# Pickup

# **Research & Development**

Pickup

# Initiatives for the Creation of Innovative Values

With the creation of new businesses and the strengthening of current businesses' competitiveness in mind, the Innovation Promotion Division propels the 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**

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

# Value Creation by the Innovation Promotion Division

Innovation Promotion Division is committed to developing new products and technologies such as highly functional/high value-added products and wood/water resources usage or environmental conservation technologies, making advancements in base technologies fostered through our long experience in paper manufacturing and film converting. Strategic Planning Department takes the lead in creation of new businesses, cultivation of new seeds and formation of a value chain.



Pickup

Trees

Lumber

Pulp

# Value Creation 01: Application of Nano-fibrillation Technologies

Nano-fibrillation Technologies for Cellulose Nano-fiber

# A highly functional next-generation material of plant origin

We have developed a ground-breaking production process which utilizes phosphate esterification chemical treatment to produce cellulose nano-fiber, a plant fiber (pulp) that is finely fibrillated to the nano-order level. Traditionally, one of the big challenges in the commercialization of cellulose nano-fiber was that its manufacture required an extremely large amount of energy to finely fibrillate the pulp. In order to overcome this, we considered various chemical treatment methods and reached the conclusion that the phosphate esterification production process is the most potentially feasible method for commercialization.

In the second half of 2016, we will install a verification facility in the Oji Paper Tomioka Mill (Anan City, Tokushima Prefecture) to speed up the commercialization process by investigating the effects of reducing the energy required for manufacturing, and increasing the volume of samples to offer to potential users.



Completely nano-fibrillated CNF demonstrates greater transparency and viscosity which can be used for highly value-added applications.

### Wide Variety of Applications for Cellulose Nano-fiber

Our application of nano-fibrillation technologies resulted in creation of the world's first, three new forms of cellulose nano-fiber.



#### Production technology for phosphate esterified cellulose nano-fiber

Oji Group's cellulose nano-fiber is finely fibrillated down to the nano-order level and demonstrates extremely high transparency and viscosity.

[Features] -The world's highest level of transparency -Higher viscosity than other thickeners (CMC, xanthan gum, etc.) at the same concentration

#### **Powderization technology**

Oji Group can produce cellulose nano-fiber in a wet powder form which has a concentration of more than 20% (concentration of conventional cellulose nano-fiber slurry is approximately 1~2%)

[Features] -Drastic reduction in water content (more than 20% of solid content) -Improved handling

-Reduction in environmental burden in terms of transportation energy savings -Easy dispersion in water

#### Sheet making technology

Oji Group has successfully developed a new technology to produce cellulose nano-fiber in a continuous transparent sheet.

[Features] -Same level of high transparency as glass -Higher strength and better dimensional stability under high heat than that of plastic film -High flexibility







#### Possibility for a Wide Range of Applications

The Oji Group is advancing the development of a range of applications that effectively utilize the various features of cellulose nano-fiber.



Highly functional/minute nano-filters Reinforcing materials for plastic

agents for upscale cosmetics, etc.

display panels

# Value Creation 02: Application of Pulping Technologies

## Transformation from Paper Manufacturing to Biochemical Manufacturing

#### From pulp for paper manufacturing to pulp for biochemical manufacturing (dissolving pulp & furfural)

As part of our business portfolio restructuring, we have introduced a cutting-edge continuous process technology to the pulping facility at the Oji Paper Yonago Mill and started the manufacturing and sales of dissolving pulp. Dissolving pulp is used as a raw material in rayon (cellulose fiber replacement for cotton), medicine, and various cellulose derivatives, and its demand is expected to increase alongside global population growth in the future. The Yonago Mill has also started the new trial demonstration experiment of the manufacture of furfural, a byproduct from hemicellulose in the dissolving pulp manufacturing process. The Mill has already accomplished the simultaneous manufacturing of dissolving pulp and furfural, and as of April 2016 started offering samples of furfural. Furfural too, is highly anticipated to be a replacement candidate of petroleum as the raw material for various chemical products and as next-generation plastics.

#### **Dissolving Pulp (DP)** Dissolving pulp is pulp manufactured from high purity cellulose extracted from wood. Though commonly known as "dissolving pulp" as it is usually dissolved in chemicals before use, it can also

#### (Main Applications)

Clothing (rayon), cellophane, cigarette filter, liquid crystal display (protective film for polarizing plate), raw material for hygiene products, medicines (tablet excipient), cellulose derivatives (food additives, etc.)

#### Furfural

be used in many ways as a cellulose material.

Furfural is manufactured through the dehydration reaction of xylose derived from hemicellulose.

(Main Applications)

Organic solvents (for oil refining), various chemical products (furan resin, nylon\*, PET\*, polyurethane\*)

\*Under research at universities and other organizations.



Simultaneous Manufacturing of DP and Furfural at Oji Paper Yonago Mill

Pickup

# Value Creation 03: Application of Water Treatment Technologies

### Expansion of Water Infrastructure Business in Japan and Overseas

# Transfer of the Water Environment Research Laboratory to the Water Environment Sales & Engineering Division under Oji Engineering for the Promotion of the Water Business

The Oji Group has developed thus far with the support of our water resources; accumulating technologies regarding watershed protection and efficient water resource utilization through our forest plantation business, and also technologies regarding waste water treatment and recycled water through our paper manufacturing business. In 2014, the Water Environment Research Laboratory was established in the Innovation Promotion Division as a core initiative in the promotion of our water

Thanks to the patronage of customers in Japan and overseas, we are starting to see the fruits of our efforts. In order to further develop the water business, in 2016 we have decided to transfer the function of Water Environment Research Laboratory from the Innovation Promotion Division to the Water Environment Sales & Engineering Division under Oji Engineering. There are still many countries in the world facing the issues of inadequate water infrastructure and worsening water environmental issues in the midst of their economic development. We will strive to contribute to the sustainable development infrastructure business, and it has been conducting technology development since then.



Membrane treatment plant delivered to a seafood processing factory

Water quality analysis with ICP-MS

of the world by continuing our work in the sustainable water environment management and regeneration that are essential to human lives.

#### Business Lineup

Sewage, industrial wastewater (animal husbandry wastewater, fishery processing effluent, food processing effluent, industrial water, etc.)

#### **Target Regions**

Japan, Southeast Asia (Myanmar, Thailand, Vietnam), Brazil, etc.

## Value Creation 04: Application of Non-woven Fabric Technologies

Development of the "Antibacterial Sheet NURASUTO!" which exhibits antibacterial properties when moistened with water.

#### Easy and convenient, just moisten and wipe. No strange odor at all! NURASUTO! for prevention against virus and food poisoning!!

Observing the powerful antibacterial properties in a solution of calcined scallop shell powder mixed with water, the Oji Group has proceeded to develop the "Antibacterial Sheet NURASUTO!" by incorporating this powder into non-woven fabric sheets. Due to its antibacterial effect being activated after coming into contact with moisture, the sheet's effectiveness could not last long if there is any moisture in the whole manufacturing process. With an application of the totally dry system process, a novel technology by Oji Kinocloth which does not make use of any water in the manufacture of non-woven fabrics, we have succeeded to transfer the powder's valuable property into the sheets without sacrificing its effectiveness.



# **Diversity Promotion**

We will strive to create a working environment which encourages our diverse personnel, regardless of gender, nationality or age, to freely come up with and develop good ideas successively, to drive business development of the whole Oji Group.

# Policies for Diversity Promotion

As a global company group that is pursuing a sustainable growth, the Oji Group performs business portfolio restructuring with one of its management strategies being the critical need to transform into an Innovative Value-Creating Company. In particular, with the recognition of the indispensability of diversity in values and flexibility in ideas, we have established the Diversity Promotion Office to spearhead this commitment. Other than the Diversity Promotion Committee which comprises of COMPANY Presidents amongst its members, the Diversity Management Session which is meant for Officers and General Managers across Japan is also held regularly.

The three diversity promotion policies are as follows:

- 1. "Promote Working Style Reforms"
- 2. "Encourage active participation of diverse talents"
- 3. "Improve work-life management"

# Promotion of Working Style Reforms

Holding the view that "a better working style forms the basis of personnel management and talent activation", we strive to improve the "quality of work" by revising traditional styles of working. Under the scheme of "Working Style Reforms", we are making changes in the way work is performed by eliminating and reducing unnecessary work, so as to reduce total working hours



and improve employees' productivity. In addition, we are encouraging "Working Style Reforms" as well as improvement in all employees' work-life management such as by introducing flexible working hours and locations.

#### Working-at home

# Participation of Diverse Talents

We are actively encouraging the active participation of females in order to effectively respond to increasingly diverse and complex market needs. With an aim to raise the gender ratio of females in management positions, we are further considering female employees' assignment, training and opportunities for promotion. We will also work on improving the recruitment process as well as expanding the applicable job categories for females.

#### [Main Initiatives]

-Reduction of total working hours -Setting the start/end time of work to match actual work situations -Setting of the maximum limit for overtime work hours (at 60 hours per month) -Prohibition of overtime work after 7 p.m. -Full compensatory leave for working on holidays -Active encouragement of paid leave usage -Utilization of flexible hours

-Trial introduction of working-at-home system

Reduction of Total Working Hours and Utilization Ratio of Paid Leave\*1

	2015	2014-2	2015
Total Working Hours [Targets]	-	1900h	1850h
Total Working Hours [Results]	2050h	1976h	1922h
Utilization Ratio of Paid Leave [Targets]	-	80%	80%
Utilization Ratio of Paid Leave [Results]	_	64.6%	70.2%

\*1 Oji Group's Main Office region

\*2 Working Style Reforms started from the second-half of fiscal 2014

#### Targets and Current Ratios of Females in Management Positions March 31, 2020

	2016	Targets
Oji Group (15 companies with more than 300 employees)	2.0%	10%
Oji Holdings (standalone)	9.5%	16%

A working environment where females are able to work with enthusiasm helps to lead to the creation of new values and energize an organization. We will consciously create a work environment that is comfortable for not just females but for all employees

#### [Main Initiatives]

-Organization of roundtable meetings for female employees in management positions

-Organization of "Diversity Management Session for Management Level Employees" targeting management level employees with pre-management level female subordinates

-Organization of "Empowerment Session for Pre-Manager Women" targeting female employees at pre-management levels -Organization of "Career Design Session for Young Female

Employees on the Generalist Track" targeting young female employees to work in by promoting Working Style Reforms that improve operational efficiency and reduce total working hours, as well as by introducing an appraisal system that evaluates employees in terms of results rather than time spent on their work.



General Manager Ikeda of Roundtable for the Diversity Promotion Office female employees in management positions

## Improvements in Work-life Management

In the recent years, we have been encouraging our employees, especially male employees, to actively participate in housework and child-care. The target for male employees' taking of childcare leave or leave for child-care purpose of 5 consecutive days or more has been set at 100%. Moreover, we are committed towards supporting our valued employees in striking a balance between work and their various life events, by introducing systems that make it easier for employees who have child-care or nursing-care responsibilities to continue playing active roles in their work.



Seminar for employees who return to work from their child-care leave

#### [Main Initiatives]

-Child-care leave (available up to the end of March in the year the child turns 1 year-old) -Shorter working hours for providing child-care (available up to when the child finishes the 1st grade of an elementary school)

-Nursing-care leave (length of 1 year, which can be divided up into a maximum of 12 periods) -Day-care center subsidies for employees who return to work early from their child-care leave -Increased flexibility in the use of accumulated annual leave (for child-care or nursing-care purposes, leave can be utilized on an hourly basis)

-Unpaid leave system in the case of accompanying a spouse's overseas relocation -Return-to-work system for employees obliged to leave work due to childbirth, child-care, nursing-care, etc.

# Offering of Network and Information

The Oji Group actively provides information regarding its diversity promotion initiatives on its websites for interested parties both inside and outside of the Group. Besides, we have set up an SNS chat system known as the "OJI  $\Leftrightarrow$  Child-care Net" for employees on child-care leave to prepare for their return to work with ease of mind. It functions as a community where employees on long term leave can freely discuss and exchange information with each other. On top of that, we organize seminars for employees on child-care leave and roundtable meetings for working mothers on work-life balance, in order to relieve their concerns on how to manage their work-life balance after returning to work, and also to support their career planning during their child-care period. We also support employees concerned about future nursing-care issues by arranging a "seminar on balancing work and providing nursing-care".



Home page of "OJI 🕁 Child-care Net"

#### Governanc

# Recruitment and Employment of Personnel for Overseas and Domestic Businesses

Pickup

# The Oji Group aims to actualize its Fundamental Policies of "Expansion of Overseas Businesses" and "Concentration/Advancement of Domestic Businesses" by creating a system and reforming the company culture to encourage personnel from diverse backgrounds to play active roles in their work.

As of the end of March 2016, the Oji Group had 33,605 employees, of which 16,760 were overseas employees (increase of 95 from the previous year) and the ratio of overseas employees stood at 49.9% (increase 0.4percentage point from the previous year). This current increasing trend is expected to go on, keeping pace with the Oji Group's thrust of the "Expansion of Overseas Businesses". On the other hand, the number and the ratio of domestic employees were at 16,845 and 50.1% (decrease of 185 employees and 0.4percentage point from the previous year) respectively, as a result of the focus on "Concentration/Advancement of Domestic Businesses". We will continue aiming for higher operational efficiency to attain a leaner employee structure. In addition, we will gradually extend the age of retirement to 65 years old, in order to proactively manage our elderly manpower and to prepare for

the projected future labor shortage caused by declining birth rate and an ageing population.

Number of Employees by Region	March 31, 2016
Japan	16,845
Asia	8,688
South America	5,491
Oceania	2,014
Europe	308
North America	259
Overseas (Total)	16,760
Both Domestic & Overseas	33,605

# Promotion of the Employment of Persons with Disabilities

Since fiscal 2004, in cooperation with public agencies and NPOs, we have worked to promote the employment of persons with disabilities. In 2007, we established "Oji Clean Mate", a special subsidiary for the employment of persons with disabilities. We will continue to make concerted efforts as a Group to increase work opportunities for persons with disabilities.

#### **Employment Ratio of Persons with Disabilities**

. ,	2013	2014	2015	
Oji Group*1	1.93	2.03	1.96	
Average of Private Companies*2	1.98	2.05	2.09	
Legally Mandated Ratio	2.00	2.00	2.00	

\*1 Coverage of calculation: Oji Holdings, Oji Nepia, Oji Imaging Media, Oji Paper, Oji Management Office, Oji Clean Mate (companies approved for Group treatment)

\*2 Average of companies with more than 1,000 employees

#### Slogan and Logo for Diversity Promotion

We have come up with the slogan "Diversity & OJInclusion" together with its corresponding logo as part of our initiative in encouraging the Oji Group to make a concerted effort to drive diversity promotion within the company. The slogan was proposed and chosen by our employees, and the word "OJInclusion" combines OJI and Inclusion in a play on the words. Diversity is a word that brings to mind differences, whereas Inclusion is a word that contains the meaning of coming together as one. Our goal is to

word that contains the meaning of coming together as one. Our goal is to foster a corporate culture that enables our diverse personnel to feel a sense of belonging, and also for them to become aware of their indispensable contributions to the organization.



# **Environmental Management**

# Promotion of Environmental Management

The Oji Group is committed to conducting and developing our business activities in harmony with the environment, in accordance to the "Environmental Action Program 2020" formulated based on the "Oji Group Environmental Charter".



## Structure of Environmental Management

The Oji Group has explicitly set out environmental management to be one of the most important aspects in our business activities. Following the directions of the top management, the Environmental Management

Department takes comprehensive charge of all environment-related activities of the whole Group, and tackles the issues that arise in our continuous pursuit of environmental improvement.



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

### Zero Environmental Accident, Zero Product Liability Accident

Oji Group aims to eliminate the occurrence of environmental accidents as well as continue with its track record of zero product liability accident by complying with relevant laws and regulations, working towards the prevention of such accidents, and by conducting inspections.

-We are committed to upholding legal compliance by seeking confirmation of the relevant laws and regulations, conducting regular employee training, implementing internal standards and rules that are stricter than legal requirements, and by managing facilities appropriately.

-We are working towards accident prevention by scrutinizing for and eliminating any potential risk that may lead to an environmental or product liability accident. -We carry out checks on the state of legal compliance, potential risks

We carry out checks on the state of legal compliance, potential risks that have been identified as well as the countermeasures taken via regular audits. With regards to our overseas worksites, we give especial attention and arrange for audits to be conducted by accredited third-party international audit organizations, in order to deal with the laws and regulations in each country appropriately.

#### Number of Environmental Accidents\*1

	FY2020 Targets	FY2015 Results
Domestic	0	4
Overseas	0	1

\*1 Environmental accident: Exceeding a regulated value set by environment-related laws and regulations.

### Number of Product Liability Accidents

	FY2020 Targets	FY2015 Results
Domestic	0	0
Overseas	0	0

### Reduction of Greenhouse Gas (GHG) Emission per Unit of Production

We are putting in much effort to reduce our GHG emissions per unit of production by implementing thorough energy-saving initiatives, promoting the increased use of renewable energy, and switching to more eco-friendly energy sources.

-We are working on energy-saving initiatives which include improving operational efficiency and upgrading of equipment and machinery with energy-saving features.

-We are promoting the expanded use of renewable energy including energy generated from biomass fuel.

-We are also reducing emissions through restructuring of the manufacturing systems.

#### GHG Emission per Unit of Production\*2

	FY2020 Targets compared with FY2013	FY2015 Results compared with FY2013
Domestic	Reduction of 10% and more	+0.8% (0.611t-CO <sub>2</sub> e/t)
Overseas	Reduction of 10% and more	-2.4% (0.280t-CO <sub>2</sub> e/t)

\*2 Emission per unit of production (t-CO<sub>2</sub>e/t) = amount of GHG emission (t-CO<sub>2</sub>e) ÷ amount of production (t) Domestically, emissions per unit of production slightly increased because

Domestically, emissions per unit of production slightly increased because the increase in emissions from extra fuel used in the new boilers exceeded the reduction achieved through operational system restructuring and the switch to biofuel. Overseas, emissions per unit of production declined due to a shift from fossil fuel to biomass fuel at a new pulp facility which started operation recently.

### Promotion of the Effective Utilization of Waste Matter

We are trying to reduce the amount of final disposal volume of waste (through landfill) by suppressing the generation as well as effective utilization of waste.

-Pulp dreg that is generated during the manufacturing process is reused as raw material for paper within the same mill to minimize waste generation.

-Incinerated ash generated from fuel combustion is utilized as a raw material for cement and road paving.

#### Effective Utilization Ratio\*3

	FY2020 Targets	FY2015 Results
Domestic	99% and more	97.0%
Overseas	95% and more	90.8%

\*3 Effective utilization ratio (%) = [generation amount (t) – landfill disposal amount(t)] / generation amount (t)  $\times$  100

#### Management of Wastewater and Exhaust Gas with Consideration to Local Ecosystems

We are promoting the management of wastewater and exhaust gases while giving consideration to local ecosystems, as well as complying with environmental laws and regulations while reducing the amount of environmentally hazardous substances. -We are investigating the adoption of a wastewater management system using aquatic organisms including fishes.
-We are conducting the management of mercury in exhaust gases generated by boilers and incinerators, as it will be newly subjected to a regulation in Japan.



#### Sustainable Forest Management

The 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 of planting, raising, harvesting trees and processing them into raw materials. We are currently focusing on acquiring "forest certifications" from third-party organizations; all 172,000 ha of our domestic forests, excluding profit-sharing forests, have acquired the SGEC\*<sup>1</sup> forest certification and 200,000 ha (69%) of our overseas

#### **Paper Recycling**

The Oji Group has been promoting initiatives on "paper recycling" and achieved a waste paper utilization ratio of 64.3% in fiscal 2015, with the goal set by pulp and paper industry being at 64%. Despite the reduction in domestic waste paper generation due to consumers shifting towards digitalized communication means, we will continue to implement various initiatives such as the reuse of confidential documents or difficult-to-process waste paper as well as

#### \*Prohibited Material Group A:

#### Materials that cause significant damage when mixed in

Stone, glass, metal, dirt, wood piece, fabric, plastic, synthetic paper, non-woven fabric, disposable diaper, scented paper, soiled paper, buffer material (sublimation transfer paper), thermal foam paper, candle waxed corrugated sheet, etc. **\*Prohibited Material Group B:** 

#### Materials that are preferably not mixed in

Carbon paper, carbonless paper, resin-coating paper, laminated paper, adhesive tape, thermal paper, fancy paper, samples attached to flyers or magazine, etc. forest plantations have acquired the FSC<sup>TM\*2</sup> forest certification. Moving forward, we will continue carrying out sustainable forest management activities, aiming for 100% certification acquisition for all of our overseas forest plantations.

\*1 SGEC: Sustainable Green Ecosystem Council. An organization which administrates a Japanese unique forest certification that fits well to natural environment and society of Japan. \*2 FSC<sup>IIII</sup>: Forest Steward Council<sup>IIII</sup>. An international organization which uses

2 ESUM: Forest Steward Council M. An international organization Which uses an international forest certification system to promote forest management appropriate for the local environment, society, and economy.

appealing for improvement to waste paper quality to the industry, in the bid to further increase our waste paper utilization rate. Waste paper quality improvement is necessary for a better practice of recycling. We are carrying out measures to increase awareness of appropriate waste sorting that minimizes the amount of "prohibited materials" which are unsuitable for use as raw material in paper manufacturing, from being mixed into waste paper collection.

#### Utilization Amount/Rate of Waste Paper



Governanc

Oji Grou

# Sustainable Forest Management

~Sustainable Forest Management Through the Use of Forest Certifications~

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

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

Other than being a source of wood resources, forests play multifaceted roles in society, such as conserving biodiversity, providing and protecting water sources and the soil, provision of a recreational venue, nurturing of cultures, and the creation of local employment. The Oji Group maximizes the use of forest resources we derive from our forests, while conducting various activities inside and outside of Japan to showcase the other roles that forests play. These activities include: conservation of natural forests, monitoring of wild animals, and the hosting of the "Oji Forest Nature School".



### 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 172,000 ha of the Oji Group's domestic forests excluding profit-sharing forests, which land ownerships are held by others. 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. It is anticipated that the Tokyo Olympic and Paralympic Games will play a major role in raising public awareness and popularity of forest certification in Japan.



View of Mt. Fuji from Kamiinako Forest, Shizuoka

#### FSC<sup>™</sup> Certified Products:Providing Eco-friendly Products

The Oji Group has acquired the FSC<sup>™</sup> FM certification for our overseas forest plantations and the COC certification for the Group's manufacturing and processing operations. The merit in acquiring these certifications for our forests and converting plants is that they enable the Oji Group to offer a wide range of FSC<sup>™</sup> 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 and tissue paper. Also, end-products are recycled as waste paper.



#### **Activities for Biodiversity Conservation**

#### Conservation of Endangered Fish Species (Sarufutsu Forest, Hokkaido)

We are engaged in conservation of the largest freshwater fish in Japan, the Itou, which has been designated as an endangered species. In Sarufutsu Forest, a land area of 2,600 ha including a river zone has been designated as a protective zone.



### **Conservation of Fairy Pitta**

(Koyagauchi Forest, Kochi)

In order to protect the living environment of Fairy Pitta, a migratory bird that is designated as an endangered species, we have signed the "Agreement on the Conservation of Fairy Pitta" with the Ecosystem Trust Society in August 2016.



#### **Conservation of Alpine Plants** (Samani Forest, Hokkaido)

Looking to restore the alpine plant population which has drastically fallen, since 2005 we have been providing part of our forestlands to assist a local NPO in its population restoration activities.



# Responsible Raw Materials Procurement

The Oji Group is committed towards conducting responsible raw materials procurement that takes into account environmental and community considerations and 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**

The Oji Group works together with business partners in its supply chain in carrying out the following actions. We also expect suppliers of our business partners to have similar measures in place.

## Oji Group Partnership Procurement Policy

- **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 environmental management systems
- 2. Reduce waste and effectively use resources
- Pursue global warming countermeasures
   Protect biodiversity
- 4. FIOLECT DIOUIVEISITY
- 5. Reduce environmental impact
- 6. Manage chemical substances

#### 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, and ensure minimum wage standards are met)
- 3. Ensure workplace safety and health
- 4. Contribute to society and the local community

#### **(5)** Communicate with society

- 1. Build relationships of trust with stakeholders through communication
- 2. Respect the cultures and customs of other countries
- 3. Appropriately disclose and protect information

#### Procurement of Pulp and Wood Raw Materials

The "Wood Raw Material Procurement Guidelines" was established and is to be adhered to when conducting the procurement of wood raw material, 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)
- http://www.ojiholdings.co.jp/english/sustainability/procurement/index.html

# Composition of the Oji Group's Procured Wood Chip



#### **Traceability Verification**

We verify that our wood raw materials are from properly managed forests via traceability reports that trace them back

to their places of origin. In addition, we conduct regular on-site inspections at forests, chip mills, and shipping sites, as well as interview government and other related parties to discover problems such as illegal logging.



Audit for the FSC<sup>™</sup> FM certification at QPFL License code: FSC<sup>™</sup>C016623

#### Safety Checks on Raw Materials and Chemicals

Before using any chemical, whether or not a chemical is safe for use is determined by referring to the relevant laws, regulations and toxicity information as well as voluntary standards of major industry organizations, from Safety Data Sheets and questionnaire forms. In addition, we ensure the continued safe use of each chemical through periodical information updates even after the start of its use.