



OJI PAPER GROUP

Oji Paper Group
**Environmental and
Sustainability Report**
2010



The Oji Paper Group is developing recycling-based business



Editorial Policy

The Oji Paper Group publishes this Environmental and Sustainability Report to deepen stakeholders' understanding of our environmental management initiatives. We have designed our 2010 version to convey the big picture of our environmental management activities through three special features: expansion of our overseas forest plantations, the role of domestic company-owned forests, and addressing global warming.

We have also made efforts toward concise and easy-to-understand information disclosure to gain broad understanding from customers and local communities.

The information in this report is available on our website:

 **URL:** http://www.ojipaper.co.jp/english/sustainability/e_report/index.html

Coverage of report

This report covers the Oji Paper Group.

Period of coverage

April 1, 2009 – March 31, 2010

Except for numerical data, some sections may contain information from April 2010 and later.

Published

September 2010

Definitions of terms in this report

Oji Paper Co., Ltd.: Non-consolidated company

Oji Paper Group: Oji Paper Co., Ltd. and its major subsidiaries

Oji Paper Group's four papermaking companies:
Oji Paper Co., Ltd., Oji Paperboard Co., Ltd., Oji Specialty Paper Co., Ltd., and Oji Nepia Co., Ltd.

Please send comments and inquiries to:

Sustainable Management Office
Environmental Management Department
Environmental Management Division
Oji Paper Co., Ltd.
4-7-5 Ginza, Chuo-ku, Tokyo, Japan 104-0061
Fax: +81-3-3563-1139
Website: <http://www.ojipaper.co.jp/english/index.html>
E-mail: info@ojipaper.co.jp



About the cover

Amid a shrinking Japanese market for paper and paperboard, the Oji Paper Group is strengthening its total forestry business focused on New Zealand, and its business in China, Southeast Asia, and elsewhere in East Asian markets where growth is foreseen. The cover's design also symbolizes the Oji Paper Group's worldwide expansion toward a promising future through globe-spanning environmental measures and social contribution activities.

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Message from the President



Kazuhisa Shinoda
President and Chief Executive Officer
Oji Paper Group

Conditions remain tough for business since the financial crisis that erupted two years ago. The situation facing the papermaking industry is no different, despite some visible signs of recovery. Against this backdrop, the Oji Paper Group has designated 2010 as the launch year for business restructuring to strengthen its ability to confront external change, and is appropriately committing managerial resources to promising fields both in Japan and overseas.

At the same time, a world ever more aware of environmental conservation holds increasing expectations that companies will balance their business activities with the needs of the environment. While this calls for the effective use of resources in various scenarios, we also believe that paper products, long a close and indispensable part of people's lifestyles, bear a function and a responsibility as a component of society's infrastructure.

The Oji Paper Group will develop its recycling-based business with consideration for forest recycling, paper recycling, and global warming countermeasures, and will continue to carry out its mission of contributing to the environment and to society.

Using forest resources comprehensively

The Oji Paper Group promotes sustainable forest management based on appropriate environmental, social, and economic control, a practice we call "forest recycling".

We own and manage forests in Japan covering 190,000 hectares, about the size of Osaka Prefecture, while overseas our plantation business extends to about 240,000 hectares, about the size of Kanagawa Prefecture.

We are working to actively expand the area of overseas forest plantations to meet our goal of 300,000 hectares.

Moreover, while the primary goal of our plantation business has been to secure raw materials for papermaking, we are now striving for more comprehensive use that maximizes the value of forests. As an example, in New Zealand we are strengthening initiatives aimed at a total forestry business spanning every process, including lumber production, processing of chips for papermaking, producing pulp, and fuel usage.

Forests play a multitude of vital roles, such as storing rainwater, controlling the ground flow of water, and preventing soil erosion. We also believe in the importance of forest-based initiatives to combat global warming and conserve biodiversity.

Maximizing limited resources

From the standpoint of effective use of resources, paper recycling is an indispensable process within the papermaking industry. We are recovering usable resources to every extent possible, extracting maximum use without being wasteful. At present, about 60% of the raw materials for papermaking consists of recovered paper; the Oji Paper Group makes use of about 30% of the recovered paper used in Japan, or about 4.5 million tons per year.

Japan's paper recovery rate is among the highest in the world, although it is true that highly-processed paper products can make recycling of recovered paper difficult. To promote paper recycling, the Oji Paper Group plans to further advance recycling technology for recovered paper.

Using waste fuel efficiently

The Oji Paper Group views global warming as both an energy problem and a key managerial challenge. Through the pursuit of energy conservation and switching from fossil fuels to waste-derived fuels, in fiscal 2009 we extended our success by meeting our goal for fossil fuel-derived CO₂ emissions per unit of production, achieving 20% lower emissions than in fiscal 1990.

Making environmental compliance a top priority at the Oji Paper Group

The Oji Paper Group's environmental management lies at the root of our recycling-based business model. At the Oji Paper Group we make environmental compliance our top priority and ensure its observance.

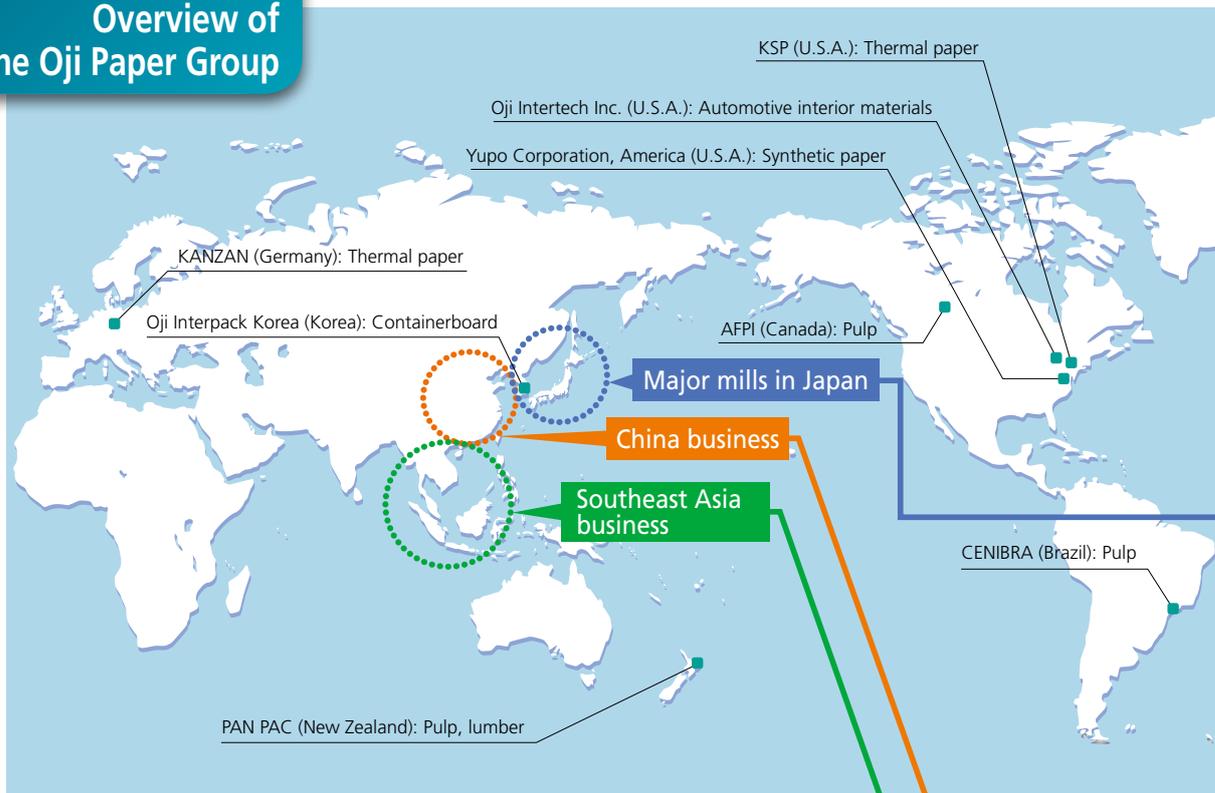
This stance extends to our overseas business as well. As we begin operations at the new Nantong Mill in Jiangsu Province, China, we are not only fitting the mill with the latest equipment but also actively transferring the environmental management expertise we have built up in Japan. Through this environmentally-friendly management we hope to contribute to environmental conservation in China.

From the past, we have established "Contribution to the environment and culture" as part of the Corporate Philosophy of the Oji Paper Group, and accordingly strive to act as a corporate entity which contributes to the environment and society. Looking ahead, we hope to advance our environmental management activities even further in response to the trust extended to us by stakeholders.



Overview of the Oji Paper Group

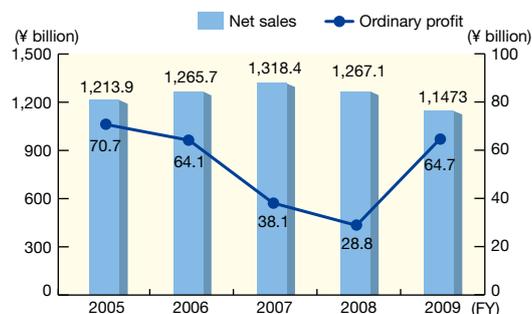
The Oji Paper Group Expanding Globally



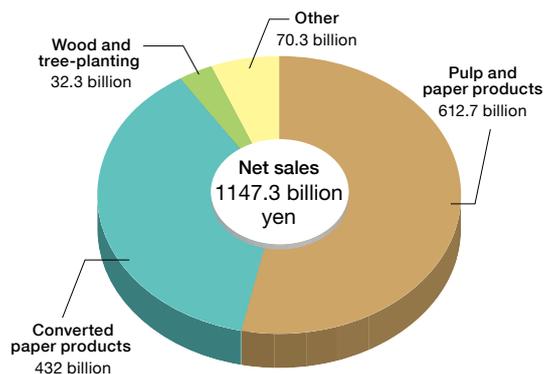
Company Data

Name: Oji Paper Co., Ltd.
Headquarters: 4-7-5 Ginza, Chuo-ku, Tokyo, Japan 104-0061
Established: August 1, 1949
Representative Director: Kazuhisa Shinoda, President and Chief Executive Officer
Main business: Manufacturing and marketing of pulp, paper, and converted paper products
Net sales: ¥1,147,322 million (fiscal 2009, consolidated)
Number of mills: 175 (as of March 31, 2010)
Number of employees: 20,363 (as of March 31, 2010, consolidated)

Net sales and ordinary profit (consolidated)

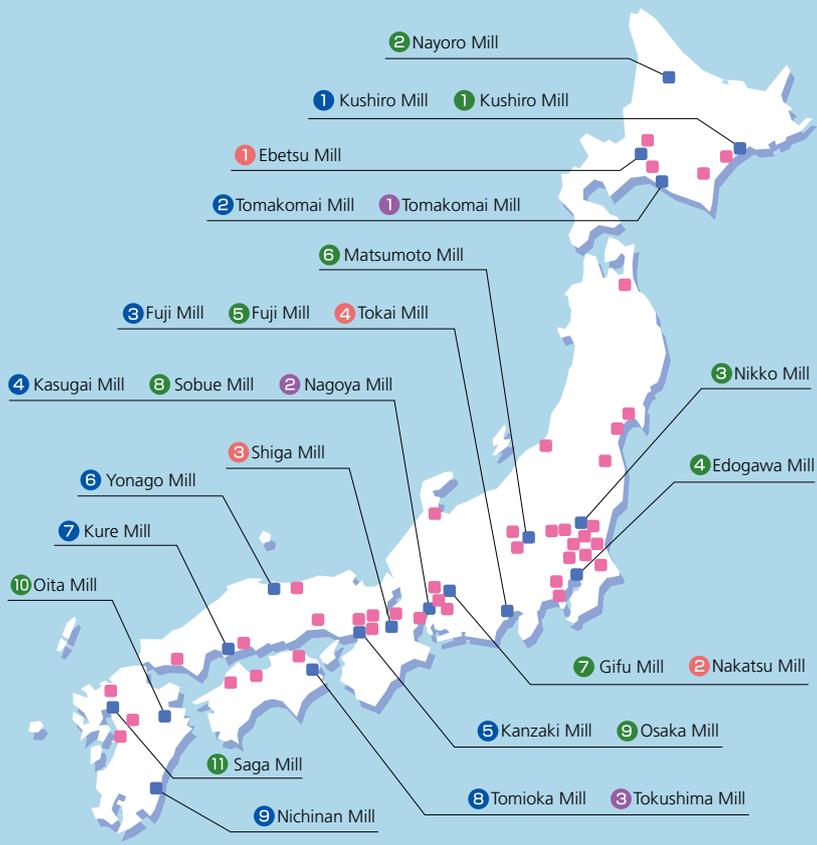


Net sales by business (Fiscal 2009, consolidated)

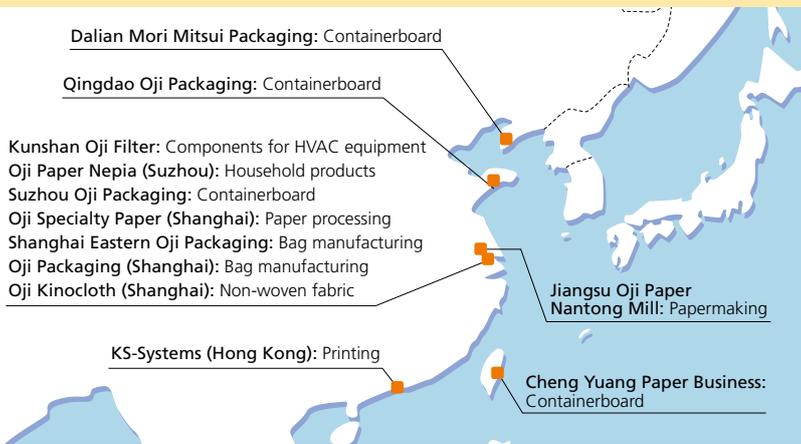


Major mills in Japan

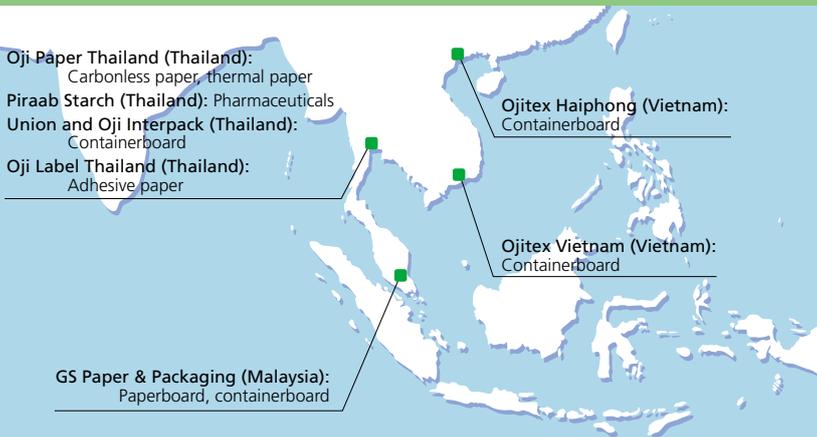
- Oji Paper Co., Ltd. ① ~ ⑨
- Oji Paperboard Co., Ltd. ① ~ ⑪
- Oji Specialty Paper Co., Ltd. ① ~ ④
- Oji Nepia Co., Ltd. ① ~ ③
- Major container-board mills ■



China business



Southeast Asia business



The Oji Paper Group at a Glance

Household and Packaging Materials Company

The Household and Packaging Materials Company handles paper product categories encompassing the household products and packaging close to our daily lives, such as tissue paper.

The Company has taken packaging beyond its traditional functions of wrapping and protecting, continually evolving it in step with the times. Leveraging its start-to-finish production system from base paper to finished product, the Company is able to meet stringent demands for diversification of markets and distribution, strict quality standards, and consideration for the environment.

- Household Products, Disposable Diapers Business (Oji Nepia Co., Ltd. and other companies)
- Containerboard Materials Business (Oji Paperboard Co., Ltd.)
- Corrugated Container Business (Oji Chiyoda Container Co., Ltd., Mori Shigyo Group, Oji Interpack Co., Ltd., and other companies)
- Boxboard and Packaging Papers Business Div., Oji Paper Co., Ltd.
- Boxboard Products Business (Oji Packaging Co., Ltd. and other companies)
- Bag Processing Business (Oji Seitai Kaisha Co., Ltd., Oji Adba Co., Ltd., and other companies)



Paper containers



Containerboard boxes



Household products, disposable diapers



Printing and Communications Media Company

The Printing and Communications Media Company handles paper product categories used in printing. Newsprint, printing paper used for publications such as books, magazines, and catalogs, and office paper for copies and forms of every kind all make up information media indispensable to people's lives. The Company meets customers' needs through improvements in print quality, stable supply systems, and a rich lineup of products.

- Newsprint Business Div., Oji Paper Co., Ltd.
- Paper Business Div., Oji Paper Co., Ltd.



Newsprint



Printing paper



Electrical insulation material for transformers

Antibacterial pads and adhesive sheets



Functional Materials Company

The Functional Materials Company handles paper product groups with added functionality, such as thermal paper and adhesive paper.

These paper products bring new values to the fields of industry, lifestyle, and culture, while also contributing to the natural environment and to the modern era's call for comfortable living.

- Imaging Media Business Div., Oji Paper Co., Ltd.
- Specialty Papers Business (Oji Specialty Paper Co., Ltd.)
- Adhesive Products Business (Oji Tac Co., Ltd., New Tac Kasei Co., Ltd., and Shinomura Chemical Industry Co., Ltd.)
- Non-woven Fabric Business (Oji Kinocloth Co., Ltd.)

Resource- and Environment-related Business

The Resource- and Environment-related Business leverages the Oji Paper Group's domestic and overseas plantations and its storehouse of technology to drive resource and environmental business, all while securing stable supplies of basic fuel and materials for the Group.

The Company is advancing the comprehensive use of forests, going beyond the processing and sales of lumber and pulp and into renewable energy and the acquisition of carbon credits.

- Strategic Resource Management Div., Oji Paper Co., Ltd.
- Oji Forest & Products Co., Ltd.
- Oji Eco Materials Co., Ltd.
- PAN PAC (New Zealand)
- CENIBRA (Brazil) and other companies



Overseas plantation business (CENIBRA, Brazil)



Jiangsu Oji Paper Nantong Mill (August 2010 photo)

Overseas Business

We are expanding our overseas business with a focus on Southeast Asia, with Jiangsu Oji Paper in China and 14 other companies overseas.

A wide range of products including printing paper, household products, specialty paper, and containerboard lets us meet the needs of customers outside Japan.

- Jiangsu Oji Paper Co., Ltd. (China)
- GS Paper & Packaging (Malaysia) and other companies

Other Business

With a number of mergers playing a role in the Oji Paper Group's long history of growth, several peripheral Group companies continue to provide diverse services. Each company pursues autonomous technology and growth to heighten the overall strength of the Group.

- Oji Real Estate Co., Ltd.
- Oji Cornstarch Co., Ltd.
- Chuetsu Co., Ltd.
- Oji Salmon Co., Ltd. and other companies

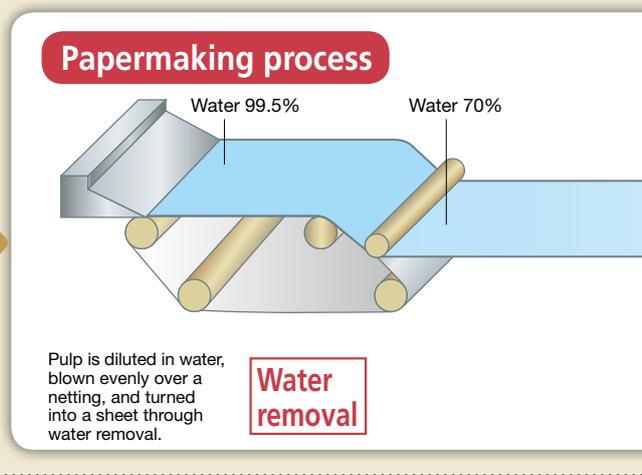
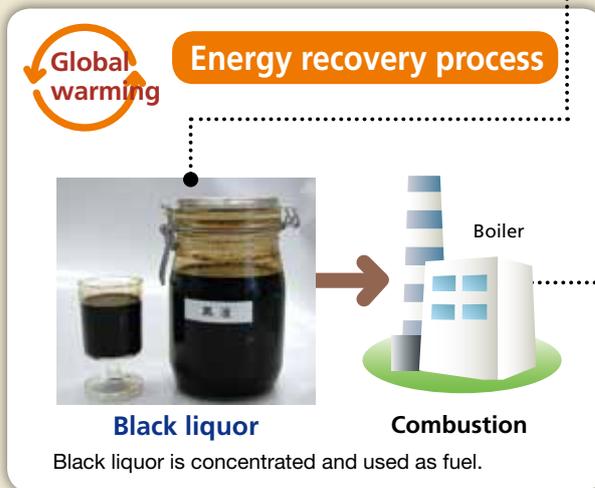
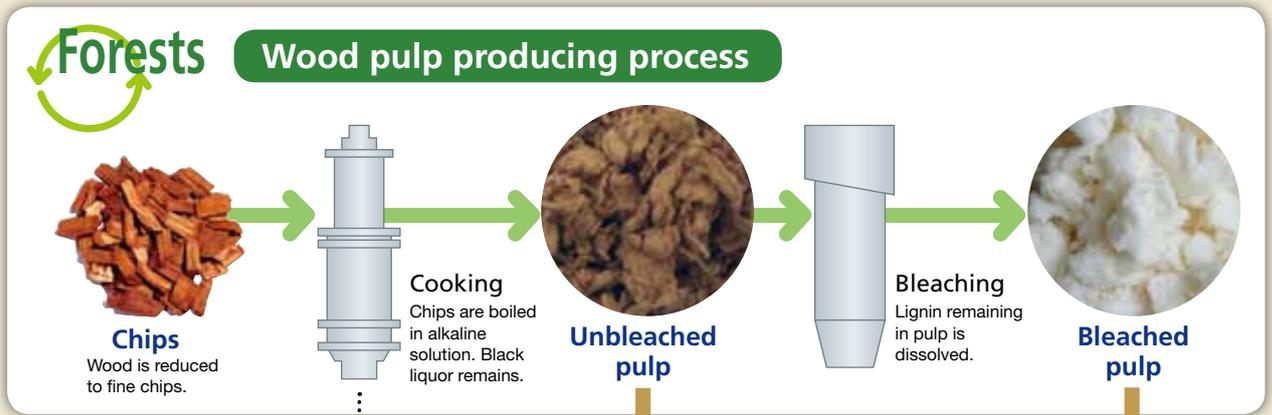


Oji Homes Aoyama by Oji Real Estate



Sweetener from Oji Cornstarch

The Making of Paper Products





Recovered paper pulping process



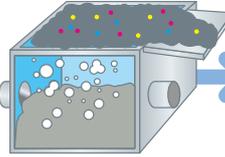
Recovered paper



Pulping
Recovered paper is broken down in water.



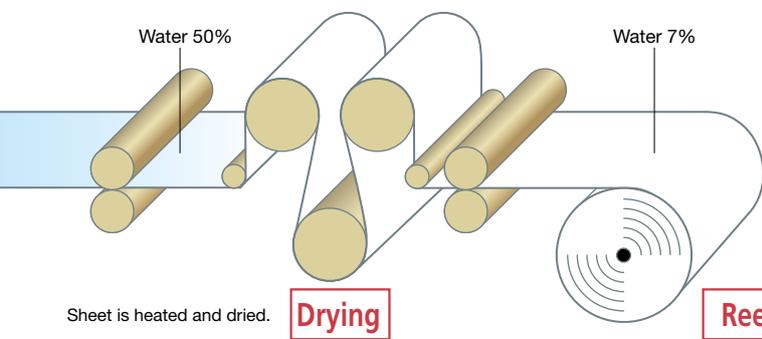
Disintegrated pulp



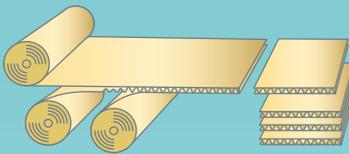
Ink removal
Air is blown in to remove ink.



De-inked pulp



Bonding



Cardboard boxes

Finishing

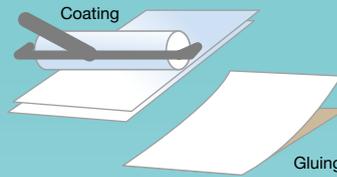


Folding, perforating, etc.



Household products

Special processing



Adhesive paper

Special Feature 1

Expansion of Our Overseas Forest Plantations → p.14



In eight countries overseas, the Oji Paper Group owns and maintains forest plantations covering 240,000 hectares, an area as large as Kanagawa Prefecture. We put these forest resources to effective use not only in securing a stable supply of raw materials for papermaking, but also in the service of resource and environmental business.

Area of overseas forest plantations

240,000 ha

Number of employees
in plantation work

10,000
persons



Plantation work creates many jobs. From growing seedlings to cutting grass, the work is diverse and spans the entire year, creating employment with roots in communities. In fiscal 2009, our plantations provided jobs for 10,000 persons.



Special Feature 3

Addressing Global Warming

→ p.22

Amount of CO₂ absorbed by forests

10 million t-CO₂

The amount of CO₂ absorbed by the forests we manage domestically and overseas is about 10 million tons per year (Oji Paper calculation).

Special Feature 2

The Role of Domestic Company-owned Forests → p.18

Area of domestic company-owned forests

190,000 ha



In Hokkaido and 32 other prefectures in Japan, the Oji Paper Group owns and maintains forest covering 190,000 hectares, an area as large as Osaka Prefecture.

Cost of maintaining company-owned forests

500 million yen



Photo credit: Satoshi Adachi

The Oji Paper Group is contributing to the global environment through tree-planting and forest conservation activities.

Our company-owned forests play multiple roles in biodiversity conservation and other environmental protection efforts in Japan. The cost of maintaining these forests is 500 million yen per year.



RPF



Scrap tires

Amount of waste-derived fuel used

770,000 t

We make use of 770,000 tons of waste per year as fuel, in place of heavy oil or other fossil fuels.

Special Feature 1

Expansion of Our Overseas Forest Plantations

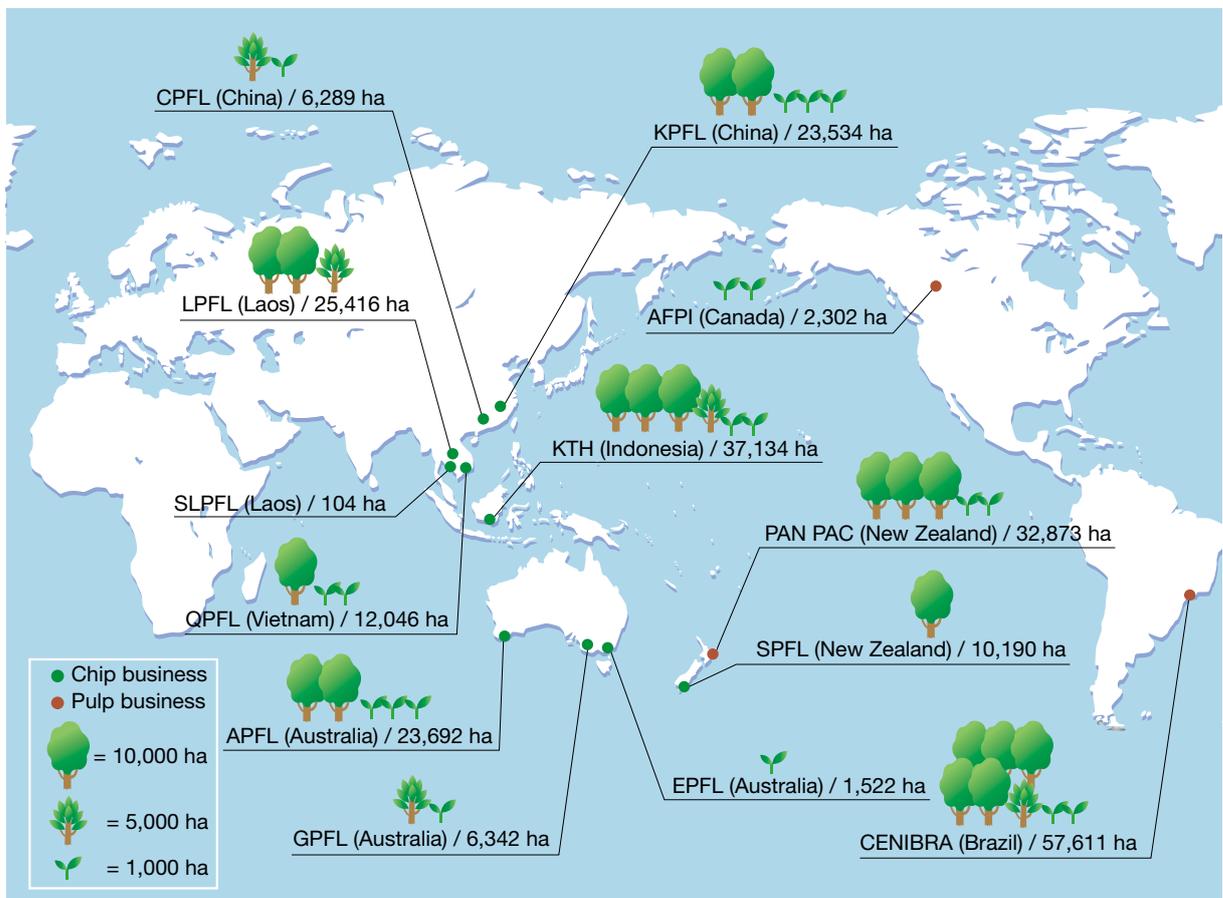
Contributing to the development of local communities and the forest industry through tree-planting activities

I. Tree-planting activities aimed at a total forestry business

The Oji Paper Group initiated overseas tree-planting activities in the 1970s, ramping up to full-scale activity from the 1990s to engage in sustainable forest management. The goal of tree planting is primarily the securing of wood chips, the raw material for papermaking. Looking ahead, we are redoubling efforts toward the goal of a total forestry business able to address various needs including lumber, plywood, and fuel.



Distribution of the Oji Paper Group overseas forest plantations



New operations in fiscal 2009

- SLPFL (Laos)
- KTH (Indonesia)

Plantations certified under forest certification systems total 138,714 hectares (end of fiscal 2009). We continue to move toward certification of all plantations.



Leading the way to total forestry business: PAN PAC

Located in the city of Napier on New Zealand's North Island, Pan Pac Forest Products Ltd. (PAN PAC) carries out start-to-finish operations from tree planting to pulping and sawing, forming a foothold for the Oji Paper Group's vision of total forestry business.

At PAN PAC, round, straight logs head to the sawmill; other logs become material for paper pulp. Remaining bark and sawdust become fuel for the mill's boilers, meaning that each tree's value is extracted to the limit with nothing left behind. PAN PAC also creates local employment through tree-planting activities.

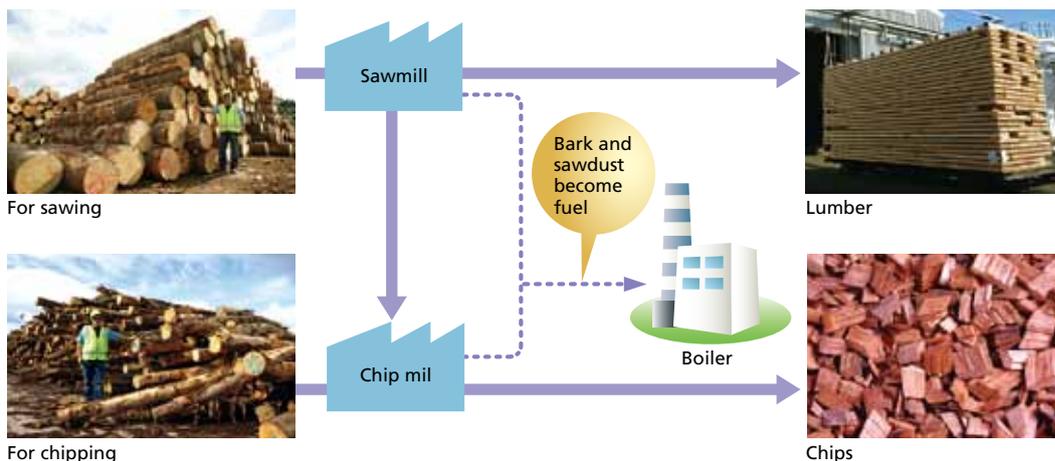
The Oji Paper Group is considering expanding this total forestry business model into other regions as well.



A view of PAN PAC (New Zealand)

The Oji Paper Group company Oji Nepia Co., Ltd. takes its name from the city of Napier.

How logs are used



Toward total forestry business: plantation work at QPFL (Vietnam)

Qun Nhon Plantation Forest Company of Vietnam Limited (QPFL) began tree planting in 1995, with logging of the grown trees starting from 2002.

The harvested trees had been used in the Oji Paper Group's domestic plants as chips for papermaking. But toward the goal of total forestry business, from 2008 the trees have also been sold for lumber use.

In 2008, QPFL's plantation trees became the only recipient of FSC forest certification in Vietnam.



Log processing (Vietnam)

After logging, seedlings are planted and trees grown anew!

II. Tree-planting activities rooted in communities

Job creation

Plantation work involves diverse, year-round jobs such as seedling growing, plowing, planting, fertilization, and mowing, all of which creates considerable local employment. In fiscal 2009, our plantation work created employment for 10,000 persons at 13 locations in 8 countries.

At QPFL in Vietnam, busy periods provide employment for over 3,000 persons. Moreover, from 2002 QPFL has provided seedlings to local residents at no cost, which creates a stable source of income for residents through purchase of the grown trees. As of 2010, the program covers 15 million trees over an area of 9,500 hectares.

Number of employees
in plantation work
10,000
persons



Local residents growing seedlings (Vietnam)

Contribution to local communities

To improve the livelihood of local communities in Laos, Oji Lao Plantation Forest Co., Ltd. (LPFL) is undertaking infrastructure work including the provision of materials for construction of wells and schools, as well as cooperating with educational initiatives by providing free notebooks.

Cumulative results through 2009

Form of aid	Number of cases
Construction of wells and waterways	36
Road construction and repair	63
Electrical line installation	15
Provision of materials for school construction	49
Provision of materials for temple construction	29
Agricultural fund aid	51
Other types of aid	31
Total	274



Supporting road construction (Laos)



School children in Laos



Donating notebooks to schools (Laos)



III. Initiatives toward conservation of biodiversity

The Oji Paper Group keeps conservation of biodiversity in mind when undertaking tree-planting activities.

When seeds are contained in droppings from birds flying overhead, seedlings sprout. Insects that coexist with those seedlings soon gather, after which birds come seeking the insects. We take meticulous care to let forests nurturing a rich variety of life arise from the repetition of that process.

At the plantation managed by Celulose Nipo-Brasileira S.A. (CENIBRA) in Brazil, we conduct numerous surveys aimed at conservation of biodiversity, such as ecological surveys of the types and number of nurtured trees, of birds and insects, and, using infrared cameras, of other animals.

We also consider biodiversity in the determination of our plantation areas. Plantations in Brazil generally carry legal requirements aimed at conserving water resources and preventing erosion; examples include requirements for preserving rivers, lakes, wetlands, and slopes of 45 degrees or steeper, and for setting aside 20% of owned land for conservation purposes. CENIBRA designates even larger percentages of land as protected forests and reduces its impact on the surrounding environment to the minimum possible.



CENIBRA's plantation area (Brazil)

Planting trees with a protected area set aside



With consideration of tree type and land characteristics overseas, we plant mainly eucalyptus and acacia. Efficiently and sustainably carrying out tree-planting activities adapted to land conditions leaves more natural forest untouched, which we believe leads to conservation of biodiversity.



Eucalyptus leaves

Characteristics of eucalyptus

- Efficient water and nutrient take-up with excellent growth, but requires mowing and other weeding.
- Some types well-suited to degraded land with little precipitation.



Acacia leaves

Characteristics of acacia

- Returns atmospheric nitrogen to soil through fixation, and thus grows trouble-free in nutrition-poor locales.

Special Feature 2

The Role of Domestic Company-owned Forests

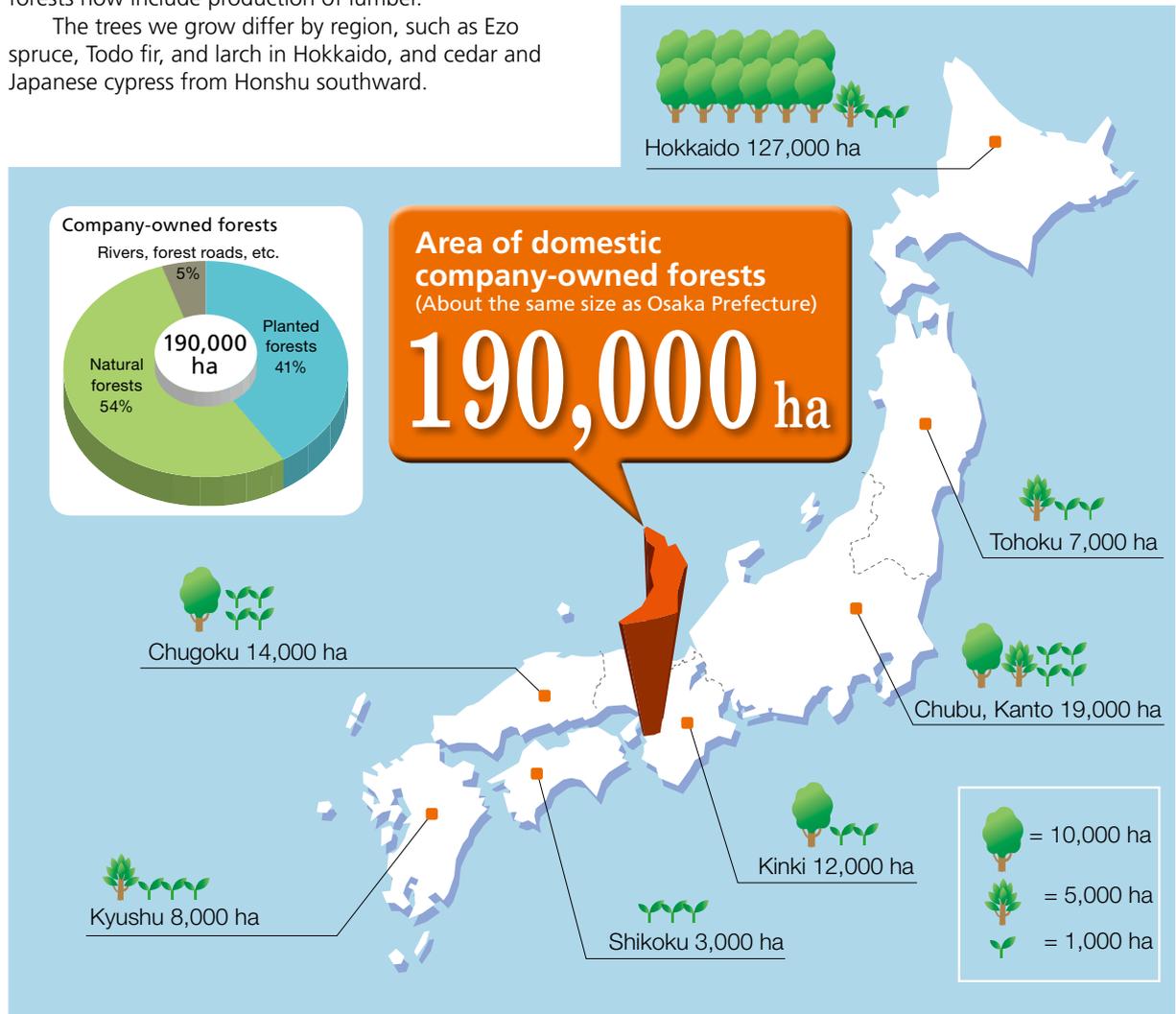
Protecting and nurturing the rich bounty of our company-owned forests

I. Overview of domestic company-owned forests

Initially aimed at the production of raw materials for papermaking, our goals for nurturing company-owned forests now include production of lumber.

The trees we grow differ by region, such as Ezo spruce, Todo fir, and larch in Hokkaido, and cedar and Japanese cypress from Honshu southward.

Distribution of the Oji Paper Group domestic company-owned forests



Company-owned forests make a contribution

Forest valuation
530 billion yen

Forests contribute to more than land conservation and the cultivation* of water resources; their diverse functions include conservation of biodiversity and the absorption and fixation of CO₂. Evaluated on the basis of their multiple functions, the value of the Oji Paper Group's company-owned forests is estimated at 530 billion yen per year.

(Source: Science Council of Japan 2001 Report)

* Via storage of rainwater and leveling of water flow into rivers.

680,000 t-CO₂

The amount of CO₂ absorbed by the Oji Paper Group's domestic company-owned forests is estimated at 680,000 t-CO₂ per year.
(Oji Paper calculation)



Taking action in company-owned forests



Aside from conservation and forest maintenance activities such as vine-cutting, brush-clearing, and tree thinning, protecting mountains calls for engaging in work that includes repair and construction of walkways and paths, border conservation, fire prevention patrols, and control of predation by deer and mice. We invest 500 million yen per year in these activities.

Cost of maintaining company-owned forests
500 million yen



Every year we undertake the logging of a set number of trees, as part of the culling required to maintain healthy forests. These trees are put to use in many ways: in construction and furniture, as papermaking material and fuel, and so on.

Area logged (FY2009)

Activity	Area (ha)
Tree thinning	2,300
Selection cutting	820
Clear felling	30
Total	3,150



Acquisition of Japan's own forest certification, SGEC

In 2007 all domestic company-owned forests (174,000 ha) excluding profit-share forests completed this certification for sustainable forest management.

II. Contributing to society through domestic company-owned forests

To make new social contributions through environmental education activities making use of our company-owned forests, we launched the Oji Forest Nature School for children, the leaders of the next generation. The Nature School is a participatory environmental education program for learning about the connections among forests and people and industry. It teaches these through papermaking mill tours, nature experiences in company-owned forests, and hands-on activities such as mountain woodland observation, mountain climbing, tree climbing, river play, camping, and papermaking, all taking advantage of the features of the activity sites. Launched in Hokkaido in 2004, in 2009 the program was held in Hokkaido, Nikko, Fuji, and Miyazaki, with 80 participants. Since fiscal 2004 a total of 424 children have taken part.

We have received many comments from the children, such as "Working together to make a secret base was fun!" "It was my first time to sleep in a tent, touch a firefly, and see a bullfrog with my own eyes," and "I learned about the role of the forest, through the creatures living on the mountain." Caretakers, too, had comments, including "It was an experience we couldn't get from school or as a family," and "I was surprised when the staff told me my kids were helpful. I'm grateful for this chance to sense the children's growth."



Tree climbing at the Nature School (Hokkaido school)

III. Initiatives toward conservation of biodiversity

Establishing environmental conservation forests

The Oji Paper Group establishes its own environmental conservation forests in which to implement environmentally-considerate management. In the selection of such forests, we target those designated as national parks or those heavily requested by researchers.

Environmental conservation forests	Goals	Area (ha)
Land conservation	Mudslide prevention and other mountain land conservation	2,900
Water resource conservation	Water resource conservation and cultivation	600
Biodiversity conservation	Conservation of rare species and biodiversity	9,240
Academic reference conservation	Forests vital to academics	10
Forest use conservation	Forest views at recreation facilities	4,540
Total (overlapping)		17,290

Establishment of the Sarufutsu Itou Conservation Council

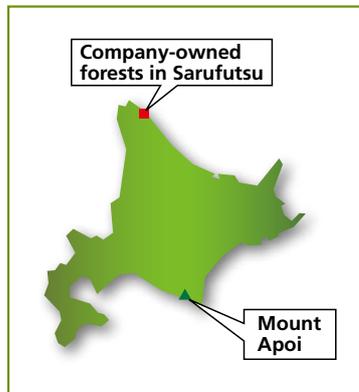
The large, rare fish called Itou (also known as Sakhalin taimen) lives in the mountainous forests of Sarufutsu in Hokkaido. To preserve this species, in 2009 we established the Sarufutsu Itou Conservation Council in concert with NPOs, government authorities, and researchers.

The Itou is Japan's largest freshwater fish, topping a meter in length over a lifespan exceeding 20 years. Its range once extended into northern Honshu, but numbers have sharply declined as river environments have worsened. The fish is now found only in a portion of rivers in Hokkaido, and has been designated as critically endangered by the International Union for Conservation of Nature (IUCN) and Japan's Ministry of the Environment.



Itou in spawning season

The Sarufutsu Itou Conservation Council conducts symposiums, nature schools, and surveys toward the aim of conservation, while soliciting cooperation from owners of surrounding forests.



Cooperation with the Mount Apoi Restoration Committee

With its thick alpine flora, the higher zones of Mount Apoi in Hidaka, Hokkaido were designated a Special Natural Monument in 1952. But environmental changes in recent years have seen that alpine flora decrease sharply, spurring formation of the Mount Apoi Restoration Committee.

As Oji Paper's company-owned forests neighbor the Special Natural Monument zone, from 2006 we have cooperated with experiments to rejuvenate Apoi's plant life.



Alpine flora rejuvenation on Mount Apoi

voice

Masashi Hamaya
Vice-Mayor, Sarufutsu Village

Among the magnificent nature remaining in Japan's northernmost village of Sarufutsu, the rare species Itou lives. We believe that educational activities and the Council that bring Sarufutsu Village together with the Sarufutsu Itou Group and Oji Paper, which owns many of the village forests, are connected to conservation of not only the Itou and its habitat but of Sarufutsu's natural environment as well.

voice

Yoichi Mizuno
Mount Apoi Restoration
Committee Headquarters

Growing up in Samani Town by Mount Apoi, from a young age I passed through Oji Paper's mountains to climb Apoi. I appreciate Oji Paper agreeing to provide land for experimenting with alpine flora rejuvenation, and for participating every year in our annual meeting and field work. For those of us wanting to do something about the flowers on Mount Apoi, this mental and financial support is a great encouragement. We will keep on with the work of protecting Mount Apoi.



IV. Initiatives toward forestry rejuvenation

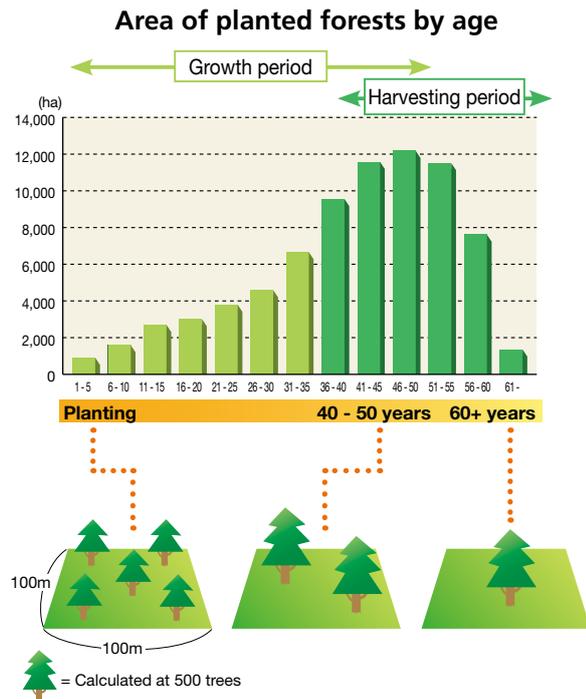
Promoting tree thinning

Japan's planted forests, created through post-war tree-planting activity, are now in their harvesting period. Yet wood from those forests is pressured by the low-cost and stable supply of wood from overseas, leaving the domestic self-sufficiency ratio low (28% in fiscal 2009).

One reason for the low rate is the small scale of forest owners, which hinders profitability. To overcome this issue, we undertake joint projects bringing together multiple neighboring owners.



View of a planted cedar forest (Gifu Prefecture)



ZOOM

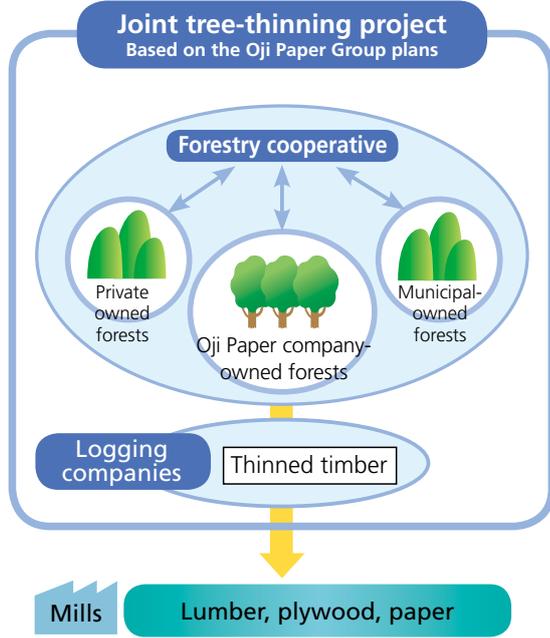
Joint tree-thinning projects

Joint projects for tree thinning and construction of forest roads are bringing together the Oji Paper Group's company-owned forests in Gifu Prefecture and surrounding forests owned by individuals or municipalities.

With the combined aid of forestry cooperatives overseeing forests and materials companies conducting logging, the project is proceeding from 2010 under a five-year contract based on plans by the Oji Paper Group, and has been recognized by Gifu Prefecture.



Planted cedar forest awaiting tree thinning (Gifu Prefecture)



Special Feature 3

Addressing Global Warming

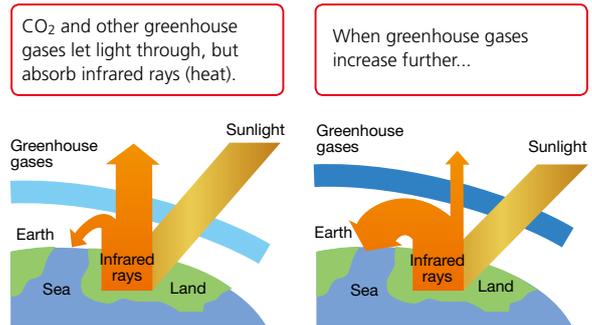
Linking company-owned forests and effective waste utilization to the achievement of low-carbon society

I. Current greenhouse gas emissions volume and the positioning of the pulp and paper industry

What is global warming?

Global warming refers to the phenomenon of rising average temperatures worldwide, reportedly due to the effects of greenhouse gases (including CO₂, methane, nitrous oxide, and chlorofluorocarbons) emitted into the atmosphere by human activities.

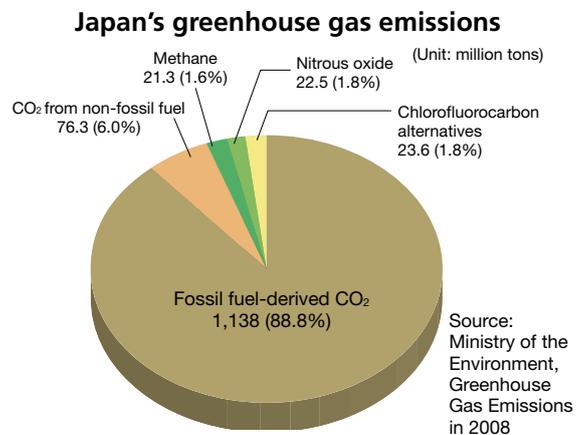
Greenhouse gases on Earth absorb and radiate heat from the ground, preserving temperatures suitable for life. However, in recent years industrial development and forest clearing have led to increased buildup of greenhouse gases, with the accompanying increase in absorbed and radiated heat thought to contribute to rising temperatures worldwide.



Source: The Energy Conservation Center, Japan

Current CO₂ emissions volume

CO₂ comprises the greatest portion of artificially-generated greenhouse gas emissions, with most of that CO₂ stemming from the use of fossil fuels (petroleum, heavy oil, coal, etc.). In Japan, 90% of the volume of CO₂ emissions comes from burning fossil fuels, making the reduction of these emissions a serious issue.



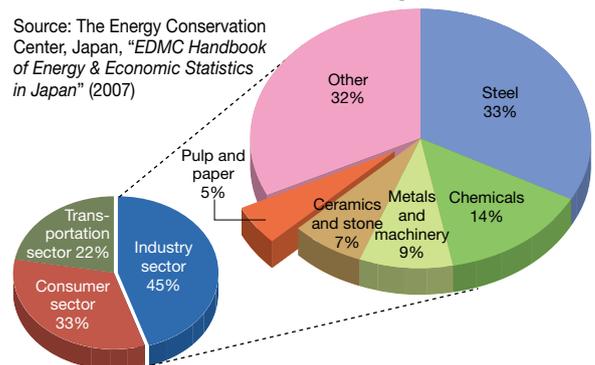
Source: Ministry of the Environment, Greenhouse Gas Emissions in 2008

Positioning of the pulp and paper industry

Among Japan's volume of fossil fuel-derived CO₂ emissions, industry accounts for about 45%. About 5% of that industry volume originates with the pulp and paper industry, and of that amount, 20%, or an amount equivalent to 0.4% of Japan's total, comes from the Oji Paper Group.

Breakdown of CO₂ emissions by sector (FY2005)

Source: The Energy Conservation Center, Japan, "EDMC Handbook of Energy & Economic Statistics in Japan" (2007)



II. Initiatives by the Oji Paper Group

The manufacture and processing of paper uses large quantities of steam, electricity, and heat generated from the burning of fossil fuels, waste fuels, biomass, and other fuels. To reduce the fossil fuel-derived CO₂ that makes up nearly 90% of the volume of Japan's greenhouse gas emissions, the Oji Paper Group is undertaking initiatives such as pursuing energy conservation and switching fuels.

Pursuing energy conservation

The Oji Paper Group views energy conservation as a vital issue, and conducts "Energy Conservation Patrols" that enable multiple observers to check on energy waste in mills. These patrols confirm steam pipe temperatures using thermography, check air conditioning settings and light brightness, and so on, and then draft countermeasures to address findings. This small but ongoing accumulation of actions leads to energy conservation.

The mills of the Oji Paper Group's four papermaking companies took part in 1,050 cases of energy conservation measures and productivity improvements in fiscal 2009. Energy use at the mills, while affected by reduced production, fell 6% from fiscal 2008 levels.



Energy Conservation Patrol checking for waste from air leaks at the Oji Paper Kasugai Mill

ZOOM

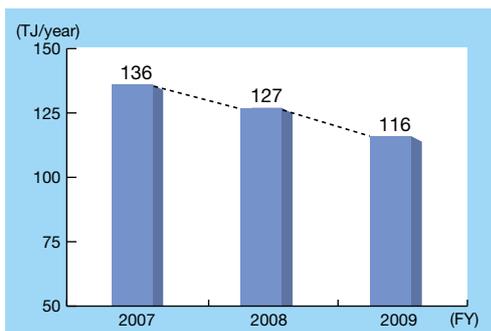


Energy conservation in offices

In December of 2007, Oji Paper launched the Office Energy Conservation Measures Team to tackle the goal of reducing energy consumption in head office buildings and laboratories, by at least 1% over the previous year.

To reach that goal, the Team promoted participation in the "Cool Biz" (May through September) and "Warm Biz" (December through March) programs for more season-appropriate clothing, indoor temperature control and lighting energy conservation (removal of a portion of fluorescent lights and replacement with high-efficiency lights), electricity conservation in office equipment, and measures to make energy use more visible. The result of the actions was a 9% reduction in fiscal 2009 usage compared to the previous year.

Amount of energy used (in offices)



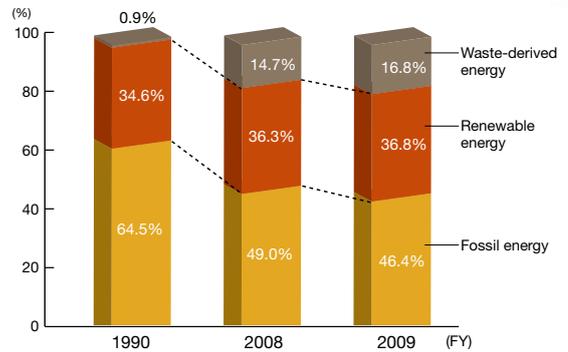
Partial removal of fluorescent lights

Switching fuels (Energy composition at the Oji Paper Group's four papermaking companies)

The Oji Paper Group's four papermaking companies are striving to use non-fossil fuels and fuels with low CO₂ emissions.

Compared to fiscal 1990, we have reduced the ratio of fossil fuels in our energy sources. We have increased the ratio of waste-derived fuels including RPF* and scrap tires, as well as fuels derived from biomass, a form of renewable energy.

Amount of waste-derived fuel used
770,000 t



* RPF (Refuse Paper and Plastic Fuel): Solid, waste-derived fuel formed from a mixture of plastic wastes and recovered paper that is difficult to recycle.



Use of waste-derived energy

Incinerating or landfilling difficult-to-recycle, combustible wastes can release the greenhouse gases methane and CO₂. While there are initiatives underway to recover the waste from incineration and reuse it as energy, the reality is that the majority of the heat is not reused effectively.

The Oji Paper Group's four papermaking companies are enabling reductions in fossil fuel use by employing combustible wastes as fuel – 770,000 tons of waste in fiscal 2009.

The average energy loss for fuels in Japan is about 60%, but only about 30% for the pulp and paper industry, revealing the sector's efficient use of energy.

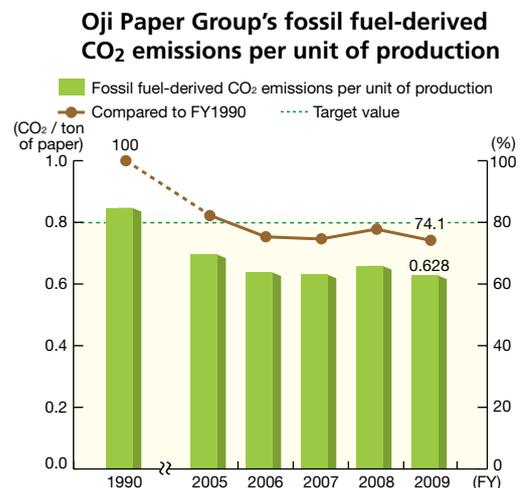


Waste-derived fuel (RPF)

Results of FY2009 initiatives (Oji Paper Group's four papermaking companies)

In fiscal 2009 we continued our achievement of fossil fuel-derived CO₂ emissions per unit of production* reduced over 20% compared to fiscal 1990. Looking ahead, we intend to shift our stance to CO₂ reduction based on reducing overall energy use.

* Fossil fuel-derived CO₂ emissions per unit of production: Volume of fossil fuel-derived CO₂ emitted per ton of paper manufactured.



III. CO₂ absorption by domestic company-owned forests and overseas forest plantations

Trees grow robustly and absorb greater amounts of CO₂ through proper care and management of forests.

Tree thinning, or the culling of trees where growth is too thick, is a necessary action for keeping forests healthy and is also connected to global warming countermeasures.

The Oji Paper Group's 190,000 hectares of domestic company-owned forests and 240,000 hectares of overseas forest plantations together absorb about 10 million tons of CO₂ per year (Oji Paper calculation).

Amount of CO₂ absorbed by forests

10 million t-CO₂



Before tree thinning

Dark forest with closely-crowded trees

After tree thinning

Bright forest with sparse trees allowing sunlight in

zoom



Participation in offset credit system (J-VER)

To create new value for the Oji Paper Group's company-owned forests, from fiscal 2009 we have undertaken the J-VER offset credit scheme and initiated actions including selecting target mountain forests, calculating work volume for actions such as tree thinning, and measuring tree diameter and height.

Through fiscal 2010, we plan to expand the project to company-owned forests in Hokkaido, Kanagawa Prefecture, and Shizuoka Prefecture.



What is J-VER?

Japan Verified Emission Reduction (J-VER) is a system launched by the Ministry of the Environment that contributes to global warming countermeasures through the use of credits (CO₂ volumes reduced or absorbed) earned through domestic CO₂ reduction and forest absorption projects.



Forest survey

Forward-looking plans

Mountain forest locations	Number of mountain forests	Area of tree thinning (ha)	Amount absorbed (t-CO ₂)
Hokkaido	4	1,650	32,000
Kanagawa Prefecture	1	300	6,000
Shizuoka Prefecture	1	50	600
Total	6	2,000	38,600

- FY2010 planned (numbers are forecasts).
- Kanagawa Prefecture project approved June 2010.
- Hokkaido and Shizuoka Prefecture projects in approval process.

voice



Yukihiro Takahashi

Oji Forest & Products Co., Ltd.

In our forest surveys to estimate CO₂ absorption volumes, we measure trees' height and diameter. Since we carry this out for each type of land and type of tree, I have walked over every inch of the forests. The survey is physically demanding, but it's vital work worth doing.



Corporate Philosophy and Code of Conduct

Fulfilling our corporate responsibility as a manufacturer of paper, a part of society's infrastructure

Corporate Philosophy

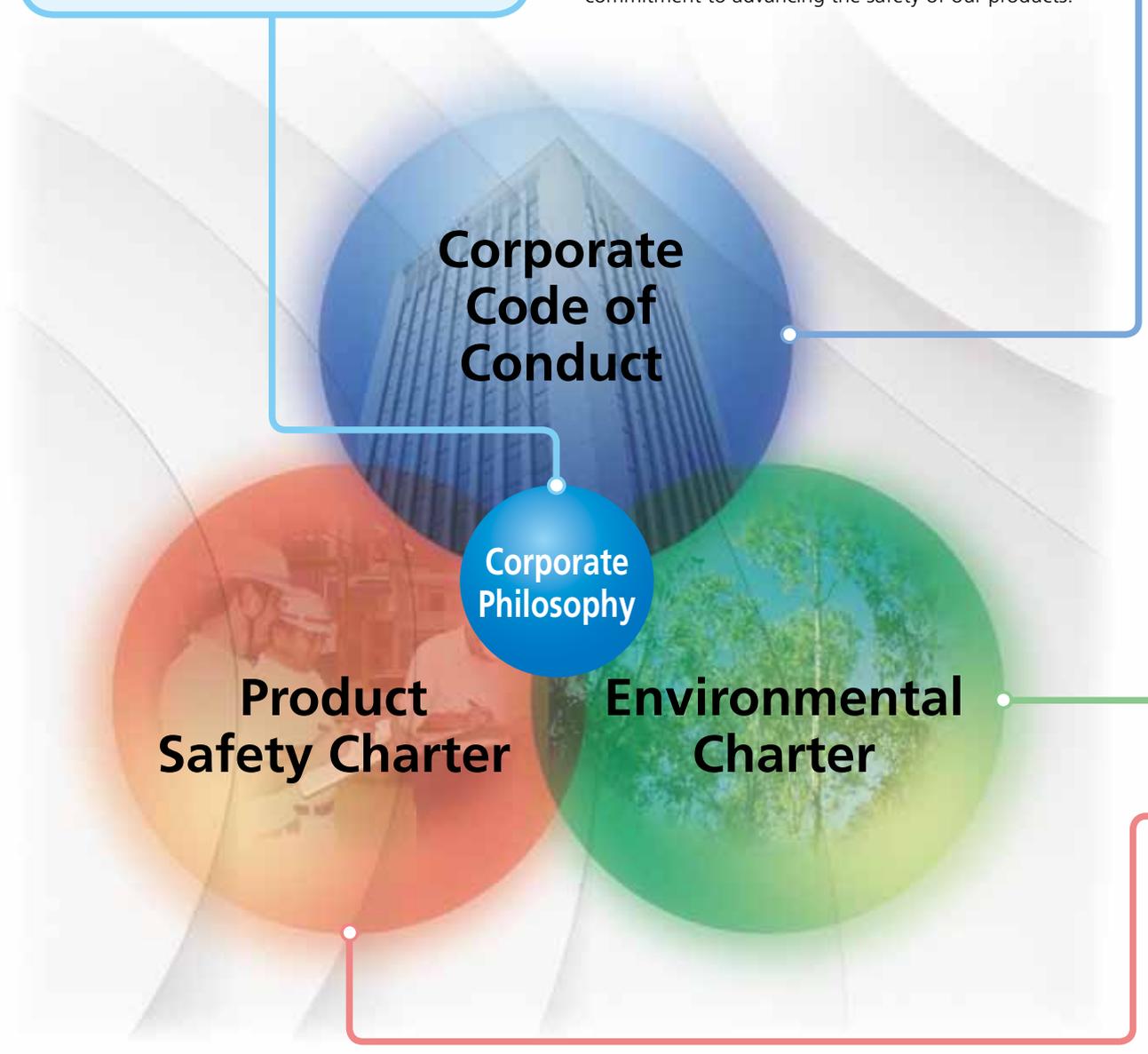
Contribution to the Environment and Culture
Innovation and Speed
Global Reputation for Dependability

With pride in and recognition of its responsibilities as a leading paper company, Oji Paper will work to continuously improve itself and win greater trust worldwide.

◆ The foundation of Oji Paper's business operations

The founder of Oji Paper, Eiichi Shibusawa, frequently used two words—*rongo* (the Analects of Confucius) and *soroban* (abacus)—to emphasize the importance of consistently combining good ethics with profitable business practices. The Oji Paper Group has incorporated this ethos into its Corporate Philosophy and also into its Corporate Code of Conduct, the guidelines for action to realize the Corporate Philosophy.

In addition, we have established the Oji Paper Group Environmental Charter that sets harmony with the environment as a top management priority, and the Product Safety Charter that demonstrates our commitment to advancing the safety of our products.



Corporate Code of Conduct

Corporate Philosophy

Product Safety Charter

Environmental Charter

Oji Paper Group Corporate Code of Conduct

- I. We, the management and employees of the Oji Paper Group, hereby adopt the Oji Paper Group Corporate Code of Conduct, as detailed below, as guiding principles for corporate activities based on an awareness of our responsibilities as a good corporate citizen and on high ethical principles appropriate for an organization that enjoys the trust of society.
 - II. We, the management and employees of the Oji Paper Group, will strive at all times to implement this Code, and to contribute to the genuine enrichment of society.
1. Compliance with the law
 2. Harmony with the environment
 3. Supply of safe, useful products and services
 4. Communication with society
 5. Participation in social contribution activities
 6. Coexistence with the international community
 7. Contribution through manufacturing
 8. Achievement of employee satisfaction

Environmental Charter

1. Basic Policy

The Oji Paper Group Environmental Charter requires the Oji Paper Group to help create a truly enriched and sustainable society by developing business activities that harmonize with the environment from a global perspective. The Charter calls for the Oji Paper Group to make autonomous efforts to achieve further environmental improvement, and aggressively drive its forest recycling, paper recycling, and global warming countermeasures forward.

2. Action Guidelines

1. Promotion of forest recycling
2. Promotion of paper recycling
3. Promotion of global warming countermeasures
4. Reinforcement of environmental improvement measures and environmental management systems
5. Development of production technologies and products that minimize environmental impact
6. Reduction and effective utilization of waste
7. Transfer of environmental protection technology to other countries
8. Building relationships of trust with stakeholders

Product Safety Charter

The Oji Paper Group delivers safe products, fully recognizing that its corporate social responsibility entails providing quality and services that enable customers to use its products with peace of mind. Going forward, we will continue to fulfill the trust of our customers by ensuring that all of our employees reliably implement the following commitments.

1. Complying with all safety-related laws and regulations, we will also implement appropriate management to follow voluntary standards.
2. We will continually improve our Group-wide quality control system, striving to ensure safety.
3. We will provide timely and appropriate information on product safety and proper usage.
4. We will proactively gather information on products involved in incidents and make reports to relevant authorities in compliance with the law. We will also faithfully take necessary action to find the root causes of incidents and strive to prevent their recurrence.
5. We will continuously review our management system through regular internal audits, always striving for improvement.



Environmental Management System

Recognizing the importance of environmental management in our corporate activities and striving for environmental compliance

◆ Establishment of the Environmental Management Division

Amid the growing importance of environmental management within our corporate activities, in June 2009 the Oji Paper Group established the Environmental Management Division. This organization is charged with drafting and advancing overall environmental measures within the Oji Paper Group, with a focus on management related to product safety and environmental conservation in all mills, including global warming countermeasures.



Environmental Committee headed by mill manager (Oji Paper Co., Ltd. Kasugai Mill)

◆ Environmental and product safety risk management within the Group

The Oji Paper Group considers the promotion of environmental management a vital part of our corporate activities. In particular, we believe that environmental compliance is a prerequisite for a company's continued existence, leading us to clearly establish compliance as a top priority within our activities.

The Environmental Management Division undertakes cross-sectional management and oversight of Group environmental and product safety initiatives, and formulates measures to respond to incidents and prevent recurrence. Beyond those functions, the Division also provides direct guidance to all other divisions within the Group and, through prevention of environmental and product liability risks, works to assure the continuity and stable development of the Group's businesses.

In addition to the above, within Group mills, laboratories, and other facilities we appoint managers to administer environmental compliance. Within larger mills we also establish environmental committees and convene regular meetings to share information.

Interview: Director, Environmental Management Division



Hajime Yamanaka

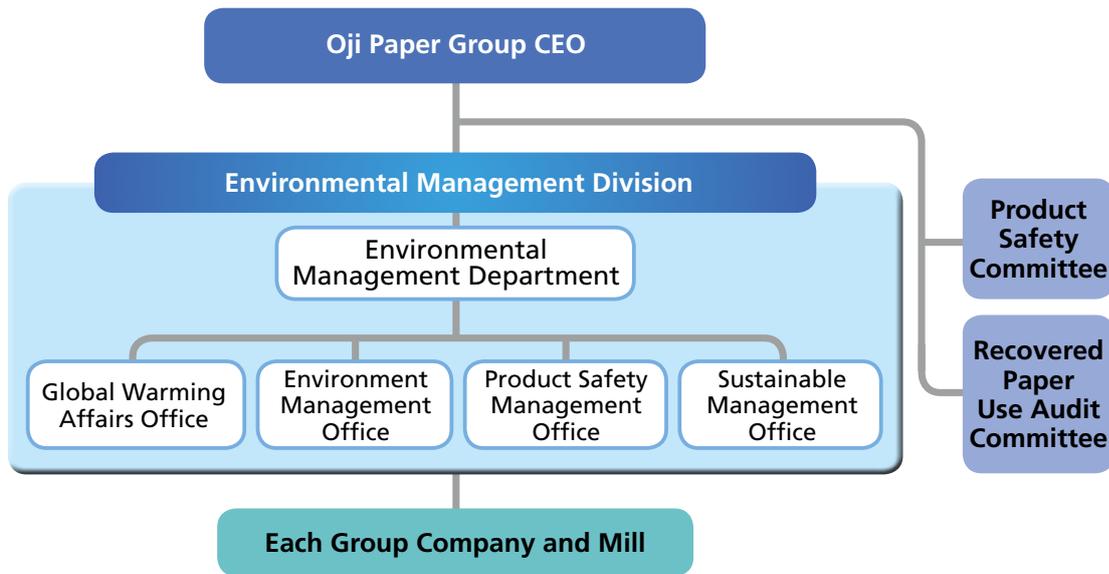
Executive Officer
Oji Paper Co., Ltd.



The Environmental Management Division was established in June 2009. Please tell us about its positioning within environmental management.

With global environmental awareness rising in recent times, we see more and more cases where just "hitting compliance numbers" is not enough to get by. It's true that in the past, just working to meet the numbers was enough, but what is sought from companies now is an environmental compliance stance that offers society a look inside the company in a way that is easy to understand, accurate, and honest. This stance is a lifeline for companies' continued existence. We believe that the Environmental Management Division has to take on this role in order for the Oji Paper Group to advance its environmental management to a higher level.

Oji Paper Group Environmental Management Organization



Main responsibilities of the Environmental Management Department

Global Warming Affairs Office	Environment Management Office	Product Safety Management Office	Sustainable Management Office
Promotion of measures to combat climate change through further improvements in energy efficiency and conservation of the Oji Paper Group's rich forest resources.	Support for improvement of environmental management structures through environmental problem prevention measures at mills and verification/guidance with respect to legal compliance.	Improvement of product safety through management of chemicals; response to customer requests for information.	Communication of information about environmental initiatives, through means such as public reports and participation in exhibits.



What considerations and actions should take place when an actual on-site problem occurs?

First, the divisions in charge of environment at each mill or other facilities should rush to the site. Organizations usually take action along vertical lines, but I'm talking about other organizations at the same horizontal level taking command. Environmental compliance is a prerequisite for a company's continued existence, and direct leadership should take place at the site before consideration of immediate losses.



What stance should a company take toward the environment?

"Use your judgment." Within everyday work, this means honing a sense of "Is something wrong? Is this strange?", and when something does seem odd, stopping, stepping in, looking around, and thinking; those are the fundamentals. Put another way, I want people to place importance on always looking at things as a member of society, not just as a member of the company.



Mill Operations (Environmental Management)

Developing management activities based on our environmental management system and striving to reduce environmental impacts

◆ Environmental management activities in mills

Convening of environmental committees

Environmental committees headed by mill managers meet once a month to deliberate concrete issues and problem areas surrounding environmental conservation.

Our system ensures close follow-up on issues through to the end, with mill managers' instructions recorded during committee meetings and implementation status reported during the next month's committee meeting.

Use of environmental management systems

To maintain continuous environmental management activities within each organization, we have implemented environmental management systems including ISO14001. Moreover, in addition to regular audits by certification bodies, we conduct internal audits at mills to independently confirm that PDCA (Plan ⇒ Do ⇒ Check ⇒ Act) procedures are being followed.

Legal compliance

We create reference charts relating to laws and regulations, keeping these up to date with the latest information. Furthermore, in our daily operations we set voluntary management standards even stricter than those of laws and ordinances, and conduct our management accordingly.

Environmental patrols

The Oji Paper Group's four papermaking companies place importance on keeping environmental problems from occurring, and accordingly conduct environmental patrol activities once a month in mills. Examples of the vital managerial issues addressed each month by Patrols include checks for cracks in dikes, problems in rainwater release valves, proper separation and storage of wastes, and so on.



Operators checking warning lights and compliance numbers (Oji Paper Co., Ltd. Tomakomai Mill)



Inspection of dike drainage pump (Oji Paper Co., Ltd. Tomioka Mill)

Internal environmental audits

Oji Chiyoda Container Co., Ltd.



Oji Chiyoda Container has acquired ISO14001 certification at 25 production facilities, tackling energy conservation and waste reduction along common themes such as lowering its usage of electricity, fuel, and ink, and cutting losses of base paper. The results of such activities are inspected via mutual audits among mills, with information shared among all mills. From fiscal 2010 the company launched paper audits and internal environmental audits checking for legal noncompliance in areas such as daily management of wastewater and voluntary measurement of water quality and noise. Through these actions the company aims to reduce the environmental impact of its business activities, as well as strengthen its environmental management.



Aiming for an environmentally friendly mill (Examples involving environmental hazard mapping)

The activities below, carried out in fiscal 2009, are examples of how we proactively prevent environment-related complaints and problems.

Oji Paper Co., Ltd. Kushiro Mill

Acting on a request received at an environmental conservation meeting, the Kushiro Mill assembled a team to create environmental hazard maps.

The mill received 886 responses to a questionnaire that asked, "Is there anything in or surrounding the mill that creates discomfort for local residents or employees, and which might have a negative impact on the environment?" Collating the responses was an enjoyable job. In addition to suggestions regarding air pollution and noise, the team received calls for beautifying the mill compound, all of which were incorporated into the mill's environmental policy under the heading "Promoting mill beautification through use of environmental hazard mapping, and aiming for an environmentally friendly mill with roots in the community."

Mill compound beautification activities



Before clean-up work



After clean-up work

Oji Paperboard Co., Ltd. Nikko Mill

Occurrence of one environmental incident can lose the trust of many people, beginning with local residents.

The Nikko Mill created environmental hazard maps with the goal of reducing environmental risk and preventing incidents. The mill first conducted a questionnaire survey of all employees (including those of partner companies situated within the mill compound), after which it worked the 181 received proposals into visible form via hazard mapping.

As a result, the mill identified high environmental risk items in areas that had tended to be overlooked. The mill intends to further tackle risk reduction through effective use of hazard mapping.



Example of construction as a risk reduction measure

Data checking

Oji Specialty Paper Co., Ltd. Nakatsu Mill



Oji Specialty Paper's Nakatsu Mill has adopted a system by which multiple persons confirm measurement results and other data.

Power plant managers check continuous data charts for boilers, incinerators, wastewater, and so on, every day. After reconfirmation by monthly patrols consisting of pollution control managers, the results are reviewed at environmental committee meetings.

Daily results are further compiled every month and distributed to pollution control managers, chief managers of pollution control, and the environmental management office manager. This confirmation by multiple persons contributes to the thoroughness of the mill's management.

Education and training

Oji Paper Co., Ltd. Yonago Mill



Following an incidence of soot pollution in April 2010, Oji Paper's Yonago Mill added new training that simulates abnormal boiler smoke emissions. The first round of training covered the matching of response measures to alert level, sending equipment stoppage requests to related sections within the mill, and performing emergency boiler shutdown. To keep incidents from occurring, the mill plans to conduct the training three times a year.

◆ Environmental conservation initiatives

Under the motto “Local-based mills”, the Oji Paper Group works toward environmental conservation that goes beyond legal compliance.

Air pollution prevention

The process of burning heavy oil or coal to generate steam and electricity releases sulfur oxide (SO_x, a substance implicated in acid rain and asthma), nitrogen oxide (NO_x, a causative agent behind photochemical smog), soot, and other substances. To limit the release of these into the atmosphere, we install anti-pollution equipment such as flue gas desulfurization and high-performance dust collection devices.

Water pollution prevention

Paper is made by breaking down wood fiber (pulp) in water, spreading the pulp on a wire netting, and removing the water. In this way, the papermaking process involves a great deal of water and results in a similarly large quantity of wastewater. To prevent water pollution, we form agreements with the prefectural, municipal, or other local authorities surrounding each mill and adhere to strict voluntary standards on top of numerous laws and regulations. Even at mills that do not face such regulations, we manage water quality according to voluntarily-set standards.

Odor prevention

By implementing a system in which the odor-causing compounds emitted by the chemical pulping process are collected, concentrated, and incinerated, we have nearly eliminated odor even within mills.

Noise prevention

The blowers, compressors, and other equipment used in mill operations generate noise. We implement appropriate measures such as noise control at points of origin and construction of sound-proofed walls, so as not to disturb residents living near mills.

zoom



Noise control measures at containerboard manufacturing mills

During the manufacture of containerboards, paper debris are collected through blower tubes on the equipment. However, the debris generate considerable noise when passing through the curved portion of the tubes. At mills manufacturing containerboards, we have fitted the blower tubes with sound-absorbing rubber covers to reduce levels of noise.



Sound-absorbing rubber covers

zoom



Responding to new fiscal 2010 VOC emissions regulations

Under VOC* emissions regulations included among revisions to the Air Pollution Control Law in 2004, facilities emitting VOCs are subject to controls on VOC concentrations from April 2010. Targeted facilities within the Oji Paper Group include mills manufacturing adhesive and release coated paper products and mills with gravure printing equipment. As of March 2010, the end of the grace period for compliance with the new VOC regulations, we had implemented measures at all targeted facilities, including installation of VOC removal equipment (deodorizing equipment and solvent recovery systems).



Deodorizing equipment (New Tac Kasei Co., Ltd. Toyonaka Mill)

In addition, the Oji Paper Group has advanced VOC reduction in accordance with the voluntary action plan established by the Japan Paper Association in September 2005. The voluntary action plan calls for a 75% reduction in VOC emissions in fiscal 2010, compared to fiscal 2000 levels; in fiscal 2009, the Oji Paper Group came close to that target with a 73% reduction.

*** VOC (Volatile Organic Compounds):** These diverse compounds, which vaporize in the atmosphere, include toluene, xylene, and ethyl acetate. VOCs are among the substances responsible for photochemical oxidants. The grace period for the new regulations ended in March 2010, with controls on VOC concentrations applying to VOC emissions facilities from April.

◆ Expanding implementation of environmental management systems

At each of its mills, the Oji Paper Group is introducing environmental management systems (EMS) that are adapted to the mill's level of environmental impact and the demands of its stakeholders. In concrete terms, this means applying the international ISO14001 standard at papermaking and containerboard mills, the domestic third-party certifications KES and Eco-Action 21 at medium-scale mills, and the Oji Paper Group's proprietary system O-EMS at small-scale mills. O-EMS is a system based on the requirements of the ISO14001 standard but devised for easier understanding and implementation.

At present, our particular focus is on implementing O-EMS in the small-scale mills that have been willing to undertake environmental action but have not had the managerial resources to gain third-party certifications. Overall it is a simple EMS, but a focus on implementing its key sections, such as legal compliance and environmental risk mitigation, allows construction of a management structure matched to existing conditions.

Looking ahead, we plan to expand third-party certification and O-EMS at a greater number of mills.

■ Oji Paper Group Status of EMS Certification

(As of July 1, 2010)

	Number of facilities	Mills (selected)
ISO14001 (third-party certification)	102	All mills of Oji Paper, Oji Paperboard, Oji Specialty Paper, and Oji Nepia; Oji Paper, Oji Chiyoda Container, Hokkaido Mori Shigyo, Gunma Mori Shigyo, Oji Cornstarch, Oji Packaging, Oji Interpack, and others
Certifications in Japan (third-party certification)	5	NIHON SEIKAHOUISO, Chuetsu (Shiga), Mori Kamihanbai (Kyoto, Nagoya), Tottori Mori Shigyo
O-EMS (self-certification)	9	Fuchigami Danbo-ru, Matsuda Aoi Danboru, Shiota Danbo-ru, Yamachu Sangyo, Daiichi Shiko, Mori Kamihanbai (Tokyo), Yamanashi Mori Shigyo, Hokuyo Shiko (Fukushima), Oji Seitai Kaisha (Sendai)

The program targets 207 mills conducting environmental audits.



voice



Reducing environmental impacts through O-EMS acquisition

Hirotsugu Tokudome
President
Fuchigami Danbo-ru Co., Ltd.

Our start with EMS came about three years ago when the Environmental Management Department suggested that we try implementing O-EMS. Although we had acquired ISO9001 certification, the environment-related vocabulary was all new to us and we were starting from zero. At the stage of building the system, we received advice from the Environmental Management Department, which was familiar with environmental regulations and risks for mills in our industry, and moved ahead with understanding our situation and all relevant laws, until we achieved certification in September 2008. After putting the system in place, we undertook two improvement projects: we reduced the risk of wastewater emissions outside the mill through wastewater treatment equipment and waterway improvements, and reduced the noise caused by our recovered paper processing equipment (cyclone). The latter in particular has earned us high marks from neighboring residents.

In the future, we intend to continue our containerboard manufacturing activities in harmony with nature, and promote action toward making even greater environmental improvements.

voice



Evolution through O-EMS acquisition and mutual audits

Toshiyuki Fujita
Section Chief
Shiota Danbo-ru Co., Ltd.

In December 2009 we received certification as the third O-EMS-registered mill. At first, our understanding of environmental initiatives was inadequate, but through guidance we came to understand that the accumulated actions of each mill and each company are what build environmental measures. Our in-house study groups and environmental committee, too, raised their capabilities over time and we started to look closely at the environmental impact of actions we once conducted without thought. In April 2010 we engaged in internal cross-audits with the O-EMS-certified companies Matsuda Aoi Danboru Co., Ltd, and Daiichi Shiko Co., Ltd. In the past we were the recipients of audits; this time, standing in the spot of auditing other mills as auditors ourselves, was a fresh experience for us. Through exchange of ideas during the work, these internal audits let us realize the depth of our environmental measures and spurred us to seriously address the continually-changing environmental issues facing us.

(Photograph: Manager Fujita, left, performing mutual audit)

◆ On-site environmental audits

The Environmental Management Division launched on-site environmental audits in 1994, and since then has expanded its scope to target small-scale as well as large-scale mills.

At small mills in particular, the insufficient experience of environmental management can be seen in a lack of legal and regulatory knowledge, and about half of the mills are subject to waste-related and other guidance as they struggle to cope with details of regulations. The results of our improvements are becoming evident in reduced incidence and severity of such guidance. Yet to keep up with shifting laws and regulations and changes in environmental managers, we consider the continuation of environmental audits to be indispensable.

Under the system we have constructed, auditors' requests for improvements do not stop at simple guidance. We continue following up and reporting on items until improvements are clearly completed.

From fiscal 2010 we are adopting a stricter system that implements document examinations to further enhance our audits and increases the frequency of on-site audits at large-scale mills with high environmental impact from once every two years to once a year. In addition, we convene study groups for environmental managers at locations nationwide to enhance knowledge of laws and regulations. Going forward we plan to further boost knowledge and spread awareness for the environment, firmly preventing legal violations and environmental problems.

■ Number of Oji Paper Group mills subject to audits

	Own mills	Affiliate mills, etc.
Oji Paper	9	2
Oji Paperboard	11	8
Oji Specialty Paper	8	0
Oji Nepia	3	0
Oji Chiyoda Container	30	33
Mori Shigyo Group	4	31
Oji Interpack	5	1
Oji Forest & Products	9	1
Oji Seitai Kaisha	6	1
Oji Packaging	3	2
Oji Cornstarch	3	0
Oji Kinocloth	2	1
Oji Tac	4	0
New Tac Kasei	3	0
Shin Nippon Feather Core	8	0
Chuetsu	3	2
Other affiliates	14	

KS-PRINTEC (two mills), Kyushu Packaging (two mills), Oji Adba, KYOTO OJIPACK, Shinomura Chemical Industry, Apica, Tomakomai Oji Shigyo, Tomakomai Energy Kosha, Oji Salmon, Hotel New Oji, Oji General Hospital, DHC Ginza

Total 207

voice



Experiencing audits at domestic and overseas mills

Michihiro Yamashita
Deputy Mill Manager,
Tomakomai Mill,
Oji Nepia Co., Ltd.

I have undergone environmental audits at the Suzhou Mill, Nagoya Mill, and Tomakomai Mill. Environmental conservation awareness was beginning to grow in China; under direction from Japan, at the Suzhou Mill we were able to impress upon Chinese local authorities that we are undertaking environmental measures. At Nagoya we underwent a detailed audit and received apt advice that let us deepen mill employees' understanding of regulations. The audit also let us improve our environmental management methods, and proved useful in environmental risk management.

At Tomakomai, too, I want to put environmental audits to effective use in mill operation that stays free of environmental issues.

(Photograph: Deputy Mill Manager Yamashita patrolling mill)

voice



Encountering continuous improvement first-hand through environmental audits

Makoto Tanaka
Director, Environmental
Conservation Office, Nagoya Mill,
Oji Cornstarch Co., Ltd.

I have experienced environmental audits four times so far, each time receiving guidance from a variety of viewpoints, getting clarification on points for environmental management improvements that we did not notice on our own, and finding the experience meaningful. As a result of rethinking our own systems after receiving guidance in environmental audits, I feel we have been able to make improvements toward far more responsible management methods, especially with regard to matters such as on-site management methods to prevent environmental problems, and procedures in response to incidents. From here on out, I hope to make effective use of environmental audits toward even better on-site environmental management, and make efforts to prevent occurrence of environmental incidents.

(Photograph: Director Tanaka performing regular check of mill wastewater clarity)



Mill Operations (Coexistence with Local Communities)

Building open mills to deepen ties with communities

◆ Coexistence with local communities

The Oji Paper Group undertakes activities at all of its mills to deepen ties with local communities. Our continuously-implemented initiatives aimed at local mills include our environmental monitor system, mill tours, Groundwork activities (see below), participation in local events, and recycling of disposable chopsticks.

Environmental monitor meetings

We hold environmental monitor meetings in which we receive opinions and information from people living near our mills. We believe that proactively disclosing information in response to local voices leads to the building of trust as well as to the advancement of environmental measures such as odor and noise control. In fiscal 2009 we held monitor meetings 184 times, adding to our record of meetings at which we have received comments from residents such as "Oji Paper responded quickly to the vibration issue." (Photograph: Oji Paper Co., Ltd. Fuji Mill)



Mill tours

Seeing our production sites first-hand is an excellent way for people to learn about papermaking. In addition to business tours for our customers, the Oji Paper Group arranges mill tours for local residents, including elementary and middle school students on social studies field trips. (Photograph: Oji Specialty Paper Co., Ltd. Ebetsu Mill)



Groundwork

Endorsing the spirit of the Japan Groundwork Association*, our workplaces nationwide engage in local clean-up and tree-planting activities. In fiscal 2009 we held such activities 1,759 times, with participation by 22,732 persons from across the Group. (Photograph: Oji Chiyoda Container Co., Ltd. Kasumigaura Mill)

* **Japan Groundwork Association:**
Originating in England, this volunteer organization's central ethos is contribution to regional environments via cooperation among citizens, local authorities, and businesses.



Participation in local events

In addition to Groundwork activities, the Oji Paper Group's mills participate in other local events. At events such as exhibits, lectures, and fairs of all kinds, we take part and provide information about the Oji Paper Group's environmental activities. (Photograph: Oji Paperboard Co., Ltd. Edogawa Mill)



Recycling of disposable chopsticks

As one of its social contribution activities, from 1992 the Oji Paper Group has collected used disposable wooden chopsticks from cooperating people, for recycling as raw material for paper. In fiscal 2009 we collected 351 tons of the chopsticks and donated ¥350,000 to the non-profit organization Decade of Education for Sustainable Development. (Photograph: Oji Paper Co., Ltd. Kasugai Mill)





Product Safety Management

Gathering necessary information about the chemicals we use, to promote product safety and inform customers

◆ Informing customers

Informing customers

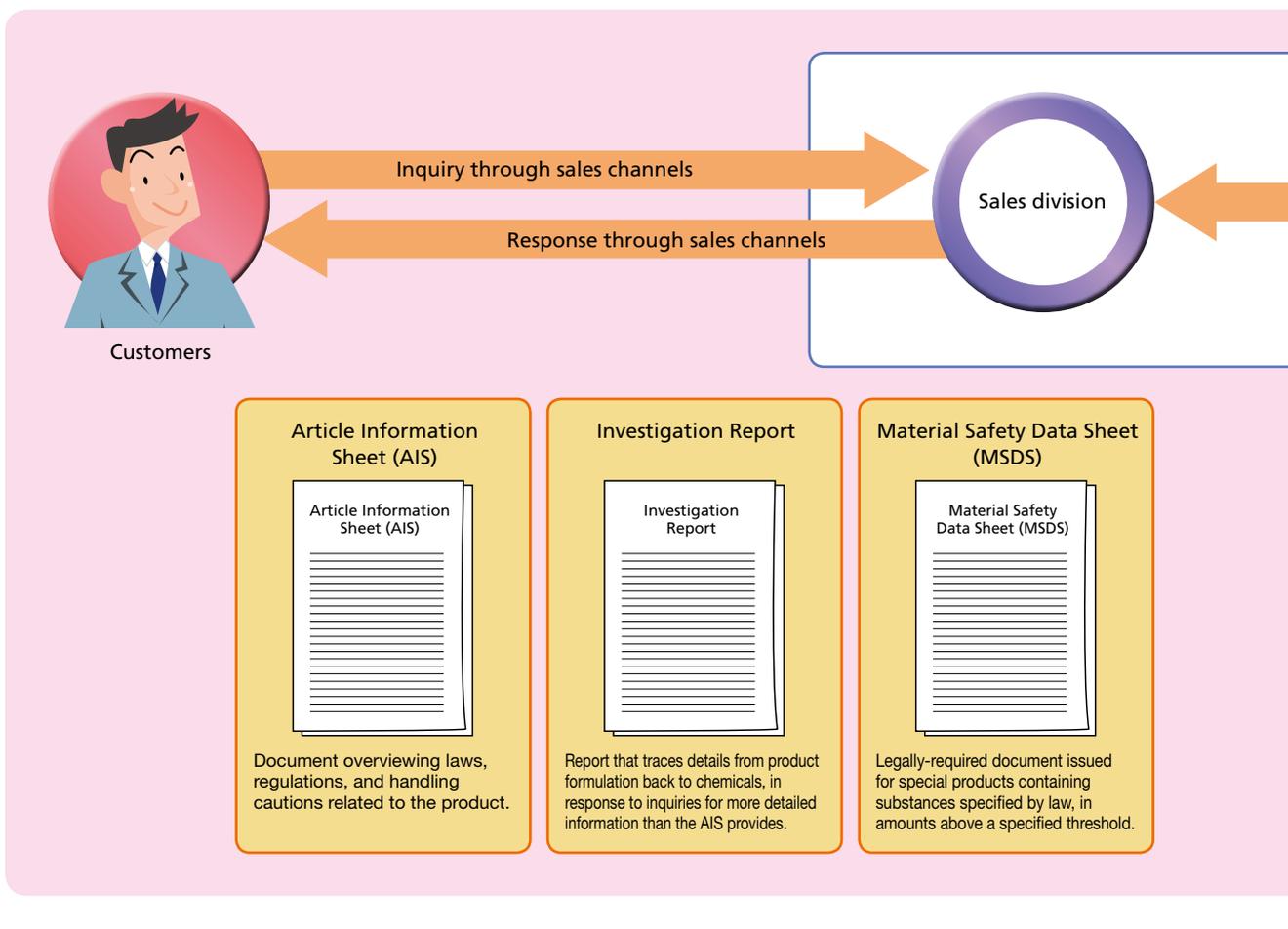
The raw materials for paper, an item deeply rooted in our lifestyles and widely used all around us, are primarily wood and recovered paper. However, equipping paper with diverse functionality, including strength and suitability for printing, requires the use of chemical products. To ensure the thorough safety of our products, the Oji Paper Group verifies the safety of the chemicals which are used in papermaking, and uses that information in replying to inquiries from customers.

Responses to inquiries

Oji Paper, Oji Paperboard, and Oji Specialty Paper respond to a variety of inquiries on our products, using Article Information Sheets (AIS), Investigation Reports, and Material Safety Data Sheets (MSDS). Group companies other than the above three often respond independently to inquiries.

In fiscal 2009, the three companies described above responded to about 7,000 customer inquiries.

The route of information to customers (Oji Paper Co., Ltd., Oji Paperboard Co., Ltd., Oji Specialty Paper Co., Ltd.)



◆ Verification of chemical safety

The Oji Paper Group differentiates the content of chemical management, depending on the scale of mills and the type and purpose of chemicals.

At eight Group companies*, we address a wide diversity of the chemicals we use through our pre-use evaluation system and information updating system, to collect and update information in even more detail than the MSDS reports provided by the chemicals' manufacturers.

Group companies other than the eight described above employ a more limited range of chemicals and accordingly conduct more simplified management. However, these companies also keep close watch on the ongoing strengthening of domestic and overseas regulations concerning chemical substances, and work to keep information thoroughly up to date.

* The eight companies are Oji Paper Co., Ltd., Oji Paperboard Co., Ltd., Oji Specialty Paper Co., Ltd., Oji Nepia Co., Ltd., Oji Packaging Co., Ltd., Oji Kinocloth Co., Ltd., Oji Tac Co., Ltd., and Tomakomai Oji Shigyo Co., Ltd., with New Tac Kasei Co., Ltd. undergoing preparation to deploy the systems.

Pre-use evaluation system

When beginning the use of a new chemical, the above eight Group companies employ the Oji Paper Group's proprietary New Raw Material Safety Sheets to collect

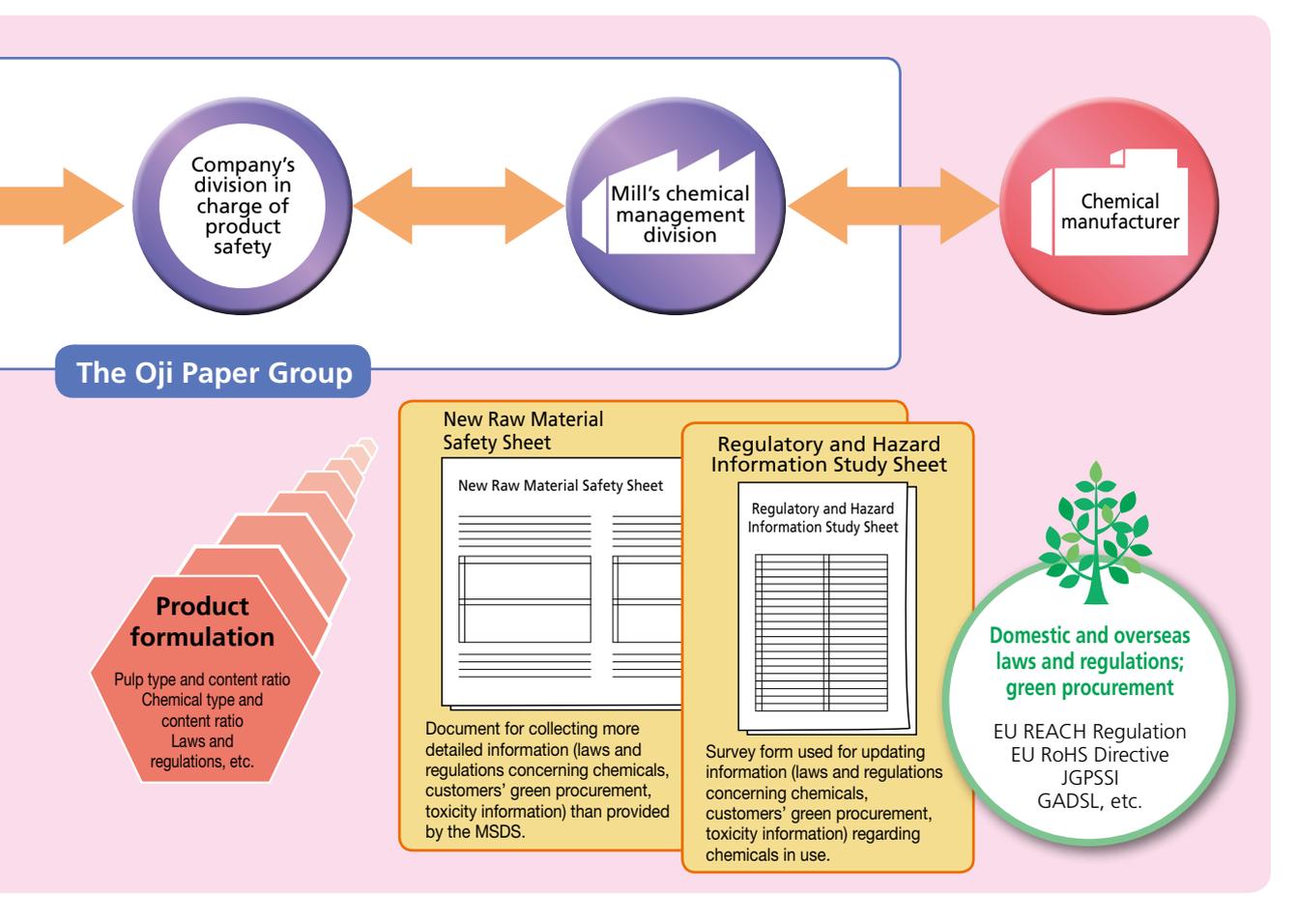
information on relevant regulations, customers' green procurement, and chemical toxicity. The gathered information exceeds MSDS in detail, allowing confirmation of the information required by customers. To keep up with the most recent regulations, we revise the survey items on the New Raw Material Safety Sheets as required.

This system was launched by Oji Paper in 1994, the year before enactment of Japan's Product Liability Law, and afterward was extended to other companies in the eight above.

Information updating system

Both in Japan and overseas, we have been strengthening our chemical substance management as more and more substances become the target of regulation or of customers' green procurement. Adhering to laws and providing accurate information to customers requires that we promptly collect the latest information on chemicals which we already have in use.

Toward that end, and as a complement to our pre-use evaluation system, we employ the Oji Paper Group's proprietary Regulatory and Hazard Information Study Sheets to periodically collect the latest information from manufacturers of the chemicals currently in use by the Group.



◆ Product Safety Committee

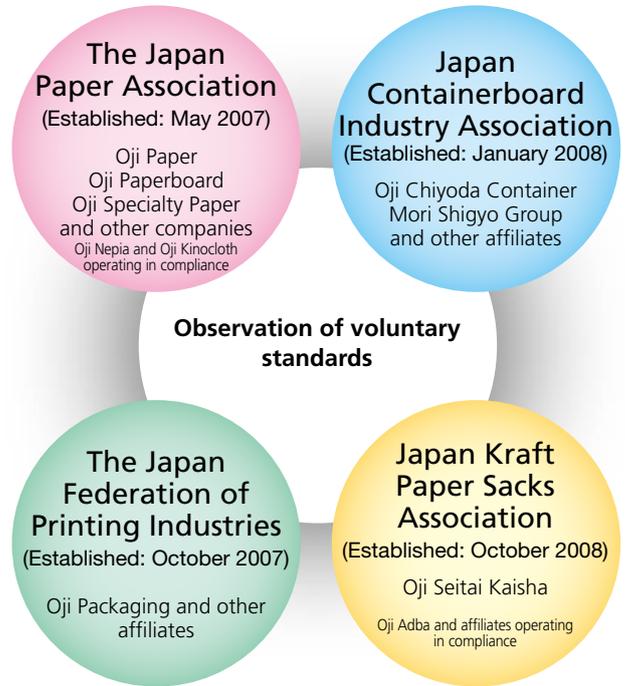
To ensure product safety, the Oji Paper Group has established policies on matters including implementation of product safety standards and handling of voluntary standards for food contact containers and packaging, through a Product Safety Committee composed of 13 major Group companies. Moreover, in fiscal 2009 we formed a subcommittee of the Product Safety Committee from 8 small- and medium-scale Group companies, to disseminate information on items discussed and approved by the Product Safety Committee.

◆ Voluntary standards for food contact containers and packaging

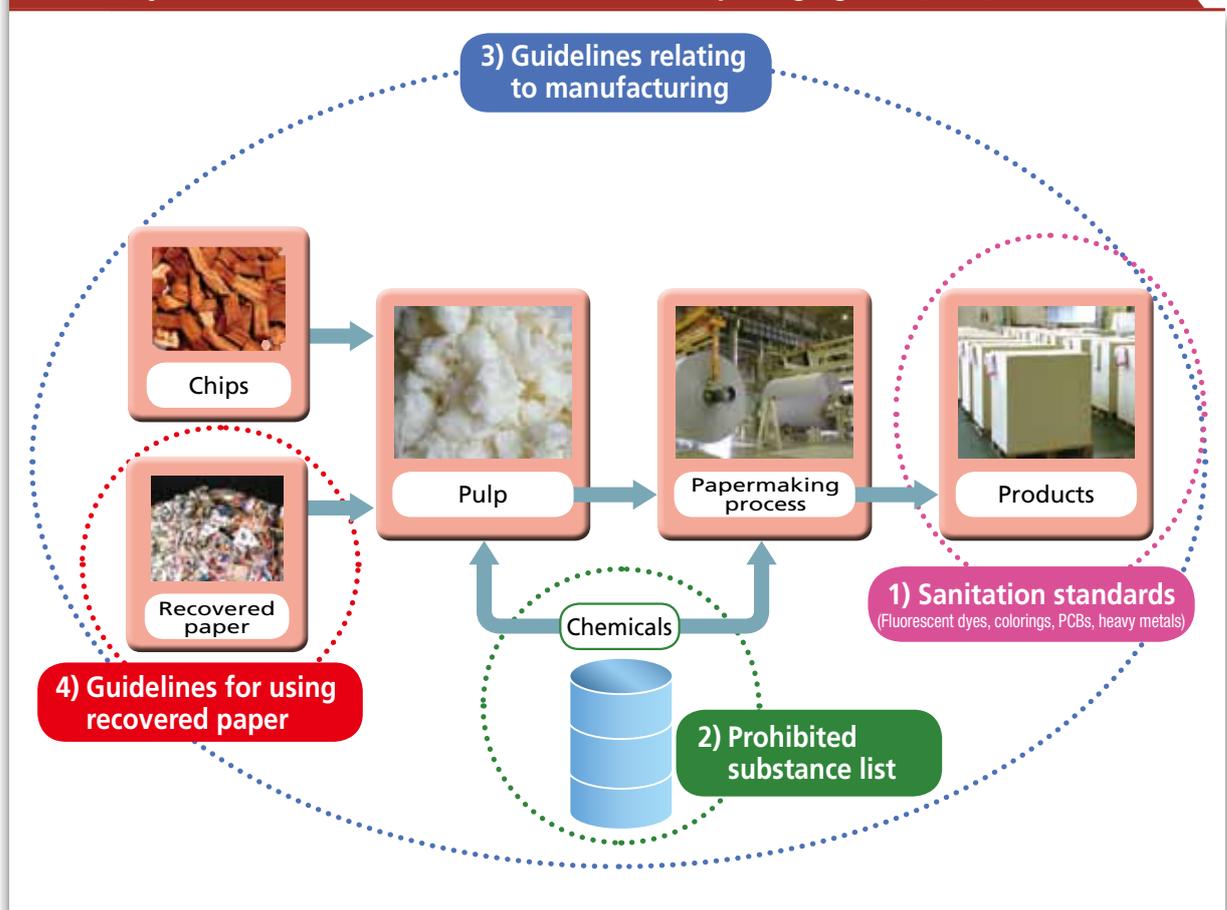
The Japan Paper Association has established its own Voluntary Standards for Paper and Paperboard Intended to Come into Contact with Food, based on a need to ensure a higher level of safety and reliability.

As part of its company policies, the Oji Paper Group has adopted the basic points of these voluntary standards: 1) sanitation standards, 2) prohibited substance list (for unusable substances), 3) guidelines relating to the manufacture of paper and paperboard, and 4) guidelines relating to the manufacture of paper and paperboard made from recovered paper.

In the same manner as the Japan Paper Association, other downstream industry bodies have also established voluntary standards, which relevant companies in our Group adopt.



Voluntary standards for food contact containers and packaging (the Japan Paper Association)



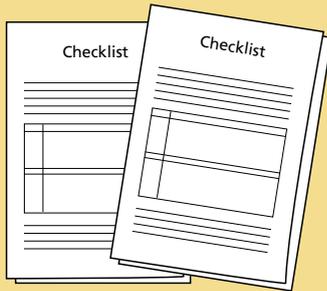
◆ Product safety audits

To confirm that chemical safety checks and our internal standards for food contact container and packaging voluntary standards are being properly applied, the Oji Paper Group conducts product safety audits (at present, generally one document audit every year and one on-site audit every two years) based on the checklists returned by mills.



Product safety audit at Oji Tac Co., Ltd. Utsunomiya Mill

Checklists used in product safety audits



The checklists cover our internal standards for chemical and product safety checks in question form. Mills' responses to the questions during internal audits allow confirmation of the mills' compliance status.

voice



Food contact container and packaging initiatives

Koji Honma
General Manager,
Quality Management
Office, Kanagawa Mill,
Oji Chiyoda Container
Co., Ltd.

As the main form of packaging for transport, containerboard is used in a wide range of areas, with an increasingly high proportion directed at food applications. To ensure product safety, Oji Chiyoda Container has established an "Internal Standards Document" based on the voluntary standards of the industry organization to which the company belongs. We use internal audits to confirm our status in implementing these standards.

Through the audits, we have reconfirmed the importance of hygiene management, such as the shoe-changing and hand-washing we have always performed at the mill, while also instilling in employees the understanding that food safety and security are among the demands placed upon the containerboard we handle. Looking ahead, we will work to further beautify the mill and improve customer satisfaction through these initiatives.

(Photograph: General Manager Honma carrying out internal audit of manufacturing lines)

zoom



Becoming a member of the Oji Paper Group: New Tac Kasei Co., Ltd.

Since becoming a member of the Oji Paper Group in September 2009, New Tac Kasei has seen great changes in its product safety-related initiatives. These include improvements in product safety checks through information provided by Oji Paper, implementation of company-wide tracking of environmental and product safety through the appointment of dedicated environmental managers, and construction of a raw materials safety check system beginning from the trial production stage.

Moreover, in July 2010 the company established a new Safety and Environmental Management Office, through which it shares information with Oji Paper Group companies and further enhances its product safety management.

(Photograph: Product inspections)



Measures to Tackle Waste

Working to reduce final disposal of waste through volume reduction and effective utilization

◆ Measures to reduce waste

Our measures to reduce waste have been focused on reducing the volume generated and promoting the effective utilization of waste.

While we have devised creative measures to improve the yield of raw materials at mills and have worked to develop new areas for the utilization of waste, in fiscal 2009 we fell short of our final disposal rate target. One major obstacle to the utilization of waste is the incinerator ash from our new energy boilers. This ash is not only voluminous but also contains contaminants such as chlorine from RPF waste plastics and lead from scrap tires, making its treatment a considerable challenge. Given the limitations of landfill sites, we intend to pursue our shift to the effective utilization of such waste and to reach our final disposal rate target.

◆ Redefining final disposal rate

As its metric for managing the final disposal rate of waste, the Oji Paper Group has used the ratio of the dry volume of landfilled waste to the production volume of paper and paperboard. However, actual waste is not dry, and final disposal rate is normally expressed as the ratio of the volume of landfilled waste to the volume of generated waste, in line with Japan Business Federation standards. For these reasons, and to make the volume of our generated waste more visible, we have decided to rethink our definition of final disposal rate.

Following the revised definition, the 0.5% target given in our Environmental Action Plan 21 (p.52) now equates to a 3.4% target.

We will continue to pursue reduction of generated waste volume, as well as effective utilization of the waste we do generate.

■ Waste disposal at the Oji Paper Group's four papermaking companies

(FY2009)

	Generated waste volume (thousand tons / year)	Amount of volume reduction and effective utilization (thousand tons / year)	Final disposal volume (thousand tons / year)	Final disposal rate (%)
Oji Paper	1,111	1,029	82	7.4
Oji Paperboard	232	214	18	7.5
Oji Specialty Paper	75	73	2	2.8
Oji Nepia	13	10	3	20.3
Total	1,430	1,326	104	7.3

- Generated waste volume: Gross weight of generated waste.
- Amount of volume reduction and effective utilization: Weight of waste reduced in volume or effectively utilized, and thus not sent to final disposal.
- Final disposal volume: Weight of landfilled waste.
- Final disposal rate: Ratio of volume of landfilled waste to volume of generated waste.



Volume reduction of waste and energy recovery

Toward the goal of economy and long-term use of final disposal sites, waste that cannot be utilized effectively is subjected to volume reduction to the extent possible and then landfilled.

As the papermaking sludge generated at mills contains considerable water, we reduce its volume through water removal. At mills with new energy boilers or waste incinerators, we incinerate the remaining sludge to further reduce its volume. The heat generated from this incineration is recovered and utilized as an energy source inside the mills.

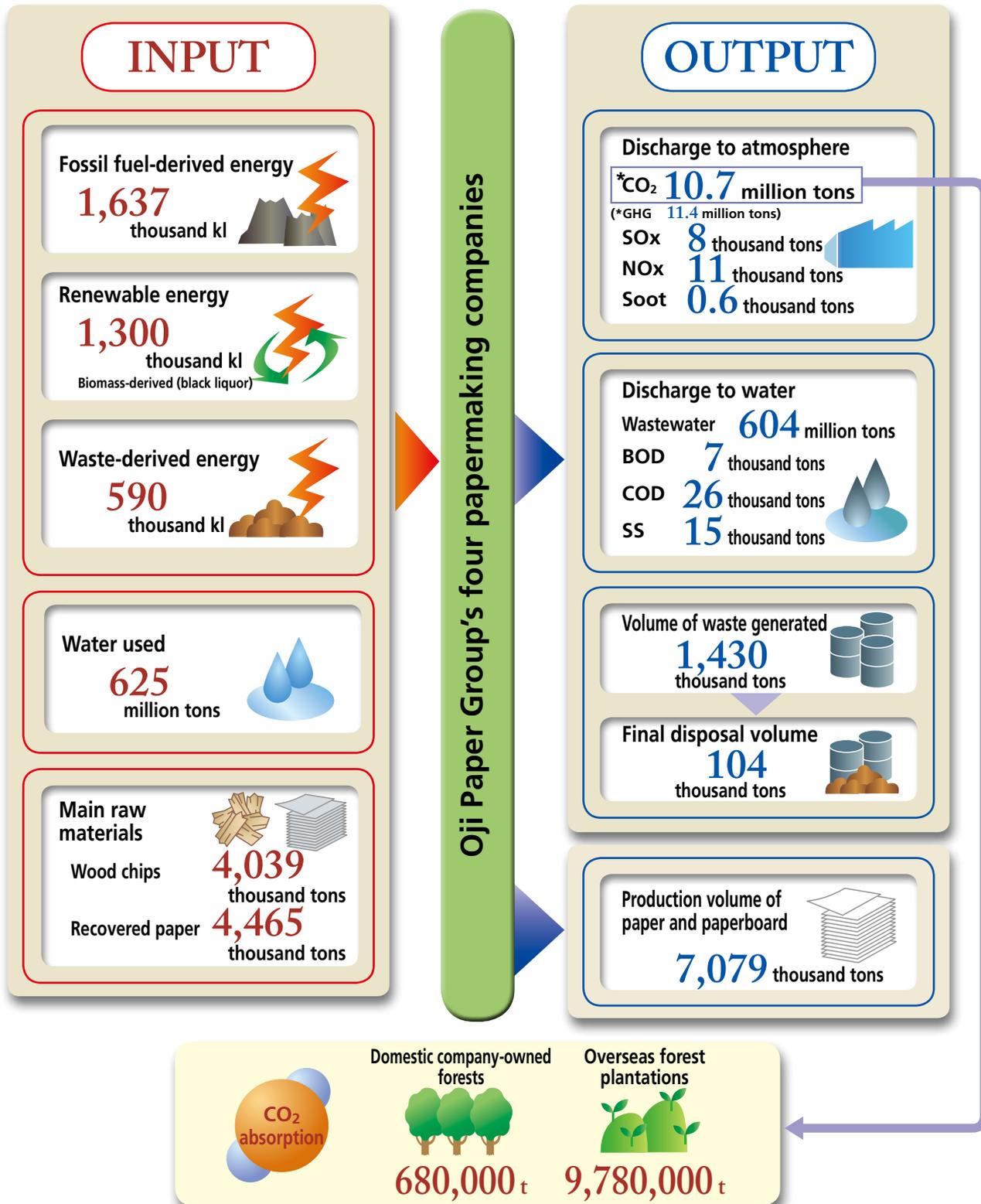
New energy boiler recovering energy from waste at Oji Paper Co., Ltd. Nichinan Mill





Environmental Impacts of Papermaking Companies

Understanding the environmental impact of our production activities to effect further improvement

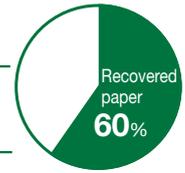


* CO₂: Oji Paper's estimate of CO₂ emitted from fuel (fossil, renewable, waste, purchased power) consumed in manufacturing processes.
 * GHG: Oji Paper's estimate of greenhouse gases (CO₂, CH₄, N₂O) emitted from fuel (fossil, renewable, waste, purchased power) consumed in manufacturing processes.
 • Other terms are discussed on p.55.



Resource- and Environment-related Business Initiatives (Recovered Paper)

Making maximum use of limited resources through paper recycling



Percentage of raw materials in papermaking

Overview of recovered paper usage

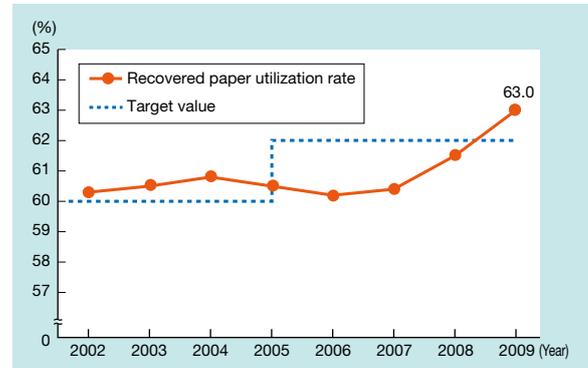
Japan's paper recovery rate is among the highest in the world, thanks to the efforts of everyone taking part in recovery. To make maximum use of recovered paper as a raw material in papermaking, in 2005 the Oji Paper Group set a goal of a 62% recovered paper utilization rate by 2010, and subsequently met that goal in fiscal 2009.

Against reduced production following a drop in demand for paper and paperboard products, the amount of domestic paper recovered and used has also fallen. On the other hand, exports of recovered paper to the fast-growing economy of China hit a record in fiscal 2009. While this may appear to represent a flow of renewable resources overseas, the reality is that the amount of recovered paper usable as a raw material is limited, even with utilization maximized. This is because quality requirements for paper products inevitably place a limit on the content ratio of recovered paper.

For example, the amount of containerboard that flows into Japan as packaging material for products from overseas exceeds the amount that flows out of Japan. Excessive exports are a hindrance to healthy domestic recovered paper recycling, but a certain level of export has the effect of reducing the amount of recovered paper that becomes garbage. For this reason, the Oji Paper Group believes that balanced exports together with domestic recovery and use are both vital.

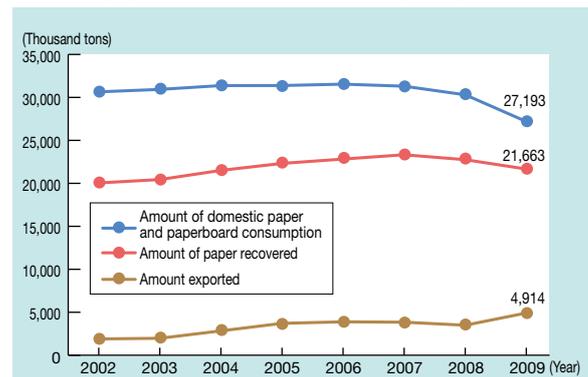
* **Recovered paper utilization rate:** Recovered paper consumption amount / total fiber raw material consumption amount (recovered paper + pulp + other fiber raw materials)

Changes in the Oji Paper Group's recovered paper utilization rate



Sources: Compiled from Paper Recycling Promotion Center statistics and Oji Paper statistics

Changes in amount of domestic paper and paperboard consumption, amount of paper recovered, and amount of paper exported



Source: Compiled from Paper Recycling Promotion Center statistics



Recycling of confidential documents

In 2006, Oji Paperboard's Edogawa Mill installed dedicated dissolution equipment for confidential documents. The amount of documents recycled through the system is increasing steadily, reaching 11,000 tons in fiscal 2009. The company plans to further expand use of this valuable recycled resource.



Comments from users

"We have been practicing recycling, but when we heard that the Edogawa Mill can do same-day processing of documents brought in, we jumped at the service." (Warehousing firm)

"We can confirm on the spot that processing is taking place without even opening the cartons, which is reassuring from the standpoint of preventing information leaks." (Financial institution)

"The Edogawa Mill is close to where our confidential documents are generated, meaning we can expect big improvements in transport efficiency." (Shipping firm)

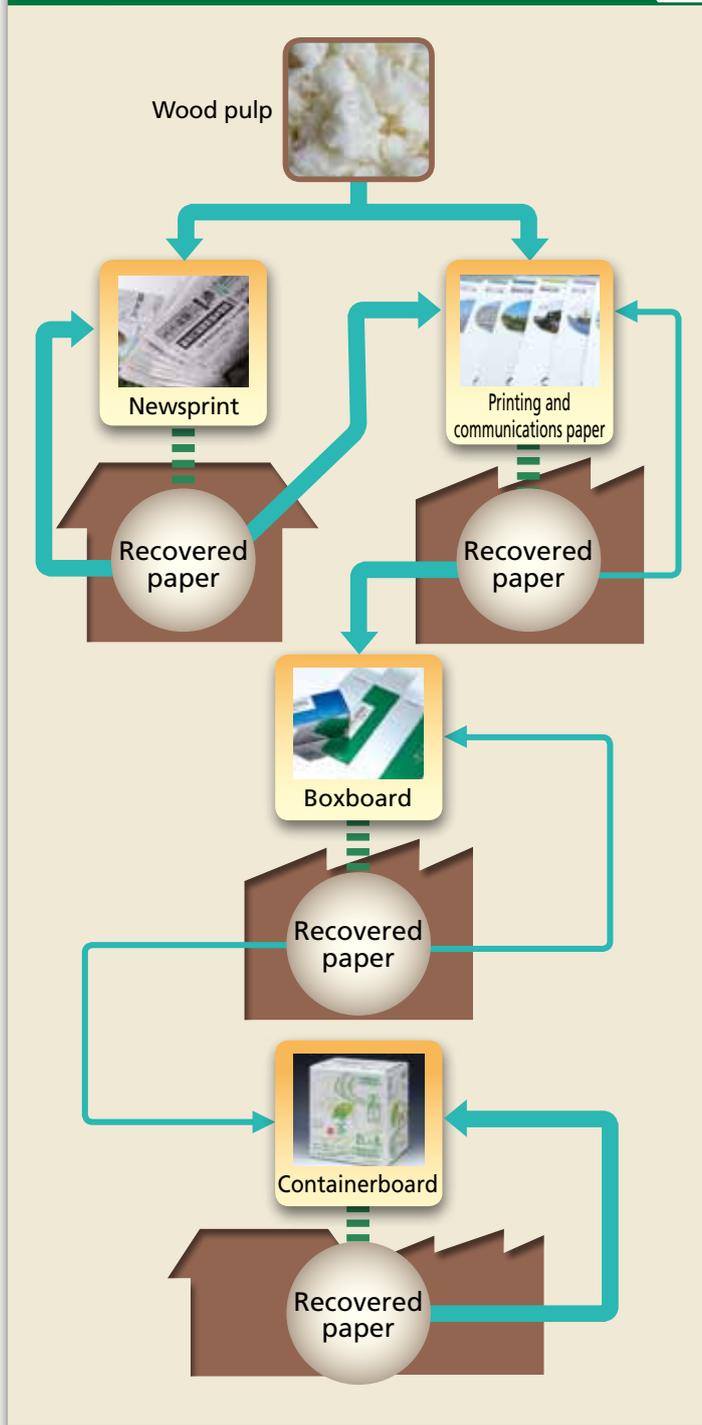
Preventing recurrence of recovered paper falsification

At all mills that manufacture paper products with recovered paper content (21 mills at papermaking companies in fiscal 2009), the Oji Paper Group is continuing its measures to prevent the recurrence of falsified reporting of recovered paper content.

Major measures in fiscal 2009 were as follows:

- 1) At each mill, we have introduced inspection systems to confirm the recovered paper pulp content ratio at each stage of production, under guidelines set by the Japan Paper Association.
- 2) At least once a year, a Recovered Paper Use Content Ratio Audit Committee, drawing together all group company head offices, conducts internal audits of raw material and product management and of the operational status of inspection systems.

Primary flow of recovered paper recycling



◆ Types and applications of recovered paper

The Oji Paper Group produces a wide range of paper and paperboard product types, incorporating various types of recovered paper matched to quality requirements. Frequently, recovered paper is recycled back into products not only in the same product category as the source paper, but in entirely separate product categories.

As production of newsprint falls amid changes in media, the amount of recovered newsprint is in gradual decline as well. To maintain our use of recovered paper, we are branching out from recovered newsprint and tackling the use of recovered magazine paper and printing and communications paper as raw materials. Compared with recovered newsprint, recovered magazine paper contains a high level of impurities that must be removed with equipment. Meanwhile, as raw material for paperboard, we are advancing the use of vinyl-coated paper and other recovered papers traditionally difficult to use.



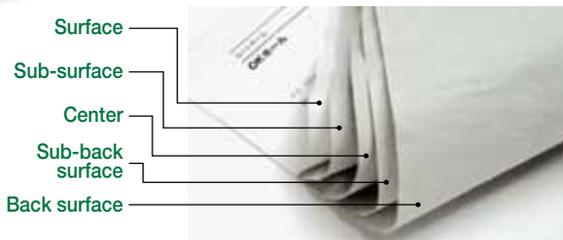
The history of recovered paper use

The recycling of recovered paper in Japan is said to go as far back as the reconstituting of unneeded paper in the Heian Era, with the current recycling system of collection, separation, and use appearing from the Edo Era.

Almost all paper currently in circulation is "Western-style" paper. The Oji Paper Fuji Mill was the first to use recovered paper in Western-style paper in 1953. Since then, the amount of recovered paper we employ has continued to rise along with demand for recycled paper, amid the urban waste problem and the heightening of environmental awareness.



A closer look at boxboard



Recovered paper is used according to its type. For example, the boxboard used in confectionary boxes is composed of four to five layers; the recovered paper used as raw material may differ by layer. Recovered papers are used to best advantage according to quality and amount.

Surface: Mainly white shavings, made from the trimmings from printing and bookbinding processes.

Sub-surface: Made from white shavings and recovered magazine paper. **Center, sub-back surface, and back surface:** Mainly made from recovered magazine paper.



Resource- and Environment-related Business Initiatives (Forest Resources)

Exploring new possibilities based on sustainable forest resources

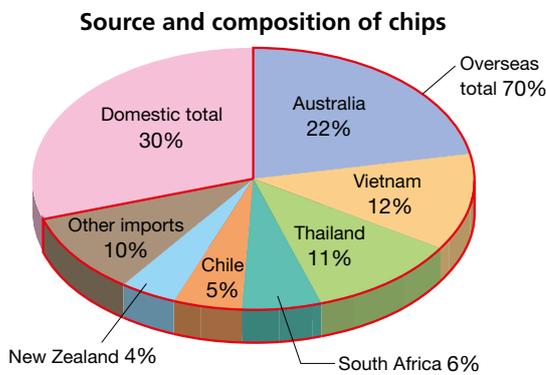


Percentage of raw materials in papermaking

◆ Source and composition of wood chips

The Oji Paper Group's domestic mills used 4,039,000 tons of wood chips in fiscal 2009, about 70% of which came from overseas.

Following our Partnership Procurement Policy and our Wood Raw Material Procurement Guidelines, we procure wood chips only from sustainable forests that are appropriately managed environmentally, socially, and economically.

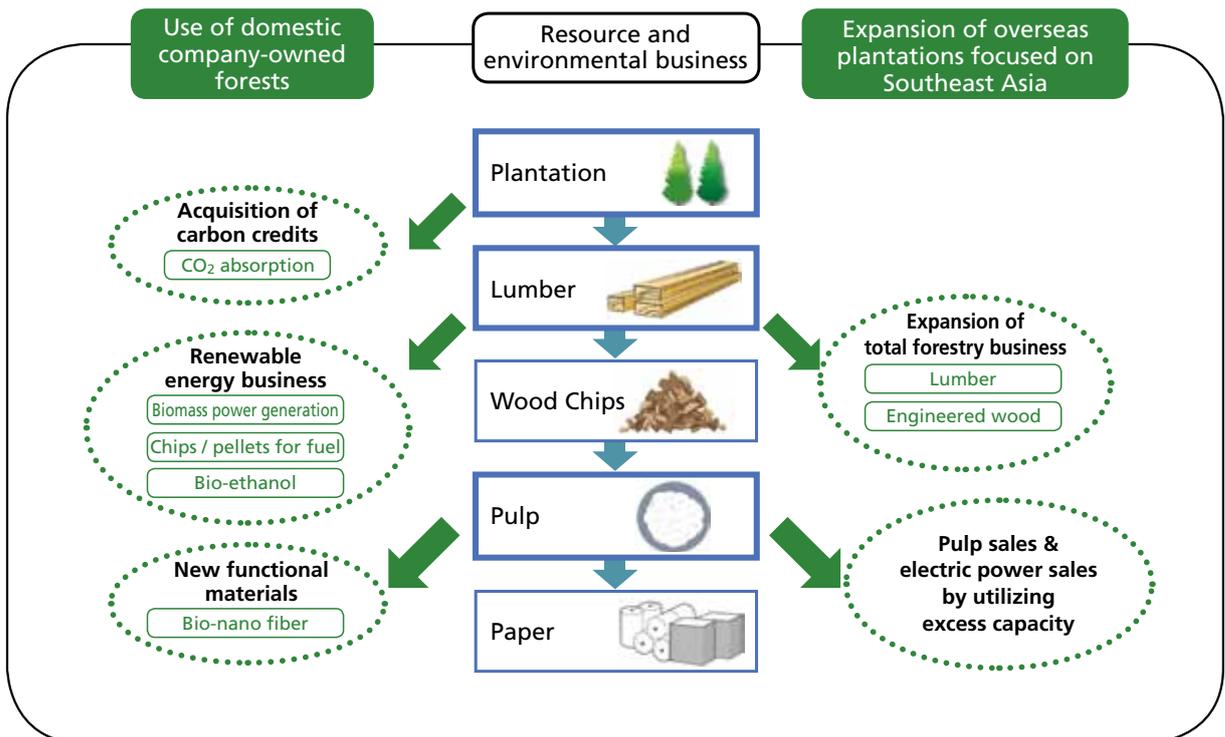


Chip traceability reporting

The Oji Paper Group requires the submission of traceability reports by all suppliers of chips. This report, consisting of self-assessment on the part of suppliers, is collected once per shipload of imported material and once per year from domestic suppliers. The collected reports are sent once per year to a third-party evaluation body to confirm 1) conformance with the Wood Raw Material Procurement Guidelines, and 2) proper recording of logging region. Results of the evaluation are reported on our website. We believe that confirmation of logging performed legally within sustainable forests is a part of environmental consideration.

◆ Promotion of resource and environmental business

We are actively advancing our resource and environmental business, taking a step beyond the securing of resources to make use of our accumulated forest resources and related technology.





Printing and Communications Media Company Initiatives

Constantly evolving paper indispensable to daily lifestyles, through products geared to paper and forest recycling

◆ New standards under Japan's Law on Promoting Green Purchasing: Our response and compliant products

Through aggressive initiatives toward recovered paper recycling, the Oji Paper Group has worked to enhance its lineup of 100% recovered paper products even in printing and communication paper. These products conform to the national standards revised in April of 2010 under Japan's Law on Promoting Green Purchasing (hereafter "Green Purchasing Law").



What is the Green Purchasing Law?

The Green Purchasing Law serves to promote environmental product purchasing by national and regional administrative bodies. Promoting the use of recovered paper is the Law's focus for paper products, for which procurement standards were revised in April of 2010. (Composite ratings* were introduced for printing paper and raised for copy paper, with 80 points now the minimum for compliant products.)

* **Composite rating:** A value based on recovered paper pulp content ratio, with whiteness and amount of coating taken into account.

Products compliant with the Green Purchasing Law

Copy paper	Printing paper		
★ Recycle PPC Paper 100	★ WHITE A G100	★ KOTE N GREEN100	★ CRYSTAL LIGHT G100
★ NEW Yamayuri 100	★ MATT KOTE GREEN100	★ KOTE L GREEN100	★ CRYSTAL LIGHT DULL G100
★ Recycle PPC Paper 100W			

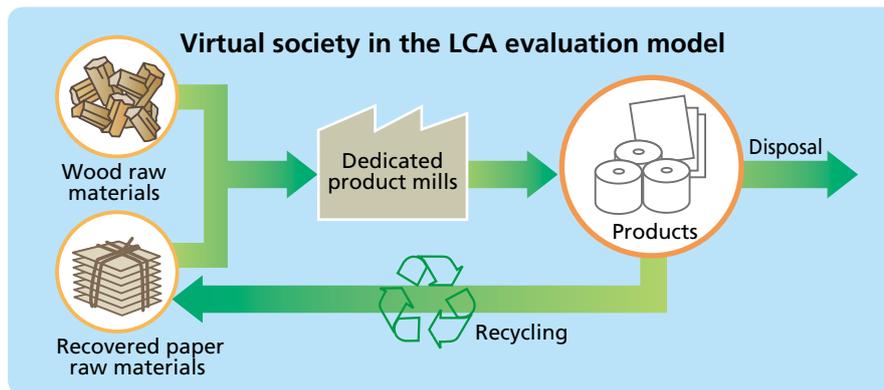
Our printing paper has achieved Eco Mark accreditation.

See website for details: <http://www.ojipaper.co.jp/envi/green/index.html>

Available in Japanese language only.

◆ Cooperation with LCA research on paper

Our customers often ask us what sort of paper is good for the environment. One evaluation method for determining "good" paper is LCA. Oji Paper is cooperating with LCA Research for Paper Recycling, a research project that creates models of virtual societies incorporating papermaking mills, and then modifies factors such as recovered paper utilization rate, recovery rate, and energy sources to compare overall social impacts on the environment. The research is expected to add to our knowledge about environmental impacts.



What is LCA?

Life Cycle Assessment, or LCA, is a method for comprehensively and quantitatively analyzing various environmental impacts through the entire life cycle of products and materials.

ZOOM



Cooperation with environmental NPO's tree-thinning promotion activities

Office Chonai-Kai, an environmental NPO, has launched the Morino Chonai-Kai (Forest Neighborhood Association) program to promote tree thinning through papermaking. Through this initiative, companies and organizations procure "Forest Thinning Support Paper" whose price includes a tree thinning promotion cost premium that goes toward tree thinning and the promotion of material gained from tree thinning. Through cooperation with the Morino Chonai-Kai program in Japan's Chubu region, Oji Paper's Kasugai Mill takes in chips originating from tree thinning, and makes use of them as papermaking raw material.





Household and Packaging Materials Company Initiatives

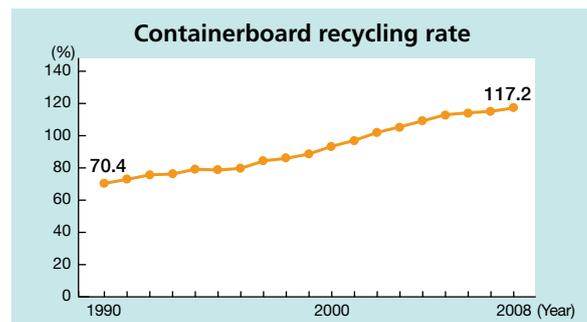
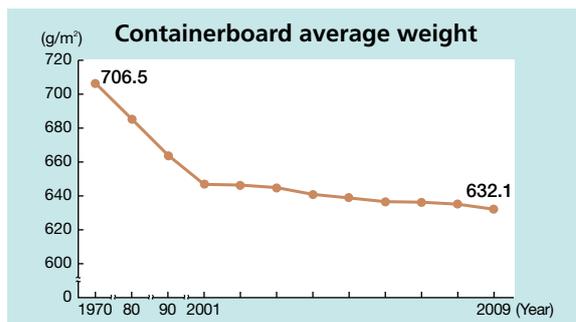
Together with customers, developing packaging materials exceeding conventional functions and maximizing the use of limited resources

Packaging materials business

Our everyday lifestyle scenarios abound with papers of all kinds. Examples close at hand include paper boxes for confectionary or detergents, packaging paper and paper bags for gifts, and containerboard boxes for shipping. To reduce impacts on the environment and effectively use limited resources, we are actively tackling the 3Rs of containers and packaging: Reduce weights and volumes, Reuse items used once, and Recycle used containers and packaging.

◆ The 3Rs of containerboard

Pursuing the merits of our status as a comprehensive paper manufacturer spanning base paper (Oji Paperboard Co., Ltd.) to processing (Oji Chiyoda Container Co., Ltd. and Mori Shigyo Group), the Oji Paper Group is advancing the selection and development of base paper matched to packaging specifications. While containerboard products enjoy a high recycling rate and thus already represent a packaging material with low environmental impact, we are further cutting such products' weight in response to customers' growing environmental considerations.



Containerboard recycling rate (%):
 $(\text{Domestic amount used} + \text{export amount}) / \text{domestic production amount} \times 100$

Lightweight paper lineup

★ Liner: Testliner 120g/m²

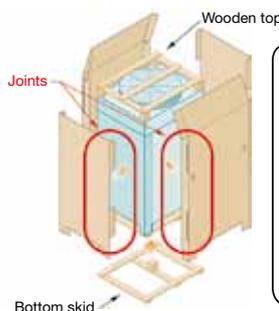
★ Medium: Medium 100g/m², Powermedium 120g/m²

Contact: Oji Paperboard Co., Ltd., Oji Chiyoda Container Co., Ltd., Mori Shigyo Group

Initiatives with customers

Daikin Industries, Ltd.

Simplified packaging



Results of improvements

Packaging cost	... 27% reduction
Packaging work steps	... 46% reduction
CO ₂ emissions volume	... 17% reduction
Containerboard parts	... 7 → 4 parts
Number of staples	... 62 → 0

Together with customer Daikin Industries, Oji Chiyoda Container is working on the development of simplified packaging. Through the development of joint technology for containerboard, the companies achieved environmentally-friendly packaging with a construction that minimizes component parts and aims to reduce the number of work steps while boosting shock absorption performance. The concept went on to win prizes at the Japan Packaging Contest 2009 and the Worldstar Packaging Awards 2009.

Lotte Co., Ltd.

Effective use of waste



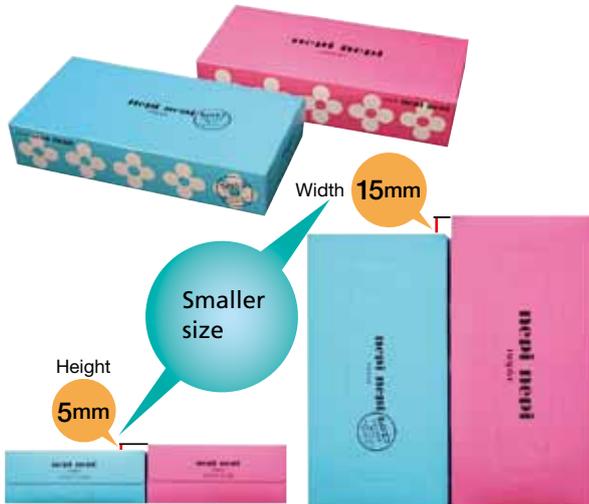
RPF fuel

Together with customer Lotte, Oji Chiyoda Container is addressing the effective use of waste. By turning waste into RPF fuel, the companies are striving for effective use of waste through thermal recycling and a reduction in the use of fossil fuels.

◆ The 3Rs of paper containers and paper bags

Reduce

We are reducing the weight and surface area of the boxboard we use in paper containers.



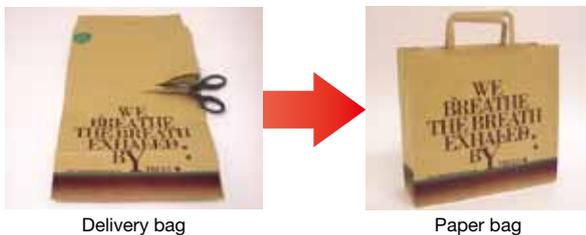
Recycle

Packaging that folds flat after use enables easier collection from households.



Reuse

We are proposing packaging that can easily be put to new uses through simple devices.



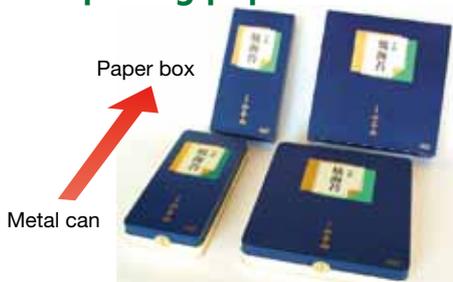
Other

The recovered paper utilization rate for the boxboard used in paper boxes is over 90%, contributing greatly to progress in the rate for paper and paperboard overall. At the same time, while Japan's paper recovery rate is among the world's highest at 79.7%¹, the recovery rate for paper container packaging alone is estimated at a low 14%². Improvement in the recovery rate is highly hoped for from the perspectives of both environmental consideration and the stable securing of recovered paper supplies.

- ¹ Source: Paper Recycling Promotion Center, 2009 materials
² Source: Paper Container and Packaging Recycling Promotion Conference, 2008 materials

Initiatives with customers

Yamamotoyama Co., Ltd. Proposing paper box designs



By switching from a conventional metal can design to paper for the packaging of *nori* seaweed, Oji Packaging has enabled improvement in shipping efficiency along with reduction in required storage space. The company retained a metal appearance for the box through metallic leaf while using shock-resistant Micro-flute in the larger boxes. The end result nearly equals the metal cans in beauty and safety.

zoom

Example of development and proposal of environmentally-conscious new materials

Oji Adba has developed a new translucent paper bag with the name "MI'L'BA". Earlier bags of the sort used transparent film placed over base paper with cut-out "windows", but MI'L'BA actually makes the window portions from transparent base paper itself, without using film. The result is a bag that does not sacrifice strength and uses environmentally friendly material. Meanwhile, letting products and packages in the bag show through the window offers a new type of advertising effect.



Translucent paper bag MI'L'BA

◆ Social contribution activities by Oji Nepia

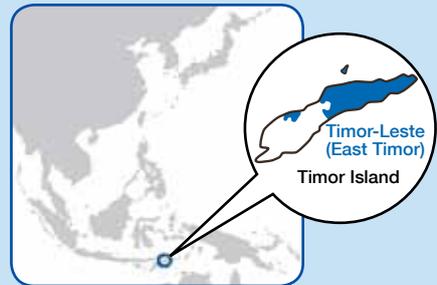
Under the banner of “participation in social contribution activities” set forth by the Oji Paper Group Corporate Code of Conduct, Oji Nepia Co., Ltd. asked what it could do as a company with regard to social issues. The company is not only contributing to customers’ lifestyles through products, but is also addressing social issues through a number of CSR activities.

“nepia 1,000 Toilets Project” initiative

The “nepia 1,000 Toilets Project” is a project launched in conjunction with UNICEF in 2008, the International Year of Sanitation, to improve toilet and water conditions in developing nations.

Each year the program sets a campaign period during which a portion of sales from specified Nepia products goes to support UNICEF’s water- and sanitation-related aid activities in Asia’s youngest nation, Timor-Leste (East Timor). Activities focus on supporting the creation of household toilets, maintaining toilet and water facilities in schools, and promoting sanitary habits, all with the aim of protecting the lives and health of children and their families.

The project managers at Oji Nepia visit Timor-Leste every year to observe and report on local sanitary conditions, and take action to make information on the region available in Japan. Oji Nepia newly established an in-house CSR support organization in 2010, and its members also traveled to Timor-Leste to observe conditions.



Comment from UNICEF, partner in nepia 1,000 Toilets Project

Jun Kukita

Representative, UNICEF office in Timor-Leste



I see firsthand how Timor-Leste, one of the youngest countries in the world, is making progress in areas such as sanitation, at the highest rate of speed in the world. I believe that is why aid is needed now. I am convinced that carrying on with this project will make even greater results possible.

Launching the “Poo Class”

“Excretion is a part of life and good health.” With that thought in mind, in 2007 we joined the Japan Toilet Labo in launching “Poo Class” to teach Japan’s elementary school children the importance of healthy bowel movements. The program has addressed about 1,600 students in 17 schools, and continues to this day. Comments from participating children include “Now I can go to the bathroom at school” and “I started eating vegetables for good bowel movements.” Such feedback lets us know that as a company we are doing something for society, and actually formed the impetus for starting the nepia 1,000 Toilets Project.



Start of “nepia GENKI ! supports Japan CliniClowns Association”

With a desire to send cheer to bedridden children, from 2010 we have begun supporting the Japan CliniClowns Association through a portion of the sales from our nepia GENKI! disposable baby diapers. The funds support the activities of the “CliniClowns” who use fun and humor to bring smiles to children who are staying in hospitals.





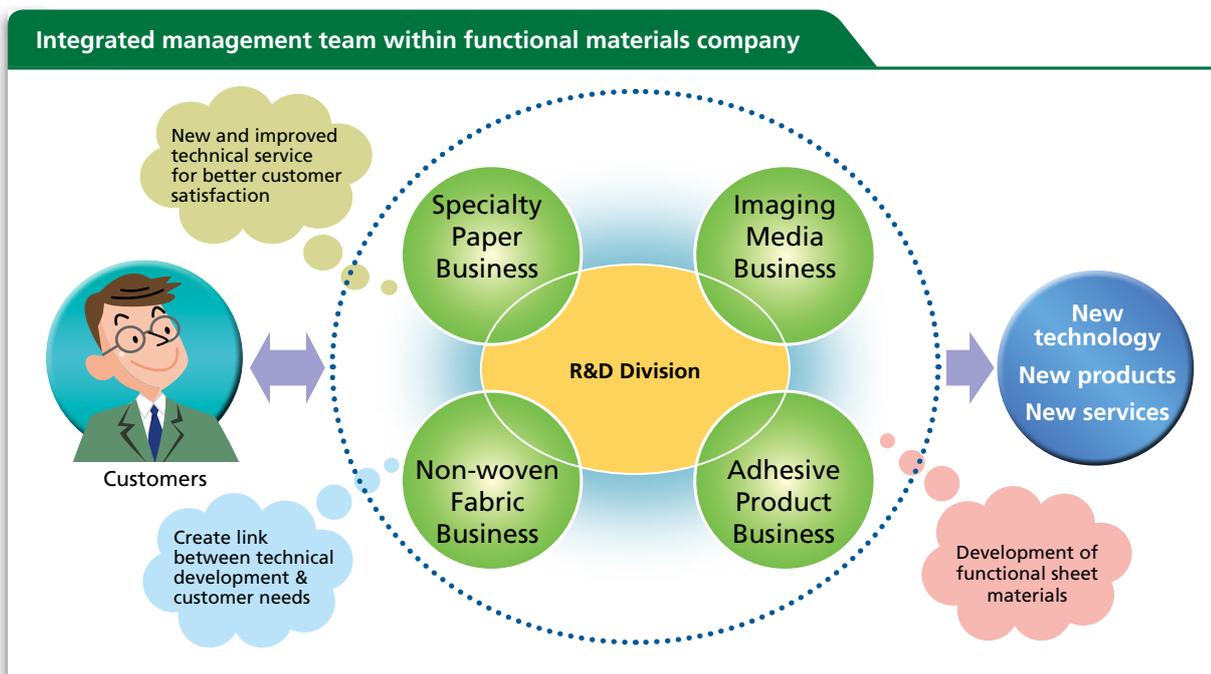
Functional Materials Company Initiatives

Developing new products using our long-standing technical and development competencies

◆ R&D-based new product proposals

The Functional Materials Company advances new products, technologies, and services to meet customers' needs. In doing so it makes use of the Oji Paper Group's technological and development competencies in a wide range of fields.

Demands for environmentally-friendly products and materials continue to grow. All of the Oji Paper Group businesses work as one with our research and development division to develop products with low environmental impact.



Film material for capacitors



Oji Specialty Paper Co., Ltd. manufactures film material for the capacitors used in hybrid cars.

Hybrid cars employ a system that converts the engine's motive energy into electrical energy which is stored in batteries, and then converts the electrical energy into motive energy. Capacitors are essential in ensuring the stable flow of electricity into and out of batteries.



Elements for total heat exchangers



What is a total heat exchanger?

The total heat exchanger element embedded in ventilation equipment is essentially the heart of the system. It uses specialty paper as a medium to draw out and displace heat energy from the air, improving air conditioning efficiency.

Oji Specialty Paper Co., Ltd. manufactures the liner used in the heat exchange elements of total heat exchangers.

Liner from Oji Specialty Paper and flute from Oji Paper are processed by Oji Chiyoda Container Co., Ltd. in China, an example of the Oji Paper Group's integrated business model for material processing.



China Business Initiatives

Deepening exchanges environmentally and socially as well as economically, through business activities in China



Image of completed mill

◆ Overview of the new Jiangsu Oji Paper Nantong Mill

The new flagship Nantong Mill of the Oji Paper Group's China business is under construction along the Yangtze River in Nantong City, Jiangsu Province, about 100 km from Shanghai. Construction began in February 2008. Following the completion of berths, water and effluent treatment facilities, the power generation plant, and installation of papermaking and coating machines, commissioning began in May 2010. Current plans call for annual production of 400,000 tons of coated

paper and uncoated wood-free paper. The mill is also equipped with the latest in environmental equipment to meet China's environmental regulations.

More than simply the latest in technological equipment, though, we are also transferring to the mill the environmental management and product safety expertise built up through long experience in our Japan operations.



Berth during loading operations



First papermaking machine



400 local workers actively listening to lecture

◆ Contributions to local communities by the Oji Paper Group

The Oji Paper Group currently has 15 local companies and 4 offices in China. As a group, we are pursuing various contribution activities on behalf of local communities.

Qinghai (Yushu) Earthquake Relief Fund

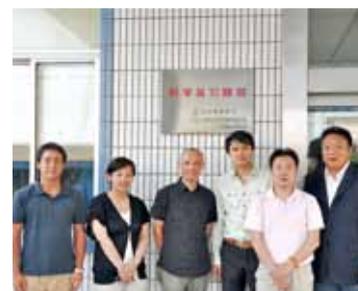
Following the earthquake that struck Yushu, Qinghai Province, on April 14, 2010, Oji Paper and employees of the Oji Paper Group in China made donations for reconstruction through the Jiangsu Province Red Cross. Similar donations were made after the 2008 Sichuan earthquake.



Commendation from the Jiangsu Province Red Cross

Promotion of academic exchanges

To help train print designers and to spread the concept of paper bags using recycled paper, in July 2009 Shanghai Eastern Oji Packaging Co., Ltd. cooperated with Shanghai Theatre Academy to set up learning and training sites within the company grounds. Here students from the Shanghai Theatre Academy gain hands-on experience and knowledge about the design and manufacture of 100% recycled paper bags.



Representatives from Shanghai Eastern Oji Packaging and Shanghai Theatre Academy

Message from the Mayor of Nantong

Mayor Ding

Nantong Municipal People's Government

Despite the impact of the global financial crisis, Oji Paper is pressing ahead with construction of its largest overseas investment project ever, the new Jiangsu Oji Paper Nantong Mill. This project, an expression of the company's unwavering confidence in the Chinese market, continues to receive the welcome and support of the Nantong Municipal People's Government.

The mill will begin commercial production of high-quality paper in 2010 and will start running pulp production lines in 2013. We sincerely wish for Oji Paper's Nantong venture to continue recording new successes day by day. Toward the growth of the project the Nantong Municipal People's Government will provide close, quality service, and continue to create a favorable environment for further development.



Mayor Ding (right) and Oji Paper Co., Ltd. President Shinoda



Mayor Ding and President Shinoda presenting papers to commemorate commissioning



Mill tour

voice

Cultural contribution activities in China

Fang Liang

Winner of the art contest sponsored by Guangxi Oji Plantation Forest (CPFL), Xinxu School in Jingkou Town, Bobai County

Our school has no art classes. Thanks to this opportunity provided by CPFL, for the first time I learned the joy of drawing. My school grades aren't so great, and there is nothing in particular that I'm good at—until now! By working hard at something I'm good at, I can get a better grade than others and win awards! Through this contest, I feel I have discovered hope for that sort of life.

- Every year, CPFL provides art supplies to elementary and middle school children and sponsors the art contest.



Fang Liang (center)

Progress toward Environmental Action Plan 21

To carry out the Action Guidelines within its Environmental Charter, the Oji Paper Group has established the Environmental Action Plan 21, with targets to be achieved in fiscal 2010.

Action Guidelines	Environmental Action Plan 21 (Fiscal 2010 targets)	Achievements (Fiscal 2009)	Pages
Promotion of forest recycling	▶ Overseas forest plantations: 300,000 ha	240,000 ha	p.14-17
Promotion of paper recycling	▶ Recovered paper utilization rate: 62%	63%	p.42-43
Promotion of global warming countermeasures	▶ Fossil fuel-based energy consumption per unit of production: 20% reduction (relative to FY1990 levels)	27.6% reduction	p.22-25
	▶ Fossil fuel-based carbon dioxide emissions per unit of production: 20% reduction (relative to FY1990 levels)	25.9% reduction	
Reinforcement of environmental improvement measures and environmental management systems	▶ Advancing environmental management systems and forest certification	Promotion of O-EMS acquisition	p.30-34 p.15
Development of production technologies and products that minimize environmental impact	▶	Promotion of the 3Rs of containers and packaging materials	p.46-47
Reduction and effective utilization of waste	▶ Achieve final disposal rate of 3.4% Promotion of volume reduction and effective utilization measures	7.3%	p.40
Transfer of environmental protection technology to other countries	▶	Expansion of business into China (new Nantong Mill)	p.50-51
Building relationships of trust with stakeholders	▶	Exhibition at Eco-Products 2009 Oji Forest Nature Schools: 80 persons Community environmental monitor meetings: 184 times "Groundwork" programs: 1,759 times, 22,732 participants Disposable chopstick recycling: 351 tons	p.19-35



Exhibition at Eco-Products 2009

The Oji Paper Group exhibited at the Eco-Products 2009 trade event under the theme "The Potential of Paper." The exhibit focused on the key phrases "Creating with Paper", "Replacing with Paper", "Conserving Paper", and "Returning to Paper", all founded upon manufacturing that is considerate of conservation and recycling, a goal made possible through our strength as a group.



Creating with Paper



Conserving Paper



Eco-Products 2009 booth



Replacing with Paper

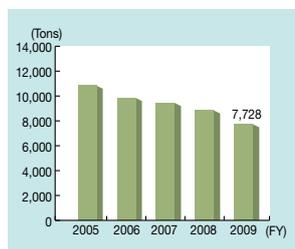


Returning to Paper

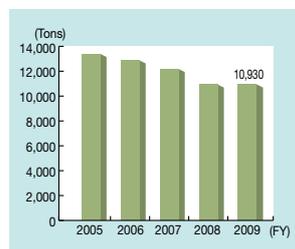
Oji Paper Group Environmental Data

Annual emission and usage volumes of substances (Oji Paper Group's four papermaking companies)

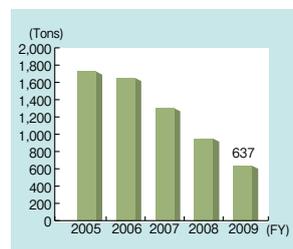
1) SOx Emissions



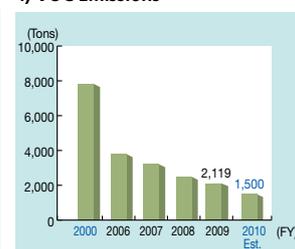
2) NOx Emissions



3) Soot Emissions

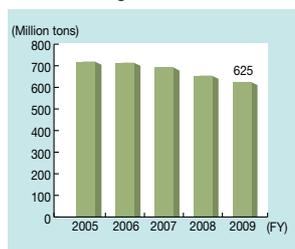


4) VOC Emissions

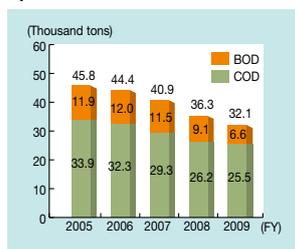


* Target for FY2010 is 75% reduction from FY2000 levels.

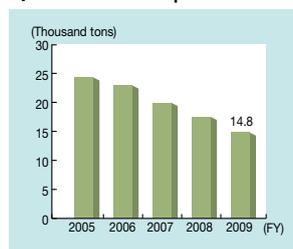
5) Water Usage



6) COD and BOD Emissions



7) Emissions of Suspended Solids



Release and Transfer of PRTR Chemical Substances (Fiscal 2009)

(Unit: tons, except for dioxins, which are mg-TEQ)

Substance	Amount handled (output)	Released to atmosphere	Released to public waters	Total released (calculated value)	Total transferred (calculated value)	Total released and transferred	Total released and transferred (FY08)
zinc compound (water-soluble)	18	0	1	1	3	4	7
acrylic acid							0
2-aminoethanol	15	0	0	0	0	0	2
diethylenetriamine	1	0	0	0	0	0	
antimony and its compounds	2	0	0	0	0	0	0
asbestos ¹	25	0	0	0	25	25	47
ethylbenzene	5	0	0	0	0	0	3
ethylene glycol	6	0	0	0	2	2	3
xylene	927	3	0	3	1	4	6
glyoxal	1	0	0	0	0	0	0
chloroform	8	8	0	8	0	8	9
vinyl acetate	552	1	0	1	0	1	1
cyclohexylamine	2	2	0	2	0	2	5
N,N-dimethylformamide	94	94	0	94	0	94	
styrene	12	0	0	0	1	1	3
copper water-soluble salt (except complex salt)	26	0	6	6	0	6	18
toluene	3,755	1,707	0	1,707	250	1,957	1,846
bis (8-quinolinolato) copper	4	0	0	0	0	0	1
hydrazine							0
phenol							0
hydrogen fluoride and its water-soluble salts	3	0	3	3	0	3	3
benzene	352	41	0	41	0	41	44
boron and its compounds	243	0	11	11	4	15	22
poly (oxyethylene) alkyl ether (C=12-15)	9	0	0	0	0	0	0
poly (oxyethylene) nonylphenol ether	2	0	0	0	0	0	0
formaldehyde	27	0	1	1	0	1	2
manganese and its compounds	1	0	1	1	0	1	1
methylenebis (4,1-cyclohexylene) diisocyanate	1	0	0	0	0	0	0
Total	6,091	1,856	23	1,879	286	2,165	2,023
dioxins ²	964	34	29	63	901	964	1,256

Companies covered: Oji Paper Group facilities that submit PRTR (excluding affiliates). New Tac Kasei Co., Ltd. is included in statistics from FY2009.

1 Transfer due to dismantling of facilities and equipment containing asbestos.

2 Release and transfer of dioxins into the atmosphere or waterways is less than 1/100 of emissions standards.

Notes

• Excluding dioxins; numbers prepared for substances of which one ton or more (0.5 tons or more for Class 1 Specified Chemical Substances) is handled (including amount produced).

• Rounded to the nearest whole amount. Chemicals with blank fields indicate amounts less than one ton handled.

• Total released and transferred (FY08) has been partially revised from Environmental and Sustainability Report 2009 Statistics according to reported changes.

Oji Paper Group Environmental Data

Environmental Impact

	Number of mills	Production Thousand tons	Energy	
			Fossil fuel consumption Crude oil equivalent Thousand kl	CO ₂ emissions Derived from fossil fuels Thousand tons-CO ₂
			Oji Paper Co., Ltd.	9
Oji Paperboard Co., Ltd.	11	2,322	412	1,123
Oji Specialty Paper Co., Ltd.	8	407	168	416
Oji Nepia Co., Ltd.	3	220	104	233
Oji Chiyoda Container Co., Ltd.	28	975	32	70
Mori Shigyo Group (excluding Oji Paper Co., Ltd.)	21	829	33	69
Oji Paper Co., Ltd.	1	39	7	17
Oji Packaging Co., Ltd.	2	61	5	11
Oji Cornstarch Co., Ltd.	3	283	41	90
Oji Kinocloth Co., Ltd.	2	26	10	18
Oji Tac Co., Ltd.	1	14	5	9
Oji Setai Kaisha, Ltd.	7	25	1	1
Oji Forest & Products Co., Ltd.	11	140	2	4
Total for 20 other affiliates*	68	238	42	95
Total	175	9,708	1,815	4,830

*20 other affiliates:

Chuetsu Co., Ltd., TAKASAKI KASEI Co., Ltd., Shizuoka Oji Container Co., Ltd., Shinomura Chemical Industry Co., Ltd., NIHON SEIKAHOSO Co., Ltd., Musashi Oji Container Co., Ltd., Kyodo Shiko Co., Ltd., Yupo Corporation, Shin Nippon Feather Core Co., Ltd., Oji Interpack Co., Ltd., DHC Ginza Co., Ltd., Tomakomai Energy Kosha Co., Ltd., Oji Real Estate Co., Ltd., OJISAITOU SHIGYO PAPER RECYCLE CO., LTD., Medical Corporation Oji General Hospital, HOTEL NEW OJI CO., LTD., Oji Logistics Co., Ltd., Hirata Warehouse Co., Ltd., Kikkou Tsuun Co., Ltd., OJI PIER TERMINAL CO., LTD.

Environmental Accounting

(Unit: ¥ million)

Environmental conservation cost				
Category	Main initiatives	Investment	Costs	
(1)	Environmental conservation costs for curbing environmental impact generated by production and service activities within business sites	16,346	21,664	
Break-down	a. Environmental conservation management costs	2,591	12,867	
	b. Global environmental conservation costs	11,760	774	
	c. Resource circulation costs	1,995	8,023	
(2)	Costs for curbing environmental impact generated upstream or downstream by production and service activities	0	567	
(3)	Environmental conservation costs related to administrative activities	0	705	
(4)	Environmental conservation costs related to R&D activities	81	2,000	
(5)	Environmental conservation costs related to social activities	0	128	
(6)	Costs related to environmental damage	0	859	
Total		16,427	25,922	

(Unit: ¥ million)

Economic benefit associated with environmental conservation activities	
Effect	Value
Income from company-owned forests in Japan	602
Cost reductions through energy conservation	2,125
Income from recycling	1,298
Total	4,025

Method and scope of data aggregation

- Data aggregation was performed in accordance with the *Environmental Accounting Guidelines* published by Japan's Ministry of the Environment.
- Companies covered: Oji Paper and its main affiliates (Oji Paperboard, Oji Specialty Paper, Oji Nepia, Oji Chiyoda Container, Mori Shigyo Group's main mills, Oji Cornstarch, and Oji Tac)
- Period covered: April 1, 2009 – March 31, 2010

Environmental impact on water					Environmental impact on the atmosphere			Industrial waste		
Water consumption	Wastewater	COD	BOD	SS	Sulfur oxides	Nitrogen oxides	Soot	Volume generated	Final disposal amount	Final disposal rate
					SOx	NOx				
Thousand tons	Thousand tons	Tons	Tons	Tons	Tons-SO ₂	Tons-NO ₂	kg	AD tons	AD tons	%
456,244	442,763	23,609	3,566	11,770	5,151	8,324	346,506	1,110,835	81,996	7.4
102,632	97,101	1,273	1,261	1,826	770	1,620	95,377	231,838	17,503	7.5
60,035	57,759	375	1,766	1,181	1,434	780	178,166	74,572	2,055	2.8
6,338	6,261	279	—	70	374	206	16,670	13,005	2,645	20.3
354	176	2	5	3	69	39	4,226	87,853	828	0.9
202	148	1	9	2	74	40	8,470	74,788	453	0.6
1,755	1,641	148	—	9	70	12	9,200	443	238	53.7
42	16	—	—	—	0	0	0	8,758	25	0.3
9,805	9,506	52	78	39	5	39	2,600	3,073	319	10.4
—	—	10	—	6	0	7	0	2,682	49	1.8
219	219	—	0	0	0	1	31	3,037	16	0.5
7	6	—	—	—	—	—	—	1,189	107	9.0
4	2	—	0	—	5	1	1,360	7,084	39	0.6
515	443	2	1	1	13	15	468	22,188	606	2.7
638,153	616,044	25,750	6,686	14,907	7,963	11,083	663,074	1,641,344	106,878	6.5

- Hyphen indicates no data.
- Oji Paperboard Co., Ltd. Kushiro Mill data is included in Oji Paper Co., Ltd. Kushiro Mill.

■ Accident Record (April 1, 2009 – June 30, 2010)

Date of occurrence, mill	Status and cause	Measures
October 22, 2009 Oji Paperboard Co., Ltd. Fuji Mill	Explosion occurred during ignition and pressurizing of boiler; portion of insulating material was scattered outside mill. No injuries resulted. Suspected cause is vaporization of startup-use A heavy oil due to incomplete combustion, followed by explosion of gas in air.	a. Strengthening of boiler status monitoring (installation of monitoring cameras in furnace) b. Prevention of ash accumulation (via thorough cleaning)
April 18, 2010 Oji Paper Co., Ltd. Yonago Mill	Ash removal conveyor belt in boiler's electric dust collector stopped; soot (salt cake) accumulated in dust collector and was emitted from the chimney. Soot dispersed widely due to late emergency response (boiler load reduction and equipment shutdown).	a. Improvement of conveyer drive shaft b. External alarm on soot meter for dust collector abnormalities c. Re-evaluation of response procedures and employee training for abnormalities (decision standards for equipment shutdown, etc.)

■ Explanation of terms

SOx (sulfur oxides): Oxides of sulfur included in the exhaust gas from boilers, incinerators, and other combustion equipment, with sulfur oxide as the principal component.

NOx (nitrogen oxides): Oxides of nitrogen included in the exhaust gas from boilers, incinerators, and other combustion equipment.

Soot: Particulate matter included in the exhaust gas from boilers, incinerators, and other combustion equipment.

BOD (biochemical oxygen demand): The amount of oxygen consumed when microorganisms decompose organic compounds in water. BOD is an indicator of the amount of biodegradable organic compounds in wastewater.

COD (chemical oxygen demand): The amount of oxygen consumed to decompose organic compounds in water through oxidation.

SS (suspended solids): Insoluble material in wastewater.



OJI PAPER GROUP