# Research & Development

### Creation of Innovative Values

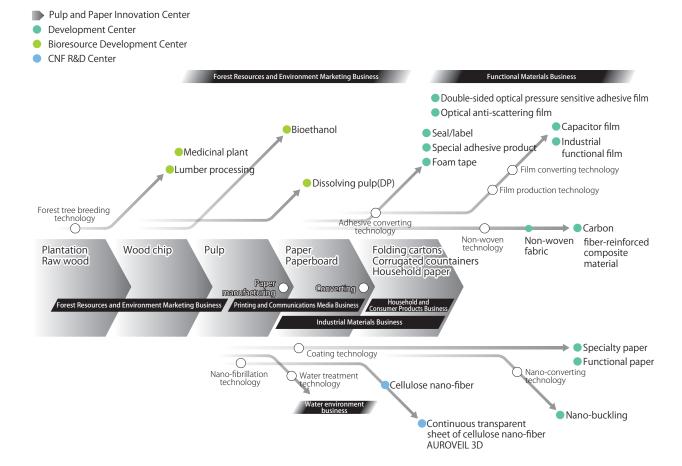
With the aim of creating of new businesses and strengthening of current businesses' competitiveness in mind, the Innovation Promotion Division propels Oji Group's pace of innovation through carrying out research ranging from those that seed the technologies of tomorrow to those that aid in the development of new markets and products which are closely attached to business enterprises.

### Priority Strategies of the Innovation Promotion Division

- Proposition/implementation of new needs (business models) and seeds, and formation of a value-chain
- Contribution to sales/earnings through creation of new businesses
- Strengthening cost competitiveness through refinement of pulp and paper technologies

### Value Creation by the Innovation Promotion Division

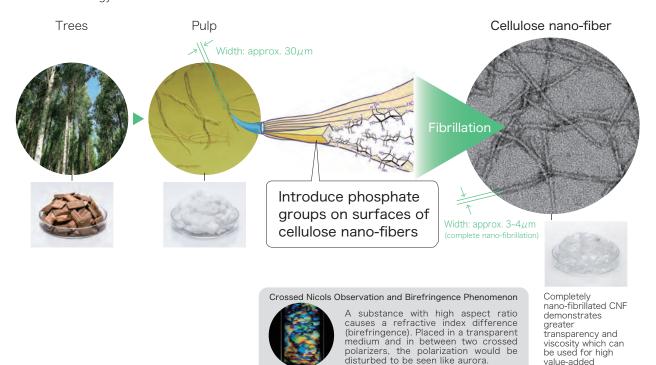
Each research center of the Innovation Promotion Division is committed to developing new products which are highly functional/high value-added, as well as developing new technologies related to wood/water resources utilization and environmental conservation, making advancements in existing technologies fostered through our long experiences in paper manufacturing and film converting. The Strategic Planning Department takes the lead in creation of new businesses, cultivation of new seeds and formation of a value chain.



# Value Creation 1 | Nano-fibrillation Technologies for Cellulose Nano-fiber

Cellulose nano-fiber ("CNF") is a plant fiber (pulp) that is finely fibrillated to nano-order level, 1/100 of 1mm, where its width is equivalent to 1/20,000 of a hair.

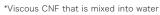
Oji Group has developed a groundbreaking process for its CNF production by utilizing a chemical treatment method "phosphate esterification" which is potentially the most feasible for commercialization, requiring a relatively small amount of energy for fibrillation.





### Initiatives for Commercialization of CNF

At the manufacturing demonstration facility for CNF slurry\*, located at Oji Paper's Tomioka Mill, we are developing a production process for mass production purposes. Also, another demonstration facility will be constructed for CNF continuous transparent sheet in the second half of 2017, to establish a mass production technology in view of commercialization. Moving forward, we will accelerate the pace towards commercialization of both CNF slurry and continuous transparent sheet.





Slurry is launched as "AUROVISCO" in 2017.

value-added applications

Takeaways Management Strategies **Business Strategies** Governance Oji Group Information

### Wide Variety of CNF Produced by Oji's Unique Technology, "Phosphate Esterification"

### **CNF Production Technologies**

Oji's Unique Complete Nano-fibrillation Technology



### **CNF Slurry** "AUROVISCO"

Complete nano-fibrillated CNF of Oji Group demonstrates an extremely high transparency, viscosity, dispersibility and thixotropy.



### **CNF Continuous Transparent Sheet** "AUROVEIL"

We have established a technology to produce a continuous transparent sheet of CNF. In addition to the conventional CNF sheet with features such as high transparency, flexibility, and dimensional stability under high temperature, a new CNF sheet with an additional feature of moldability is offered.



### **CNF Continuous Transparent Sheet** with High Moldability

#### "AUROVEIL 3D"

Besides "AUROVEIL", "AUROVEIL 3D", a new groundbreaking sheet that can be freely molded, has been developed.

[Product features]

High transparency, high dimensional stability under high temperature, flexibility, moldability



#### **CNF Wet Powder**

CNF slurry of 1~2% concentration is offered as wet powder of greater than 20% concentration. It has a hydrophilic nature and has excellent dispersibility and handling properties.



#### **CNF Hydrophobic Powder**

Following the hydrophilic wet powder is the hydrophobic powder that can be dispersed to various organic solvents without losing its high viscosity and transparency.

[Organic solvent where it is dispersible] Hydrocarbon-related, alcohol-related, ketone-related, glycol-related, aprotic polar solvent

### Value Creation 2 | Dissolving Pulp (DP)

#### ■What is Dissolving Pulp?

Dissolving pulp is pulp of the highest purity cellulose extracted from wood.

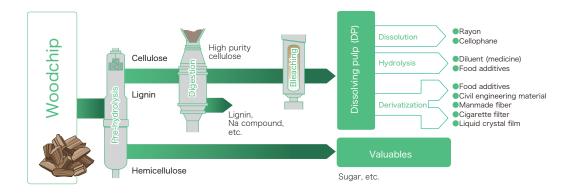
#### ■Main Applications

Dissolving pulp is mainly used as a raw material for regenerated cellulose as rayon and cellophane, and cellulose derivative including acetate. Whilst the degree of purity and polymerization depends on applications where it is used in, Oji Group develops elemental technologies to improve quality of DP to cater to each application.



#### ■Effective Utilization of Hemicellulose

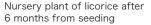
There is a procedure in dissolving pulp production called hydrolysis where hemicellulose in wood is dissolved and then eliminated. We are focusing on the sugar derived in the procedure to consider a possibility of producing valuables.



## Value Creation 3 | Medicinal Plants Cultivation Technologies

To effectively utilize tree breeding technologies, Oji Group has focused on research of medicinal plants with high market potential. In particular, licorice is used for 70% of oriental medicines. Currently, we depend heavily on import wild licorice from China/Central Asia. On the other hand, a technology to efficiently obtain domestic licorice has been increasingly required as a result of concerns for resource exhaustion







Root of licorice harvested after 18 months (1.5 years) from seeding

and export regulations due to demand increases. Oji Group has established Japan's first cultivation technology that shortens the time taken for cultivation of licorice from 5~6 years to 2 years, whilst conforming to Japanese Pharmacopoeia's active ingredient standards of containing more than 2.0% of glycyrrhizin in the cultivated licorice.

# Effective Utilization of Company-owned Forests

Other than licorice, a variety of wild medical plants growing in our company-owned forests in Hokkaido (126,000 ha) are also in consideration for utilization.

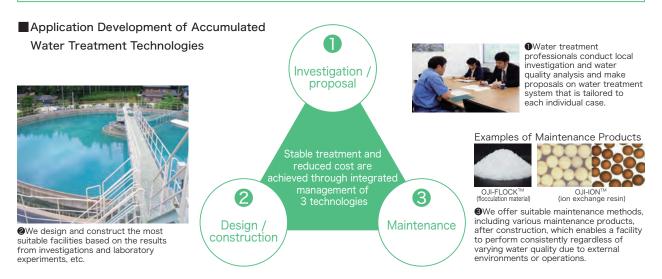


Takeaways Management Strategies **Business Strategies** Governance Oji Group Information

## Value Creation 4 | Establishment of Water Treatment Technologies

Based on its rich experience of operating mills as well as leveraging on its accumulated technologies of water production and water treatment, Oji Group offers water treatment systems for all types of environments to cater to current domestic needs as well as global needs. (Water and sewage, plant effluents, industrial wastewater, seafood processing wastewater, animal husbandry wastewater, industrial water, etc.)

[Business conductor] Oji Engineering [Technology developer] Water Environment Business Promotion Section, Innovation Promotion Division (established in 2017)



### Case Example Industrial Water Production Facility Introduced at an Industrial Estate in Thailand



The combination of our unique chemical dosing system and ultrafiltration membrane, OJI-MEMBRANE™, has led to a high-quality industrial water production system that is stable and cost-saving.

-It is more compact and has a higher processing capability than conventional facilities. It can be automatically operated 24-hr in a stable and continuous manner.



### Case Example Establishment of Cadmium Removal System in Industrial Wastewater



We have succeeded in developing a system utilizing Oji's unique chemical treatment technology as well as ultrafiltration membrane named OJI-CLEAR™, which is able to match up to domestic/overseas tightened regulations including standards of international organizations such as FAO\*1 or WHO\*2.

-It reliably removes cadmium in wastewater to levels below the latest effluent standards.

-Leveraging on minimal chemical cost and use of highly efficient filtration membrane, energy-savings and space-savings are realized with compact equipment.



# Promotion of Working Style Reforms and Diversity

## Promotion of Working Style Reforms

With "Company's Strength originates from Human Resources" as our motto, we strive to create a working environment that encourages every single employee to fully display his/her potential through working style reforms.

# 1.Reduction of Total Working Hours and Promotion of Operational Efficiency

We are making changes in the way of work to improve the quality of work. In doing so, we aim to increase productivity.

●Reduction of Total Working Hours and Utilization Ratio of Paid Leave\*

	FY2015	FY2016
Total Working Hours [Results]	1903h	1841h
Utilization Ratio of Paid Leave [Results]	69%	81%

<sup>\*</sup>Oji Group's Main Office region

Operational efficiency

[Main Initiatives]

(revising information communication and routine tasks)

- ·Setting the start/end time of work to match actual work situations (i.e. utilization of flexible hours)
- •Setting the maximum limit for overtime work hours (at 60h/month)
- ·Lights-out at 7 p.m. (with a target of more than 80%) and prohibition of late-night overtime work
- ·Full compensatory leave for working on holidays
- •Encouragement of paid leave usage (with a target of more than 80%)

# 2. Initiatives to Change Personnel System for Promotion of 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 to Oji Group that enhances the effectiveness of working style reforms.

#### [Main Initiatives]

- ·Introduction of a role-based personnel grading system\*1
- ·Introduction of a certified researcher system\*2
- \*1 We have introduced a role-based personnel grading system since FY2014 to combat seniority and enable early-promotion.
- \*2 We have introduced a certified researcher system since FY2015 to allow researchers with particularly high expertise to concentrate on their research and create innovative-values, and allow recruitment of such people externally. Certified researchers have discretion over their working styles when conducting R&D.

### 3. Introduction of Retirement at the Age of 65

Having recognized the increase in the number of active elderly population as a result of extended average life expectancy, as well as the decrease in the number of productive age population as a result of an ageing population and declining birth rates, Oji Group has introduced a retirement system which allows retirement at age 65 since FY2017\* to encourage its employees to work with enthusiasm whilst demonstrating their accumulated knowledge, techniques and abilities. We will continue to promote this system in the Oji Group.

\*7 subsidiaries have already adopted the system

# Promotion of Diversity

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

Oji Group holds training sessions and seminars such as Diversity Forums or study sessions under its policies decided by the Diversity Committee which comprises of COMPANY Presidents. The policies are as follows:

- Create situations where diverse human resources actively participate in their work
- 2.Improve employees' work-life management
- Change management-level employees' mindset and management behavior

These activities are actively communicated within our Group via company magazines and other means.



Diversity Management Session for Officers and General Managers held to change management-level employees' mindset and management behavior (Oji Paper's Tomioka Mill)

## Participation of Diverse Talents

#### Our first priority is targeted at the active participation of women.

While Oji Group has a culture that welcomes and integrates various values, its initiatives for active participation of women had lagged far behind. Today, we are focused on promoting active participation of women, and working on various initiatives such as career development for women in the generalist track as well as practical training at each workplace etc.



Training session for generalist track women (Empowerment Session for Pre-Management-Level Women)

#### [Main Initiatives]

- •Trainings for generalist track women by position (i.e. management-level employees with female subordinates, pre-management-level female employees, and young female employees on the generalist track)
- ·Active recruitment of generalist-track/management-level women (external personnel / new graduates)
- Network formation among management-level female employees
- ·Expansion of applicable job categories for women

## Improvement in Work-life Management

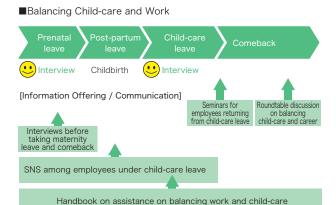
We are introducing various systems that encourage employees with child-care or nursing-care responsibilities to continue to participate actively in their work.

Assistance on Employees' Balancing Child-care and Work We aim to improve work-life management of employees of both genders through interviews and seminars that provide communication opportunities and support for them to assume active roles in work after maternity/paternity leave.

Assistance on Employees' Balancing Nursing-care and Work In order to address concerns regarding nursing-care, we offer information through "nursing-care seminars", establishment of "nursing-care consultation service" which employees can easily access via a phone call or an email, and also "Web handbook".

#### [Main Initiatives]

- •Day-care center subsidies for employees who return to work early from their child-care leave
- ·Increase in amount of allowance (aid for living cost in relation to a child) as an assistance measure for childraising generation
- Paternity leave system for male employees (paid-leave of 5 consecutive days)
- ·Hourly use of accumulated annual leave (for child-care / nursing-care)
- •Nursing-care leave (length of 1 year, which can be divided up into a maximum of 12 periods)
- ·Leave-system for employees obligated to leave work to accompany their spouses' overseas transfers



■Balancing Nursing-care and Work

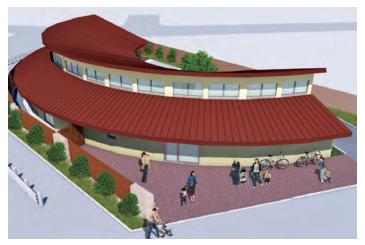


## Establishment of In-house Nursery

We plan to establish an in-house nursery in April 2018 at the adjacent area of a Group's condominium located in Edogawa-ku, Tokyo, in order to assist employees to balance child-care and work, encourage female employees' active participation in their work, and eventually to contribute to the elimination of unattended children in line with our corporate social responsibility.

By doing so, we will develop an environment where employees who live in the Group's condominium or work at workplaces in the vicinity can make smooth transition back to work life after taking child-care leave, and resume active roles in their work with a peace of mind, balancing their work and child-care.

In addition, the nursery makes use of a "Company-led Child-care Service", which is a child-care support system of the Cabinet Office, and plans to cater to both local residents and Oji Group employees.



In-house nursery to be established at the adjacent area of a Group's condominium in Edogawa-ku (image)



Inside nursery (image)

#### Overview of In-house Nursery

Day of opening	April 1, 2018 (scheduled)
Location	5-1287 Minamishinozaki-cho, Edogawa- ku, Tokyo (adjacent area of the Group's condominium and a Group company)
Capacity	30 babies
Qualifying age	0~2 years
Opening days	Weekdays excluding Saturdays, Sundays and public holidays
Opening hours	7:00~20:00
Coverage	①Oji Group employees' children ②Local residents' children

# Promotion of Employment of Disabled

Since FY2004, in collaboration with public agencies and NPOs, we have worked to promote employment of people with disabilities.

In 2007, we established "Oji Clean Mate", a special subsidiary which employs the disabled and have them in charge of administrating/cleaning communal areas of main building and building No.1 of Oji Holdings.

We will continue to make concerted efforts as a Group to increase work opportunities for people with disabilities.

Takeaways

# Environmental Management

Based upon the Basic Policy of the "Oji Group Environmental Charter", setting the "Environmental Action Program" for 2020, Oji Group is committed to operating its business activities that harmonize with the environment.

# Oji Group Environmental Charter 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 environment from a global perspective. The Charter calls for the Oji Group to make autonomous efforts to achieve a further environmental improvement, and aggressively drive its "Sustainable Forest Management", "Paper Recycling" and global warming countermeasures forward.

### Environmental Action Program

# Limitless Challenge to Zero-environmental Burden

We will aim for zero-environmental burden in each and every operational procedure by further raising environmental awareness and integrating capabilities of technology, operation and planning.

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#### Sustainable Forest Management

We will promote sustainable forest management to aim for protection of forest functions and lasting utilization of forest resources.

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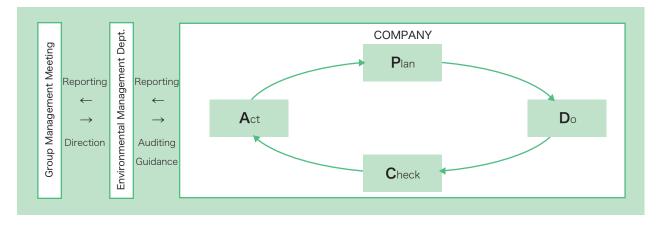
#### Responsible Raw Materials Procurement

We will comply with safety and legal guidance based on the Oji Group Partnership Procurement Policy to manufacture our products.

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# Structure of Environmental Management

Oji Group has explicitly set environmental management to be one of the most important aspects in our business activities. Following the directions of top management, the Environmental Management Department takes comprehensive charge of all environmental-related activities of the entire Group, and tackles the issues that arise from our continuous pursuit of environmental improvement.



## | Limitless Challenge to Zero-environmental Burden ~Zero-emission~

#### ■Zero-emission Performance

	FY2016 Results	FY2020 Targets
Number of Environmental Accidents*1	3	0
Number of Product Liability Accidents	0	0
Effective Utilization Ratio*2 (Domestic/Overseas)	97.9% / 91.2%	99% and above / 95% and above
Reduction of GHG Emissions Intensity *3	Reduction of 7.3% compared with FY2013	Reduction of 10% and above compared with FY2013

<sup>\*1</sup> Environmental accident: exceeding a regulated value set by environment-related laws and regulations

### Management of Wastewater and Effluent Gases in Consideration to Local Ecosystems

In addition to complying with environmental laws and regulations as well as reducing environmentally hazardous substances, we have started since 2016 and will continue to manage mercury levels in exhaust gases generated by boilers and incinerators, to comply with new standards that will be implemented in Japan in April 2018 following the "Minamata Convention on Mercury".

#### Cooperation on Carbon Offset at the G7 Ise-Shima Summit

Oji Group contributes to climate change countermeasures by absorbing approx.13,800,000t of GHG at 450,000 ha of its domestic/overseas forests and by reducing GHG emission per unit of production.

At the G7 Ise-Shima Summit which was held on 26-27 May 2016, carbon offset\*1 was implemented for GHG emissions (26,050t-CO<sub>2</sub>) which stemmed from the transportation and accommodation of national leaders and other related parties, as well as site management. Of which, we offered J credit\*2 of 1,000 t-CO<sub>2</sub>, which we have acquired through appropriate conservation of our domestic forests.

Moving forward, we will continue to work on "sustainable forest management" that shows considerations on the preservation of multifaceted functions of forests, such as biodiversity conservation.





A part of Oji Forest which helped in generating J credit we offered (Engaru/Hokkaido)

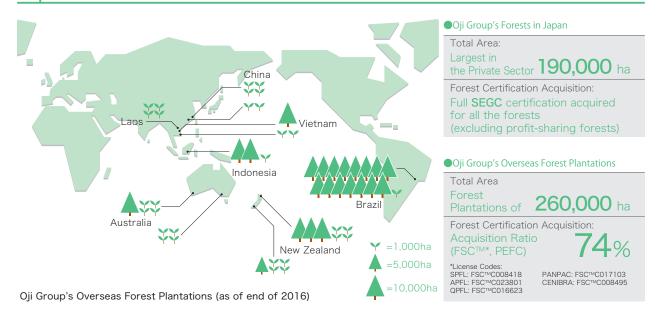
<sup>\*2</sup> Effective utilization ratio of wastes (%) = [generation volume (t) - landfill disposal volume (t)] / generation volume (t) \* 100

<sup>\*3</sup> GHG emissions intensity = domestic and overseas GHG emissions / domestic and overseas production volume Emissions from electric power business are not included

<sup>\*1</sup> To compensate fully/partially for one's GHG emissions, with another's reduction/absorption volume

 $<sup>^*2</sup>$  Credit acquired through reduction/absorption of GHG including CO $_2$  via activities such as introduction of energy-saving equipment and forest management, under a system certified by nation

### ■ Limitless Challenge to Zero-environmental Burden ~Sustainable Forest Management / Paper Recycling~



#### Sustainable Forest Management

Oji Group believes in the principle "those who use trees have the responsibility to plant trees" and has long been working hard to realize "sustainable forest management" in each stage of the cycle, namely planting, growing, harvesting trees and processing them into raw materials. Also, we are currently focusing on acquiring "forest certifications" from third-party organizations. All 170,000 ha of our domestic forests, excluding profit-sharing forests, have acquired the SGEC\*1 forest certification, and 190,000 ha (74%) of our overseas forest plantations have acquired the FSCTM\*2 forest certification. We will continue to promote forest certification acquisition.

- \*1 SGEC: Sustainable Green Ecosystem Council. An organization in charge of providing a Japanese unique forest certification that fits well to the natural environment and society of Japan.
- \*2 FSC™: Forest Steward Council™. An international organization, it uses an international forest certification system to promote forest management suitable for the local environment, society and economy.

### Paper Recycling

Oji Group has been taking initiatives in "paper recycling" and has achieved a waste paper utilization ratio of 63.5% in FY2016, while the goal set by pulp and paper industry is 65% by FY2020. Moving forward, we aim for further improvement in waste paper utilization through expanding the use of confidential documents and difficult-to-process waste paper as well as strengthening collaboration within our industry to enhance quality.

Even though paper collection ratio in Japan is relatively high globally because of its well-established collection system, the amount of collection has seen a decreasing trend due to a decline in paper consumption caused by advancements in ICT, etc. Meanwhile, we export more than 4 million tons of waste paper annually, which amounts to more than 20% of the total collection amount, to regions such as China and Southeast Asia where the demand of waste paper has been growing due to increasing paperboard production. The domestic supply and demand of wastepaper are influenced by trends in waste paper procurement not only by Japanese manufacturers, but also by overseas manufacturers.

# Utilization Amount/Rate of Waste Paper

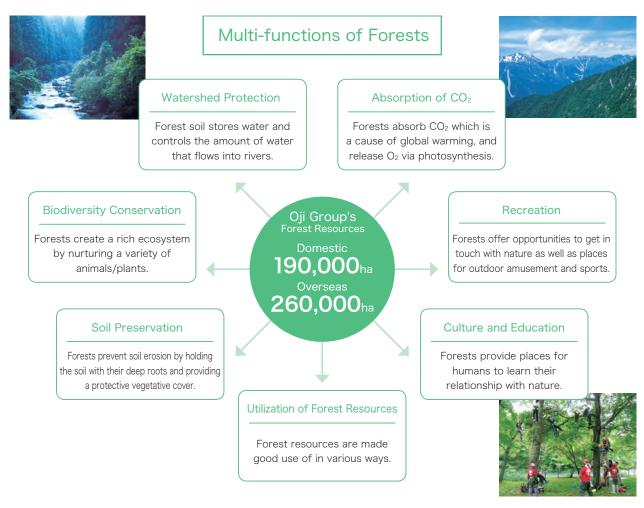


## Sustainable Forest Management ~Sustainable Forest Management Through the Use of Forest Certifications~

Oji Group promotes an integrated forestry management system that maximizes the value of our forest resources by using them in diverse ways (cascading). Furthermore, in order to aspire for "sustainable forest management", we undergo annual audits by a third-party forest certification organization to assess whether our forests are appropriately managed from the perspectives of "society", "environment" and "economy".

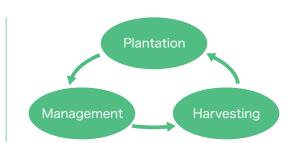
#### Multi-faceted Utilization and Conservation of Forest Resources

Other than supplying wood resources, forests play multifaceted roles in society, such as conserving biodiversity, providing and protecting water sources and the soil, serving for recreational purposes, nurturing cultures, and creating local employment opportunities. Oji Group maximizes the use of forest resources, while conducting various activities inside and outside of Japan to showcase the multiple functions of forests. These activities include: conserving natural forests, tracking wild animals, and hosting "Oji Forest Nature School".



#### Cycle of Sustainable Forest Management

Repeating the cycle of appropriately managing, harvesting and planting trees enables sustainable production of trees from forests as well as demonstrations of various environmental functions of forests.

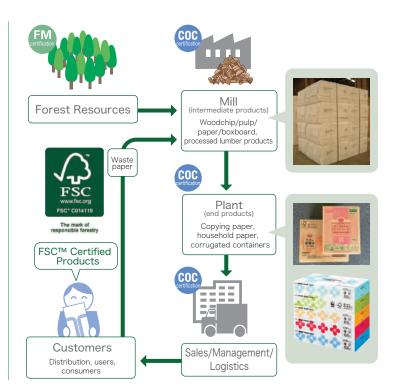


### FSC™ Certified Products: Providing Eco-friendly Products

Oji Group has acquired the FSC™ FM certification\*¹ for our overseas forest plantations and the COC certification\*² for the Group's manufacturing and processing operations. The advantage in acquiring these certifications for our forests and converting plants is that they enable us to offer a wide range of FSC™ certified products, from primary-processed products such as log, woodchip and lumber products, to secondary products such as pulp, as well as end products such as printing paper, tissue paper and corrugated containers. Finally, end-products are recycled as waste paper.

\*1 FM certification: confirmation of forest management

\*2 COC certification: confirmation of management on processing/distribution procedures of produced wood



#### **SGEC Forest Certification**

The SGEC (Sustainable Green Ecosystem Council) is a unique Japanese forest certification system. We have already acquired the SGEC-FM certification for all Oji Group's domestic forests excluding profit-sharing forests whose land owners are external organizations. In addition, Oji Forest & Products, the company in charge of the Group's domestic forests and related activities, has acquired the SGEC-COC certification. In 2016, the SGEC signed a mutual recognition agreement with the PEFC, an international organization which promotes mutual recognition of different forest certification standards in each country and region. As such, wood products certified by SGEC can enter into overseas markets as internationally certified products.

#### Activities for Biodiversity Conservation Activities are conducted at Oji's domestic and overseas forests.

- ■Conservation of Endangered Fish Species, Itou (Sarufutsu Forest, Hokkaido) Sarufutsu Itou Conservation Council: http://www.sarufutsu-icc.gr.jp/english/
- ■Conservation of Alpine Plants (Samani Forest, Hokkaido)
- ■Conservation of Fairy Pitta (Kiyagauchi Forest, Kochi)



©Ecosystem Trust Society



Mr. Nakamura conducting a special lecture at "Eco-Pro2016", one of the largest environment exhibitions in Japan in which Oji Group participates every year

Fairy Pitta is a migratory bird with several body colors and is 20cm in length. Being the representative bird of Kochi prefecture and Shimanto town, it is also red-listed by the Ministry of the Environment.

Since our establishment in 1994, the Ecosystem Trust Society has acquired 196 ha of land in Shimanto region as a permanent protective zone of Fairy Pitta through a national trust, which acquires heritage lands using funds or donations from individuals and organizations throughout Japan. Since 2014, we have established the "Shimanto Fairy Pitta Forest / Nature Center" in Taishocho, and have been continually engaging in conservation of the bird and local biodiversity. In August 2016, we signed the "Agreement on the Conservation of Fairy Pitta" with Oji Holdings which has 260 ha company-owned forest next to our protective zone. We will continue to carry out activities to conserve biodiversity to maintain the habitat of Fairy Pitta in the future.

Please refer to the website below for further information on our activities. http://wwwd.pikara.ne.jp/ecotrust/ (in Japanese)

Chairman, Ecosystem Trust Society Takio Nakamura

## Responsible Raw Materials Procurement

Oji Group is committed towards engaging in responsible raw materials procurement which takes into account environmental and community considerations as well as ensuring the safety and legitimacy of our raw materials; in line with the "Oji Group Partnership Procurement Policy" and the "Wood Raw Material Procurement Guidelines" that follow the principles outlined in the United Nations Global Compact, the "Oji Group Corporate Code of Conduct" and "Oji Group Environmental Charter".

### Oji Group Partnership Procurement Policy

- 1.Ensure stable supply
- Comply with laws and social standards, and engage in fair trade
- 3. Consider the environment
- 4.Demonstrate social concern
- 5. Communicate with society

#### • Fiber-sourcing (Pulp and Woodchips)

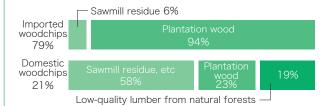
The "Wood Raw Material Procurement Guidelines" was established and is to be adhered to when conducting the procurement of wood raw materials, including pulp.

#### Wood Raw Material Procurement Guidelines

- 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
- 5.Disclose information (available online)

 $\label{limit} $$ $$ $ https://www.ojiholdings.co.jp/sustainability/forest_recycling/view.html (in Japanese) $$$ 

#### Composition of the Oji Group's Procured Wood Chip



# Traceability Verification

We verify that our wood raw materials come from properly managed forests via traceability reports that trace them back to their places of origin. In addition, we conduct regular on-site inspections in forests, woodchip mills and shipping sites, as well as discussing with the government and other related parties to assess problems such as illegal logging.



Audit for the FSC™ FM certification at QPFL License code: FSC™ C016623

#### Safety Checks on Raw Materials

Before using any raw materials (chemical and other materials), we confirm that a chemical is safe for use by referring to information regarding relevant laws/regulations, toxicity and green procurement gathered through our supply chain. To that end, we have made it compulsory throughout the Group to use our own original questionnaire form in addition to a Safety Data Sheet ("SDS") based on laws/regulations to make up for information that cannot be obtained through SDS. Furthermore, we ensure continuous safe usage of each raw material by periodically updating information even after the start of its use. With the information, we do our best to appropriately respond to customer inquiries.



# Social Responsibility

Oji Group's global subsidiaries regularly carry out various social activities that contribute to the development of sports and culture, as well as the health promotion to local residents.

### Culture

### Fujiwara Foundation of Science

The Fujiwara Foundation of Science was established by Ginjiro Fujiwara, referred to as Japan's king of paper manufacturing, and famous for contributing his private fortune to establish Fujiwara Industrial University (current name: Keio University's Faculty of Science and Technology). With its mission to contribute to the domestic development of science and technology, the Foundation presents the "Fujiwara Award" annually and provides assistance to hold the "Fujiwara Seminar" twice per annum. The Fujiwara Award is a highly prestigious award which is only awarded to scientists who have made major contributions to the advancement of science and technology in Japan. The 58th Award was presented this year; and several Fujiwara Award winners have also moved on to become Nobel Prize winners. Oji Holdings has been assisting the Foundation mainly through financial support.

Website: http://www.fujizai.or.jp/e\_gaiyo.htm



58th Fujiwara Award Ceremony (at Gakushikaikan, on June 16, 2017)



Dr. Akira Isogai Professor, Graduate School of Agricultural and Life Sciences, University of Tokyo



Dr. Susumu Kitagawa
Deputy Director-General and
Distinguished Professor,
Institute for Advanced
Study, Kyoto University
Director, Institute for
Integrated Cell-Material
Sciences, Kyoto University

#### Oji Hall

The "Oji Hall", located in the main building of Oji Holdings, is an authentic yet comfortable musical hall. The 315-seat hall hosts a wide array of performances as well as functions as a rental place.

Having reached its 25th anniversary milestone in October 2017, the Hall will be undergoing improvement works starting January 2018. It will aim to further contribute to the music cultural scene after its re-opening scheduled on 25 October, 2018.

Website: https://www.ojihall.jp/ (in Japanese)



President, Oji Hall Momoko Hoshino



Isabelle Faust, Jean Guihen Queyras and Alexander Melnikov (February 24, 2017)

### **Sports**

#### Oji Baseball Team

The Oji Baseball Team, based in Oji Paper Kasugai Mill, is celebrating its 60th anniversary in 2017. The team prides itself on its various achievements that include advancing into grand finals of two major amateur baseball championship games; the Intercity Baseball Tournament (15 times) and the Japan Amateur Baseball Championship (9 times). It ranked as one of the top 4 teams in Japan Amateur Baseball Championship in 2016. In addition, the team has been continually engaging in community-based activities such as hosting baseball games for children.

Website: https://www.ojiholdings.co.jp/baseball/ (in Japanese)



Intercity Baseball Tournament

#### Oji Eagles

The Oji Eagles, an ice hockey team with an established history since 1926, is based in the Hakucho Oji Ice Arena in Tomakomai City, Hokkaido. Competing in Asia League Ice Hockey, where 8 teams from 3 countries participate and fight for the title, the team focuses on improving its skills whilst promoting the sport.

Website of Asia League Ice Hockey: http://www.alhockey.com/



Championship in the All Japan Ice Hockey Championship in 2016

# Community Healthcare

#### Oji General Hospital

Starting out as a health facility supporting Oji Paper's Tomakomai Mill, with its 22 departments and 440 beds currently, the Oji General Hospital has come a long way to become the region's core hospital which efficiently offers highly functional and high-quality medical services to residents. It strives to provide secure and safe medical services through collaborations with facilities commissioned by Tomakomai City, Hokkaido such as the central regional comprehensive support center, an affiliated nursing school, a long-term care health facility, etc.

Website: http://www.ojihosp.or.jp/ (in Japanese)



Outpatient chemotherapy room where the number of beds was increased this year

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### **Next-generation Development**

#### Oji Forest Nature School

Together with Japan Environment Education Forum, we make use of our mills and company-owned forests to run "Oji Forest Nature School", an environmental education program that provides nature exposure and experiences for children. Reaching its 13th year in 2017, the project encourages children to learn "connection between forests, human and industry" by hosting paper mills visits, and organizing programs in relation with forests such as nature observation and tree thinning.

Japan Environment Education Forum's Website on Oji Forest Nature School:

http://www.jeef.or.jp/activities/oji/ (in Japanese)



Tree climbing activity at the Hokkaido School

### **Activities in Overseas**

#### nepia 1,000 Toilets Program

There are children who lose their lives due to diarrhea and dehydration in environments which lack potable water and proper sanitary systems in the world even nowadays. Recognizing this fact, Oji Nepia has launched the "nepia 1,000 Toilets Program" using a fraction of its proceeds since 2008, to fund the UNICEF's campaign in providing toilet facilities and fostering safe hygiene practices in East Timorese.

Website: https://1000toilets.com/ (in Japanese)



nepia 1,000 Toilets Program

#### **Activities in Other Countries**

- -Employees of Group Companies in China are gathered to conduct environmental plantation activities at the Loess Plateau, inner-Mongolia, etc.
- -To improve the local educational environment, Oji Group established the "Oji Charitable Education Fund" together with Nantongshi Charity Federation and Nantongshi Development Zone Charity Federation in Nantong City, China, where Jiangsu Oji Paper is located.
- -Oji Group provides support to dispatch doctors to regions short of medical professionals for the local communities of Vietnam, where Oji Group conducts its forest plantation business.



Plantation activity at inner-Mongolia



Ceremony for launching the "Oji Charitable Education Fund"