaction?" In fiscal 2013, we strengthened measures to prevent the spreading of poisonous gases and reinforced spraying water systems for liquefied gas storage tanks.

·Passing on operation technologies from experienced persons to inexperienced persons

The following measures are being implemented to ensure operational knowledge and skills are passed onto younger operators.

- 1) Retired operators who are sufficiently familiar with the plants were rehired as instructors to pass on operational knowledge and skills to younger operators
- 2) Plant operation simulators were built on PCs to train operators and improve their operational skillsets for chemical plants
- 3) "Know-why" training via general and specific e-learning about the operation of chemical plants.
- 4) Train employees at external educational institutions about the basis of chemical engineering, plant safety, emergency care and so on. This includes experience-based emergency drills and training.

### 4. Action Plan for Plant Safety

Our action plan based on the Basic Policy and Concepts in Occupational Safety and Disaster Prevention provides details of safety priorities which are being progressed at the business offices and plants of the Kuraray Group in Japan. 1) Enhancement of individual safety awareness

- Human error that results from specific behavior patterns is often the cause of process accidents. To prevent human error, we are raising awareness toward danger at dangerous points of work processes through KY (Hazardous Prediction).
- 2) Comprehensive risk assessment without overlooking hazards and steady implementation of measures

Plant facilities must be made inherently safe, even in the event of human errors. We are working to identify points of weakness in facilities and take action to reinforce these points of risk in order to make facilities inherently safe, starting with the highest-risk areas. This entails checking areas where human error can occur and putting in place facility measures that kick in in the event of human error.

- 3) Steady implementation of safety measures to prevent process accidents Process accidents are often caused by factors that led to process incidents in the past. We are constantly reviewing the causes of accidents at our plants and other companies' plant to ascertain the existence of any problems with our current processes. We clearly define who has authority to start and shut down operations following discussions, based on safety guidelines to prevent process accidents, as well as the criteria for those in charge to follow when making decisions.
- 4) Passing on operation technologies from experienced persons to inexperienced persons

"Know-why" records are kept in operation manuals for passing on operational skills based on the safety guidelines to prevent process

## **General Disaster-Prevention Drills**

In its production activities, the Kuraray Group handles huge amounts and various kinds of hazardous materials and high-pressure gasses. In readiness for accidents or disasters, each plant is equipped with fire-prevention and -extinguishing facilities. Each plant also has emergency organization, which regularly conduct drills. In fiscal 2013, we conducted disaster prevention drills, notification drills and tsunami evacuation drills on the assumption of various situations at each plant, including occurrence of fires, leakage of hazardous materials, earthquakes, and tsunami. In addition, because major accidents require crisis management on a Company-wide scale, we also regularly conduct drills involving the Emergency Command Center with the participation of the President and other representatives from each division at our headquarters.



▲Tsunami evacuation drill conducted at the Kurashiki Plant

risk assessment activities without overlooking hazards. At Kuraray Group

companies in Japan, the number of accidents requiring leave declined to

The Japan Chemical Industry Association (JCIA) member company (parent company)

0.85

12

1.3 (FY)

four, from five, and the frequency rate of lost time incidents improved

# **Occupational Safety**

We at the Kuraray Group recognize that ensuring employee safety and health is the very basis of a company's business activity. Through proper operation of our occupational safety management system, we strive to improve the level of safety for the entire organization as well as for each employee, toward creating safe and incident-free workplaces. In fiscal 2013, we worked to overcome weak points in safety activities identified through the Safety Level Evaluation System and conducted comprehensive

### Number of Lost Time Incidents

FY	2008	2009	2010	2011	2012	2013
Domestic Kuraray Group*1	4	2	3	2	5	4
Overseas affiliated companies	12	8	9	18	9	20
Domestic and overseas Kuraray Group* <sup>2</sup>	16	10	12	20	14	24

\*1 Domestic Kuraray Group: Plants in Japan and domestic affiliated companies \*2 Domestic and overseas Kuraray Group: Domestic Kuraray Group and overseas affiliated companie

accidents. An evaluation matrix is created mapping out the skills of all operators following an assessment of the level of their knowledge, skills and techniques specific to their tasks that are required of production site personnel on the front lines. Based on this matrix, training objectives, and career development programs are set for each employee. Key to this training is the development of decision-making skills and the ability to carry out decisions once they are made. 5) Awareness of and adherence to rules that must be followed

- There are legal, regulatory and internal rules that have been created based on past experiences to ensure safety. However, people tend to think they are exempt from some of these rules. To prevent this, rule books are read in turn every day. Employees that ignore rules are seriously dealt with, in order to enforce the fact that everyone must strictly adhere to the rules.
- 5. Initiatives to Improve Process Safety Activities In a bid to boost motivation, the Kuraray Group has two safety reward systems in place to recognize safety, comprising the Kuraray Safety Award, which is awarded at the plant level, and the Safety Excellence Department Award, which is awarded at the department level. Individuals and contractors who have exemplary safety records are recognized with awards at the plant level. We also take advantage of the award systems of the Japan Chemical Industry Association and the Japan Chemical Fibers Association. In fiscal 2013, the following awards were received from external organizations. The Okayama Plant received "the Fiscal 2013 High-Pressure Gas Safety"
- Award" from the Minister of Economy, Trade and Industry (October 2013) •Received certificates confirming continued zero accidents at plants from JCIA for the Kashima Plant (six straight years of zero accidents), the Kuraray Tsukuba Research Center (for 17 years), Kuraray Fastening Co.,

Ltd (for 10 years), Kuraray Plastics Co., Ltd. (for seven years). (December

2013)

from 0.42 to 0.33.

1.2

1 0

0.8

0.6

04

0.2

0.0

0 49

05

0.48

06

07

08

09

10

11

Frequency Rate of Lost Time Incidents

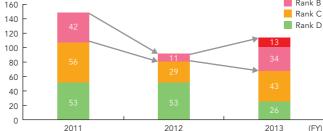
Domestic Kurarav Group\*

★ The entire domestic chemical industry

Since 2011, Kuraray has maintained an "accident evaluation score" that it uses as an independent indicator of occupational safety (an assessment of occupational incidents based on the analysis of the potential degree of injury and factors that cause incidents-the weight of responsibility). In fiscal 2013, this indicator worsened due to an increase in incidents with a heavy weight of responsibility.

Meanwhile, the Company measures the criteria of lost time incidents overseas. Therefore we adopted "the frequency rate of all

Occupational Incident Evaluation Score (Domestic Kuraray Group) Rank A (Evaluation Score) Rank B 160 г



Score reflecting the potential degree of injury or damage to humans, and the weight of human, facility, and management responsibility for all occupational incidents. The higher the score, the greater the responsibility (Degree of severity and responsibility: A>B>C>D)

# Logistics Safety

To prevent damage to society at large due to logistics accidents, we are engaged in an ongoing promotion of activities to ensure logistics safety in the aspects of product shipment and storage. The Logistics Safety Conference, which leads these activities, entered its 13th year, and we

### Product Safety

### Basic Policy on Product Safety

The Kuraray Group endeavors to contribute to creating an affluent, comfortable society by meeting customer needs through the supply of safe and reliable products.

### **Action Guidelines for Product Safety**

Osupply products that meet the level of safety expected by society in compliance with safety-related laws and regulations and on the basis of the latest technologies.

2 Minimize any anticipated risk associated with the products we supply. SMaintain an appropriate quality management system to ensure that all products meet requisite quality and safety standards. <sup>(2)</sup>Provide accurate product information to customers and end users to prevent accidents due to inappropriate use or handling. **Strive to develop safer products and improve product safety technologies.** 

<sup>6</sup>Strive to strengthen information gathering and internal and external cooperative frameworks to ensure and improve product safety and quickly respond to accidents.

Strive to raise product safety awareness among all employees and develop product safety specialists.

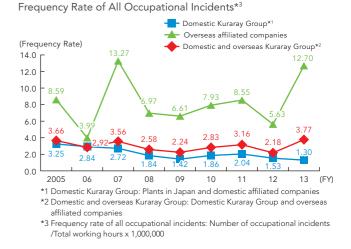
We believe that the provision of safe products is our minimum obligation as a manufacturer, and the first item of the Kuraray Group Code of Conduct points to this idea.

Our specific direction is stated in our Basic Policy on Product Safety and Action Guidelines for Product Safety.

We conduct daily management at the business unit and affiliate level, and we have built a system to confirm that product safety and other

17

occupational incidents" instead of the frequency rate of lost time incidents. In fiscal 2013, this indicator was 12.70 at overseas companies versus 1.30 for the Kuraray Group in Japan, for an average of 3.77 overall. A critical feature here is the significant deterioration at overseas companies compared with fiscal 2012 (from 5.63 to 12.70). While some plants have a record of zero incidents, some plants in particular have records of many incidents, identifying the issues that need to be addressed next.



conducted safety training in fiscal 2013 (two sessions with participation by 19 companies) on the topic of "new solutions for transporting dangerous materials in Japan and around the world" for logistics providers that handle the transportation of dangerous substances.

risks are being managed at an acceptable level when we develop and sell the products that require Companywide examination, such as those that are ingested into the body through working groups led by the CSR Division. In fiscal 2013, we ascertained the implementation of safety regulations formulated in the previous year for handling nano-materials, in order to ensure they are being followed.

# Environmental

# Approaches to the Environment

# -Aiming to Realize a Sustainable Society-

We believe that the Kuraray Group's mission as a material and intermediate material manufacturer is as follows:

- Contributing to society by providing the materials and intermediate materials required for products that are needed to create
- a low-carbon society and an environmentally conscious society; and
- Production of items with as low an environmental impact as possible.

With this in mind, we are working consistently to implement environmental conservation activities that include promoting measures against global warming, managing chemical substance emissions, and the beneficial use of wastes.

# **Environmental Management**

### **Environmental Targets and Results**

Evaluation O: achieved O: largely achieved A: further effort required

		FY2013		FY2014		Medium-term environmental taroet			Page
			Actual performances			(FY2020 target)	environmental target (to be achieved by FY2013)	luation	
Global warming	Domestic Kuraray Group	[Measures to reduce GHG emissions] Implement measures to reduce emissions by 20,000t	Reduced by 36,000t (YoY)     Improved environmental     efficiency (GHG emissions) by 7%     compared with FY2010	0	Implement measures to reduce by 20,000t	[Environmental efficiency (GHG emissions)] Improve by 40% compared with FY2010	18%		20
prevention	Overseas affiliates	[Environmental efficiency (energy consumption)*] Improve by 3% compared with FY2010	Improved environmental efficiency (energy consumption) by 14% compared with FY2010	0	Improve environmental efficiency by 4% compared with FY2010	[Environmental efficiency (energy consumption)] Improve by 10% compared with FY2010	114%	0	20
Management of chemical substance emissions	Domestic Kuraray Group	[Management of JCIA-designated PRTR substance emissions] Maintain emissions at FY2010 level(1,104t)	JCIA-designated PRTR substance emissions:1,007t     Improved environmental efficiency (PRTR substance emissions) by 18% compared with FY2010	0	Maintain emissions at FY2010 level (1,104t)	[Environmental efficiency (JCIA-designated PRTR substance emissions)] Improve by 100% compared with FY2010	18%		22
Reduction	Domestic Kuraray Group	[Measures to reduce waste] Implement measures to reduce waste by the equivalent of 1% relative to FY2012 (728t)	Amount of waste reduced: 2,260t     Environmental efficiency (waste generated) unchanged compared with FY2010	0	Implement measures to reduce waste by the equivalent of 1% (800t)relative to FY2013	[Environmental efficiency (waste generated)] Improve by 10% compared with FY2010	0%		23
of Waste	Overseas affiliates	[Environmental efficiency (waste generated)] Improve by 3% compared with FY2010	Improved environmental efficiency of waste generation by 10%	0	Improve environmental efficiency by 4% compared with FY2010	[Environmental efficiency (waste generated)] Improve by 10% compared with FY2010	100%	0	23
Effective utilization of	Domestic Kuraray Group	_	_		Review current understanding and usage conditions by fiscal 2014 and judge whether or not to set target values in fiscal 2015		_	_	23
water resources	Overseas affiliates	[Environmental efficiency (Water consumption: Excludes seawater)] Improve by 3% compared with FY2010	Improved environmental efficiency of water consumption by 6.5% compared with FY2010	0	Improve environmental efficiency by 4% compared with FY2010	[Environmental efficiency (water consumption)] Improve by 10% compared with FY2010	65%	0	23

\*Almost all electric power and steam is purchased from external sources at Kuraray's overseas affiliated companies. Because the source of supply has a large effect on GHG emissions (changes in emission factor), energy consumption is evaluated without incorporating the impact of the supply source in order to properly evaluate the activities of our overseas affiliated companies

### Environmental Management System

We have formulated the Kurarav Group Action Guidelines for the Global Environment (1993) and the Environmental Action Policy 2013 (Environmental and Industrial Safety

Management Center (ESC) Policy 2013), and we are promoting environmental conservation activities pursuant to a PDCA cycle that consists of making action plans, implementing activities, confirming results and reflecting these in plans for the coming fiscal year at every plant and affiliates.

The Kuraray Group's domestic plants and affiliated companies have each attained ISO 14001 certification and are conducting internal audits as well as external audits by an outside examining authority (JQA). Through these audits and examinations, we confirm that the environmental management system is functioning properly and receive advice on where to make improvements to ensure that it is continually upgraded. On the other hand, the accuracy of the internal audits is influenced by the capabilities of the internal auditors, therefore, we invite an outside instructor to each plant to provide training aimed at improving their capabilities.

In addition, representatives from the ESC visit the domestic Kuraray plants and affiliated companies, and conduct "environmental data audits" to check the measurement data itself in order to confirm that there are no mistakes in the data reported to the state and local government with the objective being to prevent false reporting and the like. In fiscal 2013, these audits were conducted at the Kuraray Niigata Plant, Kuraray Kashima Plant and Kuraray Chemical Co., Ltd. and it was confirmed that reporting is being done in an appropriate manner.

Each plant also verifies the status of legal compliance every year pursuant to the environmental management system and in fiscal 2013 it was confirmed that there were no incidences of leaked notifications or false reporting to the state and local government.

Based on "Safety and Environment Examination Standards." the domestic Kuraray Group examines the impact on the environment in advance when introducing new facilities or equipment. In case the new introduction is deemed to cause an environmental impact, we do our best to change the construction method, operating method and materials used

### Promotion Structure for Environmental Preservation

Kuraray's Company-wide environmental preservation activities are facilitated by the Global Warming Prevention Committee and Environmental and Industrial Safety Committee, both of which were established within the CSR Committee. These committees work primarily on promoting global warming solutions, management of chemical substance emissions, and beneficial use of waste resources. (See the organizational chart on page 11.)

## **Global Warming Prevention**

Environmental Target

In fiscal 2013, both the domestic Kuraray Group and overseas affiliated companies improved upon the benchmark standard of 100 (FY2010) with results of 107 and 114, respectively. In particular, overseas affiliated companies, which had already achieved the target set for fiscal 2020 (110) in fiscal 2012 further surpassed this benchmark. Domestic Kuraray Group reduced CO2 emissions by 36,000t through a variety of measures including efforts to expand biomass fuel use, the introduction of energy saving equipment, and a review of operating conditions for manufacturing facilities. As a result, successful steps were taken to surpass the single-year reduction amount target of 20,000t. In contrast, the amount of GHG emissions in fiscal 2013 increased compared with the previous fiscal year. This was largely attributable to fuel-related factors on the back of an increase in operating rates at domestic plants, the incineration of waste including thermal recycling at domestic plants and other facilities, and an upswing in the GHG emission factor as a result of increased purchases of electricity from utilities companies owing to the suspension of operations at nuclear power plants in Japan.

Results for GHG emissions and energy consumption in fiscal 2013 were as follows.

Domestic	Total: 1,258,000t-CO2
Kuraray Group	[FY2012: 1,215,000t-CO2]
Overseas	254,000kL (crude oil equivalent)
Affiliated Companies	[CY2012 224,000kL (crude oil equivalent)]

Because MonoSol, LLC joined the Kuraray Group in 2012, total GHG emission increased. On the other hand, net sales also increased in 2013. As a result, environmental efficiency surpassed the result of fiscal 2012.

### Biomass Fuel Power Generation and High-efficiency Gas Engine Power Generation

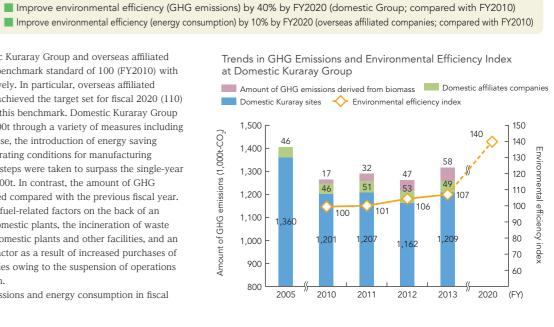
The Kuraray Kurashiki Plant (Tamashima) has introduced biomass fuel (construction waste material) as a substitute fuel for coal for their power generation plant. They are expanding the amount of biomass fuel gradually. In fiscal 2013, they expanded supply source as well as storage facilities. As a result, the amount introduced increased over 7,100 tons compared with the previous year and that contributed to reducing GHG emissions by 10,600t-CO2. In addition, the Kuraray Niigata Plant introduced and started operating a high-efficiency gas-engine power generation facility in fiscal 2011, which uses natural gas as fuel, and in fiscal 2012, this facility contributed significantly to GHG reduction based on the generation of GHG reduction effects.

### Medium-term Environmental Targets

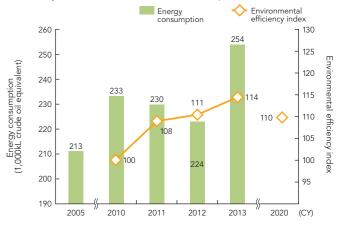
We have formulated a medium-term environmental plan aimed at fiscal 2020 relative to the standard fiscal year of 2010. Activities toward these targets were first implemented in fiscal 2011. We introduced the indicator "Environmental Efficiency\*" as a part of the medium-term plan so that we could evaluate quantitatively the effects of our activities.

- \*Environmental Efficiency = Net sales/environmental load
- Environmental load: volume of GHG emissions, chemical substance emissions, waste generated, etc.

Even if GHG emissions are reduced in the manufacturing process, the absolute amount of emissions will increase as business activities expand, which means that efforts to reduce emissions will not be evaluated appropriately. We introduced "Environmental Efficiency" as an indicator for evaluating how our production activities were efficient based on net sales and environmental load. Our target is to raise this Environmental Efficiency.







### Evaluating the Contribution of CO<sub>2</sub> Reductions throughout the Lifecycle of Products Using Kuraray Group Materials

In fiscal 2012, we began assessing our contribution to reducing GHG, taking into account the product lifecycle from the raw material procurement to the disposal stage. As a result, we enabled assessment of the degree to which we contribute to reducing GHG emissions at the manufacturing stage through to the final disposal of the products we make.

In fiscal 2013, we assessed GENESTAR, the resin with excellent heat resistance that is produced only by Kuraray, and found that we had made a significant contribution to a global reduction in CO<sub>2</sub> emissions in the component automotive and LED lighting component fields.

In components for automotive applications, substituting metal components with GENESTAR resin enabled a reduction in automobile weight. Due to the resulting improved fuel consumption, the annual CO2 emission reduction effect amounted to approximately 45,000t.

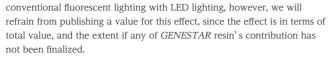
It has also been calculated that changing from conventional fluorescent lamps to LED lighting (fluorescent lamp type) is having a considerable effect on CO2 reduction across the world and that GENESTAR resin, too, is making a contribution. In the case of replacing

### The Carbon Life Cycle Analysis Assessment Method (Method for Calculating the Amount of CO<sub>2</sub> Emission Reduction Contribution)



### Reducing Environmental Load during Product Transportation

Besides striving to reduce GHG emitted during the production processes at our plants, we are also doing our best to minimize environmental load at the logistics stage when transporting products to users. Having worked to make a modal shift from trucks to rail or sea transport and gradually

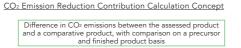


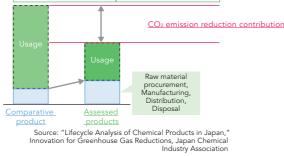
Factoring in the automotive component applications of GENESTAR resin and the effect arising from the use of EVAL gas barrier resin, which was assessed in fiscal 2012, the CO<sub>2</sub> reduction effect totals approximately 300,000t less CO2 per year. This equates to around 23% of the domestic Kuraray Group's annual CO2 emission volume amount for fiscal 2013.

Going forward, we plan to assess other products and publish the results in our CSR Report and elsewhere.

Finished Product Subject to Assessment	CO <sub>2</sub> Emission Reduction Effect
Automotive Parts	45,000t-CO <sub>2</sub>

Source: CO2 Reduction Contribution Assessment Consulting Report (Mizuho Information & Research Institute, Inc., May 2014)





reduced GHG and nitrogen oxide emissions during transportation since fiscal 2010, the amount of emissions for fiscal 2013 were roughly at the level of the previous fiscal year.

### Topics

### Scope 3 Emission Calculations Started

Under the GHG Protocol\*, GHG emission are categorized in three categories, Scope 1, 2 and 3.

Scope1	Direct emissions. GHG emissions generated by fuel combustion, such as at places of business
Scope2	Indirect emissions. GHG emissions associated with purchased energy, such as purchased electricity
	indirect emissions. On o emissions associated with purchased energy, such as purchased electricity
Scope3	Other indirect emissions. GHG emissions along the entire supply chain (from raw materials to product disposal)

Mandated under the law by which businesses voluntarily calculate and report Scope 1 and Scope 2 to the government, we have been reporting these to the government and publishing the results in our CSR Report and elsewhere.

In case of Scope 3 GHG emissions that take into account the entire supply chain, there is movement for domestic applicant

manufacturers to calculate and announce Scope 3 emissions. Due to the increasing number of survey questionnaires requesting company Scope 3 emissions that are being received from environmental NGOs and other organizations, Kuraray decided to start calculations from those giving fiscal 2013 performance.

We conducted calculations for eight of the total of 15 Scope

3 categories, omitting three categories that were not applicable to Kuraray and four for which we were unable to gather the data. As a result, it has been calculated that emissions associated with the purchase of raw materials total 610,000t of CO2, which is comparable to about half of the Scope 1 and 2 emission amounts for the domestic Kuraray Group. Emissions relating to the "production, use, and disposal of sold products," however, are calculated for products for which CO2 emission contribution assessments taking product lifecycles into account have been carried out, and the coverage as a percentage of Kuraray Group sales thus remains low.

Kuraray will continue to calculate Scope 3 emissions in the years to come and plans to examine the possibility of reducing CO2 emissions along its supply chain.

(\*) Centered on the World Resources Institute (WTI) and the World Business Council for Sustainable Development (WBCSD), the Greenhouse Gas (GHG) Protocol is an initiative to develop international standards and relevant tools relating to GHG and climate change. Companies, NGOs and governmental organizations all over the world are among those involved in the initiative.

# **Management of Chemical Substance Emissions**

Medium-term Environmental Target

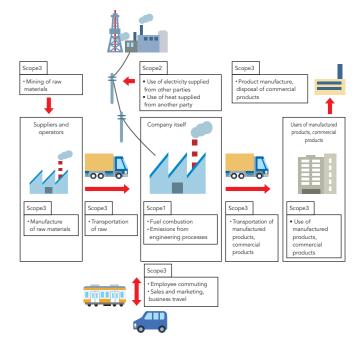
Improve environmental efficiency (chemical substance emissions) by 100% by FY2020 (domestic Kuraray Group, compared with FY2010)

Based on the Law concerning Pollutant Release and Transfer Register (PRTR Law), Kuraray's domestic plants and affiliated companies investigate and figure out the amount of annual emissions of object chemical substances and report the information to the government. In addition, we also figure out and publish, on our website and elsewhere, the emissions of chemical substances set forth by the Japan Chemical Industry Association (JCIA) that are not subject to the PRTR Law.

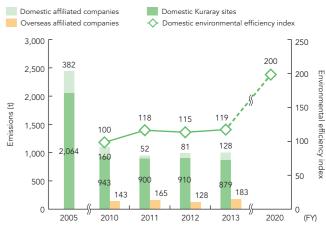
In fiscal 2013, we improved environmental efficiency by 19% compared with fiscal 2010. JCIA-designated PRTR substance emissions increased slightly with results of 880t at domestic Kuraray plants (down 30t YoY) and 130t at domestic affiliated companies (up 50t YoY). The increase in emissions was associated with an increase in the consumption of relevant chemical substances owing to such factors as increased production at domestic affiliated companies and changes in grade configurations.

Overseas affiliated companies are also working to reduce emissions in line with the regulations of the respective regions they are located, and in fiscal 2013, emissions amounted to 183t (up 55t YoY).

### Diagram Showing Scope 1, 2 and 3 Supply Chain Emissions



Trends in the Kuraray Group's Chemical Substance Emissions and Environmental Efficiency Index



## Reduction and Effective Use of Waste and Reduction of Landfill Waste

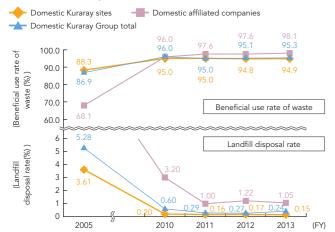
Medium-term Environmental Target

Improve environmental efficiency (waste generated) by 10% by FY2020 (both of domestic Kuraray Group and overseas affiliated companies, compared with FY2010)

Since fiscal 2007, the domestic Kuraray Group has maintained a level of more than 90% for beneficial use of waste and less than 1% for landfill disposal. In fiscal 2013, the rates for the beneficial use of waste and landfill disposal were 95% and 0.2%, respectively. We achieved a reduction in waste generation of 2,260t, thereby achieving the fiscal 2013 target, which was a reduction equivalent to 1% of the waste generated in fiscal 2012 (728t). In contrast, with regard to our medium-term environmental target of a 10% improvement in environmental efficiency by 2020, the rate achieved in fiscal 2013 was  $\pm 0\%$  (compared with fiscal 2010), a result that fell short of the target. This missed target was due to the start of full-scale operations at a new facility at the Saijo Plant that is producing optical-use poval film and the increase in the amount of ash from petroleum cokes (PC) generated by the dismantling of PC recycling facilities at the Okayama Plant.

Production increased at overseas affiliated companies as a result of acquisitions, but due to the negligible increase in the amount of waste generated, environmental efficiency increased 10% compared with fiscal 2010. Going forward, we will focus on trends and strive to optimize

Trends in Domestic Kuraray Group Rates of Beneficial Waste Use and Landfill Disposal



operating conditions and reuse resources in order to achieve our medium-term environmental target.

Domestic Kuraray Group Trends in the Amount of Waste Generated and Environmental efficiency index



Trends in Overseas Affiliated Companies Amounts of Waste Generation and Environmental efficiency index



## **Effective Utilization of Water Resources**

Environmental Targe

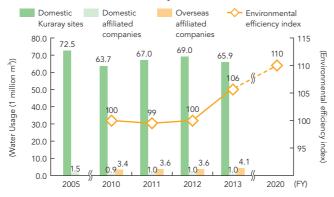
Improve environmental efficiency (water consumption) by 10% by FY2020 (overseas affiliated companies)

The Kuraray Group, including overseas affiliated companies, does not conduct production activities in regions that have only poor water resources. We consider water to be a limited resource and have stated the effective utilization of water resources as one of our medium-term environmental targets.

At domestic Kuraray plants, we have seen a gradually increasing trend in water consumption (excluding seawater) from fiscal 2010 onward. As such, we are planning to identify and investigate conditions by fiscal 2014 and decide whether we should formulate a quantitative target in fiscal 2015. In fiscal 2013, the domestic Kuraray Group's water consumption was slightly lower than that of fiscal 2012, at 66 million m<sup>3</sup>. In recent years, the level of consumption has stayed roughly the same.

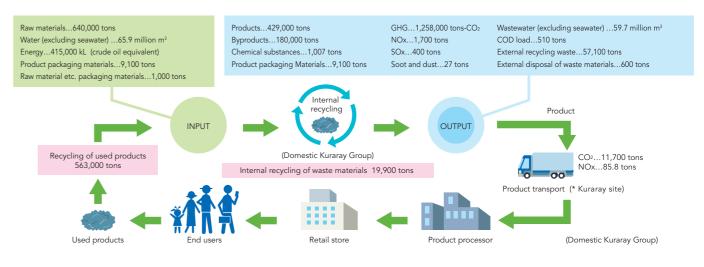
At overseas affiliated companies, there was a minor increase (0.5 million m<sup>3</sup>) in consumption compared with fiscal 2012, but this represented a major improvement in view of an increase in sales. These companies aim to improve environmental efficiency by 10% by 2020 (compared with fiscal 2010).

Trends in the Kuraray Group's Water Usage and **Overseas Environmental Efficiency** 



## Material Flow in Business Activities (Fiscal 2013)

The Kuraray Group uses large amounts of energy, chemical substances, and water resources in the course of its business activities. We make quantitative surveys of used resources and emitted substances, and use



## **Environmental Accounting**

• Total investment during the reporting period: 27.1 billion yen • Total R&D costs during the reporting period: 13 billion yen

Environmental Preservation Costs (million yen)

		Investments		
Costs within the	Pollution prevention costs	116	107	Operating cost of environmental facilities, measures to prevent emissions of toxic chemical substances
	Global environmental preservation costs	207	1	Cost of energy conservation activities
sites	Resource recycling costs	42	379	Recycling costs and waste processing costs
	Total	365	487	
Upstream and downstream costs		-	104	Recycling and reuse of packaging materials, improvement of container packaging
Administrative costs		85	78	ISO 14001, environmental measurements, environmental education
Research and development costs		2	10	Development of environmentally friendly products
Social activity costs		-	0	Afforestation, beautification, provision of environmental information to host community residents
Environmental damage costs		-	0	
	Total	452	679	

### Environmental Preservation Effects (Kuraray)

			FY2011	FY2012	FY2013	
Pollution prevention effect	SOx emissions	Tons	375	351	412	61
	NOx emissions	Tons	1,516	1,556	1,643	87
	Soot and dust emissions	Tons	22	22	25	3
onocc	PRTR substance emissions	Tons	900	910	879	▲ 31
	COD load	Tons	573	520	508	▲ 12
	GHG emissions	1,000 tons-CO2	1,207	1,162	1,162	0
Global environment preservation activities	Energy consumption	1,000 kL (crude oil equivalent)	419	386	402	16
	Unutilized externally processed industrial waste	Tons	511	345	460	115
Resource recycling	Rate of effective waste utilization	%	95.1	94.8	94.9	0.1
activities	Water resource usage*	million m <sup>3</sup>	67	69	67	▲ 2
	Total discharge of wastewater*	million m <sup>3</sup>	60	60	60	0
	* Excluding seawater	•			•	
	ental accounting calculations ril 1, 2013 to March 31, 2014 ©Scope covered:	_		ting environmental   in a simple compariso		

### 2 Environmental preservation cost calculation criteria

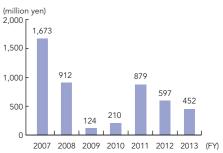
Depreciation: Straight-line method • Standard for allocating costs: In principle, 100% of costs are allocated to individual environmental preservation items. However, a portion of costs is

allocated on a pro rata basis.

Please see our website for the full set of environmental data

this information to minimize the environmental load associated with our business activities.

Investment in Environmental Facilities



The Kuraray Group made large-scale investment in environmental facilities for a few years prior to fiscal 2007 and large projects have already been completed. As a result, the amount of investment in environmental facilities has decreased since fiscal 2008.



### 4 Standard for calculating economic effects (benefits) of environmental preservation measures Although material effects such as income from recycling are known, benefits are

deducted from environmental preservation costs

# Approaches with the Community

We in the Kuraray Group consider the sound and sustainable advancement of society a precondition for corporate growth and prosperity, as well as the ultimate objective of corporate activities. It goes without saying that we see it as our duty to contribute to society through provision of products of genuine value to people. Beyond this, we consider assistance with the resolution of social issues within an appropriate scope to be another important form of social contribution in our capacity as a corporate citizen.

# Social Contribution Activities

## Kuraray Group Policy for Social Contribution Activities

For fulfilling its responsibilities as a member of society, the Kuraray Group shall make vigorous approaches to social contribution activities in accordance with the following policy.

### Types of Activities

- Activities that lead to a resolution of social problems and issues
- Activities rooted in local communities hosting Kuraray establishments worldwide
- Areas of Activities
- Priority areas: culture, science, environment, and social welfare

### Science

### Chemistry Classes for Boys and Girls

Kuraray conducts the "Chemistry Classes for Boys and Girls" program with the goal of enabling elementary school students to experience the fun of chemistry through hands-on experiments.

From 1992, this program has been held every year at each plant, and Kuraray employees volunteer to serve as instructors or assistants to conduct classes at special classrooms on plant premises and at local elementary schools and public facilities. In fiscal 2013, a total of 328 children participated in 12 sessions. Since 2002, we have been exhibiting at Dream Chemistry-21, a chemistry experiment show for children held by the Japan Chemical Industry Association. In fiscal



▲Fun Chemistry Class (Niigata Plant) Chemistry Classes for Boys and Girls Held

Plant	Class name	Number of classes to date	Number of participants to date
Kurashiki Plant	Fun Chemistry House	63	1,737
Saijo Plant	Exciting Chemistry Class	62	1,837
Okayama Plant	Fun Chemistry Class	38	1,257
Niigata Plant	Wondrous Laboratory	48	1,480
Kashima Plant	Fun Chemistry Class	16	1,108
Total		227	7,419

- Activities emphasizing participation by employees on their own initiative
- Activities that are sustainable in the long term

2013, our experiment for production of aromatics using highly water-absorbent resin attracted the participation of about 1,400 children and their parents.

### Sending School Bags across the Sea

"Sending School Bags across the Sea" is an annual program of international cooperation under which we send school bags once used by Japanese elementary school students, along with school supplies and letters, to children in Afghanistan and other countries where wartime devastation has robbed them of schooling opportunities.

The year 2013 marked the 10th year since the start of the program in 2004. The program has been steadily expanding and we received some 9,000 school bags from all parts of the country in 2012. Filled with the good wishes of the children, the bags are sorted and packed by the members of the JOICFP (Japanese Organization for International Cooperation in Family Planning) and other affiliated groups as well as Kuraray Group employees, before being sent overseas with the cooperation of many other volunteers. This year, we again delivered bags



▲Children in Afghanistan (Photo courtesy of JOICFP)

to children in need of them.

In efforts to widen the scope of our activities, we continued to participate in the Himalaya Project held at Akita Prefectural University to bring electric lights to elementary schools in Himalayan villages. Through this project, we presented school bags and stationery supplies to Nepalese children.



▲Children in Nepal

(Photo courtesy of the Himalayan project of Akita prefectural University)

### Supporting Education

In March 2014, Kuraray together with women's ski jumper (and Kuraray member ) Sara Takanashi carried out the "Sara Takanashi and Kuraray Japanese School Backpack Gift" project for students in Osaka who are about to enter their first year of elementary school. During the event 168 school bags were presented to children entering Ishii Memorial Aizen-en\* Nursery School and the Osaka Prefectural Government-run Boshikatei Elementary School.



 $\blacktriangle Sara Takanashi and Kuraray Japanese School Backpack Gift$ 

\*Ishii Memorial Aizen-en (http://www.aizenen.or.jp/ Japanese language only) Juji Ishii—known as the father of child welfare for establishing the Okayama Orphanage, the first facility of its kind in Japan—initially operated Osaka's first social welfare organization in 1909 with he aim of eliminating urban poverty. Following Ishii's death, Magosaburo Ohara carried on Ishii's wishes by establishing Ishii Memorial Aizen-en using his own funds in 1917 as a social welfare service corporation . Currently, Ishii Memorial Aizen-en operates hospitals and settlements as well as provides nursing care services.

### Organized Sports Festival

Kurashiki Plant, Okayama Plant and Niigata Plant are committed to the sound development of children in the region, and among other initiatives, organize a sports festival for local elementary and junior high school children that includes softball, soccer, soft tennis, and kick-baseball.



▲Kuraray Children's Cup ball games festival (Kurashiki Plant)

### Social Welfare

# Support for Independent Life of the Mentally Challenged

To help those with disabilities lead self-sufficient lives by providing them with opportunities for employment, Kuraray sets up workplaces especially for the mentally challenged in coordination with local welfare facilities.

The Kuraray Workshop at the Niigata Plant opened its doors as a place of work for the mentally challenged in 1997, with the cooperation of Nakajo town (the current city of Tainai) and the Nanahokai social welfare organization's "Niji-no-ie."Employees at the workshop perform sorting for recycling of scrap material generated in production processes and produce articles (see Special Feature 2 on page 9). At the Himawari Workshop, which opened on the grounds of the Saijo Plant in 2007, employees engage in recovery and weighing work required for recycling of leftover fiber generated in production processes.

In 2011, we also opened Aozora Works at our Kashima Plant with the help of the social welfare organization Kamisu Keiaien. The workers there make bags for packaging liquid resin and remove foreign materials from products.

With the inclusion of those engaged in the tasks of cleaning work clothes and affixing labels to products at our Kurashiki Plant, we employ 11 instructors and 35 workers with disabilities at a total of four locations.



▲"Niji-no-ie " Appreciation Festival sign language chorus (Niigata Plant)

# Supporting Sports Programs for People with Disabilities

Kuraray Europe participates in a charity marathon held annually in Frankfurt. In 2013, 32 employees took part in this event. A portion of the participation fees are donated to organizations that support sports programs for children with disabilities.



▲Charity marathon (Kuraray Europe)

### Kuraray Fureai Fund

We established up Kuraray Fureai Fund in July 1992. Under this fund, companies make donations consisting of those made by their employees plus a matching gift of the same amount. Employees endorsing the Fund agree to donate amounts of less than 100 yen from their salaries to it, and the company matches this amount. The funds collected in this way are used for social welfare programs. In fiscal 2013, the fund was used to donate nursing care products, books, and other useful items mainly to welfare facilities, schools, and local governments in 24 locations near Kuraray facilities as part of our community-based activities.



▲Receiving a certificate of appreciation from the mayor of Kamisu City (Kashima Plant)

### Support for Medical and Welfare Facilities

Magosaburo Ohara, our founder, also helped to pioneer philanthropy in Japan, and was involved in the establishment of numerous medical and welfare facilities. As part of its social contribution activities, the Kuraray Group continues to offer support in the management aspect to the Ishii Memorial Aizen-en, Kurashiki Central Hospital, and Doushinkai Saijo Central Hospital. In addition, we operate a nursing facility for the aged using welfare facilities in our plants.



▲Kurashiki Central Hospital



▲Saijo Central Hospital



▲Aizenbashi Hospital

### Environment

### Activities for the Conservation of Nature

Volunteers from Kuraray plants join with local government and NPOs to conduct activities aimed at conserving forests, with 385 employees participating last year. We also continue to participate in a tree-planting activity at Mount Fuji cosponsored by the labor union. Fiscal 2013 marked the eighth such event and had up to 377 people from Kuraray plants nationwide taking part.



▲Planting trees on Mount Fuji



▲Mirabakesso Forest afforestation activities (Niigata Plant)

### Green Curtain Contests

As part of its summertime energy conservation activities, Kashima Plant has been constructing green curtains to grow bitter gourd along its office buildings every year since 2011 to raise environment awareness among employees. In fiscal 2013, the Kashima Plant received an award for excellence at the Ibaraki Green Curtain Contest in the group category, as well as at the Kamisu City Green Curtain Contest for the second consecutive year.



▲Office building green curtain (Kashima Plant)

### **Environmental Photo Contest**

Kuraray Trading has been holding a "Children's Eco-Talk Photo Contest" for elementary school children in conjunction with the Japan Professional Photographers Society with the idea of getting them interested in the environment by taking eco-related photos in their daily lives. The winner of the contest is invited to a parent-child camp in the summer holidays, which provides the opportunity to learn about nature by spending time in the outdoors.



▲ "Children's Eco-Talk Photo Contest" camp

### **Clean-up Activities**

Kuraray undertakes clean-up activities in local communities as part of its social contribution program. This involves employees regularly volunteering to clean up roads and parks near to Kuraray facilities in an effort to help keep the area beautiful.



▲Beautification activities (Kuraray Plastics)

### **CSR** Procurement

# **CSR Procurement Policy of Kuraray**

### Respect for Human Rights

- 1. Respect for human rights and individuality
- 2. Observance of the International Labor Organization's core labor standards
- Guarantee of the right to organize and the right to
- collective bargaining
- Prohibition of compulsory labor
- Prohibition of child labor

### History of Kuraray's CSR Procurement Activities

### Promotes Green Procurement to

### Business Partners (2002~)

Under the Kuraray Group Action Guidelines for the Global Environment (established in 1993), we formulated our Green Procurement Standards in 2002 to promote global environmental preservation with the cooperation of our business partners. We also distributed a booklet comprising the above standards to around 800 key business partners and evaluated the status of initiatives at each company by way of a checklist.

### Develops into CSR Procurement (2005~)

In 2005, we formulated the Kuraray CSR Procurement Policy based on the 10 principles of the United Nations Global Compact, which are both international and universal. This policy has become more comprehensive than before as it has added sections on "Respect for human rights and individuality" and "Compliance" to the "Promotion of Green

### Culture Cultural Support Activity

Kuraray continues to support the Ohara Museum of Art, which was established by Magosaburo Ohara, the first president of the company.

Okayama Plant has been holding the Elementary School Student Painting



▲Ohara Museum of Art

and Calligraphy Contest annually since 2005, which serves as an opportunity to introduce cultural activities to local elementary school students. Having becoming a fixture in the local community thanks to its ongoing successes, this contest received numerous artwork entries from five elementary schools in fiscal 2013. Winning entries are displayed at the local community center, and all entries are shown on the Kuraray website.



▲Elementary School Student Painting and Calligraphy Contest (Okayama Plant)

### Promotion of Green Procurement

Compliance policy
 Compliance systems
 Compliance education program

Compliance

- Preparation of environmental policies and environmental reports
- Green procurement implementation plan and implementation apparatus
- ISO 14001 certification
- Education and awareness campaign for green procurement

Procurement" section. We requested the understanding of this policy from business partners and grasped the CSR procurement status of around 700 key business partners by conducting questionnaires about CSR procurement. Following the survey, we provided feedback and improvement requests to business partners in Japan with some problems. Through these efforts, we were able to sufficiently\* evaluate the initiatives of 98% of our business partners in 2012.

(\*Criteria for sufficiently judging initiatives: complying with at least eight of the CSR Procurement Policy's 11 articles)

In fiscal 2014, we will revise our CSR procurement initiatives and formulate medium- to long-term targets.

### Kuraray's Green Product Purchasing

In 2002, Kuraray formulated Green Purchasing Guidelines for 107 items (stationery, OA equipment, automobiles, etc.) under nine categories required for business activities and makes effort to preferentially purchase environmentally friendly (green) products.

## Social

# Approaches in the Workplace

Through the Kuraray Group Global Human Resources (HR) Policy, Kuraray Group is making efforts to develop its organizational system regarding the promotion of diversity, fostering of human resources, and fair and just evaluation of performances, as well as establishing a healthy corporate culture and creating new employment opportunities, so that each employee can work in a way which leads to personal growth through the fulfillment of his or her duties.

# The Kuraray Group Global HR Policy

1 We will respect the human rights of individuals. 6 We will strive to employ personnel who are able to contribute Based upon our Corporate Philosophy, "Respect for individuals," we will respect the individual character and the human rights of all people working in the Group. Any abuse of human rights, such as sexual harassment, bullying, child labor, forced labor and so on, should be eliminated. 2 We will abolish discrimination and respect diversityand individuality. In all aspects of HR activities, including hiring, treatment, personnel development assignment and evaluation, no distinction unrelated to work ability and operational contributions and job satisfaction. performance, nor discrimination based upon individual attributes such as race, nationality, gender or beliefs, shall be allowed. We will esteem and promote diversity that accepts the personal traits, culture and worldview of people from various nations fairly satisfactory. 3 We will carry out our HR activities in full action through dialogue with evaluations. compliance with applicable laws and regulations. We will strictly comply with applicable laws and regulations of each country in carrying out the implementation of personnel policies. 9 We will support professional development. development through performance of individual works. 4 We will create HR systems that uphold equality, fairness and transparency In implementing our HR policies, we will give full consideration to equality, fairness 10 We will support professional development. and transparency, and will seek due satisfaction to all of the Group employees. and indirect communications with them 5 We will strive to improve the environment of workplaces. From the perspective of occupational health and safety, we will strive to maintain working environments that enable people to work safely and with regard for their physical and mental health.

# **Basic Employee Data**

Number of Employees		As of March 31, 2014		
	Total	Male	Female	
Kuraray Group as a whole	7,550	6,362	1,188	
Kuraray only	3,258	2,947	311	

### \* Group = consolidated subsidiaries





to the development of the Kuraray Group. We will employ people who are highly skilled and knowledgeable, and who possess a sound sense of morals and ethics, as well as the desire to make significant contributions to the development of the Kurarav Group.

### We will place the right person in the right job.

We will place each individual in its right job, in due consideration of capabilities, knowledge, suitability and skill development, with an aim to maximizing

# 8 We will implement evaluation and benefits systems that are

We shall implement an evaluation and benefits systems that is fairly satisfactory to employees, with a focus on job description, exercise of potential, performance, attitude and

We will provide an appropriate level of support for job skill development with a focus on

So that all Kuraray Group personnel may possess a sense of unity in working toward the fulfillment of a shared mission, we will provide appropriate levels of disclosure and conduct direct

Employee Turnover Rate FY2013 28 0.9% Personal reasons Retirement 41 1.3%

\* Turnover rate = Number of those leaving employment by cause/Number of Kuraray's employees at the beginning of the fiscal period

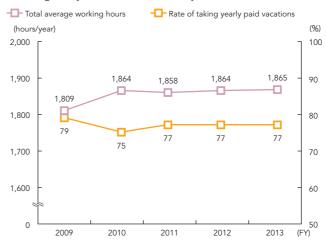


## **Diversity and Work-life Balance**

### Employment Systems and Average Working Hours

Kuraray has instituted systems for flexibility in employment. These main such systems include discretionary labor systems for adaptation to the nature of individual work, the "de facto working hour" system for out-of office work, and variable working hour system. We also have no-overtime days and are striving to improve the rate of taking yearly paid vacations.

Trends in Total Average Working Hours and Rate of Taking Yearly Paid Vacations (Kuraray)



### Leave for Childcare and Nursing Care

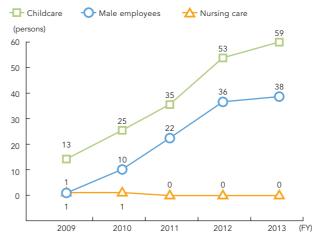
Kuraray has introduced a system to support childcare and nursing care by employees as infrastructure to support a good work-life balance.

In consideration of the timing of admission into a day-care center, employees are allowed to take childcare leave either until the end of April in the year after the child turns one or until the child is one year and six months old, whichever is longer. We recommend male employees to take childcare leave to encourage more fathers to get involved in child rearing.

Employees can also use our reduced working hour system for childcare up to the point when the child finishes the third year of elementary school. The unit of provisions for leave and reduced working hours were revised from 30 minutes to 15 minutes making for a more flexible system in 2013. As a result, almost all of the female employees who have children avail themselves of these systems.

Provisions for leave and reduced working hours for nursing care up to one year each, for a total of two years maximum, are available to employees.

### Number of Employees Taking Leave for Childcare/ Nursing Care (Kuraray)



Kuraray was certified by Japan's Minister of Health, Labour and Welfare upon achievement of its action plan in accordance with the Act on Advancement of Measures to Support Raising Next-Generation Children on three occasions in March 2007, March 2009, and August 2013. As of August 2014, the Company has applied for certification for the fourth time in March 2015.



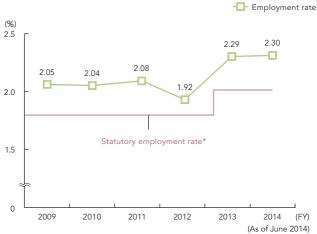
### Re-employment System for Retirees

We have devised a re-employment system for people who had to retire for such reasons as childcare, nursing care or transfer of spouse's place of work and who would like to return to work.

### Employment of Disabled Persons

Kuraray not only attains the statutory employment rate but also has taken other action to help the disabled lead self-sufficient lives, such as the establishment of workplaces especially for the mentally challenged in coordination with local welfare facilities.

Rate of Employment of Disabled Persons (Kuraray)



\* The statutory employment rate for disabled persons was revised from 1.8% to 2.0% in April 2013.

### Other Provisions

### 1 Support for Social Contribution

Kuraray employees may use accumulated yearly paid vacations, which ordinarily lapses with the prescribed passage of time, as special vacations (up to 60 days a year) for social contribution activities. We have also made provisions for social contribution leave, and support diverse activities of this type by our employees.

### 2 Refresh Vacations

On the occasion of commendation for 25 years of continuous service, employees may choose to receive a travel voucher for an award. In this case they may take special vacations to go on a trip with this voucher.

### **3** Life Planning Support

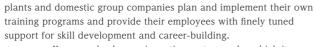
Kuraray offers employees life planning courses for each stage of life. We have also introduced web tools that are tailored to our wage and retirement benefit systems so that employees can simulate their future income and expenditure at home.

# Human Resource Development and Assessment

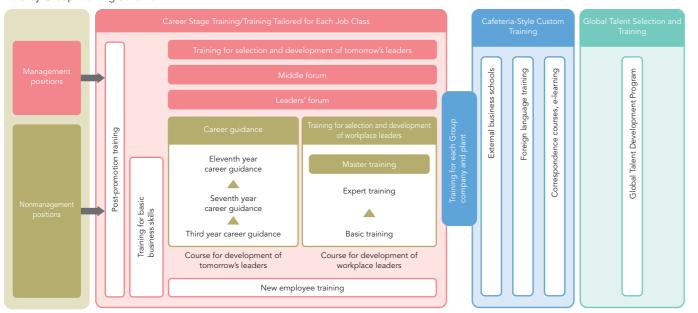
For the domestic Kuraray Group companies, we have established a companywide training scheme to support acquisition of the knowledge and skills required for jobs and career-building efforts by employees themselves.

The training is open not only to regular employees but also part-time and contract-based ones, as necessary. In addition, Kuraray

### Kuraray Group Training Scheme



Kuraray also has an incentive system under which it furnishes grants for acquisition of certain public qualifications by employees for their own self-improvement.

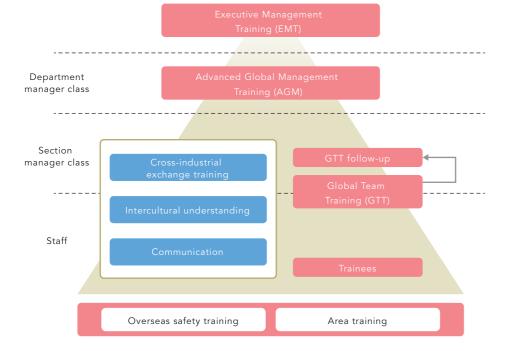


### Global Talent Development Program

The ratio of the Kuraray Group's overseas sales in fiscal 2013 was 50% and roughly 20% of all employees are working overseas. In order to further accelerate global growth in the Kuraray Group, our objective is to boost the global responsiveness of human resources, foster consistent management awareness throughout the Group, promote sharing of the Kuraray DNA and develop personnel that can play active roles on the global stage. We started the Global Talent Development Program in fiscal 2007 and continue to plan and conduct

a variety of different types of training. Over 500 people from Japan and abroad took part in the program over the seven-year period from fiscal 2007 to fiscal 2013, including Global Team Training (GTT) for training in a group at respective sites overseas and a "trainee" scheme in which employees are sent for training to Group companies in Japan and overseas. We will continue with the program every year going forward and make revisions to it as necessary.

### Global Talent Development Program



### A Fair, Impartial, and Transparent HR System

Kuraray has instituted a personnel system in which elements such as improvement of job execution capabilities, performance, roles, and spirit to challenge demanding targets (as opposed to seniority and personal factors) are reflected in remuneration.

Specifically, we instituted a scheme of role ranks for management positions, under which remuneration slides with the role and performance, and one of skill qualifications for ordinary employees, under which remuneration reflects the extent of skills and performance. Wages and bonuses are determined on the basis of these schemes. We have also incorporated a scheme whereby personnel can

# **Occupational Health**

To provide a workplace environment where it is possible to work in both a physically and mentally safe and healthy manner, we formulated the Kuraray Basic Policy on Occupational Health.

### Kuraray Basic Policy on Occupational Health

In keeping with the Principles for Business Conduct, the Kuraray Group recognizes that ensuring the safety and health of employees and other stakeholders is the basis of a company's business activity. Kuraray strives to provide a healthy and safe work environment for its employees and engages in health promotion activities.

### Mental Health

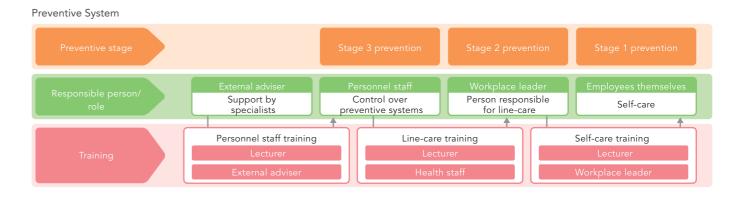
The Kuraray Group has mounted a companywide approach to mental health measures aimed at preventing stress-related conditions that have been on the rise in society as a whole in recent years.

### Training for Prevention

With guidance from the Institute for Science of Labour, we continue to implement training for self-care (action taken by employees themselves) and line-care (action taken by managers and workplace leaders) with an awareness that the employees themselves as well as their superiors and personnel staff are the principals of initiatives to maintain mental health.

### Mental Health Counseling Office

Kuraray has established counseling offices both inside and outside the company, and has made arrangements that make it easy for employees to get counseling over the phone or through face-to-face meetings. To prevent mental difficulties caused by long working hours, we have employees who work a lot of overtime receive a health examination by industrial physicians and health care staff.



## **Relations with Workers Unions**

Employees of Kuraray belong to the Kuraray Workers Union and the Federation of Kuraray Workers Unions, which is composed of all workers unions for Kuraray Group employees. Through venues such as labor management councils and councils on occupational safety and change education courses to suit their desired career paths.

With regard to personnel evaluation, we instituted a scheme of target-based management in which actual employee performance is rated with reference to targets for duties and skill development set through consultation with superiors. We also provide ongoing training for personnel making the evaluations.

In addition, we periodically conduct surveys of employee awareness to ascertain how employees feel about their job and workplace, and what changes they would like to see. We use the findings for improvement of schemes and the workplace environment.

### Assistance with Return to the Workplace

We introduced a rehabilitative attendance system to support a phased return to the workplace of employees who have been off the job for a long time.

### Support for Building Health

To promote the health of its employees, Kuraray is deploying a companywide program for improvement of life habits under the banner "Health Up Strategy." In this program, each employee sets his or her own goals (for amounts of exercise, eating, etc.) and works to attain them on his or her own initiative. This is part of our wider health promotion strategy.

In our employee health exams, besides testing for the items stipulated in the Industrial Safety and Health Act, we have expanded the applicable age and added items for tackling lifestyle diseases and gynecological testing.

health, we engage in earnest consultation with representatives of these unions on various issues and work for their resolution through mutual cooperation.

## Column In the Footsteps of Our Founders

# The Institute for Science of Labour

The Institute for Science of Labour, a public interest incorporated foundation, was conceived and established by a manager of a private-sector company, Magosaburo Ohara, Kuraray's first president. Magosaburo had the forethought and compassion to care about the safety and well-being of workers. We paid a visit to the current director of the Institute, Mr. Sakai, to talk about the activities of the Institute where Magosaburo's principles and philosophy live to this day.

(June 19, 2014, at the offices of the head of the Institute for Science of Labour)



ka was born in Takasago, Hyogo Prefecture, and attended an elite high school ir 1. He entered Tokyo Imperial University in 1910, and graduated from the College of Medicine. He was later invited to the Ohara Institute for Social Research in 1919. The

Health Division of the Institute, which was presided over by Gito Teruoka, wa / spun off into the Kurashiki Institute for Science of Labour to pursue field research into night-shift work performed by cotton-spinning women workers and laborers, working conditions, and the lifestyles and nutritional profiles of farmers and settlers. The stitute later moved to Tokyo and changed into an incorporated foundation



1921 Establishment of Kurashiki Institute for Science of Labour A private research organization for labor science, built on the premises of Kurashiki Cotton Spinning Co., Ltd., was unheard of at



new locatio Coinciding with its 50th anniversary, the Institute moved to its present-day location in Miyamae-ku, Kawasaki City. It was built in an area surrounded by so many trees that it looked like Ikuta Ryokuchi Park.

Present-day Institute for Science of Labour (Mivamae-ku, Kawasaki Citv)

## Kuraray's DNA

Sharing the same founder as the Institute, Kuraray has put in place systems that facilitate the growth of each and every employee through their work. Kuraray works hard to foster a healthy organizational culture and create employment opportunities. From the perspective of occupational safety and health, Kuraray has a policy of making concerted efforts to maintain a working environment that is healthy and safe for both mind and body. The company works to prevent mental health issues from arising, helps employees return to work after leaves of absence, and supports healthy habits. Through the appropriate deployment of an occupational safety management system, Kuraray aims to increase the level of

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safety throughout organizations for every employee.



Some of its countless research reports

One of Japan's few libraries about labor

Please provide details of the origins of the Institute for Science of Labour. I believe the meeting of Magosaburo Ohara, the founder of Kuraray and the Institute, and Gito Teruoka, the first head of the Institute, was a decisive moment that led to its establishment.

While a well-known anecdote among those of us here at the Institute, Magosaburo Ohara and Gito Teruoka supposedly went to a factory of Kurashiki Cotton Spinning Co., Ltd in the middle of the night during the winter to get a first-hand idea of actual working conditions for night-shift factory workers. At the time, boys and girls were working in factories, fighting off sleep under poor working conditions. Shocked by what he say, Magosaburo resolved to scientifically investigate labor in order to bring happiness to these workers. Gito Teruoka replied right there that he would like to be the one to make it so. I hear that this was how the Institute came to be.

What role does the Institute for Science of Labour play today? Our role is to suggest ways to improve sound management of the working environment and working conditions by clarifying their physiological and psychological impact on workers through scientific analysis.

Labor science compiles data through objective observations and provides the background and evidence needed for discussion. How this data, based on scientific analysis, is viewed, respected, and used, ultimately depends on the company. Our mission is to provide scientific evidence that can be used as a basis for labor unions and management to discuss work issues.

Employee occupational safety has become a pillar of CSR, and labor-related international standards have emerged lately. Do these international trends have an impact on the activities of the Institute? They do influence our activities. For

example, occupational safety in Japan focuses on the workplace, which acts independently to investigate onsite accidents and make improvements on their own accord. In Europe and the United States, however, companies approach safety as systems, focusing accident prevention by incorporating ISO and other standards and certifications into their management systems. Both approaches have their own merits. Here at the Institute, we are advancing research with the objective of establishing a management style in Japan that integrates prevention, improvements, systems and onsite initiatives. Moreover, we would like this to evolve into an international initiative.

What labor issues are you concentrating on now? Please give us some concrete examples. A major problem in modern Japan is low birthrates amid an aging society. We think an ergonomic and scientific approach is needed to address issues

such how people can continue to work as they reach an advanced age, and how to create environments where both younger generations and the elderly can work together.

Another issue is the use of IT in the workplace. Most people are unable to work without a PC and a smartphone, and this raises questions about how IT equipment impacts people's stress levels and health, as well as working overtime in this fashion. When I joined the Institute, it was widely regarded that the Institute's mission was to apply labor science to investigate the working environment and so forth during regular work hours. However, this is not enough to reach a sound conclusion. The methodology of labor science has been changing as a result.

"Workplace Examinations" have become more prominent lately. Like medical checkups for humans, workplaces are diagnosed from an expert's perspective, and take specific courses of action to improve the workplace based on the outcome of

their diagnosis. In light of the increase in mental health issues, we are proposing changes to the way people work in order to prevent mental health issues from arising.

As the director of the Institute, what direction would you like the Institute to take in the future? The Institute offers personnel training classes called the Industrial Safety Expert Training Course, which is sponsored by Kuraray. It is a unique personnel training system that targets the core of industry. We hope to be of use to society by compiling highly accurate data through research and personnel training. Merely following in the footsteps of what companies are already doing will be of little use to society. We aim to discover solutions from the unique perspective of labor science while researching topics that are one step ahead of the needs of corporations and society.

Thank you for your time today.



Magosaburo Ohara (1880-1943)

Founder of the Institute for Science of Labou

Co., Ltd (current Kuraray Co., Ltd), Kurashiki Cotton Spinning Co., Ltd (current KURABO INDUSTRIES LTD.), and Chugoku Godo Bank (current Chugoku Bank)

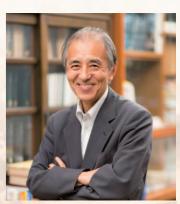




Car driving simulator for measuring how fatigue affects drivers

### Institute for Science of Labour

For more than 90 years, the Institute has compiled basic data related to labor, as well as developed and offered problem-solving methodologies and tools, with the aim of contributing to the betterment of labor conditions for workers through safety and security.



Director of the Institute for Science of Labour Kazuhiro Sakai

### Profile

Kazuhiro Sakai joined the Institute for Science of Labour in 1973. Applying his knowledge of human engineering learned in college and graduate school, Kazuhiro specializes in scientific research into labor fatigue. He became the director of the Institute in 1999, handed over the reins to his successor in 2001, and was reinstated as director in 2007.