

Biei, Hokkaido
Company-owned forest

Onneyu, Hokkaido
Company-owned forest

The Oji Group Integrated Report 2019

Fiscal year ending March 2019

Greeting from the Chairman and President

Both the business environment and the Oji Group itself have undergone major changes since the Group's foundation in 1873.

The Group is pursuing increased corporate value over the medium- to long-term while contributing to the development of a sustainable society with

“Creation of Innovative Value,” “Contribution to the Future and the World,” and

“Harmony with Nature and Society” as its management philosophy.

It is our hope that Oji Group Integrated Report 2019 will help readers to enrich their understanding about the Group's undertakings.

矢嶋 道

Susumu Yajima

Director, Chairman of the Board,
Oji Holdings Corporation

加来 正年

Masatoshi Kaku

Director of the Board, President,
Oji Holdings Corporation

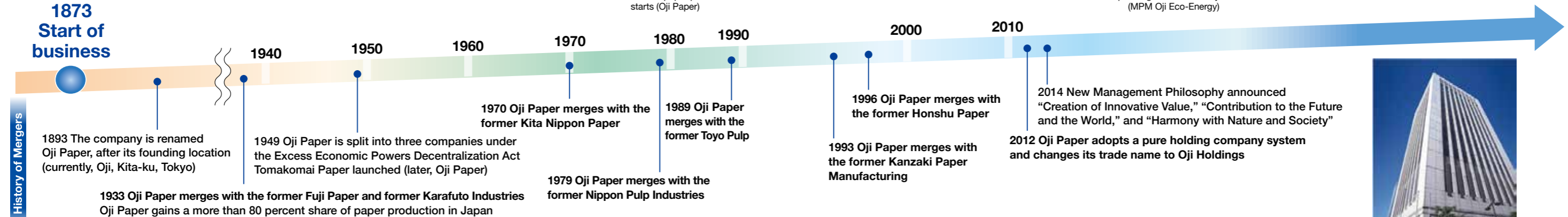
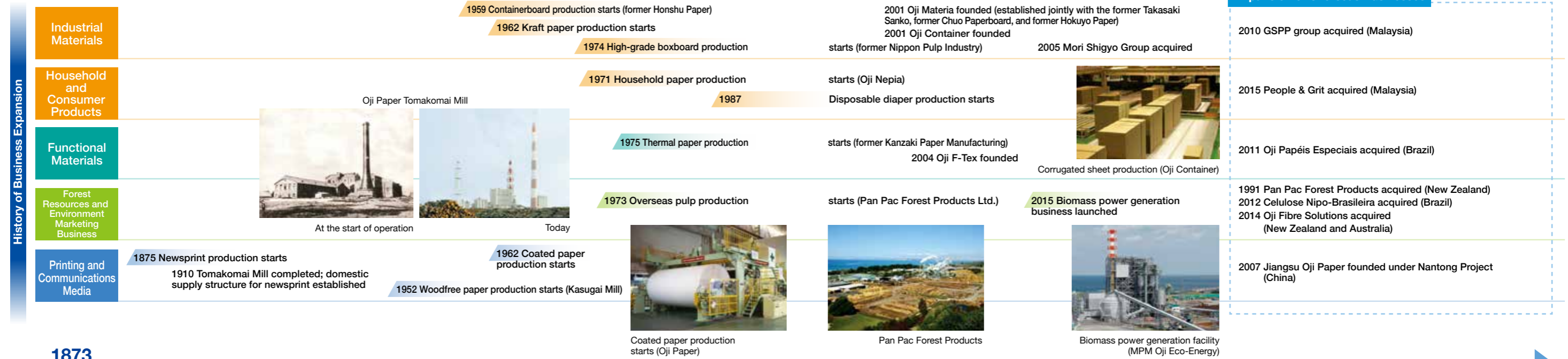


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History

Since its founding in 1873, the Oji Group has achieved continuous growth through the expansion of business fields. We use the technologies acquired in the paper manufacturing business and conducts R&D to develop a wide range of businesses and engage in business on a global scale.



Start of business Development of Japan's paper manufacturing industry

1873
Ei-ichi Shibusawa launches Japan's modern paper manufacturing industry with the foundation of Shoshi Kaisha

Ei-ichi Shibusawa founded and developed some 500 companies following the Meiji restoration (1868), contributing to building the foundations of modern Japan's economy. Believing that the paper manufacturing and printing industries are the sources of civilization, Shibusawa expounded on the need for the proliferation of books and newspapers and for paper manufacturing suitable for their mass printing and established Shoshi Kaisha in Oji, Tokyo (currently Oji, Kita-ku, Tokyo). In his book *Rongo to Soroban*, Shibusawa stated with regard to morality and economics, "wealth cannot be properly perpetuated unless it is moral wealth," and this concept has been handed down to every employee and persists even now that the company's format and business have changed drastically and the area of business has expanded.



(From Shibusawa Memorial Museum Collection)

Expansion and Growth Environmental from a global perspective

1997
Oji Paper Environmental forest recycling Charter established: and paper recycling

The Oji Group believes that *those responsibility to plant trees*. working since the Meiji Era to responsibility to society and the In 1997, we established the which adopts as its fundamental enriching and sustainable society activities that harmonize with the perspective. We have continued to sustainable forest management accordance with the Oji Group In 2005, we were presented the Pacific Basin Economic Council (PBEC) Environment international recognition of its on sustainable forest management

of the Oji Group measures undertaken

Charter established: and paper recycling

who use trees have the Accordingly, the Group has been fulfill its corporate social environment by planting trees. Oji Paper Environmental Charter, principle helping to create a truly by undertaking business environment from a global take measures centered on and paper recycling in Environmental Charter. the Pacific Basin Economic Gold Award based on environmental initiatives centered and paper recycling.

Globalization becoming a business enterprise that creates innovative value

2012
Establishment of Oji Holdings with "Beyond the Boundaries" as its slogan

With changes in supply and demand patterns as a result of various factors including the declining birth rate and aging of society in Japan, advances in information and communications technology, and the rise of imported paper including western paper and sanitary paper, the company name was changed to Oji Holdings Corporation, with a pure holding company structure which was adopted with some business divisions and back-office divisions spun off as wholly-owned subsidiaries, in an effort to carry out business restructuring and achieve continuous growth.

"Beyond the Boundaries" adopted as new slogan This slogan expresses the Oji Group's commitment to actively go beyond the "boundaries" of business domains, countries, and the respective capabilities of individual employees with the aim of contributing to the future, society, and the world as well as the determination of all Group members to maximize corporate value as a truly global



Oji Holdings Main Building (Ginza, Chuo-ku, Tokyo)

Business Overview

Oji Group conducts business in four business segments. Our overall business is managed separately by five COMPANYS, as well as the Corporate Management Group Companies and the Shared Service Companies which support the entire Group.

<p>Industrial Materials COMPANY</p> <p>Main businesses: Containerboard and corrugated containers business, Boxboard and folding cartons business, Packaging papers and paper bags business</p>	<p>Containerboard, boxboard, packing papers</p> <ul style="list-style-type: none"> ■ Oji Materia Co., Ltd. <p>Corrugated containers</p> <ul style="list-style-type: none"> ■ Oji Container Co., Ltd. ■ Morishigyo Co., Ltd. ■ Oji Interpack Co., Ltd. <p>Folding cartons, paper bags</p> <ul style="list-style-type: none"> ■ Oji Packaging Co., Ltd. ■ Oji Seitai Co., Ltd. ■ Chuetsu Package Co., Ltd. ■ Oji Adba Co., Ltd. 	<p>[Overseas] Packaging</p> <p>America</p> <ul style="list-style-type: none"> ■ Oji Intertech, Inc. <p>China</p> <ul style="list-style-type: none"> ■ Suzhou Oji Packaging Co., Ltd. ■ Oji Packaging (Shanghai) Co., Ltd. ■ Kunshan Oji Filter Co., Ltd. <p>Korea</p> <ul style="list-style-type: none"> ■ Oji Interpack Korea Ltd. <p>Malaysia</p> <ul style="list-style-type: none"> ■ GSPP Holdings Sdn. Bhd. ■ Harta Packaging Group ■ United Kotak Bhd. 	<p>Cambodia</p> <ul style="list-style-type: none"> ■ Harta Packaging Group <p>Myanmar</p> <ul style="list-style-type: none"> ■ Oji Myanmar Packaging Co., Ltd. ■ Oji GS Packaging (Yangon) Co., Ltd. <p>India</p> <ul style="list-style-type: none"> ■ Oji Interpack India Pvt. Ltd. ■ Oji India Packaging Pvt. Ltd. <p>Thailand</p> <ul style="list-style-type: none"> ■ S.Pack & Print Public Co., Ltd. <p>Vietnam</p> <ul style="list-style-type: none"> ■ Ojitex (Vietnam) Co., Ltd. ■ Ojitex Haiphong Co., Ltd. ■ Japan Paper Technology (VN) Co., Ltd. ■ Japan Paper Technology Dong Nai (VN) Co., Ltd. ■ United Packaging Co., Ltd. <p>New Zealand & Australia</p> <ul style="list-style-type: none"> ■ Oji Fibre Solutions* 	<p>Household and Industrial Materials Businesses</p> <p>Products include daily necessities such as tissue paper and disposable diapers, as well as packaging products such as corrugated containers and paper bags</p> 
<p>Household and Consumer Products COMPANY</p> <p>Main businesses: Household paper business, Disposable diaper business</p>	<p>Household papers, disposable diapers</p> <ul style="list-style-type: none"> ■ Oji Nepia Co., Ltd. <p>[Overseas] Disposable diapers</p> <ul style="list-style-type: none"> ■ Oji Paper Nepia (Suzhou) Co., Ltd. 	<p>Malaysia</p> <ul style="list-style-type: none"> ■ People & Grit (M) Sdn. Bhd. ■ Oji Asia Household Product Sdn. Bhd. <p>Indonesia</p> <ul style="list-style-type: none"> ■ PT Indo Oji Sukses Pratama ■ PT Oji Indo Makmur Perkasa 		
<p>Functional Materials COMPANY</p> <p>Main businesses: Specialty paper business, Thermal paper business, Adhesive products business, Film business</p>	<p>Specialty paper, film</p> <ul style="list-style-type: none"> ■ Oji F-Tex Co., Ltd. <p>Thermal papers</p> <ul style="list-style-type: none"> ■ Oji Imaging Media Co., Ltd. <p>Adhesive products</p> <ul style="list-style-type: none"> ■ Oji Tac Co., Ltd. ■ New Tac Kasei Co., Ltd. ■ Shinomura Chemical Industry Co., Ltd. <p>Others</p> <ul style="list-style-type: none"> ■ Oji Kinocloth Co., Ltd. ■ Chuetsu Co., Ltd. 	<p>[Overseas] Thermal paper</p> <p>Brazil</p> <ul style="list-style-type: none"> ■ Oji Papéis Especiais Ltda. <p>America</p> <ul style="list-style-type: none"> ■ Kanzaki Specialty Papers, Inc. <p>Germany</p> <ul style="list-style-type: none"> ■ Kanzan Spezialpapiere GmbH <p>Thailand</p> <ul style="list-style-type: none"> ■ Oji Paper (Thailand) Ltd. <p>Malaysia</p> <ul style="list-style-type: none"> ■ Tele - Paper (M) Sdn. Bhd. 	<p>[Overseas] Adhesive paper</p> <p>Thailand</p> <ul style="list-style-type: none"> ■ Oji Label (Thailand) Ltd. <p>Malaysia</p> <ul style="list-style-type: none"> ■ Hyper-Region Labels Sdn. Bhd. <p>[Overseas] Others</p> <p>China</p> <ul style="list-style-type: none"> ■ Oji Kinocloth (Shanghai) Co., Ltd. ■ Sunshine Oji (Shouguang) Specialty Paper Ltd. 	<p>Functional Materials Business</p> <p>Products include thermal paper for receipts etc., adhesive products including labels, a variety of film products, and specialty paper</p> 
<p>Forest Resources and Environment Marketing Business COMPANY</p> <p>Main businesses: Pulp business, Energy business, Plantation and lumber processing businesses</p>	<p>Pulp</p> <ul style="list-style-type: none"> ■ Oji Green Resources Co., Ltd. <p>Energy</p> <ul style="list-style-type: none"> ■ Oji Green Energy Ebetsu Co., Ltd. ■ Oji Green Energy Nichinan Co., Ltd. ■ MPM Oji Eco-Energy Co., Ltd. ■ Oji Green Energy Tokushima Co., Ltd. <p>Lumber</p> <ul style="list-style-type: none"> ■ Oji Forest & Products Co., Ltd. 	<p>[Overseas] Pulp</p> <p>Brazil</p> <ul style="list-style-type: none"> ■ Celulose Nipo-Brasileira S.A. <p>New Zealand</p> <ul style="list-style-type: none"> ■ Oji Fibre Solutions* ■ Pan Pac Forest Products Ltd. <p>China</p> <ul style="list-style-type: none"> ■ Jiangsu Oji Paper Co., Ltd.* <p>[Overseas] Forest plantation</p> <p>Vietnam</p> <ul style="list-style-type: none"> ■ Quy Nhon Plantation Forest Co. of Vietnam Ltd. <p>Indonesia</p> <ul style="list-style-type: none"> ■ PT Korintiga Hutani 	<p>Australia</p> <ul style="list-style-type: none"> ■ Green Triangle Plantation Forest Co. of Australia Pty. Ltd. ■ Albany Plantation Forest Co. of Australia Pty. Ltd. <p>New Zealand</p> <ul style="list-style-type: none"> ■ Southland Plantation Forest Co. of New Zealand Ltd. <p>[Overseas] Woodchips</p> <p>Australia</p> <ul style="list-style-type: none"> ■ Albany Plantation Export Co., Pty. Ltd. <p>[Overseas] Sales</p> <p>China</p> <ul style="list-style-type: none"> ■ Oji Paper International Trading (Shanghai) Co., Ltd. 	<p>Forest Resources and Environment Marketing Business</p> <p>Various businesses which utilize forest resources such as pulp for paper manufacturing, power generation, lumber processing etc.</p> 
<p>Printing and Communications Media COMPANY</p> <p>Main businesses: Newsprint business, Printing, publication, communications paper business</p>	<p>Newsprint, printing, publication, communications paper</p> <ul style="list-style-type: none"> ■ Oji Paper Co., Ltd. 	<p>[Overseas] Printing, publication paper</p> <p>China</p> <ul style="list-style-type: none"> ■ Jiangsu Oji Paper Co., Ltd.* 		<p>Printing and Communications Media Business</p> <p>Products include paper for printing purposes such as newsprint, magazines and books, and paper for photocopying purposes</p> 
<p>Corporate Management Group and Shared Service Companies</p> <p>Main businesses: Real estate, Engineering, Trading, Logistics, etc.</p>	<p>Real estate</p> <ul style="list-style-type: none"> ■ Oji Real Estate Co., Ltd. <p>Engineering</p> <ul style="list-style-type: none"> ■ Oji Engineering Co., Ltd. <p>Trading</p> <ul style="list-style-type: none"> ■ Kyokuyo Co., Ltd. 	<p>Logistics</p> <ul style="list-style-type: none"> ■ Oji Logistics Co., Ltd. <p>Others</p> <ul style="list-style-type: none"> ■ Ginpo Pack Co., Ltd. ■ Hotel New Oji, Co., Ltd. 	<p>[Overseas] Sales</p> <p>Vietnam</p> <ul style="list-style-type: none"> ■ Oji Forest Products Vietnam Co., Ltd. 	<p>Corporate Management Group and Shared Service Companies</p> <p>Various services that support Oji Group's collective strengths</p>

* Major Group companies are listed. Companies with multiple businesses are listed in several places on this page.

Major Affiliated Companies Distribution Map

Europe (Number of Manufacturing sites: 1)

Germany	
Thermal paper	Kanzan Spezialpapiere GmbH
Inkjet paper	

North America (Number of Manufacturing sites: 2)

America	
Interior automotive material, laminating	Oji Intertech, Inc.
Thermal paper, film, inkjet paper	Kanzaki Specialty Papers, Inc.

Group companies in East Asia (Number of Manufacturing sites: 8)

China	
Regional headquarters	Oji Paper Management (Shanghai) Co., Ltd.
Corrugated containers (heavy-duty packaging materials)	Suzhou Oji Packaging Co., Ltd.
Paper bags	Oji Packaging (Shanghai) Co., Ltd.
Filter	Kunshan Oji Filter Co., Ltd.
Disposable diapers	Oji Paper Nepia (Suzhou) Co., Ltd.
Cut and processed products of dry pulp non-woven fabric, thermal paper, and specialty paper	Oji Kinocloth (Shanghai) Co., Ltd.
Decorative paper	Sunshine Oji (Shouguang) Specialty Paper Ltd.
Sales	Oji Paper International Trading (Shanghai) Co., Ltd.
Pulp	Jiangsu Oji Paper Co., Ltd.
Coated paper, wood-free paper	
Korea	
Corrugated containers (heavy-duty packaging materials)	Oji Interpack Korea Ltd.

South America (Number of Manufacturing sites: 2)

Brazil	
Thermal paper, carbonless paper	Oji Papéis Especiais Ltda.
Forest plantation, pulp	Celulose Nipo-Brasileira S.A.

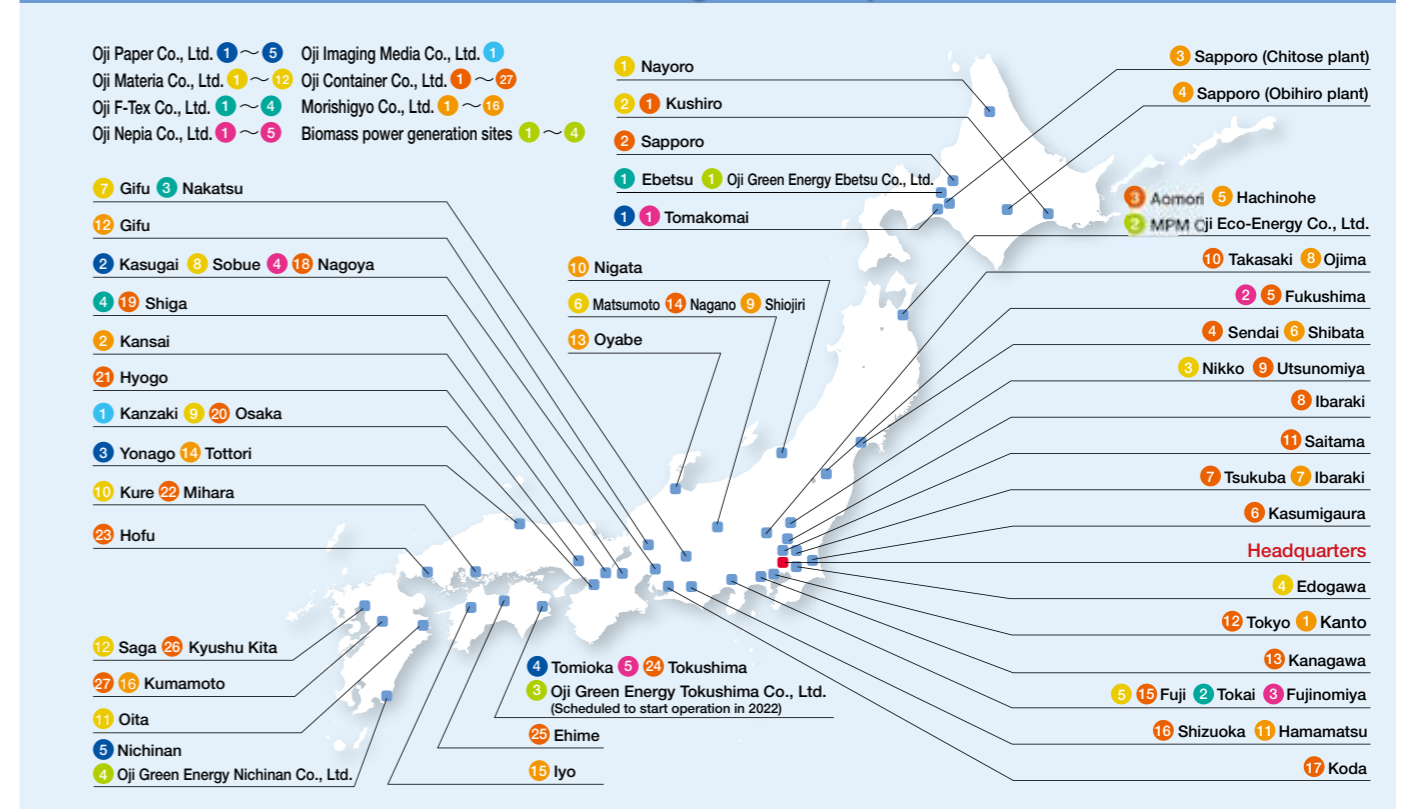
Group companies in Southeast Asia, India (Number of Manufacturing sites: 38)

Malaysia		Thailand	
Regional headquarters	Oji Asia Packaging Sdn. Bhd.	Carbonless paper, thermal paper	Oji Paper (Thailand) Ltd.
Containerboard, corrugated containers	GSPH Holdings Sdn. Bhd.	Adhesive paper, release paper	Oji Label (Thailand) Ltd.
Containerboard, corrugated containers, plastic bags	Harta Packaging Group	Corrugated containers, folding cartons	S.Pack & Print Public Co., Ltd.
Corrugated containers	United Kotak Bhd.	Vietnam	
Regional headquarters	Oji Asia Management Sdn. Bhd.	Corrugated containers	Ojitex (Vietnam) Co., Ltd.
Disposable diapers	People & Grit (M) Sdn. Bhd.	Corrugated containers	Ojitex Haiphong Co., Ltd.
Disposable diapers	Oji Asia Household Product Sdn. Bhd.	Paper bags	Japan Paper Technology (VN) Co., Ltd.
Label printing & converting	Hyper-Region Labels Sdn. Bhd.	Paper bags	Japan Paper Technology Dong Nai (VN) Co., Ltd.
Thermal paper & carbonless paper printing & converting	Tele Paper (M) Sdn. Bhd.	Folding cartons	United Packaging Co., Ltd.
Cambodia		Forest plantation	Quy Nhon Plantation Forest Co. of Vietnam Ltd.
Corrugated containers, plastic bags	Harta Packaging Group	Sales	Oji Forest Products Vietnam Co., Ltd.
Myanmar		Indonesia	
Packaging materials	Oji Myanmar Packaging Co., Ltd.	Disposable diapers	PT Indo Oji Sukses Pratama
Corrugated containers	Oji GS Packaging (Yangon) Co., Ltd.	Disposable diapers	PT Oji Indo Makmur Perkasa
India		Forest plantation, woodchips, woodpellets	PT Korintiga Hutani
Corrugated containers (heavy-duty packaging materials)	Oji Interpack India Pte. Ltd.		
Corrugated containers	Oji India Packaging Pvt. Ltd.		

Group companies in Oceania (Number of Manufacturing sites: 19)

Australia	
Forest plantation	Green Triangle Plantation Forest Co. of Australia Pty. Ltd.
Forest plantation	Albany Plantation Forest Co. of Australia Pty. Ltd.
Woodchips	Albany Plantation Export Co., Pty. Ltd.
New Zealand	
Forest plantation, pulp, lumber business	Pan Pac Forest Products Ltd.
Forest plantation	Southland Plantation Forest Co. of New Zealand Ltd.
New Zealand & Australia	
Pulp	Oji Fibre Solutions

Manufacturing sites in Japan



Number of manufacturing sites in (): It shows the number of manufacturing sites of the companies listed on this page.

Mori Shigyo Co., Ltd. indicates the business site. Other Group companies indicates the plant name.

Value Creation Model

Under the management philosophy of “Creation of Innovative Value,” “Contribution to the Future and the World” and “Harmony with Nature and Society,” the Oji Group is striving to ensure that its business itself contributes to a sustainable society by deploying the sustainability strategy globally. The Group sets “Contribution to a Sustainable Society” as the foundation of our FY2019 to FY2021 Medium-term Management Plan and provides various values to society and contributes to the genuine enrichment of society by steadily implementing the three pillars of “Profitability Improvement of Domestic Business,” “Expansion of Overseas Business,” and “Promotion of Innovation.”

[Sustainability Strategy]

The Oji Group will promote “resource circulation throughout the value chain” through five core competencies centered on forest resources.

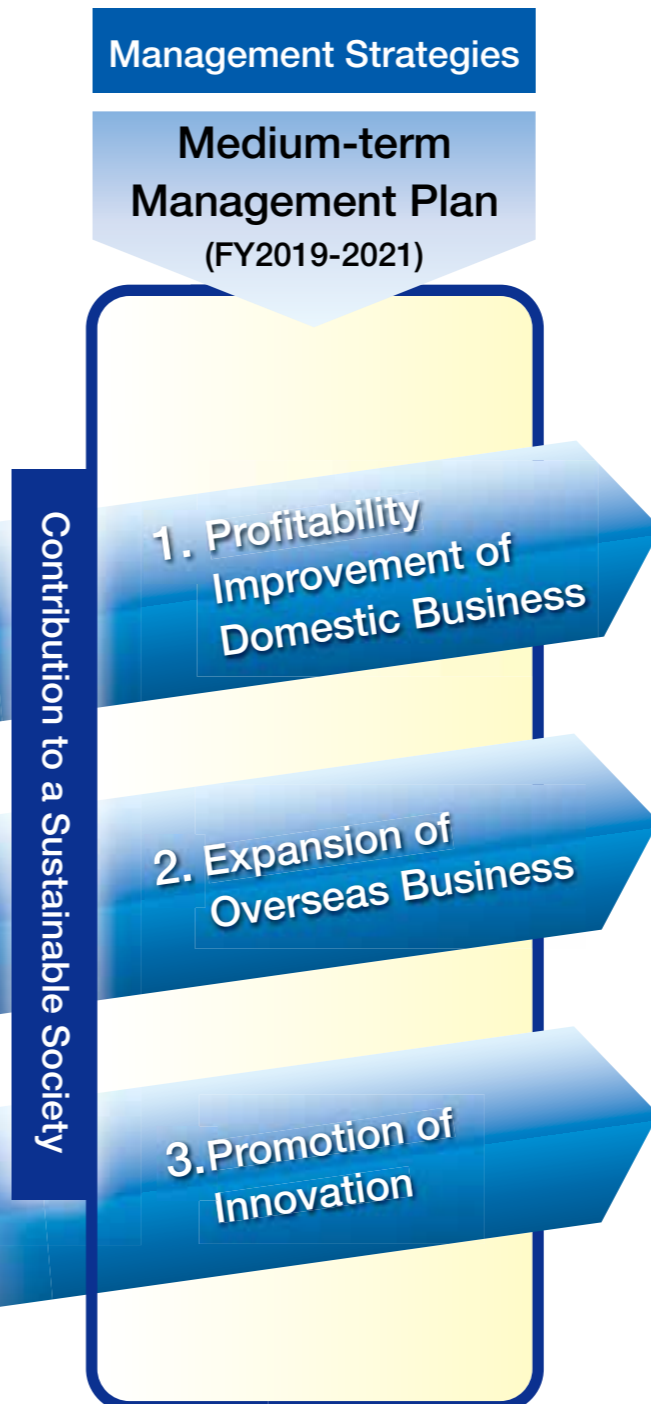
Five core competencies: “**Manufacturing that Supports Lives and Industry**,” “**Sustainable Forest Management** (forest recycling),” “**Utilization of Renewable Resources** (water recycling, paper recycling),” “**Application of Fundamental Paper Manufacturing Technologies** (deployment of renewable energy such as biomass power generation)” and “**Development of New Materials Derived from Wood Fiber** (cellulose nano-fibers, etc.).”

Management Philosophy

Creation of Innovative Value
Promptly detect changes in values across broad fields of society and strive to offer “innovative value” that fulfill society’s latent needs by promoting “challenging manufacturing” based on novel ideas.

Contribution to the Future and the World
Continue to be a global enterprise that provides “innovative value” to all countries, regions, and societies and work toward creating a new future.

Harmony with Nature and Society
Actively address environmental problems and contribute to the realization of a sustainable society for the sake of continual existence and flourishing with nature and the Earth.



Value provided to society through business

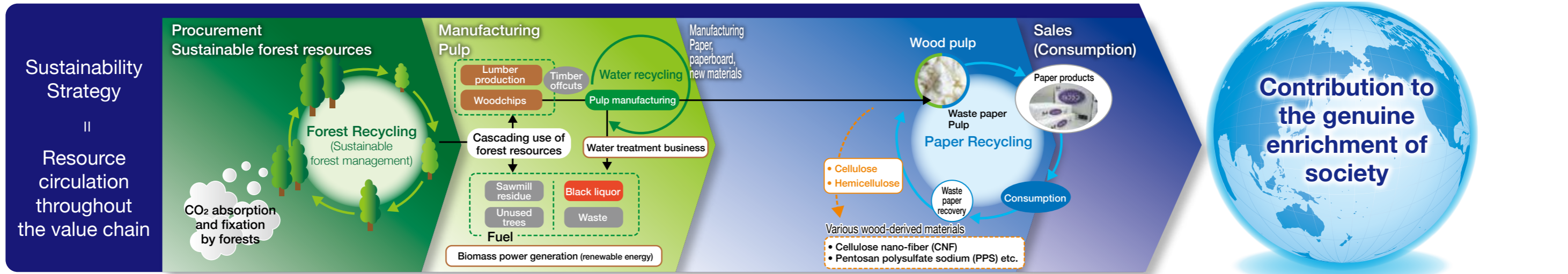
- Forest conservation
- Responsible production and consumption forms
- Supply of safe and secure products
- Transfer of technologies to emerging countries
- Solutions to the issue of plastic in the ocean
- Shift from fossil fuels to non-fossil fuels
- Mitigation of climate change
- Safe water supply
- Promotion of recycling systems
- Respect for human rights
- Safety and health
- Diversity & Inclusion

Contribution to the genuine enrichment of society

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Sustainability Strategy and Material Issues

* We have identified material issues in our sustainability strategy and are addressing them in the value chain.



Material issues	Measures in the value chain			Value provided to society	Corresponding SDGs
Sustainable forest management	Conservation of forests and biodiversity			Forest conservation	6. CLEAN WATER AND SANITATION, 8. DECENT WORK AND ECONOMIC GROWTH, 14. LIFE BELOW WATER, 15. LIFE ON LAND
	Forest certification acquisition				
Responsible raw materials procurement	Development of infrastructure in areas near forests			Forest conservation	8. DECENT WORK AND ECONOMIC GROWTH, 12. RESPONSIBLE CONSUMPTION AND PRODUCTION, 15. LIFE ON LAND
	Compliance with Group procurement policies				
Stable supply of safe and secure products	Raw materials procurement that satisfies certification and management standards			Supply of safe and secure products	12. RESPONSIBLE CONSUMPTION AND PRODUCTION, 17. PARTNERSHIPS FOR THE GOALS
	Proper management of raw materials				
Promotion of innovation	Compliance with raw materials safety confirmation standards			Solutions to the issue of plastic in the ocean	2. ZERO WASTE, 9. INDUSTRY, INNOVATION AND INFRASTRUCTURE, 13. CLIMATE ACTION, 14. LIFE BELOW WATER
	Measures for stable operations				
Mitigation and adaptation to climate change	Promotion of Green Innovation			Shift from fossil fuels to non-fossil fuels	7. AFFORDABLE AND CLEAN ENERGY, 12. RESPONSIBLE CONSUMPTION AND PRODUCTION, 13. CLIMATE ACTION
	Development of raw materials for biodegradable plastics				
Reduction of environmental burdens	Development of pharmaceutical products			Safety and health	3. GOOD HEALTH AND WELL-BEING, 6. CLEAN WATER AND SANITATION, 14. LIFE BELOW WATER, 17. PARTNERSHIPS FOR THE GOALS
	Maintenance and enhancement of CO ₂ absorption and fixation through forest conservation				
Effective resource utilization	Reduction of CO ₂ emissions during transportation			Promotion of recycling systems	6. CLEAN WATER AND SANITATION, 12. RESPONSIBLE CONSUMPTION AND PRODUCTION, 14. LIFE BELOW WATER
	Shift from fossil fuels to non-fossil fuels (renewable fuels and fuels made from waste)				
Respect for human rights	Reduction of wastewater, exhaust gas and waste (compliance with voluntary chemical substance management)			Respect for human rights	5. GENDER EQUALITY, 8. DECENT WORK AND ECONOMIC GROWTH, 10. REDUCED INEQUALITIES
	Reduction of CO ₂ emissions during transportation				
Ensuring worksite safety and health	Shift from fossil fuels to non-fossil fuels (renewable fuels and fuels made from waste)			Safety and health	8. DECENT WORK AND ECONOMIC GROWTH
	Promotion of energy-saving				
Diversity & Inclusion	Reduction of wastewater, exhaust gas and waste (compliance with voluntary chemical substance management)			Diversity & Inclusion	5. GENDER EQUALITY, 8. DECENT WORK AND ECONOMIC GROWTH, 10. REDUCED INEQUALITIES
	Improvement of the recovered paper utilization ratio				
Contribution to local communities and society	Efficient use of water			Contribution to local communities and society	17. PARTNERSHIPS FOR THE GOALS
	Checks on the status of respect for human rights by suppliers				
Dialogue with stakeholders	Promotion of respect for human rights at group companies			Dialogue with stakeholders	17. PARTNERSHIPS FOR THE GOALS
	Checks on the status of respect for human rights at manufacturing sites and contractor sites				

Corporate Profile
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Material Issues and KPI

* KPIs are set for each material issue.

Material issues	Qualitative target*1	Key performance indicators (KPI)*1 (Unless otherwise specified, until 2030)	Current value*1 (Unless otherwise specified, as of the end of March 2019)	Calculation formula
Sustainable forest management	<ul style="list-style-type: none"> Increase the rate of overseas forest certification acquisition (maintain the domestic rate at 100%) Increase overseas forest plantations 	<ul style="list-style-type: none"> Seek 100% rate of forest certification acquisition for all forest plantations 400,000 ha*2 of overseas forest plantations 	<ul style="list-style-type: none"> Rate of forest certification acquisition [Japan] 100% (excluding profit sharing forests); [overseas] 85% 250,000 ha of overseas forest plantations 	<ul style="list-style-type: none"> [Japan] Forest certification acquisition rate = Certification acquisition area (ha) ÷ Managed and owned areas excluding profit sharing forest (ha) [Overseas] Forest certification acquisition rate = Certification acquisition area (ha) ÷ Planted area (ha)
Responsible raw materials procurement	<ul style="list-style-type: none"> Procure raw materials in accordance with Group Procurement Guidelines and implement supply chain management 	—	—	—
Stable supply of safe and secure products	<ul style="list-style-type: none"> Continue zero product liability accidents 	<ul style="list-style-type: none"> Zero product liability accidents (each fiscal year) 	<ul style="list-style-type: none"> Zero product liability accidents (continued from 1998) 	—
Promotion of innovation	<ul style="list-style-type: none"> Commercialize eco-friendly products 	—	—	—
Mitigation and adaptation to climate change	<ul style="list-style-type: none"> Reduce GHG*3 emissions intensity Maintain and expand CO2 absorption and fixation through forest conservation Maintain and expand the shift to non-fossil fuels Use energy efficiently 	<ul style="list-style-type: none"> Reduce GHG emissions intensity from product manufacturing by at least 10% compared to FY2013 by FY2020 Fix at least 170 million tons of CO2 (estimated value) Reduce energy consumption intensity by at least 1.0% compared to the previous fiscal year 	<ul style="list-style-type: none"> GHG emissions intensity: 9.0% reduction from FY2013 CO2 fixation amount: 120 million tons Energy consumption intensity: 1.4% reduction compared to the previous fiscal year 	<ul style="list-style-type: none"> CO2 fixation amount (CO2 tons) = Residual cumulative volume m³ at end of FY2018 × Biomass expansion factor 1.7 × Bulk weight BDT/m³ × Carbon ratio 0.5 × CO2 conversion factor 44/12 *BDT: Bone dry tons
Reduction of environmental burdens (atmosphere, water, waste)	<ul style="list-style-type: none"> Reduce waste Acquire environmental certification (ISO 14001, etc.) 	<ul style="list-style-type: none"> Achieve effective waste utilization ratios of at least 99% in Japan and at least 95% overseas (2020) 	<ul style="list-style-type: none"> Effective waste utilization ratio [Japan] 98.3% [Overseas] 89.6% 	<ul style="list-style-type: none"> Effective waste utilization ratio = (Volume of waste generated - Volume of landfill waste) ÷ Volume of waste generated × 100
Effective resource utilization	<ul style="list-style-type: none"> Improve the recovered paper utilization ratio Reduce water usage intensity 	<ul style="list-style-type: none"> Recovered paper utilization ratio of at least 65% in Japan Reduce water usage intensity accompanying product manufacturing by at least 1% from the previous year 	<ul style="list-style-type: none"> Recovered paper utilization rate: 64.0% Water usage intensity: Down 0.8% from FY2017 	<ul style="list-style-type: none"> Recovered paper utilization ratio = Volume of paper consumed ÷ Total volume of fiber raw materials consumed (total consumption of recovered paper, wood pulp, and other fiber raw materials)
Respect for human rights	<ul style="list-style-type: none"> Reinforce human rights management systems (particularly at overseas sites) 	—	—	—
Ensuring worksite safety and health	<ul style="list-style-type: none"> Eliminate fatal accidents Reduce the lost time injury frequency rate (LTIFR)*4 Reinforce safety risk management systems and safety education at overseas offices 	<ul style="list-style-type: none"> Zero fatal accidents (each fiscal year) Reduced the lost time injury frequency rate (LTIFR) by 50% compared to 2018 	<ul style="list-style-type: none"> Number of fatal accidents: 0 (consolidated companies) Lost time injury frequency rate (LTIFR): 0.55 (consolidated companies, January 1 to December 31, 2018) 	<ul style="list-style-type: none"> Lost time injury frequency rate (LTIFR) = (Number of occupational accident casualties ÷ Total work hours) × 1,000,000
Diversity & Inclusion	<ul style="list-style-type: none"> Globalize the workforce (The following apply to Japan) Raise the percentage of female managers Raise the percentage of disabled employees Improve work-life management 	<ul style="list-style-type: none"> Percentage of female managers [Japan] 10% (6% in 2020) Percentage of disabled employees [Japan] 2.34% (2021) 	<ul style="list-style-type: none"> Percentage of female managers [Japan] 3.1% (16 Oji Group companies) Percentage of disabled employees [Japan] 1.83% (as of June 2018) 	<ul style="list-style-type: none"> Percentage of female managers = Number of female managers ÷ Number of all managers Percentage of disabled employees (employment rate) = Number of regular workers with physical or intellectual impairments or with mental illness ÷ Number of all regular workers * Workers with short working hours are counted as 0.5 workers * Persons with severe disabilities are counted as two persons
Contribution to local communities and society	<ul style="list-style-type: none"> Conduct environmental education Promote cultural and sports activities 	—	—	—
Dialogue with stakeholders	<ul style="list-style-type: none"> Transparent and appropriate disclosures via websites and integrated reports 	—	—	—

*1 Unless otherwise specified, Japanese and overseas consolidated companies

*2 ha = 10,000m²

*3 Greenhouse Gas

*4 Lost time injury frequency rate (LTIFR)

(1) Covered period: January 1 to December 31

(2) Number of deaths and injuries due to occupational accidents per million working hours (fatal accidents and accidents with at least one day off)

(3) Total working hours are calculated based on the number of group company employees (regular employees and temporary / non-regular employees) as of the end of September every year, assuming the annual working hours per person is 2,000 hours.

(4) The frequency rate calculation does not include accidents at overseas group companies that are determined to be at the level of accidents accompanied by injuries without lost work days in Japan based on standards established by the Company.

Message from the President

We seek to always anticipate changing needs,
tackle the challenges of innovation,
and be a corporate group that achieves continuous growth.



I had the honor to be appointed president of Oji Holdings in April 2019. I would like to discuss the strong commitment of Group management and employees to the long-held mission of the Group—to contribute to the genuine enrichment of society—and how we are carrying out that mission.

■ Oji Group—Development Since its Foundation—

The origins of the Oji Group can be found 146 years ago in 1873 when Eiichi Shibusawa established Shoshi Kaisha with the aim of developing the domestic paper manufacturing industry, which until then had relied on imports. He was committed to supporting social and economic development in Meiji Era Japan through the proliferation of books and newspapers to raise the level of knowledge of the public. Today, we engage in a wide range of businesses including book paper and newsprint in the Printing and Communications Media Business as well as packaging materials, household paper, and disposable diapers in the Household and Industrial Materials Businesses, specialty paper, thermal paper, adhesive products, and film products in the Functional Materials Business, and pulp sales and electric power generation using renewable energy in the Forest Resources and Environment Marketing Business. Also, our business is not limited to Japan and has expanded globally.

■ Sustainability Strategy

We have established resource circulation throughout the value chain so that our business activities contribute to the development of a sustainable society, namely through Forest Recycling*, Paper Recycling, and Water Recycling.

Forest Recycling

The Oji Group owns 190,000 hectares of forests in Japan, the largest private holding in the country, and an additional 250,000 hectares of forest plantations overseas. At these Oji Forests, we conserve forest resources based on the belief that “those who use trees have the responsibility to plant trees.” We practice sustainable forest management while continuously planting trees.

In addition, through the maintenance of the precious forest resources of Oji Forests, measures against global warming via CO₂ absorption and fixation in forests, and conservation of precious animals and plants that live in the forest, we are contributing to the maintenance of biodiversity.

Paper Recycling

We undertake continuous paper recycling by encouraging waste paper recycling and establishing a waste paper recovery system.

Water Recycling

We develop water treatment technologies to promote reuse of wastewater in our paper and pulp manufacturing processes.

We are making further advances in paper manufacturing technologies and achieving innovations in the development of new materials such as cellulose nano-fiber (CNF) and advanced paper with functions that can serve as alternatives to plastics. In addition, we are applying fundamental paper manufacturing technologies using forest resources to develop the renewable energy business such as biomass power generation.

We seek to maximize the value of diverse forest resources and to pass healthy forests on to future generations. By doing this, we provide value to society. We are committed to fulfilling the responsibility of continuing to provide value to society into the future.

* Forest Recycling: Sustainable Forest Management

■ Management Strategy: FY2016–2018 Medium-Term Management Plan

Next, I would like to discuss our management strategy. The management strategy is a key roadmap that urges us strongly along the path that we should take. Under the previous medium-term management plan, which ended in FY2018, we set as our fundamental strategies **Expansion of Overseas Business, Concentration and Advancement of Domestic Business, and Enhancement of Financial Foundations**. We worked to achieve our performance indicator targets of 100 billion yen in consolidated operating profit, an overseas sales ratio of 35 percent, and interest-bearing debt of 700 billion yen.

With regard to **Expansion of Overseas Business**, we increased the number of manufacturing sites, particularly in the packaging business, increased production capacity and efficiency, and focused on entering new business fields in Southeast Asia.

In relation to **Concentration and Advancement of Domestic Business**, we worked to raise earnings capacity by cutting costs and reorganizing production structures. In addition, we used core Oji Group technologies to develop high-performance and high added value products and focused on expanding the renewable energy business including biomass and hydroelectric power generation.

With respect to **Enhancement of Financial Foundations**, we improved operating cash flows, sold off shares held for strategic purposes and idle assets, and worked to reduce interest-bearing debts.

These efforts produced results, with consolidated operating profit reaching 110.2 billion yen in FY2018 (up 38.2 billion yen compared to FY2015) and interest-bearing debt falling to 620.6 billion yen (down 157.1 billion yen compared to FY2015). Thus, we achieved both our earnings and financial targets. The overseas sales ratio was 32.0 percent (up 4.2 points from FY2015), falling below the target, but over the three years of the plan, we steadily reinforced structures for increasing overseas profits.

■ Management Strategy: FY2019–2021 Medium-Term Management Plan

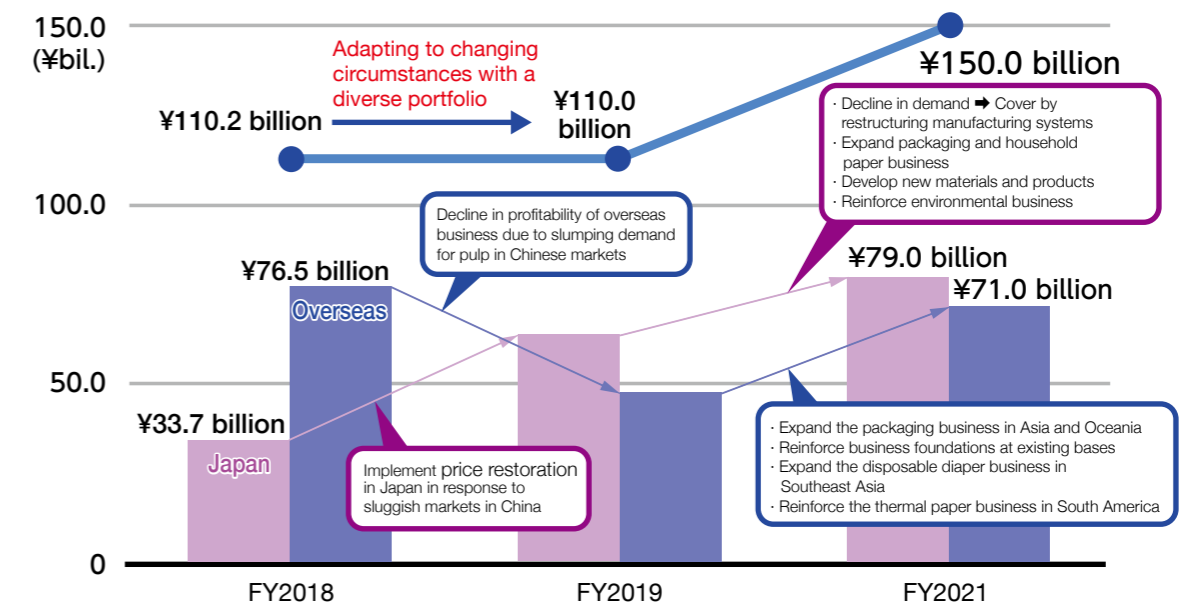
We are now carrying out our new Medium-Term Management Plan covering the period from FY2019 to FY2021. The fundamental policies of our current management strategy comprise three pillars: **Profitability Improvement of Domestic Business, Expansion of Overseas Business, and Promotion of Innovation**. Also, we will pursue **Contribution to a Sustainable Society**, as a cornerstone of the fundamental policies.

With regard to the management targets for FY2021, consolidated operating profit of 150 billion yen is the target for FY2021, the final year of the Medium-Term Management Plan, and this includes a target of maintaining stable operating profit of at least 100 billion yen each year. We will also pursue an overseas sales ratio of 40 percent and ROE of 10.0 percent.

Performance Indicator Targets Under the FY2019-2021 Medium-Term Management Plan

- Consolidated operating profit: At least 150 billion yen (maintain stable operating profit of more than 100 billion yen)
- Overseas sales ratio: 40% (with a target of more than 50% in the short term)
- ROE: 10.0%
- Net D/E ratio: Maintain current status * FY2018 result: 0.7 times
- Market capitalization: At least 1 trillion yen

Operating Profit from FY2018 to FY2021



The direction that the Oji Group will take in the future has not fundamentally changed. Optimal manufacturing structures will be created throughout the Group through a process of selection and concentration of existing businesses, and we will commit to enhancing businesses that are promising and hold the potential for growth and creating new businesses that will become our new core businesses. At the same time, we will respond in a timely and appropriate manner to changes in the business environment. Until now, we have been sensitive to changes in global and domestic circumstances, taking various anticipatory actions to establish a diverse business portfolio. We will reinforce foundations so that a wide range of business fields and territorial areas can complement one another and generate synergy effects in the pursuit of even further growth.

Now, I will describe the three pillars of our fundamental policies in detail.

First is **Profitability Improvement of Domestic Business**. As demand for newsprint and printing paper continues to decline in domestic business in conjunction with the rapid advancement and proliferation of information and communications technologies, we will continue our efforts to secure cash flows through extensive cost cutting. We will also shift our strategies towards the generation of cash flows through maximum effective utilization of existing facilities, thereby enhancing the earnings capacity of domestic business.

Specifically, we are building optimal manufacturing systems for newsprint and printing paper and rapidly shifting excess facilities to growth businesses. Oji Paper Co., Ltd. and Oji F-Tex Co., Ltd. have made decisions to shut down a total of three printing and communication paper machines. In addition, one newsprint machine at Oji Paper Tomakomai Mill that is no longer needed will be modified into a containerboard and kraft paper machine. As a result, we will work on achieving substantial cost improvements, enhancing international competitiveness, and increasing cash flows.



We are also steadily developing the potential of promising businesses. In the corrugated container business, for example, we are constructing a state-of-the-art containerboard plant, one of the largest in Japan, in Funabashi City, Chiba Prefecture in the Kanto region, which is expected to experience particularly significant increases in demand. We are also expanding business by promoting total packaging including new product development and sales, containerboard manufacturing to corrugated container converting, and packaging machine sales and maintenance by using our proposal capabilities as a strength.

In the household paper business, MPM Oji Home Products Co., Ltd., a joint venture with Mitsubishi Paper Mills Limited with a production base in Hachinohe City, commenced production in April 2019. Having acquired its first household paper production site in the Tohoku region, the Oji Group plans to expand sales and streamline logistics further. Furthermore, a household paper base paper machine will start operating in China in 2020. In Japan, we plan to establish a new converting base in Edogawa-ku, Tokyo, to increase household paper supply capacity in the Tokyo Metropolitan region. We will expand business through collaboration between domestic and overseas operations.

In the energy business, we will expand the biomass power generation business even further. A biomass power generation facility in Hachinohe City, a joint venture with Mitsubishi Paper Mills Limited began operations in 2019, and a joint venture biomass power generation facility established with ITOCHU ENEX Co., Ltd. will commence operations in 2022. In conjunction with the expansion of the biomass power generation business, the biomass fuel business is also being reinforced.

Until recently, the Oji Group's capital and business alliances with Mitsubishi Paper Mills Limited have been confined to sporadic cooperative relationships in specific business fields such as the household paper and energy businesses. Going forward, we will expand and reinforce this relationship. We will actively undertake measures to cut costs through the elimination of duplicative transportation, joint procurement of raw materials and facilities, and development of new products through joint development, and to make reciprocal use of each other's sales channels with the aims of increasing the competitiveness and raising the earnings capacity of both companies.

Next is **Expansion of Overseas Business**. Overseas business has been expanding rapidly since about 2010. At that time, overseas business accounted for less than 10 percent of sales, but surpassed 30 percent in FY2017. We have set a target of 40 percent for FY2021 as a transitional point on the way to our future target of 50 percent. Our overseas business has already exceeded our domestic business in terms of the number of companies and the number of employees, and by combining our capabilities throughout the Group, we will further expand sites and territories while creating inter-business and inter-site synergies for dynamic growth to boost competitiveness and enhance our presence.

Looking to individual businesses, in the corrugated container business, we are expanding business and increasing the number of sites with a focus on Southeast Asia and India while reinforcing business foundations. We are installing an additional containerboard machine in Malaysia and building corrugated container converting plants in India, Vietnam, Cambodia, and Indonesia in stages. Particularly in Indonesia, we decided to construct a corrugated container plant through a joint venture with a leading firm, enabling the Oji Group to enter business in the country. The region continues to develop economically, and we will seek to steadily capture the growing demand for corrugated containers and increase our market shares.

In the disposable diaper business, we are conducting business in Indonesia through a joint venture with Indofood, a leading local company. While the JV company has conducted OEM sales since the end of 2016, it will begin operation of its own production facilities in March 2020. We will work to expand sales, secure cost competitiveness, and strengthen business foundations. In Malaysia, we are conducting manufacturing and sales at two sites, and exporting products to Vietnam and other neighboring countries. In China and Southeast Asia, there is a preference for high-quality, high added value, made-in-Japan products, and we will take advantage of this to expand exports from Japan and increase sales.

In the pulp business, we continue to implement strategic revenue management measures in order to reinforce business foundations that are resilient against price fluctuations in pulp markets. Pulp markets have been affected by trade frictions between the U.S. and China, making the business environment more demanding. Under these circumstances, we are implementing daily cost improvements so that we can maintain stable quality and fulfill our supply responsibilities. We are taking measures in various regions including updating manufacturing facilities in Brazil and stabilizing and enhancing the efficiency of operations in New Zealand.

With regard to **Promotion of Innovation**, we are advancing the technologies accumulated in the paper manufacturing business even further and accelerating new materials development, which will become our core businesses in the future, to ensure the sustainable growth of the Oji Group.

Specifically, we are developing applications for cellulose nano-fiber (CNF) by extending pulp fibrillation technologies, fibrillating wood fiber on the nano-level, and using the nano-fiber not only as a raw material for conventional paper, but also as an alternative for glass and plastics.

The issue of plastic in the ocean is currently attracting considerable attention. The Oji Group is participating as a founding member in the Clean Ocean Material Alliance (CLOMA), a platform for promoting measures to address the issue of plastic in the ocean by industry as a whole, and undertaking joint measures with other industries to reduce waste. CLOMA has set five Key Actions, of which one is developing and using paper and cellulose materials. As a part of these efforts, we are developing and using different types of paper materials such as barrier paper with barrier properties not found in conventional paper and various liquid containers.

We are also establishing a bio-refinery that can effectively use the byproducts generated when pulp is produced from wood materials. In addition to developing sugars derived from non-edible raw materials as new raw materials for biodegradable plastics through the application of saccharification technology, we are promoting developments of therapeutic agents for equine arthritis, therapeutic agents for human cystitis, and an anticoagulant necessary for dialysis (heparin; currently produced from cows and swine and thus cannot be used by certain persons because of religious grounds) using sulfated hemicellulose at a life science research organization which we established with Hokkaido University.

As we undertake the development of new materials that will be at the core of our business in the future, we are also conducting green innovation (development of eco-friendly products) using wood materials produced through sustainable forest management.

Based on the three pillars of the fundamental policies of our management strategies that I discussed above, we will continue contributing to the formation of a sustainable society by reinforcing the Oji Group's environmentally-friendly business in Japan and overseas and pursuing innovation.

■ Safety, the Environment, and Compliance as the Top Priorities in Management

As I mentioned, management strategies are important as indicators of the path that we should take, but above all else, Safety, the Environment, and Compliance are the highest priority management issues over the business.

As long as a company exists, it must ensure the safety of the people who work for it. When safety is impaired, the health and happiness of employees and their families can be lost in an instant. I see my own role as ensuring that the employees who report to work healthy in the morning are able to return home healthy at the end of the day, and I seek to make this known at every opportunity. As the Group expands, the scope of this also grows. Protecting the more than 36,000 Group employees in Japan and overseas as well as all of the people involved in our value chains is an ongoing issue. We are committed to maintaining safe and reassuring work environments by conducting various trainings to raise employee safety awareness and enhancing the safety of equipment.

I also want to act in good faith at all times with respect to the diverse stakeholders who are essential for the company's existence. We will continue comprehensive environmental measures including compliance with environmental laws and regulations and preventing environmental accidents on the Group level and at individual business sites to maintain plants and offices that can exist in harmony with local communities and residents. This also applies to our compliance initiatives. We will conduct business in a manner that proves worthy of the trust that we have established over the Group's 146-year history.

■ Message to Stakeholders

We move forward every day with the support of diverse stakeholders including shareholders and investors, customers, business partners, local communities, global society, and employees. We achieved our long-held target of 100 billion yen in operating profit last fiscal year, but the business environment is by no means grounds for optimism. Nonetheless, we have built business foundations that will enable us to transform difficult circumstances into opportunities and pursue growth. Just as the era name in Japan changed this year from Heisei to Reiwa, we will anticipate changing needs, undertake the challenges of innovation, and strive to be a corporate group that achieves sustainable growth.

We will continue to make every effort to meet the needs and expectations of stakeholders. I look forward to your continued understanding and support.

Creating Innovative Value

With the aim of creating new business and strengthening the competitiveness of the company's existing businesses in mind, the Oji Holdings Innovation Promotion Division undertakes activities ranging from the creation of technological seeds to the development of new markets and new products that are more business-oriented, thereby propelling the company's business restructuring.

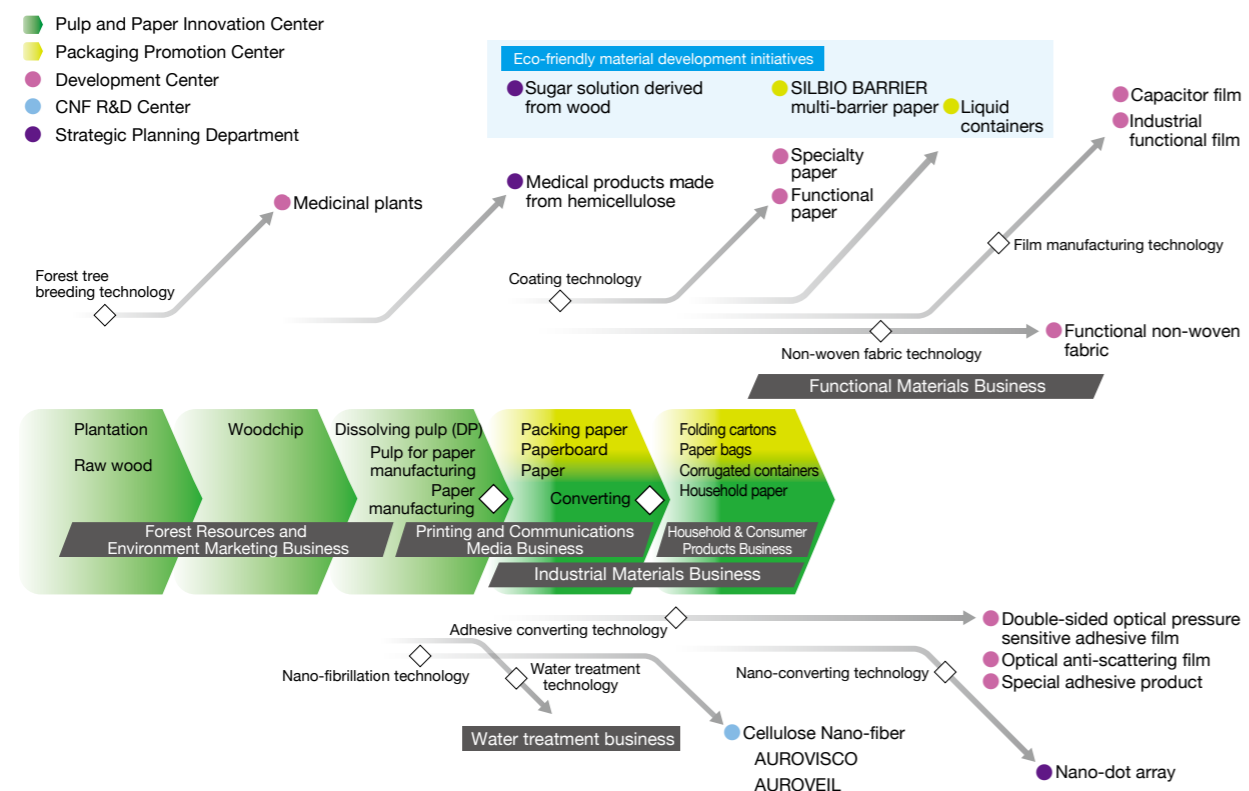
Priority Strategies of the Innovation Promotion Division

- Creating technological seeds and capturing needs
- Building business models and establishing value chains
- Strengthen cost competitiveness through refinement of pulp and paper technologies

Ongoing Innovative Value Creation by the Innovation Promotion Division

The Division is evolving underlying core technologies cultivated from paper manufacturing and film converting to promote the development of new business and new products and achieve early profitability. The Division is also developing eco-friendly products and technologies as a form of contribution to the realization of a sustainable society. Specific projects include development of technology for producing sugar from wood for use as a raw material of biodegradable plastic and development and application of paper materials with high barrier properties as an alternative to plastic for containers and packaging material.

The Division is also developing medical products made from hemicellulose which has had only limited applications, creating uses for cellulose nano-fiber using proprietary technologies, promoting the water treatment business using technologies acquired through paper manufacturing, and developing capacitor films for electric and hybrid vehicles to support the potential widespread adoption of eco-cars.



Eco-Friendly Material Development Initiatives

The Oji Group is developing eco-friendly materials to address the issue of plastic in the ocean, a global scale problem, and to contribute the reduction of CO₂ emissions as a measure to fight global warming. By developing paper materials that can take the places of plastic packaging and biomass*¹ plastic materials made from renewable forest resources, the Group seeks to contribute to the development of a sustainable society.

*1 Renewable, bio-derived organic resources excluding fossil resources

Development of biomass plastic raw materials

Biodegradable plastics have been the subject of considerable attention in recent years, and much of the sugar used as a raw material is produced from sugarcane or corn. There are concerns that sugar produced from edible resources will result in food competition in relation to global food supply shortages.

The Oji Group is researching the production of sugar by breaking down wood components (cellulose) using enzymes through the application of technologies acquired from bioethanol research. The aim is to supply sugar derived from non-edible sources as a new raw material for the production of biodegradable plastics, demand for which will increase in the future.



Cellulose-derived sugar solution (Left: Unrefined product; right: refined product)

Development of paper materials as alternative to plastic packaging

Development of multi-barrier paper

The Oji Group developed SILBIO*² BARRIER, a multi-barrier paper made from a paper base with a barrier coating layer, using its water-based coating technologies, one of the Group's areas of specialization.

The barrier coating layer prevents water vapor, oxygen, and other substances from passing through, curtailing deterioration of the content and maintaining aroma and moisture content.

*2 SILBIO = SILVA+BIOREFINERY

Silva means forest in Latin. The name was coined to incorporate the intent to create eco-friendly products that enrich society using biorefinery technology from forests.



SILBIO Barrier was presented at a G20 Summit (held in Karuizawa-machi, Nagano Prefecture on June 15 and 16, 2019) ministerial meeting as an innovative initiative from Japan.

Development of pulp composites

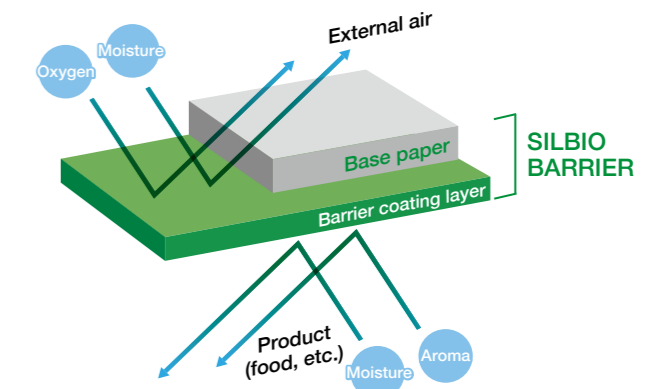
By mixing pulp into biodegradable plastic, various properties including strength and rigidity can be improved. The Group is conducting research as a means of expanding applications for biodegradable plastics.



Examples of processed pulp composite materials

Development of biomass plastic film

Biomass-derived plastic films are expected to be used for food packaging and an expanding range of other applications in the future. The Oji Group has commenced development of distinctive biomass plastic films through the application of thin film stretch processing technology accumulated in the development of capacitor films.

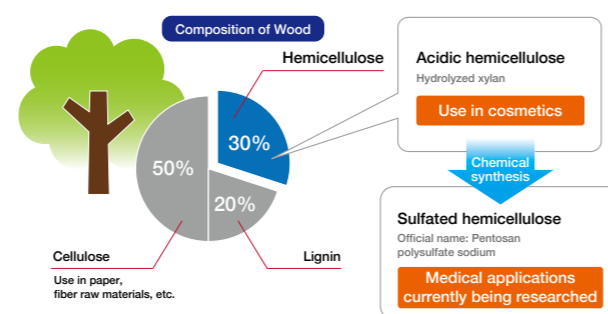


Structure of SILBIO BARRIER

Development of Medical Products Derived from Hemicellulose

The components of wood are mainly composed of cellulose, hemicellulose, and lignin. Cellulose has extensively been used as a raw material for paper and textiles without waste, but we are advancing research and development to use hemicellulose, which has been utilized as a fuel and other limited applications, as a product with higher added value. Acidic hemicellulose (hydrolyzed xylan) refined from hemicellulose is used as a raw material in cosmetics, as it provides skin moisture retention properties and protects the barrier function. In addition, a substance referred to as sulfated hemicellulose (pentosan polysulfate sodium: PPS) that is refined and chemically synthesized from acidic hemicellulose is attracting attention as an active pharmaceutical component, and the Group is conducting joint research and development with Hokkaido University.

PPS has the following effects: (1) suppressing arthritis symptoms, (2) suppressing bladder inflammation, and (3) suppressing blood coagulation. The Group is conducting development with the aims of use for effect (1) as a pharmaceutical agent for animals (in particular, horses) and for effects (2) and (3) as a pharmaceutical agent for people.



Application of People- and Eco-Friendly Temporary Materials at Civil Engineering Sites

The Oji Group and Shimizu Corporation jointly developed KAMIWAZA, a technology for improving the productivity of temporary construction using people- and eco-friendly paper materials. KAMIWAZA is a solution that uses paper materials in temporary structures at civil engineering sites. By using easily handled paper materials as an alternative to conventional steel and wood, the burdens on workers are reduced and the productivity of temporary construction can be enhanced. The main materials used for temporary construction are HiPLE-ACE^{*1} manufactured by Oji Interpack Co., Ltd. and Hatosheet^{*2} manufactured by Oji Kinocloth Co., Ltd.



HiPLE-ACE manufactured by Oji Interpack



Hatosheet manufactured by Oji Kinocloth

^{*1} HiPLE-ACE

A corrugated board material with a three-layer structure that is used as packing material for heavy loads and has high shock absorption performance and high strength.

^{*2} Hatosheet

A nonwoven fabric made primarily from wood pulp that is capable of controlling the diffusibility, retentivity, and volatility of liquids that it absorbs. Verification tests of the temperature increase prevention effects were carried out during dam construction in Iwate Prefecture by installing Hatosheet that contain water in an aggregate storage facility for concrete materials.



New construction method using HiPLE-ACE

HiPLE-ACE Use Example: Tunnel Wind Gates

The temporary tunnel wind gates constructed in mountain tunnels are used to prevent rapid airflows that can occur during tunnel boring. With conventional construction techniques, special-purpose (disposable) nylon balloons were used to build a wall blocking the tunnel cross-section. When HiPLE-ACE is used, a wind gate of approximately 100 m² can be constructed by attaching corrugated board members (with an area of approximately 1 m²) with one-touch technique using just an aerial work platform. In addition, the corrugated board can be recycled and construction costs can be cut by approximately one half compared to conventional methods. The photo to the right shows an example from a road tunnel worksite in Nagasaki Prefecture.

Development of Cellulose Nano-Fiber

Cellulose nano-fiber (CNF) is a plant fiber (pulp) that is finely fibrillated to the nano-order level, 1/1,000,000 of 1 mm, where its width is equivalent to 1/20,000 of a hair. Oji Group is conducting development for commercialization of CNF with the aim of application of phosphorylated CNF, a proprietary technology, in a wide range of fields.

CNF Reinforced Polycarbonate Resin

Polycarbonate (PC) resin is lightweight, highly transparent, and shock resistant material expected to be used as an alternative to glass for automobile windows, but it also has weaknesses—it is easily bent by force and deformed by heat. These weak points can greatly be improved by creating a compound of CNF and PC. The Oji Group is developing applications such as automobile windows with an aim of practical application at an early stage.

Composite of CNF and polycarbonate



CNF for Use in Cosmetic Ingredients

Working with Nikko Chemicals Co., Ltd., a leader in the cosmetics materials industry, the Oji Group commercialized AUROVISCO CS, a cosmetic ingredient.

AUROVISCO CS boasts more than 100 times the viscosity of naturally-derived thickeners but has a non-sticky and moist feel. Moreover, the wood fiber used as a raw material is a sustainable and renewable resource that can be supplied from forests. It is expected that AUROVISCO CS will be adopted in various cosmetics.



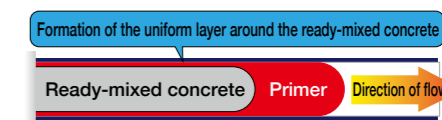
Cosmetics products

CNF Used as Concrete Pump Primer

The Oji Group began sales of AUROVISCO for use with RUBURI concrete pump primer^{*} made by TAKEcite Co., Ltd. in January 2019.

Approximately 1 ton of conventional mortar is typically used, but when RUBURI mixed with CNF is used, this amount can be significantly reduced to tens of kilograms, slashing the amount of industrial waste generated. It also contributes to greatly reducing work times. RUBURI was selected as a standardization project for the Standardization System for Cultivating New Markets by the Ministry of Economy, Trade and Industry of Japan, and once standardization is approved, uses expected to expand to a wide range of construction sites.

^{*} Primer is used to form a uniform lubricating layer on the inner surfaces of ready-mixed concrete pumping pipes to prevent clogging of pipes when pressure is applied to pump the concrete.



Cross Section of a Pumping Pipe



A concrete pump truck pumping concrete

Expansion of the Water Treatment Business

Establishment of Water Treatment Technologies

The Oji Group provides water treatment systems suitable for all needs based on its operational expertise and water production and wastewater treatment technologies accumulated through paper manufacturing technologies over many years. The Oji Group has created new water treatment systems by combining proprietary chemical treatment with the OJI-MEMBRANE ultrafiltration membrane as well as remote support technologies that optimize facility operations and prevent problems before they occur using the Internet of Things (IoT).

Based on its established technologies, the Group will continue to develop new water treatment technologies so that it can provide integrated services from design and installation of water treatment facilities to supply of consumables and after-sales support including maintenance and management to customers in Japan and overseas.

Developing Overseas Business with a Focus on Southeast Asia

The Group's water treatment business is not limited to Japan. It is increasing in Southeast Asia including proposals for industrial water production equipment at an industrial estate in Thailand, water production facilities for a beverage company and drinking water production facilities and wastewater treatment facilities for a large-scale multipurpose facility in Myanmar.

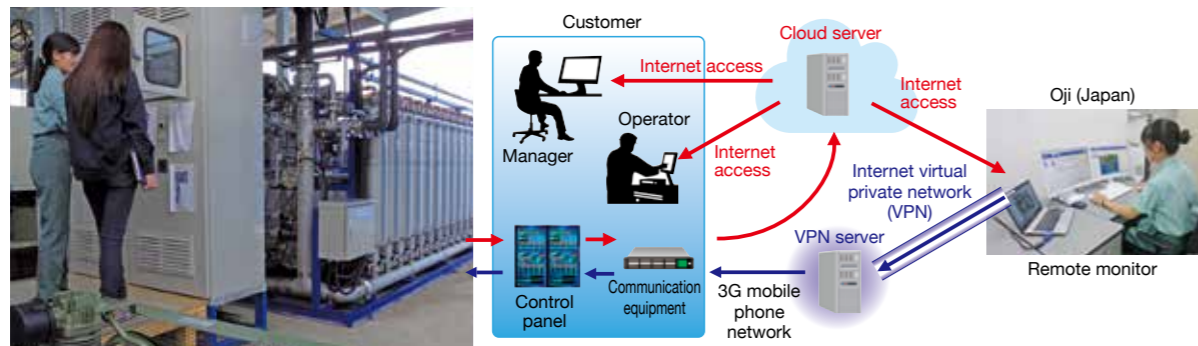
The Group has also conducted business seminars in Yangon, Myanmar's largest city, to provide education on preservation of water environments and undertakes other measures to contribute to local communities.

Going forward, the Group will develop its water treatment business overseas with a focus on Southeast Asia while generating synergy effects with other Group businesses.

Business conductor: Oji Engineering
Technology developer: Water Environment Business Promotion Section, Innovation Promotion Division

IoT-based remote support service introduced at industrial water production facility in Thailand

Ultrafiltration equipment



Proposals for water treatment chemicals



OJI-FLOCK™
(flocculant)



OJI-ION™
(ion exchange resin)

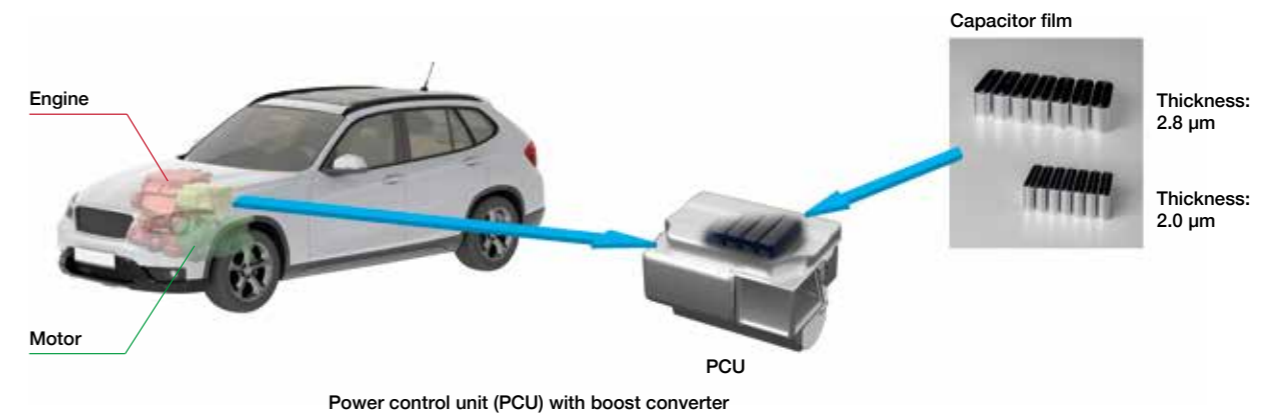


OJI-CARBON™
(activated carbon)

We use our accumulated expertise to propose appropriate water treatment chemicals that can ensure stable operation of equipment even when water quality varies depending on the external environment or operations.
[Products offered]
Flocculants for waste water treatment
Ion exchange resin for producing pure water
Activated carbon for deodorization and organic matter treatment
Chemicals for boiler water, etc.

Film Manufacturing Technologies Pursue “Thinner and Stronger”

The Oji Group's biaxially stretched polypropylene film has a wide range of applications in electrified vehicles including hybrid and electric vehicles. Electrified vehicles use highly safe film capacitors in inverters and other electric drive system components. The main component of those film capacitors is high-performance polypropylene film, and the thinner the film, the smaller the capacitors can be made. The solution of how to drive on electricity alone without using gasoline is attracting considerable attention worldwide, and the trend towards high voltages and high currents to obtain more powerful drive force is continuing, creating a need for high levels of insulation that can withstand high-voltage electricity even when thin. The Oji Group is leveraging its proprietary materials design technologies and stretch processing production technologies to develop technologies for producing ultra-thin, high-voltage resistant polypropylene film that can withstand high-voltage even when extremely thin. These efforts are contributing to making more compact electrical components for electric vehicles, which are expected to become more widespread throughout the world.



Japan's First Licorice Cultivation Technology Established

The Oji Group has commenced research on medicinal plants that hold future potential for use in Kampo medicines, the market for which is expanding, as well as cosmetics and functional foods. Licorice is used in approximately 70 percent of Kampo medicines. At present, most raw materials are dependent on imports of wild licorice from overseas, but there are calls for domestic production through the development of efficient cultivation techniques in order to respond to fear of resource depletion accompanying the increase in demand and export restrictions. The Oji Group established Japan's first licorice cultivation technology through the application of afforestation technology developed by the Group. The technology shortens the time from seed sowing to harvesting of licorice, from five to six years to just two years. Further, the glycyrrhizin amount conforms to the Japanese Pharmacopoeia's active ingredient standards of containing at least 2 percent glycyrrhizin in cultivated licorice. A large-scale cultivation trial was commenced in the Nayoro area of Hokkaido in 2017, and business feasibility is being verified. In the future, the Group will seek to achieve Japan's first large-scale cultivation with the aim of providing stable supply of domestic licorice to customers who emphasize safety, security, and traceability.



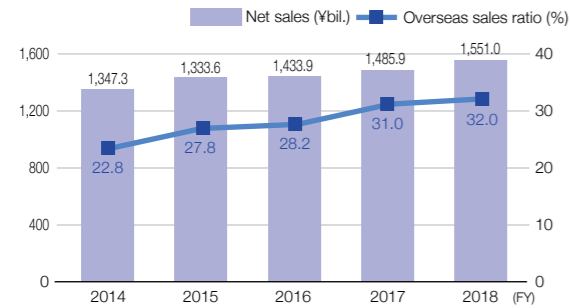
A large-scale licorice field (photo taken in summer 2019)

Financial Highlights

* Unless otherwise specified, the scope covers domestic and overseas consolidated companies.

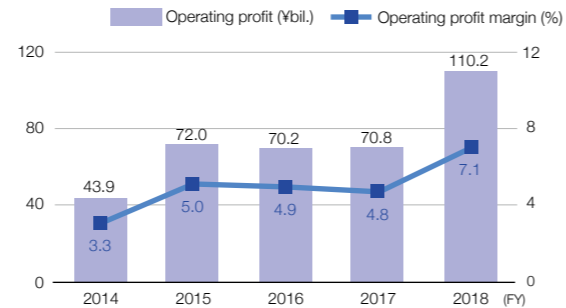
Overseas Sales Ratio

32.0% Change from FY2017 +1.0 pt.



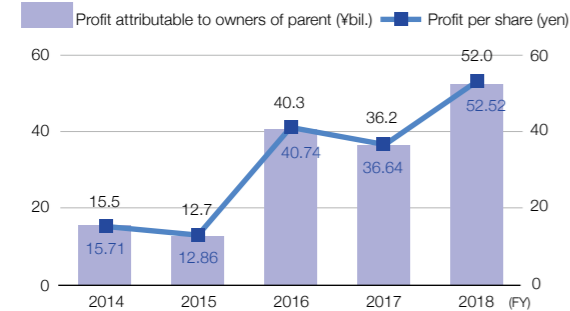
Operating Profit

¥110.2 billion Change from FY2017 +55.6%



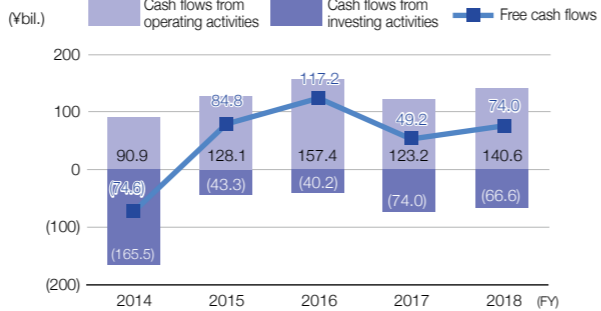
Profit per Share

¥52.52 Change from FY2017 +43.3%



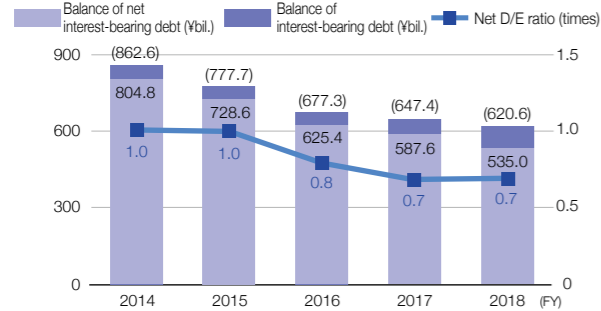
Free Cash Flows

¥74.0 billion Change from FY2017 +50.4%



Net D/E Ratio

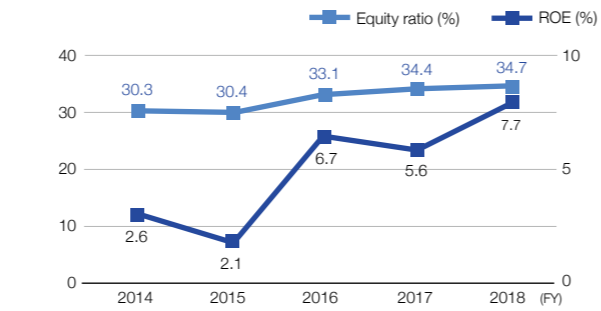
0.7 times Change from FY2017 -



* Net D/E ratio (times) = net interest-bearing debt/net assets at the year-end

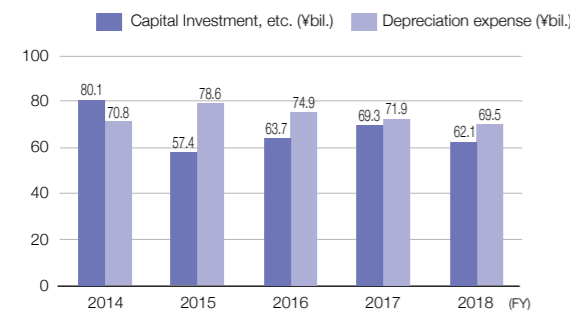
ROE

7.7% Change from FY2017 +2.1 pt.



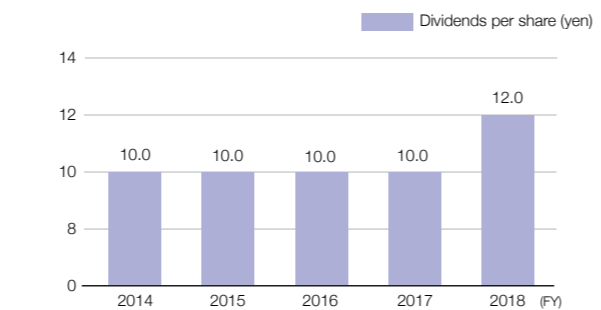
Capital Investment, etc.

¥62.1 billion Change from FY2017 ↓ 10.4%



Dividends per Share

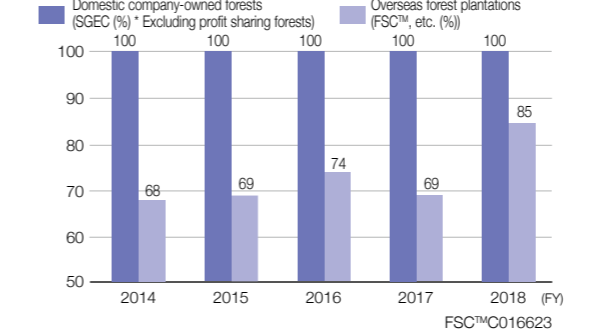
¥12.0 Change from FY2017 +¥2.0



Non-financial Highlights

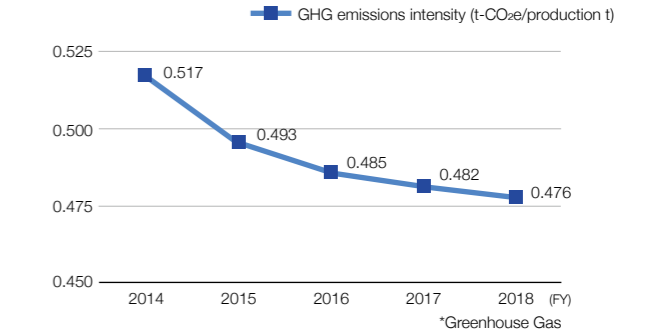
Forest Certification Acquisition Rate

Japan: 100%, Overseas: 85% Change from FY2017 (overseas) Overseas: +16 pt.



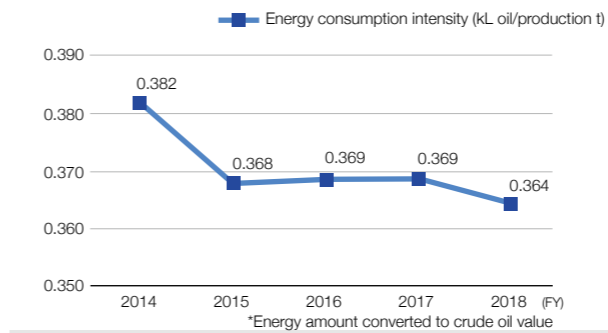
GHG* Emissions Intensity

0.476 t-CO₂e/production t Change from FY2017 ↓ 0.006 t-CO₂e/production t



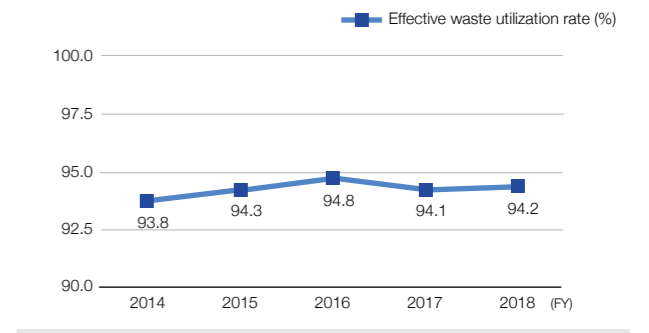
Energy Consumption Intensity

0.364 kL oil*/production t Change from FY2017 ↓ 0.005 kL oil/production t



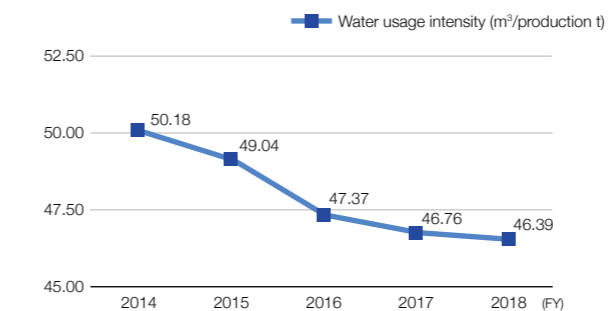
Effective Waste Utilization Rate

94.2% Change from FY2017 +0.1 pt.



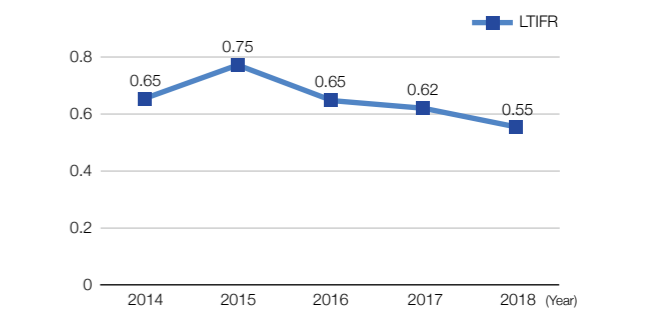
Water Usage Intensity

46.39 m³/production t Change from FY2017 ↓ 0.37 m³/production t



Lost Time Injury Frequency Rate (LTIFR)

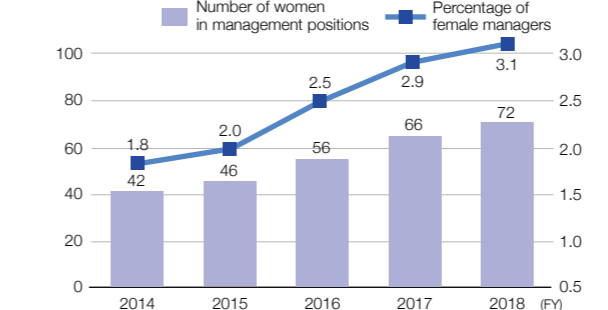
0.55 Change from FY2017 ↓ 0.07



(1) Covered period: January 1 to December 31
 (2) Number of deaths and injuries due to occupational accidents per million working hours (fatal accidents and accidents with at least one day off)
 (3) Total working hours are calculated based on the number of group company employees (regular employees and temporary/non-regular employees) as of the end of September every year, assuming the annual working hours per person is 2,000 hours.
 (4) The frequency rate calculation does not include accidents at overseas group companies that are determined to be at the level of accidents accompanied by injuries without lost work days in Japan based on standards established by the Company.

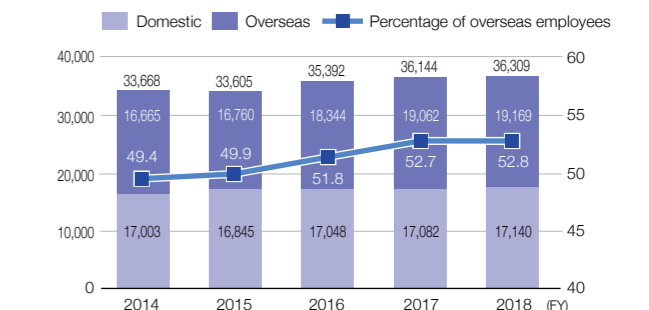
Percentage of Women in Management Positions (16 Oji Group companies)

3.1% Change from FY2017 +0.2 pt.



Number of Domestic and Overseas Employees

36,309 Change from FY2017 +165 (Of which, overseas +107)



Household and Industrial Materials Businesses

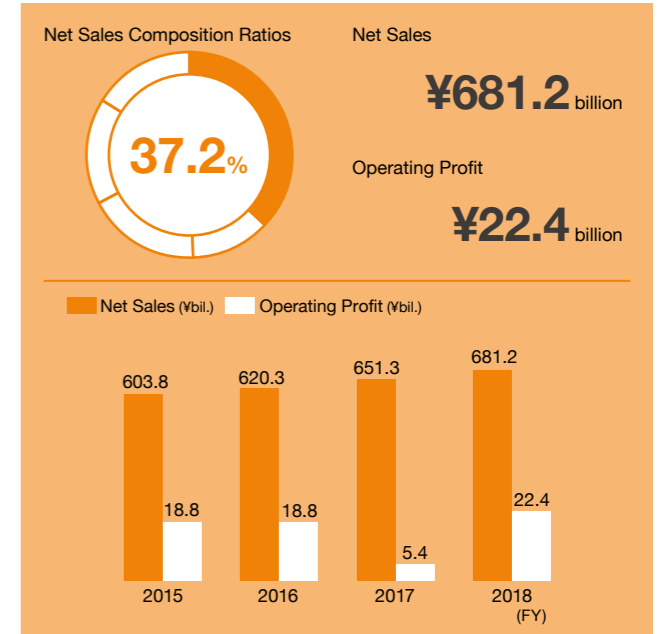
The Household and Industrial Materials Businesses aim to be a “lifestyle and social support enterprise” that contributes to the prosperity of society as a whole into the future by sustainably providing materials and technologies that are closely tied to people’s day-to-day lives.



Ryoji Watari
President, Industrial Materials COMPANY
President, Household and Consumer Products COMPANY

Changes in Net Sales and Operating Profit

In FY2018, the Household and Industrial Materials Businesses had net sales of 681.2 billion yen (up 29.9 billion yen from FY2017) and operating profit of 22.4 billion yen (up 17.0 billion yen from FY2017). The Industrial Materials Businesses reported that costs increased as a result of higher raw materials and fuel prices and other factors, but profit increased year-on-year due to product price revisions and progress in cost reductions. The Household and Consumer Products Business reported higher net sales as a result of an overall increase in household paper sales.



Industrial Materials Business

Business Overview

[Industrial Materials Business]

The Industrial Materials Business has production and sales structures that integrate materials and processing from base paper manufacturing to product processing and packaging design for the packaging materials that are essential to industry such as corrugated containers, folding cartons, and paper bags and responds in a timely manner to customer needs.



Main products of the Industrial Materials COMPANY

Business Strategies (1)

Increase the Earnings Capacity of Domestic Business

Demand for corrugated containers, one of the main business lines of the Industrial Materials COMPANY, is expanding nationwide as a result of e-commerce and other factors, and the growth in demand in the Kanto region in particular is prominent because of the concentration of population in the Tokyo metropolitan area.

To meet this demand, the Industrial Materials COMPANY decided to construct a new corrugated container plant at a Group logistics center in the bay area of Funabashi City in Chiba Prefecture. Operations are scheduled to start in stages in April 2020. In addition, base paper supply capacity will be increased by converting Oji Paper newsprint manufacturing facilities into containerboard and kraft paper manufacturing facilities.

To further reinforce earnings bases through the integration of materials and processing, investments will be made for the full utilization of Group management assets.



Rendering of the completed new Funabashi corrugated container plant

Expansion of Overseas Businesses

The Industrial Materials COMPANY conducts business at 44 sites in nine countries in Southeast Asia, India, and Oceania. Until now, business has focused on establishment and expanding processing sites to respond to growing packaging demand however, but a new containerboard manufacturing facility is being established in Malaysia with a target of commencing operations in 2021, and efforts are being made overseas to develop business further by integrating materials and processing.

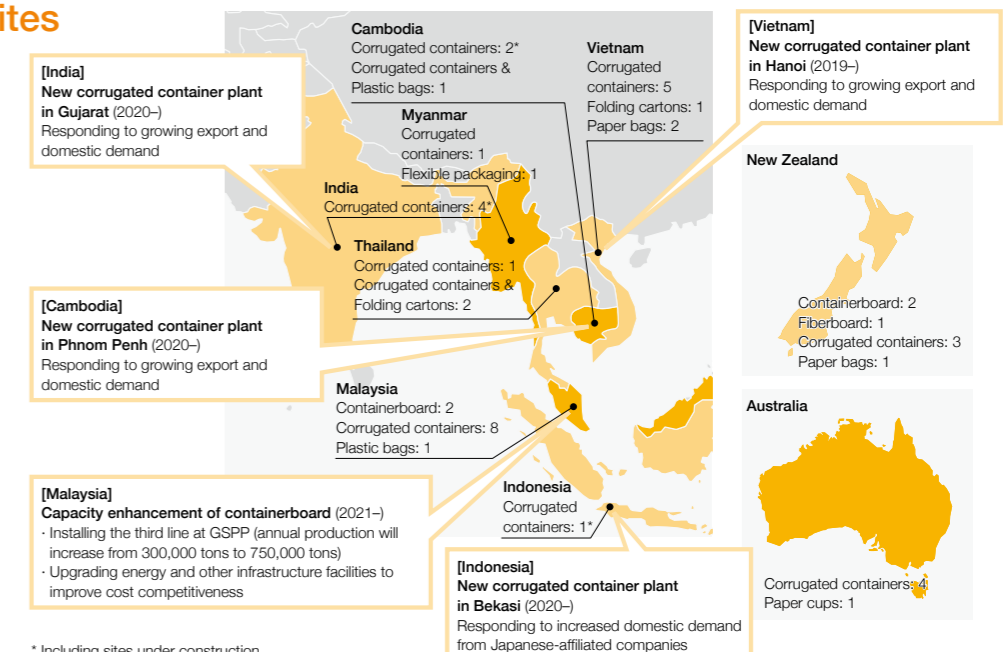
A decision was also made to enter business in Indonesia, a previously untapped market, by means of a joint venture, and preparations are underway for a corrugated container plant to

start operating in 2020. Going forward, business expansion will continue by carefully examining risks and returns in each region and market and making effective use both of new business site establishment and M&A.



Rendering of the completed containerboard manufacturing facility in Malaysia (structures with blue roofs)

Main Overseas Sites



Business Strategies (2)

Promotion of Innovation

As a result of the growing trend to shift away from plastics, a movement to replace various plastic products with paper can be seen around the world.

The Industrial Materials COMPANY is making efforts to capture the demand to switch to products made from both

paper and plastic such as shopping bags and is working in collaboration with the Innovation Promotion Division to develop products with new functions using paper and other materials for products that previously were available only in plastic to capture this new demand.

ESG and SDG Topics

Promoting Recycling—Dissolution treatment of confidential documents

Oji Materia Edogawa Mill is equipped with a high-security dissolution treatment facility, where confidential documents packed in sealed corrugated carton boxes are recycled into boxboard, entirely remaining unopened. This system, which takes the environment into consideration while maintaining information security, contributes to the creation of a sustainable society.

Aid Distribution Agreement under Disaster Cases (Oji Container & Morishigyo Group)

“Aid Distribution Agreement under Disaster Cases” refers to collaboration between our corrugated container plants located throughout Japan with neighboring local governments, so that we are able to contribute to making people feel safe and at ease at evacuation sites when disaster strikes. In times of disasters we promptly deliver corrugated container products such as portable beds, sheets, partitions, and portable toilets to the public.



Household and Consumer Products Business

Business Overview

[Household and Consumer Products Business]

In the household paper and disposable diaper business fields, Oji Nepia integrates sales, marketing, and production in the pursuit of three types of quality: quality of life as in the seeking of good texture, comfort, and functionality; environmental quality as in forest conservation such as the adoption of FSC™ certified paper*; and social quality such as taking CSR initiatives that contribute to society and that are in line with customers' hopes. FSC™C018118



* FSC™ is the world's most widely recognized forest certification program. Examinations are performed on issues such as whether forests and lumber are properly managed and whether new trees are planted to replace trees cut in order to protect precious nature. Selecting products with the FSC™ certification mark is a sign of support for forest conservation activities worldwide, and is conducive to sustainable forests in the future.

• Main Products



nepia Premium Soft Toilet Rolls



nepia Premium Soft Tissues



nepia Hana Celeb Three Pack



nepia Genki! Pants

Business Strategies (1)

Profitability Improvement of Domestic Business

In addition to boosting sales of nepia Genki! baby diapers, concentrated efforts are put forward to penetrate the market with high-quality, high-price range nepia Whito products. By reinforcing collaboration with retailers such as drugstores and baby goods stores, the fine quality and benefits of these products are conveyed to parents resulting in an upwards shift in profitability of the disposable baby diaper market.



The Whito high-quality, high-price range nepia brand

Expansion of Overseas Businesses

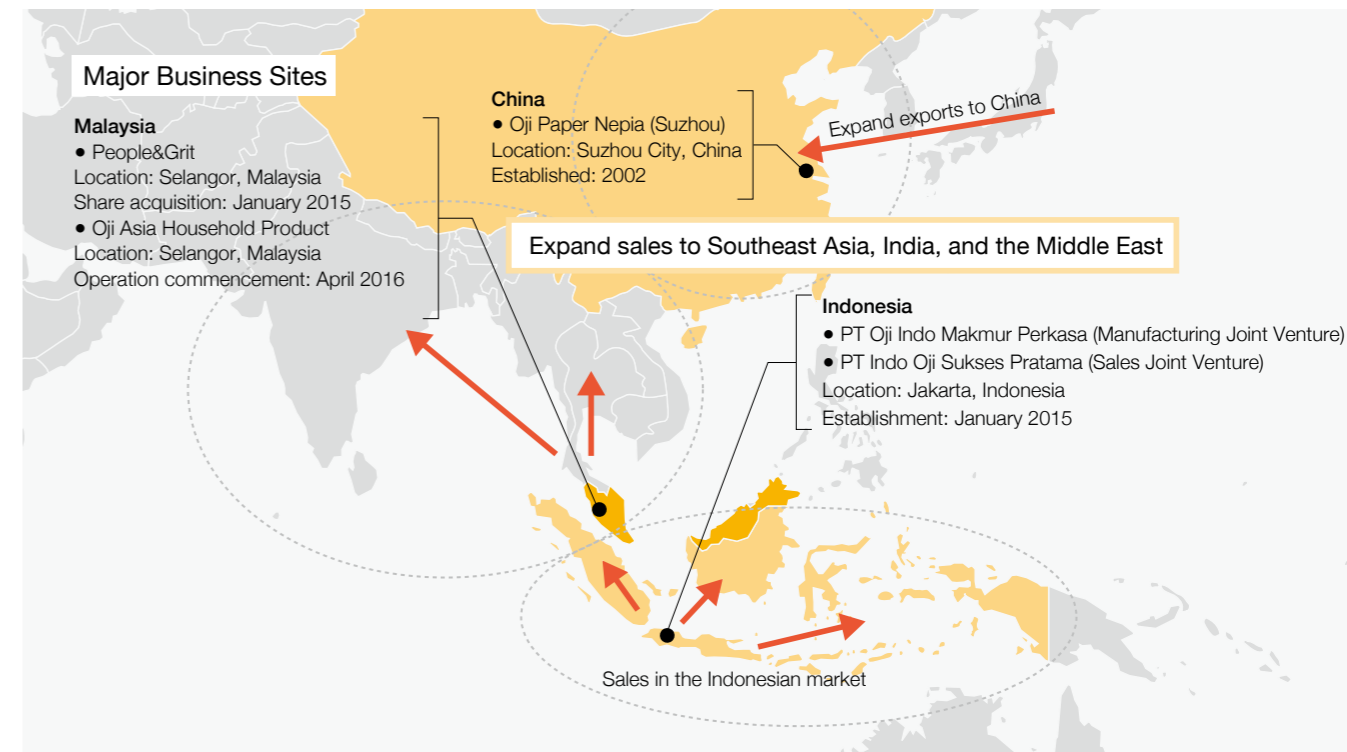
In order to strengthen the business foundation, the Southeast Asia business is being expanded, where consumption of disposable baby diapers is expected to grow. This besides, production capacity was increased and costs were reduced through reorganization of production structures at two sites in Malaysia, and a production facility is being constructed in Indonesia, which has the largest population in the region. Active business expansion through investment including M&A is also under consideration.

As high-quality “made in Japan” products, export of Genki! brand and Whito brand products has also been growing in China and Southeast Asia.



Genki! products sold in Malaysia

Main Overseas Sites



Promotion of Innovation

Three-hour-use pants diaper is unprecedentedly developed for the baby diaper market and added to the superior nepia Whito brand lineup to further enhance product quality and respond to the requests of parents. The Household and Consumer Products COMPANY will continue to propose products that reform the competitive axis of the market by instilling the differentiation between 3-hour-use and 12-hour-use with a focus on their different usage conditions. The company will continue its efforts in advancing the proprietary quilting technology adopted in Whito products to enhance performance even further.



3-hour use pants diapers added to the product lineup

ESG and SDG Topics (1)

nepia Quality

Pursuing “nepia Quality,” which comprises high living, environmental, and social quality, Oji Nepia engages in various activities in order to be the No. 1 in each of these three aspects. This is especially evident in “environmental quality,” where we have adopted the FSC™ certified paper for our major products since 2011, way ahead of our industry peers. Furthermore, we established a tie-up with WWF Japan in 2017 and created a logo which emphasizes forest conservation, while encouraging the use of FSC™ certified paper as our focus.



WWFはFSC™認証を応援しています。ネピアの紙は、森を守る紙FSC™認証紙*です。『FSC™認証紙のネピアを選ぶことは世界の森を守ることです』と消費者に呼びかけています。
*一部商品を除きます。
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Adult Disposable Diapers

Reducing the work burdens of caregivers has become a major issue because of a shortage of workers at care sites, and changing diapers is one such burden. Because of this, the market for urine pads with high absorption volumes that can reduce the frequency of changing is growing year by year. This trend is expected to continue into the future.

Nepia Tender, a commercial brand, is developed by the Household and Consumer Products COMPANY to ease changing difficulties and reduce and shorten the changing procedures for caregivers. Meanwhile, the absorption capability provides comfort and long periods of peace of mind for diaper users.

In recent years, research has focused on absorbing not just urine, but watery stool as well. Watery stool can cause skin problems for diaper users and, in the case of leakage, can lead to substantial burdens on caregivers. For these reasons, it is included among the most troublesome issues relating to diaper changing. From October 2019, the Household and Consumer Products COMPANY began

sales of incontinence pads with the ability to allow watery stool to pass through and be absorbed without spreading along the surface of the diaper. Going forward, the Household and Consumer Products COMPANY will continue to pursue comfort for both caregivers and care recipients and contribute to human dignity, health, and longevity by enhancing the quality of care.



Large urine pads with the ability to absorb watery stool fulfill the need of nursing care facilities to reduce diaper changing burdens

ESG and SDG Topics (2)

nepia 1,000 Toilets Program

In today's world, approximately 800 children lose their lives each day due to diarrhea and dehydration in environments that lack potable water and proper sanitary systems. In the Democratic Republic of Timor-Leste, (hereinafter, East Timor), where open defecation remains commonplace, there are many such children. The mortality rate for children under the age of five years is 50 per 1,000 live births, and diarrhea caused by contaminated water and lack of sanitary systems is one of the leading causes.

The nepia 1,000 Toilets Program is a program intended to install toilets and end open defecation in East Timor. Since 2008, a portion of Oji Nepia's sales have been contributed to a UNICEF (United Nations Children's Fund) program for improving sanitation in East Timor. The aim is to eliminate open defecation, a cause of disease, by installing toilets through community efforts and conducting educational programs, mainly in agricultural villages. Oji Nepia will continue to provide support to protect the lives and health of East Timorese children and their families.

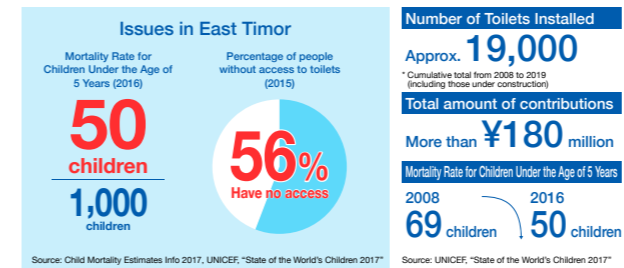


Photo by Kisei Kobayashi



A toilet installed with the support of the project Photo by Kisei Kobayashi

Poo Class by Oji Nepia

“As a company that delivers toilet rolls, we want to contribute to society via the topic of poo.” With this thought in mind, Oji Nepia launched a unique learning program called the Poo Class jointly with the Japan Toilet Labo. in 2007.

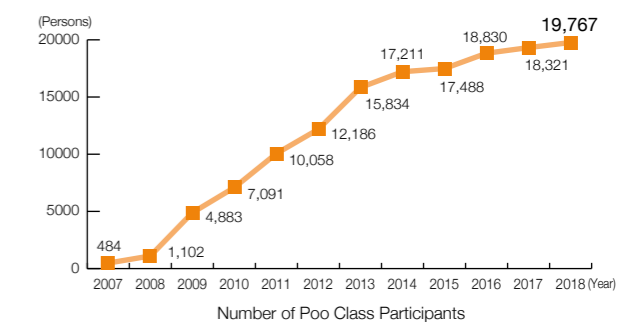
Excretion is equally important as ingestion in maintaining our lives. There are numerous opportunities for children to learn about diet and health, as indicated by the term “dietary education,” but there are few opportunities to learn about excretion and health. For this reason, the Poo Class was created to provide children with opportunities to learn about excretion and think about their health.

To date (as of 2018), a total of 19,767 children have attended the Poo Class. Through 2018, the class has been conducted at a total of 48 elementary schools in the Kanto region as well as Fukushima, Iwate, Fukui, and Aichi Prefectures.

Through Poo class, children learn about the importance of excretion in a fun way. With an aim to promote healthy lifestyle to children, the Poo Class program will continue to expand in the future.



Children learn about their bodies through poo.



Functional Materials Business

The Functional Materials Business will lead the Oji Group's transition to an "Innovative Value-Creating Company" by enhancing our comprehensive proposal making capabilities to react promptly and appropriately to various customer needs, and further developing high value-added products targeted at global markets.



Shoji Fujiwara
President, Functional Materials COMPANY

Business Overview

[Specialty Papers Business]

The specialty Papers Business has a lineup of products with advanced special functions such as electrical material paper including insulation materials, dry pulp nonwoven fabric with excellent bulk and liquid retention properties, and glass paper with outstanding dimensional stability and heat resistance.



Glass paper (Oji F-Text)

[Adhesive Products Business]

Using proprietary adhesive force control technology, the Adhesive Products Business handles products such as familiar items like food and beverage labels, courier delivery labels, adhesive tape for packaging, and wound dressings as well as to less familiar, special applications like aluminum tape for construction material and forgery prevention tape.



PP Clean stickers (Oji Tac)

[Imaging Media Business]

The Oji Group boasts a leading share of the world's market for thermal recording media. Using diverse coating technologies such as thermal and inkjet technologies, the Imaging Media Business is developing products that meet diverse needs in household, industrial, logistics, and medical applications.



Various types of thermal papers (Oji Imaging Media)

[Film Business]

Films for capacitors are used in the power supply units of hybrid and full electric vehicles, and the Oji Group offers films of various thicknesses including the world's thinnest. The Film Business also offers optical adhesive double-coated films and hard-coated films that are seeing rapid growth due to their use in smartphones and other precision devices.

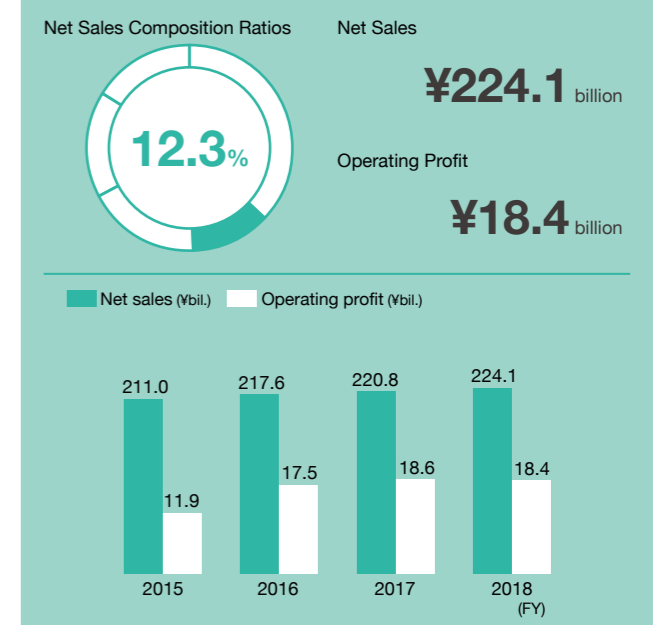


Film used in capacitors (Oji F-Text)

Changes in Net Sales and Operating Profit

In FY2018, the Functional Materials Business had net sales of 224.1 billion yen (up 3.3 billion yen from FY2017) and operating profit of 18.4 billion yen (down 0.2 billion yen from FY2017).

With regard to net sales, effects from the suspension of mill operations caused by the 2018 Hokkaido Eastern Iburu Earthquake resulted in lower sales volume, but effects from price revisions concerning specialty papers for export sales and higher sales volume of thermal paper, particularly in emerging countries in Southeast Asia and South America, pushed net sales higher. Cost reduction efforts were implemented, but effects from higher prices for raw materials and fuel resulted in lower operating profit.



Business Strategies

Profitability Improvement of Domestic Business

Through the integration of Oji Group core technologies developed in the past such as papermaking, converting (functional and adhesive coatings), and film forming with new materials, the Functional Materials Business will rapidly develop and supply high-function and high Value-added products. Air laid technology that forms sheets from various powders, fibers, and so on contributes to the reduction of waste through the recycling of manufacturing process waste materials generated by fiber manufacturers into raw materials and manufacturing new air laid nonwoven fabrics.

In addition, we maximize profit, by expanding new business fields high value-added products in collaboration with the Innovation Promotion Division, by achieving business collaboration effects with Mitsubishi Paper Mills, and by reorganizing production structures.



The 6FM at the Oji F-Text Shiga Mill



Oji Kinocloth Fuji Factory Machine No. 2 (Product name: Kinocloth)

Expansion of Overseas Businesses

In conjunction with the economic development of emerging countries and regions such as Southeast Asia, India, and South America, demand for existing products including thermal paper and adhesive paper is expanding steadily.

The Functional Materials COMPANY is establishing integrated production structures and expanding business in Southeast Asia from upstream (release paper production, thermal sensitive coatings) to midstream (adhesive converting) and downstream (printing). Plans call for the production capacity of Oji Papéis Especiais to be increased and sales boosted in response to robust demand for thermal paper in Brazil. In Myanmar, production and sales of flexible packaging products such as films for consumer goods makers was launched in 2017, and efforts are being made to develop new markets.

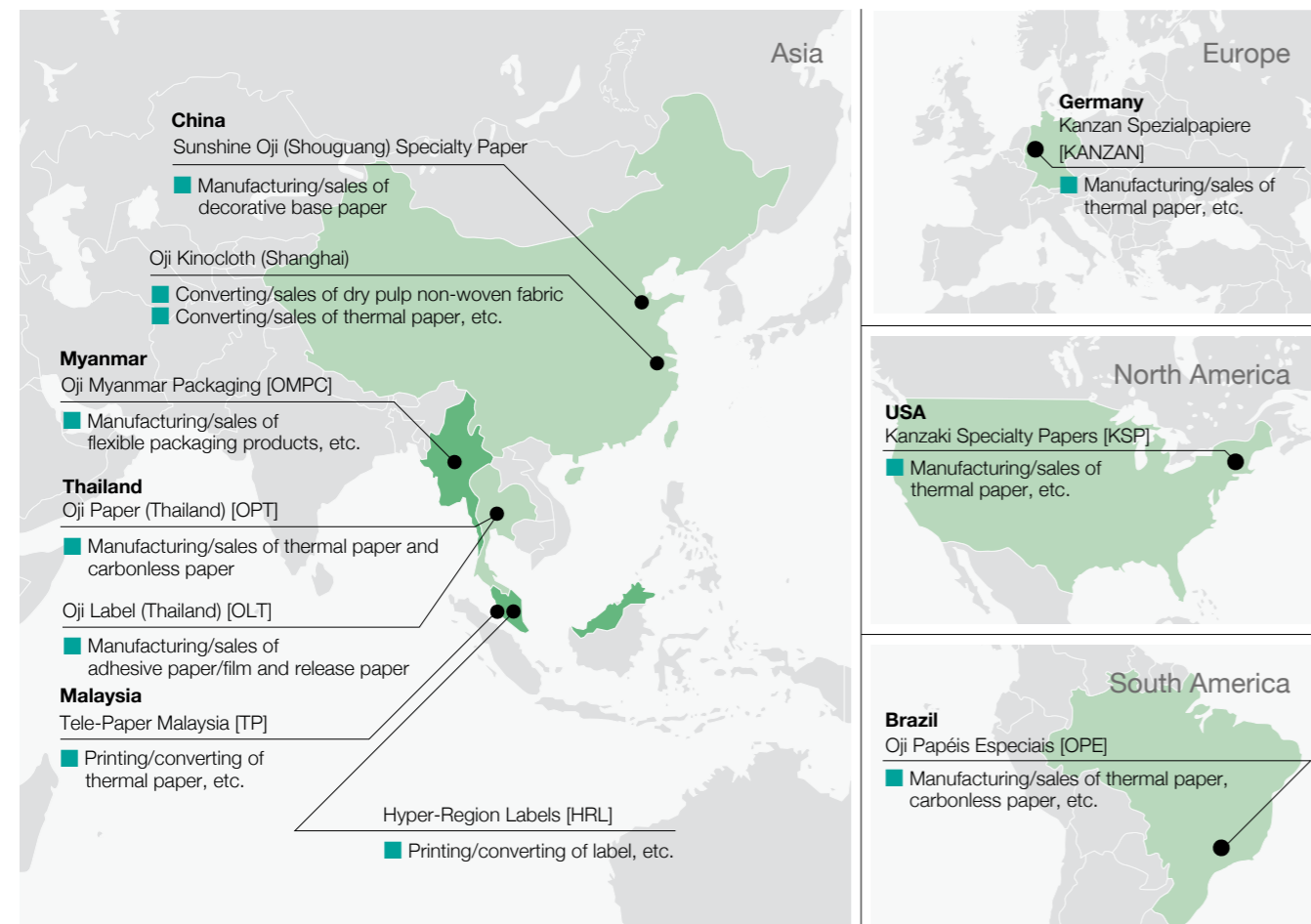


Overall view of the Oji Paper (Thailand) and Oji Label (Thailand) Plant



The PC3 at Oji Papéis Especiais

Main Overseas Sites

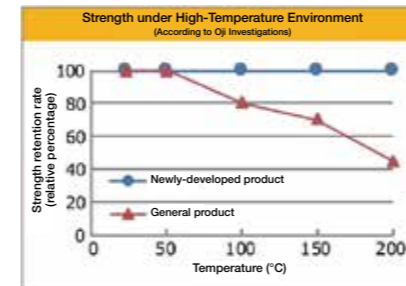


Promotion of Innovation

Oji F-Tex developed heat resistant glass paper by adding heat resistance properties to existing glass paper. Glass paper is made primarily from glass fiber and formed into sheets that maintain excellent properties derived from glass fiber such as electrical insulation, dimensional stability, high elasticity, heat resistance, corrosion resistance, and durability and can be processed in various ways. Glass paper is a product that is expected to have reliable effects and enhance functionality

in various applications. In addition to the characteristics of existing glass paper, the newly developed heat resistant glass paper maintains strength even under high-temperature environments and hardly emits any smoke at all even when near fire. Moreover, individual fireproofing treatment (sintering) of glass paper is not needed.

Adding new functions to glass paper and expanding possible applications is expected to lead to use in new fields.



Smoke test with heating from alcohol lamp

ESG and SDG Topics

Measures to Address the Issue of Plastic in the Ocean

The Issue of Plastic in the Ocean is becoming increasingly serious, leading to movements to eliminate plastics around the world and rising demand for paper products with minimal environmental impact as alternatives to plastic containers and straws. A shift from plastic to paper straws and other such changes can be seen in leading restaurant chains.

Oji F-Tex is leveraging the technologies used to manufacture various types of base paper for food applications to develop straw base paper that has the same water resistance as existing plastic straws and maintains spiral processability. Supply of prototypes has started.

Oji F-Tex is also developing composite materials (resin pellets) that contain biodegradable plastics made from pulp and polylactic acid. In addition to biodegradability, improvements in physical properties such as improved rigidity after molding and heat resistance are expected to expand application to food containers and other products that can replace plastics.



Samples of cup base paper use



Molding examples (spoons and chopsticks)

Forest Resources and Environment Marketing Business

The Forest Resources and Environment Marketing Business supports the Group's business through the stable supply of raw materials and other materials and comprehensively leverages Group assets including renewable resources of the likes of forests and water as well as facilities, real estate, and technologies to reinforce business.



Fumio Shindo

President, Forest Resources and Environment Marketing COMPANY

Business Overview

[Pulp Business]

Market pulp supply capacity is 2.5 million tons per year, and the Forest Resources and Environment Marketing Business has a diverse lineup of pulp grades including hardwood pulp, softwood pulp, and dissolving pulp. The broad product lineup and the Group's sales channels are used to boost sales in Asia and other growth regions. Moving forward, we will continue to carry out strategic financial measures to secure our competitiveness.



Dissolving pulp

[Energy Business]

The electric power generation business has strengthened by expanding and fortifying electricity generation facilities and entering the electricity retailing business. With regard to biomass electric power generation, the Energy Business brought two new boilers online in FY2015 and, in March 2016, established a joint venture biomass power generation company together with Mitsubishi Paper Mills, which started operation in 2019.



Biomass power plant (Oji Green Energy Nichinan/Nichinan City, Miyazaki Prefecture)

As for hydroelectric power plants, the energy business continues to update existing facilities. Additionally, a joint electricity retailing business was launched with ITOCHU ENEX.

[Lumber Processing Business]

In the lumber business, the Forest Resources and Environment Marketing Business stockpiles and sells lumber products and processed lumber products, primarily in Asia and Oceania, and is taking measures to expand production capacity. Efforts to



Pan Pac lumber

expand sales at sales bases established in China and Southeast Asia are ongoing.

[Forest Plantation Business]

The Group has engaged in forest management for many years and has 190,000 hectares forests in Japan and 250,000 hectares of forest plantations overseas. The purposes of forests are, in addition to existing uses for paper manufacturing raw materials, and use for processed products including lumber and plywood as well as diverse resources namely, biomass fuel, to develop a comprehensive forestry industry that generates maximum value from forest resources.

Integrated Report p. 68
 Forest Recycling: Company-Owned Forests in Japan and Overseas Forest Plantations

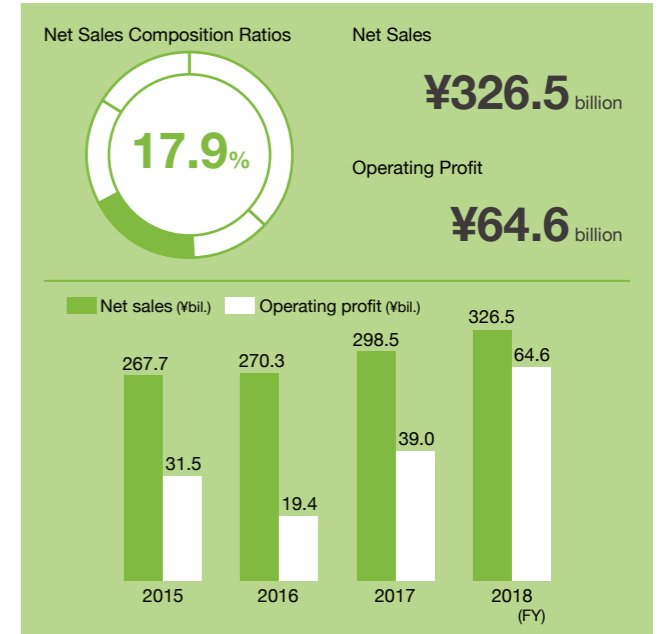
[Raw Materials and Fuels & Materials Procurement Business]

As prices for raw materials, fuels, and materials increase in conjunction with economic development of emerging countries, centralized management procurement and advantageous procurement are conducted for the group as a whole. CSR procurement is conducted while taking into consideration the environment and society in accordance with the Oji Group Partnership Procurement Policy.

Changes in Net Sales and Operating Profit

In FY2018, the Forest Resources and Environment Marketing Business had net sales of 326.5 billion yen (up 28.0 billion yen from FY2017), and operating profit of 64.6 billion yen (up 25.6 billion yen). Thus, both sales and profit increased significantly, due mainly to effects from higher pulp prices.

In the pulp business, sales volumes were solid both in Japan and overseas. In the lumber business too, sales volume was brisk in Japan and overseas, particularly to China, and sales were up from the previous fiscal year. In the energy business, sales were solid with electric power sales remaining at the same level as the previous year.



Business Strategies

Expansion of Overseas Businesses

In the pulp business, the Forest Resources and Environment Marketing Business continues to implement strategic profit measures at key business sites to reinforce business foundations that are resilient to fluctuations in pulp markets.

Oji Group know-how and operational management methods have been introduced and used in New Zealand to stabilize operations and raise efficiency. In Brazil, profit measures are implemented on a continuous basis by updating production facilities and through other means.

In Japan, the Forest Resources and Environment Marketing Business is expanding business and started production of high value added products: medical product materials and filter materials in addition to existing products for rayon applications.

The Forest Resources and Environment Marketing Business conducts forest plantation operations in nine locations in six overseas countries and is working to continuously secure sustainable resources.

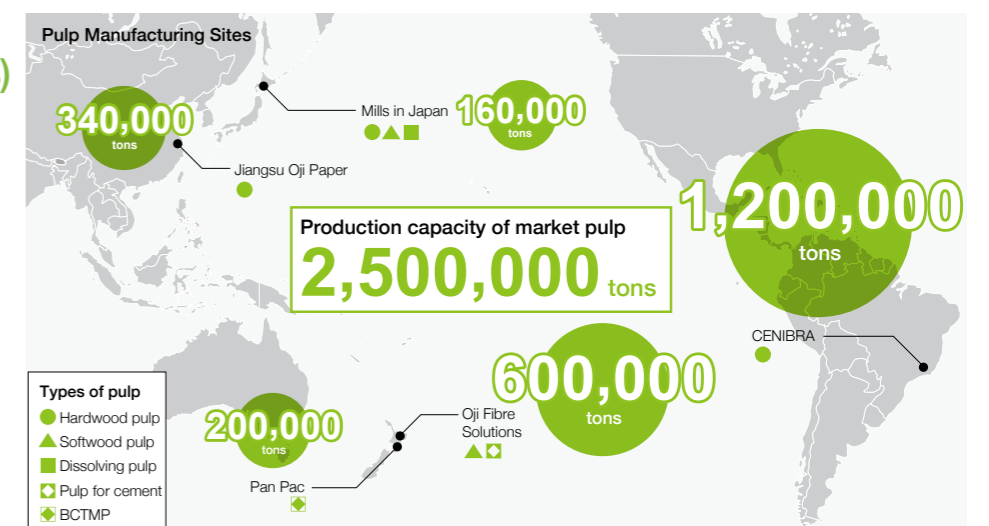


Overall view of the CENIBRA Mill (Belo Oriente, Minas Gerais, Brazil)

Forest plantation at CENIBRA
 Photo by João Rabelo



Main Overseas Sites (Pulp Production Sites)



Profitability Improvement of Domestic Business

Electric Power Generation Business: Expansion of the renewable energy business with a focus on establishing new biomass power plants

The Forest Resources and Environment Marketing Business is pursuing further expansion of the energy business, and a joint venture biomass power generation facility established with Mitsubishi Paper Mills commenced operation in 2019. Additionally, a decision was made to construct a biomass power generation facility in Tokushima Prefecture as a joint venture with ITOCHU ENEX, and preparations are underway for the start of operations in 2022. To reinforce the biomass fuel business in conjunction with expansion of the energy business, a new fuel woodchip production company was established in Hokkaido in November 2018 to expand production of fuel woodchips by making use of unused domestic forest resources. Overseas, efforts to increase procurement of palm kernel shells (PKS) for use as fuel continue in Indonesia and Malaysia.



One of the Group's strengths is its ability to procure PKS through the networks developed for procuring raw materials for paper and through the development of overseas business. PKS is used in the Group's biomass energy business and is sold externally.



MPM Oji Eco-Energy's biomass electric power generation facility

MPM Oji Eco-Energy	Oji Green Energy Tokushima	Other
Operation commenced in 2019 (on the site of Mitsubishi Paper Mills Hachinohe Mill)	Operation to commence in 2022 (On the site of the Oji Paper Tomioka Mill)	Undertakings that seek to contribute to the development of a low-carbon society including the fuel procurement business for biomass power generation, hydroelectric power business, and other businesses
Generating capacity: 75,000 kW	Generating capacity: 75,000 kW	
Joint venture with Mitsubishi Paper Mills	Joint venture with ITOCHU ENEX	

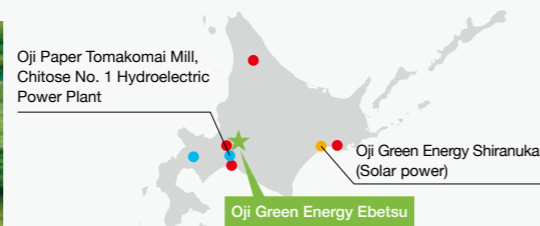
Oji Group's Power Generation Sites



Oji Paper Tomakomai Mill, Chitose No. 1 Hydroelectric Power Plant (Inside)



Oji Paper Tomakomai Mill, Chitose No. 1 Hydroelectric Power Plant



Oji Paper Tomakomai Mill, Chitose No. 1 Hydroelectric Power Plant



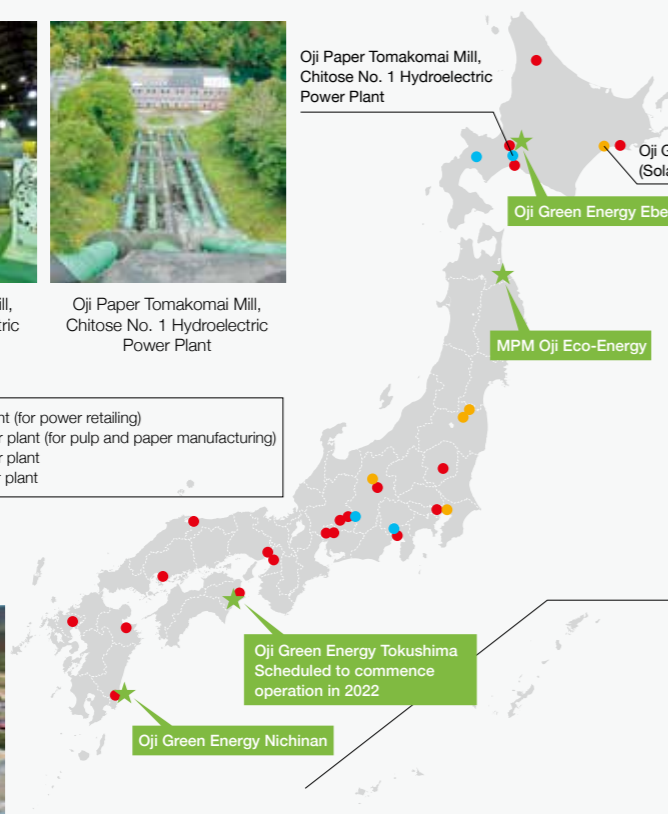
Oji Green Energy Shiranuka (Solar power)



Oji Green Energy Ebetsu



Oji Green Energy Nichinan



Development of New Business and New Products

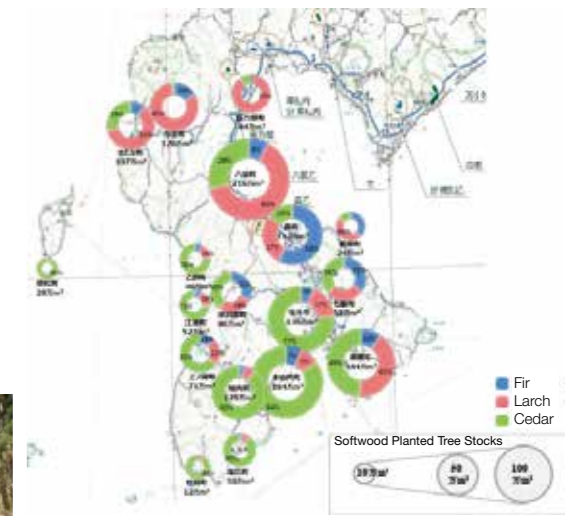
Hakodate-Hokuto Oji Forest & Products was established in Hokuto City in the southern region of Hokkaido in 2018 to produce woodchips for biomass power generation and as a raw material for paper manufacturing. The plant was completed and production commenced in 2019.

Abundant fir, larch, and cedar resources are found in the southern region, but their use has not progressed. To make effective use of these unused forest resources, the new company will use logs harvested from forests in the region to produce woodchips using stationary wood chippers at the mill in Hokuto City. Forest debris including materials remaining after logging (remaining branches, treetops, etc.) will also be used.

Annual production targets are 30,000 GMT of woodchips for biomass fuel use and 6,000 GMT of woodchips for paper manufacturing materials (GMT (green metric ton) is the tonnage with moisture content of approximately 50 percent). The materials will be supplied to the MPM Oji Eco-Energy biomass electric power generation facility (in Hachinohe City, Aomori Prefecture) and the Oji Paper Tomakomai Mill (in Tomakomai City, Hokkaido), respectively.



Cedar trees in a forest owned by Hokkaido Prefecture



Softwood Planted Tree Stocks in Donan

ESG and SDG Topics

Eco-and Society-Friendly CSR Procurement

In order to fulfill its social responsibilities when procuring raw materials, the Oji Group conducts CSR (Corporate Social Responsibility) procurement that takes environmental and social factors into consideration in cooperation with business partners throughout its supply chain. The Oji Group's CSR procurement activities are based on such principles as the United Nations Global Compact, the Oji Group Corporate Code of Conduct, and the Oji Group Environmental Charter. By implementing CSR procurement, we seek to contribute to a truly enriched and sustainable society.

The Oji Group shares the Oji Group Procurement Policy with all its divisions involved in procurement, not only requesting new suppliers for their understanding before starting transactions, but also informing all existing suppliers through the procurement divisions of the revised content at the time of revision. In February 2019, we notified about 1,200 suppliers of wood raw materials, materials, wastepaper, and purchased pulp about the details of the revision, and asked them to comply with CSR procurement again. In addition, our procurement personnel and suppliers promote good communication to expand CSR procurement that takes into consideration the environment and society throughout our supply chain.

The procurement of wood raw materials is covered by the Wood Raw Material Procurement Guidelines, which are subordinate to this procurement policy because more aspects, such as illegal logging and biodiversity, need to be checked than for other procured materials. The Oji Group Partnership Procurement Policy and the Wood Raw Material Procurement Guidelines have been translated into English for suppliers all over the world.



Integrated Report p. 76
Wood Raw Material Procurement Guidelines

Oji Group Partnership Procurement Policy (Overview)

- 1 Ensure stable supply**
 1. Offer competitive prices
 2. Ensure quality and delivery
- 2 Comply with laws and social standards, and engage in fair trade**
 1. Comply with relevant laws and international conventions
 2. Maintain sincere and healthy relations with business partners
- 3 Consider the environment**
 1. Reinforce environment management systems
 2. Reduce waste and effectively use resource
 3. Address climate change (reduce greenhouse gas emissions mainly through energy conservation, and promote carbon dioxide absorption as well as carbon fixation mainly through forest conservation)
 4. Protect biodiversity
 5. Reduce environmental impact
 6. Manage chemical substances
 7. Manage water resources
- 4 Demonstrate social concern**
 1. Protect human rights (prohibit child labor, forced labor, discrimination, and harassment)
 2. Protect labor rights (maintain good labor relations, avoid long working hours, ensure payment of above-minimum wage, and respect freedom of association as well as right to collective bargaining)
 3. Ensure worksite safety and health
 4. Contribute to society and the local community
- 5 Communicate with society**
 1. Build relations of trust with stakeholders through communication
 2. Respect the culture and customs of other countries
 3. Appropriately disclose and protect information

Revised: December, 2018

Printing and Communications Media Business

The Printing and Communications Media Business will build optimal production structures to reinforce domestic business foundations while providing globally-competitive products to raise earnings capacity even further.



Ryuichi Kisaka

President, Printing and Communications Media COMPANY

Business Overview

[Newsprint Business]

Newsprint must have the strength to withstand high-speed rotary press printing and printability for a beautiful finish in color printing. The Oji Group holds approximately 30% share of the Japanese market for newsprint and makes ongoing efforts to enhance quality in response to the needs of newspaper companies throughout the country.



[Printing and Publication Paper Business]

Publication paper used in books and magazines and printing paper used in catalogs and leaflets requires varied levels of quality according to the planning and particulars of the final product and the characteristics of the printing equipment.



We continuously develop products to meet the needs of the times and supply the high-quality products demanded by customers.

[Communications Paper Business]

In addition to conventional forms and Copier paper (PPC), we are developing various new products such as highly functional printing paper for print on-demand (POD) printing. These products are used for diverse tasks in a wide range of industries as information processing system input media.



Business Strategies (1)

Profitability Improvement of Domestic Business

We are taking various measures including concentration of production facilities through shutdown and transfer of operations in order to improve profitability in domestic business and increase international competitiveness, thereby eliminating urgent issues.



The #N-5 machine at the Oji Paper Tomakomai Mill

<Overview of Equipment Shutdown and Retrofitting>

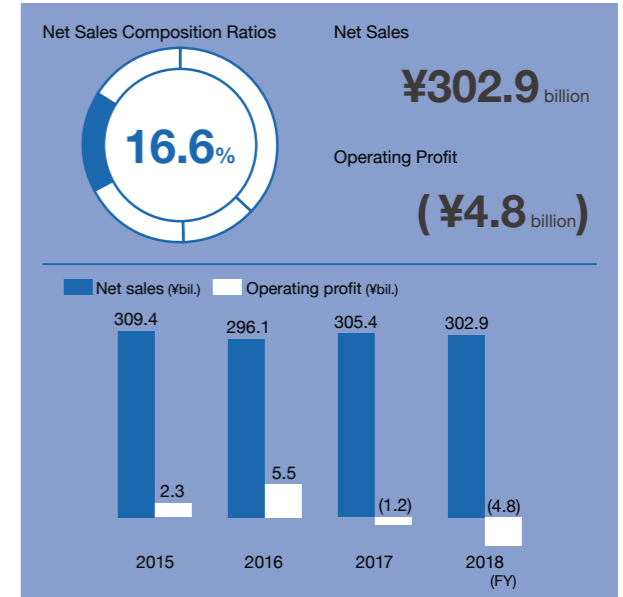
- Retrofitting of the #N-5 machine at the Tomakomai Mill (FY2021)
- Modification from newsprint manufacturing equipment to containerboard and kraft paper manufacturing equipment
- Shutdown of the Tomioka Mill #9 machine and #9 coater (end of FY2019)

<Closer Business Partnership with Mitsubishi Paper Mills>

- Cost cutting by eliminating mixed transportation
- Sharing operating technologies
- Integration of brands through complementation of products

Changes in Net Sales and Operating Profit

In FY2018, the Printing and Communications Media Business reported net sales of 302.9 billion yen (down 2.5 billion yen from FY2017) and an operating loss of 4.8 billion yen (down 3.6 billion yen from FY2017). Net sales decreased owing to a slight decline in demand and a slump in both newsprint and printing/communication paper markets. Operating losses had increased despite progress made in cost cutting and price correction because of the effects of higher prices for raw materials and fuel.



Business Strategies (2)

Expansion of Overseas Business

As a result of strong market conditions for both paper and pulp, Jiangsu Oji Paper Co., Ltd. achieved substantially higher sales and profit in 2018. The company will continue to make efforts to strengthen sales capabilities and reduce costs, but due to the effects of advances in information and communications technologies, the business environment is not grounds for optimism in the future. Accordingly, the company has decided to invest in household paper base paper production facilities as a growth field in order to secure new sources of profit.



Diagram of the completed household paper base paper machine

Promotion of Innovation

In the Japanese markets for newsprint and printing paper, a shift has been made over the past several years from gravure printing suitable for large-lot printing to general offset printing in conjunction with declines in the numbers of copies of newspapers, books, and magazines issued, and it is expected that the introduction of inkjet printing suitable for extremely small lots will also be explored. To flexibly respond to these emerging needs. We are developing papers with unique characteristics such as offset printing paper that has strong gloss approaching that of gravure printing and paper suitable for inkjet printing.

ESG and SDG Topics

Oji Charitable Education Fund

Jiangsu Oji Paper Co., Ltd., (Nantong City, China) engages in manufacturing and sales of pulp, printing paper, publication paper, and other products. Oji Holdings has established the Oji Charitable Education Fund jointly with the Nantongshi Charity Federation and Nantongshi Development Zone Charity Federation to help improve the local educational environment.



Annual scholarship granting ceremony

Hydroelectric Power Business

The Hokkaido Eastern Iburi Earthquake that occurred in September 2018 caused an approximately 11-hour blackout throughout Hokkaido, but power to the Shikotsuko hot spring resort Onsen area was restored after only one and a half hours.

Hydroelectric power is supplied to Shikotsuko hot spring resort (Onsen) from the Chitose No. 1 and No. 4



Hydroelectric Power Plants, which are owned and managed by the Tomakomai Mill. From this earthquake, hydroelectric power is being re-examined.

Main Businesses of Corporate Management Group and Shared Service Companies

Kyokuyo and Ginpo Pack

Kyokuyo Co., Ltd. is a specialized trading company that performs business functions for the Oji Group, buying and selling products of Oji Group and other companies. These products include pulp and paper, synthetic resin materials and products, packaging materials, chemicals, and machinery. With the change of its name in January 2018, Kyokuyo has been expanding its business activities to a more diverse range of fields to respond to customer needs in the most suitable and optimal ways.

Ginpo Pack Co., Ltd, a subsidiary of Kyokuyo that conducts planning, manufacture, and sales of plastic containers for food packing with focus on "Pulfine," heat-resistant polypropylene foam containers.



Plastic cups made from used PET bottles (CO₂ reduction)



Pulfine, highly-expanded polypropylene containers feature excellent heat resistance and heat retention properties

ESG and SDG Topics

Eco-friendly Products (Kyokuyo)

This new type of foldable plastic tray is made from eco-mark certified recycled materials. It reduces waste in response to calls from consumers for trays that are not cumbersome and have easily-discardable shapes. The trays have uneven grooves and can be folded along the grooves into a compact form. They are used for food delivery, but are suitable not only for food but can also be used to transport miscellaneous items, stationery goods, cosmetics, and so on.



A foldable tray made from eco-mark certified recycled materials (waste reduction)

Oji Engineering

Oji Engineering, a company that supports Oji Group's technology, leverages its technologies accumulated through paper manufacturing to offer one-stop engineering services ranging from facility design to operations. The company actively spearheads entries into greenfields, such as proposals for practical water treatment and other systems in its water environment business and fuel handling facilities in its biomass power generation business.



Waste water treatment system

Oji Real Estate

Oji Real Estate Co., Ltd. is as a general developer active nationwide in the development and sale of condominiums and single-family homes, lease and management of office buildings, condominiums, and commercial facilities, and the renovation business. It is a comprehensive real estate firm with a construction division that conducts design, supervision, and consultation in a wide range of areas including factories and plants as well as public and private facilities.



Oji Homes Aoyama (located in Minamiaoyama, Minato-ku, Tokyo) is a vintage condominium that provides support for fulfilling lifestyles through a highly-detailed concierge service



Hotel New Oji

Hotel New Oji, engages in the hotel and flight catering businesses. In addition to the Grand Hotel New Oji, which marked 20 years of business in May 2019, a 16-story city hotel located in Tomakomai City, Hokkaido, the company prepares inflight meals for domestic and overseas flights in the catering building at the New Chitose Airport and loads the meals onto aircraft using large, specialized vehicles.



Rooftop crown lighting was used to mark 20 years of business by the Grand Hotel New Oji



A food loader supplies meals to an aircraft

Oji Logistics

Oji Logistics offers a variety of services, mainly to Oji Group companies to transport paper products to be shipped out of mills and consumption area warehouses. These services include warehousing, land transportation, marine transportation, port logistics, international logistics, etc. It offers total logistics service solutions, along with incorporating eco-friendliness into its operations such as implementing a modal shift toward railroads and ships rather than trucks.



A roll-on roll-off (RORO) ship that can transport vehicles carrying goods (placed in service in June 2019)

Corporate Officers **Directors**



Susumu Yajima
Director, Chairman of the Board



Masatoshi Kaku
Director of the Board,
President
(Group CEO)



Ryoji Watari
Director of the Board,
Executive Vice President
President, Industrial Materials
COMPANY
President, Household &
Consumer Products COMPANY



Yoshiaki Takeda
Director of the Board,
Senior Executive Officer
General Manager, Corporate
Governance Division
President,
Oji Management Office Inc.



Shoji Fujiwara
Director of the Board,
Senior Executive Officer
President,
Functional Materials COMPANY



Yoshiki Koseki
Director of the Board,
Senior Executive Officer
Vice President, Industrial
Materials COMPANY
President, Oji Materia Co., Ltd.



Ryuichi Kisaka
Director of the Board,
Senior Executive Officer
President, Printing &
Communications Media COMPANY
President, Oji Paper Co., Ltd.



Kazuhiko Kamada
Director of the Board,
Executive Officer
President,
Celulose Nipo-Brasileira S.A.



Hiroyuki Isono
Director of the Board,
Executive Officer
Chairman of the Board, Oji Oceania
Management Co., Ltd.
Chairman of the Board,
Oji Fibre Solutions (NZ) Ltd.



Koichi Ishida
Director of the Board,
Executive Officer
Deputy General Manager,
Corporate Governance Division
In charge of: Innovation
Promotion Division
President, Oji Engineering Co., Ltd.



Fumio Shindo
Director of the Board,
Executive Officer
President, Forest Resources &
Environment Marketing
COMPANY



Michihiro Nara
Outside Director of the Board



Toshihisa Takata
Outside Director of the Board



Norio Henmi Outside Audit & Supervisory Board Member
Makoto Katsura Outside Audit & Supervisory Board Member
Tomihiro Yamashita Audit & Supervisory Board Member
Nobuko Otsuka Audit & Supervisory Board Member
Mikinao Kitada Outside Audit & Supervisory Board Member

Oji Group established the Oji Group Corporate Code of Conduct in 2004 based on the fundamental values and philosophy that have been handed down since the Group's foundation and has undertaken business activities with an awareness of its role as a corporate member of society and a strong sense of ethics throughout the Group. Going forward, we will continue to position the enhancement of corporate governance as a priority management issue in order to ensure management efficiency, soundness, and transparency, increase corporate value, and be a company that is trusted by society while building trusting relationships with diverse stakeholders.

Basic Concepts, Framework, and Operational Policies

Fundamental Policies on Corporate Governance

The Fundamental Policies on Corporate Governance set forth the basic concepts, framework, and operational policies regarding corporate governance.


[Fundamental Policies](https://www.ojiholdings.co.jp/english/group/policy/governance.html)
<https://www.ojiholdings.co.jp/english/group/policy/governance.html>

Corporate Governance Report

The Oji Group posts its Corporate Governance Report, which it submits to Tokyo Stock Exchange, on its official website.


[Corporate Governance Report](https://www.ojiholdings.co.jp/english/ir/library/governance.html)
<https://www.ojiholdings.co.jp/english/ir/library/governance.html>

Corporate Governance Structures

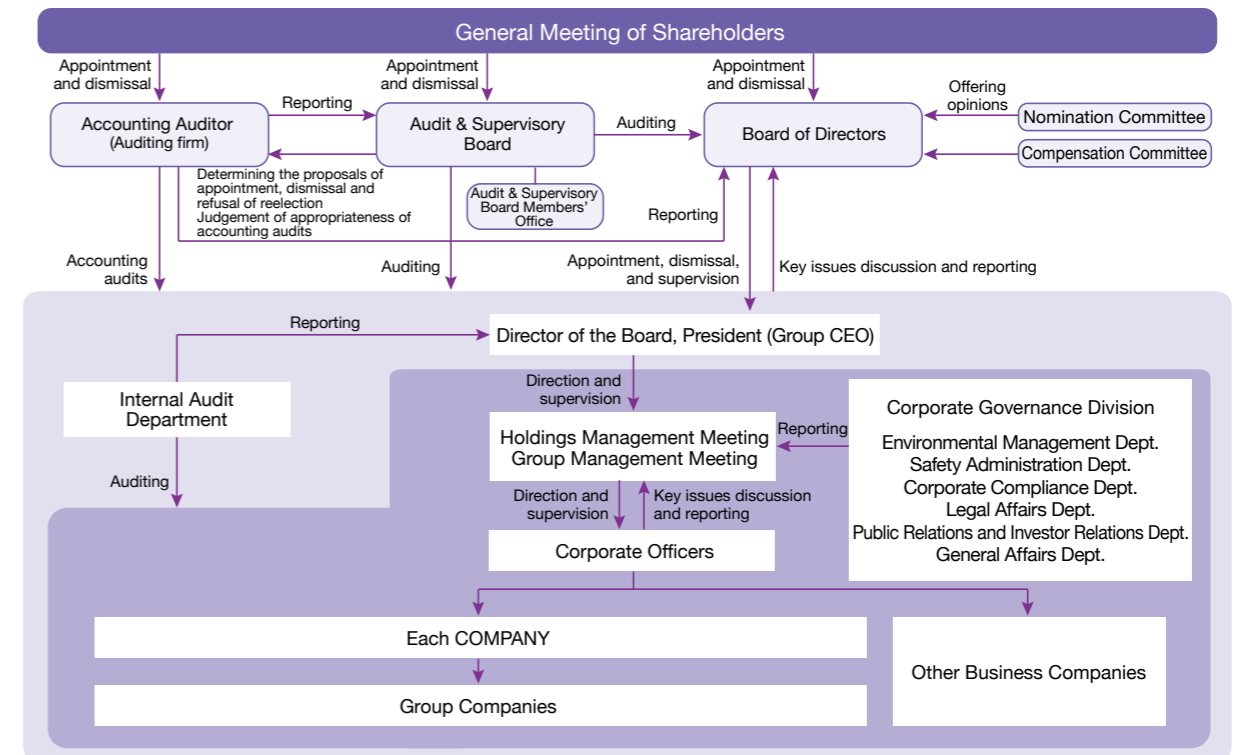
Oji Holdings oversees the formulation of Group management strategies and Group governance. Oji Group has adopted a COMPANY system under which each COMPANY, made up of closely-related businesses, plays a central role in businesses operations. This structure accelerates decision making by each business unit and clarifies management responsibilities.

In addition, as a company with Audit & Supervisory Board, Oji Holdings reinforces Group-wide governance through audits of

the execution of duties by Directors carried out by the Audit & Supervisory Board Members and the Audit & Supervisory Board.

The Nomination Committee and Compensation Committee were established as advisory bodies to the Board of Directors. These two committees enhance the objectivity and transparency of decision making, and the Compensation Committee analyzes the effectiveness of and deliberates on evaluations of the Board of Directors.

• Corporate Governance Structural Diagram



Policy on Determination of Director Compensation and Total Compensation Amount

Policy on Determination of Director Compensation

Oji Holdings has designed its compensation programs with an emphasis on the roles performed by the Director compensation program such that the Board of Directors promotes sustainable growth and increasing medium- to long-term corporate value of the company and pursues enhanced profitability and capital efficiency. The specifics of the Director compensation program and decision-making policies are set forth in the Fundamental Policies on Corporate Governance. Director compensation comprises base compensation, bonuses that reflect short-term performance, and stock-based compensation that reflects medium- to long-term improvement in corporate value. Determinations are made by the Board of Directors based on recommendations submitted by the Compensation Committee.

Total compensation is within the limit set by the general meeting of shareholders. The total of base compensation and bonuses was set by resolution at the 92nd annual meeting of shareholders on June 29, 2016 to no more than 700 million yen annually, and stock-based compensation was set, separately from the above 700 million yen annual amount, to no more than 570,000 points (normally, one point is equal to 1 share of Oji Holdings' stock) per fiscal year. With the introduction of this program, new grants of stock options were terminated. The compensation of Independent Outside Directors comprises base compensation only.

Total compensation for Audit & Supervisory Board Members is determined through discussion among the Audit & Supervisory Board Members within the limit set by resolution of the general meeting of shareholders. The total amount of compensation was set by resolution at the 82nd annual meeting of shareholders on June 29, 2006 to no more than 97 million yen annually.

Please refer to the Annual Securities Report for details concerning performance-linked compensation including bonuses and stock-based compensation.



Securities Reports and other information
<https://www.ojiholdings.co.jp/ir/library/security.html>
 (in Japanese)

Total Compensation for Director and Audit & Supervisory Board Member

Information on compensation paid to Directors and Audit & Supervisory Board Members including the total amount and a breakdown by type is presented in Business Reports and Securities Reports. Additionally, Securities Reports indicate the total consolidated compensation of persons whose total compensation is 100 million yen or more and other information.

The total amount of compensation paid to the fifteen Directors in FY2018 was 782 million yen (337 million yen in base compensation, 251 million yen in bonuses, and 194 million yen in stock-based compensation). The total amount of compensation paid to the five Audit & Supervisory Board Members was 90 million yen.

Nomination Committee and Compensation Committee

Purpose of Establishment

The Nomination Committee and Compensation Committee were established as advisory bodies to the Board of Directors in 2015. These two committees enhance objectivity and transparency in their decision making, and the Compensation Committee analyzes the effectiveness of and deliberates the evaluations of the Board of Directors.

Roles of Nomination Committee

- Deliberating the following issues/matters and reporting to the Board of Directors
- Nomination policies for candidates for Directors and Audit & Supervisory Board Members
 - Selection policies for Corporate Officers
 - Nomination of Director and Audit & Supervisory Board Member candidates and appointment of Corporate Officers
 - Dismissal of Directors, Audit & Supervisory Board Members, and Corporate Officers in cases where they do not satisfy the nomination and appointment policies
 - Succession planning for the Director of the Board, President
 - Appointment and dismissal of Corporate Advisors

Structure of the Nomination Committee

President (committee chair), Chairman, all Independent Outside Directors

Meetings of the Nomination Committee

The committee met two times in FY2018. Attendance rates were as follows.
 Kiyotaka Shindo (Chairman): 100%
 Susumu Yajima (President): 100%
 Michihiro Nara (Independent Outside Director): 100%
 Nobuaki Terasaka (Independent Outside Director): 100%
 * Positions as of FY2018

Roles of Compensation Committee

- Deliberating the following issues/matters and reporting to the Board of Directors
- Compensation structures and levels for Directors and Corporate Officers
 - Evaluation of Directors and Corporate Officers
 - Analysis and evaluation of the effectiveness of the Board of Directors
 - Compensation structures and levels for Corporate Advisors

Structure of the Compensation Committee

President (committee chair), Chairman, all Independent Outside Directors

Meetings of the Compensation Committee

The committee met three times in FY2018. Attendance rates were as follows.
 Kiyotaka Shindo (Chairman): 100%
 Susumu Yajima (President): 100%
 Michihiro Nara (Independent Outside Director): 100%
 Nobuaki Terasaka (Independent Outside Director): 100%
 * Positions as of FY2018

Independent Outside Officers

Status of Activities by and Reason for Appointment of Independent Outside Officers

Oji Holdings has two Independent Outside Directors and three Independent Outside Audit & Supervisory Board Members. All Outside Officers attend Board of Directors meetings and the briefings (in principle, held twice each month) conducted by the Director responsible for the Corporate Governance Division regarding Management Meeting agendas and planned Board of Directors deliberation matters. The two Independent Outside Directors are also members of the Nomination Committee and

Compensation Committee.

Persons with highly specialized and wide-ranging knowledge who are able to express opinions that are independent from management and from the perspectives of various stakeholders are selected as Independent Outside Director candidates, and persons with excellent values and principles, a high level of specialization, and extensive experience are selected as Independent Outside Audit & Supervisory Board Member candidates.

Main Activities of Outside Officers in FY2018

Category	Name	Attendance at Board of Directors meetings	Attendance of Audit & Supervisory Board meetings	Statements at Meetings
Independent Outside Director of the Board	Michihiro Nara	Attended 14 of 15 meetings (93.3%)	—	Makes statements from a professional perspective based on extensive experience and wide-ranging knowledge as an attorney.
Independent Outside Director of the Board	Nobuaki Terasaka	Attended 15 of 15 meetings (100%)	—	Makes statements based on extensive experience and wide-ranging knowledge as a public official.
Independent Outside Audit & Supervisory Board Member	Makoto Katsura	Attended 15 of 15 meetings (100%)	Attended 15 of 16 meetings (93.8%)	Makes statements based on extensive experience and wide-ranging knowledge as a diplomat.
Independent Outside Audit & Supervisory Board Member	Mikinao Kitada	Attended 15 of 15 meetings (100%)	Attended 16 of 16 meetings (100%)	Makes statements based on extensive experience and wide-ranging knowledge as a prosecutor and attorney.
Independent Outside Audit & Supervisory Board Member	Norio Henmi (Took office on June 28, 2018)	Attended 10 of 11 meetings (90.9%)	Attended 11 of 11 meetings (100%)	Makes statements from a professional perspective based on extensive experience and wide-ranging knowledge as an attorney.

Note: With regard to Independent Outside Audit & Supervisory Board Member Norio Henmi, only Board of Director and Audit & Supervisory Board meetings held after he took office on June 28, 2018 are considered.

The Oji Group Corporate Code of Conduct and the Oji Group Behavior Standard were established in 2004 as fundamental and universal standards of values and a guide to the code on the behavior level, respectively, by incorporating the principles on human rights, labor, the environment, and anti-corruption of the UN Global Compact.

The revision or abolition of the “Oji Group Corporate Code of Conduct” and the “Oji Group Behavior Standard” is a matter to be resolved by the Board of Directors of Oji Holdings. These are the standards for activities for all officers and employees of the Oji Group under the involvement of the Board of Directors, and translated into each language to be familiarized to all officers and employees of the Oji Group. All Oji Group officers and employees strive to comply with laws, regulations, and social norms based on an accurate understanding and practice of the Code of Conduct and Behavior Standard and to carry out compliance by promoting corporate activities based on high ethical standards that meet the trust and requirements of society.

The Oji Group Corporate Code of Conduct

1. Compliance with the Law

We will comply with the letter and spirit of the law in Japan and other countries, respect corporate ethics and all social standards, including common sense, and ensure that our business activities are fair and honorable.

2. Harmony with the Environment

We will promote forest recycling and paper recycling and maintain and develop business activities that are in harmony with the environment from a global perspective.

3. Supply of Safe, Useful Products and Services

We will contribute to society and culture by developing and supplying products that will allow us to gain the satisfaction and trust of customers, with proper consideration for usefulness and safety.

4. Communication with Society

We will establish relationships of trust with all stakeholders, including customers, shareholders and local residents, through an active commitment to good communication with society.

5. Participation in Social Contribution Activities

We will contribute to the development and improvement of society through active participation in social contribution activities.

6. Coexistence with the International Community

We will respect the culture and customs of other countries and contribute to local communities.

7. Contribution through Manufacturing

We will express our pride in our role as a manufacturer by contributing to local communities through production activities guided by a commitment to safety and protecting the environment, and by contributing to the advancement of industry through technology development and innovation.

8. Achievement of Employee Satisfaction

We will take all possible steps to ensure employee safety and health, and we will strive to give employees opportunities to achieve happiness and prosperity and realize their potential as individuals.

The Oji Group Behavior Standard

In order to carry out the Code of Conduct, the Oji Group Behavior Standard, comprising 25 items to be followed, was adopted.

1. Compliance with Relevant Business Laws

2. Environmental Conservation

3. Ensuring Safety

4. Sensible Action

5. Wholesome Relationship with Politics and Government

6. Severance of Relationships with Antisocial Groups and Organizations

7. Coexistence with the International Community

8. Seeking a Relationship of Trust with Customers

9. Maintenance of an Honest, Wholesome Relationship with Business Partners

10. Compliance with Laws and Regulations Related to the Anti-monopoly Act and the Act Against Delay in Payment of Subcontract Proceeds etc., to Subcontractors

11. Prohibition of Unfair Competition

12. Compliance with laws and regulations related to importing and exporting

13. Disclosure of Management Information

14. Prohibition of Insider Trading

15. Respect for Human Rights

16. Ensuring Worksite Safety and Health

17. Fulfillment of Duties and Self-development

18. Compliance with Company Rules

19. Management of Company Secrets

20. Appropriate Records and Accounting

21. Appropriate Use of Computer Systems

22. Maintenance of Company Assets

23. Prohibition of Conflicts of Interest

24. Prohibition of Political and Religious Activities in the Worksite

25. Open Working Environment

At the Oji Group, the Corporate Compliance Department (under the Corporate Governance Division of Oji Holdings) plays a central role in drawing up policies and measures for promoting compliance. It also establishes internal whistleblowing systems and rules on anti-corruption including formulation and review of the Oji Group Corporate Code of Conduct and the Oji Group Behavior Standard. The Department works to instill compliance awareness throughout the Group through measures undertaken primarily by compliance managers and compliance promotion leaders at domestic and overseas Group companies.

Measures for Promoting Compliance

Activities for Raising Compliance Awareness

Numerous opportunities are created for employees to acquire necessary knowledge including compliance training as a part of rank-based training for newly-appointed managers and new employees as well as periodic internal training on issues that are common to all Group companies such as the Subcontract Proceeds Act, the Antimonopoly Act, and the prevention of bribery. Also, the Compliance News is issued every month and uses case studies to promote awareness, explain the Oji Group Corporate Code of Conduct and Oji Group Behavior Standard, and inform employees about the whistleblowing system.



Training on the Subcontract Proceeds Act (transmitted nationwide by videoconferencing)

Monitoring of the Status of Compliance

The Internal Audit Department conducts periodic audits, and if problems are identified, implements countermeasures to individually address issues and performs other detailed responses to ensure that compliance is firmly established. In addition, a compliance awareness survey of all Oji Group officers and employees is conducted every other year in Japan to monitor the status of compliance at each worksite.

Whistleblowing System

The Oji Group operates the Business Ethics Helpline to provide all officers and employees (including part-time and short-term employees) the opportunity to consult and make reports with the aim of prevention or remediation through early discovery of violations of laws and regulations and improper conduct (including labor relations and sexual and power harassment related issues). Whistleblowing desks are established both internally (in the Oji Holdings Corporate Compliance Department) and externally (a law firm) to ensure the early discovery and correction of human rights abuses such as harassment and discrimination, corrupt practices including bribery, and other misconduct.

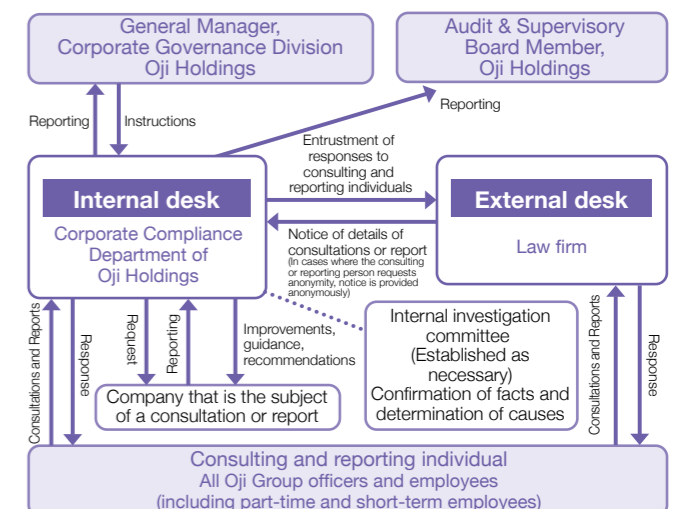
Response to Compliance Violations

The Oji Group considers not only violations of laws and regulations to be compliance violations, but also infringements of the Oji Group Corporate Code of Conduct and the Oji Group Behavior Standard and ethical violations. If a compliance violation occurs, an investigation is conducted to confirm the facts, the cause is identified, responsive and preventive measures are implemented, disciplinary measures against the involved officers and employees are considered, and if necessary, disciplinary measures are imposed.

Anti-Corruption Initiatives

Based on Principle 10 of the United Nations Global Compact—anti-corruption initiatives—the Oji Group Corporate Code of Conduct and Oji Group Behavior Standard expressly provide for “wholesome relationships with politics and government” and “maintenance of honest, wholesome relationships with business partners” and prohibit corruption and bribery by requiring transparency with regard to political donations and prohibiting corrupt practices such as illegal contributions and donations as well as bribery. In addition, the Group established the Group Bribery Prevention & Corruption Regulations and the Group Guidelines on Bribery to create specific provisions. Group-wide responses including overseas companies and sites are clarified and made specific and periodic checks are conducted through internal audits.

Structure of Corporate Ethics Whistleblowing System



Under the risk management structure developed and supervised by the Board of Directors, the Oji Group has established the Group Risk Management Regulations, and the Corporate Governance Division manages the risks common to the overall Group in a centralized manner.

A responsible officer and division are assigned for each type of risk, enabling management to be informed of the risk and to respond quickly and appropriately.

In response to the rapid expansion of the areas where we operate businesses, we will reinforce our risk management structure globally to ensure business continuity and the steady development of our businesses.

Risk Management Structure

The Oji Group has identified Group-wide and business line risks within the execution of business by categorizing risks in all of the assets it owns, both tangible and intangible, in accordance with the Group Risk Management Regulations, as shown to the right. Responses to risks are implemented by the responsible management and support departments.

The Board of Directors supervises the enhancement and implementation of risk management. When a new risk occurs, the Board of Directors makes a decision after deliberations within the Group Management Meeting.

The Director and the General Manager of the Corporate Governance Division is responsible for the risk management of the Oji Group. The Corporate Governance Division works to ensure the effectiveness of the risk management of the overall Group.



Emergency Responses

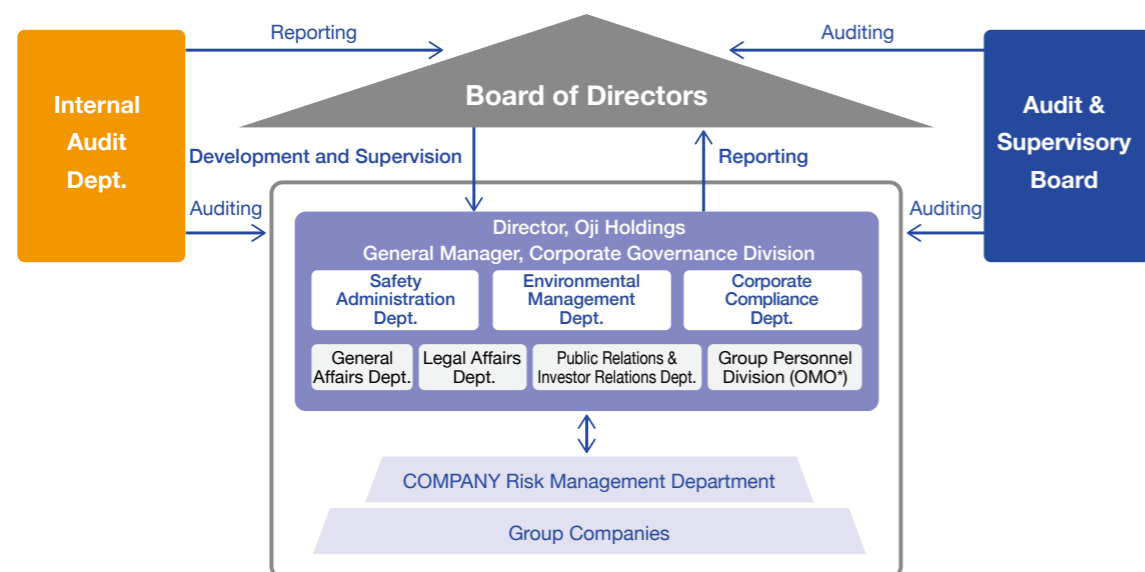
To ensure prompt initial responses to emergencies, the Oji Group has established a system for reporting and collecting information around the clock.

In the event of a serious incident to be addressed by the overall Group, we establish the Group emergency headquarters to confirm the safety of employees, check the damage suffered, and take prompt measures to continue

supplying products to our customers.

In addition, we constantly review and improve our crisis response system through training on the establishment of Group emergency headquarters and the inspection and maintenance of necessary facilities, equipment, and other items, in our efforts to maintain and improve our initial response capability.

• Risk Management Structure



* Oji Management Office Inc.

Risk Assessment

Risk Assessment of New Businesses

The Oji Group screens investments and loans, such as those for new businesses and projects, not only by examining economic aspects but also from the viewpoint of ESG (environment, social, governance) by following the Oji Group Corporate Code of Conduct, the Oji Group Behavior Standard, the Oji Group Partnership Procurement Policy, and other criteria.

■ Occupational Safety and Health

We conduct risk assessment by confirming our safety and health policies, objectives, and management structure, the occurrence of occupational accidents resulting in incapacity for work lasting at least one day, including accidents resulting in deaths or serious injuries, and countermeasures taken against such injuries, daily safety and health activities such as safety patrols and safety training, and safety of machines, equipment, chemicals, work environment, work methods, and others, not to mention the status of compliance with laws and regulations related to safety and health.

■ Water

To assess and identify water-related risk, we use WRI Aqueduct*1 and conduct due diligence on precipitation, drought, water disasters, water-related laws and regulations, and other elements of the area where we plan to launch a new project or business.

*1 A global map and information depicting regional water risks prepared by the World Resources Institute (WRI).

Risk Assessment of Existing Businesses

Existing businesses and projects are subject to regular audits by the Internal Audit Department, Safety Administration Department, and Environmental Management Department. Where a risk is found, guidance for improvement is provided and shared across the Group.

Business Continuity Planning

For handling business continuity risks, such as natural disasters and accidents, we implement business continuity management (BCM) by having each COMPANY formulate a business continuity plan (BCP) and review it as necessary.

We have also established the Group Disaster Control Office as a permanent organization and formulated rules on the reporting of disaster and accident information, thereby establishing a system for obtaining the latest information promptly. We also share information about the causes of fires and accidents, and other information beyond boundaries between COMPANYS in our efforts to disseminate measures to prevent their recurrence throughout the Group.

In Japan, we have introduced a safety confirmation system for Group employees. Using this system, safety confirmation is carried out promptly at the headquarters and each business location in the event of a disaster or accident.

We conduct nationwide safety confirmation training twice a year, thereby maintaining a system that places maximum priority on human life. In addition, a comprehensive disaster drill is conducted regularly at each business location.

With regard to seismic protection, the Group is taking measures by conducting earthquake resistance surveys.

■ Biodiversity

In the planning phase of a new business or M&A, we collect information by meeting with local governments and environmental NGOs of the respective areas, and assess biodiversity risk.

■ Human Rights

We conduct risk assessment to see whether consideration is given to basic human rights and check for elements that have a negative impact on human rights, with a special focus on child labor, labor management, the rights of indigenous people, labor-management relationships, and other factors.

■ Anti-Corruption

We conduct risk assessment of our business partners as well as our agents to confirm that they do not engage in any bribery, illegal trade, or misconduct.

■ Tsunami Countermeasures

To prepare for tsunami, the Group has obtained inundation hazard maps from local governments and identified and secured safe areas inside buildings (by indicating altitudes, evacuation areas, and other information).

■ Fire Countermeasures

Voluntary inspections are conducted at each business site and disaster control inspections are conducted as preventive initiatives.

■ Emergency Supplies

Water, food, and other items are stockpiled at each business site in preparation for emergencies.

Fundamental Stance and Policy

The Oji Group works in concert under the direction and supervision of the Board of Directors to put into practice the basic policy of the Oji Group Environmental Charter.

Oji Group Environmental Charter (established January 1997, revised June 2006)

Basic Policy

The Oji Group Environmental Charter requires the Oji 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 Group to make autonomous efforts to achieve further environmental improvement, and aggressively drive its forest recycling, paper recycling, and global warming countermeasures forward.

Environment Action Program 2020, established April 2015	FY2018 Results and Activities
1. Ceaseless Efforts to Achieve a Zero-environmental Burden We will aim for zero-environmental burden in each and every operational procedure by further promoting environmental awareness-raising and bringing together capabilities of technology, operation and planning.	
1) Zero-emission Zero environmental incidents · Elimination of environmental incidents (violations for exceeding environmental regulatory standards)	Environment incidents (violations for exceeding environmental regulatory standards): 4 No penalties were imposed for regulatory violations. * Breakdown of violations in excess of environmental regulatory standards. Waste water: pH (two incidents) and coliform bacteria count; atmospheric: odor
Zero product liability incidents · Elimination of product liability incidents	Product liability incidents: Zero (none since 1998)
Promotion of effective utilization of wastes · Reduction of wastes and promotion of effective utilization of wastes [Japan] Effective utilization rate of at least 99% in FY2020 [Overseas] Effective utilization rate of at least 95% in FY2020	[Japan] Effective waste utilization rate: 98.3% [Overseas] Effective waste utilization rate: 89.6%
Management of wastewater and exhaust gases with consideration of ecosystem · Compliance with environment-related laws/regulations, reduction of environmental load substances and management of wastewater and exhaust gases with consideration of ecosystem	Measures to reduce SOx, BOD, COD, and SS emission intensity year-on-year: 1% or more for all measures undertaken with a target of reducing VOCs below the FY2010 level of 0.56 kg/million yen: 0.31 kg/million yen*
Reduction of greenhouse gases · Promote energy conservation and fuel conversion, and reduce GHG emission intensity during product manufacturing by more than 10% in FY2020 compared to FY2013.	Measures undertaken with a target of reducing GHG emission intensity by at least 8.7% compared to 2013: reduction rate of 9.0%
2) Forest recycling / paper recycling Forest recycling · Target of forest certification acquisition: 100%	Rate of forest certification acquisition [Japan] 100% (excluding profit-sharing forests) [Overseas] 85%
Paper recycling · Promotion of paper collection and further expansion of waste paper usage	Measures contributing to achieving the Japan Paper Association target of a 65% recovered paper utilization ratio: 64% recovered paper utilization ratio
2. Responsible Raw Materials Procurement We will comply with safety and legal guidance based on the Oji Group Partnership Procurement Policy to manufacture our products.	
Wood raw materials and pulp · Procurement complying with laws/regulations and considering environment and society by means of third party audit	All traceability reports for procured chips and pulp underwent audit by a third party organization and no indications were made.
Raw materials and chemicals · Compliance with safety-related laws/regulations and appropriate management to follow voluntary standards	Zero violations of laws and regulations relating to raw material and chemical safety
3. Sustainable Forest Management We will promote sustainable forest management to aim for the protection of forest functions and the lasting utilization of forest resources.	
Sustainable forest management through the use of forest certifications · Preservation of forests' multi-functions including conservation of biodiversity	Preserved and nurtured endangered and other species and continued implementation of forest conservation such as thinning as biodiversity preservation measures
Active promotion of lumber business · Contributions to recovery of the domestic forestry business and restoration of forests	The Group collaborated with a wide range of stakeholders both inside and outside the Group from mountain forest managers in Japan to wood product users and supplies raw materials including lumber, plywood, paper, and biomass fuel.
Expansion of forest certified products · Expand forest certified products	Sales volume of forest certified products: 2,993,000 t (FY2017 result: 1,387,000 t)

SOx: Sulfur oxides; BOD: Biochemical oxygen demand; COD: Chemical oxygen demand; SS: Suspended solids; VOC: Volatile organic compounds
 * kg/million yen = Emissions/Sales
 Environmental performance data covers 113 consolidated Group companies involved in production (285 business sites). The data collection period for both Japan and overseas is in principle the fiscal year.

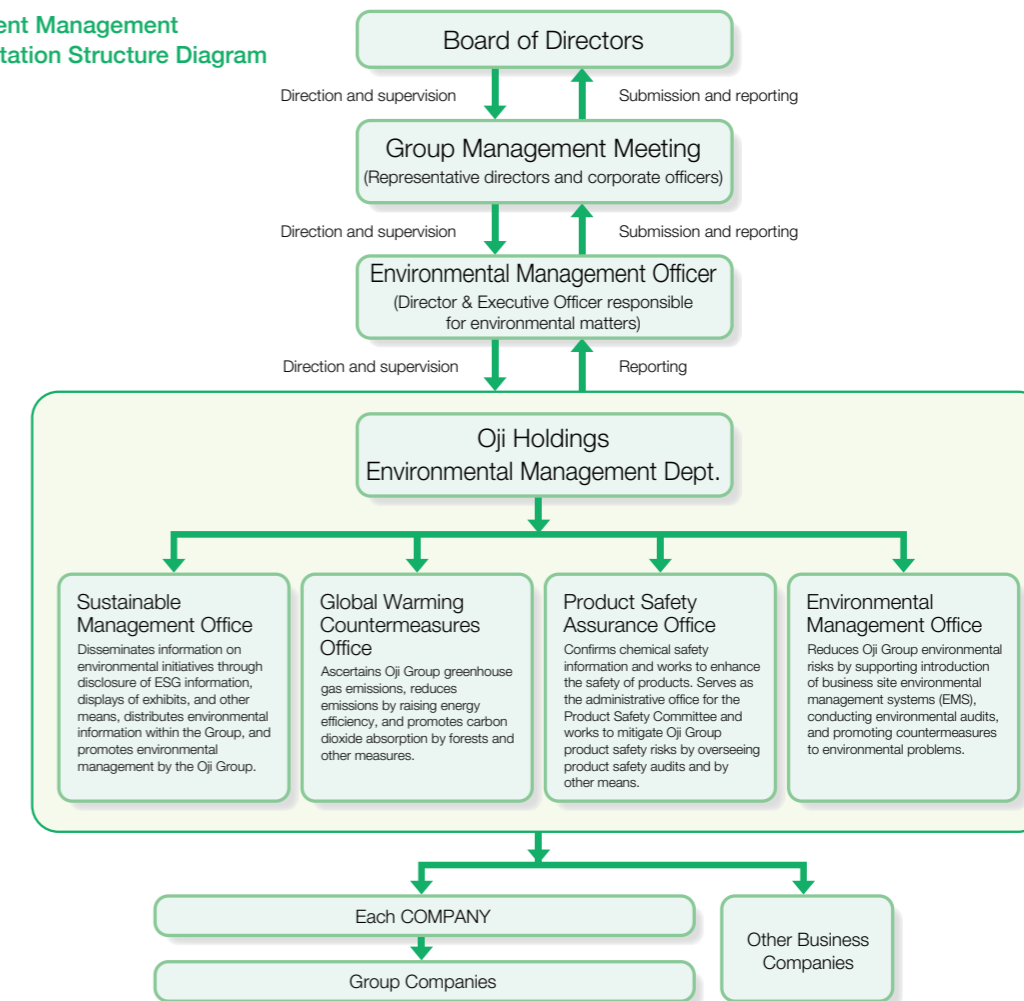
Environment Management Implementation Structures

The Oji Holdings Environmental Management Department oversees and manages Group environmental governance and carries out environmental management.

The four subsidiary organizations of the Environmental Management Department identify Group-wide risks and opportunities in the areas of their responsibility. These organizations manage and mitigate risks by disseminating information to the Group via committees and other bodies for each risk affecting Each COMPANY, Group companies, and so on.

The Environmental Management Department oversees and manages these risks, reports on a monthly basis to the Director of the Board and Executive Officer responsible for environmental matters including climate change, and submits and reports on issues to the Group Management Meeting once each year. Additionally, significant risks are reported to the Board of Directors pursuant to decisions by the environmental management officer.

Environment Management Implementation Structure Diagram




Collaboration with External Organizations

Oji Holdings has been participating in the Carbon Disclosure Project (CDP), an NGO with an extensive database of environmental information relating to climate change countermeasures, water, and forests, since 2012. The Group responds to CDP questionnaires in all three categories: climate change, water resources, and forests.

The Group is a member of the Japan Business Federation (Keidanren), Japan Paper Association (JPA), and other industry organizations, participates in committees that address climate change countermeasures, forest conservation, and reduction of environmental burdens, and works to set and achieve targets relating to environmental issues for each organization.

We also support the intent of the Japan Water Forum (JWF), an NPO that collaborates with diverse related parties including not only those in Japan but also United Nations organizations, international organizations, development banks, national and municipal governments, private companies, researchers, and NGOs of other countries. We have been participating in JWF as its member since its establishment in 2004.

 [Official website of Japan Water Forum](http://www.waterforum.jp/en/about_us/jwf_members/)
http://www.waterforum.jp/en/about_us/jwf_members/

Relationship Between Business and the Environment

The Oji Group has made “Harmony with Nature and Society” a part of its management philosophy. To achieve this, the Group undertakes a variety of measures that give consideration to the environment, society, and the economy throughout its business activities from procurement of raw materials to sale of products with the aim of establishing a sustainable society.



Group forest in Japan



Hydroelectric power plant



Confidential document processing facility (Oji Materia Co., Ltd. Edogawa Mill)



A Japanese Sarufutsu Itou with breeding coloration
Photo provided by Yo Chirai



Overseas forest plantation



Biomass power generation



Biomass fuel



Promoting use of waste paper



A fairy pitta
Photo provided by Ecosystem Trust Society

Forest Recycling (Sustainable Forest Management) (p. 68)

Mitigation and Adaptation to Climate Change (p. 62)

Paper Recycling (p. 72)

Conservation of Biodiversity (p. 74)

Procurement

Manufacturing

Sales (Consumption)

Regional Contribution Activities

Responsible Raw Materials Procurement (p. 76)

Domestic and Foreign Laws and Regulations and Green Procurement
EU REACH Regulation
EU RoHS Directive
Chem SHERPA GADSL
etc.

Confirmation of the safety of raw materials



An FSC™ certification audit

Reduction of Environmental Burden Effective Resource Utilization (p. 64)



Environmental audits

Eco- and Socially Friendly Products (p. 71)



FSC™ Certified Products
FSC™ C018118



Resource and energy conservation, and products that contribute to disasters (beds made from corrugated board and other products)

Contribution to Local Communities (p. 75)



Oji Forest Nature School



Forest Picture Book Contest and Environmental Class

Measures Against Climate Change

Policies on Energy Use

Seeking to create a virtuous cycle between the environment and economy with energy conservation and a shift to non-fossil energy (renewable and waste-derived fuels) as core measures.

Generally, the paper and pulp industry is regarded as one of the energy-intensive industries as it uses heat (steam) in its pulping process, in which pulp is made from woodchips, and also in the process of making pulp dispersed in water into sheets and drying them, in addition to electricity for operating production facilities and machines.

Energy Conservation

The Oji Group has positioned energy conservation measures as a crucial topic and takes continuous measures to address it.

Conserving energy is important not only because it reduces energy costs, but also as a part of fulfilling our corporate social responsibility to undertake environmental measures.

The Group conducts energy conservation patrols at Mills to identify steam leaks and facilities that can be



An energy conservation control at the Oji Paper Kasugai Mill. The patrol confirms that there is no waste caused by air leaks.

shut down, to check equipment, and take other measures. Additionally, the Group is steadily conserving energy by switching to energy efficient equipment.

Use of Non-Fossil Fuels

As the problem of climate change grows more serious, reducing GHG emissions is an urgent task, and the Group needs to reduce consumption of fossil energy such as petroleum and coal. The Oji Group has successfully reduced GHG emission intensity by using renewable fuels*1 such as black liquor,*2 waste fuels such as wood residue, bark, and RPF.*3

The Group will continue to pursue a virtuous cycle between the environment and the economy, recognizing that it is our mission to use energy in a way that provides both economic and environmental effects.

*1 Renewable fuels
Organic energy and resources derived from renewable biological sources (such as wood) other than fossil resources.

*2 Black liquor (black vegetative waste fluid)
Black liquor refers to the black vegetative waste fluid that remains after removing wood fibers in woodchips in the process of making pulp from woodchips (kraft pulping process). Its components include lignin and hemicellulose.

*3 RPF (Refuse Paper & Plastic Fuel)
RPF is a type of waste-derived fuel (WDF). It is a solid fuel made from refuse paper and plastics. It attracts attention as a method of thermal recycling of wastes including plastics and paper that is difficult to recycle.



*4 Greenhouse gases

Reduction of GHG*4 Emission Intensity

Reduction of GHG Emission Intensity

The Group is reducing GHG emission intensity by raising production efficiency, conserving energy, and using renewable and waste fuels. A target for cutting GHG emission intensity by FY2020 was set in FY2015.

GHG Emission Intensity Reduction Target

Reduce GHG emission intensity (t-CO₂e/production t) in conjunction with product manufacturing by at least 10 percent compared to the FY2013 level by FY2020.*5

*5 Not including GHG emissions from the electric power business and transportation using Group vehicles.

Results

The FY2020 reduction target set in FY2018 was achieved and emissions intensity was reduced. Scope 1, 2, and 3*6 results are set forth below.

Reduction Target Progress

	FY2018			FY2019
	Target	Results	Assessment	Target
Reduction in GHG emission intensity compared to FY2013	8.7%	9.0%	Target Achieved	9.4%

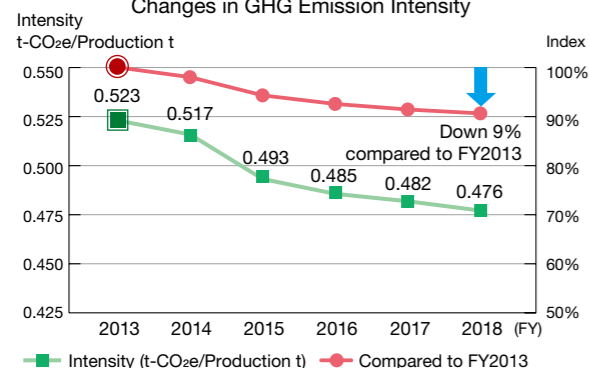
GHG Emissions Volume★ Unit: Thousand t-CO₂e

	FY2018	FY2017	Year-on-Year Change	Remarks
Scope 1	6,394	6,595	-3.0%	FY2018 figures have been assured by a third party
Scope 2	1,442	1,349	6.9%	
Scope 1+2	7,836	7,944	-1.4%	
Scope 3	3,923	3,836	3.9%	

*6 (1) Business sites of consolidated companies are included in the total, but non-production sites (primarily the main building, sales offices, and other sites that perform managerial and administrative work and sites where GHG and environment impact are extremely low) are excluded.
(2) Emissions relating to the electric power business (supply of electricity or heat to other companies) and transport by Group-owned vehicles are included.
(3) Emissions of carbon dioxide (CO₂) generated in conjunction with the use of fossil fuels do not include emissions relating to the supply of electric power or heat to other companies.
(4) Unit calorific value and emissions factors are calculated by using the following laws and international standards.
Japan: Act on Rationalizing Energy Use (Energy Conservation Act), Act on Promotion of Global Warming Countermeasures (Global Warming Act), and base emissions factors of individual electric power companies.
Overseas: IPCC 2006 Guidelines for National Greenhouse Gas Inventories
IEA CO₂ emission factors by country in 2010
(5) Emissions from fuels derived from biomass (black liquor, wood, etc.) that are subject to the Global Warming Act are calculated.
(6) Since unit calorific values for non-fossil fuels emphasize comparability to reduction targets, the factors set in the FY2013 reporting are used.
(7) Scope 3 indicates only Category 1 (emissions relating to purchased goods and services).

A star mark ★ indicates that FY2018 figures have been assured by KPMG AZSA Sustainability Co., Ltd.

Changes in GHG Emission Intensity



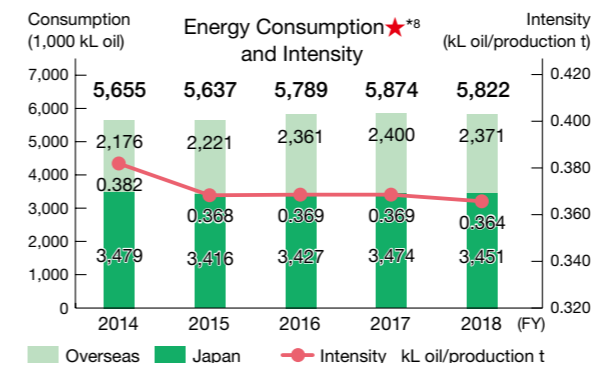
■ Intensity (t-CO₂e/Production t) ● Compared to FY2013

Energy Consumption and Intensity

In 2018, the Oji Group implemented energy-saving measures that reduced energy consumption by more than 50,000 kL oil*7 (equivalent to the reduction of more than 100,000 tons of GHG emissions).

In recent years, the Group's energy consumption is increasing slightly, in part reflecting facility expansion and enhancement for higher product quality and added-value, but energy consumption and intensity has been declining. We will continue to save energy in an uncompromising manner.

*7 Energy consumption converted to a crude oil equivalent.



*8 Energy consumption in conjunction with the manufacture of products is calculated excluding the following energy use.

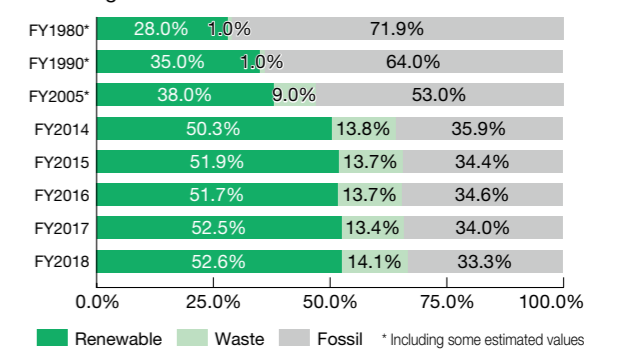
- Business sites of consolidated companies are included in the total, but non-production sites (primarily the main building, sales offices, and other sites that perform managerial and administrative work and sites where GHG and environment impact are extremely low) are excluded.
 - Consumption relating to the electric power business (supply of electricity or heat to other companies) and transport by Group-owned vehicles is excluded.
 - Energy relating to the supply of electric power or heat to other companies is excluded from fossil fuel and non-fossil fuel derived energy.
 - Unit calorific values are calculated by using the following laws and international standards.
Japan: Act on Rationalizing Energy Use (Energy Conservation Act) and Act on Promotion of Global Warming Countermeasures (Global Warming Act)
The energy conversion of electric power from in-house hydropower generation uses 3.6 GJ per 1,000 kWh
Overseas: IPCC 2006 Guidelines for National Greenhouse Gas Inventories
 - Since unit calorific values for non-fossil fuels emphasize comparability to reduction targets, the factors set in the FY2013 reporting are used.
- A star mark ★ indicates that FY2018 figures have been assured by KPMG AZSA Sustainability Co., Ltd.

Use of Non-Fossil Fuels

Since 1980, we have been using non-fossil fuels.

In 1980, the fossil fuel ratio was 71.9 percent. However, fuel conversion has been promoted through the installation of waste boilers and efforts to improve the yield of black liquor renewable fuel and in 2018 the fossil fuel ratio reached 33.3 percent.

Changes in Calorific Structure* (ratios on a calorific basis)



*9 Each ratio is calculated based on the energy consumption calculation method. The energy input from the electric power business and the supply of electricity or heat to other companies is included.

Absorption and Fixation of CO₂ Through Sustainable Forest management

Target

The Group promotes absorption and fixation of carbon dioxide by supporting sustainable forest management including expanding forest plantations and preserving company-owned forests to contribute to achieving an 80 percent GHG reduction by 2050, the long-term target set by the government of Japan.

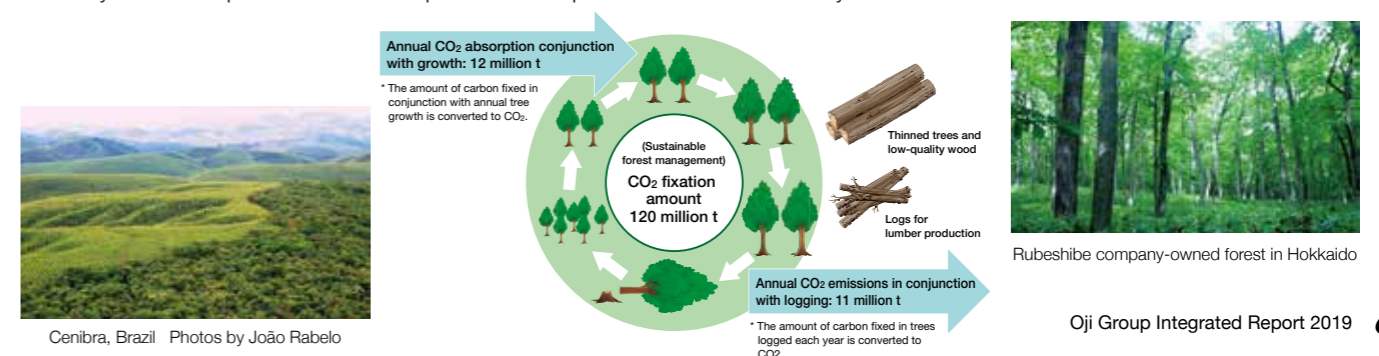
Status of Domestic and Overseas Company-Owned Forests and Forest Plantations

The Oji Group owns and manages the largest area of forests (190,000 hectares) among private companies in Japan. Overseas, the Group has planted forests in six countries with a total area of 250,000 hectares. This means that the Group owns a total of 440,000 hectares of forests all over the world with an area approximately twice as large as that of Tokyo. Overseas forest plantations include management of forest that protect forest ecosystems, wildlife, and so on and conservation forest for protection of water sources and prevention of sediment runoff. Area under management including forest plantations is 380,000 hectares.

The Group spends approximately 9.0 billion yen annually for ongoing forest management in order to practice sustainable forest management that takes into consideration the environment, economy, and society.

Status of CO₂ Absorption and Fixation

Forests absorb CO₂ in the atmosphere and perform photosynthesis, storing and fixing the carbon trunks, branches, and so on. Approximately 12 million tons of CO₂ is absorbed each year in conjunction with the growth of the Group's 440,000 hectares of forests in Japan and overseas, and timber equivalent to this absorption amount is sold inside and outside the Group and used internally for lumber products. The Group's forest in Japan and overseas currently hold a total of 120 million tons of CO₂.



Reduction of Environmental Burden

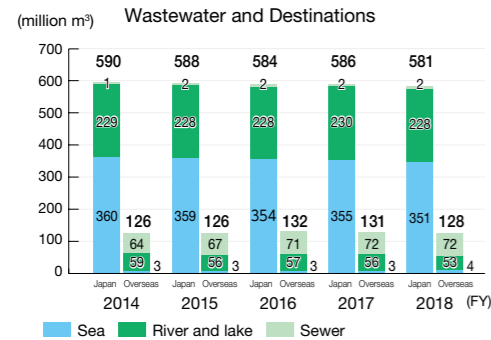
The Oji Group recognizes that the reduction of environmental burdens is an important task for achieving a sustainable society. The Group sets its own management values that are stricter than the regulatory values for waste water and exhaust gas, strives to strictly comply with laws and regulations, and works to control emissions of substances of environmental concern in wastewater and chemical substances in exhaust gases, reduce and effectively use waste, and prevent pollution.

Wastewater Purification

Management of Compliance with Regulatory Values

Substances of environmental concern in wastewater generated in conjunction with business activities are reduced to below regulatory standards through the use of physical and chemical treatment before water is released into various waterways.

Releases of wastewater into waterways are managed through measurement of pollutants and continuous measurement pursuant to laws and other means. In cases where voluntary standards are exceeded, suspension of operations and other measures are taken for the prevention of pollution.



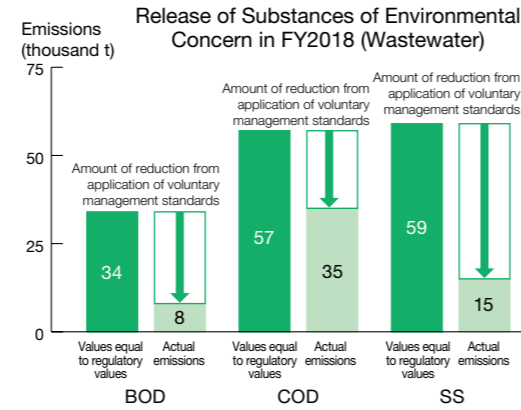
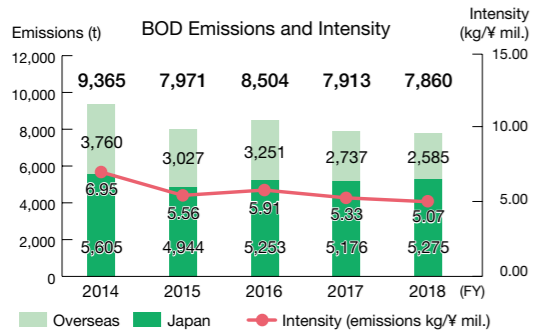
A comparison of annual emissions in cases where substances of environmental concern were released at values equal to environmental regulatory values indicates that the Group's actual emissions decreased in FY2018.

Status of Reductions in Substances of Environmental Concern in Wastewater

The Group is reinforcing recovery of raw materials from wastewater generated from business activities, which contributes to reducing the amount of waste generated, as a means of addressing substances of environmental concern at the source. In addition, coagulation and precipitation through pressure flotation and the addition of chemicals, neutralization, activated sludge, biofilm treatment, and other measures are employed depending on the type of substance of environmental concern.

BOD, COD, and SS emissions intensity have been trending downward since FY2014.

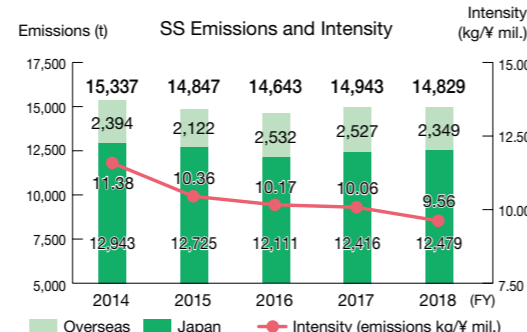
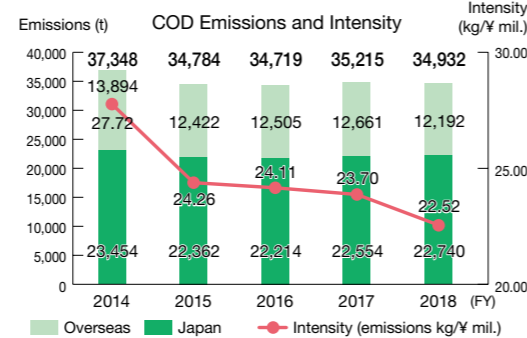
To achieve the FY2019 targets, further operational improvements in wastewater treatment were implemented and measures were taken to reduce substances of environmental concern at overseas business sites in the same manner as domestic sites.



Wastewater Treatment Targets and Results

The FY2018 targets for wastewater treatment were 1% year-on-year reductions in BOD, COD, and SS emissions intensity. All targets were achieved.

Intensity Per Unit of Sales Revenue	FY2018			FY2019
	Target	Results	Assessment	Target
BOD kg/¥million	No more than 5.23	5.07	Target Achieved	No more than 5.02
COD kg/¥million	No more than 23.46	22.52	Target Achieved	No more than 22.29
SS kg/¥million	No more than 9.96	9.56	Target Achieved	No more than 9.46



Curtailing Emissions of Chemical Substances in Exhaust

Management of Compliance with Regulatory Values

The Oji Group owns a number of thermal-fired electric power generating plants. The electric power and thermal energy obtained through direct combustion of fossil fuels, waste fuels, and renewable fuels is used internally and provided to local communities.

The Group has set voluntary management standards that are stricter than the regulatory values with regard to the atmospheric release of the chemical substances produced through direct combustion. In cases where voluntary standards are exceeded, suspension of operations and other measures are taken for the prevention of pollution.

Exhaust Purification Targets and Results

The FY2018 targets for exhaust purification were as follows.

- Reduce SOx emissions intensity by 1 percent compared to the previous year
- Reduce VOC emissions intensity to below the FY2010 level (plants that handle volatile organic compounds)

Both targets were achieved.

Reduction Target Progress

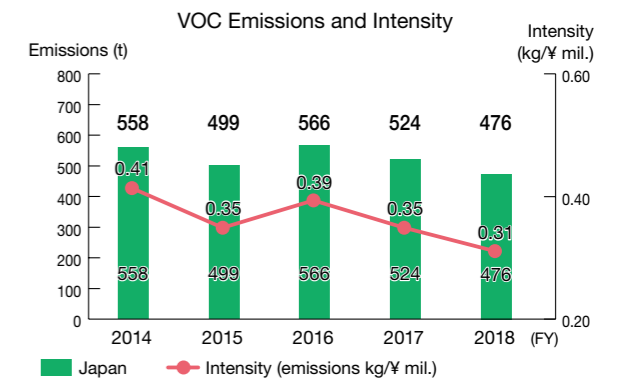
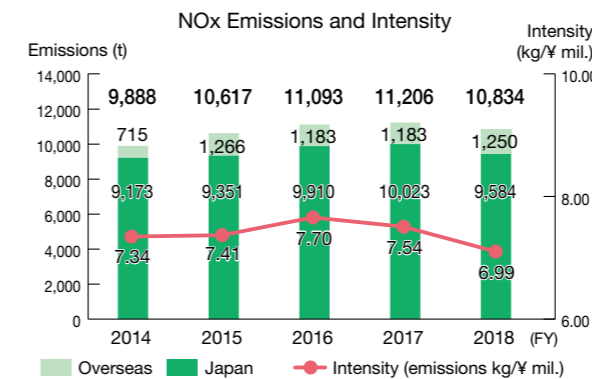
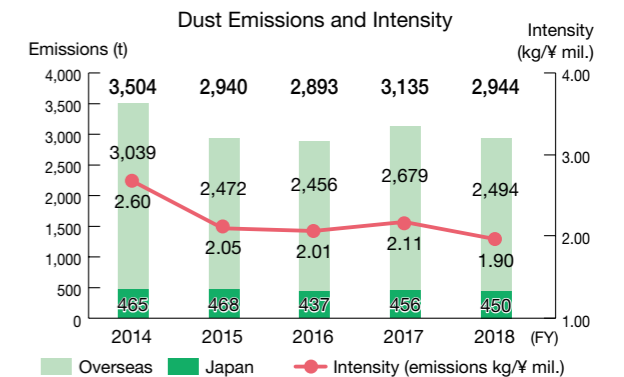
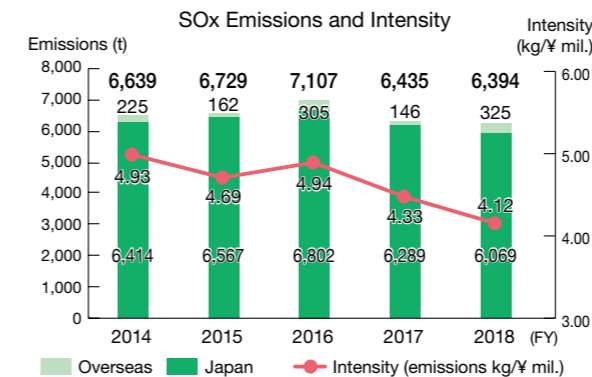
Intensity Per Unit of Sales Revenue	FY2018			FY2019
	Target	Results	Assessment	Target
SOx Kg-SO ₂ conversion/¥ million	No more than 4.29	4.12	Target Achieved	No more than 4.08
VOC Kg/¥ million	No more than 0.56	0.31	Target Achieved	No more than 0.56

Note: SOx emissions are calculated by converting to SO₂. VOC emission intensity covers Japan only.

Status of Reductions in Chemical Substances in Exhaust

Emissions of chemical substances and dust are reduced through technological advances in combustion boiler structure, desulfurization facilities, dust collection facilities, and other areas and use of operational technologies.

The Group makes continuous operational improvements and performs rigorous management of equipment for reducing substances of environmental concern and will continue to implement measures for the prevention of pollution and work towards achieving the FY2019 targets.



SOx: Sulfur oxides; NOx: nitrogen oxides; BOD: Biochemical oxygen demand; COD: Chemical oxygen demand; SS: Suspended solids; VOC: Volatile organic compounds; kg/million yen units: Emissions/sales

Effective Use of Waste

Compliance with laws and regulations

The Group did not commit any regulatory violations and was not subject to any penalties in relation to the storage and management (labeling, sorting, etc.) of waste, proper internal disposal, outsourcing (contracts, manifests), or other aspects of waste handling.

Target for Effective Use of Waste

A target for the effective use of waste was set for FY2020, and the Group is taking measures for the effective use of waste.

Progress in Effective Use

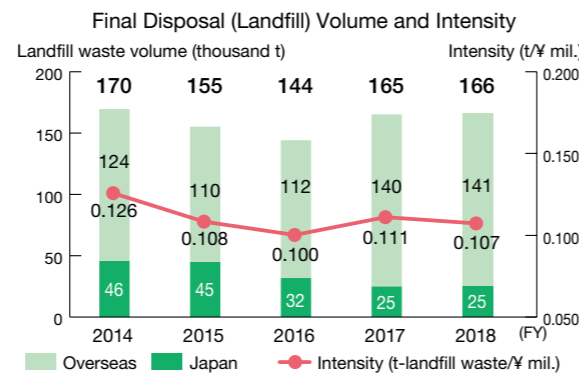
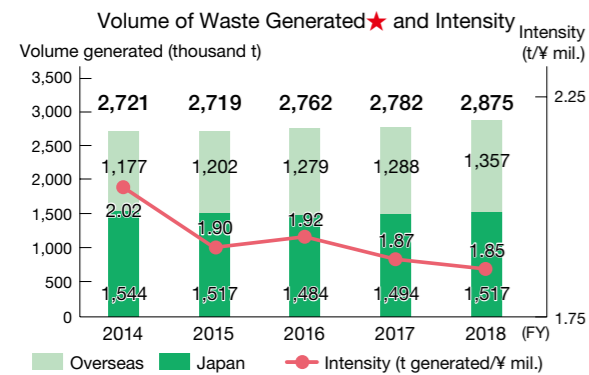
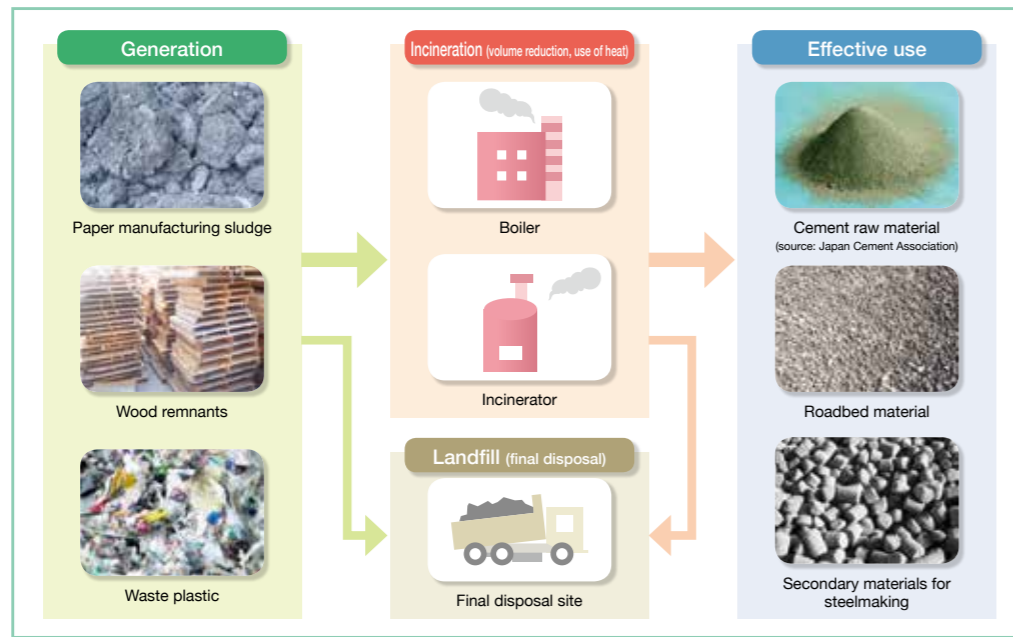
	FY2016	FY2017	FY2018	FY2020 Target
Japan	97.9%	98.3%	98.3%	At least 99%
Overseas	91.2%	89.1%	89.6%	At least 95%

Status of Reduction and Effective Use of Waste

Waste includes paper manufacturing sludge generated during paper manufacturing stages, remnants produced during processing, and ash produced during fuel combustion. Such waste is appropriately treated to make it harmless and is used effectively.

In Japan, ash is used primarily as a raw material in cement and roadbed material. Overseas, paper manufacturing sludge is used as fertilizer and for other applications.

Going forward, the Group will work to reduce the amount of waste generated and to expand effective utilization.



A star mark ★ indicates that FY2018 figures have been assured by KPMG AZSA Sustainability Co., Ltd.

- (1) Business sites of consolidated companies are included in the total, but non-production sites are excluded.
- (2) The volume of waste generated includes valuable materials (general waste is not included).
- (3) Intensity is the volume of waste generated divided by sales.

The Oji Group takes measures to recycle water and identify regions with high water-related risks and is working to reduce water consumption. In addition, water consumption and water consumption intensity are incorporated into annual plans and periodic management is performed.

Water Resources

Assessment of water risks

The Oji Group uses WRI Aqueduct*1 to assess water risks in projects, new business, and existing business.

In existing businesses, the Group identifies relationships between water stress levels and water resource inputs at all manufacturing sites of consolidated subsidiaries.

The Group will continue building production systems that incorporate countermeasures against the risks of drought and water disasters.

Water Risk Assessment

Overall water assessment (water stress level)	FY2018								
	Number of business sites	Input volume (thousand m ³)	Production volume (thousand t)	Sales (¥100 mil.)	Assets (¥100 mil.)				
Low (<10%)	73	270,459	37%	6,764	42%				
Low to medium (10-20%)	110	348,002	47%	6,061	38%	14,928	96%	19,004	97%
Medium to high (20-40%)	90	120,280	16%	2,882	18%				
High (40-80%)	7	1,947	0.3%	160	1%	582	4%	676	3%
Extremely high (>80%)	5	203	0.0%	105	1%				
Total	285	740,889	100%	15,972	100%	15,510	100%	19,680	100%

* Total sales and total assets of companies with manufacturing sites rated as highly water-stressed (40%-100%)
Assessed using the WRI Aqueduct (3.0) Water Risk Atlas Baseline Water Stress

*1 Global maps and information indicating status of water risks in each region announced by the World Resources Institute (WRI)

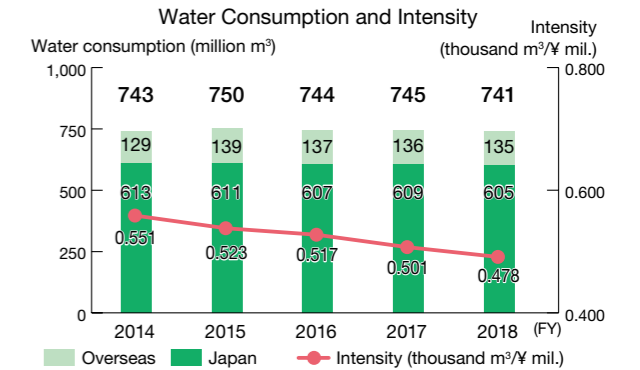
Water Usage Intensity Reduction Target and Results

The FY2018 targets for intensity and reduction rate were achieved. The Group is working towards achieving a target of a 1 percent year-on-year reduction in FY2019 as well.

Reduction Target Progress

	Thousand m ³ / ¥ Million	FY2018		FY2019
		Target	Results	Assessment
Intensity per unit of sales revenue	No more than 0.496	0.478	Target Achieved	No more than 0.473
Rate of change from previous year	%	At least 1%	4.7%	Target Achieved

In FY2018, the cost of reducing water risks was 6,983 million yen and investments including R&D were 891 million yen.



Reduction of water consumption and status of effective utilization through recycling

The Group takes measures to effectively use and reduce consumption of water at manufacturing sites. Measures to reduce use of tap water include installation of water-save faucets at business sites and headquarters departments.

Water recycling

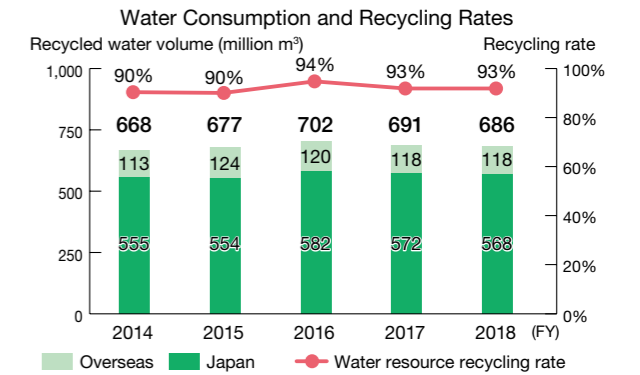
Oji Group companies engaged in the pulp and paper business use a large amount of water. They reduce water consumption by recycling water that has been taken in and reusing it in the manufacturing process. The water recycling rate exceeds 90 percent.

Water conservation at CENIBRA (Brazil)

Recovery and effective utilization of cooling water

Oji Fibre Solutions (New Zealand)

New installation of water treatment facilities that enable recycling of previously unused wastewater generated in various manufacturing processes and other measures



Paper is essential in our day-to-day lives. It is used in a wide range of situations for various applications such as newspapers, notebooks, copy paper, tissues, toilet paper, corrugated containers, and packaging materials. Approximately 60 percent of the raw material used for these types of paper is wastepaper, and the remaining 40 percent comes from trees. The Oji Group is working on “forest recycling” for the purpose of sustainable use of resources and contribution to the environment.

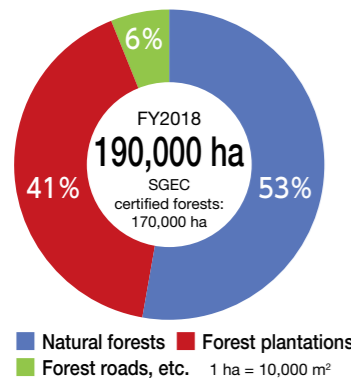
► Company-Owned Forests in Japan

The Group owns forests in approximately 650 locations throughout Japan extending from Hokkaido to Kyushu. The area of those forests is 190,000 hectares, equal to the size of Osaka Prefecture. Protecting the forest leads to protecting the rich nature and land of Japan.

Company-Owned Forests in Japan

The Oji Group owns and manages 190,000 hectares of forests in Japan. This total area is among the largest of all forests owned by private corporate entities. The Group initially owned forests for producing raw materials for paper, but policy was subsequently changed to production of raw wood for lumber and environmental contribution through forest management.

At present, the area of company-owned forest plantations in Japan is approximately 80,000 hectares, constituting 41 percent of all company-owned forests. The Group plants Sakhalin fir, larch, and other varieties in Hokkaido, and cedar, Japanese cypress, and other trees on Honshu and southward. The average age of these trees is about 60 years and are approaching the time for harvesting. The Oji Group manages its forests sustainably by utilizing forest resources (harvesting mature trees and replanting trees to rejuvenate forests) while also continuing tending operations such as thinning (enhancing resources for future generations).



Breakdown of Forest Plantations (41%)

	Cedar	Japanese cypress	Spruce, Sakhalin fir	Red pine	Larch	Other
Area (ha)	14,000	11,000	24,000	10,000	14,000	4,000
Percentage	7%	6%	14%	5%	7%	2%

Breakdown of Natural Forests (53%)

	Softwood	Hardwood
Area (ha)	24,000	77,000
Percentage	13%	40%



Forest plantations (Engaru mountain forest, Hokkaido)



Natural forests (Rubeshibe mountain forest, Hokkaido)

Fundamental Policy concerning Company-Owned Forests Management

Those who use trees have the responsibility to plant trees

- 1** The Group grows Ezo spruce, Sakhalin fir, larch in Hokkaido and cedar, Japanese cypress, and Japanese red pine on Honshu to create highly-profitable forests.
- 2** Forest plantations that have matured are rejuvenated by replanting after harvest. Natural forests are maintained and improved through selective cutting and thinning.
- 3** The Group is contributing to society through the development of forests that perform public functions including CO₂ fixation, water source conservation, national land conservation, and preservation of biodiversity.

Forest plantations and Natural Forests

Forest plantations are created for the purpose of wood production by planting seedlings and performing maintenance such as thinning. Natural forests are formed when trees germinate and grow through the power of nature.

Harvesting

Felling all trees in the harvest area within a forest that has reached the age suitable for harvesting (cutting age). Hardwood and other trees are left standing, however, as buffer zones in consideration of the environment on ridge lines and in valleys.

Selective Cutting

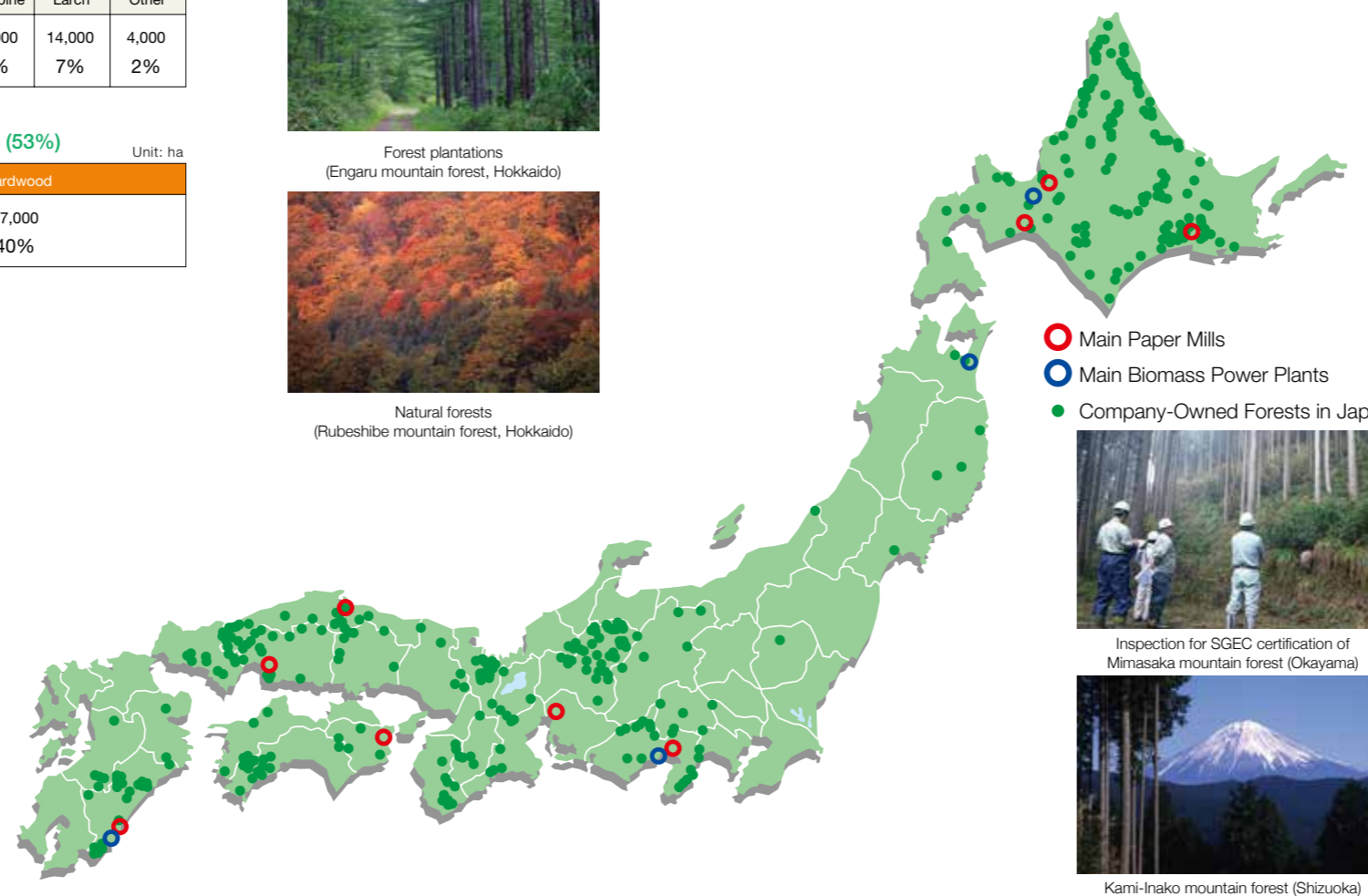
Felling trees at or below the annual growth volume that have been carefully selected and cutting age trees within a natural forest. Trees are selected for removal to enable the forest to rejuvenate naturally.

Thinning

Work performed to alleviate overcrowding in forest plantations while the trees are growing. In natural forests, selection and removal of trees to promote second-forest growth.

Re-planting

Tree planting in areas that have been harvested to develop the next generation of forests.



Inspection for SGEN certification of Mimasaka mountain forest (Okayama)



Kami-Inako mountain forest (Shizuoka)

Oji Group's Forests in Japan

Total Area **190,000 ha**

Forest Certification **Certification acquisition rate for approx. 170,000 ha excluding profit-sharing forests: 100%**

SGEC License Codes
 SGEC-FM: JAFTA-002, JAFTA-008, JAFTA-012
 SGEC-CoC: JAFTA-W025

Acquisition of SGEN Forest Certification

SGEC*1 forest certification is a forest certification program*2 unique to Japan that is operated by the Sustainable Green Ecosystem Council (SGEC). The Oji Group began acquiring SGEN forest certification in December 2003 with the Kami-Inako mountain forest in Shizuoka. To date, we have acquired SGEN forest certification for 330 company-owned forests in Japan, excluding profit-sharing forests, with a total area of 173,000 hectares. It is the largest area of certified forests among those of private companies in Japan. In FY2016, SGEC signed a mutual recognition agreement with the Programme for the Endorsement of Forest Certification (PEFC), an international organization. This has made SGEN forest certification an internationally viable certification program.

*1 Sustainable Green Ecosystem Council

*2 Forest certification

Forest certification is aimed at sustainable forest management. An independent, third-party organization certifies a forest by examining it to see whether it is managed well in accordance with specific standards.

Sustainable Forest Management and Social and Environmental Contributions

Forests are closely related to our lives. It is important to maintain extensive forests in Japan while making effective use of them.

The Oji Group considers it necessary to encourage cooperation among people engaged in mountain forest management and users of lumber. Accordingly, the Group provides raw material including lumber, plywood, paper, biomass fuels, and other products to companies both inside and outside the Group as a part of efforts to revitalize Japan's forestry industry and ensure a stable supply of domestic lumber.

The Group also manages forests by giving full consideration to environmental contribution as the social responsibility of a company that owns forests. The Group takes initiative to ensure that Group forests meet a range of functions, including support for activities to protect Japanese huchen, fairy pitta, and other endangered species and hosting the Oji Forest Nature School.

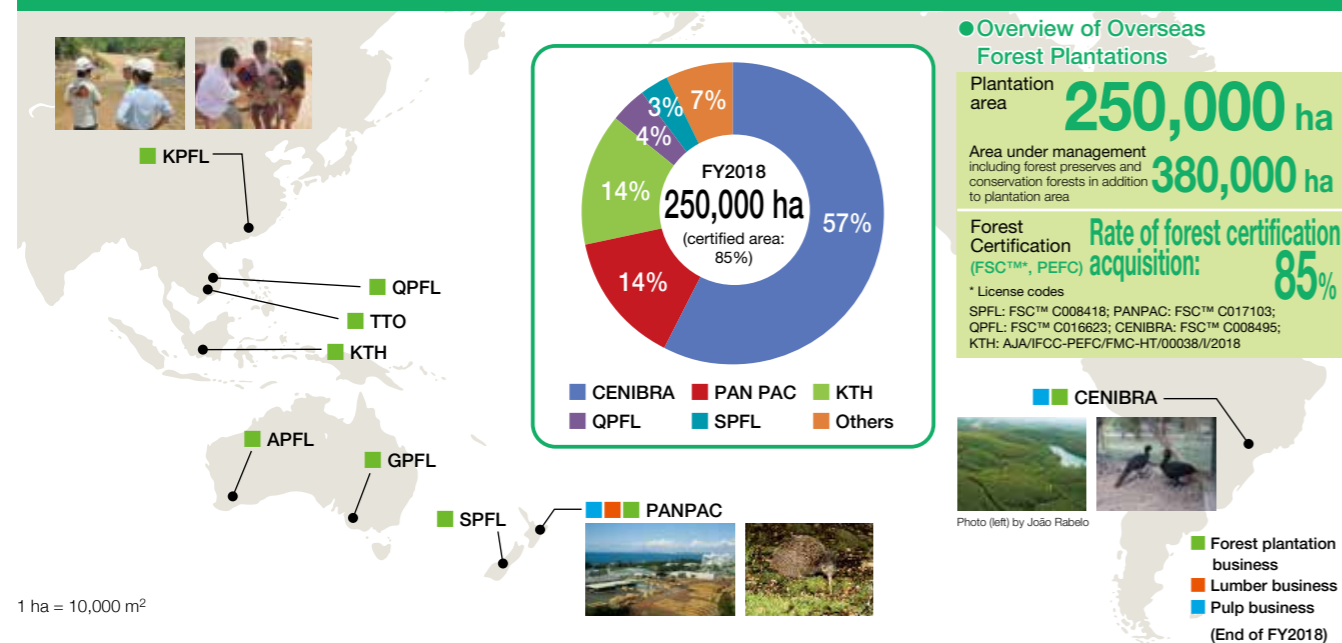


Integrated Report p. 74 Initiatives for Conservation of Biodiversity
 p. 75 Contribution to Local Communities

Forest Recycling: Overseas Forest Plantations

The Oji Group conducts the forest plantation business in nine areas in six countries. As of the end of FY2018, the total area of overseas forest plantations was 250,000 hectares. The area under management in the overseas forest plantation business including forest preserves for the protection of forest ecosystems and wildlife and conservation forests for water source conservation and prevention of soil runoff is 380,000 hectares. To ensure appropriate forest management from the perspectives of society, economy, and the environment, the Group leverages the forest certification programs and acquired forest certification for 85 percent of forests as of the end of FY2018. The overseas forest plantation business secures wood raw materials, absorbs and fixes CO₂, and creates jobs and industry, contributing to the creation of truly enriched and sustainable local communities.

Overview of Overseas Forest Plantation Business: Pursuing Sustainable Forest Management



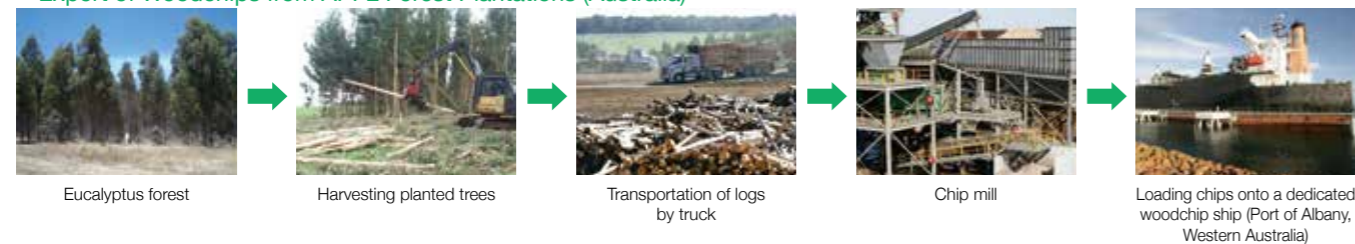
1 ha = 10,000 m²

Use of Plantation Wood

At Oji Group forest plantations, planted trees that are ready to be harvested are processed into papermaking raw materials (woodchips) and lumber products. Woodchips are locally processed into pulp or transported to Japan on dedicated woodchip ships.

Integrated Report p. 76 Responsible Raw Materials Procurement

Export of Woodchips from APFL Forest Plantations (Australia)



Community-Based Forest Plantation Activities

CENIBRA in Brazil procures, processes, and sells logs and woodchips and manufactures and sells pulp. CENIBRA is active in various community contribution programs including supporting higher incomes for farm workers by leasing land that is suitable for farming, entering into partnership agreements with local beekeepers, and dispatching doctors and educators to local communities.



A beekeeper tending bees on land owned by CENIBRA

Utilization of Forest Certification Programs

The Oji Group also manufactures FSC™ certified products using only woodchips that meet the requirements of FSC™ such as FSC™ certified wood and properly controlled wood.*1 Controlled wood must meet requirements to be used in FSC™ certified products. The requirements are also specified in the Wood Raw Material Procurement Guidelines (p. 76).

*1 FSC™ Requirements

Not coming under, or confirmed to be unlikely to come under, any one of the five categories below.

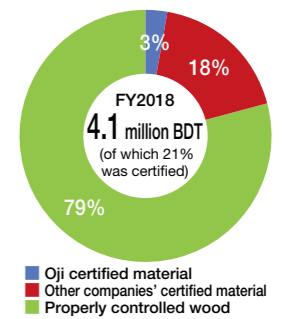
- 1 Illegally harvested wood;
- 2 Wood harvested in violation of traditional and human rights;
- 3 Wood from forests in which high conservation values are threatened by management activities;
- 4 Wood from forests being converted to plantations or non-forest use; and
- 5 Wood from forests in which genetically modified trees are planted.

Suppliers with FSC™ CoC*2 certification must be audited by a third party, and by utilizing these certification systems it is possible to ensure wood raw material traceability and the management systems (such as internal training) of suppliers. The results of these audits are available on the Web.

Properly Controlled Woodchips

The volume of woodchips imported in FY2018 was 4.1 million BDT (bone dry tons), all of which was derived from planted trees including sawmill residue. The certification ratios for imported woodchips were 3% for the Oji Group and 18% for other companies, making a total of 21%.

The remaining 79% was derived from properly controlled wood.



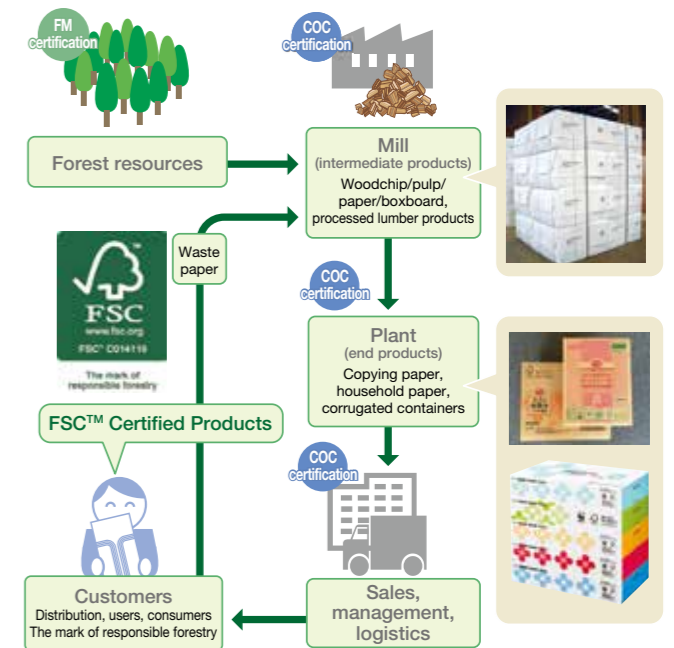
FSC™ Certified Products: Provision of Eco-Friendly Products

The Oji Group has acquired FSC™-FM certification*3 for its overseas forest plantations and FSC™-CoC certification for the Group's manufacturing and processing operations.

The advantage of acquiring integrated certification from forests to converting plants is that it enables the Group to offer a wide range of FSC™ certified products including intermediate products such as woodchips and pulp as well as end products such as photocopying paper and paper for household use. In addition, photocopying paper and corrugated containers are recycled as waste paper. Refer to the FSC™ website for detailed information on the status of certification acquisition.

*2 CoC certification: Confirmation of management on processing and distribution of produced wood
CoC: Chain of Custody

*3 FM certification: Confirmation of forest management
FM: Forest Management



Paper is essential in our day-to-day lives. It is used in a wide range of situations for various applications such as newspapers, notebooks, copy paper, tissues, toilet paper, corrugated containers, and packaging materials. Approximately 60 percent of the raw material used for these types of paper is wastepaper, and the remaining 40 percent comes from trees. The Oji Group is working on “paper recycling” for the purpose of sustainable use of resources and contribution to the environment.

Oji Group Paper Recycling Results

The Oji Group uses approximately 4.08 million tons of waste paper each year, the largest amount and about 24 percent of the 17 million tons of total waste paper use in Japan. The breakdown of waste paper use by the Group is as follows: about 50 percent waste corrugated containers and about 20 percent each of waste newspaper and waste magazines. In addition, recovered paper utilization ratio* in FY2018 was 64 percent, an increase of 2.5 points in the past 10 years as a result of various efforts to use waste paper as a resource.

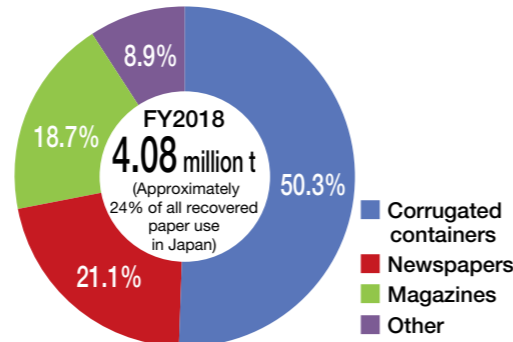
The Oji Group seeks to achieve a recovered paper utilization ratio of 65 percent by FY2020, which is part of the Environmental Action Plan of the Japan Paper Association. To this end, the Group promotes the collection of waste paper as a raw material to expand the use of recovered paper further.

* Recovered paper utilization ratio = Volume of recovered paper ÷ Total volume of fibrous raw material (total consumption of waste paper, wood pulp, and other fibrous raw material)

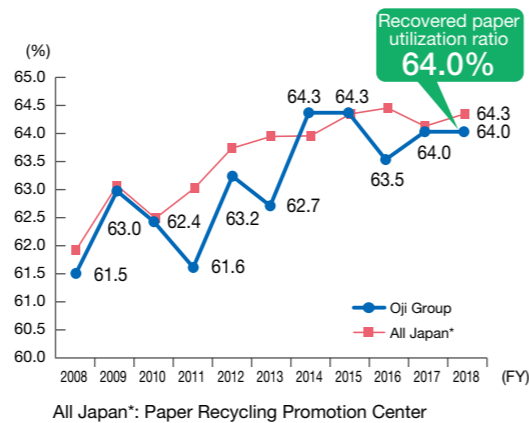
Collection of recovered paper from households



FY2018 Recovered Paper Use Results



Changes in Recovered paper utilization ratio (FY2018)



Reduction of Environmental Burdens by Promoting Recovered Paper Recycling

Paper is a material that is highly suitable for recycling, and therefore, it is important that paper be reused (paper recycling) rather than disposed of as waste. Paper (recovered paper) recycling contributes to (i) securing stable supplies of papermaking raw materials, (ii) effective utilization of resources, (iii) sustainable use of forest resources, and (iv) reduction of waste.

Following a period of rapid economic growth, there is a period when waste becomes an environmental problem. To address this issue, government, trade organizations, and the papermaking industry cooperated to build sorting, collection, and recycling mechanisms that led to the current wastepaper recycling system. In 2018, the combined recovered paper utilization ratio for paper and paperboard was 64.3 percent and the collection rate was 81.5 percent, putting Japan at the highest levels in the world.

(Source: Japan Paper Association)

The Significance of Recovered Paper Recycling

- (i) Securing stable supplies of papermaking raw materials**
Wastepaper is a valuable resource generated within Japan and is the primary raw material for papermaking, accounting for more than 60 percent of all raw materials.
- (ii) Effective utilization of resources**
Recovered paper recycling enables the repeated use of wood resources (pulp) that were previously used.
- (iii) Sustainable use of forest resources**
By recycling wastepaper, the volume of new wood resources (pulp) used can be reduced.
- (iv) Reduction of waste**
By recycling wastepaper, the volume of paper that must be disposed of as waste is reduced.

Various Measures to Promote the Use of Wastepaper

The Oji Group is working to promote various uses of waste paper, such as thorough sorting of waste paper at offices and factories within the group, a used paper wholesaler as a supplier, and an awareness campaign on paper recycling in cooperation with local residents and industry groups.

1) Enhancing the quality of wastepaper

The inclusion within wastepaper of specially processed paper and foreign substances that are not suitable as papermaking materials (collectively referred to as prohibited materials) is a cause of product problems. It is necessary that such prohibited materials be excluded before collection. Accordingly, the Group cooperates with wastepaper dealers, who play a central role in wastepaper logistics, to eliminate prohibited materials included in wastepaper discarded by households and businesses and strives to raise the recovered paper utilization ratio and manufacture high-quality paper products.

Prohibited Materials

Paper products that are not suitable for use as papermaking materials	
Scented paper, paper with an odor	Paper packaging and corrugated containers used for detergent, soap, incense, and so on
Sublimation transfer paper, thermal expansion paper	Thermal paper, iron print paper, 3D copy paper (for Braille and so on)
Waxed corrugated containers, waxed corrugated board	Corrugated containers that contained imported produce, processed seafood, and so on
Soiled paper	Paper that contains food remnants or oil
Materials other than paper	
Stones, glass, metal, earth and sand, wood, cloth, plastic, and others	

Source: Paper Recycling Promotion Center

2) Increasing the use of waste paper

- Use of difficult-to-process paper: The Group is installing special-purpose facilities to process paper tubes, laminated paper, and other difficult-to-process paper for use as a raw material.
- Use of confidential documents: In consideration of the maintenance of confidentiality and issues of information leaks, confidential documents were incinerated in the past, but the Group performs confidential dissolution processing in fully secure facilities for use as a raw material.



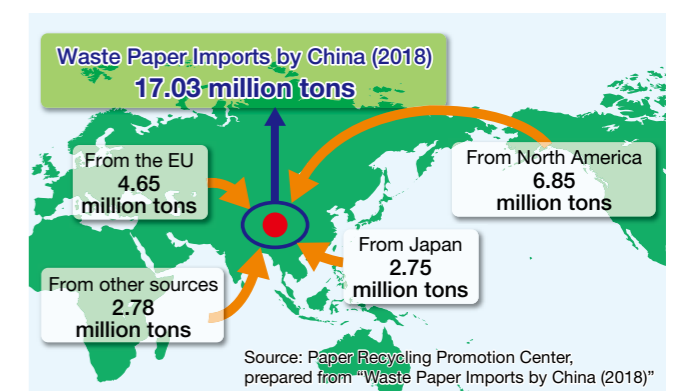
Difficult-to-process waste paper (paper tubes)



A confidential document processing facility (Oji Materia Edogawa Mill)

International Trends in Waste Paper Recycling

China is the world's largest importer of wastepaper, importing 17.03 million tons in 2018. Imports come from North America, the EU, and Japan, which shipped 2.75 million tons, approximately 20 percent of the total, to China. In conjunction with the tightening of environmental regulations, China has announced a policy of banning the import of all solid waste including wastepaper starting at the end of 2020. As a result, the global wastepaper supply and demand will enter a period of major change. The Oji Group is deepening collaboration with wastepaper dealers, who play a major role in wastepaper recycling, to stabilize procurement prices while maintaining and stabilizing waste paper recycling systems.



Column: "A Corrugated Container Travel Journal: Cardboard to Cardboard," a Pamphlet Introducing an Overseas Site

The Oji Group issued a pamphlet with information on the corrugated container business in Malaysia. Fuyuki Shimazu, a corrugated container artist who collects corrugated containers from around the world, observed GSPP, the Oji Group's largest site in Southeast Asia, and created a report from a unique perspective on the process starting with scenarios where corrugated containers are used and collected in Malaysian cities to the creation of new containerboard at the plant from recovered waste paper.



Initiatives for Conservation of Biodiversity

The Oji Group engages in activities for protecting and nurturing endangered species, recovering ecosystems, and other activities by working together with governments, administrative authorities, environmental NPOs, academics, local residents, and other parties.

Conservation activity for Kiwi (Pan Pac)

Pan Pac Forest Products, an Oji Group company, conducts activities for protecting the kiwi, a rare bird species, by collaborating with the Ministry for the Environment of New Zealand, citizen volunteers, and other parties. For these activities, the company has designated land of an area of approximately 40 hectares as a kiwi sanctuary for protecting kiwi chicks. Chicks and eggs in the surrounding area are captured and collected, and chicks that are captured or hatched from the collected eggs are nurtured in the sanctuary before being returned to the wild.

In June 2019, Pan Pac was named Community Corporate Sponsor of the Year at a national kiwi conference held by Kiwis for kiwi, a kiwi protection organization.



Sarufutsu Itou Conservation Activities (Sarufutsu company-owned forest in Hokkaido)

In 2009, Oji Holdings established the Sarufutsu Itou Conservation Council with a local NPO, administrative bodies, researchers, and others for the purpose of protecting the Japanese huchen, or the sea-run taimen (Hucho perryi), an endangered species that lives in the river zone of the Sarufutsu mountain forest in Sarufutsu village, Hokkaido. An area of 2,600 hectares including the river zone was designated a conservation area, and conservation activities are conducted.



A Japanese Sarufutsu Itou with breeding coloration Photo provided by Yo Chirai
1 ha = 10,000 m²

Restoration of Ecosystems and Protection of Rare Species (CENIBRA)

One of the largest overseas forest plantations of the Oji Group is owned by CENIBRA, which operates the eucalyptus plantation and pulp businesses in Brazil. CENIBRA owns and manages a 150,000 hectares forest plantation and 100,000 hectares forest reserve. In accordance with the Brazilian Forest Law, natural forests as well as steep slopes and areas around water sources such as wetlands are left unharvested to preserve biodiversity. In cases where natural forest in the preserve is lost due to erosion, wildfire, or other such events, the company plants indigenous species of trees so that the environment can recover (restoration of natural forest).

Diverse wildlife species are observed in the forest plantations of CENIBRA. The symbol of the company's biodiversity initiatives is the Macedonia Farm, a 560-hectare area that is registered as a natural forest reserve (RPPN*). In this forest, the company has been engaged in activities for breeding the Mutum (a relative of the curassow), an endangered bird species, and returning them to the wild, jointly with an NPO since 1990. CENIBRA also provides environmental education related to forests and biodiversity to schools and local communities and conducts wide-ranging monitoring surveys of flora, fauna, and water resources in the forest on a regular basis.

*RPPN: Reserva Particular do Patrimônio Natura



Measures to Protect the Fairy Pitta (Koyagauchi company-owned forest in Kochi Prefecture)

The fairy pitta is a migratory bird with multiple body colors and a body length of around 20 centimeters. It is listed as a class IB endangered species on the Red List of the Ministry of the Environment.

In August 2016, Oji Holdings concluded an agreement to protect the fairy pitta with the Ecosystem Trust Society at the 260 hectares of company-owned forest, which is adjacent to the fairy pitta sanctuary of the organization.



(Photo provided by Ecosystem Trust Society)

Contribution to Local Communities

Oji Forest Nature School

The Oji Forest Nature School was first held in 2004 through collaboration with the Japan Environmental Education Forum. It is an environmental education program for children that provides opportunities to experience nature by using forests owned by the Oji Group and Group mills. The program deepens understanding of the connections among forests, people, and industry and is an important opportunity to convey the Group's attitudes and approaches to environmental preservation to future generations.



Hands-On forest development in a company-owned forest

Forest Picture Book Contest and Environmental Class

Since 2015, Oji Holdings has hosted the Forest Picture Book Contest with WWF Japan. To provide children with a catalyst for creating picture books, Oji Holdings conducts an environmental class on the Oji Group's sustainable forest management.



Website of WWF Japan Forest Picture Book Contest website

<http://team-morrie.com/shinrin-ehon/index.html> (in Japanese)



An environmental class

Protecting and Nurturing Forests for Thriving Oceans

The 69th Oji Paper Tomakomai Mill Tree Planting Festival was held on May 22, 2019 at the Ojiyama company-owned forest in Tomakomai Takaoka. The festival has been held since 1950 based on the idea that preservation and nurturing of forests leads to thriving oceans. Since 1995, the festival has been held with the Tomakomai fishery cooperative.

In 2018, a total of about 100 persons including mill employees and other involved persons, members of the fishing association, local co-op, Tomakomai River Office of the Tomakomai fishery cooperative, Muroran Development and Construction Department, Hokkaido Regional Development Bureau as well as personnel from the Tomakomai fishery cooperative and others participated as a part of implementation of the Tomakomai fishery cooperative. A total of 1,150 seedlings (500 red pine and 650 Japanese oak) were planted on a 0.65 ha area that was damaged by strong winds in October 2015.

The participants hope that the planted seedlings will grow into beautiful trees and will continue protecting them in the future.




Participants planting seedlings

Responsible Raw Materials Procurement

The Oji Group established the Oji Group Partnership Procurement Policy that confirms the safety and lawfulness of raw materials throughout the supply chain, and strives to expand CSR procurement that gives due consideration to the environment and society. With regard to wood raw materials, compared to other procurement raw materials, there are many matters that require confirmation such as illegal logging and biodiversity, so the Group established the Wood Raw Material Procurement Guidelines under the Oji Group Partnership Procurement Policy. The policy and guidelines have been translated into English and are distributed to suppliers around the world.

Oji Group Partnership Procurement Policy (established in 2007 and revised in 2012 and 2018)

 Integrated Report p. 43 Forest Resources and Environment
Marketing Business: ESG and SDG Topics

Wood Raw Material Procurement Guidelines (established 2005)

The Oji Group has established the Wood Raw Material Procurement Guidelines for its wood raw materials procurement.

The Guidelines stipulate that the Group shall: (1) expand procurement of wood from certified forests; (2) increase use of plantation trees; (3) utilize unused wood effectively; (4) verify that procurement is in compliance with laws and is environmentally friendly and socially responsible, and; (5) disclose information.

To ensure raw material traceability as specified in (4)-2 in particular, production sites of raw materials going back to sources of wood raw materials, forest management methods, and the avoidance of wood obtained through illegal logging are included among the confirmation items. In this way, the Group procures only raw materials produced from well-managed forests.

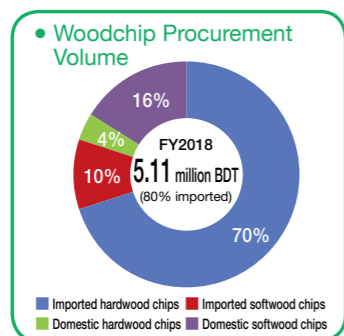
- ### Wood Raw Material Procurement Guidelines
- (1) Expand procurement of wood from certified forests
 - (2) Increase use of plantation
 - (3) Utilize unused wood effectively
 - (4) Verify that procurement is in compliance with laws, environmentally friendly, and socially responsible
 - 1 Implement monitoring of supplies
 - 2 Ensure raw material traceability
 - a) Production place of raw materials (logging site, forest manager, differentiation between plantation and natural forests, etc.),
 - b) Forest management method (compliance with applicable forest laws and forest management standards, etc.),
 - c) Acquisition of forest certification,
 - d) Avoidance of wood obtained through illegal logging,
 - e) Avoidance of genetically modified (GMO) wood,
 - f) Avoidance of logging in forests that are recognized publicly as forests with high conservation value,
 - g) Avoidance of raw materials associated with major social conflicts,
 - h) Adherence to protection of human rights and labor rights
 - (5) Information disclosure

Confirmation of Traceability

Woodchip procurement volume in FY2018 was 5.11 million BDT (bone dry tons). Of that amount, 80 percent was imported.

The Group obtained a total of 1,154 traceability reports including 511 on the entire volume of domestic woodchips,

261 on imported woodchips covering all ships, and 382 on the entire volume of purchased pulp, verifying that the Group conducted procurement in accordance with the Wood Raw Material Procurement Guidelines.



An FSC™-FM certification audit (QPFL in Vietnam) (FSC™-C016623)



A third-party audit report on traceability reports

Supplier Monitoring

The Oji Group visits local suppliers every year to check logging permits and related documents and inspect the actual logging areas and forests, monitors the status of compliance with the Wood Raw Material Procurement Guidelines, and verifies traceability. Through these monitoring activities, we have built good relationships with our suppliers.



A supplier meeting (monitoring)

Confirmation of Raw Material (Chemical) Safety and Provision of Information to Customers

The Group confirms the safety of the chemicals (including materials) during the selection phase of procurement in an effort to improve product safety. The Group also provides information to customers.

Provision of information to customers

The Group responds to customer inquiries based on safety information for various chemicals verified using the Pre-use Evaluation System and the Information Updating System. Responses to customer inquiries are made using Research Reports,*1 Article Information Sheets (AIS),*2 Safety Data Sheets (SDS)*3 and other information.

*1	Research Reports	Reports that respond to detailed individual inquiries by tracing back to the chemicals used.
*2	Article Information Sheet (AIS)	A document that summarizes laws and regulations relating to products and key handling points.
*3	Safety Data Sheet (SDS)	A document provided pursuant to laws and regulations concerning special products that contain substances designated in laws and regulations in amounts exceeding certain thresholds.

Confirmation of the Safety of Chemicals Used

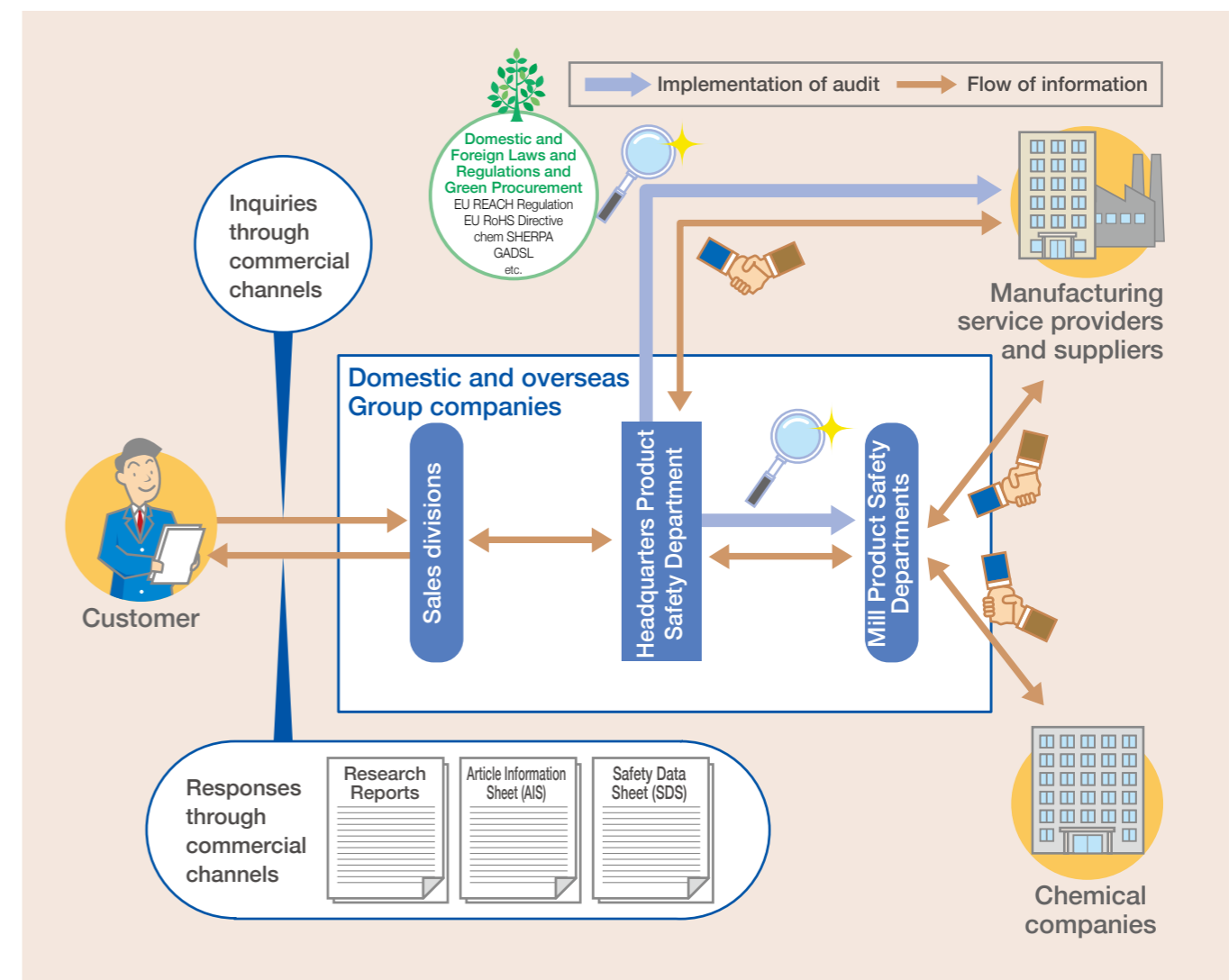
The safety of chemicals used is ensured by means of a Pre-use Evaluation System and Information Updating System.

[Pre-use Evaluation System]

When considering the use of a new chemical, the Oji Group conducts a pre-use assessment by checking laws and regulations, hazard information, and green procurement by major industry associations, etc. using proprietary pre-use evaluation sheets and makes a determination whether the chemical can be used.

[Information Updating System]

Chemical substance management regimes are being strengthened in Japan and overseas, and accordingly, the Group regularly updates evaluation sheets and information by regularly evaluating chemicals in use and confirms their safety.



Consideration for Human Rights

Fundamental Policy

The Oji Group established the Oji Group Corporate Code of Conduct and Oji Group Behavior Standard as criteria to be followed by all Group officers and employees. The Behavior Standard includes provisions concerning respect for human rights, ensuring worksite safety and health, and other issues, and is considered the Group's policy on respect for human rights.

The Oji Group has been a participant in the United Nations Global Compact since 2003 and has expressed its support for the 10 principles relating to human rights, labor, the environment, and anti-corruption.

Additionally, the Oji Group Partnership Procurement Policy, adopted in 2007, expressly provides for respect for human rights (including prohibitions on child labor, forced labor, discrimination, and harassment), and the Group requires that business partners in the supply chain comply with these provisions.

■ The Oji Group Behavior Standard: 15. Respect for Human Rights

We will respect the fundamental human rights of all people, will not unfairly discriminate or harass individuals according to their philosophy and beliefs, nationality, birthplace, religion, race, sex, disability, social status, status within the company, etc., and will not invade their privacy. Further, we will not allow others to do so.



➔ Integrated Report p. 54 The Oji Group Behavior Standard

➔ Integrated Report p. 43 Oji Group Partnership Procurement Policy Participation in the United Nations Global Compact



➔ https://www.ojiholdings.co.jp/english/group/policy/un_global_compact.html

Details of Initiatives

(1) Risk Management Structures

Under Group-wide risk management structures, when launching new business and engaging in other such conduct, the Group performs risk assessments not just from an economic viewpoint, but also from the perspectives of ESG. With regard to human rights, risk assessments are conducted with particular regard for child labor, labor management, the rights of indigenous peoples, labor relations, and the like to determine whether consideration is given to fundamental human rights and whether there are any assessments that will have a negative impact on human rights.



➔ Integrated Report p. 56 Risk Management

(2) Initiatives for Respecting Human Rights

Domestic and overseas Group companies conduct offsite training on harassment and other issues to instill an awareness of compliance. In China, Brazil, and Vietnam, the Group supports local communities and carries out programs with strong community ties such as supporting the enhancement of educational environments and dispatching physicians, nurses, and others to areas lacking physicians.

● Promoting compliance

The Corporate Compliance Department creates numerous opportunities for new managers, new employees, and others to obtain necessary information concerning harassment and other issues through compliance training during rank-specific education. The department also issues Compliance News, a monthly newsletter, to raise awareness and inform employees about the whistleblowing system through case studies.



A compliance training session

● Support for enhancing educational environments

In Nantong City, China, where the Group manufactures and sells pulp, printing paper, publication paper, and other products, the Group established the Oji Charitable Education Fund with the Nantongshi Charity Federation and Nantong Development Zone Charity Federation to help improve the local educational environment. The Oji Group also supports the repair of facilities such as nursery schools and other schools and conducts other activities to support education in Binh Dinh Province, Vietnam, where the Group is active in the forest plantation business.



The Oji Charitable Education Fund received the CSR China Top 100 Brands, which is granted to outstanding CSR projects that have contributed to educational projects in China.



A fence installed at a nursery school in Vietnam

● Dispatch of doctors and nurses to regions that lack medical professionals

The Group supports healthcare programs in regions that lack access to healthcare services such as providing mobile healthcare in the state of Minas Gerais in Brazil, where the Group engages in the pulp business, and dispatching teams of doctors to regions of Binh Dinh Province in Vietnam, where the Group is active in the forest plantation business, that lack doctors.



Provision of mobile healthcare services in Brazil



Teams of doctors are dispatched to regions that lack doctors in Vietnam

(3) Operation of Whistleblowing Hotline (Business Ethics Helpline)

The Oji Group operates the Business Ethics Helpline as a whistleblowing hotline for corporate ethics violations. The Group established an internal hotline (within the Oji Holdings Corporate Compliance Department) and an external hotline (law firm) for the early detection and remedy of misconduct including human rights violations such as harassment, and discrimination and corruption such as bribery.



➔ Integrated Report p. 55 Whistleblowing System

(4) Monitoring of the Status of Compliance

The Group administers compliance awareness surveys to all domestic and overseas Group employees and performs periodic monitoring of compliance awareness including awareness of harassment as well as compliance-related problems in the workplace. Additionally, the Internal Audit Department together with overseas Group companies conducts periodic audits regarding the status of compliance.



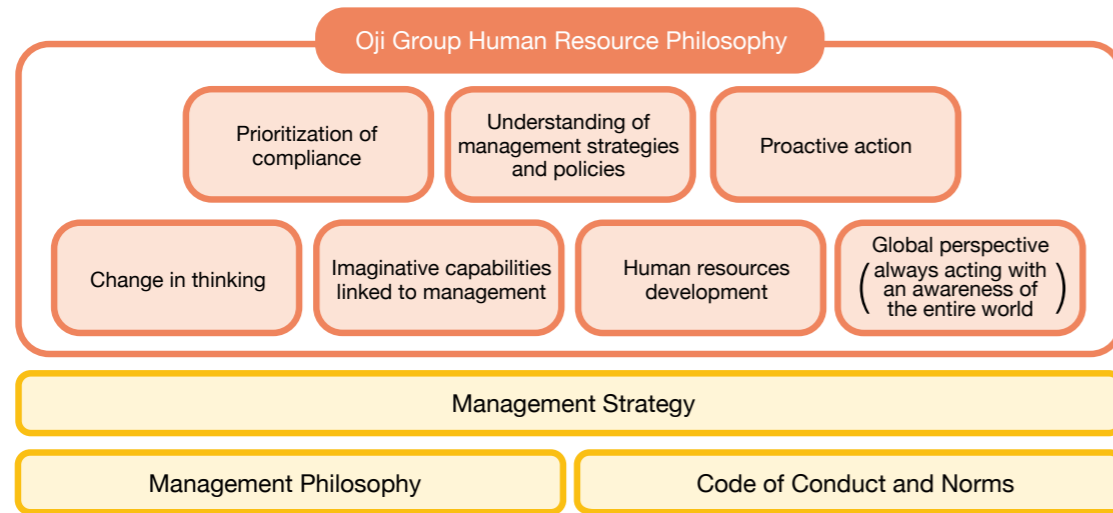
➔ Integrated Report p. 55 Monitoring of the Status of Compliance

Human Resource Measures

Diversity of values and flexibility are extremely important for reinforcing corporate competitiveness and achieving continuous development.

For the Oji Group to grow as a global enterprise “beyond boundaries,” we have been committed to promoting “human resources development,” “working style reforms,” and “diversity promotion” in order to encourage every employee to embrace diversity of values and flexibility in thinking and to enhance his/her skills; in accordance with our fundamental principle, “a company’s strength originates from human resources.”

• Oji Group Human Resource Philosophy



Human Resource Strategies and Targets (Global Human Resource Strategies) and Human Resource Development

(1) Next-generation development

We will foster human resources who will be the core of management of our Group companies, which will be the key to achieving our management strategies.

- Mid-level management training (Oji Juku)

(2) Global human resource development

In addition to identifying and developing human resources, Oji Group actively recruits outstanding human resources from outside the Group

- New employee global challenge (training in India for employees in their first year of employment)
- Overseas trainee training (three months of language training for employees in their fifth to 10th years of employment followed by two years of practical experience at an overseas site)
- Oji Global School (six months of language training for employees aged 31 to 45 years followed by overseas assignment)

(3) Management training and training by job type

To successfully carry out management strategies centered on business structural reforms, it is necessary to enhance management capabilities on the middle management level. The Group has clarified the ideal in human resources for each COMPANY and is conducting awareness-changing training and division-specific training.

- General manager training
- Communications skills training
- New manager training
- Sales personnel training

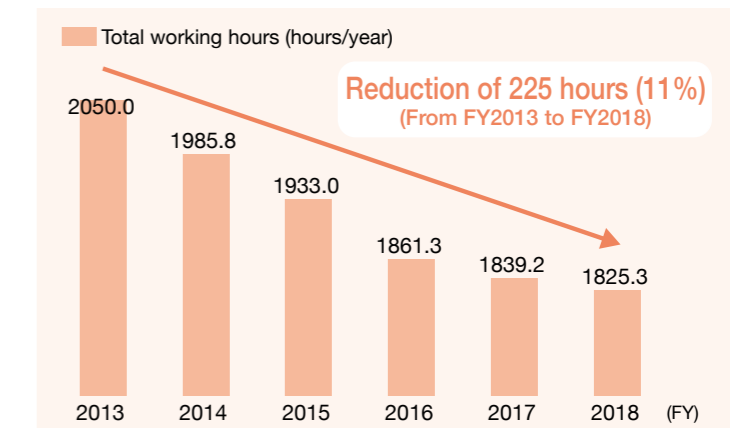
Promotion of Working Style Reforms (Japan)

(1) Reduction of total working hours and promotion of operational efficiency

The Group has been implementing business reforms to reduce overtime work and total working hours.

- Use of flex-time systems, setting limits on overtime work, enabling full transfer of time off when work is performed on holidays, encouraging employees to take paid leave, and other measures
- Promotion of flexible work styles

Reduction of total working hours (Oji Group* Tokyo Main Office region; hours)



* 30 Companies and divisions

(2) Initiatives to establish personnel systems for promoting working style reforms

In order to reliably carry out the tasks in line with the management strategy, we are working to establish a personnel system in Oji Group that enhances the effectiveness of working style reforms.

i) Role-based personnel grading system

In order to break away from seniority systems and realize early identification of personnel suitable for advancement, each employee is evaluated based on whether or not he/she has fulfilled his/her clarified roles. The appropriateness of evaluations is confirmed once each year and strict implementation is undertaken. Training is conducted to raise evaluator levels. Suitable people are appointed to the right position based on the evaluation results.

ii) Certified researcher system

To promote the creation of innovative value, the Group grants researchers with particularly high levels of specialized knowledge discretion regarding their work styles and provides working environments that allow them to focus on research.

iii) Retirement at age 65

Introduced in FY2017 to enable employees to demonstrate their knowledge, skills, and abilities to the fullest and work with enthusiasm.

* Introduced at 10 Group companies

Promotion of Diversity (Japan)

Oji Group strives to carry out initiatives that enable its diverse human resources to actively assume roles at work regardless of gender, age, disability, or nationality, ultimately strengthening the Group’s competitiveness with their diverse values and ideas.

• Diversity promotion policy



(1) Change in mindset and behavior of management level employees

Oji Group believes that changing the mindset and behavior of management level employees is particularly important and conducts training and other programs to ensure accurate understanding of the thinking of top management and promotion of diversity, and to disseminate Group policies. The Group also conducts awareness surveys as indicators of the propagation of promotion measures.

- Study sessions held by the Diversity Promotion Committee
- Skill enhancement training for managers
- Diversity management training for new general managers
- Training for managers who have as subordinates pre-management female employees on the generalist track
- Supervisor management training for young female employees on the generalist track



Diversity management training for new general managers

(2) Demonstration of the abilities and career development of diverse human resources

Promoting the active participation of women

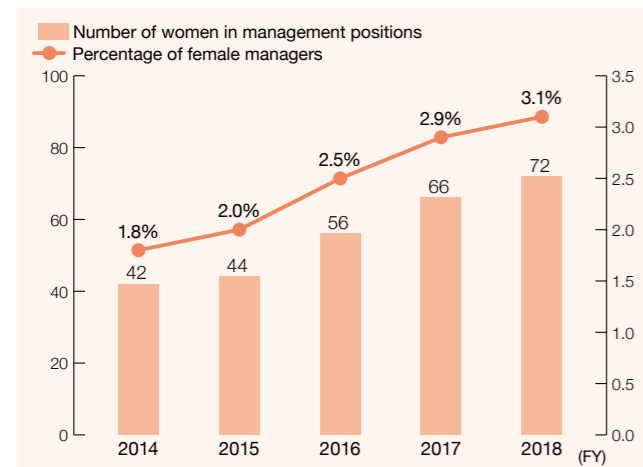
Career development for female employees on the generalist track, practical development support for personnel in all positions, and various other measures are being undertaken as priority issues until 2020.

- Training for pre-management female employees on the generalist track
- Career design training for young female employees on the generalist track

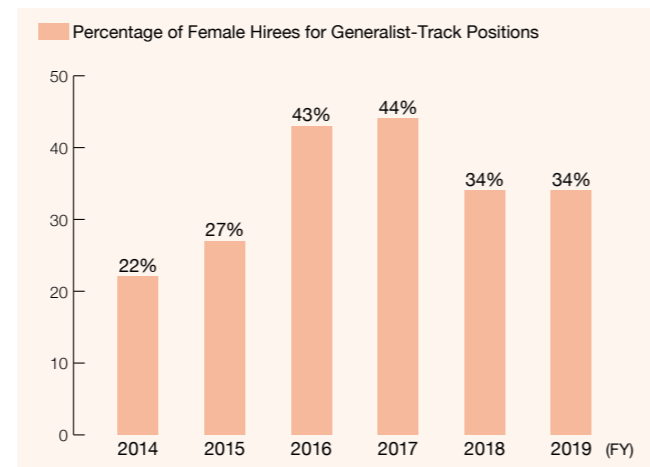


Training for managers who have as subordinates pre-management female employees on the generalist track

Percentage of Women in Management Positions (16 Oji Group companies)



Percentage of Female Hirees for Generalist-Track Positions (16 Oji Group companies, including mid-career hires)



* Data for FY2019 is for recent graduates only

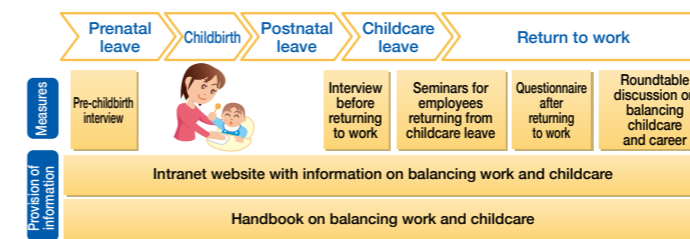
Promoting recruitment of disabled persons

Oji Group established a special subsidiary in 2007 to promote the recruitment of disabled persons. Employees perform management and cleaning of common areas in the Head Office Building. They also perform product finishing and inspection, corrugated container assembly, administrative work, and various other tasks at Oji Group mills. The Group formulated a Three-Year Disabled Persons Employment Plan in FY2018 to promote the recruitment of disabled persons throughout the Group. The Group will continue working to expand employment opportunities for persons with disabilities in an effort to contribute to society.

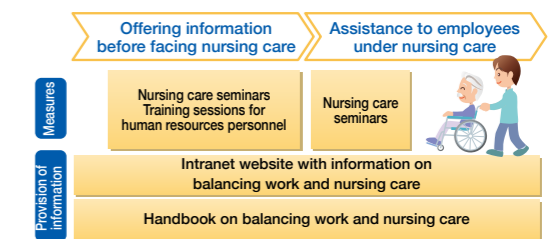
(3) Improvement in employee work-life management

We are introducing various systems that enable employees with childcare or nursing care responsibilities to continue to actively participate in their work. In addition, in April 2018 the Group established and operates Nepia SODATERASU, a nursery located adjacent to a Group housing facility in Edogawa-ku, Tokyo, with the aims of helping employees maintain a balance between childcare and work, promoting the active participation of women in their work, and contributing to the elimination of unattended children as a part of our corporate social responsibility.

Support for balancing work and childcare



Support for balancing work and nursing care



Seminars for employees returning from childcare leave



A nursing care seminar for employees

Safety and Health Policies and Targets

Under a policy of making safety, the environment and compliance top priorities, the Oji Group has established rules and standards on occupational safety and health in the Oji Group Corporate Code of Conduct and the Oji Group Behavior Standard. We secure the safety and health of workers by ensuring that every Group employee is aware of these rules and standards on occupational safety and health, practices them, and complies with them. At the same time, we promote the creation of comfortable worksite environments and strive to create better worksite safety climates so that all workers in the Oji Group can work safely and with a sense of security.

Each Group company creates a safety and health promotion plan and a specific safety and health action plan for each company and worksite based on the Oji Group's annually formulated safety and health promotion plan. Measures for the elimination of occupational accidents are implemented together by Group employees, affiliates and business operators who enter the Group's premises on a temporary basis.

Oji Group's 2019 Safety and Health Promotion Plan

The plan establishes the following basic policies, slogan, and key measures and expresses the Group's strong commitment to achieving zero fatal and serious work-related accidents, which is a priority target, and preventing the occurrence of similar accidents that have occurred repeatedly. The entire Group, including affiliates, is working together towards achieving these objectives.

Basic Policies

The Oji Group will promote activities with the target of zero work-related accidents across the entire Group with safety as its absolute top priority.

Slogan

Always Follow the Rules and Ensure that Others Follow the Rules to Prevent Fatal and Serious Accidents

Key Targets

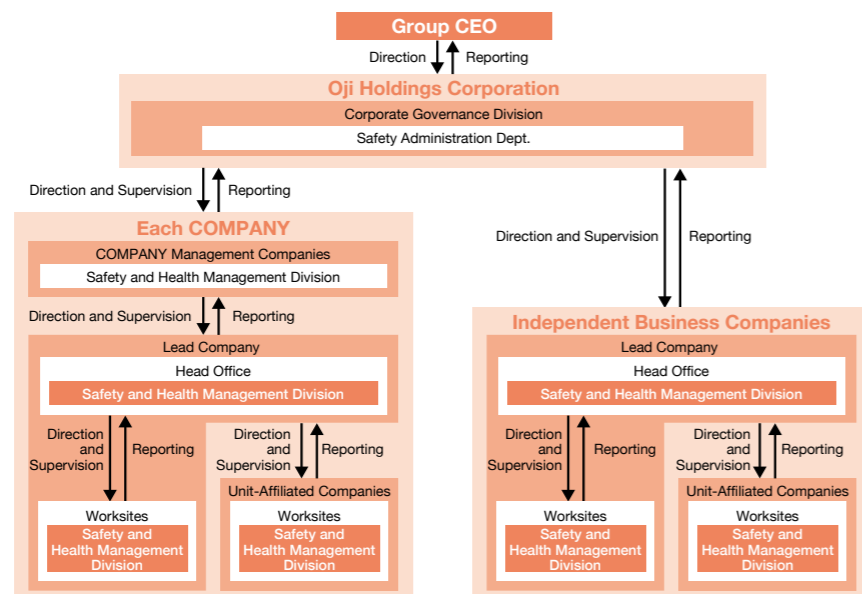
Group target: Achieve zero fatal and serious work-related accidents

Key Measures

- 1 Measures for preventing fatal and serious work-related accidents
- 2 Recurrence prevention measures by implementing the risk assessment for each accident type
- 3 Reform the worksite safety culture
- 4 Prevention measures against the frequent occurrence of accidents leading to lost work time that happens to employees of contractors
- 5 Promotion of heatstroke measures
- 6 Management of physical and mental health, and improvement and maintenance of the worksite environment

Safety and Health Management Structures

Oji Group Safety and Health Management Structures aim to prevent occupational accidents and maintain and promote the good health of Group employees, affiliates, and business operators who enter the Group's premises on a temporary basis and also clarify responsibilities relating to safety and health in the Oji Group and stipulate fundamental matters in the Group Safety and Health Management Rules.



Distribution of Safety and Health Information and Occupational Accident Reports

The Group's safety and health promotion plan, notices and guidelines on safety and health, and occupational accident reports, and other information are distributed throughout the Group.

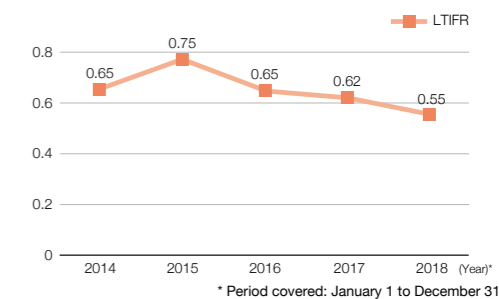
If a fatal or serious accident occurs, the incident is immediately reported to management in accordance with the reporting route specified in the Basic Regulations for Group Risk Management, and structures are in place to ensure appropriate responses.

Safety Performance (Lost Time Injury Frequency Rate (LTIFR))

Lost time injury frequency rate (LTIFR)* occurring within the Oji Group continuously declined since 2015, falling to 0.55 in 2018. According to the Ministry of Health, Labour and Welfare's Survey on Industrial Accidents (businesses with at least 100 employees), in 2018, the rate in manufacturing industries was 1.20 and the rate in the pulp, paper, and paper processing manufacturing industry was 1.88.

Lost Time Injury Frequency Rate (LTIFR) ★

0.55 Change from Prior Year (0.07)



* (1) The frequency rate is an indicator of the frequency of occupational accidents as the number of fatalities and injuries (fatal accidents and accidents resulting in at least one day of lost work) caused by occupational accidents per one million working hours. Lost time injury frequency rate (LTIFR) = (Number of fatalities and injuries due to occupational accidents ÷ Cumulative number of hours worked) × 1,000,000

(2) Total working hours are calculated based on the number of group company employees (regular employees and temporary / non-regular employees) as of the end of September every year, assuming the annual working hours per person is 2,000 hours.

(3) The frequency rate calculation does not include accidents at overseas group companies that are determined to be at the level of accidents accompanied by injuries without lost work days in Japan based on standards established by the Company.

A star mark ★ indicates that FY2018 figure has been assured by KPMG AZSA Sustainability Co., Ltd.

Safety Audits and Safety Patrols

Safety audits and safety patrols

The Oji Holdings Safety Administration Department and the safety departments of each COMPANY and Lead Company conduct safety audits and safety patrols of the companies and worksites that they oversee including overseas companies and worksites to raise safety and health management levels.

Designated system for special guidance on enterprise safety management

The Oji Holdings Safety Administration Department and the safety departments of each COMPANY and Lead Company established the Designated System for Special Guidance on Enterprise Safety Management. Under this system, companies and worksites at which improvements in safety management are deemed necessary such as those where occupational accidents resulting in a serious injury or death or resulting in a temporary incapacity for work have occurred repeatedly within a short period of time are designated as worksites needing special guidance on enterprise safety management. Inspections are conducted and guidance is provided, not only regarding measures for preventing recurrence but also about safety management systems, improvement plans, the status of activities, and other matters, to improve the safety management level of and create a better work safety climate at each designated worksite.

On-site accident investigation

The Oji Holdings Safety Administration Department and the safety departments of each COMPANY and Lead Company immediately visit worksites where accidents occurred to confirm how and why the accident occurred and countermeasures and also conduct thorough confirmation and hold discussions with worksite executives and worksite managers regarding measures for preventing the recurrence of accidents and daily safety management activities, thereby providing guidance on improving the safety management activities of and creating a better work safety climate at the worksite as a whole.

Employee Participation

Occupational safety and health committees, worksite safety and health meetings, and worksite discussions

Group companies have established occupational health and safety committees at each worksite in accordance with laws. These committees carry out safety and health measures through labor-management cooperation by formulating plans for the prevention of occupational accidents and health impairment, creation of comfortable working environments, and maintenance and promotion of good health and holding discussions to confirm and improve initiatives taken under these plans and address other relevant issues. The Group also holds worksite safety and health meetings and discussions to create opportunities for numerous employees to present their opinions.

At worksites where the establishment of a safety committee or health committee is not required by law, we also hold monthly safety and health meetings and social gatherings to obtain opinions from employees and promote worksite safety with a unified labor and management approach.

Central Labor-Management Committee

The Central Labor-Management Committee, which is made up of managers including the Group CEO and representatives from Group company labor unions, meets twice annually. Information concerning safety is shared at these meetings including the status of safety and health activities pursuant to the Group's Safety and Health Promotion Plan, occupational accident occurrence, and initiatives for preventing the recurrence or occurrence of accidents. Committee discusses the establishment of worksites where Oji Group employees put an absolute top priority on safety and that instill a sense of security among their families.

Safety Initiatives (Case examples and others)

Domestic Activities

Group CEO Safety Award

The Group CEO Safety Award is granted to Oji Group domestic and overseas worksites that meet certain criteria determined according to the business scale (number of employees) including the total work time without any occupational accidents resulting in temporary incapacity for work and the number of consecutive years without any occupational accidents.

The Award is granted to worksites with outstanding records of no accidents together with the employees of those worksites and those of affiliates of Group companies with the aim of improving the safety and health levels of the Oji Group and eliminating occupational accidents.



Presentation ceremony of the 2018 Group CEO Safety Award

Section Chief Meetings

The Safety Administration Department has been hosting meetings of section-chiefs level employees working on operational frontlines since 2017. At these meetings, which are held throughout Japan, safety-related issues are presented and through discussions, the participants gain an accurate understanding of their safety responsibilities, raise safety awareness, and think about what to do and what measures to take to ensure that their subordinates will never be injured.



Discussion at a Section Chief Meeting (2018)

Section Chief Training and Supplementary Education

Ensuring the safety of workers depends greatly on the leadership abilities of section chiefs and others who directly supervise workers. For this reason, the Group's safety and health promotion plan for 2018 provided that "newly-appointed managers and supervisors must undergo the training for new safety managers and section chief training" under the action items of the "reform the worksite safety culture," which was a priority measure. Accordingly, section chief training and supplementary education are conducted at worksites throughout Japan.



Groups discussions during section chief training (2018)

Hands-on Risk Training Using Hazard Simulation Virtual Reality Devices

Installation of devices that simulate hazards and encouraging personnel to take external courses gives workers firsthand experience, contributing to improving sensitivity to risks and awareness of safety. Recently, some Group companies have started training using risk sensitivity educational tools that employ virtual reality (VR) technologies to provide safe and effective occupational accident experiences such as tripping and falling, which have been difficult to simulate, and electric shock, which uses the motions of persons who have experienced shocks with a micro-current device. Going forward, the Group will rollout these tools Group-wide.



VR risk experience education (2019)

Overseas Activities

OAP: Meeting of Safety and Disaster Control Managers

Oji Asia Packaging (OAP), which is supervised by the Industrial Materials COMPANY, has been playing a central role in meetings of safety and disaster control managers in Southeast Asia since 2016. Measures are undertaken with the aim of raising safety management levels at each company under the slogan "zero occupational accidents."

Personnel from Malaysia, Vietnam, Thailand, India, Cambodia, and Myanmar attend the meetings, where they receive explanations of the OAP safety promotion plan, review case studies of occupational accidents, and confirm important matters to be shared among the worksites through notices. They also inspect the plant where the meeting is held as well as nearby companies and plants. The participants are eager to discuss safety initiatives every year.



Earnest discussion for achieving zero accidents (2019)

Meeting of Plant Managers from Oji Group Companies in China

Plant managers in China has been holding meetings on safety and the environment since 2013 to exchange information on safety and the environment and deepen interaction among plant managers and safety and environmental managers with the objective of achieving zero occupational and environmental accidents.

During the meetings, attended by plant managers from Oji Group companies in China, the participants inspect the plant where the meeting is held and hear reports on safety and environmental topics presented by the Oji Holdings Safety Administration Department and Environmental Management Department and attend presentations on achievements from daily activities and best practices regarding safety and the environment given by individual companies, question and answer sessions, and other programs intended to raise safety and environmental management levels and promote measures for achieving zero occupational and environmental accidents.



Participants aim to achieve zero occupational and environmental accidents (2019)

Forklift Safety Workshop & Skills Competition

Oji Group companies in China have been holding a Forklift Safety Workshop & Skills Competition since 2014. The events provide knowledge concerning forklifts and improve operating skills with the aim of achieving zero forklift accidents.

During the forklift safety workshop, participants analyze the causes of forklift accidents, watch a safety video, and actively participate in a question and answer sessions, enhancing their awareness of safety.



Forklift Skills Competition (2018)

Health Initiatives (Case Studies)

Regular Health Examinations

The Group provides regular health examinations (with statutory examination items) at least once each year. In addition, major Group companies provide their employees aged 35 years or older with screenings for lifestyle-related diseases (total cholesterol, uric acid, funduscopy, tumor markers, breast and cervical cancer screening, screening for VDT syndrome, and others) together with the health insurance union. Based on the results of the examinations, detailed follow-ups are conducted for the early detection and treatment of health problems by working in collaboration with an industrial physician.

Health Consultation Office

The Group established the Oji Group Health Consultation Office, where doctors and counselors are available to give advice, either by telephone or online, on various health problems of employees and their families, including mental health problems caused by worksite human relations and so on.

The Group also established a nationwide system that enables employees to receive face-to-face counselling services from specialized counselors by making prior appointments. The Group provides employees who have used this service with a wide variety of support based on the particulars of their issues.

Stress Checks

In accordance with the law, The Oji Group ensures that employee stress check tests are conducted once annually. Employees with high stress levels are recommended to receive face-to-face guidance from doctors individually by an external service provider to which we outsource the clerical work for implementing the stress checks.

With regards to the results of the stress checks, the Group holds meetings, including reporting seminars, for responsible personnel from Group companies and divisions as well as providers of clerical work related to the implementation of the stress checks, where we provide feedback on organizational analysis and encourage them to improve their worksite environments.

Vaccination of Expatriate Employees before Dispatch

The Group recommends that employees who are to be dispatched to countries with a high risk of infectious diseases and their accompanying family members receive vaccinations that are recommended by the Ministry of Health, Labour and Welfare (hepatitis A and B, tetanus, rabies, Japanese encephalitis, polio, yellow fever, measles/rubella, and typhoid) depending on the destination, thereby preventing infection after their dispatch.

At each of its bases around the world, the Oji Group undertakes a range of social contribution initiatives including the promotion of culture and sports in accordance with the Management Philosophy of the Oji Group including “Contribution to the Future and the World” and “Harmony with Nature and Society.”

Nepia SODATERASU, company-managed childcare facility

The Group opened Nepia SODATERASU, a nursery, in April 2018 at a facility adjacent to a Group condominium located in Edogawa-ku, Tokyo to help employees balance child-care and work and eventually to contribute to the elimination of children on the waiting list for nursery schools, in line with our corporate social responsibilities. The facility is also available for use by local residents.

The name “SODATERASU,” embodies three meanings: “sodate [to raise children] (carefully and soundly),” “terasu [to illuminate] (the future brightly),” and “terrace (safe play on the nursery school playground).”



Oji Hall

Oji Hall, which reopened in October 2018 following renovations, is a full-fledged 315-seat music hall with a homey atmosphere in the main building of Oji Holdings. Oji Hall uses it to host diverse performance and engage in the hall rental business. The hall has been praised by Japanese performers and fans as well as renowned artists from the West.



Oji Hall Re-opening Special Concert
October 25, 2018
MARO World Vol. 33 by Fuminori “Maro” Shinozaki

Fujihara Foundation of Science

The Fujihara Award presented by the Fujihara Foundation of Science, which was established by Ginjiro Fujihara, is known as a historic and prestigious accolade that honors scientists who have made distinguished contributions to the development of Japan’s science and technology. Several past recipients went on to win Nobel Prizes. Oji Holdings supports the foundation, mainly through financial assistance.



The 60th Fujihara Award presentation ceremony

Sports

The Oji Group sponsors the Oji Baseball Team, which is based in Kasugai City, Aichi Prefecture, and the Oji Eagles, an ice hockey team based in Tomakomai City, Hokkaido. Both teams focus on contributing to their local communities and promoting sport competition while achieving their respective objectives.



The Oji Eagles



The Oji Baseball Team

FTSE4Good Index Series

Oji was selected as a constituent of the FTSE4Good Global Index and FTSE Blossom Japan Index, stock indices established by the U.K.-based FTSE, in June 2019. (Scope: Oji Holdings)



JPX Nikkei Index 400

Oji has been selected as a constituent of the JPX Nikkei Index 400,* an index calculated by Japan Exchange Group, Inc., Tokyo Stock Exchange, Inc., and Nikkei, Inc., since August 2014. (Scope: Oji Holdings)



SNAM Sustainability Index

Oji was selected as a constituent of the SNAM Sustainability Index, an index developed by Sompo Japan Nipponkoa Asset Management Co., Ltd., in June 2019. (Scope: Oji Holdings)



S&P/JPX Carbon Efficient Index

Oji has been selected since September 2018 as a constituent of the S&P/JPX Carbon Efficient Index developed by Japan Exchange Group, Inc., Tokyo Stock Exchange, Inc., and S&P Dow Jones Indices. (Scope: Oji Holdings)



MSCI Japan Empowering Women (WIN) Index

Oji has been selected since December 2017 as a constituent of the MSCI Japan Empowering Women (WIN) Index created by U.S.-based MSCI. (Scope: Oji Holdings)



“Eruboshi” (the top grade) certification received pursuant to the Act on Promotion of Women’s Participation and Advancement in the Worksite

On December 21, 2017, Oji Holdings was granted “Eruboshi” (Grade 3, the top grade) company certification by the Minister of Health, Labour and Welfare in recognition of its efforts to promote women’s participation and career advancement. (Scope: Oji Holdings)



Oji selected as FY2017 “Nadeshiko Brand”

On March 22, 2018, Oji was designated by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange as “Nadeshiko Brand” companies for the first time as enterprises that are outstanding in terms of encouraging the empowerment of women in the worksite. (Scope: Oji Holdings and Oji Management Office)



Financial Data Highlights

Changes in Assets and Profit/Loss

Segment		FY2014	FY2015	FY2016	FY2017	FY2018
Net sales	(¥ mil.)	1,347,281	1,433,595	1,439,855	1,485,895	1,550,991
Operating profit	(¥ mil.)	43,867	71,987	70,243	70,781	110,212
Ordinary profit	(¥ mil.)	49,360	60,517	52,949	65,958	118,370
Profit attributable to owners of parent	(¥ mil.)	15,526	12,706	40,270	36,222	51,977
Profit per share*1	(¥)	15.71	12.86	40.74	36.64	52.52
Total assets	(¥ mil.)	2,140,641	1,909,483	1,901,029	1,960,753	1,951,369
Net assets	(¥ mil.)	784,420	711,230	759,198	810,011	815,406
Net assets per share*2	(¥)	656.03	587.62	635.95	681.52	684.50

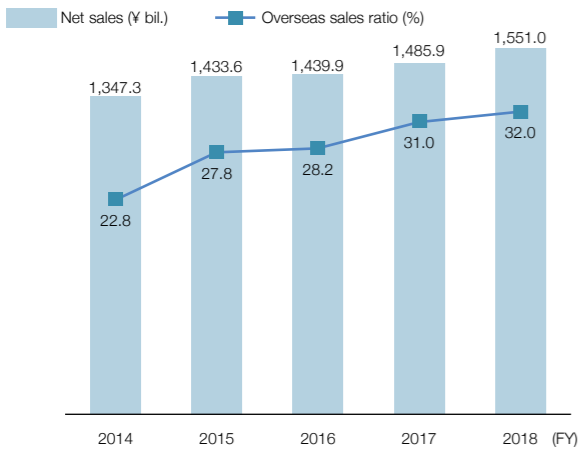
*1 Profit per share was calculated by dividing profit attributable to owners of parent by the average number of shares outstanding for the year under review upon subtracting from it the number of treasury stocks.

*2 Net assets per share were calculated by dividing net assets by the number of shares outstanding at the end of the year under review upon subtracting from it the number of treasury stocks.

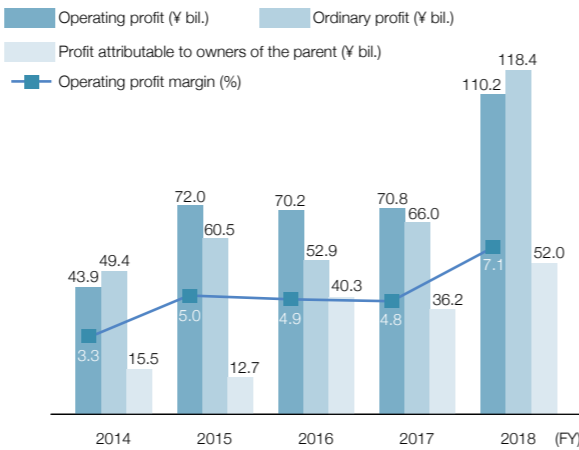
*3 The Company applied "Partial Amendments to Accounting Standard for Tax Effect Accounting" (ASBJ Statement No. 28, February 16, 2018) from the beginning of FY2018. Total assets for FY2017 states the figure after the said accounting standard, etc. was applied retrospectively.

*4 Numbers less than one million yen are rounded down to the nearest million.

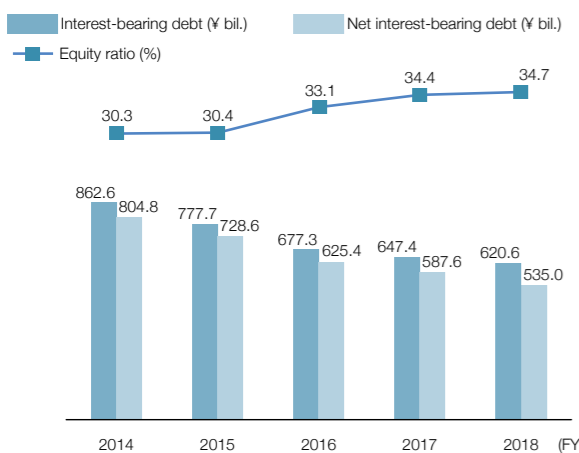
Net Sales and Overseas Sales Ratio



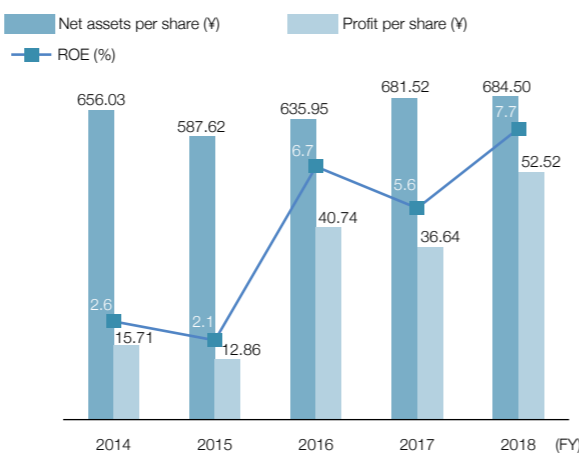
Operating Profit, Ordinary Profit, Profit Attributable to Owners of the Parent, and Operating Profit Margin



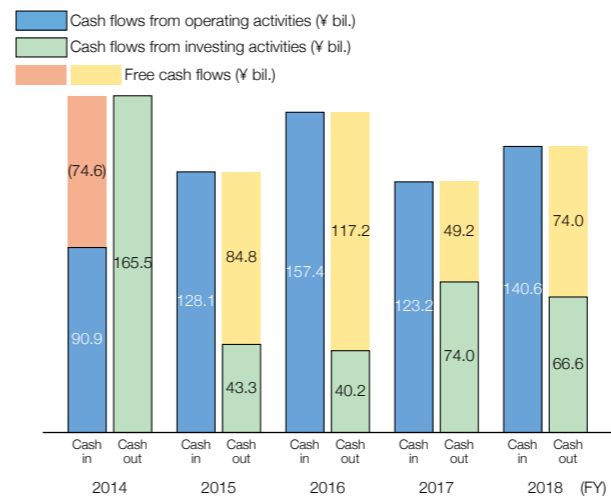
Interest-Bearing Debt, Net Interest-Bearing Debt, and Equity Ratio



Net Assets Per Share, Profit Per Share, and ROE



Changes in Cash Flows



Status of Individual Segments

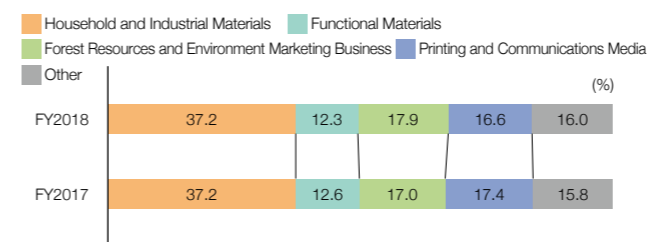
Segment	Net Sales	Operating Profit
Household and Industrial Materials	¥681,190 million (increase 4.6% year-on-year)	¥22,408 million (increase 312.2% year-on-year)
Functional Materials	¥224,123 million (increase 1.5% year-on-year)	¥18,357 million (decrease 1.1% year-on-year)
Forest Resources and Environment Marketing Business	¥326,467 million (increase 9.4% year-on-year)	¥64,644 million (increase 65.9% year-on-year)
Printing and Communications Media	¥302,887 million (decrease 0.8% year-on-year)	(¥4,819 million) (—)
Other	¥294,177 million (increase 6.2% year-on-year)	¥9,846 million (increase 12.4% year-on-year)
Subtotal	¥1,828,846 million (increase 4.3% year-on-year)	¥110,437 million (increase 56.5% year-on-year)
Adjustments	(¥277,854 million) (—)	(¥224 million) (—)
Total	¥1,550,991 million (increase 4.4% year-on-year)	¥110,212 million (increase 55.7% year-on-year)

*1 Internal managerial categories were revised starting from this fiscal year, and we have made changes to some business segments.

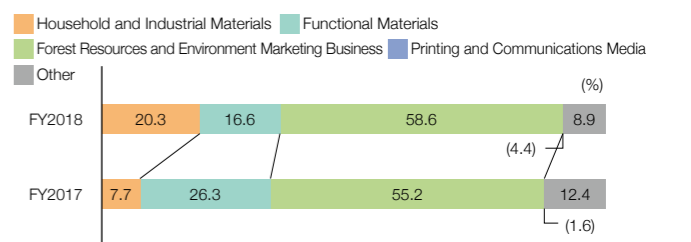
*2 Adjustment amount is mainly the adjustment concerning internal transaction.

*3 Numbers less than one million yen are rounded down to the nearest million.

Net Sales Composition Ratios by Segment



Operating Profit Composition Ratios by Segment



* Net sales and operating profit composition ratios by segment (%) were calculated excluding adjustments (adjustments for internal transactions, etc.)

Consolidated Financial Statements

Consolidated Balance Sheets

	Previous consolidated fiscal year (March 31, 2018)	Current consolidated fiscal year (March 31, 2019)		Previous consolidated fiscal year (March 31, 2018)	Current consolidated fiscal year (March 31, 2019)
Assets			Liabilities		
Current assets			Current liabilities		
Cash and deposits	50,357	78,756	Notes and accounts payable - trade	248,490	253,929
Notes and accounts receivable - trade	325,373	334,852	Short-term loans payable	153,911	193,175
Marketable securities	12,406	9,471	Commercial paper	1,000	3,000
Merchandise and finished goods	96,658	101,940	Current portion of bonds	40,000	20,000
Work in process	19,502	20,094	Accounts payable-other	16,062	16,705
Raw materials and supplies	86,994	94,758	Accrued expenses	49,560	48,912
Short-term loans receivable	3,504	6,294	Income taxes payable	9,320	17,941
Accounts receivable-other	19,877	14,531	Other	18,887	22,705
Other	11,894	14,603	Total current liabilities	537,231	576,369
Allowance for doubtful accounts	(1,511)	(1,838)	Non-current liabilities		
Total current assets	625,056	673,465	Bonds	60,000	70,000
Non-current assets			Long-term loans payable	392,511	334,402
Property, plant and equipment			Deferred tax liabilities	67,182	62,486
Buildings and structures	661,640	662,001	Deferred tax liabilities for land revaluation	7,828	7,806
Accumulated depreciation	(456,863)	(473,139)	Net defined benefit liability	51,422	52,874
Buildings and structures (Net)	204,777	188,861	Long-term deposits	7,929	7,728
Machinery, equipment and vehicles	2,369,615	2,369,868	Other	26,635	24,295
Accumulated depreciation	(2,002,914)	(2,051,165)	Total non-current liabilities	613,509	559,593
Machinery, equipment and vehicles (Net)	366,700	318,702	Total liabilities	1,150,741	1,135,963
Tools, furniture and fixtures	60,141	59,894	Net assets		
Accumulated depreciation	(54,827)	(54,979)	Shareholders' equity		
Tools, furniture and fixtures (Net)	5,313	4,914	Common stock	103,880	103,880
Land	235,846	235,975	Capital surplus	112,086	110,474
Forests	112,590	110,882	Retained earnings	377,801	413,023
Plantations	93,238	89,719	Treasury stock	(14,465)	(13,753)
Leased assets	9,077	9,012	Total shareholders' equity	579,303	613,625
Accumulated depreciation	(6,288)	(6,715)	Accumulated other comprehensive income		
Leased assets (Net)	2,788	2,296	Valuation difference on available-for-sale securities	39,287	32,981
Construction in progress	35,389	33,404	Deferred gains (losses) on hedges	(170)	317
Total property, plant and equipment	1,056,644	984,759	Revaluation reserve for land	5,835	5,816
Intangible assets			Foreign currency translation adjustment	31,973	13,223
Goodwill	9,664	6,682	Remeasurements of defined benefit plans	17,412	11,428
Other	11,626	9,903	Total accumulated other comprehensive income	94,338	63,767
Total intangible assets	21,290	16,586	Share acquisition rights	246	222
Investments and other assets			Non-controlling interests	136,122	137,790
Investment securities	162,336	186,287	Total net assets	810,011	815,406
Long-term loans receivable	7,855	7,398	Total liabilities and net assets	1,960,753	1,951,369
Long-term prepaid expenses	21,333	21,336			
Net defined benefit asset	51,614	37,115			
Deferred tax assets	2,820	10,732			
Other	13,261	14,806			
Allowance for doubtful accounts	(1,460)	(1,119)			
Total investments and other assets	257,762	276,558			
Total non-current assets	1,335,696	1,277,904			
Total assets	1,960,753	1,951,369			

Consolidated Statements of Income

	Previous consolidated fiscal year (From April 1, 2017 To March 31, 2018)	Previous consolidated fiscal year (From April 1, 2018 To March 31, 2019)
Net sales	1,485,895	1,550,991
Cost of sales	1,144,157	1,175,093
Gross profit	341,737	375,897
Selling, general and administrative expenses		
Freight expenses	147,357	149,421
Warehouse expenses	7,281	6,652
Salaries and wages	54,060	52,886
Retirement benefit expenses	4,927	883
Depreciation and amortization	5,932	5,151
Other	51,396	50,689
Total selling, general and administrative expenses	270,955	265,685
Operating income	70,781	110,212
Non-operating income		
Interest income	1,516	2,081
Dividends income	2,735	3,386
Equity in earnings of affiliates	521	12,593 ^{*1}
Other	6,123	9,535
Total non-operating income	10,896	27,596
Non-operating expenses		
Interest expenses	6,924	6,419
Exchange loss	607	4,046
Other	8,187	8,973
Total non-operating expenses	15,719	19,439
Ordinary profit	65,958	118,370
Extraordinary income		
Gain on return of assets from retirement benefits trust	—	11,224 ^{*2}
Gain on sales of investment securities	912	2,091
Gain on revision of retirement benefit plan	1,305	—
Other	5,439	2,175
Total extraordinary income	7,657	15,492
Extraordinary losses		
Impairment loss	2,364	34,141 ^{*3}
Other	6,251	8,923
Total extraordinary losses	8,616	43,065
Profit before income taxes	64,999	90,797
Income taxes-current	17,794	31,227
Income taxes-deferred	3,836	(6,560)
Total income taxes	21,631	24,667
Profit	43,368	66,130
Profit attributable to non-controlling interests	7,145	14,152
Profit attributable to owners of parent	36,222	51,977

*1 In conjunction with Mitsubishi Paper Mills becoming an affiliate subject to the equity-method, 10,884 million yen is included as the amount equivalent to negative goodwill that arose.
*2 In conjunction with the return of a portion of retirement benefits trust assets, unrecognized actuarial differences corresponding to the retirement benefits trust assets were processed as a lump sum.

*3 Impairment losses of 29,603 million yen were reported in relation to Oji Paper Co., Ltd.'s paper business assets.

Third-Party Independent Assurance Report



Independent Assurance Report

To the Representative Director of the Board, President and CEO of Oji Holdings Corporation

We were engaged by Oji Holdings Corporation (the "Company") to undertake a limited assurance engagement of the environmental and social performance indicators marked with a red star ★ (the "Indicators") for the period from April 1, 2018 to March 31, 2019, except for the lost time injury frequency rate, which is for the period from January 1, 2018 to December 31, 2018, included in its Oji Group Integrated Report 2019 (the "Report") for the fiscal year ended March 31, 2019.

The Company's Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the "Company's reporting criteria"), as described in the Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the 'International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information' and the 'ISAE 3410, Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company's responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company's reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company's reporting criteria, and recalculating the Indicators.
- Visiting the Tomakomai Mill of Oji Paper Co., Ltd. selected on the basis of a risk analysis.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.

Tokyo, Japan

December 11, 2019

Consolidated Statements of Cash Flows

(¥ mil.)

	Previous consolidated fiscal year (From April 1, 2017 To March 31, 2018)	Current consolidated fiscal year (From April 1, 2018 To March 31, 2019)		Previous consolidated fiscal year (From April 1, 2017 To March 31, 2018)	Current consolidated fiscal year (From April 1, 2018 To March 31, 2019)
Cash flows from operating activities			Cash flows from financing activities		
Profit before income taxes	64,999	90,797	Net (decrease) increase in short-term loans payable	14,046	(21,047)
Depreciation and amortization	71,880	69,527	Net increase (decrease) in commercial paper	(1,000)	2,000
Impairment loss	2,364	34,141	Proceeds from long-term loans payable	34,202	26,897
Amortization of goodwill	2,119	1,685	Repayment of long-term loans payable	(57,036)	(21,004)
Depletion of standing timber	7,999	8,457	Proceeds from issuance of bonds	19,963	29,795
Increase (decrease) in allowance for doubtful accounts	(338)	74	Payment for redemption of bonds	(40,000)	(40,000)
(Increase) decrease in net defined benefit asset	3,579	(3,490)	Payments from changes in ownership interests in subsidiaries that do not result in change of scope of consolidation	(440)	(10,424)
Increase in net defined benefit liability	328	2,192	Payment for purchase of treasury stock	(119)	(50)
Interest and dividend income	(4,251)	(5,468)	Dividend payments	(9,910)	(10,900)
Interest expenses	6,924	6,419	Other	(1,498)	(805)
Exchange loss (gain)	(1,584)	3,825	Net cash (used in) financing activities	(41,793)	(45,539)
Equity in (earnings) losses of affiliates	(521)	(12,593)	Effect of exchange rate change on cash and cash equivalents	(310)	(2,241)
Loss (gain) on sales of investment securities	(903)	(1,521)	Net increase in cash and cash equivalents	7,049	26,152
Loss (gain) on return of assets from retirement benefits trust	—	(11,224)	Cash and cash equivalents at the beginning of the year	51,352	58,343
Loss on disposal of non-current assets	2,329	1,933	Increase in cash and cash equivalents resulting from mergers of subsidiaries	25	20
Loss (gain) on sales of non-current assets	(5,252)	(132)	Increase in cash and cash equivalents from newly consolidated subsidiary	51	—
Business structure improvement expenses	283	1,348	Decrease in cash and cash equivalents resulting from exclusion of subsidiaries from consolidation	(134)	(1,722)
(Increase) decrease in trade receivables	(32,142)	(14,005)	Cash and cash equivalents at the end of the year	58,343	82,794
(Increase) decrease in inventories	(12,837)	(16,365)			
Increase (decrease) in trade payables	40,379	6,381			
Other	(5,288)	(6,078)			
Subtotal	140,067	155,905			
Interest and dividend income received	5,002	6,372			
Interest paid	(6,812)	(6,366)			
Income taxes paid	(15,079)	(15,339)			
Net cash provided by operating activities	123,178	140,571			
Cash flows from investing activities					
Purchase of securities	(1,130)	—			
Proceeds from sales and redemption of marketable securities	—	70			
Payment for acquisition of property, plant, equipment and intangible assets	(64,739)	(59,197)			
Proceeds from sales of property, plant, equipment and intangible assets	3,133	530			
Payment for acquisition of investment securities	(4,949)	(11,246)			
Proceeds from sales and redemption of investment securities	1,724	5,131			
Payment for acquisition of shares of subsidiaries resulting in change in scope of consolidation	(4,340)	—			
Payment for loans receivable	(4,123)	(1,858)			
Proceeds from collection of loans receivable	2,384	1,038			
Other	(1,984)	(1,104)			
Net cash used in investing activities	(74,025)	(66,636)			

List of Affiliated Companies

Industrial Materials COMPANY

Oji Industrial Materials Management Co., Ltd.

Oji Materia Co., Ltd.

- Hokuyo Shiko Co., Ltd.
- Utsunomiya Oji Shiko Co., Ltd.
- Shin Nihon Feather Core Co., Ltd.
- Saga Itagami Co., Ltd.

Oji Container Co., Ltd.

- Musashi Oji Container Co., Ltd.
- Kanto Pack Co., Ltd.
- Honshu Rheem Co., Ltd.
- Wakayama Oji Container Co., Ltd.
- Kansai Pack Co., Ltd.
- Chiyoda Meiwa Danboru Co., Ltd.
- Nihon Seika Hosono Co., Ltd.
- Kyodoshiko Corporation
- Kyodo Hinode Sangyo Co., Ltd.
- Kunshan Oji Filter Co., Ltd.
- Nantong Oji Filter Co., Ltd.

Morishigyo Co., Ltd.

- Morikamihonbai Co., Ltd.
- Hokkaido Morishigyo Co., Ltd.
- Tohoku Morishigyo Co., Ltd.
- Sendai Morishigyo Co., Ltd.
- Hitachi Morishigyo Co., Ltd.
- Gunma Morishigyo Co., Ltd.
- Nagano Morishigyo Co., Ltd.
- Niigata Morishigyo Co., Ltd.
- Shizuoka Morishigyo Co., Ltd.
- Tokai Morishigyo Co., Ltd.
- Hokuriku Morishigyo Co., Ltd.
- Tottori Morishigyo Co., Ltd.
- Shikoku Morishigyo Co., Ltd.
- Kyushu Morishigyo Co., Ltd.
- Aipacks Co., Ltd.
- Fuji Co., Ltd.

Oji Asia Packaging Sdn. Bhd.

GSPP Group

- GS Paperboard & Packaging Sdn. Bhd.
- Dazun Paper Industrial Co. Sdn. Bhd.
- Oji GS Packaging (Yangon) Co., Ltd.

Harta Packaging Group

- Harta Packaging Industries Sdn. Bhd.
- Harta Packaging Industries (Perak) Sdn. Bhd.
- Harta Packaging Industries (Selangor) Sdn. Bhd.
- Trio Paper Mills Sdn. Bhd.
- Chiga Light Industries Sdn. Bhd.
- Harta Fleksipak Sdn. Bhd.
- Tottori Morishigyo Co., Ltd.
- Harta Packaging Industries (Cambodia) Ltd.
- Ojitex Harta Packaging (Sihanoukville) Ltd.
- Oji Packaging (Cambodia) Co., Ltd.

- United Kotak Bhd.

- Ojitex (Vietnam) Co., Ltd.
- Ojitex Haiphong Co., Ltd.
- United Packaging Co., Ltd.
- S.Pack & Print Public Co., Ltd. — Sahakij Packaging Co., Ltd.
- PT Oji Sinar Mas Packaging
- Oji India Packaging Pvt. Ltd.

- Oji Interpack Co., Ltd.
 - Oji Interpack Korea Ltd.
 - Suzhou Oji Packaging Co., Ltd. — Oji Packaging Technology (Chongqing) Co., Ltd.
 - Oji Interpack Singapore Pte. Ltd.
 - Oji Intertech, Inc.
 - Oji Interpack India Pvt. Ltd.
 - Oji Interpack Vietnam Co., Ltd.

- O&C Paper Bag Holdings Co., Ltd. * Intermediate holdings companies
 - Oji Seitai Co., Ltd. — Kusumiseitajo Inc. — Oji Packaging (Shanghai) Co., Ltd.
 - Chubushiko Co., Ltd. — Japan Paper Technology Dong Nai (VN) Co., Ltd.
 - Chuetsu Package Co., Ltd. — Chuo Shiko Co., Ltd.

- Oji Packaging Co., Ltd.
- Oji Adba Co., Ltd.
- Kyushu Package Co., Ltd.

Household and Consumer Products COMPANY

Oji Nepia Co., Ltd.

- Oji Paper Nepia (Suzhou) Co., Ltd.
- Oji Asia Household Product Sdn. Bhd.
 - OAHP Marketing Sdn. Bhd.

- People & Grit (M) Sdn. Bhd.
 - People & Grit Marketing Sdn. Bhd.
 - Supplymark Sdn. Bhd.
 - We Love Marketing Sdn. Bhd.

- PT Indo Oji Sukses Pratama * Equity-method affiliates
- PT Oji Indo Makmur Perkasa * Equity-method affiliates

Functional Materials COMPANY

Oji Functional Materials Progressing Center Inc. Oji F-Tex Co., Ltd.

- Oji Tac Co., Ltd.
- New Tac Kasei Co., Ltd.
- Oji Kinocloth Co., Ltd.
 - Oji Kinocloth (Shanghai) Co., Ltd.
- Chuetsu Co., Ltd.

- Shinomura Chemical Industry Co., Ltd.
- Ebetsu Oji Shigyo Co., Ltd.
- Sunshine Oji (Shouguang) Specialty Paper Ltd.
 - * Equity-method affiliates

Oji Imaging Media Co., Ltd.

- Oji Scientific Instruments Co., Ltd.
- Kanzaki Specialty Papers, Inc.
- Kanzan Spezialpapiere GmbH
- Oji Paper (Thailand) Ltd.
- Oji Label (Thailand) Ltd.
- Oji Papéis Especiais Ltda.

- Hyper-Region Labels Sdn. Bhd. — Hyper-Region Industries Sdn. Bhd.
- Tele-Paper (M) Sdn. Bhd. — Sonofax Sdn. Bhd. — Ge-Pap Sdn. Bhd. — SRE-Marketing Sdn. Bhd. — SPNL Print Sdn. Bhd.

Forest Resources and Environment Marketing Business COMPANY

Oji Green Resources Co., Ltd.

- Oji Paper International Trading (Shanghai) Co., Ltd.
- Japan Brazil Paper and Pulp Resources Development Co., Ltd.
- Celulose Nipo-Brasileira S.A.
 - Cenibra Logística Ltda.
 - Cenibra Internacional Serviços e Comércio (Sociedade Unipessoal) Lda
 - Cenibra Trading Ltd.
 - Cenibra, Inc.

- Pan Pac Forest Products Ltd. — Pan Pac Forest Products (Otago) Ltd.
- Oji Forest & Products Co., Ltd.
- Oji Forestry Co., Ltd.
- Southland Plantation Forest Co. of New Zealand Ltd.
- Albany Plantation Forest Co. of Australia Pty. Ltd.
- Green Triangle Plantation Forest Co. of Australia Pty. Ltd.
- Albany Plantation Export Co., Pty. Ltd.
- PT Korintiga Hutani * Equity-method affiliates
- Quy Nhon Plantation Company * Intermediate holdings companies
 - Quy Nhon Plantation Forest Co. of Vietnam Ltd.
 - Binh Dinh Chip Corporation

- Oji Green Energy Shiranuka Co., Ltd.
- Oji Green Energy Nichinan Co., Ltd.
- Oji Green Energy Ebetsu Co., Ltd.
- Oji Green Energy Tokushima Co., Ltd.
- MPM Oji Eco-Energy Co., Ltd.
- Oji-Itochu Enex power retailing Co., Ltd. * Equity-method affiliates
- Oji Ecomaterial Co., Ltd. — Kyokushin Recycling Resources Co., Ltd.
- Oji Cornstarch Co., Ltd. — Oji Saito Paper Recycle Co., Ltd. — Oji Trading Co., Ltd.

Printing and Communications Media COMPANY

Oji Paper Co., Ltd.

- Tomakomai Oji Shigyo Co., Ltd.
- Tomakomai Kyowa Service Co., Ltd.
- Oji Shigyo Co., Ltd.
- Yonago Oji Shigyo Co., Ltd.
- Tomioka Oji Shigyo Co., Ltd.
- Nitinan Oji Shigyo Co., Ltd.

Jiangsu Oji Paper Co., Ltd.

- O&C Ivory Board Co., Ltd. * Equity-method affiliates

Corporate Management Group

Oji Management Office Inc.

- Oji Real Estate Co., Ltd.
- Kyokuyo Co., Ltd.
- Fujikako Co., Ltd.
- Ginpo Pack Co., Ltd.
- Oji Hall Co., Ltd.
- Oji Paper Insurance Service Co., Ltd.
- Hotel New Oji Co., Ltd.

- OCM Fiber Trading Co., Ltd.
 - Oji Forest Products Vietnam Co., Ltd.
- Yupo Corporation * Equity-method affiliates
- Oji Paper Management (Shanghai) Co., Ltd.
- Oji Asia Management Sdn. Bhd.
- Oji Myanmar Packaging Co., Ltd.

Oji Oceania Management Co., Ltd.

Oji Fibre Solutions Group

- Oji Fibre Solutions (NZ) Ltd.
- Oji Fibre Solutions (AUS) Pty. Ltd.
- Oji Foodservice Packaging Solutions (AUS) Pty. Ltd.
- Oji Fibre Solutions (QLD) Pty. Ltd.
- Oji Cardboard Carton Solutions Pty. Ltd.

Chuetsu Pulp & Paper Co., Ltd.

- * Equity-method affiliates

Mitsubishi Paper Mills Limited

- * Equity-method affiliates

Shared Service Companies

- Oji Logistics Co., Ltd.
- Oji Engineering Co., Ltd. — Oji Machinery Hokkaido Co., Ltd., Oji Machinery Chubu Co., Ltd.
- Oji Business Center Co., Ltd.
- Oji Human Support Co., Ltd.

Company Profile (as of March 31, 2019)

Company name	Oji Holdings Corporation
Director of the Board, President	Masatoshi Kaku (appointed April 1, 2019)
Headquarters address	7-5, Ginza 4-chome, Chuo-ku, Tokyo 104-0061 Japan
Start of business	February 12, 1873
Corporate establishment	August 1, 1949
Capital	¥103,880 million
Total number of authorized shares	2,400,000,000 shares
Total number of issued shares (treasury stocks included in the total)	1,014,381,817 shares (23,369,691 shares)
Number of shareholders	59,813
Number of employees of the consolidated Group	36,309

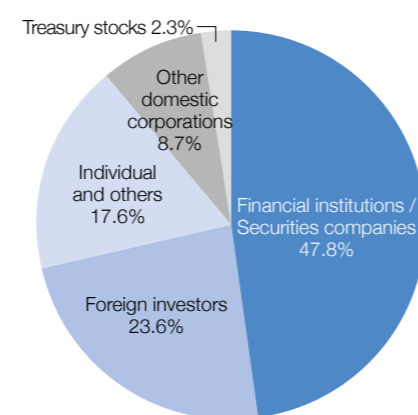
Stock Information (as of March 31, 2019)

Listing stock exchange	Tokyo Stock Exchange
Securities Identification Code	3861
Share register manager and account administration authority for special accounts	Sumitomo Mitsui Trust Bank, Limited 4-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo Japan
Mailing address	Transfer Agency Department, Sumitomo Mitsui Trust Bank, Limited 8-4, Izumi 2-chome, Suginami-ku, Tokyo 168-0063 Japan
Toll-free telephone number	+81-120-782-031

Principal Shareholders (as of March 31, 2019)

Name of shareholder	Shares held (Thousands)	Percentage of total shares issued
The Master Trust Bank of Japan, Ltd. (Trust account)	81,771	8.3%
Japan Trustee Services Bank, Ltd. (Trust account)	64,734	6.5%
Japan Trustee Services Bank, Ltd. (Trust account 4)	35,452	3.6%
Sumitomo Mitsui Banking Corporation	31,668	3.2%
Nippon Life Insurance Company	25,658	2.6%
Japan Trustee Services Bank, Ltd. (Trust account 9)	23,063	2.3%
Mizuho Bank, Ltd.	21,636	2.2%
Oji Group Employee Stock-holding Association	19,419	2.0%
Japan Trustee Services Bank, Ltd. (Trust account 5)	17,303	1.7%
The Norinchukin Bank	16,654	1.7%

Distribution of Shareholders



* The Company holds treasury stock of 23,369 thousand shares, which is excluded from the above list.
 * The percentage of total shares issued has been calculated after excluding the Company's treasury stock (23,369 thousand shares).
 * Numbers less than one thousand are rounded down to the nearest thousand

To provide information about the Oji Group to stakeholders including investors, we have released the Environmental and Sustainability Reports and the Oji Group Report. For FY2019, we released the Oji Group Integrated Report, including more detailed financial and non-financial information about us, prepared in a more easily understandable manner.

In recent years, the Earth, where we live, has been facing crises never previously experienced, such as climate change and the issue of plastic in the ocean. Under these circumstances, the Oji Group, operating a paper manufacturing business since our foundation, with forest resources as the core of our business, has held numerous discussions by obtaining internal and external cooperation to sincerely and carefully communicate what new values can be created, how it could be possible to commercialize them, and how we can contribute to the global environment and society through the new businesses.

We hope that the Oji Group Integrated Report 2019 will help you understand more about the Oji Group and our initiative to fulfill our mission to continue innovating to implement our business activities that contribute to advancing our society, with a view toward the future, through deeper communication with stakeholders.

Oji Holdings Website

Please refer to the corporate website for more detailed information.

- **Homepage:**
<https://www.ojiholdings.co.jp/english/>
- **Investor Relations**
<https://www.ojiholdings.co.jp/english/ir/>
- **Securities report**
<https://www.ojiholdings.co.jp/ir/library/security.html>
- **ESG Data Collection**
https://www.ojiholdings.co.jp/english/environment/esg_data.html

Editorial Policies

When preparing this Report, and reference was made to the following. Additionally, the report is structured in relation to the 10 principles in four areas found in the United Nations Global Compact.

- **GRI Standard**
(Global Reporting Initiative)
- **Guidance for Collaborative Value Creation**
(Ministry of Economy, Trade and Industry)
- **ISO 26000**
(International Organization for Standard)
- **International Integrated Reporting Framework**
(International Integrated Reporting Council)

Ensuring Reliability

To ensure the reliability of this report, FY2018 figures marked with a star (★) have been assured in accordance with the International Standard for Assurance Engagements (ISAE) 3000 and ISAE 3410 by KPMG AZSA Sustainability Co., Ltd.

Scope of Coverage of this Report

In general, this report covers Oji Holdings, 190 consolidated subsidiaries, and 24 equity-method affiliates (as of March 31, 2019). In cases where coverage differs, this is indicated.

Reporting Period

The reporting period is from April 1, 2018 to March 31, 2019.

With the exception of numerical data, however, activities carried out after April 2019 are also referenced.

Disclaimer Regarding Forecasts and Other Forward-looking Statements

Forecasts and other forward-looking statements in this report represent projections by Oji Holdings based on information available at the time of publication and reasonable judgments and therefore contain uncertainties. Please be advised that actual results may differ substantially due to various factors.

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