

Corporate Social Responsibility Report



Kuraray CSR Report 2004
— Environmental and Social Activities —



A Message from the President



Yasuaki Wakui

Yasuaki Wakui
Representative Director and President

Since its beginnings in 1926, Kuraray has been guided by its founding philosophy, to contribute to society through the development of products that feature original technological innovation. This abiding value derives from the "personalism" that our founder, Magosaburo Ohara, expected in the management of our social services and business, and is the source of the corporate culture in which we pride ourselves.

Even before the concept of Corporate Social Responsibility (CSR) acquired the familiarity it has today, the Kuraray Group was deeply aware of its duties and responsibilities to society as a corporate citizen, and has long sponsored many forms of social service, including contributions to community medical services at its affiliated hospitals, support for chemistry education by organizing Chemistry Classes for Boys and Girls, and other community and volunteer activities.

In tackling the issue of environmental conservation, we expressed our goal of being an "Eco-Friendly Enterprise with Unique Technology" in G-21, the Medium-Term Business Plan we began in fiscal 2001. In order to achieve the goal, we drew up a Medium-Term Environmental Plan to expand our proprietary eco-friendly business and expedite proactive programs for environmental preservation. I am happy to report that we have made steady progress in significant issues during the three years through fiscal 2003, including reducing emissions of chemical substances specified by the Pollutant Release and Transfer Register (PRTR) Law, increasing our efficiency in utilizing industrial waste, reducing the volume of unutilized industrial waste disposed externally, and increasing our energy efficiency.

In June of 2003 we reviewed these initiatives from the perspective of CSR. As a result of this review, we identified wide-ranging CSR-related corporate goals, and integrated the In-house Ethics Committee and the Philanthropy and Environment Committee to establish a CSR Committee. In line with this, the Kuraray Environmental and Social Report has been renamed the Kuraray CSR Report, and its contents substantially expanded.

I sincerely hope that the information contained here will assist you in gaining a better understanding of the Kuraray Group.

C O N T E N T S

Management Philosophy/Management Organization	4 - 7
Initiatives for Environmental Preservation and Industrial Safety	8 - 25
Community and Employees	26 - 36
Evaluation by the 3rd parties	37 - 39
Data	40 - 49
Corporate Data	50 - 51

Greetings



Koichi Kushida

Koichi Kushida
Chairman of CSR Committee, and Senior Managing Director

Recently, the current expansion of the scope of CSR has made it necessary to look at the entire range of corporate activities in a new light. Today we need to take concrete action in the spirit of CSR, rather than regarding it merely as an abstract philosophy.

In June 2003, Kuraray inaugurated its CSR Committee. The Committee is charged with the mission of giving additional impetus to the practices we have always carried on, such as environmental preservation and social contributions, in the spirit of Kuraray's traditional corporate culture.

The Committee set itself three policies: use its own judgment and act proactively whenever it is called for, rather than just following current fashion; involve all employees in applying a CSR perspective to every kind of operation, so thoroughly that CSR activities become integral to daily operations; and, as a Group of chemical enterprises operating worldwide, ensure that initiatives for CSR take hold not only in Japan but overseas. We believe that these

CSR initiatives play an essential role in our duty to contribute to truly sustainable societies.

By way of example, total CO₂ emissions in Japan were 1.25 billion tons in fiscal 2002, of which Kuraray was responsible for 1.34 million tons, or one thousandth of the total. We have set ourselves a reduction target of approximately 300,000 tons by fiscal 2010, and will remain committed to the achievement of this socially significant theme.

In addition to planning and implementing CSR activities, another important role of the Committee is the facilitating of communication with society at large via timely disclosure of such activities. This Report itself was planned and edited by the Committee.

I admit that we need to continually increase our activities in this important area. We are determined to expand our activities, based on the opinions we receive from the many sources available to us. Therefore, your comments and opinions will always be most appreciated.

Editorial policy

Last year, we issued The Kuraray Environmental and Social Report 2003 featuring data on our social activities as well as on environmental preservation and safety. Starting this year, the report covers the entire range of our CSR activities, under the editorial responsibility of the CSR Committee.

Past Publications

1998-2002 Kuraray Environmental Activities Report

2003 Kuraray Environmental and Social Report

2004 Kuraray CSR Report – Environmental and Social Activities

In preparing the report, we referred to the guideline by the Ministry of the Environment (Fiscal 2003 edition) and the GRI Sustainability Reporting Guideline.

See page 50 for the reporting scope.

Reporting period: Fiscal 2003, ended March 31, 2004

All italicized product names are trademarks of Kuraray Co., Ltd.

Management Philosophy

Corporate Philosophy (Established in 1986)

Respect for individuals
Cooperation in shared goals
Creation of values

A brief statement of the founding philosophies that all Kuraray employees must share.

Guidelines for Action (Established in 1986)

Act on customers' needs
Act on ideas in the working place
Act on your own initiative

Guidelines that all employees are expected to reflect in their everyday attitudes and actions, in order to create a vibrant corporate culture.

Corporate Mission (Established in 2003)

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.

Establishment of a Corporate Mission

Since its founding in 1926, Kuraray has transformed itself from a domestic fiber manufacturer to a global group of chemical enterprises. We could say that the Company owes its existence to its acceptance by society.

In recognition of this fact, we have reflected once again on why the Kuraray Group exists and what contributions it can make. Out of this process, the Kuraray Group Corporate Mission was born.

The mission and raison d'être of the Kuraray Group is characterized briefly in the Corporate Philosophy as the "creation of value." The Corporate Mission expresses the spirit in a more straightforward manner so that the individual members of the Group can refer to it in the course of their everyday work.

Principles for Business Conduct (Established in 1998)

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.

The Principles for Business Conduct ensure that each of our specific corporate activities lives up to the Corporate Philosophy and Guidelines for Action, and all are in harmony with the broad context of our relationship with society.

Management Organization

We at Kuraray believe that fulfilling our responsibility to society and maintaining a proper relationship with our shareholders and many other stakeholders help us achieve our corporate goals of long-lasting performance improvement and sustainable growth as a global entity. To this end, we organize our management organization to improve corporate governance and assure fair and transparent management.

Corporate Governance Structure

We believe we can establish effective corporate governance within the scheme of the Corporate Auditor system. This belief led us to institute the following reorganization of our management organization in June 2003:

The number of director was reduced to not more than 10, with a one-year term of office, to enable more agile management decisions.

One auditor has been added, bringing their number from four to five, to facilitate close monitoring of management; three of these auditors come from outside the Company (they are neither former employees nor former directors of the Company).

A Management Advisory Council comprising five permanent members (including two outside members) was established as a consultative body to the president. The Council meets biannually to advise the president on management policies, key managerial issues and business plans for the Kuraray Group, as well as matters related to the retirement of the president, candidates for successor, and the president's compensation.

An Executive Officer System was introduced to keep decision-making and supervision functions clearly separated from operational function under the in-house company system introduced in 2002. Executive officers oversee operations in their capacity as either head of in-house companies or principal staff organizations, assuring individual accountability and responsibility for profits.



Initiatives for CSR and Risk Management

Initiatives for CSR

The CSR Committee was established in June of 2003 in order to improve the entire range of programs for CSR and be able to act with agility.

Risk Management

The Kuraray Group Risk Management Conference was established in March 2002. Chaired by the President, the Conference is building a Group framework for the prevention of and timely response to risk.

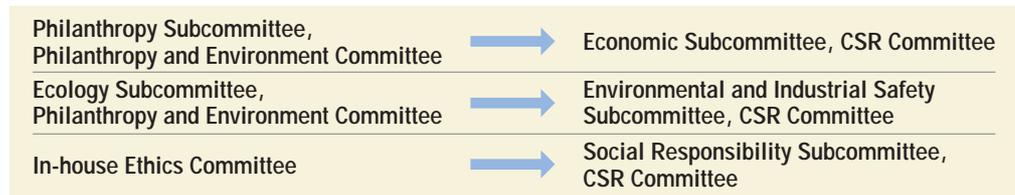
CSR Committee

In 1991, we established a Philanthropy and Environment Committee for the purpose of balancing its business activities with the interests of the global environment and benefits to local societies, thereby moving philanthropic activities and environmental preservation to the forefront in a manner that caters to the needs of our host communities. We likewise established an In-house Ethics Committee in 1998 to ensure regulatory compliance and observance of corporate ethics.

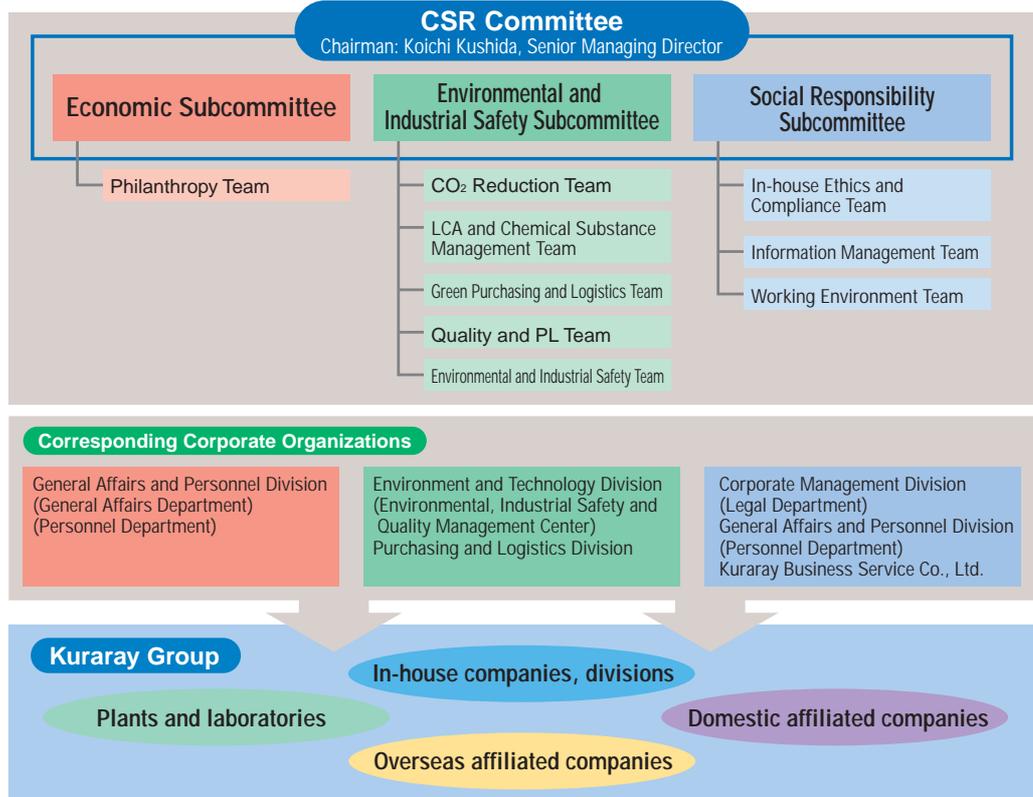
The scope of CSR has recently become broader and more advanced, taking in issues related to employment and human rights that were not covered under our existing committees. This need to extend the scope of our CSR activities led us to integrate the above committees into a newly established CSR Committee in June 2003.

Responsibility and Organizational Structure

The CSR Committee comprises three subcommittees: Economy; Environmental and Industrial Safety; and Social Responsibility. These correspond to the Triple Bottom Line*¹ analysis laid out in the Sustainability Report by GRI*², an international standard. Below is an outline of the correspondence of previous committees to each subcommittee.



The subcommittees have theme-specific working teams comprised of specialists. The basic direction and key programs are decided by the Committee and assigned to the corresponding working teams, who put them into practice immediately. Progress in the programs is reported to the Executive Committee via the Committee. The CSR Committee oversees the entire Kuraray Group to promote global initiatives.



*1 An idea advocated by John Elkington of Sustainability Ltd. of the UK, which holds that the achievement of sustainability relies on a "triple bottom line" of economic prosperity, quality of the environment, and social equity.

*2 Global Reporting Initiative: International body initiated and institutionalized by the United Nations Environment Programme (UNEP) and NGOs in the United States. Formulates and disseminates guidelines for sustainability reports applicable anywhere in the world.

Compliance

We established the In-house Ethics Committee in 1998 and adopted the Principles for Business Conduct which delineate the fundamental value we adhere to in conducting business activities and we have been carrying out fair and transparent business activities of higher ethics.

In 2001, a Kuraray Employee Counseling Room was opened as a corporate-sanctioned venue for "whistle blowing" to ensure the early detection of any problematic activity in the Company.

In February 2003, the Compliance Declaration was published to remind each and every employee of the personal obligation to comply with laws and regulations, and to elevate corporate ethics. All employees are required to carry on their person a Compliance Card, which displays the Principles for Business Conduct and our Declaration of Compliance, so that they can refer to it anytime, anywhere.

In June 2003, an In-house Ethics and Compliance Team was instituted under the Social Responsibility Subcommittee of the CSR Committee, to gather under one umbrella the framework for compliance established by the In-house Ethics Committee and the Kuraray Group Risk Management Conference. The new Team makes regular checks of the progress of the year's key projects in order to promote them systematically.

Compliance Declaration

On behalf of the Kuraray Group, the President of Kuraray Co., Ltd. announced the Compliance Declaration both internally and to the public to put regulatory compliance and the practice of corporate ethics at the forefront of every business undertaking, in the spirit of the Principles for Business Conduct.

We will comply with the law and the Principles for Business Conduct.

We will give precedence to laws and regulations, and to the Principles for Business Conduct, over corporate profits.

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.



Campaign for Employees

To help the Principles for Business Conduct and the Compliance Declaration filter throughout the Company and take root, presidents of in-house companies, employees who are newly assigned to managerial positions, and new recruits receive a lecture from experts invited from both within and outside of the Company. To ensure compliance with key regulations, such as the antitrust regulations and securities trade regulations, a copy of the guidelines is distributed to all employees and briefing sessions are provided.

Initiatives for Environmental Preservation and Industrial Safety

Environmental Preservation and Safety Guidelines	9
Medium-Term Environmental Plan	10 - 11
Environmental and Industrial Safety Management System	12 - 13
Environmental Impact of Business Activities	14
Environmental Preservation	15 - 22
Disaster Prevention	23
Product Safety	24 - 25



Basic Approach to Responsible Care

In keeping with the Principles for Business Conduct, these are the most fundamental approaches for the promotion of environmental conservation and industrial safety.

Basic approach to global environmental issues

We will fulfill its responsibilities for the well-being of future generations through corporate activities that are in harmony with the global environment and the local community.

Basic approach to disaster prevention and occupational safety

We will take extraordinary measures company-wide to prevent and contain any damage from disasters that could affect the community, including explosions, fires, and leakage of hazardous substances.

Basic approach to product safety

We will endeavor to contribute to creating an affluent, comfortable society by meeting customer needs through the supply of safe and reliable products.

* Responsible Care calls for companies that manufacture or handle chemicals to commit themselves to taking measures of their own initiative to prevent hazards to the environment, safety, or health during all stages of each chemical's lifecycle – from product development through manufacturing, use and disposal.

Kuraray Group Action Guidelines for the Global Environment

In line with the Basic Approach to Responsible Care, these guidelines lay down concrete actions for the preservation of the global environment.

Basic Guideline

We will fulfill its responsibilities for the well-being of future generations through corporate activities that are in harmony with the global environment and the local community.

In order to realize our basic guideline, Kuraray will undertake the following activities:

- ① We will assign the highest priority to the environment and safety in the course of our corporate operations.
- ② We will work to improve the global environment and ensure its sustainability.
- ③ We will develop technologies and products that contribute to the goal of improving the global environment.

Action Principles

- ① Continual reduction of emissions of designated chemical substances into the environment
- ② Promotion of reduction in emissions of greenhouse gases while working to improve energy efficiency, to contribute to the prevention of global warming
- ③ Promotion of preservation, reuse, and recycling of resources
- ④ Development and supply of technologies for improving the environment through products with low environmental impact
- ⑤ Utilization of environmentally friendly products
- ⑥ Public disclosure of environmental information and dialog with the community
- ⑦ Raising the level of environmental consciousness and environmental management

Policies

The Kuraray Group currently operates its business under G-21, the five-year Medium-Term Business plan, in which we set our goal of becoming an "Eco-Friendly Enterprise with Unique Technology. We have formulated the Medium-Term Environmental Plan as part of this Medium-Term Business plan to expedite environmental preservation through concrete numerical targets. The Plan is subject to review according to progress towards annual targets and regulatory changes.

In fiscal 2003, we made the following revisions based on a long-term forecast for the Plan (up to fiscal 2010) and progress to date.

1. Setting a target for the reduction of CO₂ emissions

In the past, we attempted to contribute to the prevention of global warming by saving energy, however, since reducing energy consumption alone is not sufficient, we revised the Action Principles of the Kuraray Group Action Guidelines for the Global Environment so that we can begin proactive initiatives to reduce emissions of greenhouse gases. Accordingly, we set a target for the reduction of CO₂ emissions.

2. Reviewing measures to reduce emissions of substances covered by the voluntary PRTR program of the Japan Chemical Industry Association (JCIA)

Our original target was to reduce 90% of the emissions of substances covered by JCIA's voluntary PRTR program by fiscal 2005 versus the base year, fiscal 1999. In the past, our primary measure to achieve this was the incineration of emissions, but we have decided to shift our focus to other measures, including the recycling of emissions and a production process that doesn't discard any chemical substances. Accordingly, we will devote two additional years to the development of new technologies and move our target year from fiscal 2005 to fiscal 2007.

3. Setting a new target for waste utilization efficiency (original target achieved in fiscal 2002)

Progress with Numerical Targets

Results for fiscal 2003 were in line with the original targets.

Targets		Unit	Base year			
Reduction of 90% in emissions of substances covered by JCIA's voluntary PRTR program	Kuraray	All covered substances	tons	3,545 (100%)		
		Substances covered by PRTR Law		1,361 (100%)		
	Domestic affiliates	All covered substances		1999	889 (100%)	
		Substances covered by PRTR Law			475 (100%)	
	Total	All covered substances			tons	4,434 (100%)
		Substances covered by PRTR Law				1,836 (100%)
Reduction of 90% in volume of unutilized industrial waste inefficiently processed externally	Kuraray	1,000 tons	1999			9.6
	Domestic affiliates					5.0
	Total			14.6 (100%)		
Increase of 30 percentage points in waste utilization efficiency	Kuraray	%	1999	63		
	Domestic affiliates			16		
	Total			60		
Reduction of 10% in unit production of CO ₂ emissions	Kuraray	tons-CO ₂ /ton	1990	2.93 (100%)		
Increase of 6% in energy efficiency (1% increase/year)	Kuraray	%	1999	-		

Significant Issues

1. Efforts to reduce environmental impact

- ① Reduction of CO₂ emissions
- ② Reduction of the volume of designated chemical substances released into the environment
- ③ Achievement of the goal of zero waste emissions

2. Expansion of efforts for both "green" purchasing and "green" distribution

3. Quantified measurements of the environmental impact of Kuraray products

- ① Implementation of Life Cycle Assessment (LCA)
- ② Introduction of the Environmental Label Type III

4. Development and supply of environmentally friendly products

5. Strengthening and improvement of communications

- ① Greater disclosure
- ② Enhanced environmental accounting
- ③ Strengthened risk-related communication with host communities

Numerical Targets

- ① Reduction of 10% in unit production of CO₂ emissions by fiscal 2010 versus the fiscal 1990 level
- ② Increase of 6 percentage points in energy efficiency by fiscal 2005 versus the fiscal 1999 level
- ③ Reduction of 90% in emissions of substances covered by JCIA's voluntary PRTR program by fiscal 2007 versus the fiscal 1999 level
- ④ Reduction of 90% in the volume of unutilized industrial waste disposed externally by fiscal 2005 versus the fiscal 1999 level
- ⑤ Increase of 30 percentage points in waste utilization efficiency by fiscal 2006 versus the fiscal 1999 level (60% → 90%)

FY2003	Target year	Major activities in FY2003	Pages	
1,973 (56%)	2007	<ul style="list-style-type: none"> • Installing a device on the vinyl acetate monomer tank vent pipe to recover and reuse vinyl acetate monomer • Installing a condenser on the acetone tank vent pipe to recover and reuse acetone 	18 · 19	
624 (46%)				354 (10%)
370 (42%)				136 (10%)
8 (2%)				89 (10%)
2,343 (53%)				48 (10%)
632 (34%)				443 (10%)
2.7	2005	<ul style="list-style-type: none"> • Developing ways to put individual waste to efficient use • Reducing waste production by remodeling the production processes 	20 · 21	
2.4				1.0
5.1 (35%)				0.5
87	2006	<ul style="list-style-type: none"> • Expanding the scope of heat recovery from waste oil 	20 · 21	
60				1.5 (10%)
85				–
3.18 (109%)	2010	<ul style="list-style-type: none"> • Improving the performance of two generator turbines 	15	
7.6	2005	<ul style="list-style-type: none"> • Supplying waste heat to the distillation tower 	15	

Policies

We begin by pursuing business and supplying products in a way that achieves a balance with the environment. We complement this by acting in line with the Basic Approach to Responsible Care and the Kuraray Group Action Guidelines for the Global Environment to sustain the PDCA cycle as we engage ourselves in activities aimed at global environmental conservation, disaster prevention and occupational safety, management of chemicals, product safety and the safety of physical distribution, from both mid- and long-term perspectives.

* PDCA: Plan-Do-Check-Action

Organizational Structure

In the Kuraray Group, environmental and industrial safety management receives company-wide priority. To address this issue from mid- and long-term perspectives, we have established the Environmental and Industrial Safety Subcommittee under the CSR Committee, which reports to the Executive Committee.

The Subcommittee and its five task force teams are responsible for promoting the preservation of the global environment, disaster prevention

and occupational safety, management of chemicals, product safety and the safety of transportation for the entire Group.

On top of this, we have appointed a director in charge of environmental and industrial safety, and have established the Environmental, Industrial Safety and Quality Management Center at our Headquarters, along with environmental and industrial safety departments and sections at each plant, which oversee environmental and industrial safety.



* The Environmental and Industrial Safety Team deals with issues that fall outside the responsibilities of the other four teams.

Responsible Care (RC) activity

Kuraray has endorsed the initiatives of the Japan Responsible Care Council since it was established in 1995. Closely linked to the environmental and industrial safety programs of the CSR Committee, RC activity covers such dimensions as the environment, disaster prevention and occupational safety and health, product safety, and communication

with society, in every stage of our products' life spans, from development, resource utilization, and production through use and disposal. Every year, we conduct an RC internal audit and organize the Kuraray Group RC Convention and RC activity Verification Meeting to raise the level of the initiatives by sustaining the PDCA cycle.

RC activity Verification Meeting

In fiscal 2001, we inaugurated the Responsible Care activity Verification Meeting to ensure the steady advance of our Responsible Care activity. Representatives from head offices and plants gather to discuss the progress in the PDCA cycle of individual programs at each plant, identify challenges and record the progress. Every year, two of six themes – environmental preservation, disaster prevention, occupational safety and health, safety of transportation, safety of chemicals

and products, and communication with society – are highlighted for discussion. Action plans are prepared by a team that is assigned to propose solutions to each individual challenge presented at the meeting, and progress is monitored at the following year's Meeting to ensure continuous improvement. The outcomes of the Meeting are reported to the corporate management to make sure that the level of the initiatives is elevated through the company-wide PDCA cycle.

Fiscal 2003 RC activity Verification Meeting

- ① Period: October to December, 2003
- ② Locations: Okayama, Kurashiki, Nakajo, Kashima and Kuraray Saijo Co., Ltd.
- ③ Themes: disaster prevention, safety of transportation, themes unique to individual plants
- ④ Points for verification
 - i) Disaster prevention structure
 - ii) Review of preparedness for initial action against accidents
 - iii) Review of operations and employee training to ensure safety when downsizing the workforce



RC activity Verification Meeting

**Kuraray Group
RC Convention**

**Environmental
Management System**

- iv) Risk management
(Preventing the spread of damage from disasters)
- v) Compliance
- ⑤ Domestic and overseas affiliated companies and labor unions were invited to observe the Meeting in anticipation of extending the initiative to domestic and overseas affiliated companies beginning in fiscal 2004.



RC activity Verification Meeting

The presidents, directors and employees of the Kuraray Group meet at this Convention, where selected groups from different business units share their programs for industrial safety, disaster prevention and environmental preservation.

The Kuraray Group has encouraged its business units to obtain ISO 14001 environmental certification to increase the efficiency of our environmental initiatives. As a result, all domestic plants and research laboratories were certified by December 2001. Among domestic affiliated companies, Magictape Co., Ltd. was certified in August 2003, and Kuraray Chemical Co., Ltd. is preparing for certification. Overseas, Septon Company of America was

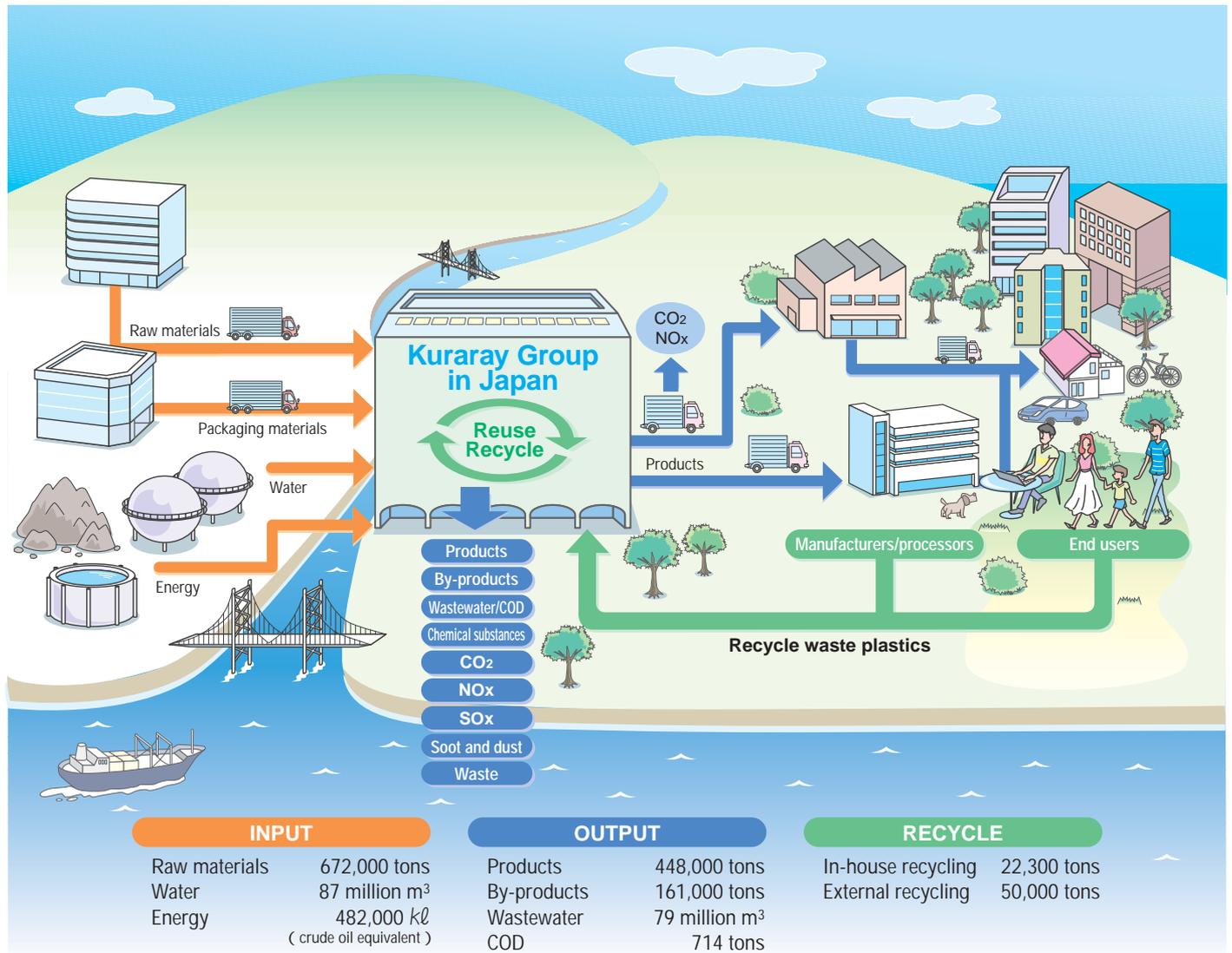
Participants are expected to bring what they learned at the Convention back to each business unit they belong to, in order to raise the level of safety awareness throughout the Group.

certified in September 2003. In October 2003, we introduced an ISO 14001-based environmental management system to the headquarters in Tokyo and Osaka, to save energy and resources at these offices. We will take advantage of these environmental management systems to make continuous improvements to our environmental initiatives, including a reduction of our environmental impact.

ISO 14001 Certification

Sites	Date Obtained
Kashima Plant	March 1999 (renewed March 2002)
Okayama Plant	March 2000 (renewed March 2003)
Nakajo Plant	March 2000 (renewed March 2003)
Kurashiki Plant	December 2000 (integrated for renewal in December 2003)
Kuraray Tamashima Co., Ltd.	December 2000
Kuraray Saijo Co., Ltd.	December 2000 (renewed December 2003)
Tsukuba Research Laboratories	December 2001
Techno Soft Co., Ltd.	December 1999 (renewed December 2002)
Kuraray Plastics Co., Ltd.	January 2003
Magictape Co., Ltd.	August 2003
Kuraray Specialities Europe GmbH	November 1998 (renewed February 2002)
Eval Company of America	February 2000 (renewed February 2002)
SEPTON Company of America	September 2003

* The Advanced and Basic Technology Research Laboratories, Kurashiki Research Laboratories, and the Optical Device R&D Center are located on the premises of the Kurashiki Plant and the Tsukuba Research Laboratories. Following the organizational change in April 2003, the ISO 14001 systems at the Kurashiki Plant and Kuraray Tamashima Co., Ltd. were integrated internally in August 2003, and officially integrated when certification was renewed in December 2003.



Efforts to Expedite LCA

In order to develop eco-friendly products, the Kuraray Group is expediting its promotion of Life Cycle Assessment (LCA) initiatives. Following our move to introduce LCA to the Kurashiki plant in fiscal 2001, we launched a full-scale initiative in fiscal 2003. We will apply an LCA-based approach to our product development process to develop products with lower environmental impact. We have also started monitoring the environmental impact of our products, and compiling Life Cycle Inventory (LCI) data on

our own products. Although the scope of the current LCI data only up to the production process in the entire life cycle, we intend to compile LCI data on products equivalent to 80% of our net sales before the end of fiscal 2004.

With these initiatives, we intend to develop products and conduct business having less environmental impact, and use LCA as an indicator for promoting the preservation of the global environment by the Kuraray Group.

LCA: A technique to quantitatively monitor the impact that products may have on the global environment by investigating total energy used, from exploitation of resources to manufacturing, and to post-use, as well as the types and amounts of substances discharged into the environment.
LCI: Basic data for the entire life cycle of products to which LCA is applied.

Efforts to prevent global warming

Policies

In the past, we attempted to help prevent global warming by reducing CO₂ emissions through energy-conservation efforts; however, since reducing energy consumption in the production process, etc., alone doesn't accomplish sufficient results, we revised our policies to allow us to begin proactive initiatives to reduce CO₂ emissions, such as the introduction of new energy sources and the conversion of fuels, and, in so doing, promote energy conservation as well.

Activities

Setting CO₂ emission reduction target and drawing up specific measures

We have decided to "cut 10% in unit production of CO₂ emissions by fiscal 2010 versus the fiscal 1990 level." To achieve this target, we will need to reduce about 300,000 tons of CO₂ emissions per year (equivalent to the CO₂ absorption capacity of a 46,000-ha forest in Japan), when future growth in our production is considered. We are studying several concrete measures to make this happen, including the introduction of new energy sources such as

solar-power generation and biomass-power generation, an increase in power generation efficiency, the development and introduction of innovative production processes, the conversion of boiler fuels, and the promotion of energy conservation at production processes. Going forward, we will implement these initiatives systematically, while further refining unfinished technologies and giving concrete shape to action programs.

Concrete activities in fiscal 2003

In fiscal 2003, we implemented several energy-saving programs in production processes, including improving the performance of two generator turbines in operation at plants (reducing 10,000 tons of CO₂), and supplying waste heat to the distillation tower.

As a result, the Kuraray Group's CO₂ emissions during fiscal 2003 amounted to 1,438,000 tons, up 1.5% over the previous year.

Our unit production of CO₂ emissions declined by 3.0% against the previous year to 3.18 CO₂ tons/ton, which was up 8.5% compared to fiscal 1990.

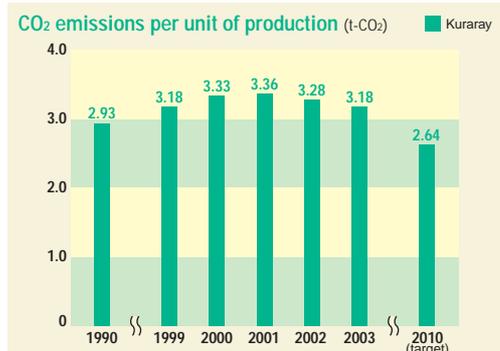
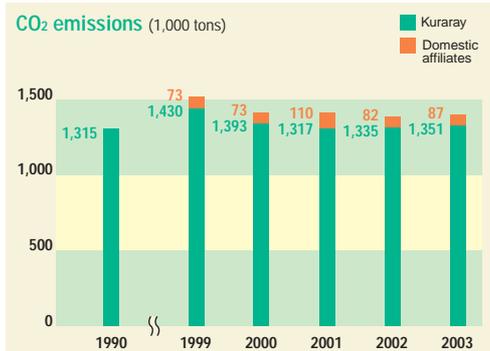
The latest survey by the Japanese government reveals that total emissions of greenhouse gases in the nation for fiscal 2002 amounted to 1,330.8 million tons of CO₂ equivalent, which was up 7.6% compared to the Kyoto

Protocol's base year of fiscal 1990 and up 2.2% over the previous year. Of that total, CO₂ emissions were 1,247.6 million tons, an increase of 11.2% over fiscal 1990 and 2.8% over the previous year. (CO₂ emissions by domestic Kuraray Group companies declined 0.7% between fiscal 2001 and 2002.)

In fiscal 2004, we will strive to further reduce our CO₂ emissions through a combination of major and minor energy-conserving programs, the more significant ones being the introduction of new energy sources such as solar- and biomass-power generation (total reduction in CO₂ emission: 10,000 tons of CO₂ in fiscal 2004, 22,000 tons of CO₂ in fiscal 2005 and after), and the shutdown of inefficient diesel power generators (total reduction in CO₂ emission: 2,000 tons of CO₂ per year).

Note: CO₂ emissions reported in the Kuraray Environmental and Social Report 2003 included those generated from electric power sales by some plants; however, based on the judgment that it is more reasonable to exclude these, the data for fiscal 2001 and onward has been corrected.

* See "Data (page 42)" for our energy consumption.



Reducing environmental impact during transport

Policies

In an attempt to reduce substances that impact the environment, such as CO₂ and NO_x, during transport, Kuraray is increasing its use of efficient modes of transport and expediting this modal shift. In fiscal 2003, we started to boost these efforts, with the goal of reducing CO₂ and NO_x emissions during transport by 15% and 10%, respectively, by fiscal 2005 (vs. fiscal 2000)*¹.

Activities

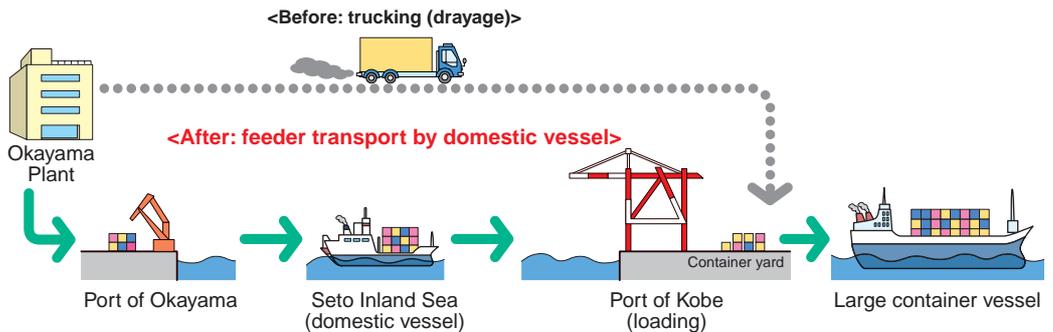
In fiscal 2003, our CO₂ emissions*² dropped 6.0% year-on-year to 24,193 tons, and NO_x emissions were down 6.4% to 98.1 tons, through greater transport efficiency, promotion of modal shift and cooperation with logistics partners.

Promotion of modal shift (feeder transport by domestic vessel between Okayama and Kobe)

In the past, much of the export freight from our Okayama Plant was loaded into containers at the Plant and trucked to the Port of Kobe, where the containers were loaded onto ocean-going ships for export. In April 2004, we began shifting from this container transportation to more environmentally friendly transport by domestic vessels, reducing flue-gas substantially. Although the distance is relatively short (150 km one way), this modal shift to

domestic vessel transport is expected to reduce our current annual CO₂ emissions of 811 tons of CO₂ by 73% (591 tons of CO₂) to 220 tons*³. This project was designated a "fiscal 2003 demonstration experiment aimed at building up a logistics scheme with less environmental impact," subsidized by the Ministry of Land, Infrastructure and Transportation (MLIT) of Japan.

Feeder transport by domestic vessel between the ports of Okayama and Kobe



*1 Figures for actual and target emissions include only those related to transport of products shipped from Kuraray's plants, and don't include those related to shipment from commercial warehouses and manufacturing facilities or transport of non-products.

*2 CO₂ emissions = weight (tons) x distance (km) x emissions per unit of production
NO_x emissions = weight (tons) x distance (km) x emissions per unit of production

*3 Emission calculation formula and emissions per unit of production based on "Chiba Prefecture Modal Shift Promotion Manual (FY1997)." According to the MLIT estimate, CO₂ emissions would be reduced by 82% from 1,153 tons to 946 tons of CO₂ equivalent.

Cooperation with logistics partners

Kuraray assessed the environmental friendliness of logistics partners against the Green Purchasing Guidelines, to evaluate their packaging specifications and transport practices for sufficient savings of energy and resources and reduction of flue-gas.

In fiscal 2003, the "greenness" of our logistics partners was 60%, which was up 20 percentage points from the previous year. We will seek their continued cooperation by, for example, sending questionnaires, to ensure all our logistics partners meet the Guidelines.

* For details on "greenness" assessment see Green Purchasing (page 22).

Soil Investigation

Policies

Recognizing that soil pollution due to business activities is pollution not only of our own but also of public properties, we at the Kuraray Group are paying the utmost attention to its prevention.

As part of our efforts for environmental preservation and risk management, we will also investigate the soil at all of our plants in line with our voluntary plan to check for any pollution due to past business activities, and take proactive measures wherever necessary.

Activities

Since the Soil Pollution Countermeasures Law went into force in February 2003, methods for soil investigation have been given concrete shape. Although none of the land belonging to the Kuraray Group's domestic plants is obliged by Law to perform soil investigation, we have decided to conduct this at all domestic plants according to a voluntary plan. We started in fiscal 2003 by investigating the soils of the Kurashiki Plant – our oldest plant - in the manner stipulated by the Law. As a result, we discovered lead and arsenic at levels of a maximum 11 and 2.8 times more, respectively, than the environmental quality standards for elution in portions of the soil. Although we don't believe this affects the ambient environment, since most of the contaminated land is under either pavement or buildings, we will take measures to prevent

the contaminated soil from being stirred up, lest anyone should inhale contaminated soil at the plant site. Meanwhile, although we didn't find any groundwater pollution, we will continue to inspect underground water to watch out for any impact on the ambient environment.

We examined the records, related documents and data on our past operations to learn why lead and arsenic were found in excess of the environmental quality standard, but we were unable to locate a cause for the pollution, although the possibility of some of our business activities having something to do with it can't be denied.

We will investigate the soils at all of our plants according to the voluntary plan, and take actions whenever necessary.



Kurashiki Plant

* Environmental quality standards for soil: comprises standards for content (amount of specified substances contained in soil) and for elution (amount of specified substances eluted from the soil). The latter is stricter than the former to prevent pollution of groundwater.

Management of Chemicals

Policies

The Kuraray Group uses a variety of chemical substances both as materials and in the production process. We are exercising proper control of these substances, which are highly useful, but, if not handled properly, could cause some impact to the environment. The Kuraray Group believes that the PRTR Law and JCIA's voluntary PRTR management program are key instruments in this effort, since they are designed to encourage voluntary management of chemicals to reduce emissions that could harm people and the environment.

Review of the Medium-Term Environmental Plan

Guided by the Medium-Term Environmental Plan, we were targeting a 90% reduction in emissions of chemical substances covered by JCIA's voluntary PRTR management program by fiscal 2005 versus fiscal 1999 levels, and were incinerating the emissions.

Although incineration served to reduce emissions of chemical substances, the large amount of energy it required contributed to increased CO₂ emissions. Meanwhile, such other measures as the collection and reuse of emissions and the development and introduction of production methods that don't emit chemical substances are preferable for the global environment, since they not only put resources to efficient use but don't generate any CO₂, as does incineration. Recent technological progress has increased the

likelihood of the development of these reduction techniques, and we have decided to dedicate the coming two years to the development of technologies that still need elaboration.

This means we must set back the target year of our emission reduction from fiscal 2005 to fiscal 2007, but we will put significant resources into technological development in order to achieve the target as quickly as possible.

As a long-term priority, we will reduce emissions of highly hazardous chemical substances, such as vinyl acetate and isoprene. We have also clearly announced our intentions and targets for the reduction of transfer of substances covered by JCIA's voluntary PRTR management program.

Activities

Reducing the release of chemical substances covered by JCIA's voluntary PRTR management program

The domestic Kuraray Group companies currently handles 84 chemical substances (including 48 covered under the PRTR Law) of the 480 covered by the reduction program issued by JCIA (354 designated under the PRTR Law).

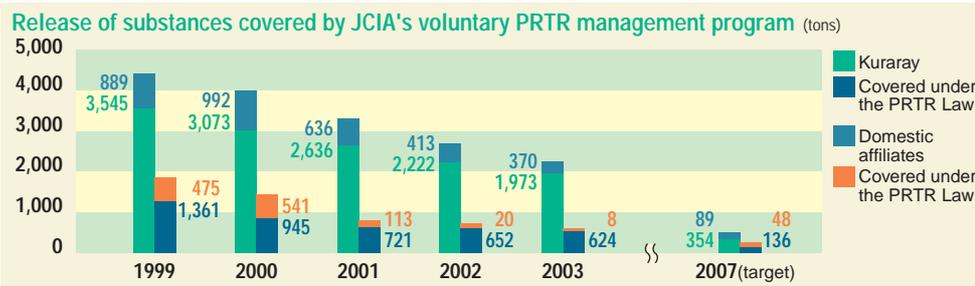
In fiscal 2003, we succeeded in lowering the release of these chemicals to 2,343 tons (632 tons for those under the PRTR Law) by installing an anti-exhaust device on a polyvinyl acetate tank and a condenser on the acetone tank, for a reduction of 47% versus fiscal 1999 (down 11% vs. fiscal 2002).

By fiscal 2004, we will reduce the release of substances covered by the PRTR Law to 2,100 tons (53% reduction versus fiscal 1999, and 10% reduction versus fiscal 2003). To achieve this, we will install an flue-gas treatment device on the isoprene production process among other measures.

Other plans for fiscal 2004 include the collection and reuse of methanol released from the polyvinyl alcohol production process and introduction of chemical-substance-free production processes. Capital expenditures for these projects are estimated at 660 million yen. Due to the implementation of these plans. We expect to realize a substantial reduction in the release of chemical substances from fiscal 2005.

The Japanese government estimated that the release of substances covered by the PRTR Law in fiscal 2002 was 879,535 tons, down 1.9% from fiscal 2001. The release volume reported to the government by businesses that are obliged to do so was 290,453 tons, down 7.1% from fiscal 2001. (During the same period, domestic Kuraray Group companies managed to reduce their volume by 19.4%.)

* National government statistics on the release volume of substances covered by the PRTR Law
The government totals the release volume reported by relevant businesses, which it combines with its estimate of the release volume by non-relevant businesses, mobile objects (cars, etc.), households and farmland, etc.



Managing the transfer volume (waste either removed from sites or released into the sewage system) of substances covered under JCIA's voluntary PRTR management program and their reduction targets

In fiscal 2003, domestic Kuraray Group companies divided chemical substances that are removed from sites into four categories, according to the need to pre-treat them to make them harmless, and started managing transfer volume according to the different approaches below.

This is because we believe it more appropriate to apply the PRTR approach to those substances that aren't pre-treated and thus have more impact on the environment,

while using a more generalized waste management approach for those that are pre-treated and thus cause little environmental impact. Similarly, we believe it appropriate to apply an effluent management approach, rather than the PRTR approach, to the transfer volume to the sewage system, since it is pre-treated at a wastewater treatment facility.

Accordingly, the following reduction targets were set for each category.

Category, management approach and target reduction for substances covered under JCIA's voluntary PRTR management program

Category	Definition	Approach	Target reduction (% vs. fiscal 1999)
I	Waste removed from sites and used for landfill without pretreatment	PRTR program	90% (fiscal 2005)
II	Waste removed from sites and pre-treated by incineration, neutralization, etc.	Waste management	Taken as part of waste. Of the total, reduce 90% of unutilized waste being inefficiently processed externally, and increase the ratio of efficient use to 90% by fiscal 2006
III	Waste removed from sites and subjected to material/chemical recycling processes		
IV	Discharged into the sewage system	Effluent management	10% (fiscal 2005)

* Of all the Kuraray domestic plants, only the Kashima Plant discharges chemical substances into the sewage system, but, because production there is expanding, the volume of the discharge is growing. To improve effluent quality, we have set a target for reducing the volume of chemical substances being transferred into the sewage system.

Reducing the transfer volume of chemical substances

The total volume of transfer by domestic Kuraray Group companies was 1,050 tons. Four substances fall under Category I (no pre-treatment) with a transfer volume of 13 tons, down 97% versus fiscal 1999 (down 70% vs. fiscal 2002), successfully achieving the target. The majority is bis (2-ethylhexyl) phthalate, which is used as a plasticizer in polyvinyl chloride resin by domestic affiliates, and becomes landfill together with the waste

polyvinyl chloride resin. We will attempt to put the waste polyvinyl chloride resin to efficient use and reduce the volume used for landfill. Thirteen substances fall under Category IV with a transfer volume of 301 tons, down 13% versus fiscal 1999 (down 0.5% vs. fiscal 2002). We will continue our efforts to reduce the substances discharged from the production process to the sewage system.

* The release and transfer volumes for each substance covered under the PRTR Law at each of the Company's sites can be found on our website.

<http://www.kuraray.co.jp/en/csr/report/prtr2004.html>

Alternatives for endocrine-disrupting substances

The Ministry of Environment of Japan is of the view that nonylphenol could affect the eco-system by disrupting endocrines in fish. We use nonylphenol and its derivatives in our

products, but are in the process of testing substitutes. We should be able to discontinue their use by the end of fiscal 2004.

Removing asbestos

Asbestos has adverse effects on human health and its use is totally prohibited, except for special applications like sealing materials at chemical plants. Some of the domestic Kuraray Group companies use asbestos for special sealing materials at their chemical plants, but will strive to eliminate its use, including special applications, as soon as possible, by

identifying alternative materials. For the less toxic forms of asbestos that are currently used to reinforce slating materials, we are in the process of testing the substitution of slating materials that use our vinylon fibers to reinforce concrete. Once the testing is complete, we will expand the use of these new materials as an alternative to asbestos.

Bringing Emissions of Industrial Waste to Zero

Policies

The Kuraray Group's efforts to bring industrial waste emissions to zero include the improvement of production processes with a view to reducing, reusing and recycling waste, and the development of efficient utilization for waste.

The Medium-Term Environmental Plan established targets for fiscal 2005 of 90% reduction in the volume of externally processed industrial waste and a 20-percentage-point increase in waste utilization efficiency, both against the base year fiscal 1999. Since we managed to achieve the fiscal 2005 target for the latter in fiscal 2002, it was revised to a 30-percentage-point increase in waste utilization efficiency by fiscal 2006 versus the base year.

For the longer term, we have decided to reduce the volume of externally processed industrial waste by 94% and maintain waste utilization efficiency at 90% versus fiscal 1999, by and through fiscal 2010.

Activities

"Zero" waste emission achieved

In fiscal 2003, Kuraray's Okayama Plant and Kuraray Trading's Okayama Plant succeeded in reducing industrial waste to zero, and Kuraray's Kashima Plant and Kuraray Living Co., Ltd. produced zero industrial waste for two consecutive years.

We will continue our efforts for "zero waste emissions" at these plants, and accelerate this initiative at other plants.



Okayama Plant

The Kuraray Group's definition of zero waste emissions

Reduce the final amount of waste destined for landfill to less than 1% of the total generated at a site by expediting its efficient use.

We believe it is possible to reduce the amount of waste destined for landfill to zero; however, in order to achieve this, we need to perform processing that consumes a large amount of energy, e.g., processing incineration ash into molten slag in an electric furnace and into roadbed materials in order to use it efficiently, which involves steps that are questionable considering the purpose of LCA. We thus do not aim to reduce the amount of waste destined for landfill to absolute zero.

Programs for achieving the targets in the Medium-Term Environmental Plan

- ① Efficient use of materials and reuse of packaging materials
- ② Development of a zero surplus sludge system in treating wastewater
- ③ Efficient utilization of waste through separation
- ④ Development of methods for efficient use of individual types of waste
- ⑤ Thermal recycling by turning waste plastics into solid fuels
- ⑥ Use of a gasification fusion furnace

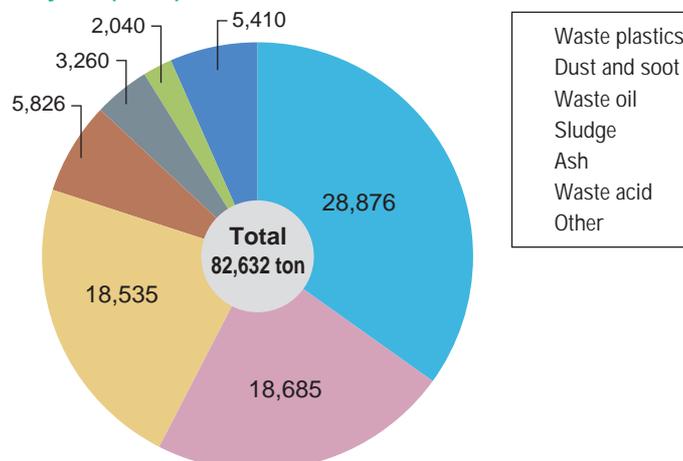
Industrial waste is decomposed in the high-temperature gasification fusion furnace into flammable gases, molten metal and molten slag, which makes it possible for the flammable gases to be used as fuel, the molten metal as metal resources, and the molten slag as soil stabilization materials. Kuraray intends to put more industrial waste to efficient use through this process.

In fiscal 2003, the volume of industrial waste processed for domestic Kuraray Group companies by outside contractors was 5,100 tons, a 65% reduction against the fiscal 1999 base year level (down 14% vs. fiscal 2002). The effective reuse ratio for waste reached 85%, an increase of 25 percentage points over the base year. Industrial waste production was 82,600 tons. According to the latest survey by the Ministry of Environment of Japan, the total industrial waste production in fiscal 2001 was approx. 400 million tons, of which 183 million tons (46%) was recycled (During the same period, the ratio for domestic Kuraray Group companies was 70%). In fiscal 2004, we expect the volume of

industrial waste processed for domestic Kuraray Group companies by outside contractors to be around 2,700 tons, an 81% reduction from fiscal 1999, and the effective reuse ratio for waste to be around 88%, an increase of 28 percentage points over the base year, through continued efforts to separate waste for efficient use and develop techniques to put waste to efficient use, including landfill by Kuraray Chemical Co., Ltd. At the same time, to reduce the production of industrial waste, we will promote the efficient use of resources by increasing production yields and develop a system that reduces the excess sludge from the wastewater treatment system to zero.



Breakdown of Industrial Waste Generated by Domestic Kuraray Group Companies in FY2003 (tons)



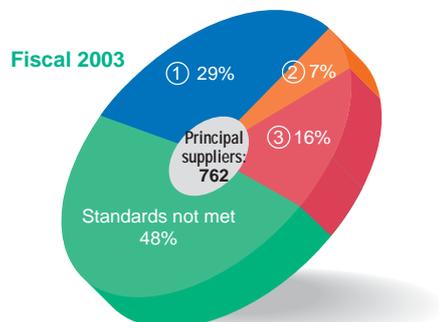
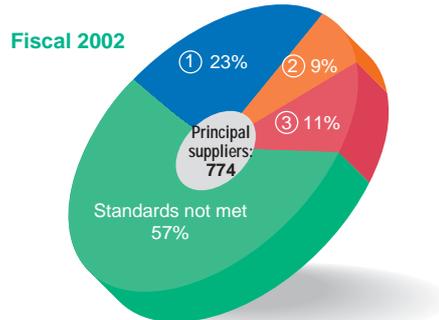
Green purchasing

Policies

In effect since April 2001, the Green Purchasing Law mandates placing priority on purchasing products and services with low environmental impact. Development of environmentally friendly businesses and products logically dictates the purchase of materials and components with low environmental impact. In fiscal 2001, the Kuraray Group set internal regulations for green purchasing of office consumables and production materials that give priority to eco-friendly products and services.

Standards

In March 2002, we established Green Purchasing Standards applicable to production materials, giving higher priority to environmentally conscious suppliers. Following an assessment of the "greenness" of our principal suppliers in fiscal 2002, in fiscal 2003 we provided individual guidance to those who failed to meet the Green Purchasing Standards. The pie charts on the right show the results of their reassessment: the percentage of "Green" suppliers increased 9%. We will continue to encourage further compliance with the Standards.



Criteria for suppliers

- ① Certified to ISO 14001
- ② Certification to ISO 14001 under plan, and auditing institutes and date of auditing are fixed
- ③ If 1. or 2. above do not apply, the following criteria must be met:
 - Corporate philosophy/policy on environmental preservation
 - Organization/plan for environmental preservation
 - Assessment of impact on the environment
 - Environmental education/disclosure
 - Environmentally-friendly logistics

Scope of green purchasing

- Raw materials for development and production of products
- Mechanical appliances for development and production of products
- Packaging materials and containers for shipment and delivery of products
- Equipment and consumables for marketing and administrative operations
- Outsourcing of operations, including production, sales, logistics, etc.

Green Purchasing

We established our own Green Purchasing Guidelines for the purchase of "green" products. In fiscal 2003, we expanded green purchasing of "automobiles" and "stationery."

Status of Green Purchasing

Category		Item	Value of Purchase (million yen)	Green Purchasing Ratio	
				FY02	FY03
1	Paper (recycle)	5 items Copier paper, forms, printing paper, sanitary paper, business cards	55	100%	100%
2	Stationery (recycle)	47 items Mechanical pencils, ballpoint pens, markers, pencils, etc.	7	90%	95%
3	Furnishings (reuse)	8 items Chairs, desks, shelving, cabinets, low partitions, bulletin boards, chalkboards, whiteboards	7	80%	80%
4	OA equipment (energy-saving)	4 items PCs, printers, copiers, facsimile machines	254 (leasing fees)	100%	100%
5	Appliances (energy-saving)	4 items Refrigerators, air-conditioners, TVs, VCRs	6	80%	80%
6	Lighting (energy-saving)	2 items Fluorescent lighting apparatus, fluorescent tubes	6	100%	100%
7	Automobiles (reduce pollutants)	1 items Automobiles	71 (leasing fees)	70%	100%
8	Uniforms and work clothes (recycle)	2 items Uniforms, work clothes	-	-	-
9	Work gloves (recycle)	1 items Work gloves	4	50%	50%

* Uniforms and work clothes: to be replaced in fiscal 2005 with items made from our recycled polyester fibers

Disaster Prevention

Policies

True to the Basic Approach to Responsible Care, the domestic Kuraray Group companies views the prevention of fires, explosions and other forms of disaster at plants as its most important issues, thereby ensuring safety and eliminating any anxiety society might harbor on our account. Accordingly, we are working for disaster prevention. To facilitate substantive improvements in the safety of its facilities and equipment, we have adopted Equipment Safety Design Guidelines and Safety Inspection Standards. When there is an installation of new equipment or a major change in operating conditions, we inspect our facilities at four stages (design, construction, before test runs, after startup) to ensure the prevention of accidents and disasters. We are also striving to improve our level of risk management and our public relations with host communities should a disaster occur.

Activities

Regulatory compliance concerning high-pressure gas equipment

Annual suspension of operations to overhaul "high-pressure gas equipment" and "boilers and Category 1 pressure vessels" is mandatory. However, "items of equipment deemed to satisfy the legal requirements for safety control and equipment control" may be operated for two years or longer, provided they are inspected while in operation. Accordingly, our Okayama Plant has obtained certification for their "high-pressure gas equipment" and "boilers and Category 1 pressure vessels," and the Kashima Plant and Kuraray Saijo, for their "boilers and Category 1 pressure vessels." In fiscal 2003, our Kashima Plant applied for a "project for rescheduling open inspection periods of high-pressure gas equipment" in the Kashima Special Economic Zone, and the extension of the period for open inspection was granted. Fiscal 2003 saw many incidents at other companies in Japan, such as the false reporting of inspection findings, that undermine the credibility of this system. Kuraray double-checked the status of the implementation and reporting of high-pressure gas safety

inspections to confirm that there is no violation of the law.

The Okayama Prefectural Government conducted an on-site inspection at our Okayama Plant, and found that the plant was operated properly.

To enhance our credibility before society, we intend to establish an internal auditing structure and procedures for the company-wide voluntary inspection of high-pressure gas equipment.



High-pressure Gas Equipment

Preparedness against industrial accident

There were large-scale fire and explosion accidents among Japanese industrial circle in 2003. It made Japanese residents uneasy and became social problems. Kuraray group companies urgently rechecked disaster prevention measures, and at the same time we have improved to prevent industrial accident and first aid in case of emergency accident.

In the RC activity Verification Meeting, we have decided the main theme "industrial accident" and discussed safety measure in reply to reduction in force, against terrorism, counter measure in night shift. We have set action plan regarding each issue and been trying to figure out problems.

Small fires

In fiscal 2003, the failure to turn the power off at one of the laboratories in our Kurashiki Plant led to a small fire, which, fortunately, did not turn into a major disaster. We have taken this mistake seriously, and developed fail-safe measures (equipment and human behaviors) and seen to their implementation across the board, to make sure that safety is improved.



Disaster Drill



Quality Assurance and Product Safety

Policies

The Kuraray Group is guided by its Product Safety Basic Policy and Action Guidelines for Product Safety in ensuring the safety of our products. By encouraging our business units to achieve certification in the ISO 9001 international standards on quality management, we promote customer-oriented quality assurance, which provides the foundation for product safety.



I .Product Safety Basic Policy

We will endeavor to contribute to creating an affluent, comfortable society by meeting customer needs through the supply of safe and reliable products.

II .Action Guidelines for Product Safety

1. Supply products that conform to the level of safety expected by society in accordance with safety-related laws and regulations and the latest technological levels.
2. Minimize any predictable risk that may be associated with our products.
3. Maintain an appropriate quality management system to ensure that all products meet requisite quality and safety standards.
4. Provide accurate production information to customers and users to prevent accidents due to inappropriate use or handling.
5. Endeavor to develop safer products and improve technology for product safety.
6. Endeavor to augment the framework for information gathering and cooperation from both within and outside of the Company to ensure and improve product safety and take quick action against any incident.
7. Endeavor to raise the awareness of product safety among all employees and develop product safety specialists.

Organizational Structure

A Quality and PL Team under the Environmental and Industrial Safety Subcommittee of the CSR Committee monitors the status of quality and PL management at each company and plant based on information received from its three working groups, each comprising quality and PL managers, Quality and PL Committee members at affiliated companies, and quality and PL specialists, and other departments in the Company. When the Team discovers an issue that it believes should be discussed from a company-wide perspective, it works out countermeasures and submits them to the Environmental and Industrial Safety Subcommittee.

Organizational Chart



* Functions of the WGs

The WG of Quality and PL Managers:

Comprised of the people in charge of quality and PL at each department in the Company. Plans quality and PL programs, gathers and evaluates performance records, evaluates complaints on quality and PL incidents, devises improvements for any issue that has been identified, and briefs the Quality and PL Team on the results.

The WG of Quality and PL Committee Members at Affiliated Companies:

Comprised of the people in charge of quality and PL at affiliated companies. Has the same functions as the WG of Quality and PL Managers.

The WG of Quality and PL Specialists:

The special WG comprised of both in-house and outside specialists in quality and PL. Deals with specific, highly specialized themes that the other two WGs find difficult to address. Reports the results of its discussions to the Quality and PL Team.

Quality Assurance

The Kuraray Group promotes certification to ISO 9001 international standards on quality management, so that we can improve our quality assurance activities based on the PDCA cycle. In line with Customer Information Management Regulations, we interview and

send questionnaires to customers to hear what they have to say about our products and what they expect from them, assess customer satisfaction, and reflect the results back into product quality.

Present status of ISO 9001: 2000 certification

Nakajo, Okayama, Kashima Plants,
 Kuraray Saijo Co., Ltd., Kuraray Tamashima Co., Ltd., Kuraray Chemical Co., Ltd.,
 Kuraray Plastics Co., Ltd., Kuraray Techno Co., Ltd., Magictape Co., Ltd., Kuraray Medical Inc.
 Eval Company of America, SEPTON Company of America, Eval Europe N.V.,
 Kuraray Specialities Europe GmbH

Product Safety

During the product development process, we pay due cognizance to the potential effects our products may have on the environment and on human health and safety at every stage of their life cycle, from R&D through to eventual disposal, in accordance with our Product Safety Management Standards for the R&D Stage, Product Stage Management Standards up to Market Launch and Guidelines for Compilation and Control of Operating Instructions. We are studying ways to resolve potential problems as early as possible by changing raw materials or production processes to reduce the impact on the environment wherever issues might be anticipated.

In accordance with the Guidelines for the Control of MSDSs (Material Safety Data Sheets), we ensure the proper use of MSDSs, which are compiled into a database so employees can access the data on nearly all products and raw materials. In fiscal 2003, we posted the MSDSs of our major products on our website.

In the event that a PL-related incident (PL incidents or complaints and problems in quality that could lead to a PL incident) were to occur in the Kuraray Group, we make sure that we are prepared to take quick and appropriate action in accordance with the Kuraray Group Regulations on PL-related Accident Contingency Plans.

Product Complaints

In accordance with the Quality Grievance Procedures Regulations, the Kuraray Group ensures that every complaint on quality from customers is handled both quickly and accurately.

Quality and PL Team and its subordinate organizations provide support for quality improvements in the different departments in the Company to bolster our prevention of quality complaints.

To reduce the number of complaints, the

Safety in Logistics

Policies

The domestic Kuraray Group companies are tightening their already strict safety controls for chemicals during transport in accordance with our own Distribution Safety Management Standards and the regulations for their implementation. Items containing specific substances and all items in liquid form are subject to safety management procedures based on these standards and regulations whenever they are shipped, stored, loaded or unloaded.

Activities

Distribution safety control officers are assigned to oversee these tasks. One of their responsibilities is to provide the necessary training and education to the Kuraray distribution staff and the people contracted to transport the chemicals, in order to maintain quality and ensure their safe handling. To safeguard against accidents during transport, we keep sandbags at the ready (for preventing the spread of damage) and maintain an emergency dispatch communications tree. We also conduct regular emergency communications training with contract distribution businesses.

Under the Guidelines for the Control of Yellow Cards, truck drivers are required to carry a Yellow Card (emergency response card), which details information on the chemical properties and potential dangers of the items being transported, as well as emergency procedures and whom to contact should a problem occur, so they can prevent the spread of any damage.

We supply MSDSs to distribution contractors to improve safety during transport, in accordance with the Guidelines for the Control of Product Safety Data Sheets.

Community and Employees

Social Contributions	27 - 29
Communication	30
Relationship with Employees	31 - 36



Policies

As set out in our Corporate Mission, we of the Kuraray Group believe it our fundamental mission to open new fields of business using pioneering technology and to contribute to society through the supply of excellent products and services.

At the same time, we are applying our resources to good corporate citizenship programs, such as exchange programs with and contributions to our host communities, which are highly relevant to our business activities.

Our policy is to select activities where our employees can tap their ingenuity, participate voluntarily and be involved for a long period, and to pursue grass-roots themes that are not well served by public agencies in areas like education, medicine and public welfare, in a way that achieves harmony with our local communities.

Activities

Chemistry Classes for Boys and Girls

Since 1992, we have been sponsoring Chemistry Classes for Boys and Girls for grade school students in order to provide children with opportunities to discover the "joy of chemistry" through experiments and experiences. The classes are held in "classrooms" on the plant premises or at neighboring elementary schools, with young employees volunteering as lecturers and assistants during their holidays.

In fiscal 2003, a total of 534 students attended 17 classes that featured experiments related to the environment.

Hosts	Class Name	No. of Classes to Date	Attendees
Kurashiki Plant	Fun Chemistry House	43	1,302
Kuraray Saijo	Exciting Chemistry Class	35	1,109
Nakajo Plant	Wondrous Laboratory	25	780
Kashima Plant	Fun Chemistry Class	2	141
Okayama Plant	Fun Chemistry Class	12	390
	Total	117	3,722

(total as of March 31, 2004)

Since fiscal 2002, we have begun holding chemistry classes at the National Museum of Emerging Science and Innovation of the Japan Science and Technology Corporation (now the Japan Science and Technology Agency) as part of Dream Chemistry-21, a project sponsored by the Chemical Society of Japan and related organizations.

In fiscal 2003, the event was attended by more than 10,000 people, many of whom visited Kuraray's booth.

【Exhibit Themes】

- FY2002 Wondrous plastics that return to their original shape
- FY2003 Let's make room deodorizers!



Chemistry Classes for Boys and Girls

【Recent Themes】

- Water in daily life. What is a separation membrane?
- Let's clean up dirty water!
- Making fibers from PET bottles
- Wonders of chemical reactions



Dream Chemistry-21

Contributing to society through community medical services

We are serving the community via healthcare services provided by Kurashiki Central Hospital (Okayama Prefecture), Aizenbashi Hospital (Osaka Prefecture), and Saijo Central Hospital (Ehime Prefecture) to all of which we have been providing support from their foundations.

Ishii Memorial Aizen-en Aizenbashi Hospital (Osaka City, Osaka)

The Ishii Memorial Aizen-en Aizenbashi Hospital was established in 1937 by the late Magosaburo Ohara, the founder of Kuraray, to "provide healthcare equally to everyone," inspired by Juji Ishii, a welfare worker in Okayama. The hospital includes a special nursing home for the elderly on its grounds to meet the need for nursing care services in the host community (277 beds).

Kurashiki Central Hospital (Kurashiki City, Okayama)

Kurashiki Central Hospital was established in 1923 as a company clinic of Kurabo Industries, Ltd. After Kuraray Co., Ltd. (then Kurashiki Kenshoku) was founded, it also served as its clinic for employees. Based on his belief that "when you're sick, it shouldn't matter whether you're the president or a factory worker," Magosaburo Ohara replaced the system that required family members to attend to patients' needs with round-the-clock professional nursing care. The hospital went independent to better cater to local healthcare needs, and today is one of the largest general hospitals in Japan (1,256 beds), providing world-class advanced medical services.

Healthcare Corporation Doshin-kai Saijo Central Hospital (Saijo City, Ehime)

This hospital was established in 1954 by Soichiro Ohara, the second president of Kuraray, as a branch of Kurashiki Central Hospital. Since it opened, the hospital (242 beds) has served the needs of local residents as one of the core medical institutions in the community.

We have remodeled the employee company housing at the Saijo Plant and offer it as a nursing home for the elderly. In July 2004, our Nakajo Plant opened Tulip-en, a community nursing home for dementia patients operated by our affiliate Kuraray Techno in a former corporate welfare facilities.



Kuraray Fureai Fund Raising (matching gift)

Employees donate a fraction of their monthly pay to the service of public welfare in host communities, and the Company matches their contributions. In fiscal 2003, our plants used this money to donate nursing and life support supplies to social welfare councils and nursing care facilities in our host communities. We also donated funds raised at a charity event sponsored by a group of employee volunteers to the AMDA (Association of Medical Doctors in Asia), an NGO comprised of volunteer medical practitioners that is headquartered in our host prefecture, Okayama.



Sending satchels across the water (Kuraray Campaign)

The idea of this campaign is to fill second-hand satchels with stationery items – notebooks, pencils, and crayons – and send them to children in Afghanistan, where there is a great shortage of such goods.

As many as 8,000 used satchels were donated from around the country under the banner, "Sending satchels across the water." They left Japan in May and are due to arrive in Afghanistan in July, where children are eagerly awaiting them.



Open lectures and seminars

We frequently offer open lectures and seminars in order to open our plants to their host communities through greater communication.

In fiscal 2003, many attended lectures on "Track and Field and Me" and "Safety in the Community," presented respectively at the

Nakajo and Okayama Plants.

At the Kashima Plant, residents aged 60 and over were invited to join in an experiment making room deodorizers out of superabsorbent polymer KI Gel, as part of the program of the municipality-sponsored University for the Aged.

Sports Meets

Kuraray sponsors sports meets at its gymnasiums and athletic fields, and holds soccer tournaments and tennis tournaments,

in an effort to make ourselves an open and familiar presence to our neighbors in their local communities.

Community Events

Our interaction with host communities takes a variety of forms, including flower viewing parties, clean-ups, volunteer activities, plant tours and exhibitions and spot-sale of artwork by students from schools for the handicapped.



Cherry Blossom Viewing Party (Saijo)

Internship

We offer internships for engineering students to allow them to learn more about the Kuraray Group and give them work experience. Every year, students from both Japan and overseas spend between two weeks and two months gaining work experience at our R&D laboratories and production sites.

In fiscal 2003, we accommodated eight interns from Okayama University and other institutions. The students expressed satisfaction with their internships, saying the experience in real society provided them with greater motivation to study at university.

Communication

Policies

Intent on being a good corporate citizen, we constantly strive to earn the trust of all our stakeholders by communicating a true picture of the Company through active dialog with society in which we listen to candid comments from outside.

Activities

Dialog with host communities

In order to foster better communication with a host community, our plants often invite the local residents for plant tours and briefing sessions to help them deepen their understanding of what the plants do, the impact of their operations on the environment, and countermeasures for the same. We invite comments and opinions from participants and feed their input into making our plants better. Each plant compiles its own environmental report to present at these briefing sessions.

Our dialog with our host communities takes many other forms in addition to those above. One of these is participation in community dialogs sponsored by the Japan Responsible Care Council (JRCC). In fiscal 2003, our Nakajo Plant organized the first Northern Niigata District Regional Dialog, where JRCC

Visitors	FY00	FY01	FY02	FY03
From host communities	1,744	2,013	2,075	1,618
Others	988	926	904	1,256



Plant Tour

member companies presented their environmental conservation programs to some 130 people from the local community, government agencies and NPOs, followed by a frank exchange of views among all those present.

Reporting of CSR activities

Since 1998, the Kuraray Group has issued annual reports on its environmental initiatives. In 2003, we expanded the scope of the reports to cover our relationships with society and our employees through the Kuraray Environmental and Social Report. In yet another step forward, this issue covers our CSR activities in general under the title, Kuraray CSR Report – Environmental and Social Activities.

The annual report is a key tool for communication with a broad range of stakeholders in the Kuraray Group. The latest issue and back numbers of these reports can be found on our website.



URL: <http://www.kuraray.co.jp/en/>

Relationship with Employees

Policies

True to the tenets of our Corporate Philosophy, "Respect for individuals," "Cooperation in shared goals," and "Creation of values," each and every member of the Kuraray Group desires to grow as a person through our work, joins hands in working towards our shared goals, and offers society new value. Accordingly, the Company provides a variety of measures designed to ensure that all employees work with vigor, both physical and mental, attain self-realization through their work, and are motivated to improve the performance of the Company in a spirit of unity with management.

Activities

Encourage employees' sense of participation in management and foster a spirit of unity with management

Dialog with Top Management

In order to better communicate the management's thoughts and policies, update employees on the current status of the Company, and feed back first-hand comments from employees at every level of the position, employees have the opportunity to meet with top management face-to-face.

We are also developing an Intranet-based system that allows management to share its policies and opinions with employees and to invite questions and proposals from them. Dialog and information sharing with the labor union are carried on through various meetings between labor the union and management.



Stock options and growth of the employee stock subscription plan

The Kuraray Group believes that "the improvement of the company's business can be achieved not by the few in management but rather through the united efforts of each and every employee." Based on this conviction on the part of management, between the years 2002 and 2003, the Company granted stock options not only to its directors and managers but also to the staff at domestic and overseas group companies, to encourage them to contribute to the performance of the Company and foster their

sense of participation in management. We also revised the employee stock subscription plan by raising the percentage of the financial incentives and the upper limit of the subscription lot. By inviting more employees to join the plan through these revisions and through in-house IR, we are trying to enhance employee awareness of corporate value and share prices, and to foster the sense of their participation in management.

The Kuraray group safety award

Employees who have made significant contributions to the Company's business through their ingenuity, their initiatives for environmental preservation and industrial safety, and their many years of service, receive the President's Award and other honors, to improve morale and foster a

creative, free and generous corporate culture. Employees who have made outstanding contributions to community service and welfare activities receive the Social Contribution Award. We support our employees who actively engage in social activities as members of the community.

Personnel Affairs

Policies

The Kuraray Group strives for a fair and transparent personnel affairs system that encourages individual employees to take the initiative in demonstrating their talents. Our basic policy is to create and operate a fair system, basing our concept on such international standards as the Universal Declaration of Human Rights and the Fundamental Human Rights Conventions of the International Labour Organization, in every aspect of human resource affairs, including employment, treatment and skill development. We are also dedicated to fairness in rating, remunerating and allocating individual talent to an appropriate position, so that our employees can attain self-fulfillment through their work, feel a sense of achievement, and find constructive motivation.

Activities

Diversity and equal opportunities

Policies on equal opportunity

Kuraray stipulates in our labor agreement that we respect human rights, do not discriminate against anyone because of attributes like race, nationality or gender, and place emphasis on individual talent in order to recruit and promote a variety of human resources.

Providing job opportunities

Kuraray takes a proactive stance on providing disabled people with job opportunities. As of March 2004, 2.04% of those on our payroll had some handicap.

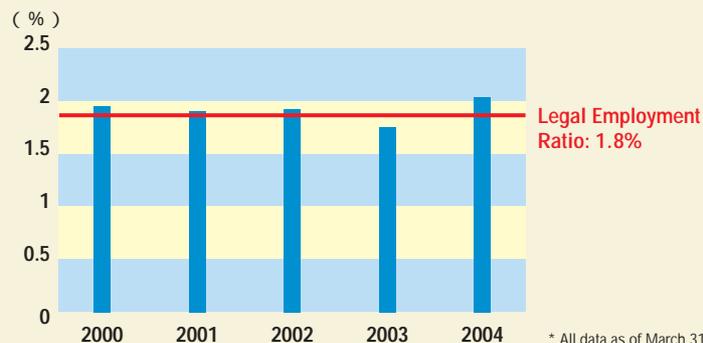
Our Nakajo Plant works with the social welfare institute 'Niji-no-ie' to provide disabled people with job volition with the opportunity to participate in society. We also provide job



'Niji-no-ie' Kuraray Workshop

opportunities for disabled people at massage rooms in several plants and continue improving working environment for them.

Employing the disabled people



Respect for human rights

We have adopted the philosophies of such existing international standards as the Universal Declaration of Human Rights and the Fundamental Human Rights Conventions of the International Labour Organization in our human rights practices. We clearly stipulate in our labor agreement that we will never engage in child labor, forced labor or obligatory labor. We strive to raise the awareness of human

rights in our employees by including human rights issues in the training program for new recruits as well as in our other in-house training courses.

We have also established a unit to promote overall awareness of human rights throughout the Company, and will continue to conduct related training and education Company-wide.

Contacts for employee consultations

Kuraray Employee Counseling Room

Originally established as a whistle-blowing system to detect compliance violations, this organ now also serves as a contact for individual employees to turn to when any

problem occurs in their workplace that they find difficult to resolve either by themselves or with their team.

Sexual Harassment Consultation Contact, Sexual Harassment Grievance Committee

The Sexual Harassment Consultation Contact and Sexual Harassment Grievance Committee were set up under the work

regulations to investigate any allegations of sexual harassment in the workplace.

* In addition to the above, a Grievance Procedure Committee has been established under the labor agreement to help maintain a mutually satisfactory and harmonious relationship between union members and the Company through quick, fair deliberation of any complaint filed by union members. The work regulations clearly state that, whatever the outcome of the deliberation, the Company shall not treat the employee in question in any way prejudicially as a consequence of consultation and reporting.

Fair remuneration

Fair personnel affairs programs (Management by objectives, merit rating, Meister system)

Kuraray now remunerates its employees based on individual performance rather than on personal attributes like age. With the introduction of management by objectives, each and every employee sets personal job and skill development objectives at regular intervals. Progress in achieving these objectives provides the cornerstone for fair

evaluations and remuneration. In addition, to ensure fair administration of the programs, those in managerial positions at all of Kuraray's business units have taken a course in "Assessor training." Under the Meister system, highly skilled technicians at plants receive a special allowance in recognition of their contributions.

Programs to help employees find fulfillment

Support for career development

We offer a variety of programs that allow employees to take the initiative in designing their careers: an "Open invitation to vacant posts", which ensures that all employees can work in the area of their preference and so fulfill themselves; a "Career guidance system", which gives them the opportunity to design a personal career plan together with their immediate supervisor and the Personnel Department staff; and an "Interview sheet" to give them the opportunity to report on their satisfaction with the current job or their desire for a transfer.

Applications for Open Invitation to Vacant Posts

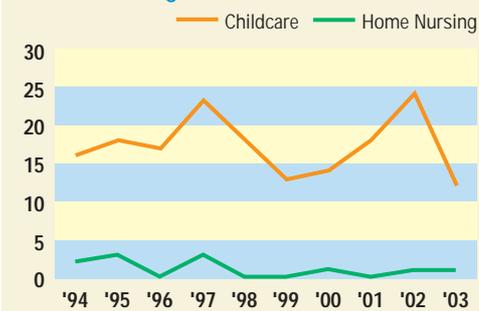
(Number of employees who have taken advantage of this program since its inception in 2001)

a. Vacant posts offered	38
b. Applicants	25
c. Successful transfers	15
d. Success rate (c/b)	60%

Response to changing working styles

Changes in society and diversification of workers' attitudes toward working styles have made it necessary to look at the different kinds of talent appropriately. We have been responding to this with flexibility, maintaining schemes like temporary leave for childcare, home nursing and social contributions (volunteer work).

Applications for Temporary Leave for Childcare or Home Nursing

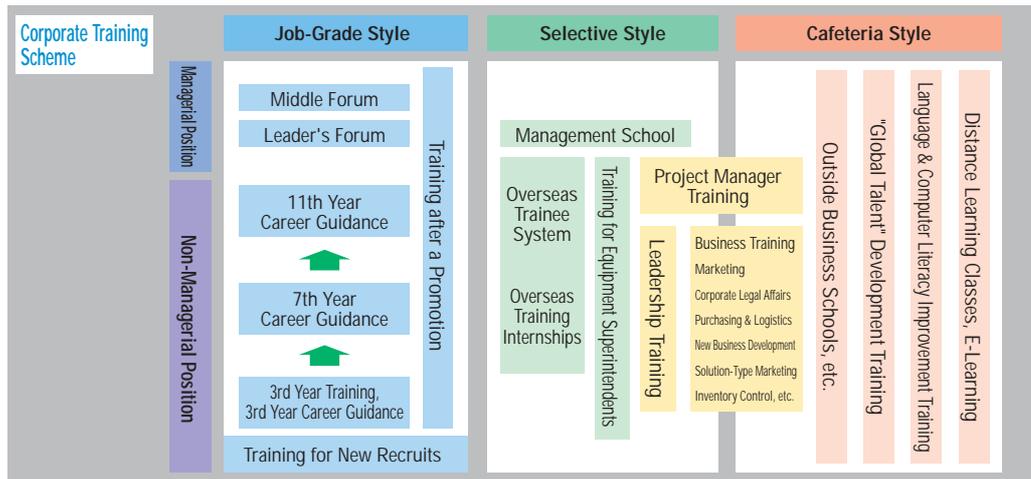


Education and Training

Policies

Kuraray strive to assign its employees to posts where they feel motivated, rewarded and fulfilled, and to provide them with opportunities to learn. In order to satisfy the desire of employees to polish their skills and develop themselves, we offer three training schemes: Job-grade style training includes training for those who have succeeded in being promoted to a higher job grade and career guidance programs where employees are invited to design their careers at each milestone year of their service; Selective style training is for those who are recommended by their supervisors, and includes management school; and Cafeteria style training allowing employees select classes of their own choosing, such as Business training and home-studying programs. The Company offers financial incentives for those who successfully obtain publicly acknowledged licenses.

Activities



Each plant offers training programs that meet their specific training needs, in line with the corporate human development policies. At the Nakajo Plant, for example, a "Young staff development seminar" was started in fiscal 2000 for young regular employees who plan to take the "Corporate leadership training course", and a debriefing session where young employees in career-track jobs report to the plant director and general managers on

Business training

Business training is designed for employees from new recruits to the 7th year of service, and features lectures and workshops on practical matters like marketing and business presentations.

Management school

On the recommendation of their supervisors, young employees in managerial positions are sent to this training course for future managers that features lectures and workshops on a broad range of corporate management knowledge and skills.

their achievements during the past 12 months. In fiscal 2001, a "Niigata University Faculty of Economics Management Seminar" was started, where engineering employees (managerial positions, middle-rank employees in career-track positions) are invited to 4-5 monthly lectures and workshops on management and accounting given by lecturers from the University.



Business training



Management school

Occupational Safety and Health

Policies

True to the Principles for Business Conduct, the Kuraray Group believes that ensuring the safety and health of our employees is the very ground of any business activity. In line with this belief, we are striving to make our workplaces safe and healthy by building up an occupational safety and hygiene management system to reduce any risks to employee safety and health.

Activities

Programs for enhanced safety

Kuraray Group RC Convention

The presidents, directors and employees of the Kuraray Group gather for this convention on occupational safety geared to train employees, share knowledge and raise awareness on this important theme.

OSHMS (Occupational Safety & Health Management System)

In fiscal 2003, all the Kuraray plants introduced OSHMS. Going forward, we will expedite its introduction in affiliated companies in order to locate and reduce the various risks associated with operations.

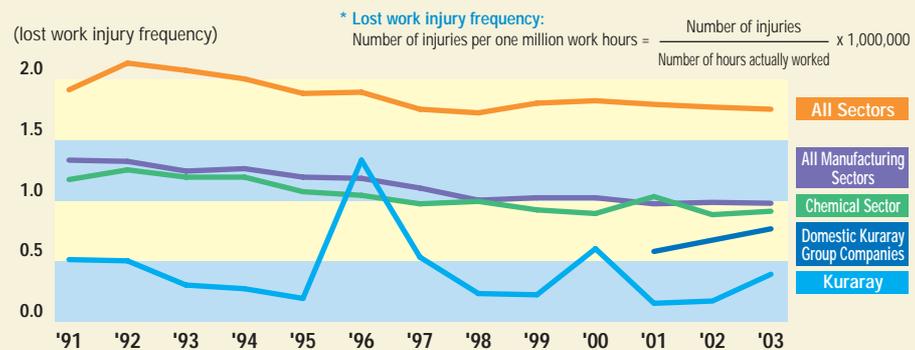
RC activity Verification Meeting

With "occupational safety" as a key theme, the programs at each plant are verified at the Meeting, to help raise the level of our initiatives in this area by drawing up an action plan against issues that are either common among or unique to the plants and address them in stages. In fiscal 2004, we plan to extend the scope of this initiative to cover affiliated companies, both domestic and overseas, thereby raising the level for the entire Kuraray Group.

Safety Day

To elevate safety awareness among employees, we designate the third Thursday of each month as Safety Day and conduct various activities, including safety patrols at each plant.

Occupational Safety Performance (lost work injury frequency)



Despite all these initiatives, we had some labor accidents between June and December of 2003. To address this state of emergency, we initiated intensive efforts to ensure occupational safety, including an overhaul of the safety management system, frequent on-site patrols, and special safety inspections. Aware of the fact that the frequency of work loss due to injury at affiliated companies has been higher than at Kuraray, we will further strengthen our safety initiatives at affiliated companies to prevent labor accidents.



Commendation by the Ministry of Health, Labour and Welfare (MHLW)

The MHLW Minister commends foremen with skills and experience above a certain level and whose workplaces have excellent safety records. The domestic Kuraray Group companies have produced recipients of this honor for three consecutive years.

Healthcare programs

The Kuraray provides a series of programs designed to help employees stay healthy, including a clinic and a health control room, physical checkups and health instruction, and support for mental health care and building physical strength.

Augmenting health instruction programs

Legally required health examinations, health examinations to prevent lifestyle diseases, gynecological health examinations, cancer checkups, dental checkups, subsidies for medical checkups, etc.

Mental health care

In recent years, greater emphasis has been placed on mental health care, as changes in modes of work lead to greater incidence of stress-related diseases.

• Mental health training

In fiscal 2003, a total of 12 mental health training classes were given at our plants, with 353 employees attending.

• Counseling Room for Mental Disease, health counseling by phone

• "Listener Training" for managers

• Health Fact-Finding Survey

(consigned to the Institute for Science of Labor)

• Distributing educational brochures, displaying the "Newsletter from the Healthcare Office" on billboards, organizing lectures

Health build-up campaign

Each plant has a health management committee, etc., to organize a variety of programs designed to assist in promoting the health of employees.

* Sample programs

Walking exercise, various sports meets, workout instructions, diet instructions, prevention of back problems and colds, non-smoking campaign, health fact-finding survey, etc.



Mental Health Training



Softball Meet

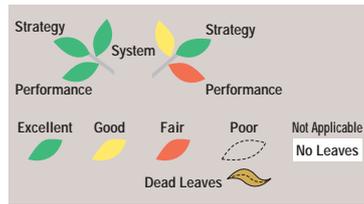
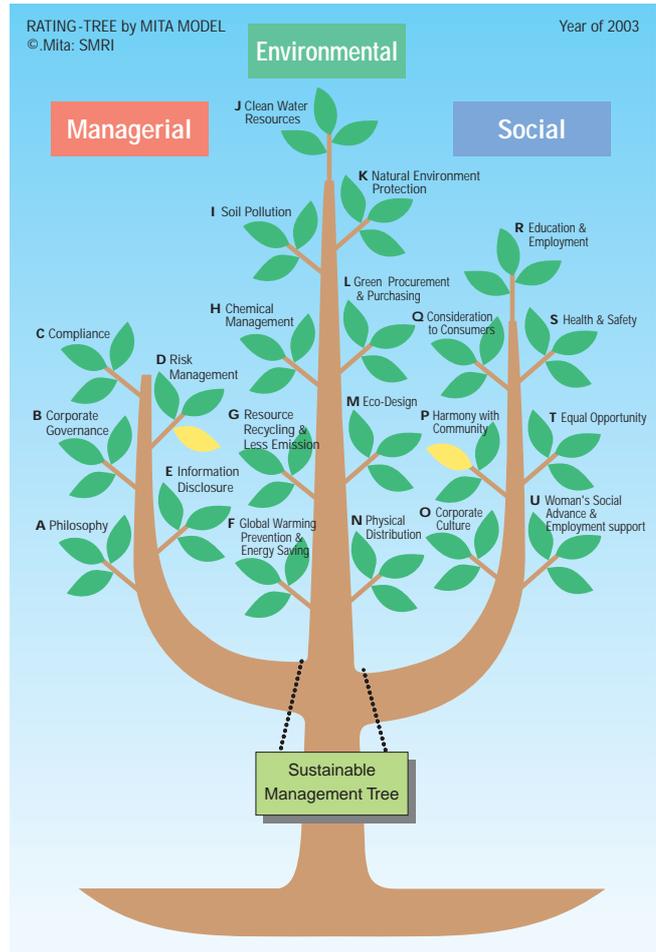


Backache Lecture

Sustainable Management Rating

We have invited an independent bodies to assess the CSR activities of the Kuraray Group. We will feed the results of these third-party appraisals into the continued improvement of our CSR activities.

Kuraray got the top-level evaluation in The 2nd Sustainable Management rating by Sustainable Management Rating Institute. They evaluated not only sustainable management but also company management and sociality.



Corporate Environmental Management Survey

The 7th Corporate Environmental Management Survey by the Nihon Keizai Shimbun, Inc.

Domestic ranking 108/599

The graph on the right side shows the ranking out of 599 manufactures. It shows evaluation of each factor. We need to do more in "Measures for Products."

Overseas ranking 40/217

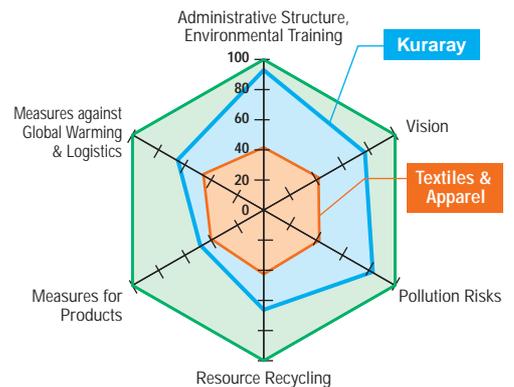
Ranking is based on 217 manufactures having overseas plant out of 599 companies.

Eco-friendliness image ranking: 51st

The people in the environmental sections of the companies who answered the questionnaire were asked to name three companies whose efforts for "sustainable growth" they considered excellent in terms of environmental conservation.

The first choice was given 3 points, the second, two points, and the third, one point (all companies).

Environmental Management Radar Chart (Domestic)



FTSE4Good

FTSE4Good is a benchmark index for an SRI (Socially Responsible Investment) Fund set up by the FTSE (a joint venture between the Financial Times and London Stock Exchange). The index is used extensively in Europe, where the SRI market is experiencing fast growth in Scandinavia and the UK, and is among the indexes that attract greatest attention in Japan.

Kuraray has been a designated stock in the FTSE4Good Global Index (as of June 2004, 123 of the 657 issues in the Fund are Japanese) for two consecutive years. The selection is based on three criteria: environmental aspects, social aspects and human rights.



To Kuraray Co., Ltd.

Third-Party Comments

The Natural Step Method of Analysis

The Natural Step applies a “Back casting” approach, in which the present efforts are evaluated from a sustainable future perspective. Thus, the evaluation is mainly based on present progress toward achieving conformity with the principles of a sustainable society in the future (the four system conditions below) rather than changes from the previous year.

In the sustainable society, nature is not subject to systematically increasing:

1. concentrations of substances extracted from the Earth's crust,
2. concentrations of substances produced by society,
3. degradation by physical means
and, in that society ...
4. people are not subject to conditions that systematically undermines their capacity to meet their needs.



Findings

As a leading petrochemical industry company, you have been very keen on programs for environmental and occupational safety and health, and already making remarkable achievements in maintaining the level of safety and health and reducing industrial waste.

However, the petroleum and other fossil fuels on which many of your businesses depend, and persistent substances that are foreign to nature, are not sustainable from a long-term perspective. It is therefore desirable to substitute them in phases with sustainable materials.

The commitment of management and the sharing of visions and strategies between management and the entire labor force are essential in order to tackle this challengeable issue. This requires clear criteria for sustainable development (the above four system conditions for a sustainable society). Following are our comments on the sustainability of each specific field. We hope you find them informative in planning your future initiatives.

1. Strategic thinking

Instead of seeing environmental programs merely as social responsibility or as risk management, your management has positioned environmental conservation as a core agenda that requires a proactive commitment for the sake of your survival and competitiveness, and has demonstrated the will to tackle this issue strategically. Since you have just begun to study sustainability, however, you still need to elaborate a clear management vision.

2. Competence

Under the leadership of the CSR Committee, environmental and occupational safety and health initiatives have implemented to every member of the organization. Going forward, we expect that you will help your employees strengthen their knowledge and competence regarding sustainability, so that you can initiate long-term programs premised on a clear vision.

3. Dependence on resources and environmental impact / measures

At this point in time, you face major challenges in terms of sustainability, including a large consumption of energy, dependence on fossil fuels and dependence on persistent substances foreign to nature. To expedite the substitution of materials and use them efficiently by creating a reuse and recycling system, you need to further strengthen the collaboration of suppliers and customers.

4. Environmental impact by processes

Although you discharge and dispose of a large quantity of industrial waste, you have set highly challenging targets for their reduction, and have steadily achieved them.

5. Products, services

We think it is great that you have a number of products that help reduce environmental impact, such as *EVAL* and activated carbon. Nevertheless, the goal is to achieve environmental cautions at every stage of the product life cycle, the issue of waste after usage of a product is of great importance.

We look forward to seeing your company take on further challenges.

April 2004



The National Step International, Japan
Representative Sachiko Takami

A handwritten signature in black ink, appearing to read 'Sachiko Takami'.



Answer to the Questions

Forty-five people responded to a questionnaire on the Kuraray Environmental and Social Report 2003. Among the topics that attracted the greatest interest were "Working to Reduce Environmental Impact" (62.2%) and "Working to Reduce Emissions to Zero and Conserve Resources" (40.0%). One third of the respondents said they were interested in the "Relationship with Society."

We will take advantage of this valuable input to advance our CSR activities, and provide full access to our information. Here are a group of questions from you and our answer.

Q The Report says your target is to reduce 90% of the emissions of substances covered by JCIA's voluntary PRTR management program by fiscal 2005 versus fiscal 1999. What was your target before this? And, judging by what you achieved in fiscal 2002, do you think you can achieve this target?

A An initiative has started whereby the industry has set a voluntary target for the reduction of emissions of substances into the atmosphere designated as hazardous air pollutants by the Air Pollution Control Law. Of those substances, Kuraray is responsible for acetaldehyde and formaldehyde emissions. Our original plan was to reduce emissions into the atmosphere by 63% of the fiscal 1995 level over the three years beginning in fiscal 1997, but, with the enforcement of the PRTR Law, we expanded the scope of the substances to be reduced, and set a more stringent reduction target in fiscal 2000. Please refer to "Management of Chemicals: Review of the Medium-Term Environmental Plan" (page 18) for our progress towards the target.

Q What is your response to the inauguration of the PRTR Law?

A Please see our Policies on "Management of Chemicals" (page 18).

Q Do you think that forestation is needed to arrest global warming, which is allegedly triggered by energy consumption?

A We plant trees on the premises of our plants, but are not involved in any forestation projects in Japan or developing countries. We will see what we can do to support NPOs that promote forestation projects.

Q Is there any way that you can reduce your water consumption?

A Being a chemicals company, we consume a large quantity of water for cooling during the production process. One way to reduce this water consumption is to recycle the cooling water. To do this, we need to add agents to prevent algae or rust from gathering in the circulating water, and use electric energy to cool the water returning from the production process and circulate it. This is the method we currently use. However, it requires us to use excess agents and energy, so we are considering alternatives for areas where abundant water is available.

Q Are you interested in OHSAS 18001 certification (standard of the Occupational Health and Safety Management System)?

A We believe the OHSAS approaches are effective in raising the level of occupational health and safety, and so we have adopted them. However, the system operates in the same way as ISO 9001 and ISO 14001. Since we have been certified to ISO 9001 and 14001, we believe we can administer the system without the OHSAS 18001 certification. Therefore, we have no plans for OHSAS 18001 certification.

Q We trust that you're not sacrificing safety to lower product costs, even though others are. Could you comment on this?

A Like any other manufacturer, the Kuraray Group is constantly working to reduce product costs. In doing so, however, we put top priority on safety assurance, including legal compliance. To achieve these two objectives, we take a two-fold approach: reducing manual labor by introducing industrial robots and remodeling equipment to ensure safety (disaster prevention and occupational safety) (hardware approach); and revisions to our operation manuals along with training (software approach).

Q What specifically do you do to encourage employees to take temporary leave for home nursing and childcare?

A In response to demands of employees and society in general, we are expanding the scope of temporary leave for home nursing and childcare. To facilitate their return to their former posts, we keep temporary-leave employees updated on what's going on in the Company and, after reinstatement, brief them on new programs and systems that were introduced during their absence. The Kurashiki Plant operates an in-house day-care center as one of its programs to enable employees to work without any worries.

Data

History of Environmental Preservation and Safety Assurance Initiatives, and Social Activities	41
Environmental Data	42 - 43
Data on Main Sites	44 - 49

History of Environmental Preservation and Safety Assurance Initiatives

History of Social Activities

- 1970** Specialized organizations established at head office and plants, responsible for environmental preservation and occupational safety.
- 1977** Regulations for Environmental Control and Occupational Safety established.
- 1991** Philanthropy and Environment Committee established.
The Committee's Ecology Subcommittee and Philanthropy Subcommittee inaugurated.
- 1992** The 1st Chemistry Class for Boys and Girls given at the Kurashiki and Saijo Plants.

Matching Gifts started
(employees contribute a fraction of their monthly salary, which is matched by the Company).
- 1993** Kuraray Action Guidelines on the Global Environment established
(revised to encompass the entire Kuraray Group in 2001).
- 1995** Participation begun in Responsible Care activity.
- 1997** The Nakajo Plant workshop established in the 'Niji-no-ie' social welfare house, Nakajo Town.
- 1998** In-house Ethics Committee established.

Efforts begun to obtain ISO 14001 certification for all Kuraray plants and research laboratories.

First issue of the Environmental Report.
- 2000** Many sites certified to ISO 14001
(Kashima, Okayama, Nakajo and Kurashiki Plants, Techno Soft, Kuraray Tamashima, Kuraray Saijo, Eval Company of America, Kuraray Specialties Europe).

'Fruits-no-ie' Group Home opened in idle company housing at the Saijo Plant.
- 2001** The Medium-Term Environmental Plan formulated.

The Environmental, Industrial Safety and Quality Management Department renamed The Environmental, Industrial Safety and Quality Management Center, and its functions upgraded.

Responsible Care activity Verification Meeting inaugurated.

With the certification of Tsukuba Research Laboratories, all Kuraray plants and research laboratories in Japan are certified to ISO 14001.
- 2003** CSR Committee established.
The Committee's Environmental and Industrial Safety Subcommittee, Economic Subcommittee, and the Social Responsibility Subcommittee inaugurated.
(With this, the Philanthropy Subcommittee and In-house Ethics Committee were dissolved.)

The 100th Chemistry Class for Boys and Girls.

Promote ISO 14001 introduction to group companies globally.
(Kuraray Plastics, Magictape, SEPTON Company of America).

Environmental Accounting

Environmental Preservation Costs (millions yen)

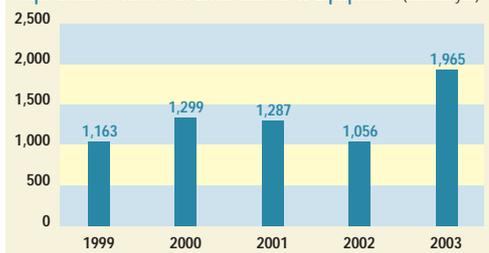
Category	Capital Investments	Expenses	Major Areas Addressed
Costs within business areas	Pollution prevention	476	Operating costs of environmental equipment Prevention of chemical substance emissions
	Global environment preservation	1,480	Installation of condensing generator Other energy conservation measures
	Resource recycling	9	Turning waste plastics into sold fuels Volume reduction and recycling of waste
	Subtotal	1,965	3,563
Upstream/downstream costs	-	101	Recycling and reuse of packaging materials, improvement of container packaging
Administration costs	-	222	ISO 14001, environmental measurements, environmental training
R&D costs	-	288	Development of eco-friendly products
Social activity costs	-	2	Forestation, beautification, environmental information provided to local residents
Environmental remediation costs	-	-	
Total	1,965	4,176	

Total capital investments during the period ¥23.6 billion (aggregated according to the scope of environmental accounting)
Total R&D spending during the period ¥11.4 billion (ditto)

Environmental Preservation Benefits

Category	Unit	2002	2003	Change
Pollution prevention benefits	SOx emissions	1,000 tons	1.2	0.6 ▲0.6
	NOx emissions	1,000 tons	1.9	1.9 0
	Soot and dust emissions	tons	68	60 ▲8
	Emissions of substances covered under JCIA's voluntary PRTR management program	tons	2,222	1,975 ▲247
COD load	tons	753	710 ▲43	
Global environment preservation activities	CO2 emissions	1,000 tons of CO2 equivalent	1,335	1,351 16
	Energy consumption	1,000 kℓ (crude oil equivalent)	456	468 12
Resource recycling activities	Unutilized industrial waste inefficiently processed externally	1,000 tons	3.9	2.7 ▲1.2
	Industrial waste utilization efficiency	%	82	87 5
	Water use	million m ³	81.7	85.3 3.6
	Total effluent	million m ³	78.1	77.7 ▲0.4

Capital Investments in Environmental Equipment (millions yen)



1. Precondition for the compilation of environmental accounting

Period covered: April 1, 2003, to March 31, 2004
Scope covered: Kuraray

2. Standards for calculation of environmental conservation costs

- ① Depreciation: Straight-line method
- ② Standard for posting combined costs: In principle, 100% of the combined costs are posted under environmental conservation items, but a part of these is divided proportionally

3. Standard for calculating environmental conservation benefits

Simple comparison with the previous year's total environmental load. No adjustment for production volume.

4. Standard for calculating economic benefits brought about by environmental conservation measures

Actual benefits (Income from recycling, etc.) are deducted from environmental conservation costs.

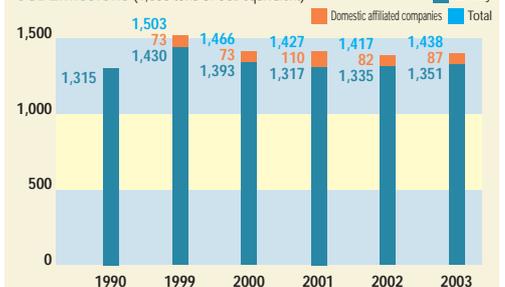
5. Capital investments

Finalized budget for the period in question

CO2 Emissions per Unit of Production (CO2-t/t) Kuraray



CO2 Emissions (1,000 tons of CO2 equivalent)

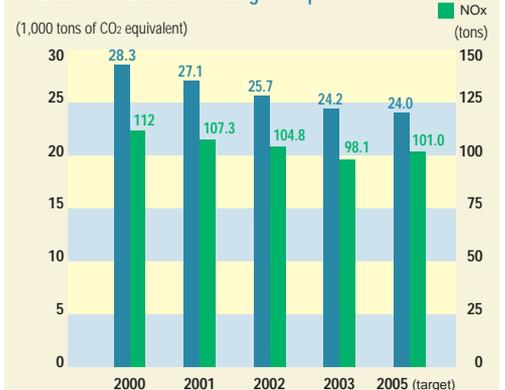


Note: CO2 emissions reported in the Kuraray Environmental and Social Report 2003 included CO2 emissions generated from electric power sales by some plants; however, based on the judgment that it is more reasonable to exclude these, the data for fiscal 2001 and onward has been corrected.

Energy Consumption (1,000 kℓ crude oil equivalent)



CO2 and NOx Emissions during Transport



Prevention of Global Warming

PRTR

Emissions of Greenhouse Gases other than CO₂

Substance	Global Warming Potential	Emissions (tons)			CO ₂ Equivalents (t-CO ₂)		
		FY01	FY02	FY03	FY01	FY02	FY03
Methane	21	4.9	2.5	2.9	102.9	52.5	60.9
Dinitrogen monoxide	310	-	-	-	-	-	-
Hydrofluorocarbons (HFCs)	140 ~ 11,700	0	0	0	0	0	0
Perfluorocarbons (PFCs)	6,500 ~ 9,200	0	0	0	0	0	0
Sulfur hexafluoride (SF ₆)	23,900	0	0	0	0	0	0
Total		4.9	2.5	2.9	102.9	52.5	60.9

Emissions of Substances Covered under JCIA's Voluntary PRTR Management Program (tons)

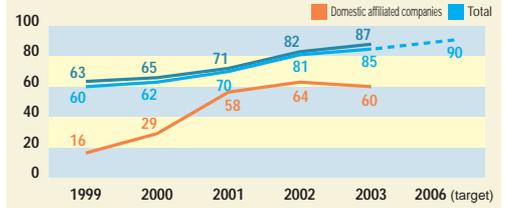


Industrial Waste

Unutilized Industrial Waste Processed Externally (1,000 tons)

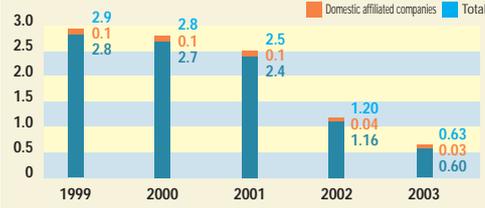


Industrial Waste Utilization Efficiency (%)

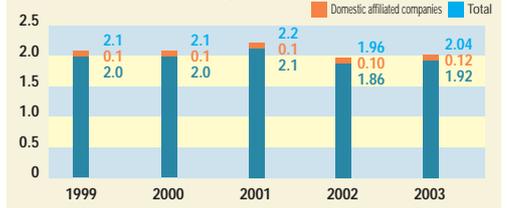


Air Pollution Prevention

SO_x Emissions (1,000 tons)



NO_x Emissions (1,000 tons)



Water Pollution Prevention

COD Load (1,000 tons)



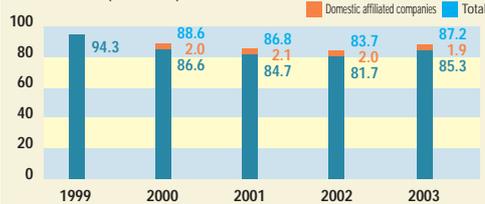
Management of Substances that Deplete the Ozone Layer

Emissions of Primary Ozone-Layer-Depleting Substances (tons)

	Ozone Layer Depleting Potential	Emissions			CFC Equivalent		
		FY01	FY02	FY03	FY01	FY02	FY03
Hydrochlorofluorocarbons (HCFC-123)	0.02	0.93	1.52	0.31	0.02	0.03	0.01
Chlorofluorocarbons (CFC-11)	1.00	0.50	0.46	0.20	0.50	0.46	0.20
Carbon tetrachloride	1.10	0.01	0.01	0.01	0.01	0.01	0.01
1,1,1-trichloroethane (methylchloroform)	0.10	0.00	0.00	0.00	0.00	0.00	0.00
Three specified halons	3.0 ~ 10.0	0.00	0.00	0.00	0.00	0.00	0.00
Hydrobromofluorocarbons	0.1 ~ 14.0	0.00	0.00	0.00	0.00	0.00	0.00
Ethyl bromide	0.60	0.00	0.00	0.00	0.00	0.00	0.00
Total		1.44	1.99	0.52	0.53	0.50	0.22

Resource Preservation

Water Use (million m³)



Effluent (million m³)



Okayama Plant

- (1) Address: 1-2-1, Kaigandori, Okayama City, Okayama Prefecture
 (2) Site area: 692,000 m²
 (3) ISO 14001: Certified on March 24, 2000
 Certification No. JQA-EM0796

Main products:

KURALON, KURALON K-II,
CLARINO (man-made leather),
 Poval resin,
EVAL resin and film,
KURAFLEX (dry-laid non-woven fabric)

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	29,383	28,717	27,052	25,817	25,167	
Effluent	1,000 m ³	27,550	27,067	25,975	24,273	23,576	
COD load	tons	336	303	322	313	262	
Energy consumption (crude oil equivalent)	1,000 kl	216	208	221	210	210	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	634	637	670	667	667	
SO _x emissions	tons	741	742	672	270	244	
NO _x emissions	tons	1,237	1,220	1,295	1,240	1,298	
Soot and dust emissions	tons	77	78	63	21	12	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0.004	0.0004	0.002	
Substances covered under JCIA's voluntary PRTR management program	No. of items	19	31	31	31	30	
	Release	tons	1,956	1,470	1,275	1,097	990
	Transfer	tons	656	293	120	293	219
Substances covered under PRTR Law	No. of items	10	17	17	16	17	
	Release	tons	1,007	712	567	528	508
	Transfer	tons	355	96	8	110	114
Waste	Volume generated	tons	26,735	29,075	30,673	31,791	31,590
	Utilized internally	tons	5,057	5,081	3,847	4,484	4,611
	Utilized externally	tons	13,370	18,649	22,326	23,280	22,914
	Treated/disposed of internally	tons	5,800	4,767	4,150	3,592	3,787
	Treated/disposed of externally	tons	2,508	578	350	434	277

The Kurashiki Plant

- (1) Address: 1621, Sakazu, Kurashiki City, Okayama Prefecture
 (2) Site area: 668,000 m²
 (3) ISO 14001: Certified on December 22, 2000
 Certification No. JQA-EM1213

Main products:

CLEARFIL and *EPRICORD* (dental materials),
 artificial kidneys,
 blood purifiers,
CLARA (contact lenses),
 industrial membranes

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	1,927	2,310	2,399	2,182	2,182	
Effluent	1,000 m ³	1,848	1,852	1,752	1,560	1,644	
COD load	tons	9	11	9	9	9	
Energy consumption (crude oil equivalent)	1,000 kl	9.1	9.1	8.9	8.7	8.9	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	19.1	19.4	19.4	18.3	18.7	
SO _x emissions	tons	3.0	3.0	3.9	5.5	4.5	
NO _x emissions	tons	72	67	66	73	62	
Soot and dust emissions	tons	1.0	1.0	1.2	0.8	0.9	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	9	21	22	16	13	
	Release	tons	107	114	100	79	49
	Transfer	tons	160	210	193	193	169
Substances covered under PRTR Law	No. of items	6	15	15	10	8	
	Release	tons	12	15	9	11	11
	Transfer	tons	18	41	38	28	37
Waste	Volume generated	tons	1,112	916	898	969	940
	Utilized internally	tons	163	272	203	193	189
	Utilized externally	tons	251	182	168	475	600
	Treated/disposed of internally	tons	0	20	39	30	24
	Treated/disposed of externally	tons	698	442	488	270	126

Kuraray Tamashima Co., Ltd.

(1) Address: 7471, Tamashima-otoshima, Kurashiki City, Okayama Prefecture
 (2) Site area: 414,000 m²
 (3) ISO 14001: Certified on December 22, 2000
 Certification No. JQA-EM1213

Main products:
 Polyester staple

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	16,068	14,811	11,028	7,952	11,404	
Effluent	1,000 m ³	13,290	10,607	7,711	6,724	7,107	
COD load	tons	238	174	48	44	42	
Energy consumption (crude oil equivalent)	1,000 <i>kℓ</i>	57.1	41.2	38.4	42.4	38.9	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	211	179	99	98	74	
SO _x emissions	tons	170	111	52	33	23	
NO _x emissions	tons	157	122	94	77	77	
Soot and dust emissions	tons	6.0	4.5	2.9	1.0	0.5	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	10	9	7	9	4	
	Release	tons	88	15	1	3	0
	Transfer	tons	60	0	0	0	0
Substances covered under PRTR Law	No. of items	8	6	6	6	2	
	Release	tons	98	4	1	1	0
	Transfer	tons	59	0	0	0	0
Waste	Volume generated	tons	13,555	12,096	12,541	8,045	8,189
	Utilized internally	tons	1,624	2,890	343	338	323
	Utilized externally	tons	7,243	3,416	8,553	6,154	7,025
	Treated/disposed of internally	tons	1,558	1,009	2,770	552	328
	Treated/disposed of externally	tons	3,130	4,781	875	1,001	512

The Nakajo Plant

(1) Address: 2-28, Kurashiki-machi, Nakajo-cho, Kitakambara-gun, Niigata Prefecture
 (2) Site area: 924,000 m²
 (3) ISO 14001: Certified on March 31, 2000
 Certification No. JQA-EM0801

Main products:
 Methacrylic resin for molding,
 Poval resin,
 aroma chemicals,
 pharmaceutical and agrochemical intermediates

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	31,457	29,146	28,761	30,606	30,125	
Effluent	1,000 m ³	31,937	30,076	29,009	29,216	28,650	
COD load	tons	296	307	226	240	249	
Energy consumption (crude oil equivalent)	1,000 <i>kℓ</i>	92.1	88.6	88.6	90.5	88.6	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	249	236	216	213	203	
SO _x emissions	tons	1,574	1,567	1,459	655	78	
NO _x emissions	tons	310	284	289	183	137	
Soot and dust emissions	tons	49	30	39	23	35	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0.53	0.50	0.21	
Substances covered under JCIA's voluntary PRTR management program	No. of items	30	56	43	37	45	
	Release	tons	764	667	593	532	475
	Transfer	tons	398	398	546	481	175
Substances covered under PRTR Law	No. of items	18	22	24	19	23	
	Release	tons	177	144	81	68	69
	Transfer	tons	1	8	16	28	49
Waste	Volume generated	tons	15,276	14,456	18,952	19,214	18,829
	Utilized internally	tons	4,355	3,269	4,523	4,652	5,680
	Utilized externally	tons	6,428	7,719	10,608	10,397	9,582
	Treated/disposed of internally	tons	3,275	2,711	2,150	2,303	2,229
	Treated/disposed of externally	tons	1,218	757	1,671	1,862	1,339

The Kashima Plant

- (1) Address: 36, Oaza-higashiwada, Kamisu-machi, Kashima-gun, Ibaraki Prefecture
 (2) Site area: 408,000 m²
 (3) ISO 14001: Certified on March 12, 1999
 Certification No. JQA-EM0364

Main products:

SEPTON and *HYBRAR* (thermoplastic elastomers), industrial cleaner

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	2,515	2,522	2,348	2,326	2,622	
Effluent	1,000 m ³	2,660	2,587	2,739	2,540	2,650	
COD load	tons	94	91	94	87	88	
Energy consumption (crude oil equivalent)	1,000 kl	60.0	57.1	57.0	60.5	75.7	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	178	173	168	193	241	
SO _x emissions	tons	0	0	0	0	0	
NO _x emissions	tons	46	54	54	47	42	
Soot and dust emissions	tons	9	11	9	7	3	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	21	27	28	29	33	
	Release	tons	527	744	591	475	434
	Transfer	tons	8	5	39	308	493
Substances covered under PRTR Law	No. of items	10	15	15	15	18	
	Release	tons	33	64	54	39	31
	Transfer	tons	1	5	8	52	127
Waste	Volume generated	tons	9,126	9,893	10,741	10,772	11,820
	Utilized internally	tons	34	46	45	6,094	8,974
	Utilized externally	tons	660	85	687	1,182	2,000
	Treated/disposed of internally	tons	8,112	9,240	9,799	3,402	792
	Treated/disposed of externally	tons	320	522	210	94	54

Kuraray Saijo Co., Ltd.

- (1) Address: 892, Tsuitachi, Saijo City, Ehime Prefecture
 (2) Site area: 667,000 m²
 (3) ISO 14001: Certified on December 15, 2000
 Certification No. JQA-EM1185

Main products:

Polyester filament,
VECTRAN polyarylate fiber,
 poval film,
GENESTAR (heat-resistant polyamide resin),
KURAGEL PVA gel, melt-blown non-woven fabrics

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	12,968	11,563	13,088	12,778	13,763	
Effluent	1,000 m ³	13,028	11,508	13,177	13,748	14,028	
COD load	tons	57	40	59	60	60	
Energy consumption (crude oil equivalent)	1,000 kl	45.0	43.7	43.6	43.6	44.2	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	122	132	142	144	145	
SO _x emissions	tons	243	241	228	192	241	
NO _x emissions	tons	177	261	301	241	298	
Soot and dust emissions	tons	20	19	38	16	9	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	6	9	10	12	10	
	Release	tons	82	53	39	36	22
	Transfer	tons	456	524	302	96	4
Substances covered under PRTR Law	No. of items	4	5	5	7	6	
	Release	tons	17	4	2	5	5
	Transfer	tons	0	0	0	0	4
Waste	Volume generated	tons	10,504	8,197	4,906	5,069	4,888
	Utilized internally	tons	720	892	838	1,066	856
	Utilized externally	tons	8,001	5,754	3,393	3,805	3,710
	Treated/disposed of internally	tons	23	0	0	0	0
	Treated/disposed of externally	tons	1,760	1,551	675	198	322

The Tsurumi Plant, Kuraray Chemical Co., Ltd.

- (1) Address: 4342, Tsurui, Bizen City, Okayama Prefecture
 (2) Site area: 89,000 m²

Main products:

Activated carbon,
 high performance activated carbon,
 nitrogen gas separators

	Unit	FY99	FY00	FY01	FY02	FY03
Water use	1,000 m ³	-	828	828	878	932
Effluent	1,000 m ³	-	730	724	692	697
COD load	tons	-	4	4	3	3
Energy consumption (crude oil equivalent)	1,000 kl	-	7.5	9.1	9.1	8.9
CO ₂ emissions	1,000 tons of CO ₂ equivalent	-	65.4	78.4	70.5	77.1
SO _x emissions	tons	-	26.3	40.6	32.5	29.5
NO _x emissions	tons	-	74	122	97	116
Soot and dust emissions	tons	-	16	21	14	9
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items	2	2	5	4	4
	Release	tons	0	8.3	10.6	10.8
	Transfer	tons	0	0	0	0
Substances covered under PRTR Law	No. of items	0	0	2	2	2
	Release	tons	0	0	0	0
	Transfer	tons	0	0	3.7	0
Waste	Volume generated	tons	2,426	2,586	3,852	3,831
	Utilized internally	tons	0	0	820	836
	Utilized externally	tons	70	342	875	1,311
	Treated/disposed of internally	tons	147	140	79	27
	Treated/disposed of externally	tons	2,209	2,104	2,078	1,657

The Okayama Plant, Kuraray Trading Co., Ltd.

- (1) Address: 1099, Oaza-Kawabe Aza-Shinden, Mabi-cho, Kibi-gun, Okayama Prefecture
 (2) Site area: 5,780 m²

Main products:

industrial resin belts

	Unit	FY99	FY00	FY01	FY02	FY03
Water use	1,000 m ³	-	2	2	2	2
Effluent	1,000 m ³	-	-	-	-	-
COD load	tons	-	0	0	0	0
Energy consumption (crude oil equivalent)	1,000 kl	-	0.15	0.15	0.15	0.17
CO ₂ emissions	1,000 tons of CO ₂ equivalent	-	0.56	0.56	0.56	0.65
SO _x emissions	tons	-	0	0	0	0
NO _x emissions	tons	-	0	0	0	0
Soot and dust emissions	tons	-	0	0	0	0
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	0	0	0	0
Substances covered under JCIA's voluntary PRTR management program	No. of items	2	2	4	3	3
	Release	tons	15.5	18.0	22.6	16.5
	Transfer	tons	1.4	1.4	0.5	0.2
Substances covered under PRTR Law	No. of items	1	1	2	1	2
	Release	tons	0	0	7.9	5.9
	Transfer	tons	1.4	1.4	0.5	0.2
Waste	Volume generated	tons	-	26	32	26
	Utilized internally	tons	-	26	25	20
	Utilized externally	tons	-	0	0	0
	Treated/disposed of internally	tons	-	0	0	0
	Treated/disposed of externally	tons	-	0	7	6

The Ibuki Plant, Kuraray Plastics Co., Ltd.

- (1) Address: 4330, Osa, Tarui-cho, Fuwa-gun, Gifu Prefecture
 (2) Site area: 74,900 m²
 (3) ISO 14001: Certified on January 17, 2003
 Certification No. JOA-EM2934

Main products:

Hoses,
laminates,
driving pipes,
compounds

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	-	1,225	1,168	1,018	873	
Effluent	1,000 m ³	-	1,225	1,168	1,018	873	
COD load	tons	-	1.4	1.2	0.7	0.5	
Energy consumption (crude oil equivalent)	1,000 kl	-	3.7	3.4	3.2	2.6	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	-	7.3	6.7	6.3	4.9	
SO _x emissions	tons	-	12.0	19.2	8.1	1.8	
NO _x emissions	tons	-	9.0	6.3	5.1	2.2	
Soot and dust emissions	tons	-	2.0	1.8	1.3	0.5	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	4	3	6	5	7	
	Release	tons	426	496	380	358	344
	Transfer	tons	0	0	57	55	48
Substances covered under PRTR Law	No. of items	4	3	4	3	4	
	Release	tons	426	496	75	6.7	2.1
	Transfer	tons	0	0	57	39.9	39
Waste	Volume generated	tons	585	970	1,078	1,096	1,081
	Utilized internally	tons	0	0	97	83	59
	Utilized externally	tons	100	701	980	959	752
	Treated/disposed of internally	tons	25	24	0	0	0
	Treated/disposed of externally	tons	460	245	1	54	269

The Hokkaido Plant, Kuraray Interior Co., Ltd.

- (1) Address: 194, Okayama, Mikasa City, Hokkaido Prefecture
 (2) Site area: 76,720 m²

Main products:

Folkcraft furniture

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	-	4	4	3	3	
Effluent	1,000 m ³	-	4	4	3	3	
COD load	tons	-	-	-	0	0	
Energy consumption (crude oil equivalent)	1,000 kl	-	0.6	0.6	0.5	0.5	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	-	1.4	1.4	1.3	1.2	
SO _x emissions	tons	-	1.0	1.0	1.7	1.7	
NO _x emissions	tons	-	3.3	3.3	2.6	2.0	
Soot and dust emissions	tons	-	1.0	1.0	0.8	0.6	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	-	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	2	5	4	4	3	
	Release	tons	19.0	19.9	15.4	9.2	8.6
	Transfer	tons	0	0	0	0	0
Substances covered under PRTR Law	No. of items	2	2	2	1	1	
	Release	tons	19.0	17.1	9.8	3.2	2.7
	Transfer	tons	0	0	0	0	0
Waste	Volume generated	tons	573	466	444	334	317
	Utilized internally	tons	0	0	399	292	270
	Utilized externally	tons	456	368	0	0	0
	Treated/disposed of internally	tons	0	3	0	1	0
	Treated/disposed of externally	tons	117	95	45	42	46

Magictape Co., Ltd.

- (1) Address: 56, Noune, Maruoka-cho, Sakai-gun, Fukui Prefecture
 (2) Site area: 22,950 m²
 (3) ISO 14001: Certified on August 22, 2003
 Certification No. JQA-EM3326

Main products:

MAGIC TAPE (hook and loop fastener),
MAGILOCK molded plastic hook and loop fastener

	Unit	FY99	FY00	FY01	FY02	FY03	
Water use	1,000 m ³	-	17.6	17.6	5.8	5.8	
Effluent	1,000 m ³	-	17.6	17.6	5.8	5.8	
COD load	tons	-	4	4	0	0	
Energy consumption (crude oil equivalent)	1,000 kl	-	2.3	2.3	0.99	0.99	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	-	4.3	4.3	1.85	1.80	
SO _x emissions	tons	-	0	0	0	0	
NO _x emissions	tons	-	0	0	0	0	
Soot and dust emissions	tons	-	0	0	0	0	
Ozone-layer depleting substance emissions	tons of CFC equivalent	-	0	0	0	0	
Substances covered under JCIA's voluntary PRTR management program	No. of items	4	6	4	6	5	
	Release	tons	313.7	298.2	210	18	15.9
	Transfer	tons	30.0	29.4	29.0	9.1	8.6
Substances covered under PRTR Law	No. of items	2	2	2	4	3	
	Release	tons	30.0	27.2	20	4.6	3.1
	Transfer	tons	0	0	3	2.4	2.1
Waste	Volume generated	tons	292	284	164	203	223
	Utilized internally	tons	10	10	69	70	101
	Utilized externally	tons	155	80	75	41	28
	Treated/disposed of internally	tons	23	0	0	0	0
	Treated/disposed of externally	tons	104	194	20	92	85

*The above figures also include data for Reihoku Textile Co., Ltd., which merged with Magictape Co., Ltd. in July 2002

Overseas Affiliated Companies

Europe: EVAL Europe N.V.

Kuraray Specialities Europe GmbH (certified to ISO14001 in November 1998)

North America: Eval Company of America (certified to ISO14001 in February 2000)

SEPTON Company of America (certified to ISO14001 in September 2003)

	Unit	Europe			North America			
		FY01	FY02	FY03	FY01	FY02	FY03	
Water use	1,000 m ³	395	455	738	799	927	1,192	
Effluent	1,000 m ³	1,079	1,083	1,056	638	739	857	
TOC emissions	tons	825	897	1,029	447	449	455	
Energy consumption (crude oil equivalent)	1,000 kl	83	86	89	49	57	62	
CO ₂ emissions	1,000 tons of CO ₂ equivalent	205	214	220	113	132	165	
NO _x emissions	tons	0	0	0	0	0	0	
SO _x emissions	tons	0	0	0	0.2	0.4	0.2	
Substances covered under PRTR Law	No. of items	8	8	6	4	8	9	
	Release	tons	61	69	51	55	57	70
	Transfer	tons	364	114	156	223	278	243
Waste	Volume generated	tons	2,200	1,003	1,037	904	984	1,491
	Utilized internally	tons	0	0	0	0	0	0
	Utilized externally	tons	1,356	368	808	223	280	391
	Treated/disposed of internally	tons	0	0	0	0	0	0
	Treated/disposed of externally	tons	844	635	229	681	704	1,100

*Since TOC emissions are treated by outside wastewater treatment businesses, the amount of discharge to public water areas is substantially lower than the above figures.

*Data for overseas affiliated companies is not included in the Kuraray Group total in this report.

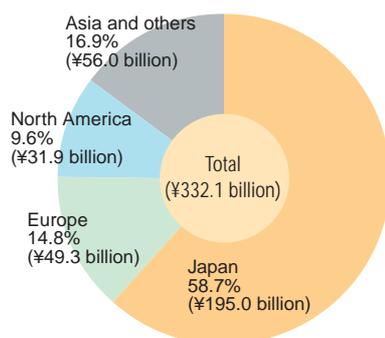
Outline

Company Name: Kuraray Co., Ltd.
 Established: June 1926
 Capital: 89.0 billion yen (as of March 31, 2004)
 Net Sales: 332.1 billion yen (consolidated), 191.7 billion yen (non-consolidated) (FY2003)
 Number of Employees: 6,760 (consolidated), 2,700 (non-consolidated) (as of March 2004)
 Head Office: Osaka, Tokyo
 Plants and Laboratories: Kurashiki, Saijo, Okayama, Nakajo, Kashima, Tsukuba
 Affiliated Companies: Consolidated subsidiaries: 40; Equity-based companies: 10
 Overseas Operations: USA, Germany, Belgium, China, Singapore

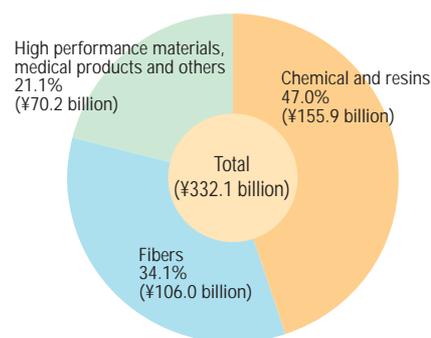
Financial Highlights



Sales by Geographic Region



Consolidated Net Sales by Segment



Kuraray Group

The scope of this Report covers the Kuraray Group, provided "Kuraray," "Kuraray Group," and "domestic Kuraray Group companies" in the environmental and occupational safety sections refer to the following:
 Kuraray: Kuraray Co., Ltd. and its 12 affiliated companies occupying the same premises. ()
 Kuraray Group: Kuraray Co., Ltd. and its 27 principal affiliated companies (all listed below)
 Domestic Kuraray Group companies: Kuraray Group companies excluding the 7 overseas companies (with asterisks)

Kuraray Co., Ltd.

Kuraray Engineering Co., Ltd.

Kuraray Chemical Co., Ltd.

Kuraray Trading Co., Ltd.

Kuraray Plastics Co., Ltd.

Kuraray Fudosan Co., Ltd.

Kuraray Living Co., Ltd.

Kuraray Techno Co., Ltd.

Techno Soft Co., Ltd.

Kuraray Interior Co., Ltd.

Magictape Co., Ltd.

Kuraray Kiko Co., Ltd.

Kuraray Niigata Kasei Co., Ltd.

Kyosei Chemical Co., Ltd.

Kuraray Medical Inc.

Kuraray Saijo Co., Ltd.

Kuraray Tamashima Co., Ltd.

Kuraray Techno Nakajo Co., Ltd.

Kuraray Okayama Spinning Co., Ltd.

Kuraflex Co., Ltd.

Nihonkai Acetylene Co., Ltd.

Kuraray America Inc.*

Eval Company of America*

SEPTON Company of America*

Kuraray Europe GmbH*

EVAL Europe N.V.*

Kuraray Specialities Europe GmbH*

Kuraray Specialities Asia*

Medium-Term Business Plan "G-21"

Aiming to be an "eco-friendly enterprise with unique technology," the Kuraray Group is moving forward with the five-year Medium-Term Business plan "G-21," which was begun in fiscal 2001.

The "G" in "G-21" symbolizes "Globalization," "Green," "Growth," and "Group" – "Green" meaning "considerations for the global environment."

The basic approach of the Kuraray Group is to contribute to society through business activities by tapping its unique technology. Accordingly, we are making proactive efforts to develop and expand products with less environmental impact and products that actively improve the environment.

"G-21" highlights four strategic businesses – "electronics and information," "eco-friendly," "environmental" and "medical" – which offer high potential and where we can apply our technologies and know-how.



Two of the four are related to the environment. We thus put weight on the environment, believing contributions in this area will open up greater business opportunities for us.

Eco-friendly area:

Products that serve as substitutes for materials with high environmental impact

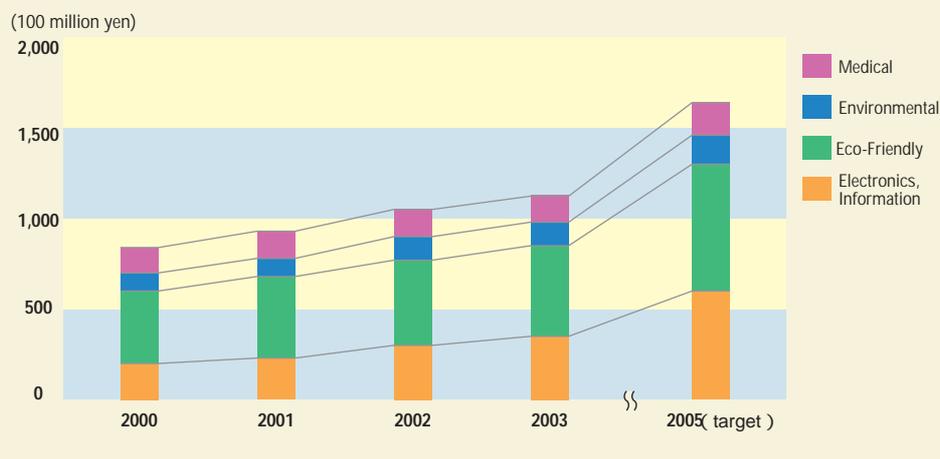
e.g., Vinyon fiber asbestos substitute
Elastomer PVC substitute

Environmental business area:

Products that assist in maintaining and improving the environment

e.g., Industrial membranes for water purification
Activated carbon for emissions treatment

Growth of Strategic Areas in "G-21"



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