

NIPPON PAPER GROUP

Sustainability Report 2019



Shaping the Future with Trees

Nippon Paper Group sustainability information

Editorial Policy

Nippon Paper Group discloses its sustainability information to provide stakeholders with a broad overview of what we are doing to meet our corporate social responsibilities (CSR). The Group also publishes an integrated report to communicate about value creation over time.

Our CSR disclosure has been prepared in accordance with the GRI Standards: Core option.

Period Covered

Fiscal 2018: April 1, 2018 to March 31, 2019 Includes information from before April 1, 2018 and after March 31, 2019. Dates are indicated in such cases.

Scope of Organizations Covered

The reporting entity is Nippon Paper Industries Co., Ltd. Data, however, were compiled as of March 31, 2019 for Nippon Paper Industries Co., Ltd. and all 48 of its consolidated subsidiaries.

Scope of Environmental Coverage

The scope of the report covers the basic environmental policies, systems, environmental accounting and environment performance and other data for the 16 companies, including 2 non-consolidated subsidiaries with production facilities, named below. All major production locations are included.

Consolidated: Nippon Paper Industries Co., Ltd.; Nippon Paper Crecia Co., Ltd.; Nippon Paper Papylia Co., Ltd.; Paper Australia Pty Ltd.; Jujo Thermal Oy; Siam Nippon Industrial Paper Co., Ltd.; Nippon Seitai Corporation; Nippon Paper Lumber Co., Ltd.; N&E Co., Ltd.; Daishowa Uniboard Co., Ltd.; Nippon Paper Development Co., Ltd.; GAC CO., LTD.; Amapá Florestal e Celulose S.A.; Nippon Dynawave Packaging Co. **(The contribution to total consolidated sales of the companies listed here was 94%).** (Sales data for trading companies that are members of the Nippon Paper Group and sell products made by the Group to outside buyers are included.)

Non-consolidated: Nippon Paper Liquid Package Product Co., Ltd. and Akita Jujo Chemicals Co., Ltd.

Referenced Guidelines

- Environmental Reporting Guidelines (2018) of the Ministry of the Environment
- Sustainability Reporting Standards issued by the Global Reporting Initiative (GRI)
- United Nations Global Compact
- ISO 26000, etc.

Information on performance relative to guidelines is available at the following URL.
<https://www.nipponpapergroup.com/english/csr/gri/>

Nippon Paper Industries Co., Ltd.

Head Office:
 4-6 Kandasurugadai, Chiyoda-ku, Tokyo 101-0062, Japan

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 Inquiries: CSR Department
 Phone: +81-3-6665-1015
 Fax: +81-3-6665-0309

Disclaimer

This report includes not only statements of fact and historical data but also plans, forecasts and estimates (forward-looking statements) based on the business plans and policies of the Nippon Paper Group. These forward-looking statements are the result of assumptions or judgments based on currently available information as this report was prepared. It should be noted that forward-looking statements may differ significantly from actual results due to the impacts of a number of important factors.

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Social Issues and the Nippon Paper Group's Value Creation Flow

Toward Sustainable Social Development

As shown in the diagram below, the Nippon Paper Group addresses social issues through its value chain. Among these social issues, we identified materiality items. (see page 4)

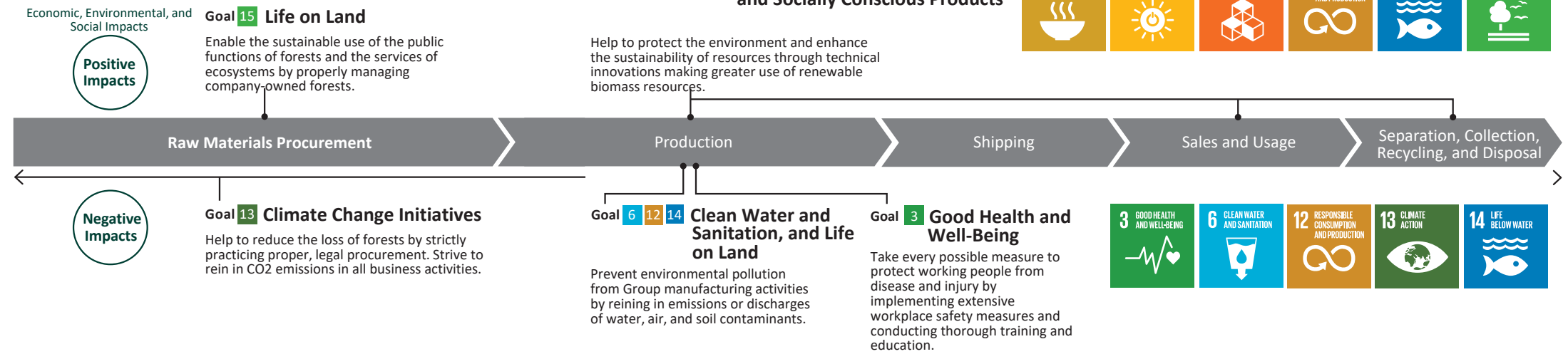
Please refer to our Integrated Report 2019 PP.38-39 for "SDGs with Particular Relevance for the Nippon Paper Group"

https://www.nipponpapergroup.com/english/ir/Integrated_Report_E2019.pdf#page21

The relationship between our group activities and SDGs can be seen at

<https://www.nipponpapergroup.com/csr/download/sdgs/>

SDGs with Particular Relevance for the Nippon Paper Group's Materiality Items



Addressing Social Issues in Our Value Chain

Social Issues	ISO26000 Core Subjects	Pages	Initiatives in Our Value Chain				
			Raw Material Procurement	Production	Shipping	Sales and Usage	Separation, Collection, Recycling, and Disposal
Management Responsibility	Organizational Governance, Fair Operating Practices	P.5-14	Corporate governance, CSR management, thorough compliance, appropriate information disclosure, personal information management, and dialogue with stakeholders				
Forest Management, Raw Material Procurement, and Environmental Responsibility	The Environment	P.15-38	<ul style="list-style-type: none"> Sustainable procurement of raw materials Protection and nurturing of company-owned forests (Preserving biodiversity) 	<ul style="list-style-type: none"> Reduction of environmental impacts (Water and air pollutants, waste, noise, vibration, odor, chemical substances, etc.) Development and manufacturing of environmentally and socially conscious products Climate change initiatives 	<ul style="list-style-type: none"> Increase in load efficiency (Promotion of modal shifts) Shortening of transportation distances (Pursuit of direct delivery and reorganization of distribution warehouses) 		<ul style="list-style-type: none"> Promotion of the collection and use of wastepaper (Strengthening of waste paper processing capacity, expansion of use of unutilized waste paper, improvement of recycled paper pulp quality)
Responsibility to Customers	Consumer Issues	P.39-49		<ul style="list-style-type: none"> The stable supply of products Ensuring quality and safety 		<ul style="list-style-type: none"> Enhancement of product safety Enhancement of product value Pursuing customer satisfaction Appropriate disclosure of product information Addressing customer questions and opinions 	<ul style="list-style-type: none"> Promotion of wastepaper collection together with customers (Support for recycling organizations, establishment of waste paper collection facilities, etc.)
Human Rights, Employment and Labor Responsibility	Human Rights, Labor Practices	P.50-63	<ul style="list-style-type: none"> Confirmation of suppliers' actions in respecting human rights Respect for human rights in the company's forest management 	<ul style="list-style-type: none"> Hiring practices that respect human rights Securing diversity in the workforce Human resource development Occupational safety and health disaster preparedness Creation of comfortable work environments, Creation of a vigorous organization Respect for basic human rights 	<ul style="list-style-type: none"> Ensuring safety during transportation Promotion of traffic safety 		
Responsibility to Communities	Community Involvement and Development	P.64-67	<ul style="list-style-type: none"> Coexistence with communities adjacent to overseas afforestation areas (Job creation, education support, cultural preservation, contributions to local environments, Preserving biodiversity, Promotion of safety and disaster preparedness, etc.) Contributions that make use of company-owned forests for the benefit of local areas and communities (Environmental education, etc.) 	<ul style="list-style-type: none"> Coexistence with areas surrounding mills (Job creation, education support, contributions to local environments, cultural preservation, Promotion of safety and disaster preparedness, etc.) 	<ul style="list-style-type: none"> Reduction of impacts of shipping (Promotion of transportation safety, adoption of low emission vehicles, promotion of noise abatement measures) 		<ul style="list-style-type: none"> Working with local communities to promote wastepaper collection

Nippon Paper Group's CSR Materiality

CSR Materiality Items among Initiatives in Our Value Chain

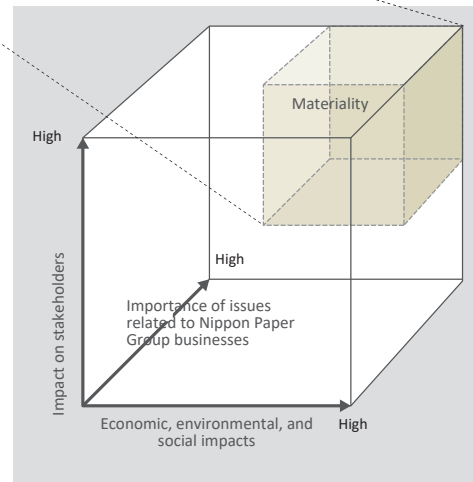
ISO26000 Core Subjects	Materiality	Scope of External Impacts	Indicators
Organizational Governance, Fair Operating Practices (Management Responsibility)	<ul style="list-style-type: none"> ● Thorough Compliance ● Dialogue with stakeholders 	Society	P.5
The Environment (Forest Management, Raw Material Procurement, and Environmental Responsibility)	<ul style="list-style-type: none"> ● Sustainable procurement of raw materials ● Climate change initiatives ● Reduction of environmental impacts ● Preserving biodiversity 	Production sites, people living near company-owned forests, and suppliers	P.15 P.26
Consumer Issues (Responsibility to Customers)	<ul style="list-style-type: none"> ● Enhancement of product safety ● Enhancement of product value 	Customers	P.39
Human Rights, Labor Practices (Human Rights, Employment and Labor Responsibility)	<ul style="list-style-type: none"> ● Occupational safety and health ● Creation of a vigorous organization 	Subcontractors, suppliers	P.50
Community Involvement and Development (Responsibility to Communities)	<ul style="list-style-type: none"> ● Coexistence with local communities and society at large 	Production sites and people living near company-owned forests	P.64

The Nippon Paper Group, working from a foundation of sustainable forest management, contributes to better living and cultural progress as a comprehensive biomass company making full use of, and recycling, renewable wood resources. Proper management of sustainable forests promotes preservation of biodiversity and helps to fight global warming. And use of wood resources increases the amount CO2 sequestered throughout society and helps to prevent resource depletion.

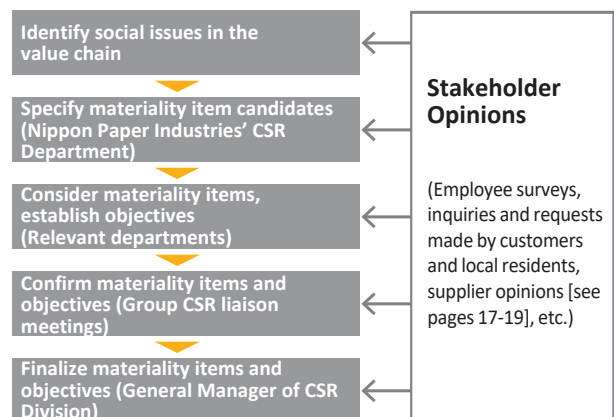
Creating new products and expanding our activities as a comprehensive biomass company, we manage and operate expansive forests and large-scale production sites. We, therefore, have a significant impact on the local areas and people who work there. Coexistence with these communities, as well as reducing environmental impacts and securing the safety and health of our local employees, therefore, are critical to our own continued existence. Moreover, the opinions of our stakeholders serve as valuable opportunities to grasp issues that are important for coexisting and growing with society in a sustainable way.

Therefore, the materiality items given above are of particular importance among our initiatives addressing social issues in our value chain (see pages 2-3).

We identify materiality items as described in the diagram to the right.



Process for Identifying Materiality Items



Management Responsibility

The opinions of stakeholders are important for bringing attention to issues that could affect the Nippon Paper Group's coexistence with society and efforts to grow sustainably.



* Please refer to our Integrated Report 2019 PP.45-53

Indicators	Key Objectives	Performance (fiscal 2018)
Materiality Thorough Compliance		
Thorough familiarization with the Group Action Charter/Nippon Paper Codes of Conduct	Through compliance training of Nippon Paper and its Group companies, promote familiarization and confirm the level of understanding and status of implementation	Out of the sites of Nippon Paper and its Group companies, we conducted compliance training and awareness surveys of approximately 770 people, 30 times, and in 18 locations.
Risk management structure in line with the Nippon Paper Group's Basic Policy on Prevention of Bribery of Public Officials and the Nippon Paper Group's Basic Policy on Compliance with Competition Laws	Conduct education and awareness activities for Nippon Paper's employees through e-learning Put in place a risk management structure at Nippon Paper's overseas bases	We conducted e-learning targeting Nippon Paper's employees and disseminated reports in the Group's internal newsletter, thoroughly familiarizing employees with the details of laws and regulations. We prepared, distributed, and provided education on action guidelines at each of Nippon Paper's overseas bases.
Materiality Dialogue with Stakeholders		
(Shareholders and Other Investors) Constructive Dialogue	Strive to gain understanding of the Nippon Paper Group's corporate strategies and policies, listen to shareholder opinions and to the business analysis views of capital providers, and reflect these perspectives in management	Held 6 briefings on operating results and management, and 170 individual meetings Made timely disclosures via the Nippon Paper Group's website and responded swiftly to inquiries
(Suppliers) Surveys of main raw material (chips and pulp) suppliers, field interviews	Exercise due consideration of human rights, worker rights, local community needs, biodiversity, and legality	Conducted surveys (24 chip suppliers, 14 pulp suppliers), and noted no problems in field interviews
(Customers) Responses to customer questionnaires and inquiries	Respond rapidly and accurately	Responded rapidly and accurately to questionnaires and routine inquiries
(Employees, subcontractors, and others) Privacy guarantee based on strict management of users' personal information, communication content, and other information	Ensure that potential whistleblowers can have confidence to report their concerns internally	Conducted training for Group helpline responders and practiced strict information management Received 33 whistleblower reports in fiscal 2018
(Local Residents) Dialogue and disclosure of environmental information via risk communication meetings and other means	Share environmental risk information with stakeholders	Provided information and gathered opinions in 29 risk communication meetings

Corporate Governance

Further enhancing transparency and practicing fair management, while pursuing sustainable growth and medium-to-long-term increases in corporate value

For details on corporate governance, please refer to page 45 of the Nippon Paper Group Integrated Report 2019.

⇒ Nippon Paper Group Integrated Report 2019

https://www.nipponpapergroup.com/english/ir/Integrated_Report_E2019.pdf

Dialogue with Stakeholders

Actively creating opportunities for dialogue to promote coexistence with society

Basic Stance

Actively promoting dialogue

The Nippon Paper Group actively establishes contact points and opportunities for direct dialogue with all stakeholders while regularly providing information on our operations and promoting the exchange of opinions. Each of our business locations actively creates opportunities for regular communication on risks and other matters. And stakeholder opinions are received through channels such as our website, Sustainability Report, and ShikiOriori, the CSR communication magazine we publish to provide plain and simple explanations of our CSR initiatives.

We carefully consider the feedback we receive and reflect it in management decision making aimed at enabling the mutually beneficial ongoing development of society and the Nippon Paper Group.



Prize of Excellence at the Environmental Communication Awards*

* Nippon Paper Group's Sustainability Report 2018 was named winner of the Prize of Excellence at the Environmental Communication Awards 2018, sponsored by the Japanese Ministry of the Environment and the Global Environmental Forum.



ShikiOriori
<https://bit.ly/2nWcfmQ>

Results of activities in fiscal 2018

Management briefings	1 time
Operating results briefings	4 times (includes 1 teleconference)
Business briefing	1 time
Individual meetings	170 time

● Tours and other events

Nippon Paper Group conducts annual plant tours to promote a deeper understanding of its business activities. In fiscal 2018, we held tours at the Egawa Mill of Nippon Paper Liquid Package Product Co., Ltd.; the Gotsu Mill of Nippon Paper Industries Co., Ltd.; and the Kyoto Mill of Nippon Paper Crecia Co., Ltd. Given that interest in paper is mounting due to the plastic pollution of marine environments, we held a business briefing on the "Nippon Paper Group's initiatives involving paper." The tours and this briefing received high marks from attendees.

● General shareholders' meeting, shareholder communications, and IR website

Nippon Paper Industries Co., Ltd. strives to disclose and otherwise provide information in a timely, appropriate manner to enhance dialogue with shareholders at the general shareholders' meeting. In preparing general shareholders' meeting announcements, for example, we provide shareholders with copious amounts of important information, which we strive to make as clear and straightforward as possible. For the general shareholders' meeting held in June 2019, we sent announcements early – 23 days before the meeting date – and disclosed meeting materials even earlier – seven days before we sent the announcements - on our website and through other channels.

We distribute a shareholder newsletter twice a year. In addition, Information is disclosed in a timely manner on our website, where we also accept inquiries regarding the Group.

IR Activities

Promoting dialogue with shareholders and investors

Nippon Paper Industries Co., Ltd. strives to gain understanding of the Group's business direction by engaging shareholders and other investors in constructive dialogue. Furthermore, we reflect the opinions of investors and the business analysis perspectives of capital providers in our management to promote sustainable growth and medium-to-long-term increases in corporate value for the Group.

Trends in dividends per share

(Yen)

	March 2016	March 2017	March 2018	March 2019
Interim dividend	30	30	30	0
Period-end dividend	30	30	30	30

Contact points for dialogue with stakeholders

Stakeholder	Major point of contact	Means of communication
Employees and others (executives, permanent employees, part-time employees, employee families)	Human resource sections	Labor-management councils, labor-management committees, etc.
Customers (business enterprises, consumers, etc.)	Sales sections Product safety sections Customer assistance channels	Individual interviews, inquiries to customer relations sections, etc.
Society and local residents (local communities, NPOs/NGOs, municipalities, the media, students, etc.)	Responsible sections within mills and branches	Environmental explanatory meeting, risk communication, environmental monitoring system, mill presentation meetings, etc.
	Responsible sections within each business segment	Interviews, etc.
	Social contribution sections	Social contribution activities, etc.
Business partners (suppliers, subcontractors, etc.)	Public relations sections	Press releases, interviews, etc.
	Procurement sections Human resource sections	Individual interviews, supplier surveys, etc.
Shareholders (shareholders, investors, etc.)	General affairs sections IR sections	General shareholders' meetings, shareholder communications, explanatory meetings, Integrated reports, IR site, IR information mail, etc.

Enhancement of Product Value

Dialogue with a Customer

Representatives of Nippon Paper Group’s Healthcare Products Business paid a visit to Nagatoroen, an intensive care home for the elderly. Nagatoroen uses the Hada Care Acty® series of adult diapers, which employ highperformance deodorizing sheets that are the world’s first to use functional cellulose nanofiber. We asked Facility Manager Fumio Nomura, and Care Providers Hiroshi Tomida and Hatsue Iijima, about the problems of an aging society in Japan, the role of intensive care homes for the elderly, and their thoughts on the Hada Care Acty® series of adult diapers.

(Interviewers: Yu Sakai of NP Trading Co., Ltd. and Gota Osawa of Nippon Paper Crecia Co., Ltd.)



Fumio Nomura
Facility Manager



Hiroshi Tomida
Care Provider



Hatsue Iijima
Care Provider

Customer Overview

Company Name

Nagatoroen

Location

Nagatoro Town, Chichibu-gun, Saitama Prefecture

Main Business

Intensive care home for the elderly, short-stay care, adult day care, visiting care services, in-home care support

Connection to Nippon Paper Group

Began using the Hada Care Acty® series of adult diapers in 2016 and has continued to purchase them ever since

—How is the problem of an aging society in Japan seen from the perspective of an intensive care home for the elderly?

Nomura The biggest problem for us is a shortage of care workers. At our care facility, we are steadily working to prepare for what is referred to as the “2025 problem”¹, but have not achieved the progress we need to. When the baby boom generation begins to use intensive care homes for the elderly, the personnel shortage will make it impossible to provide the necessary services. This is a critical problem for care facilities going forward.

¹ The baby boom generation, which numbers approximately 8 million, will pass the age of 75 in 2025 and join the ranks of the latter-stage elderly.

—Are you considering measures such as using foreign workers to resolve your labor shortage?

Nomura Some facilities are doing that, but our facility is not currently considering it. Care workers have to work with the elderly and, in my experience, there is a language barrier that seems to make communication too difficult for foreign workers. Our plan is to hire Japanese care workers who live nearby, to the extent possible.

—Could you please tell us about your initiatives for coexisting with the local community?

Nomura As an initiative for the benefit of the local community, we began in April 2018 to operate the Lunch Café for local residents 65 or older. The Lunch Café builds on the concept of the Orange Café, which are venues that are operated by and for people with dementia and their families as places to have tea and get to know one another. At the Lunch Café, we offer the same food we prepare on a daily basis for our ordinary needs. We envision that the café will attract mostly elderly people who are still capable of living independently, but we also welcome people who

require assistance in their daily lives. Our philosophy is to be a facility that is open to the local community.

—What kind of services does your facility perform? What kinds of care does it provide?

Nomura At this time, an intensive care home for the elderly can, in principle, admit only people with a nursing care level² of 3 or higher, so for most of our residents this will be their last home. We strive to provide support that allows these residents to live out their days in ease and with as much freedom in lifestyle as possible. But, of course, the amount of time spent on meals, attending to bathroom needs, changing diapers, etc. is significant.

Tomida I want to spend time with the residents and help them to get the most enjoyment out of their recreation activities. But we have many residents who have been assigned high nursing care levels, so it is unfortunate, but the number of people I can be with is limited. So it is within those circumstances that I want to provide care that alleviates distress and gives residents a sense of security that allows them to live as they want, to the extent possible.

Iijima Every Sunday, we hold events in which, for example, residents participate in crafts or volunteers join us for activities. And every month, we announce the names of everyone with a birthday during that month and hold a birthday party. Sunday is the only day when there is no bathing assistance, so lunch is served about 30 minutes early, the staff finish their work early, and we all enjoy an hour or hour-and-a-half of fun from about 1:30 PM or so.

² When a person is to receive care services, their need level is assessed. There are five nursing care levels assigned numbers 1 to 5. “Nursing care level 3” describes a person who is unable to stand up and walk on their own and who requires nearly comprehensive care assistance for bathroom needs, bathing, dressing, and other daily activities.

—What are the most fulfilling aspects of your work?

Iijima I like elderly people a lot. Among the people I care for are some who cannot communicate verbally, but if I say something to them, they always do something to let me know they heard me. Even if they cannot speak, if I see a little smile, for example, I know they heard me and the moment I see that smile I feel fortunate to be doing the work I'm doing. Also, there are people who can speak and, though it seems only natural, when a resident says, "Thank you," I feel extremely happy.

Tomida I feel a great deal of fulfillment when I'm taking care of someone and they do something that tells me they feel secure and content. Of course, there are residents who can say, "Thank you," for something I've done for them, but it also makes me especially happy when a resident who cannot speak acknowledges my effort with a smile.

—Would you please let us know your opinions about the Hada Care Acty® series of adult diapers?

Iijima I'm very satisfied. For example, after we change the diapers, we put all the used ones in a single bag before disposing of them. In the past, the bag gave off a horrendous smell, even if it was sealed, and we had to use a deodorizing spray to deal with the situation. With the Hada Care Acty® series, odor is not an issue. I can really tell that it has very good deodorizing performance. Also, with previous products, diaper rash was a terrible problem, but now I hear no complaints. The Hada Care Acty® series has reduced the number of times we have to change diapers for most of the residents who use them, and the residents are more comfortable, partly because they are able to sleep longer. One other thing I'm pleased with is that the tapes that are used to secure the diapers are long and stay on very well.

Tomida The place where we change diapers does have a bit of odor, as you might expect, but outside of that space the odor has almost completely disappeared.

Nomura Our facility has two floors; the second floor is where we provide care for residents. Before we started to use the Hada Care Acty® series, I would sometimes hear from employees on the first floor that there was a strong odor of urine from the second floor, but now I don't hear those comments anymore. And I agree; urine and fecal odors are no longer a problem.

—What are your opinions about our support system?

Iijima I was very thankful for the class on how to put diapers on another person, choose pads, etc. Even among those of us who have been doing this for a while, there were some who were not putting diapers on the right way. Diligently studying how to put the diapers on makes it possible to easily do it correctly and makes the residents more comfortable. I've heard that these classes will be held regularly and I'm very thankful for that.

Nomura Your sales representatives definitely visit us more often than representatives of other companies do, and I'll be very thankful to have that service continue.

—Please tell us what role you would like the Nippon Paper Group to play going forward.

Nomura Not just about your company's products, but in general, the switch from cloth diapers to paper diapers has reduced total costs. The residents who use them have no complaints, and I think paper diapers are good. When I came to this facility six years ago, it was still using cloth diapers. Paper diapers were already in wide use, but there were still some, particularly elderly people, who preferred cloth diapers. Where we are today is a result of the efforts of all of the paper diaper manufacturers. The Nippon Paper Group is involved in various businesses, but I would like to see it devote even greater attention to paper diapers. I would like to see even more efforts devoted not only to deodorizing performance but also areas such as absorbency and the comfort of wearers. Research and other efforts to lower your costs would also make me happy. I'm anxious to see what you can do.



Right side, front to back: Facility Manager Fumio Nomura, and Care Providers Hiroshi Tomida and Hatsue Iijima
Left side, front to back: Yu Sakai, Gota Osawa

CSR Management

Advancing CSR activities that help to build a sustainable society through business endeavors

Management Structure

Oversight through the CSR Division

Nippon Paper Industries Co., Ltd. established the CSR Division to oversee the CSR activities of the Group as a whole. The CSR Department and Public Relations Office were set up within the CSR Division. The CSR Department promotes CSR activities based on the Action Charter and works closely with the various divisions and departments.

The Nippon Paper Group's Action Charter

1. We shall pursue a sustainable growth for the future to contribute to society through our business activities.
2. We shall abide by the letter and the spirit of laws and regulations, and comply with the highest ethical standards and social codes of conduct, both in Japan and abroad.
3. We shall conduct our business in a fair, transparent and liberal manner.
4. We shall win the trust of customers through the development and provision of socially useful and safe products and services.
5. We shall disclose corporate information positively and fairly to all stakeholders of the Group.
6. We shall actively address environmental issues, and shall endeavor to conserve and enhance the environmental state of our planet.
7. We shall maintain consistency between corporate development and the personal contentment of individual employees, and create a company filled with dream and hope.

Supporting CSR activities by Group companies

Nippon Paper Industries Co., Ltd.'s CSR Department hosts regular CSR liaison meetings with personnel in charge of CSR at principal Group companies. These meetings are held to communicate directions being taken with regard to CSR matters and to share opinions. They are also used as opportunities to hear discussions of CSR activity trends by invited consultants, and to hold workshops.

Meeting social responsibilities through business activities

Nippon Paper Group aims to contribute to the development of a sustainable society through its business activities. Toward that end, we are committed to grasping the expectations and demands of our stakeholders, and fulfilling our social responsibilities from the perspectives of business management; forest management and the procurement of raw materials; the environment; customers; human rights, employment, and labor; and local communities.

Meeting social responsibilities through business activities



Participating in Organizations in Japan and Abroad

Seeking to connect to and work with external parties

The Nippon Paper Group strives to share information with other companies and organizations, and contribute to various activities together with these partners.

⇒ Principal organization memberships

https://www.nipponpapergroup.com/csr/2019_DATA_SECTION.pdf

The United Nations Global Compact

Nippon Paper Industries Co., Ltd. announced its decision to support the 10 principles covering the four fields of human rights, labor, environment and anti-corruption and joined the United Nations Global Compact as a signatory in November 2004.



Network Japan

⇒ United Nations Global Compact

<http://www.ungcn.org/>

Compliance

As a committed partner ensuring that employees are fully informed about compliance, the Nippon Paper Group engages in corporate activities in accordance with laws and social norms

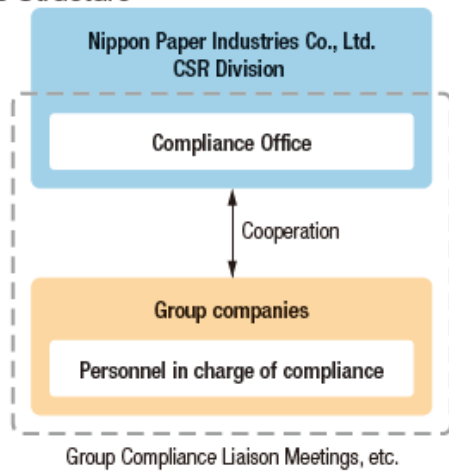
Compliance Structure

Promoting compliance throughout the Group

The CSR Division of Nippon Paper Industries Co., Ltd. serves as a facilitator and driving force behind efforts to achieve and reinforce understanding of compliance throughout the Nippon Paper Group.

Each Group company appoints a person to be in charge of compliance within its organization, and Nippon Paper Industries' Compliance Office actively hosts Group Compliance Liaison Meetings to provide all employees in charge of compliance with information on important policies and measures, opportunities to share information, and advice on education and training activities.

Compliance Structure



● Implementing compliance education

Nippon Paper Group conducts training on an ongoing basis to further enhance compliance awareness and understanding. We, together with a consultant from outside the Group, conduct practical training that involves group discussions and other approaches and is tailored to the specific needs of production sites and sales offices. In fiscal 2018, 770 people participated in this training. Education on compliance is also provided through avenues such as stratified training in the form of new-hire training and training for newly appointed managers at principal Group companies.

Group Internal Whistleblower System

Encouraging reporting via a help line on activity in conflict with compliance

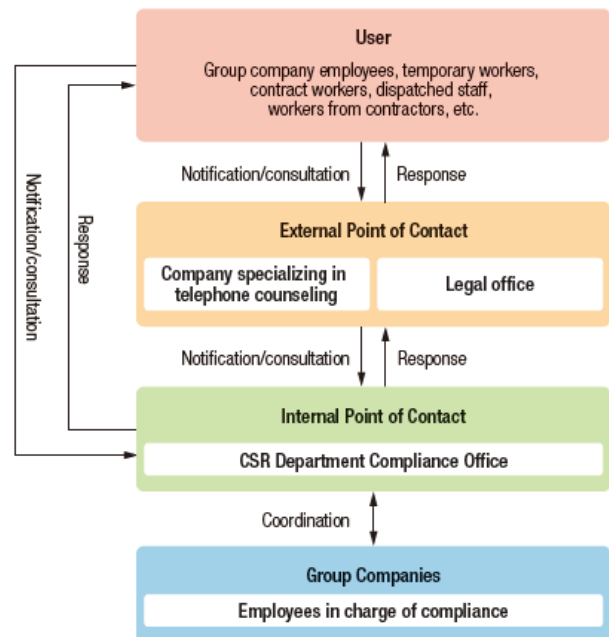
Nippon Paper Group has established its help line system to allow any employee of the Group to provide direct notification of, or seek advice outside the chain-of-command on, any action in the workplace that could violate laws, social norms or corporate ethics. The Compliance Office located within Nippon Paper Industries Co., Ltd.'s CSR Department serves as a point of contact within the Group. We have also established points of contact outside the Group for use by employees as appropriate. The help line system guarantees the privacy of whistleblowers and takes steps to ensure that they do not suffer because they have reported questionable activity or have sought advice.

Trends in the number of notifications received by the help line

	Fiscal 2016	Fiscal 2017	Fiscal 2018
	11	32*	33

*Reported as 31 last year (mistaken count)

Help-line system flow chart



Personal Information Protection

Maintaining a systematic structure and rules

Nippon Paper Industries has taken steps to ensure clear understanding of the structure and rules applicable to the handling of personal information. The personal information of customers, business partners and employees is controlled by clearly stated rules and a manual, and is tracked and managed in control ledgers by individual related departments as required by the Private Information Protection Law. These ledgers contain details of the dates when personal information was obtained and the purposes for holding it, and are reviewed annually to eliminate data for which the holding period has expired and take other actions, as well, to ensure that information is handled properly.

Respect for Intellectual Property

Education programs on intellectual property rights and compliance

Nippon Paper Group's emphasis on intellectual property is evident not only in research and development but also in all of its business activities, and the Group adheres strictly to all applicable laws and regulations. Members of the Intellectual Property Department of Nippon Paper Industries and Nippon Paper Crecia, and outside patent attorneys, conduct intellectual property education programs for the benefit of Group company employees.

A total of 305 employees attended the 12 programs in fiscal 2018.

Prevention of Bribery of Public Officials and Promotion of Compliance with Competition Laws

Strengthening the Risk Management System in Line with the Group's Basic Policy on Prevention of Bribery of Public Officials and Basic Policy on Compliance with Competition Laws

Nippon Paper Industries Co., Ltd. set forth the Group's Basic Policy on Prevention of Bribery of Public Officials and Basic Policy on Compliance with Competition Laws in November 2017.

When Nippon Paper Industries Co., Ltd. established the Nippon Paper Group Action Charter (P.11) and Nippon Paper Codes of Conduct in April 2004, it included clear pronouncements on preventing bribery of public officials

and promoting compliance with competition laws in the sections that address the conduct of its business in a fair, transparent and liberal manner. It has also included fairness as a key value in its Group Mission. Based on this attitude and these pronouncements, the Nippon Paper Group has until now taken a top-down approach to preventing bribery and promoting compliance with competition laws.

In recent years, however, countries throughout the world have quickly enhanced regulations in these areas, and authorities have actively exposed violations.

As a result, a growing number of Japanese companies doing business overseas have been cited and sanctioned. Nippon Paper Group, therefore, has significantly stepped up its efforts to thoroughly comply with the laws and regulations of the countries where it does business. Going forward, we will strive to strengthen our risk management system in line with the Group's Basic Policy on Prevention of Bribery of Public Officials and Basic Policy on Compliance with Competition Laws.

In fiscal 2018, we were subject to no legal actions involving confirmed incidents of corruption or public legal cases regarding corruption, anti-competitive behavior, anti-trust, or monopoly practices.

⇒ Nippon Paper Codes of Conduct
<https://www.nipponpapergroup.com/csr/charter/>

● Essentials of the Nippon Paper Group's Basic Policy on Prevention of Bribery of Public Officials

- The basic policy prohibits bribery, requires compliance with laws and regulations, and calls for education on these topics. Given that the Group conducts business globally, the basic policy unequivocally requires compliance with laws and regulations not only in Japan but in all countries and regions where the Nippon Paper Group does business.
- In the interest of public accountability, record-keeping is required even for outlays that are beyond potential association with an act of bribery.

⇒ Nippon Paper Group's Basic Policy on Prevention of Bribery of Public Officials
https://www.nipponpapergroup.com/csr/Basic_Policy_on_Prevention_of_Bribery_JP.pdf

- **Essentials of the Nippon Paper Group's Basic Policy on Compliance with Competition Laws**

- The basic policy requires compliance with the laws and regulations of relevant countries and calls for education on compliance with competition laws. Based on the assumption that international transactions will be engaged in as a matter of the Group's global business development, the basic policy unequivocally requires compliance with competition laws not only in Japan but in all countries and regions where the Nippon Paper Group does business.

- The basic policy includes a list of typical competition law violations as concrete examples of prohibited activities.

⇒ Nippon Paper Group's Basic Policy on Compliance with Competition Laws

https://www.nipponpapergroup.com/csr/Basic_Policy_on_Compliance_with_Competition_Laws_JP.pdf/

Forest Management and Raw Material Procurement Responsibility

The Nippon Paper Group, as a comprehensive biomass company pursuing business endeavors that are founded on sustainable forest management and promoting sustainable growth by using, and later recycling, every bit of the renewable wood resources it harvests, contributes to better living and cultural progress.

In addition, we preserve biodiversity through sustainable forest management. Because forests act to sequester CO₂, our use of wood resources actually contributes to the fight against global warming.



* Please refer to our Integrated Report 2019 PP.56-59

Indicators	Key Objectives	Performance (fiscal 2018)
Materiality Sustainable Procurement of Raw Materials		
Maintenance of forest certifications for all company-owned forests inside and outside Japan	100% of company-owned forests	100%
Ensure that all wood materials for pulp and paper are endorsed under forest certification systems	100% of wood used as raw material for paper	100%
Conduct survey-based audits of overseas chip and pulp suppliers	100% of chip and pulp suppliers	100% (Overseas chip suppliers: 24; domestic and overseas pulp suppliers: 14)
Promote use of domestic timber	Maintain a domestic timber utilization rate that exceeds the wood self-sufficiency rate	Achieved a domestic timber utilization rate that exceeds the wood self-sufficiency rate

Policy and Management

Practicing sustainable procurement of raw materials in ways that consider environmental and social concerns in line with our philosophy and basic policy

Basic Stance

Pursuing sustainable and stable wood resources procurement

Woodchips and wastepaper, as recycled material, are the main raw materials for pulp and paper. Procurement of these materials entails the support not only of suppliers in and outside of Japan, but also the communities and government authorities of local production areas. Taking into consideration relationships with the environment and society, the Nippon Paper Group recognizes the importance of working closely with suppliers to establish a sustainable supply chain that incorporates production area forest ecosystem, local community, occupational safety and health as well as other concerns.

Accordingly, we have built and implemented a structure and framework that will allow us to sustainably procure renewable wood resources.

Philosophy and Basic Policy

Focusing on Supply Chain Management in Procuring Raw Materials

The Nippon Paper Group established its Philosophy and Basic Policy Concerning Raw Materials Procurement in 2005. Based on this philosophy and basic policy, we use supply-chain management to practice sustainable raw material procurement that is both environmentally and socially conscious. Moreover, we promote dialogue with stakeholders as we strive to take our environmentally and socially conscious raw material procurement to greater levels of achievement.

Sustainable Forest Management

Practicing proper planning and management

Forestry management considers not only economic, but also environmental and social sustainability. The Nippon Paper Group defines sustainable forest management as

- 1) Biodiversity is preserved.
- 2) The productivity and soundness of the forest ecosystem is maintained.
- 3) Soil and water resources are conserved.
- 4) Diverse social needs are satisfied.

Proper planning and management are important factors in the sustainable management of forests. A considerable amount of time is required to cultivate trees to their maturity. In putting together a viable sustainable forest management plan, it is important to consider factors including the areas allocated to afforestation and harvesting, the rate of growth, the surrounding environment and the impact on society.

Landscape concerns related to efforts to protect waterside forests and address other such needs must also be examined. Taking full advantage of its expertise in forest management, the Group is promoting proper planning and management.

Philosophy and Basic Policy Concerning Raw Materials Procurement

(formulated on October 5, 2005)

Philosophy

We are committed to establishing a reliable raw materials procurement system through global supply chain management in consideration of the environment and society.

Basic Policy

1. Environmentally friendly raw materials procurement

- (1) We procure woodchips, lumber and pulp from forests under sustainable forest management.
- (2) We use and deal in no illegally logged lumber and we support the eradication of illegal logging.
- (3) We make active use of recycled materials to help build a recycling-oriented society.
- (4) We make appropriate procurement of chemical substances in compliance with relevant laws and regulations.
- (5) We build traceability systems to ensure the above policies are practiced throughout the supply chain.

2. Socially aware raw materials procurement

- (1) We pursue fair deals with suppliers on equal terms.
- (2) We ensure that the entire supply chain has appropriate human rights and labor practices.

3. Promotion of dialogues with stakeholders

- (1) We engage in dialogues with stakeholders to improve the quality of our raw materials procurement in constant consideration of the environment and society.
- (2) We proactively disclose information so that our initiatives are better known.

Framework for Promoting Raw Materials Procurement Management

Overseeing raw material procurement for the entire Group

The Nippon Paper Group established the Raw Materials Committee, chaired by the general manager of the Raw Materials and Purchasing Division at Nippon Paper Industries. This subcommittee deliberates on a wide variety of important issues concerning raw material procurement, including the Group's overarching procurement policy.

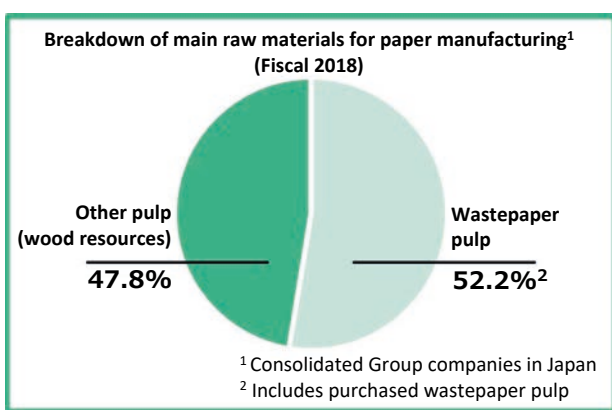
Current Status of Raw Materials Procurement

In addition to actively promoting the use of recycled paper, we procure wood resources from sustainably managed forests

Current Status of Paper Raw Materials Procurement

Using wastepaper and wood resources as raw materials

The Nippon Paper Group is engaged primarily in the manufacture of paper products. 52.2 percent of the raw materials are composed of recycled paper and the remaining 47.8% consists of such wood resources as woodchips. .



Initiatives aimed at stable wastepaper procurement

With each passing year, the collection of wastepaper has taken on greater importance for reducing waste volumes and reusing materials. For Japan’s paper industry, wastepaper is an essential resource accounting for more than half of the raw materials it uses. Against this backdrop, the Nippon Paper Group has maintained a stable system for procuring wastepaper. This system, the product of many years of collaboration with the wastepaper industry, promotes the recycling of wastepaper.

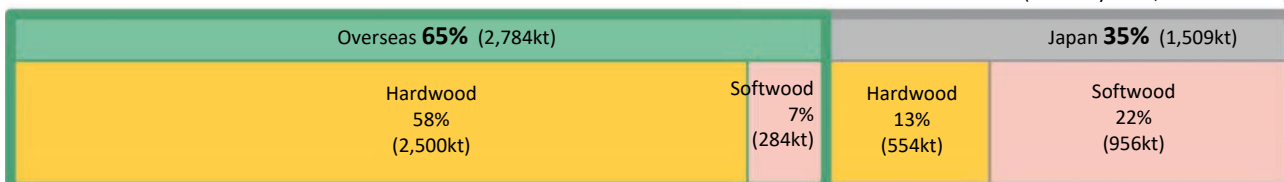
Initiatives aimed at stable wood resource procurement

Most of the wood raw materials Nippon Paper Industries Co., Ltd. procures consist of woodchips, with pulp making up the rest. Over 60% of the woodchips we use come from overseas sources and less than 40% from domestic. To ensure stable overseas procurement, sources of woodchip imports are diversified among Australia, South America, and other parts of the world.

Geographic breakdown of wood raw materials (chips) procured by Nippon Paper Industries Co., Ltd.

(FY2018)

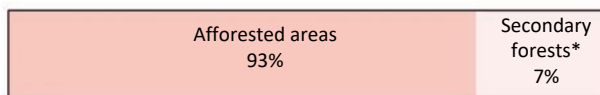
(bone dry units, kt=kilotonnes)



Hardwood resource breakdown (3,054kt)



Softwood resource breakdown (1,240kt)



* Forests that have recovered naturally or that have been artificially replanted after an event such as timber harvesting or fire.

Tree species and countries of origin for overseas woodchips procured by Nippon Paper Industries Co., Ltd. (Fiscal 2018)

Hardwood

Country	Percentage	Species
Vietnam	28%	Acacia
Australia	21%	Eucalyptus
Brazil	20%	Eucalyptus, Acacia
South Africa	18%	Acacia
Chile	11%	Eucalyptus
Thailand	2%	Eucalyptus
Total	100%	

Softwood

Country	Percentage	Species
Australia	71%	Radiata pine
U.S.A.	21%	Douglas fir
Russia	8%	Yezo spruce
Total	100%	

Sustainable Procurement of Raw Materials

Practicing sustainable forest management and resource procurement using certifications as benchmarks

Basic Stance

Focusing on legal compliance and transparency in the procurement of raw materials

The Nippon Paper Group is a strong advocate of sustainable raw materials procurement that takes into consideration environmental and social concerns. Our procurement of wood raw materials rests on the principles of legality and emphasizes sustainability, clear identification of the origin of wood resources, and full accountability.

When purchasing from external suppliers, we make every effort to enhance our supply chain management capabilities, taking into consideration environmental and social needs. At the same time, we use a system that employs third-party forest certification programs to confirm the propriety of raw materials procurement.

In the context of procurement from company-owned forests, we pursue overseas afforestation projects to increase our plantation timber procurement. Moreover, we practice sustainable forest management by maintaining forest certifications acquired for company-owned forests both in Japan and overseas.

M

- Sourcing from sustainable forests (sustainability)
- Clearly identifying the origin of timber (traceability)
- Maintaining full accountability (accountability)

Overview of major forest certification programs

Certification program name	Details and features
PEFC —Programme for the Endorsement of Forest Certification A program that promotes mutual recognition of the forest certification programs of individual countries	PEFC bases its sustainability benchmark on a broad consensus expressed in intergovernmental processes and guidelines. It provides a mutual recognition system that endorses compatibility and comparability of the responsible forest management systems of individual countries. Launched across countries in Europe, the program encompasses the forest certification programs of 49 countries around the world. PEFC has adopted the FM and CoC certification systems*. Examples of certifications mutually approved by PEFC (for forests owned by Nippon Paper Industries Co., Ltd.) Australian Forestry Standard (AFS): Australia / CERTFORCHILE: Chile / CERFLOR: Brazil
SGEC —Sustainable Green Ecosystem Council A forest certification program established in Japan	SGEC engages in an evaluation based on seven criteria while taking into consideration Japan's natural environment as well as its social customs and culture. Mutual certification with PEFC was approved in June 2016.
FSC ®—Forest Stewardship Council® A forest certification program based on unified global standards (License No. FSC® C001751)	FSC® is a non-profit international member-based organization that certifies that forests are being managed in compliance with its 10 principles. FSC® has adopted the FM and CoC certification systems*.

* FM and CoC Certification

The forest certification system is made up of two parts — the Forest Management (FM) component, which certifies that forests are responsibly managed, and the Chain-of-Custody (CoC) component, which certifies that products from certified forests have been properly processed and distributed.

Under the FM certification system, a third party certifies that the management of forests is being undertaken in a responsible manner based on various objective benchmarks including (1) compliance with regulatory requirements and system frameworks, (2) maintenance and preservation of forest ecosystems and biodiversity, (3) respect for native and local resident rights,

and (4) maintenance and improvement of forest productivity.

CoC certification is a system covering all operators engaged in the processing and distribution of timber materials. In addition to tracking products (certified woodchips) from certified forests in each process including processing and distribution, CoC certification confirms that a risk assessment of all non-certified woodchips has been undertaken. Products display a certification mark in the event that all operators have acquired CoC certification across all processes.

● **About the Clean Wood Act**

In March 2018, Nippon Paper Industries Co., Ltd. completed its registrations as both a Type 1 and Type 2 Wood-related Business under the Act on Promotion of the Distribution and Use of Legally Harvested Wood (the Clean Wood Act), which took effect in May 2017. Nippon Paper Papylia Co., Ltd. and Nippon Paper Crecia Co., Ltd. also completed their registrations in April 2019. In compliance with this law, the companies confirm the legality of the covered items*1 they handle.

Also, in July 2018 Nippon Paper Lumber Co., Ltd. completed its registrations as both a Type 1 and Type 2 Wood-related Business, confirming the legality of the covered items*2 it handles.

*1 Wood pulp and copier paper, form paper, coated paper for inkjet color printers, uncoated printing paper, coated printing paper, and tissue paper and toilet paper that use wood pulp

*2 Logs, sawn boards and square timbers, single and sliced veneers, plywood and laminated veneer lumber and laminated wood, wood materials for wooden pallets, chips, or flakes

Individual companies' registration details

Business registered: **Nippon Paper Industries Co., Ltd.**
 Registration number: JIA-CLW-I, II No. 17024
 Effective registration period: March 19, 2018 to March 18, 2023

Business registered: **Nippon Paper Papylia Co., Ltd.**
 Registration number: JIA-CLW-I, II No. 19001
 Effective registration period: April 26, 2019 to April 25, 2024

Business registered: **Nippon Paper Crecia Co., Ltd.**
 Registration number: JIA-CLW-I, II No. 19002
 Effective registration period: April 26, 2019 to April 25, 2024

Institution conducting registration (for the three companies indicated above):
 Japan Gas Appliances Inspection Organization

Business registered: **Nippon Paper Lumber Co., Ltd.**
 Registration number: JPIC-CLW-I, II54
 Effective registration period: July 6, 2018 to July 5, 2023
 Institution conducting registration:
 Japan Plywood Inspection Corporation

Action Plan for Wood-Based Raw Material Procurement

Eradicating illegal logging while promoting environmentally and socially aware procurement

The Nippon Paper Group has put in place its Action Plan for Wood-based Raw Material Procurement, in keeping with the Group's Philosophy and Basic Policy Concerning Raw Materials Procurement. This action plan provides a roadmap that incorporates checks on the legality of woodchips, and consideration for human rights, labor, local communities, and the preservation of biodiversity, allowing the Group to practice CSR procurement. This action plan also helps enhance traceability and the use of forest certifications with respect to woodchips procured from overseas while placing considerable emphasis on trade association certification of the legality of woodchips produced in Japan

⇒ **Action Plan for Wood-Based Raw Material Procurement**
<https://www.nipponpapergroup.com/csr/forest/procurement/actionplan/index.html> (Japanese only)

Nippon Paper Industries Co., Ltd., Nippon Paper Papylia Co., Ltd., and Nippon Paper Crecia Co., Ltd. have formulated the Legally Certified Due Diligence Manual to confirm the legality of the wood raw materials they procure. The companies perform due diligence on all the wood raw materials they procure, confirming that they have been logged legally.

⇒ **Legally Certified Due Diligence Manual**
<https://www.nipponpapergroup.com/csr/forest/sustainability/DDmanual20180806.pdf> (Japanese only)

Nippon Paper Industries, in connection with annual forest certification audits and audits performed by the Japan Paper Association's illegal logging monitoring project, has third parties perform objective assessments to determine whether it is conducting wood resource procurement in accordance with its basic policies. Suggestions from these assessments are then used to make improvements.

Sustainable wood resource procurement scheme

Philosophy and Basic Policy Concerning Raw Materials Procurement (see page 16)

Action Plan for Wood-based Raw Material Procurement

	Japanese Resources	Overseas Resources
Basic Policy and Scheme	<ul style="list-style-type: none"> Based on verifications by organizations approved by forest, timber or lumber industry organizations specified in the Guideline for Verification of Legality and Sustainability of Wood and Wood Products established by Japan's Forest Agency in connection with government procurement initiatives to fight illegal logging in accordance with the Law on Promoting Green Purchasing. 	<ul style="list-style-type: none"> Verifications by individual companies using their own approaches, as provided in the Guideline for Verification of Legality and Sustainability of Wood and Wood Products. Based on the Japan Paper Association's guideline for measures against illegal logging.
	<ul style="list-style-type: none"> Confirmation based on a due-diligence system (DDS) for verifying legality under the Clean Wood Act 	
Confirmation of Legality and Traceability	<ul style="list-style-type: none"> Traceability based on the Guideline for Verification of Legality and Sustainability of Wood and Wood Products established by Japan's Forest Agency Confirmation of basic information relating to forest operations. Information examples include compliance with laws and regulations, tree species, and whether forest certifications have been obtained. 	<ul style="list-style-type: none"> Document verifications are performed on a vessel-by-vessel basis to ensure that the area where the wood was harvested and the supplier of the wood are in compliance with relevant laws, and that no illegally harvested wood is included. On-site checks by employees assigned to local offices Questionnaires and local interviews (Every effort is made to enhance traceability by confirming compliance with statutory requirements regarding forest management, tree species, and the acquisition of forest certifications. <p>※ In fiscal 2018, it was determined, based on questionnaire responses and shipping and other documents provided by each supplier, that no illegally harvested woodchips or pulp were procured from overseas suppliers.</p>
Confirmation of sustainability	<p>Based on information from sources such as results of supplier surveys and local interviews, the following has been confirmed.</p> <ul style="list-style-type: none"> Policies or systems have been established for addressing human rights and labor matters. Social contribution initiatives have been undertaken to improve relations with local communities. Biodiversity surveys have been conducted. Areas requiring special consideration to protect biodiversity have been identified and logging and forest management activities have been modified appropriately. 	
Independent Audits	<p>The following have been implemented for all procured wood resources.</p> <ul style="list-style-type: none"> Annual audits by the Japan Paper Association's illegal logging monitoring project. Annual risk assessments based on the due diligence system of the Programme for the Endorsement of Forest Certification (PEFC), a Forest certification organization. 	

Implementation Results for the Action Plan for Wood-based Raw Material Procurement (Fiscal 2018)

	Procurement in Japan	Procurement Overseas
Coverage and Results	410 chip suppliers, 4 pulp suppliers (Implemented for all suppliers) Confirmation of conformance with the above action plan	24 chip suppliers, 10 pulp suppliers (Implemented for all suppliers) Confirmation of conformance with the above action plan



Third-Party Sustainable Forest Management Validations

Forest certification system: System for the certification by third-party organizations that forests are being sustainably managed



At Nippon Paper Industries Co., Ltd.,

- All company-owned forests in Japan and overseas have received forest certifications.
- All wood-based raw materials have been certified by the PEFC or FSC® (All procured chips have been produced with wood from forests with an FM certification or have undergone a risk assessment for the CoC certification.)

Protecting and Nurturing Japan's Wood Resources

Maintaining a focus on forest management that takes into consideration the characteristics of each region in an effort to promote sound growth

Sustainable Management of Company-Owned Forests in Japan

Practicing sustainable forest management at company-owned forests over an area extending to 90 thousand hectares

Nippon Paper Industries owns approximately 90 thousand hectares of forest in around 400 locations in Japan, the second largest private-sector holdings of forest in the country. SGEC Forest Certifications have been obtained for all of the forest. For the Nippon Paper Group, forests are not only an important business resource—as a corporate group shaping the future with trees, we recognize and work to manage the integrity of the multifaceted functions forests play within society

- **Maintaining company-owned forests in Japan**

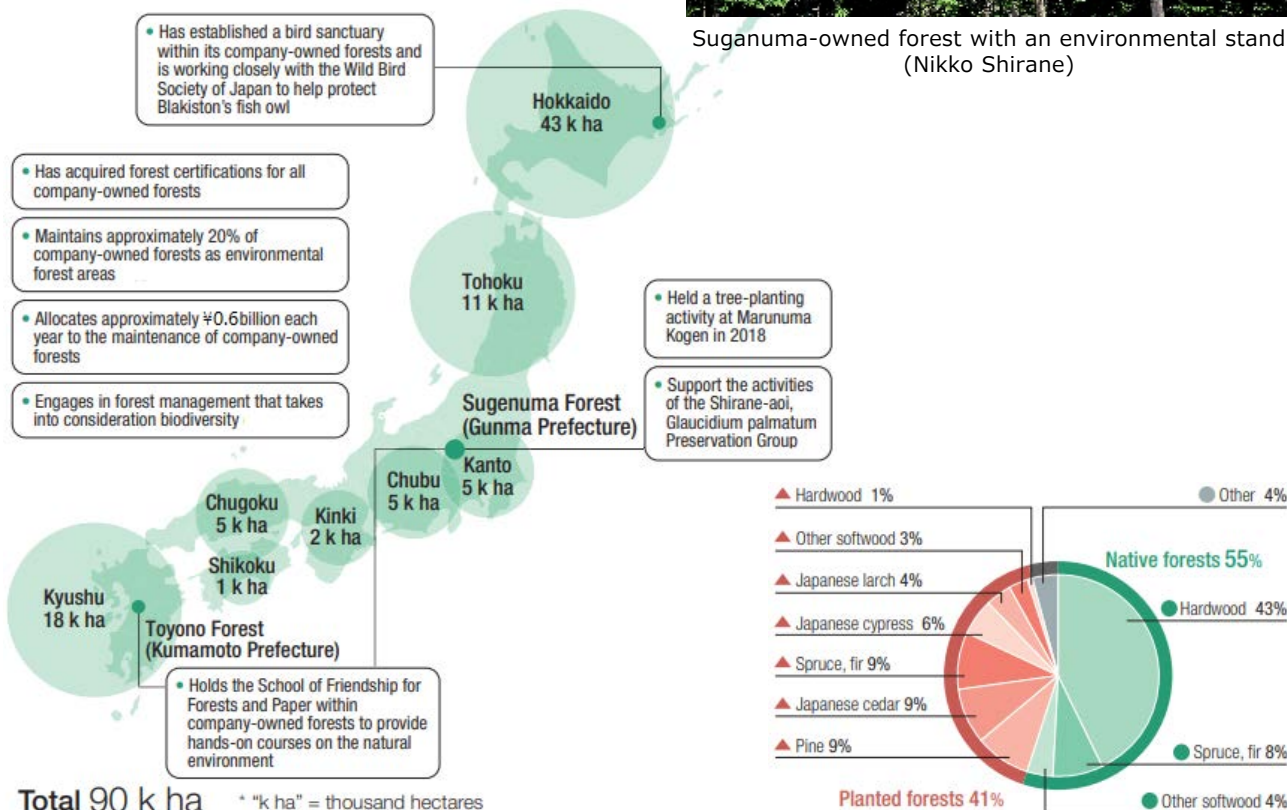
Nippon Paper Industries allocates approximately ¥0.6 billion each year to the maintenance and management of company-owned forests in Japan, which entails the clearing of undergrowth and thinning. As a company which has continued to benefit from and grow through forests and forest products, we are committed to balanced, sustainable forest management that allows forests to fulfill their multifaceted functions - including ones that benefit biodiversity preservation and watershed conservation - despite the fact that forests within Japan are not currently economically viable because of the stagnant price of domestic timber.

- **Environmental forest designations, biodiversity-conscious forest management**

Nippon Paper Industries Co., Ltd. designates its domestic company-owned forests as either “commercial forest areas” for the production of wood materials or “environmental forest areas,” where wood-material production is not conducted and the ecological, water catchment, and other environmental functions of forests are protected. The company appropriately manages both forest types for their respective purposes. Environmental forest areas make up 18,000 hectares, or about 20%, of the company’s domestic company-owned forests and are home to a wide variety of plant and animal species.



Sugenuma-owned forest with an environmental stand (Nikko Shirane)



Invigorating Japan's Forest Industry

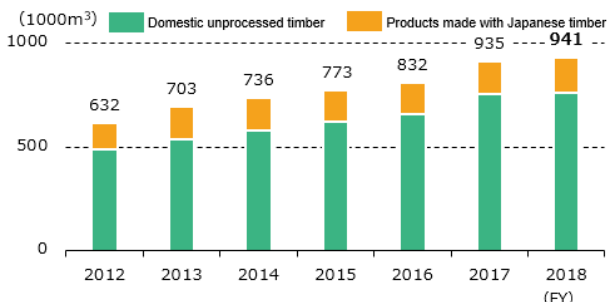
Actively utilizing domestically produced timber and promoting the sound growth of forestry resources in Japan

In recent years, deterioration of artificially planted Japanese cypress and Japanese cedar forests throughout Japan has become a concern. The reason for this deterioration is low lumber prices that have squeezed forest industry profitability and made it impossible to perform thinning and other necessary maintenance. The Japanese government, under its Forest and Forestry Basic Plan, has committed itself to promoting the use of domestically produced wood and lifting the nation's wood self-sufficiency rate to 50% by 2025. The government aims to use recycled resources to make forestry a growth industry and strengthen competitiveness in the lumber industry.

● Promoting the use of domestic timber

With its network for domestic timber collection in Japan and its ability to handle a comprehensive lineup of products, Nippon Paper Lumber Co., Ltd. is actively developing its domestic timber business. The company has set the objective of handling 1 million m³ of domestic timber; in fiscal 2018 the figure reached approximately 940 thousand m³. To utilize domestic timber and meet its revised goal of handling 1 million m³ of domestic unprocessed timber by fiscal 2020, Nippon Paper Lumber intends to continue developing new applications and working to boost exports.

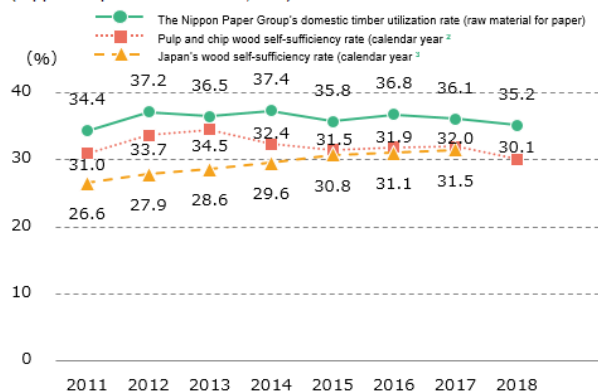
Domestic timber sales results by product type (Nippon Paper Lumber Co., Ltd.)



● Efforts to use more domestic wood as a raw material for paper

Nippon Paper Industries Co., Ltd. is working to increase the percentage of domestically produced wood it uses to make paper. This figure rose to 35.2% in fiscal 2018. We aim to carry on with our efforts to help invigorate Japan's forest industry by using Japanese timber whenever possible.

Domestic timber utilization rate¹ (Nippon Paper Industries Co., Ltd.)



¹ The domestic (Japan) timber utilization rate includes sawmill residues.
² Source: Yearbook of Paper and Pulp Statistics issued by the Ministry of Economy, Trade and Industry of Japan
³ Source: Supply and Demand of Lumber (Lumber material self-sufficiency rate) issued by the Forestry Agency of Japan

● Organizing private-sector forest owners in Kyushu

Increasing the competitiveness of Japan's forest industry requires that forest owners work not by themselves but together with owners of neighboring forests to undertake work such as road building and logging, and measures to protect against damage by wildlife.

In 2011, Nippon Paper Industries Co. Ltd. signed an agreement with the Kyushu Regional Forest Office; Oji Forest & Products Co., Ltd.; Sumitomo Forestry Co., Ltd.; and others to promote forest management in the Itsuki region of Kyushu. Since then it has entered into additional agreements, which together with the one mentioned above, cover four areas of Kyushu and involved efforts toward public-private cooperation in forest management. Moreover, in 2016, the company entered into an agreement to promote forest management in the Mt. Fuji Seiroku area, on the west side of Mt. Fuji, together with the Shizuoka District Forest Office, a part of the Japanese Forestry Agency's Kanto Regional Forest Office; the Fuji Agriculture and Forestry Office of Shizuoka Prefecture; the city of Fujinomiya; and others. These agreements serve as a proof of concept for public-private collaboration in a centrally managed work model.

Case

Producing Seedlings from Specified Japanese Cedar Mother Trees

In its overseas afforestation operations, Nippon Paper Industries Co., Ltd. developed technology for using cuttings to produce seedlings. It is now using that technology to produce seedlings of specified mother trees* in Kyushu. Amid expectations of expanded regeneration logging and reforestation in areas throughout Japan, the Japanese government is actively promoting the use of environmentally friendly species. Having developed technology that enables the use of shoots as small as 10 cm in length as cuttings (Normally, shoots used for this are 40 cm.), the company is now able to propagate large numbers of cuttings from specified Japanese cedar mother trees in a short time. Currently, cuttings of these trees are being propagated in a large scion plantation located in Hitoyoshi City in Kumamoto Prefecture.

Amid concerns of a nationwide shortage of seedlings, in general, Nippon Paper Industries is applying its proprietary production technology in locations across the country to produce seedlings that will help to stabilize supply and make forestry in Japan a growth industry.



Seedlings grown from cuttings of specified Japanese cedar mother trees

* **Specified Japanese cedar mother trees:** Trees from species the Minister of Agriculture, Forestry and Fisheries has designated as being special for their rapid growth, outstanding CO2 sequestration capability, and low pollen production.

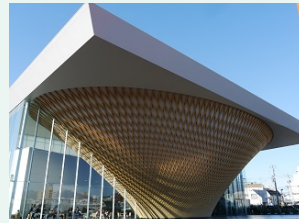
Case

SGEC-certified Wood from the Kitayama Company-owned Forest Supplied for Use in Building the Mt. Fuji World Heritage Center, Shizuoka

In January 2018, Nippon Paper Industries Co., Ltd. (NPI) and Nippon Paper Lumber Co., Ltd. (NPL) provided lumber to the Exhibition Building Wooden Grid Project of the Mt. Fuji World Heritage Center, Shizuoka.

The exhibition building features latticework walls made completely of SGEC-certified Japanese cypress. Through local and cross-industrial cooperation, it became the first building in Japan to acquire the SGEC/PEFC CoC Project Certification.

NPI supplied lumber for the project from its Kitayama Forest, the first SGEC-certified forest in Japan. NPL managed the supply of lumber to the construction site and is the first SGEC CoC-certified company in Japan. Together, NPI and NPL successfully delivered SGEC-certified wood from the forest where it was sourced to the project site where it was used.



Mt. Fuji World Heritage Center, Shizuoka

Overseas Afforestation

Growing trees as a renewable resource, and coexisting with local communities

Sustainable Management of Overseas Afforested

Developing an afforestation business that contributes to the local community

Recognizing the importance of mutual development the Nippon Paper Group strives to build positive ties with the local communities in and around its forests. In accordance with our Philosophy and Basic Policy Concerning Raw Materials Procurement (see page 16), we pay particular attention to the concerns of local residents while taking into consideration the cultures and traditions of each region as well as the natural environment and ecosystems. Considerable effort is also placed on promoting educational activities, and creating employment opportunities, within local economies.

- Acquisition of forest certifications (see pages 19-21)
- Engages in forest management that takes into consideration biodiversity (see pages 36-37)
- Coexisting with local communities (Employment support, respect for indigenous people, see page 66)

Tree Farm Initiative

Nurturing renewable wood resources

In similar fashion to the cultivation of crops in the field, the Tree Farm Initiative achieves sustainable procurement of raw materials through repeated cycles of growing and harvesting trees. The Tree Farm Initiative manifests Nippon Paper

materials through repeated cycles of growing and harvesting trees. The Tree Farm Initiative manifests Nippon Paper Industries Co., Ltd.'s concept for overseas afforestation projects. Presently, the Company oversees 83 thousand hectares (as of December 31, 2018) of afforested areas in Brazil, Chile, Australia, and South Africa.

● Afforestation projects that help the local ecology

The Nippon Paper Group performs afforestation work on grasslands, former farms and pastures and on harvested plantation land. We select species, focusing mainly on fast-growing Eucalyptus, according to individual climatic conditions and materials available for making paper.

In order to maintain a balance between areas planted with Eucalyptus and the biodiversity needs of each region, we implement appropriate measures and keep native waterside forests where the potential effects on the ecology are large.

⇒ Tree Farm Initiative

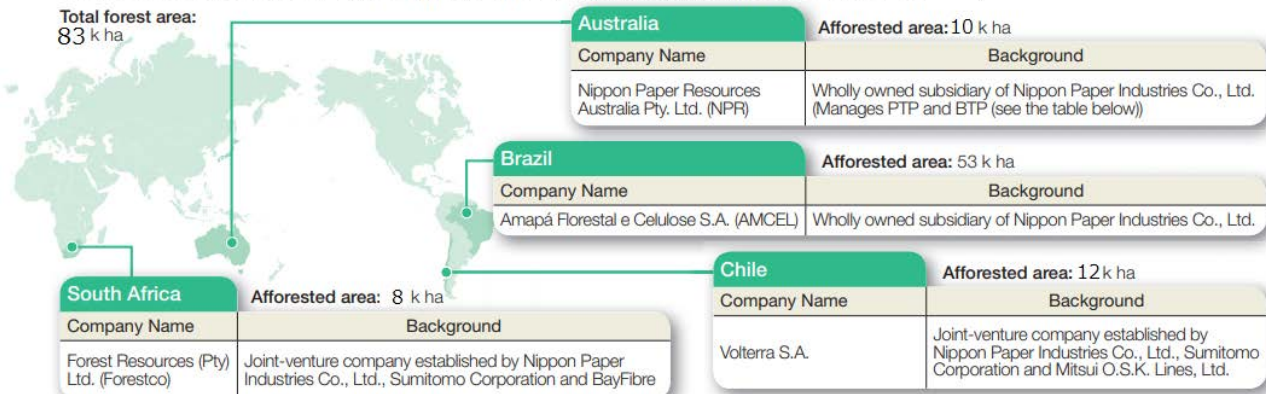
<https://www.nipponpapergroup.com/csr/forest/afforest/>



Tree planting that preserves riparian forests. (Right) The blue area indicates riparian forests.

Overview of overseas forests under Nippon Paper Group management (as of December 31, 2018)

Total forest area:
83 k ha



* "k ha" = thousand hectares

Status of forest certification acquisition for overseas afforestation projects

Overseas plantation project by operating company	Certification system name (License no.)	Date of acquisition
PTP (Australia)	AFS	June 2006
BTP (Australia)	AFS	April 2006
Volterra (Chile)	FSC® (FSC®C120260) CERTFORCHILE	January 2014, December 2007
Forestco (South Africa)	FSC® (FSC®C012171)	April 2003
AMCEL (Brazil)	FSC® (FSC®C023383) CERFLOR	December 2008, September 2014

Environmental Responsibility

The Nippon Paper Group contributes to the building of a sustainable recycling-oriented society by minimizing environmental impacts at every stage of its value chain.



* Please refer to our Integrated Report 2019 PP.60-65

Indicators	Key Objectives	Performance (fiscal 2018)
Materiality Climate Change Initiatives		
Greenhouse gas emissions	Reduce by 10% compared to the fiscal 2013 result, by fiscal 2020	Reduced 6.2%
Materiality Reduction of Environmental Impacts		
Waste recycling rate	Increase to 98% or higher by fiscal 2020	98.2%
Materiality Preserving Biodiversity		
Forest certification's for company-owned forests	100%	100%
Check for rare species prior to harvesting in company-owned forests	100%	100%

Policy and Management

We are putting in place a Group-wide environmental management system based on our Environmental Charter and engaging in environmentally friendly corporate activities.

Basic Stance

Reducing our environmental impacts

Acting in accordance with the Nippon Paper Group Environmental Charter, the Nippon Paper Group strives to reduce environmental impacts at every stage of its value chain by selecting equipment that is appropriate for its operations and by striving to maximize efficiency in its daily use.

The Nippon Paper Group Environmental Charter

(Established March 30, 2001, and revised March 30, 2007)

Philosophy

The Nippon Paper Group is committed to helping preserve the global environment over the long term and contributing to the development of a recycling based society by carrying out its corporate activities in recognition of the importance of biodiversity.

Basic Policy

1. Act to counter global warming
2. Protect and develop forest resources
3. Increase use of recycled resources
4. Comply with environmental statutes and work to minimize our environmental impact
5. Develop environmentally friendly technologies and products
6. Engage in active environmental communication

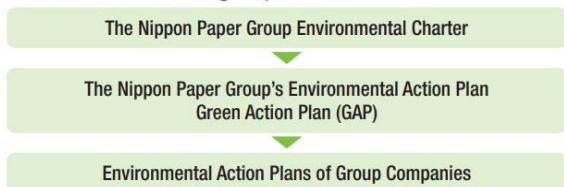
Environmental Action Plan (Green Action Plan) *

Setting forth specific objectives and actions

Nippon Paper Group has established its Environmental Action Plan - the Green Action Plan (GAP) – in accordance with the six basic policies expressed in its Environmental Charter. Group companies have each established their own specific environmental action plans to reflect their own individual business circumstances based on the GAP. Their efforts to fulfill these plans are enhancing our ability to accomplish the GAP.

Since fiscal 2016, we have been working to achieve GAP objectives for fiscal 2020 under the Environmental Action Plan - the Green Action Plan 2020.

Framework for achieving objectives



Environmental Management Promotion Structure

Building a group-wide structure

The Management Execution Committee (MEC) makes environmental strategy decisions for the Nippon Paper Group, and leads the Group's environmental activities. The Environmental Charter constitutes the environmental management principles of individual Group companies. The Nippon Paper Group Environmental Committee manages progress in implementing the charter's philosophy and policies under the Environmental Action Plan and reports to the MEC. The MEC makes decisions on new initiatives to lead the Group's environmental activities and promote ongoing improvement.

The Nippon Paper Group's environmental management promotion structure (as of March 31, 2019)



Strengthening environmental management systems

At Nippon Paper Group, the environmental departments at our headquarters and production facilities work together to strengthen the environmental management systems.

Nippon Paper Industries, for example, has adopted a system for centrally managing emissions from the boilers of individual mills. This effort illustrates how simultaneous monitoring by the company's headquarters and production facilities ensures compliance with laws and regulations, and reduces environmental impact.

* ⇒ Green Action Plan 2020
https://www.nipponpapergroup.com/english/csr/2019_DATA_SECTION_e.pdf

● **Introducing environmental management systems**

As one measure aimed at promoting environmental management, the Nippon Paper Group is introducing various environmental management systems including ISO 14001, the international standard for environmental management, and Eco-Action 21. ISO 14001 certifications have been obtained by 71% of the principal production sites of Nippon Paper Industries Co., Ltd. and its consolidated subsidiaries.

⇒ conditions with regard to ISO14001 and Eco-Action 21 certifications.
http://www.nipponpapergroup.com/csr/2019.3_ISO14001.pdf

Environmental Compliance

Taking action in a two-pronged approach

Nippon Paper Group is strengthening its environmental compliance by preventing problems and establishing a framework that ensures all problems come to light.

In fiscal 2018, we were not penalized for any environmental regulation violations.

To bolster environmental compliance

1. Building systems to prevent problems

- Building a workplace that emphasizes the importance of the environment (environmental compliance training)
- Strengthening the system for identifying applicable laws and regulations
- Implementing measures from both the facility and technology perspectives

2. Establishing a framework that ensures all problems

- Implementing environmental audits
- Employing an environmental management system
- Engaging in environmental communication and active information disclosure

● **For identifying relevant laws**

To accurately respond to wide-ranging and relatively frequent changes in environmental legislation, Nippon Paper Industries has implemented a legal and regulatory search system.

● **Introducing equipment and measurement devices to prevent environmental accidents**

Nippon Paper Industries identifies risks of environmental accidents and assesses both their probability and their potential impact on the environment, and accordingly introduces the equipment and facilities needed for prevention.

The prevention of major spills of chemical or oil was again considered a top priority in fiscal 2018, leading to such steps as installing liquid containment walls and measurement devices where appropriate.

● **Environmental audits emphasizing legal compliance and risk control**

Nippon Paper Group ensures legal compliance through internal audits conducted at its various business locations and environmental audits by Nippon Paper Industry's head office Environment & Safety Department. These audits are based on guidelines issued by the Japanese government. In performing environmental audits, environmental management records are examined and on-site inspections are performed. A system of mutual audits has also been put in place by the Group as an additional step to strengthen compliance and risk control.

Environmental Communication

Reflecting feedback into our environmental activities

Nippon Paper Group engages in environmental risk communication with local residents and government authorities, as provided in the Nippon Paper Group Risk Communication Guidelines.

In cases such as the installation of large-scale equipment, we also conduct explanatory meetings beforehand to provide a better understanding of any impact on the environment from installation work and operation of the installed facilities.

● **Responses to opinions and complaints**

In addition to receiving opinions and inquiries via its website, the Nippon Paper Group has established a complaint and inquiry contact at each of its mills. We have also adopted environmental monitoring systems and take other steps to encourage input from local residents.

When a complaint is received, we move swiftly to determine possible causes, and implement emergency and permanent solutions. We also explain to the person who lodged the complaint what happened and what we did to resolve the situation, so that they can be satisfied that we have responded appropriately.

No. of environment-related complaints in Japan
(fiscal 2018)

Complaints	No.
Noise	5
Dust and mist dispersal	9
Odor	0
Vibration	0
Smoke	0
Other	2
Total	16

Environmental Education and Training for Employees

Supporting employees to learn

Nippon Paper Group provides basic to specialized environmental education covering topics such as wastewater treatment plant operation. In addition, the Group encourages employees to participate in external training and take advantage of other opportunities to gain pollution prevention qualifications and expertise.

To help elevate the environmental protection awareness of employees, we also hold the Nippon Paper Group Eco-Photo Contest and conduct environmental e-learning. These activities take place in the month of June –Environment Month in Japan.

In 2018, large numbers of employees participated in our e-learning programs, which focused on the Energy Saving Act*.

* Act on the Rational Use of Energy

Reduction of Environmental Impacts

Assessing environmental issues from multiple perspectives and reducing our environmental impacts

Basic Stance

Aiming to minimize environmental impacts

It is impossible to completely eliminate the environmental impacts of the business activities that provide the goods and services society requires. Nevertheless, we believe that companies can contribute to the building of a sustainable society by minimizing these impacts.

When products are made, energy and water are used, and waste; greenhouse gases; sulfur oxide (SOx), nitrogen oxide (NOx), and other air pollutants; and wastewater containing organic and other substances are generated. To minimize its environmental impacts, the Nippon Paper Group uses equipment and technologies to reduce the presence of these substances in its discharges to levels within standards set by various environmental laws and regulations.

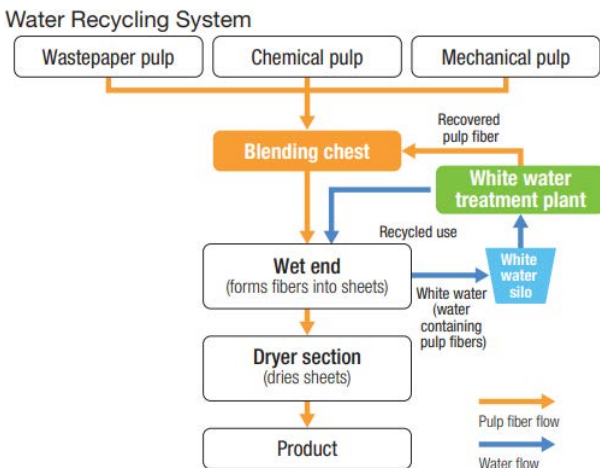
⇒ Key Environmental Performance Indicators
https://www.nipponpapergroup.com/english/csr/2019_DATA_SECTION_e.pdf

Effective Use of Water Resources

Effectively using water resources in manufacturing processes

The manufacturing of paper requires large volumes of water. One example is the wet end of the papermaking process, in which pulp fiber from woodchips and wastepaper is dispersed in water to eventually create thin sheets.

The Nippon Paper Group’s papermaking process efficiently and effectively uses water resources, which are a form of natural capital. It does this by recovering “white water,” which contains very fine pulp fibers from the wet end of the papermaking process, removing the fibers through a treatment process, and then sending the removed fibers to the pulp blending chest and returning the water to the wet end of the manufacturing process.



Controlling Chemical Substances

Working to properly manage chemical substances

Nippon Paper Group examines the chemical substances it uses in its production processes in accordance with its Chemical Substance Management Guidelines. We do this in exercising risk management that monitors how much of these substances we use and how much we release into the environment.

We disclose information on our management, release, and transfer of PRTR*-controlled substances to local stakeholders through environmental risk communications at each of our mills and other production sites. In fiscal 2018, the Nippon Paper Group released 193 tonnes of PRTR-controlled substances and transferred 80 tonnes.

Nippon Paper Industries Co., Ltd. clarified its new measures for storing polychlorinated biphenyl (PCB) waste as provided in measures for processing waste stipulated in the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes. We will process this PCB waste appropriately and in line with related laws and regulations.

* The Pollutant Release and Transfer Register (PRTR) is a system for monitoring the movement of chemical substances posing risks to human health or ecosystems. Under the PRTR system, businesses track the amounts of these chemicals they have released into the environment or transferred to other business locations and report this information to government authorities.

⇒ Amounts of substances subject to the PRTR Law released and transferred
https://www.nipponpapergroup.com/csr/2019.3_PRTR.pdf
 (Japanese only)

Preventing Soil Pollution

Fiscal 2018, another year free of soil contamination

The raw materials and chemicals used by Nippon Paper Group mills contain almost no heavy metals, trichloroethylene or other soil contaminants. Fiscal 2018 was another year in which there were no instances of contaminated soil generated at Group companies.

Preventing Noise and Vibration

Using IoT to Prevent Complaints

Pulp and paper mills use large machines incorporating numerous motors that generate noise and vibration.

Nippon Paper Industries Co., Ltd. and NIPPON PAPER UNITEC CO., LTD. have developed the "e-musen junkai" (e-wireless patrol) system, which uses wireless sensors to constantly monitor equipment for signs of abnormalities (see page 42). This system uses IoT technology to accumulate temperature and vibration acceleration data on equipment in operation. By analyzing trends in this data to uncover abnormalities early on, this system helps to prevent serious equipment problems and avoid vibration, noise, and other complaints by local residents.



Climate Change Initiatives

Reducing greenhouse gas emissions at every stage of our business activities

Helping to build a low-carbon society

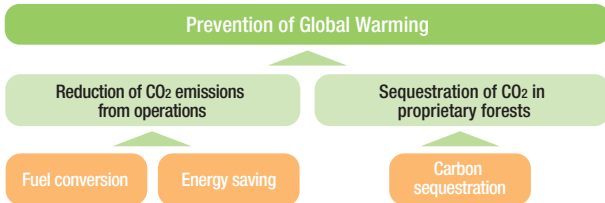
Advancing effective initiatives well-suited for our businesses

The Japan Federation of Economic Organizations and Japan Paper Association both support the creation of a low-carbon society. As a member of both organizations, Nippon Paper Group is actively working to reduce emissions of greenhouse gases through our Environmental Action Plan, which is intended to fight global warming across every stage of our business activities.

Please see ..

- Green Action Plan 2020 (page 27)
- Converting to non-fossil energy (page 32),
- Conserving energy in each of our production and logistics processes (page 33)
- Managing proprietary forests properly to ensure CO₂ absorption/sequestration (see page 34)

Nippon Paper Group environmental initiatives

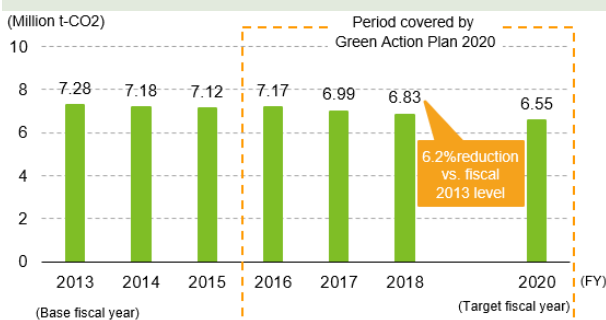


Reducing greenhouse gas emissions

Working to achieve objectives for reducing greenhouse gas emissions

In its Environmental Action Plan - Green Action Plan 2020 (see page 27) - the Nippon Paper Group has established the objective of reducing greenhouse gas emissions 10% compared to the fiscal 2013 level. In fiscal 2018, we reduced our emissions 6.2% compared to the fiscal 2013 level through equipment consolidation/update and other energy-saving investments and further conversion to non-fossil energy.

Progress Report for the Green Action Plan 2020 Environmental Action Plan - Greenhouse gas emissions (Japan*)



* For companies covered by the Act on the Rational Use of Energy. These consist of certain consolidated group companies in Japan and certain nonconsolidated subsidiaries in Japan.

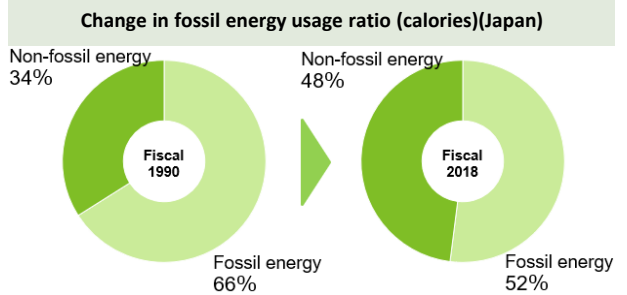
Fuel conversion initiatives

Actively using biomass and waste fuels to reduce fossil energy usage

Nippon Paper Group has installed two types of boilers—high efficiency boilers, and boilers capable of burning construction waste and other woody biomass fuels, used tires; RPF*, and other waste fuels. Our ongoing conversion to these fuels allows us to reduce our usage of fossil fuels.

This fuel conversion initiative helps to prevent global warming and slow the depletion of fossil resources. As a result of energy saving activities and fuel conversion, the Group's fossil energy usage ratio (in terms of heating value) in Japan fell to 52% in fiscal 2018, compared to 66% in fiscal 1990.

** RPF (Refuse paper and plastic fuel): Fuel derived from paper that is unusable as recycled paper and from waste plastic.

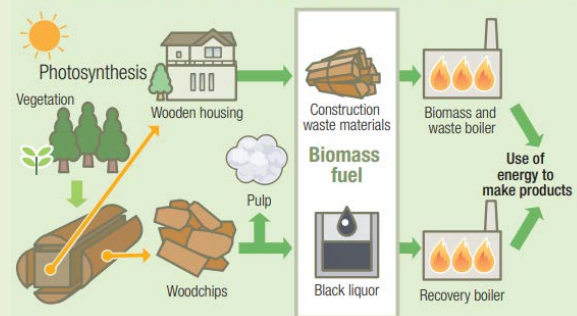


One of the leading corporate users of woody biomass energy in Japan

The Nippon Paper Group actively applies woody biomass fuel from sources such as black liquor and construction waste. The amount consumed accounts for up to 5%* of non-fossil energy (excluding nuclear and hydroelectric power) used in Japan. The Nippon Paper Group is one of the leading corporate users of woody biomass energy in Japan

** In-house data prepared by Nippon Paper Industries Co., Ltd. Using energy supply information (fiscal 2017 finalized information) published by the Natural Resources and Energy Agency

Biomass energy utilization at the Nippon Paper Group



● Development of a new biomass solid fuel

Trees absorb CO₂ from the atmosphere, so when woody biomass fuel is burned there is no net impact on atmospheric CO₂. In other words, woody biomass fuel is carbon neutral.

Nippon Paper Industries Co., Ltd. is developing torrefaction technology as a method for making an alternative to coal as a fuel for thermal power generation. This approach uses woody biomass that is the product of the company's wealth of afforestation, forest management, and woody biomass collection experience. Torrefaction technology uses relatively low heat to carbonize woody biomass. This produces a fuel that retains most of the pre-processing heating value, offers good grindability, and is sufficiently water-resistant for outside storage. Woody



Torrefaction demonstration facility (Thailand)

fuel made with torrefaction technology can be used as a substitute for coal in firing existing thermal power plants and, therefore, can help to reduce greenhouse gas emissions.

Currently, a demonstration test is underway at a torrefaction facility in Thailand, and combustion testing is moving forward at the Kushiro Mill.

Initiatives for Saving Energy in Manufacturing Processes

Applying energy-saving techniques developed in Japan at overseas production sites

Nippon Paper Group includes overseas members that are operating paper and paperboard businesses in Australia, Thailand, and other countries. Climate change is an issue of serious concern in countries throughout the world. We, therefore, are working to reduce greenhouse gas emissions by having companies exchange information on what they have done to save energy effectively.

The Hokkaido Mill (Asahikawa) of Nippon Paper Industries Co., Ltd., for example, successfully reduced their energy usage by finding a way to decrease the amount of steam they use to dry pulp sheets into paper in the dryer sections of their paper machines.



Dryer section of Siam Nippon Industrial Paper Co., Ltd.'s Yankee machine

With their technique, an agent is used within the hollow shell roll to form a waterrepellent film that sheds condensation and improves heat conduction efficiency.

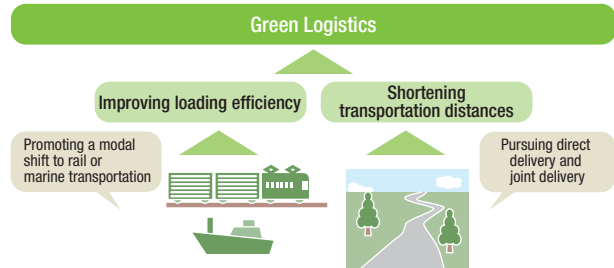
Siam Nippon Industrial Paper Co., Ltd., located in Thailand, has adopted this technique and is working in fiscal 2018 to achieve energy savings.

Advancing Energy Efficiency in Logistics

Working to promote green logistics

Nippon Paper Group focuses mainly on the two core initiatives of improving its loading efficiency and shortening transportation distances to reduce logistics-related CO₂ emissions.

Logistics-related initiatives



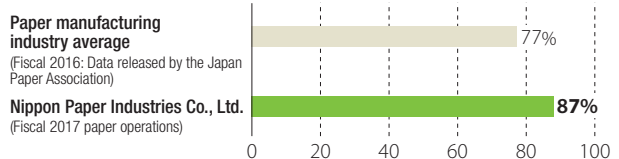
● Promoting a modal shift in transportation to secure high loading efficiency

The Nippon Paper Group is advancing its use of modal shift transport to reduce CO₂ emissions from long-distance shipping. We are doing this by using mainly rail and domestic marine transport to move large volumes of cargo with every trip. At 87%, Nippon Paper Industries is maintaining a high modal shift rate.

* Modal shift rate:

The percentage of rail or marine (including coastal shipping and ferries) transport in general cargo transported over 500 kilometers

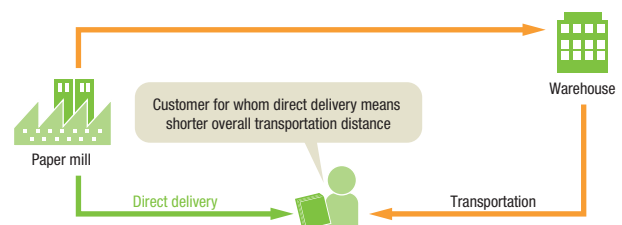
Comparison of modal shift rates



● Working with logistics service providers to shorten transportation distances

Nippon Paper Group is working with logistics service providers to bypass warehouses and deliver products directly to customers. This effort is intended to reduce CO₂ emissions by shortening overall transportation distances.

Reducing the total distance by direct delivery from paper mills
Marine, rail and truck transportation



● Obtaining Green Management Certifications

Green Management Certifications are awarded and registered by the Foundation for Promoting Personal Mobility and Ecological Transportation. Companies that undertake at least a certain minimum level of initiatives based on the Green Management Promotion Manual are eligible for these certifications.

Within the Nippon Paper Group, 16 business locations of 8 Group companies have received Green Management Certification. The Nippon Paper Group is actively implementing ecological driving, vehicle inspection and maintenance, reduction of vehicle disposal and waste generation, proper waste handling and recycling, and other practices consistent with green management.

Green Management Certifications** (As of July 1, 2019)

Company
NIPPON PAPER LOGISTICS, Kyokushin Transport, Nanko Logistics Support, Hotoku, NP Unyu Kanto, NP Unyu Fuji, NP Unyu Kansai, and NP Unyu Iwakuni

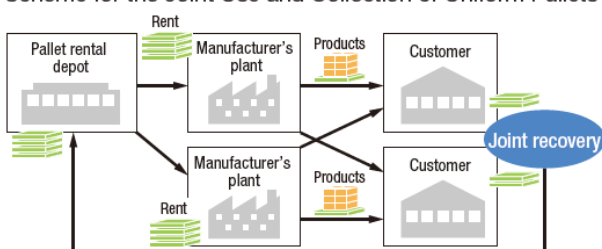
* Consolidated and non-consolidated subsidiaries in Japan

● Building a sustainable logistics system Establishment of the Study Group for Joint Usage of Pallets for Household Paper Products

Household paper products, such as tissue paper and toilet paper, are bulky, yet lightweight. Therefore, shipping vehicles carrying these items are loaded and unloaded manually, without the use of pallets, as a way to improve loading efficiency. However, amid a constant labor shortage, this approach has resulted in problems such as drivers being tied up for long periods of time and excessive wait times for distribution vehicles.

To address these problems, Nippon Paper Creca Co., Ltd. and three other manufacturers of household paper products, plus UPR Corporation, a provider of pallet and logistics services, established the Study Group for Joint Usage of Pallets for Household Paper Products. This organization aims to create an energy-saving, sustainable logistics system by constructing a scheme for the joint use and recovery of uniform pallets and using it as a basis for mechanizing loading and unloading work, and improving the efficiency of freight handling in other ways as well. The four household paper products manufacturers started using uniform pallets in the fall of 2018.

Scheme for the Joint Use and Collection of Uniform Pallets



Absorbing and Sequestering CO₂ through Proper Management of Company-Owned Forests

Sequestering atmospheric CO₂ through proper forest management and the use of wood

● Sequestering CO₂ with 173 thousand hectares of forests in and outside Japan

As trees grow, they absorb and sequester CO₂ from the atmosphere. It is widely recognized, therefore, that protection of forests through proper management contributes to the fight against global warming.

The Nippon Paper Group manages 173 thousand hectares of forests, 90 thousand hectares in Japan and 83 thousand hectares across four countries abroad. Through sustainable forest management, the Group maintains the CO₂ absorption and sequestration capabilities of trees. These forests, both in and outside Japan, continuously sequester approximately 32 million tonnes of CO₂.

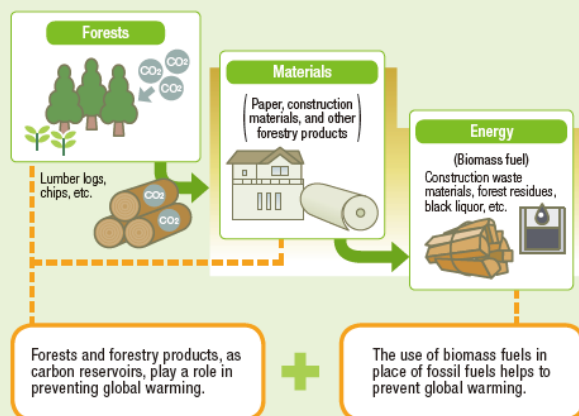
We are helping to prevent global warming not only by reducing greenhouse gas emissions but also by protecting forests.

Sequestering CO₂ in various wood products

CO₂ sequestered in trees as carbon remains sequestered even after trees have been processed into products like construction materials and paper. Products made from wood, therefore, work to prevent increases in atmospheric CO₂ concentrations. Using wood products and actively recycling wastepaper, in other words, by fixing CO₂ for extended periods of time in products, helps to hold down increases in atmospheric CO₂ concentrations.

Moreover, when wood products like construction materials reach the end of their useful lives they can be used as carbon-neutral biomass fuel, the burning of which does not increase atmospheric CO₂.

Helping to prevent global warming through the cascade-use of wood*



* "Cascade-use" refers to the full use of an individual tree for applications across the quality scale, from ones requiring very high quality to others for which quality is not a consideration, for maximum efficiency in resource usage.

Promoting Recycling

Contributing to the development of a recycling-based society

Initiatives for Using Wastepaper

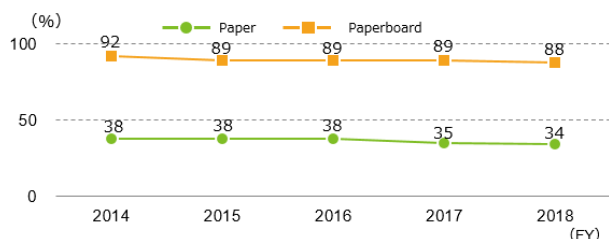
Actively promoting paper recycling

Despite efforts to secure forest resources through sustainable forest management, wastepaper is a very important resource for the paper industry.

Nippon Paper Group is promoting paper recycling by working with customers to build wastepaper recycling systems, and by collaborating with citizens' and industry groups to conduct educational activities on wastepaper collection. The Group has also been working to further expand the use of wastepaper by developing technology for using types of paper that have proven difficult to recycle.

As paper and paperboard demand grows outside Japan, it is becoming more difficult to procure sufficient amounts of wastepaper in Japan. We, however, will continue with efforts to expand both wastepaper collection and the kinds of wastepaper that can be recycled.

Recycled paper utilization rate by the Nippon Paper Group in Japan



● Paper-Pak carton collection initiatives

The Committee for Milk Container Environmental Issues (an organization composed mainly of container manufacturers and manufacturers of dairy products) has set the goal of increasing the beverage carton collection rate to at least 50% by 2020. In December 2018, the collection rate for fiscal 2017 was determined to be 43.4%, a decrease of 0.9% compare to the previous fiscal year.

Nippon Paper Industries Co. Ltd. is a member of the committee and is gradually installing Paper-Pak collection boxes at Group company locations. It is also conducting education initiatives to increase employee awareness of the importance of recycling. The company views Paper-Pak collection as an activity that promotes effective use of resources throughout society and, together with commercial collectors, has begun to encourage schools and other types of institutions and organizations to recycle.



Paper-Pak collection box installed at a Nippon Paper Industries Co. Ltd. Location

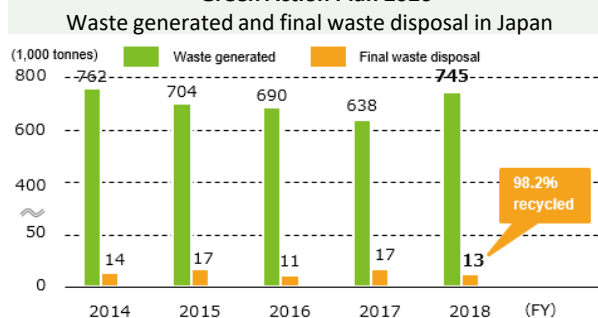
Recycling Industrial Waste

Working to make effective use of waste, while reducing waste generation

Under the Environmental Action Plan, GAP 2020 (see page 27), the Group is working to increase its waste recycling rate to at least 98%.

To reduce the amount of industrial waste sent for final disposal by burial in landfills or by other means, we have revised production processes and have developed ways to effectively use boiler ash as a construction material and for other purposes. As a result, our waste recycling rate rose to 98.2% in fiscal 2018.

Progress in Implementing the Environmental Action Plan - Green Action Plan 2020



Case

Project for making and selling CfFA[®] (Carbon-free Fly Ash), a concrete admixture that makes effective use of coal ash

Nippon Paper Industries Co., Ltd. is manufacturing and selling CfFA[®], a concrete admixture made from coal ash - a byproduct from the coal-fired power plant at the Company's Ishinomaki Mill.

CfFA[®] consists of fly ash from which unburned carbon, a material that can have a negative effect on concrete quality, has been removed through a heat modification process. It has been used for disaster recovery construction (bridges, seawalls, etc.), mainly in the Tohoku region of Japan, and in precast and other concrete products, and is gradually being adopted for a widening variety of applications.

Going forward, the Company will continue to focus on having CfFA[®] contribute to high-quality infrastructure construction.



Piers for the Chinju Bridge in Ishinomaki City, Miyagi Prefecture

Preserving Biodiversity

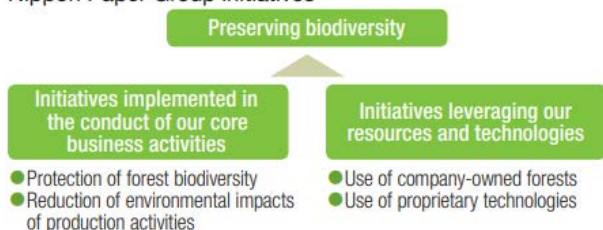
Pursuing activities that protect the ecosystems of company-owned forests and leverage proprietary resources and technologies

Basic Stance

Formulation of a new basic policy

The business activities of the Nippon Paper Group entail the cultivation and utilization of forests and, therefore, have an inherently significant and wide-ranging impact on forest biodiversity. We recognize that the sustainable use of forests is fundamental to our existence and development as a going concern. The basic philosophy of the Nippon Paper Group Environmental Charter (see page 27) states that the Nippon Paper Group will engage in corporate activities that recognize the importance of biodiversity. Our Basic Policies on the Preservation of Biodiversity, established in April 2016, provides guidance for the pursuit of such activities.

Nippon Paper Group initiatives



Initiatives in Our Core Business Activities

Pass thriving forests on to future generations

In pursuing sustainable forest management (see pages 22 and 25), the Nippon Paper Group conducts biodiversity surveys in company-owned forests. We also strive to reduce our impact on biodiversity by, for example, treating wastewater and controlling greenhouse gas emissions in our manufacturing processes.

Basic Policy on the Preservation of Biodiversity

(Established April 1, 2016)

Principle

The Nippon Paper Group, a corporate group to which forest resources are of fundamental importance, appreciates the natural gifts bestowed by biodiversity and, by preserving biodiversity, aims to help create a sustainable society that can continuously enjoy ecosystem services.

Basic Policy

1. Recognizing the protection of biodiversity as a critical social issue, we will work to pursue business activities that are in harmony with the sustainable use of ecosystem services.
2. In supply-chain management, we acknowledge the impacts on biodiversity of cross-border use of ecosystem services, and will manage our ecosystem service usage properly
3. In an effort to reduce environmental impacts on biodiversity, we will actively work to recycle and save resources.
4. We will promote the development of technologies, products, and services that contribute to the preservation of biodiversity and the sustainable use of ecosystem services.
5. Endeavoring to raise employees' awareness of biodiversity, and collaborating with stakeholders, we will contribute to the building of a society that nurtures biodiversity

Biodiversity preservation scheme for company-owned forests

Basic Policy on the Preservation of Biodiversity			
Designating particularly sensitive areas and limiting logging		Matters to consider or confirm when performing forestry operations	
Japan	Environmental forest areas (see page 28) Riparian forests Protected areas (see page 41)	Limiting logging and maintaining existing forest ecosystems Preserving biodiversity by prohibiting logging Protection of the Blakiston's fish owl by prohibiting logging	Japan Commercial forest areas (see page 28) Adjustment of Location and Timing for Forestry Operations Preserving Blakiston's Fish Owl Habitat while Pursuing Forestry Operations (see page 41) Presence of endangered species included in prefectural Red Lists*
Overseas	Conservation area / Protected forests* (see pages 30,41) <small>* Areas not designated for afforestation. Riparian forests are managed as part of these areas.</small>	Preserving biodiversity by prohibiting logging	Overseas Performance of commercial operations that are considerate of local biodiversity
Biodiversity surveys (Domestic company-owned forests and overseas conservation areas / protected forests)			
Topography confirmation of riparian forests and other areas, fixed-point surveys of forest ecosystems, etc. Ex.) Regular surveys in overseas protected area (see page 41), surveys of Blakiston's fish owls conducted with the Wild Bird Society of Japan, ornithological and vegetation surveys in the company-owned Kitayama Forest in Shizuoka Prefecture			

Third-Party Sustainable Forest Management Validations

* List of threatened animal and plant species.

Forest certification programs (see pages 26-27)

Forest certifications have been awarded to Nippon Paper Industries in recognition of its practice of biodiversity-friendly forest management in all of its company-owned forests in Japan and overseas.

Case

Preserving Blakiston’s fish owl habitat while pursuing business activities – Collaborating with the Wild Bird Society of Japan

In 2010, Nippon Paper Industries entered into an agreement with the Wild Bird Society of Japan where approximately 126 hectares of forestland owned by the company in Hokkaido was identified as a sanctuary for Blakiston’s fish owl. This sanctuary is home to three confirmed braces of this endangered species.

In May 2015, we signed a memorandum of understanding* for the pursuit of business activities while preserving Blakiston’s fish owl habitat in company-owned forests in Hokkaido. After collaborative surveys conducted in an atmosphere of mutual trust, we have clearly documented standards for methods and timing for continuing lumber production, while also protecting habitat and breeding activity, without establishing protected areas.

*The activities pursued under this memorandum of understanding were presented with a 2015 Biodiversity Action Award by the Japan Committee for the United Nations Decade on Biodiversity

Surveys undertaken with the Wild Bird Society

Fiscal Year	Survey Description
2010	Large trees suitable as Blakiston’s fish owl habitat
2011	Bird species habitat
2012	Nesting survey focusing on white-tailed eagles and Steller’s sea eagles, and an audio survey of nocturnal bird species
2013	Mammals and Blakiston’s fish owl habitat
2014	Geographic activity scope of the Blakiston’s fish owl
2015-	Blakiston’s fish owl habitat, other bird species habitat

Blakiston’s fish owl

Standing 70 to 80cm high and weighing 3 to 4.5 kg, Blakiston’s fish owl is the world’s largest owl, with a wingspan of 180 cm. Formerly numbering over 1,000 and found throughout Hokkaido, Blakiston’s fish owls are now found mainly in the eastern parts of Hokkaido, with confirmed numbers of around 160, making up 70 braces. Blakiston’s fish owl was identified as a national protected species in 1971, and placed on the Red List of critically endangered species by Japan’s Ministry of the Environment.



(Photo courtesy of the Wild Bird Society of Japan)

Case

Conducting biodiversity overseas research

(AMCEL S.A, Brazil and Volterra S.A., Chile)

AMCEL S.A., located in the Brazilian state of Amapa, owns approximately 300 thousand hectares of land and has set aside 180 thousand hectares as a conservation area. Volterra S.A., in Chile, owns approximately 19 thousand hectares of forests and has designated about 5 thousand hectares as protected forests.

These areas are home to large numbers of plant and animal species, many of which are rare or endangered. Protecting them, therefore, is very meaningful. Both AMCEL and Volterra undertake surveys and other initiatives to research and monitor biodiversity in the areas they are protecting.

Initiatives by afforestation companies in South America

Fiscal Year	Description
AMCEL S.A.	
Regular water inspections	Installation of equipment for monitoring the quality and level of water in the afforestation area, and performance of regular water inspections
Cooperation in a wildlife release program	Annual provision of the conservation area for use in a wildlife release program being conducted by the Brazilian Institute for the Environment and Renewable Natural Resources
Collaboration with the Federal University of Para	Ongoing monitoring by AMCEL following a joint mammalian habitat survey in cooperation with the university’s Department of Biological Sciences in afforested and other areas. Ongoing monitoring of fish populations in waters adjacent to afforested areas in cooperation with the university’s ecology research laboratory since 2016.
Collaboration with the local environmental research institution in Amapa state	A vegetation survey was initiated in a protected area to determine the distribution and status of plant life.
Volterra S.A.	
Wildlife surveys in the company’s Protected forests	Using camera traps and other tools, surveys have identified mammals (including pumas) and bird species. The 2018 survey confirmed the existence of the “near-threatened” pudu and several rare species.
Regular river surveys	To research impacts of forest operations on ecosystems, surveys of river water quality and biodiversity are performed on a regular basis in company-owned afforested areas.

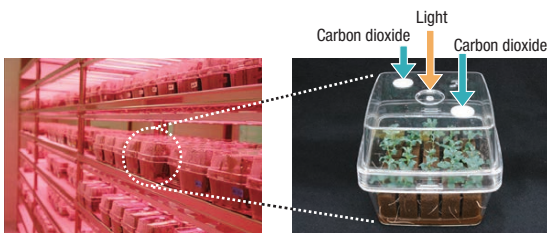
Initiatives Leveraging Our Resources and Technologies

Contributing to the protection of a variety of plant species

● **Using proprietary technology**

Nippon Paper Industries Co., Ltd. is working to protect precious plant species. It does this by using a proprietary technology that encourages cuttings to take root.

This technology, which promotes photosynthesis, enables the propagation of even trees that failed to root via traditional cutting technology. This technology has enabled the propagation of endangered plant species and prominent cherry trees throughout Japan. It, therefore, preserves not only biodiversity but also history and culture.



Even plant species that normally fail to root by cutting are able to root



● **Use of company-owned forests**

Case

Supporting the activities of the Shirane-aoi wo Mamoru Kai

Shirane-aoi (*Glaucidium palmatum*: Japanese wood poppy) is designated as a “threatened II” species in the Red Data Book for Gunma Prefecture. To protect and breed this plant species, the Shirane-aoi Preservation Group was set up in December 2000, mainly at the initiative of Gunma Prefectural Oze High School and the residents of the village of Katashina in Tone-gun, Gunma Prefecture. As recognition of its achievements to date, it received the Greenery Day Minister of the Environment’s Prize for Meritorious Service Related to the Natural Environment in April 2014.

Since its inception, Nippon Paper Development, which manages Nippon Paper Industries’ Sugenuma Forest, has supported the operation of the Shirane-aoi Preservation Group, and Nippon Paper Industries has offered a portion of the Sugenuma Forest as a plantation site for Shirane-aoi.



Planting Japanese wood poppies

Since 2002, the Group employee volunteers have participated in planting, seed collection, and other activities.

Results of Nippon Paper Industries Co., Ltd.'s cherry tree preservation activities



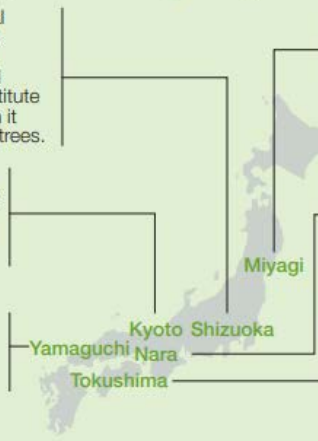
Cherry trees of Japan's National Institute of Genetics, which has numerous cherry tree species considered to be of exceptional value. Many people visit the institute once a year, in early April, when it allows the public to view these trees.



The Tatekawa cherry tree owned by Shinnyodo, a temple in Kyoto, and said to be connected to the third shogun of the Tokugawa dynasty



Cherry tree presented by the feudal lord Kikkawa Hiroie to Ueda Soko, a noted warrior and tea master, around 1625



Cherry tree owned by Shiogama Shrine and registered as a Japanese national treasure



The Uwamizuzakura cherry tree owned by Fuefuki Shrine and dating back to the end of the 12th century.



The Hachisukazakura cherry tree, estimated to be over 250 years old



Cherry tree presented by Kikkawa Hiroie to Ueda Soko (Photo courtesy of Uedaryu-Wafudou (Hiroshima Prefecture, Japan))

Responsibility to Customers

Stakeholder opinions are critical for bringing to our attention issues that are important for coexisting with society and growing sustainably.

We now receive large numbers of customer questions regarding environmentally and socially conscious raw material procurement and product development.

The Nippon Paper Group is committed to providing products that respond to customer concerns and desires.



* Please refer to our Integrated Report 2019 PP.66-67

Indicators	Key Objectives	Performance (fiscal 2018)
Materiality Enhancement of Product Safety		
Initiatives to reduce product safety risk	Strengthening of the product safety management system	<ul style="list-style-type: none"> Convened two meetings of the Group Product Safety Committee, which made decisions on Groupwide measures, shared information among Group companies, and discussed safety matters. Established a management system for brands used for food products, and conducted audits to confirm operating conditions at mills making products under these brands.
	Establishment of a product safety management system for new products	Specified risk management items for new products that cannot be handled under the existing management systems.
	Maintain a higher level of FSSC22000-based management for Paper-Pak products	Conducted product recall training at each business location and revised the manual on crisis management procedures for food safety to comply with the revised standard. Passed FSSC22000 renewal inspection with positive results and no citations for any business location.
Materiality Enhancement of product value		
Forest certification coverage (the provision of products with forest certifications)	Obtain the right to display forest certification logos on substantially all Nippon Paper Industries Co., Ltd. Paper-Pak products by 2020.	Displayed forest certification logos on approximately 200 million Paper-Pak products. (Result for the previous fiscal year: Approx. 20 million)

Policy and Management

In addition to the development of various products that are indispensable to everyday life, we continue to pursue quality which meets the expectations of customers

Basic Stance

Providing reliable products and services

The Nippon Paper Group engages in a broad spectrum of businesses including paper, films, healthcare products, chemical products, lumber, and construction materials, to serve a wide range of both corporate customers and consumers as it continues to develop and grow in tune with society.

Providing stable supplies of products that are indispensable to everyday life, and applying the Group's strengths to develop products that please customers, are how we fulfill our basic responsibility to play a useful role for society. Assuring quality and safety, we will continue to live up to the trust society places in our products and services.

Quality Management Initiatives

Properly managing quality for individual products

Each Group company actively promotes efforts aimed at acquiring ISO 9001 certification and engages in quality management suited to the characteristics of its products.

⇒ ISO 9001 certification status

https://www.nipponpapergroup.com/csr/2019.3_ISO9001_e.pdf

●Quality audits at companies making paper containers for liquids

Customers are constantly increasing their demands for quality and safety in packaging materials. To rapidly respond to these demands and anticipate future demands, the Paper-Pak Quality Assurance Department of Nippon Paper Industries Co. Ltd.'s Paper-Pak Sales Division regularly conducts quality audits of Nippon Paper Liquid Package Product Co., Ltd.'s three mills. In addition, the three mills annually conduct quality meetings and annual quality audits to enhance quality by ensuring a uniform understanding of quality management and critical food safety concerns regarding chemical substances, microorganisms, and foreign matter.

● Quality assurance systems in the paper and paperboard divisions

Nippon Paper Industries has adopted a Service Engineer (SE) system to shorten the distance between customers and production facilities. Under this system, SEs listen directly to customers' voices. They do this, for instance, by visiting customers and conducting quality patrols in which they observe printing and processing lines where paper is used. To create even closer customer relationships, we revamped our quality assurance systems in 2013, assigning technical experts to sales divisions. In addition, to enable swift responses to diverse customer needs, regular quality-information meetings and other means are used to promote collaboration between sales and technical divisions.

● Responding to instances of defective products

For defective products, action is taken by individual Group companies.

In the Paper and Paperboard Division of Nippon Paper Industries Co., Ltd., for example, sales technicians act as the central contact point, working with the relevant mill and head office departments to develop solutions by using tools such as a database of safety-related problems.

At Nippon Paper Crecia Co., Ltd., which sells consumer products, contact information for the Customer Service Office is provided on all products and the Customer Service Office itself is placed directly under the president to ensure that all issues raised by customers are reported. Furthermore, the company's website is configured to accept customer queries and comments. The company consistently acts in good faith to ensure that customers are fully satisfied.

● **Verification and audit of wastepaper pulp blending ratios and use of thinned wood**

Nippon Paper Industries has established a management system for providing customers with guarantees that products are made with a certain percentage of wastepaper pulp content and with wood from forest thinning.

Steps are taken to manage and review production procedures at each of the Group’s mills, based in part on the standards and criteria of the ISO 14001 environmental management system. The proper operation of content management systems is confirmed in internal and external audits, and customers verify that products are being manufactured to content specifications.

Identifying Customer Needs

Proactive communication

Nippon Paper Group engages in proactive communication to identify customer needs across a wide range of areas. We receive numerous inquiries from customers about the tree species, countries of origin, and legality of our raw materials. In response, we explain measures we have put in place to address these matters and provide information on third-party evaluations of our activities (see page 21).

We also actively welcome customers for inspections and tours of mills and plants to give them a first-hand view of production facilities and, thereby, gain their understanding of our production activities.

● **Nippon Paper Industries Co., Ltd.’s Paper-Pak Sales Division**

Nippon Paper Industries’ Paper-Pak Sales Division conducts technical lectures for customers (dairy and beverage companies) providing them with information on how to properly use filling machines. At the same time, the division continuously strives to improve its products based on valuable feedback from customers.



Technical lecture

● **Nippon Paper Industries Co., Ltd.’s Packaging Communication Center**

Nippon Paper Industries Co., Ltd. aims to help enrich daily life through packaging made with woody biomass. The company works together with processing companies and product manufacturers to provide the world with processing technologies and the SHIELDPLUS® series of paper-based packaging materials with outstanding barrier properties.

System for Advancing New-product Development

Building a system for accelerating development

The Nippon Paper Group has established its New Product Development Committee to accelerate business structure transformation. New product development teams operating under the committee identify research themes and present them in committee meetings held every three months. For themes approved by the committee, formal projects are established and provided with human, financial, and other resources.

The committee is chaired by the General Manager of the Corporate Planning Division and its membership is composed of the president of Nippon Paper Industries and the other members of the Management Execution Committee. Depending on the meeting agenda, presidents of subsidiaries or affiliates, and heads of relevant divisions, may participate in committee meetings in order to speed progress toward commercialization.

System for Advancing New-Product Development



The Stable Supply of Products

Stable supply systems optimized by product

To secure on-demand-supply, we devote considerable effort to maintaining stable production by securing reliable procurement of raw materials, and systematically maintaining and upgrading our production facilities. Sales departments and production units coordinate their activities to provide customers with reliable supplies of products by developing flexible production plans that avoid waste, and managing inventories appropriately.

● Addressing natural disaster risks (Nippon Paper Industries Co., Ltd. headquarters and individual mills)

Nippon Paper Group, having learned much from past natural disasters, has developed practical guidelines for addressing natural disaster risks. Working from these guidelines, each mill and plant has examined its natural disaster response measures and revised its disaster response manual.

For its part, Nippon Paper Industries, in preparation for a major disaster that could disable its headquarters, has established a backup facility that could immediately take over headquarters functions. The company also conducts training in the transfer of functions from its headquarters to the backup facility.

● Emergency Manuals (Newsprint)

Newspapers are a highly public information medium, so the need for the stable supply of newsprint is especially strong. The paper industry, therefore, has prepared regional emergency manuals for use when supply operations cannot be conducted in the usual manner.

In the event of a disruption to communication and transportation systems as a result of a major disaster, paper companies follow these manuals to ensure the smooth supply of newsprint.

● Business continuity management system (Nippon Paper Industries Co., Ltd. Paper-Pak Sales Division)

Nippon Paper Industries' Paper-Pak Sales Division has developed its own business continuity guidelines and established its own management system, so that it can maintain production even in times of emergency. The division is moving ahead with the selection of priority items for emergencies and procurement of key raw materials from multiple manufacturers. It has also diversified its production across multiple production sites to lower its disaster risk exposure.

Stabilization of Operations

Installing a newly developed system of wireless sensors for 24/7 detection of equipment abnormalities

Nippon Paper Industries Co., Ltd. and NIPPON PAPER UNITEC CO., LTD. have developed the "e-musen junkai" (e-wireless patrol) system, which uses wireless sensors to constantly monitor equipment for signs of abnormalities.

The pulp and paper is a prime example of a process industry, where the stable operation of equipment has a direct impact on the ability to stably supply products and maintain high quality. Maintaining equipment, therefore, is critical, and proper maintenance depends on monitoring for signs of abnormalities by checking vibration and temperature.

In the past, signs of abnormalities were discovered mainly by people who patrolled production facilities. This approach depended greatly on unquantifiable skills and expertise in the form of the experience and intuition of those checking production facilities. With the "e-musen junkai" (e-wireless patrol) system, IoT technology is used to accumulate temperature and vibration acceleration data on equipment in operation and monitor trends in this quantitative data. Properly responding when an abnormal trend is detected helps to prevent equipment trouble and stabilize operations (see page 31).

Nippon Paper Industries Co., Ltd. is gradually installing the "e-musen junkai" system in all of its domestic mills and actively selling it to companies outside the Group.

⇒ "e-musen junkai" (e-wireless patrol) system webpage (Sales company: Sakurai Co., Ltd.)

<http://www.sakurai.co.jp/landing/e-musen/index.html>

(Japanese Only)

Water Supply Risk related to Our Water Usage

No Threats to Water Supplies

Presently, we have received no information from either government authorities or local communities that water usage by Nippon Paper Group company mills is having negative environmental impacts. Our operations are posing little risk to water supplies in Japan.

In addition, simple risk assessments performed by third parties have not indicated that water supplies are seriously threatened by our operations.

Enhancement of Product Safety

Responding to customer faith by establishing the Product Safety Management System to enhance safety

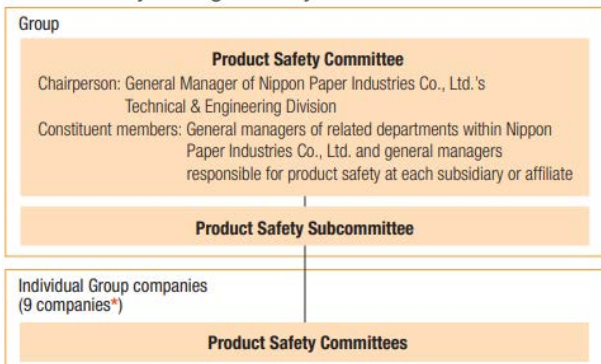
Product Safety Management System

Establishing a Group system

The Nippon Paper Group Product Safety Committee oversees all matters related to product safety. It discusses and makes decisions on directions and policies, and other important product safety matters, for the entire Group.

Reporting directly to the committee, the Product Safety Subcommittee monitors and manages activities at each Group company. Drawing on information and the exchange of opinions among Group companies, the subcommittee also deliberates on optimal responses to matters of concern and submits its findings to the Product Safety Committee. Each Group company establishes its own product safety committee and engages in appropriate product safety activities.

Product safety management system



※Nippon Paper Industries Co., Ltd., Nippon Paper Crecia Co., Ltd., Nippon Paper Papyrus Co., Ltd., Nippon Paper Lumber Co., Ltd., Nippon Seitai Corporation, NP Trading Co., Ltd., Nippon Paper Development Co., Ltd., Akita Jujo Chemicals Co., Ltd. (As of March 31, 2018)

Philosophy and Basic Policy on Product Safety

(established on October 1, 2004, revised on August 1, 2014)

Philosophy

We pledge to work to improve safety at every stage of the life cycle of our products, from design to manufacture, supply, and disposal, and to provide products and services that the public can trust.

Basic Policy

1. To provide safe products and services in response to the continued trust of our customers.
2. To respect related laws and standards in order to guarantee the safety of our products and services. We pursue safety not only as expected under Japanese laws but also from a global perspective.
3. To provide customers with precise information on the safety, features, and correct usage of our products.
4. To set up a product and service safety management structure and ensure that all group employees have a thorough awareness of the importance of product safety.

Approach toward Product Safety

System for legal and regulatory management and compliance

Nippon Paper Group, acting in compliance with laws, including Japanese laws such as the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, PRTR Law, and Food Sanitation Act, works to ensure product safety by employing management approaches adapted to the characteristics of particular operations and products.

Product Safety Management Approach

Overall Level

- ISO 14001 Environmental Management
Management of chemical substances included in raw materials

Brands for Food Products (Paper and Paperboard businesses)

- Product safety management guidelines for paper and paperboard with direct exposure to food products
Specification of brands and production facilities subject to safety management measures; implementation of enhanced facility- and management-system-based measures to prevent contamination by insect and other foreign matter; promotion of hygiene management; chemical substance management based on Japan Paper Association voluntary standards; and annual confirmation of the functional status of the above measures.

Food, beverages, and their containers (Paper-Pak Division)

- HACCP¹ hygiene management (Food containers)
Adoption and enhancement of facilities that emphasize production environment hygiene, the use of defect-detection devices to monitor products, and wearing of clothing to prevent contamination by hair
- FSSC 22000² food safety standard
- Food defense measures
Prevention of intentional threats to food products by equipping paper-pak manufacturing plants with entry and exit controls, cameras for quality control, tight controls on access to chemicals, and other such security measures.

1 HACCP

An acronym for "Hazard Analysis and Critical Control Point"

2 FSSC22000

FSSC 22000 is a food safety management system certification scheme integrating the ISO 22000 international food safety management system standard, which calls for implementation of HACCP, the ISO/TS 22002 prerequisite program on food safety, and other requirements

Acquisition of FSSC 22000 certifications (as of March 31, 2019)

Company Name	Mill, Operating Division, Production Company
Nippon Paper Industries Co., Ltd.	Gotsu Mill ³ , Nippon Paper Liquid Package Product Co., Ltd. (Egawa Mill, Miki Mill, Ishioka Mill)

Nippon Dynawave Packaging Co.

- 3 CMC (carboxymethyl cellulose), cellulose powder, and stevia and licorice sweeteners (all for use in food)

- **Halal certification obtained**

In March 2017, Halal certification⁴ was obtained for the nucleic acid (RNA-M) and dissolving pulp produced at the Gotsu Mill.

The same certification was obtained for CMC (carboxymethyl cellulose) the following October. As a result, the Gotsu Mill can now export products Muslims can safely consume to Islamic countries.

- 4 **Halal certification**

Halal certification is presented for products that, upon inspection of raw materials, production processes, ingredient and product storage conditions, and other matters, have been determined to be in keeping with Islamic law. Products exported to Islamic countries should be Halal certified.

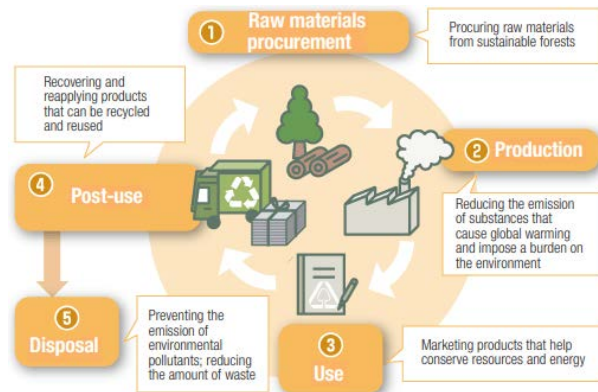
Enhancement of Product Value

We provide products, including forest certified products, that meet customer demands.

Development of Environmentally Friendly Products

Considering every stage of the product lifecycle

Nippon Paper Group products use wood raw materials – renewable biomass resources – and are recyclable. Building on the fact that our products have a low environmental impact by their very nature, each Group company strives to develop products that are cognizant of the environment at every stage beginning with raw material procurement and proceeding through production, consumption, post-consumption, and disposal.



1 Environmentally Friendly Raw Materials Procurement

Case

Providing certified paper by starting with properly managed forests

(Nippon Paper Group)

The forest certification system is composed of two components—the Forest Management (FM) component, which certifies that forests are sustainably managed from environmental, social, and economic perspectives, and the Chain-of-Custody (CoC) component, which certifies that products from certified forests have been properly processed and distributed. The Nippon Paper Group has obtained CoC certifications at its principal mills, and provides certified paper products.

⇒ Status of CoC certification acquisition at principal production sites
https://www.nipponpapergroup.com/csr/2019.3_CoC_e.pdf

Case

Obtaining certifications for Paper-Pak products

(Nippon Paper Industries Co., Ltd., Paper-Pak Sales Division)

Nippon Paper Industries Co., Ltd.'s Paper-Pak Sales Division obtained CoC certifications from the FSC® (FSC® C0128733) and PEFC international forest certification organizations in February 2016. It took this step to promote the environmental advantages of PaperPak products over plastic bottles and metal cans, and enhance appreciation of both Paper-Pak products and the company's brand. The division is working to supply Paper-Pak products with forest certifications to basically all customers* by fiscal 2020, when the Olympic and Paralympic Games will be held in Tokyo.

* Nippon Paper Industries Co., Ltd. was able to place forest certification logos on approximately 500 million Paper-Pak products in fiscal 2018, up from approximately 200 million in fiscal 2017.

① ⑤ Environmental consciousness in raw material procurement and waste handling

Case

SPOPS® Paper Containers Replacing the Refill Pouch

(Nippon Paper Industries Co. Ltd.)

Nippon Paper Industries Co., Ltd. has developed SPOPS®, a replaceable paper container designed to take the place of plastic pouches for refills of shampoo and other products. Commercialization efforts for this new product are now moving forward. With SPOPS®, there is no need for pouring from a pouch into a dispenser; product refills are accomplished simply by replacing a cartridge. PAPERPAK manufacturing technology is what makes the SPOPS® approach to product refills possible. SPOPS® makes daily life more convenient by simplifying refills. Because it maximizes the use of paper - a recyclable material - it also helps to reduce plastic waste. In February 2019, we completed development on a specialized filling machine that we are installing at OEM manufacturers of cosmetics as we move toward full-fledged sales activities.



The specialized SPOPS filling machine (left) and product (right)

① ~ ⑤ Environmental consciousness throughout the product lifecycle

Case

SHIELDPLUS PREMIER® oxygen- and moisture-barrier materials

(Nippon Paper Industries Co., Ltd.)

Nippon Paper Industries Co., Ltd. has developed SHIELDPLUS®, an environmentally friendly packaging material made from paper, which is recyclable and ultimately renewable. Sales of this product began in November 2017.

The company is also developing SHIELDPLUS PREMIER®, a product with even greater moisture-barrier properties that it began providing on a sample basis in April 2019. Group company Jujo Thermal Oy (headquarters: Kuuttua, Finland) has begun considering production of the SHIELDPLUS® series.

Performing as well as existing products, SHIELDPLUS® offers outstanding barrier properties and is seen as a substitute for aluminum and barrier-film options. As a replacement for aluminum, SHIELDPLUS® enables the use of metal detection devices for inspection procedures. As a replacement for barrier film, SHIELDPLUS® reduces the use of plastic, which is made from petroleum, a depletable resource. It, therefore, results in lower CO₂ emissions, from manufacturing through disposal, than do conventional packaging materials made only from plastic.

The shift to paper packaging is accelerating globally in light of the recent attention on plastic pollution of marine environments. The environmental benefits the SHIELDPLUS® series offers in addition to its outstanding barrier properties, make it appropriate for use under a wide range of circumstances and for various types of packaging applications.



Examples of packages that use SHIELDPLUS®

4 5 Post-use environmentally friendly disposal

Case

MinerPa®, a new functional material made from trees

(Nippon Paper Industries Co., Ltd.)

Nippon Paper Industries Co., Ltd. has developed a unique technology for densely bonding inorganic particles to the surface of wood pulp (cellulose fiber). This technology is based on the company’s accumulation of pulp, inorganic, and other technologies for making paper and has given rise to MinerPa®. Premarketing work for this new product began in February 2017, and technologies are being developed based on customer needs.

MinerPa® is a functional material based on wood pulp, a recyclable natural fiber, and combines the formability of wood pulp with the deodorizing/antibacterial, flame-retardancy, X-ray shielding, antiviral, and other properties of inorganic materials. MinerPa® can be recycled for reuse as paper or as fuel for generating heat. Nippon Paper Industries Co., Ltd. has adopted a new-material development concept, which is to flexibly change materials into granular, solid, and other forms to offer functional, design, and other types of value to serve customer needs. MinerPa® is a product that is based on this concept and is being offered as a new earth- and people-friendly material that delivers value beyond that of paper (sheets).

In fiscal 2018, the company moved forward with plans to establish a demonstration plant at the Fuji Mill (Fuji, Shizuoka Prefecture) with operations starting in October and the scale of trial production increasing. This facility will have an annual production capacity of at least 450 tons. The company will establish a system for the full-scale distribution of samples with an eye toward commercialization.

With the establishment of the demonstration plant, the company will search for promising business areas and focus on rapidly developing applications for commercialization



Demonstration Plant for MinerPa®

Providing Products that Respond to Customer Demands

Responding to changing quality demands

Case

Super Jet Fiber insulation material

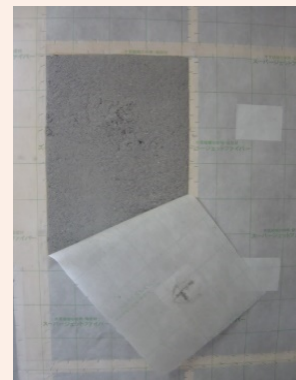
(Nippon Paper Lumber Co., Ltd.)

Nippon Paper Lumber manufactures Super Jet Fiber, a residential heat insulation material that, because it is made primarily of recycled newspapers, is close to a natural material.

As a blown-in thermal insulation material, Super Jet Fiber offers the benefits of low environmental impact and high insulating efficiency, which have made it increasingly popular for use in ZEH (net zero energy houses).



Super Jet Fiber (insulator)



example of construction

Case

Water-based functional coating resin

(Nippon Paper Industries Co., Ltd., Chemical Sales Division)

The Chemical Business of Nippon Paper Industries Co., Ltd. manufactures and sells SUPERCHLONÁ®, a functional coating resin. This product adds adhesion properties to coatings and inks, making it possible to coat or print on automobile bumpers, soft packaging films for food, and other items made of polypropylene, a material with poor adhesion properties.

In addition to the original organic-solvent-based product, the company also makes a low-environmental impact water-based version of this product to meet market needs inside and outside Japan. It is also working diligently to develop products that respond to detailed customer needs.



Super Cron®
(Water-based type)

Case

Paper-Pak Products with Closures

(Nippon Paper Industries Co., Ltd., Paper-Pak Sales Division)

Nippon Paper Industries Co., Ltd. is expanding its lineup of the triangular-roof-shaped paper cartons used in chilled distribution. Additions include Pure-Pak®¹ Curve; Pure-Pak®Sense, which is suited for highly viscous liquids; Pure-Pak®Diamond, which conveys the image of a PET bottle for beverages; and NP-PAK Rock, which features two corner panels that can be used for product messages. In addition, in September 2018 Nippon Paper



From right: Pure-Pak® Diamond, Pure-Pak® Curve, Pure-Pak® Sense, and NP-PAK Rock liquid containers with closures.



NSATOM®

Industries collaborated with Shikoku Kakoki Co., Ltd. to develop the Nippon- Shikoku Aseptic Total Optimized Method (NSATOM®). NSATOM® meets market needs for a filling system that can handle solid materials, long fibers, high-viscosity filling, and a high degree of hygiene, and is the world's first aseptic filling system for paper packs that enables room-temperature storage. By adding more variety to paper packs, the company is increasing added value and responding to customers' needs.

The closures Nippon Paper Industries Co., Ltd. provides on its paper packs are based on universal design concepts. Because they do not use an inner lead, they are easy to open and use less plastic, which makes them more environmentally friendly and lighter² than similar products made in Japan.

1 "Pure-Pak®" is a trademark of ELOPAK AS of Norway.

2 Based on research by Nippon Paper Industries Co., Ltd.

Case

A product line for a wide range of needs
(Nippon Paper Crecia Co., Ltd.)

Nippon Paper Crecia goes to great lengths to develop products that respond to customer needs. It pays meticulous attention to feedback received through its Customer Service Office and sales channels, and works to develop products that meet newly emerging needs and performance demands.



Kleenex® Lotion Tissue Hada Ururu



Poise® Sara-sara Suhada
Pantiliner



Poise® Hada Care Pad



SCOTTIE® fine four-roll,
triple-length Kitchen
Paper Towel

Human Rights, Employment and Labor Responsibility

Large numbers of people work in the Nippon Paper Group's expansive company-owned forests and large-scale production sites. Securing their safety and health is the Nippon Paper Group's top priority.

The Nippon Paper Group aims to be an organization where a diversity of people can exercise their individual strengths, inspire each other, and help each other achieve new depths of knowledge.



* Please refer to our Integrated Report 2019 PP.68-70

Indicators	Key Objectives	Performance (fiscal 2018)
Materiality Occupational Safety and Health		
Number of serious occupational accidents	Prevention of injuries to any person at a mill site <ul style="list-style-type: none"> Elimination of serious occupational accidents 	One serious occupational accident (an in-plant traffic accident on November 6, 2018)
Materiality Maintenance of a Vigorous Organization		
Promotion of reexamination of work styles	Adoption of measures for reexamining work styles	Conducted management training for personnel at the general manager level that included business process reviews

Policy and Management

Building a healthy and safe workplace environment in which employees, who serve as the driving force behind the Group's corporate activities, can take full advantage of their individual capabilities while conforming to the highest ethical standards

Basic Stance

Focusing on the optimal application of diverse human resources while ensuring safety and disaster prevention

Nippon Paper Group respects human rights and aims to develop a working environment that makes the most of a diverse range of human resources. Work-style reform, for example, has received much attention in recent years, and we are moving pro-actively to help ensure that employees can maintain work-life balances that suit them.

We also make every effort to maintain and enhance safe working environments and to take all appropriate measures for safety and disaster preparedness.

Philosophy and Basic Policy

Aiming to be a company where employees can look to a better future

Gaining the trust of society and fulfilling our responsibilities requires that Nippon Paper Group employees act with high morals and strong motivation. Promoting employee awareness and behavior consistent with that belief, helping individual employees improve their capabilities, and rewarding performance are among our most important responsibilities. The Group established its Philosophy and Basic Policy on Human Rights, Employment and Labor based on this understanding.

Philosophy and Basic Policy on Human Rights, Employment and Labor

(established on October 1, 2004)

Philosophy

Respecting fundamental human rights at all times and making the most of the individuality and capabilities of a diverse range of human resources, we aim to create a company overflowing with dreams and hope.

Basic Policy

1. Respect for human rights

We pledge to respect fundamental human rights and not to engage in any behavior that disregards such rights, including discrimination based on matters such as nationality, race, place of birth, sex, religion, medical conditions or disabilities, sexual harassment and the abuse of power. We also pledge to manage personal information appropriately in order to prevent infringements on privacy.

2. Prohibition of forced and child labor

We pledge not to force any employees to carry out unreasonable work. We also pledge not to employ children aged under the minimum employment age stipulated in local laws and regulations.

3. Promotion of personnel training and skill development

We pledge to promote personnel training and skill development programs to help improve individual employees' abilities and skills through the establishment and maintenance of structures to make the most of the individuality and capabilities of a diverse range of human resources.

Initiatives in Respect of Human Rights

Confirming, verifying, and educating with the help of a third-party perspective

● Exchanging opinions with Amnesty

International Japan

In 2014, divisions in charge of procuring wood chips and managing labor relations at Nippon Paper Industries each met with Amnesty International Japan to share opinions. The meetings helped us to deepen our understanding of global trends in human rights issues. They also gave us an opportunity to explain and discuss conditions at the company and prioritize our actions going forward.

Later, in fiscal 2015, we embarked on an examination of human rights conditions at subcontractors in Japan and at overseas chip suppliers. Based on examination results, we are making changes by employing PDCA cycles as we continue our dialogue with Amnesty International Japan.

● Paying attention to human rights issues at affiliated companies in Japan

Nippon Paper Industries Co., Ltd. conducts surveys on human rights issues at affiliated companies in Japan. In fiscal 2015, we had these affiliates perform self-checks and, beginning in fiscal 2016, each of these companies began to move forward with examinations of survey results and ways to improve.

● Concern for human rights across the supply chain

Concern for human rights and labor across the entire supply chain is clearly defined in the Nippon Paper Group's Philosophy and Basic Policy Concerning Raw Materials Procurement. The Group audits suppliers through surveys and interviews them regarding these concerns (see pages 16 and 21). In addition, in fiscal 2018, employees responsible for procurement performed on-site inspections of suppliers in Vietnam and Chile. These were supplemented with interviews covering matters such as health, hygiene, safety, disaster preparedness, and local environmental concerns.

In managing forests, the Group devotes significant attention to protecting the culture and traditions of residents in each region of its overseas afforestation operations (see page 25).

● Education and training

In pursuit of personnel management cognizant of human rights, the Nippon Paper Group has employees responsible for personnel matters participate in training courses hosted by government agencies.

Occupational Safety and Health

By working daily to uncover inherent risks, maintaining a workplace environment in which employees can go about their duties without undue anxiety

Basic Stance

Securing safety and health, and preventing disasters

We introduced our Philosophy and Basic Policy on Safety and Health Measures in 2004 in the aim of creating a workplace atmosphere that fostered health and peace of mind for all employees. In accordance with this policy, employees and management work together on such key themes as ensuring safety and health and preparing for disaster.

Although completely eliminating all risk from the workplace is not possible, maintaining an unwavering daily commitment to uncovering and minimizing risks is essential. Consistently engaging in sound management while responding to the trust of employees is also important for building a pleasant and comfortable workplace that helps to maintain and improve employees' health. Based on this understanding, we have created labor safety and health systems and continuously strive to prevent accidents and provide safe, pleasant working environments.

Philosophy and Basic Policy on Safety and Health Measures

(established on October 1, 2004)

Philosophy

In addition to acknowledging that it is the company's duty to guarantee safety and health, and to strive to develop pleasant, improved working conditions, we pledge to work ceaselessly to prevent any and all accidents, minor or major.

Basic Policy on Safety and Health

1. To respect the Industrial Safety and Health Law.
2. To establish self-imposed standards and step up daily management.
3. To set up a management structure and clearly define roles, responsibilities, and authority.
4. To strive to improve safety and health training.
5. To develop and maintain a safe, pleasant working environment.

Basic Policy on Safety and Risk Prevention

1. To respect laws and regulations pertaining to safety and risk prevention.
2. To establish self-imposed standards and step up daily management.
3. To set up a management structure and clearly define roles, responsibilities, and authority.
4. To strive to improve safety and risk prevention education and training.
5. To work in cooperation with related government and local communities and share information.

System to Promote Occupational Safety and Health

To build a safe workplace environment

To promote the comprehensive safety and health management efforts, the Nippon Paper Group has established the Safety and Disaster Prevention Committee, which coordinates Group-wide occupational safety and health, disaster prevention, and security measures. Nippon Paper Industries Co., Ltd. holds annual labor and management occupational safety and health meetings for personnel in charge of safety and health at headquarters, mills, and the labor union. For section managers in charge of safety and health, the company also holds meetings twice each year for people in charge of safety at headquarters and mills. The company also holds annual meetings for the heads of safety and environmental control departments. Through these regular meetings, we consider measures related to companywide safety and health and formulate safety and health policies and the annual occupational safety and health management plan. Each mill and office has its own Safety and Health Committee and Safety and Health Promotion Council. Each Safety and Health Committee plans specific safety and health activities in line with company policies and measures. The committees also deliberate, decide on, and notify employees of important administrative matters and activity policies. In addition, they promote cooperation between labor and management on specific activities to ensure safety and health and prepare for disasters. Meanwhile, each Safety and Health Promotion Council promotes on-site safety and health management activities for in collaboration with partner companies and subcontractors whose employees work in-house at Nippon Paper Industries.

Occupational safety and health meetings and committee activities are conducted in accordance with an agreement with the labor union, and labor and management cooperate to promote safety and health.

System to promote occupational safety and health



● **Occupational safety and health management system**

In 2009, the Nippon Paper Group implemented its own system (NPSS※) for continuously pursuing occupational safety and health management activities at the organization level. Under this system, the company incorporates specific ongoing and voluntary activities at each mill and business site into safety and health plans in accordance with company policies and measures related to safety and health. The system is helping to improve safety and health levels through the prevention of occupational accidents, promotion of worker health, and creation of an appropriate working environment.

The Group conducts Mills Safety Audits to assess the progress of related initiatives against safety and health plans for individual mills and business sites, make improvements, and bolster companywide safety levels. Since 2010, we have conducted Mill Safety Audits as mutual safety audits among Group companies. This move has helped promote closer communications among Group companies and improved audit levels.

※ Nippon Paper Occupational Safety and Health Management System



Safety audit

Efforts regarding Hygiene and Health

Taking into consideration the importance of mental and physical health

Nippon Paper Group strives to keep its employees healthy and to detect health problems in their early stages. For example, at Group companies that are members of the Nippon Paper Industries Health Insurance Union, examinations focusing on lifestyle diseases are performed together with regular physical examinations. In addition, industrial physicians regularly visit workplaces and the Group uses the results of these visits in efforts to improve working environments. The Group also provides medical examinations for the spouses of employees.

● **Tackling mental health**

Nippon Paper Industries has organized Internet-based mental health care and counseling services for all employees. Under this system, employees are asked to complete an annual survey designed to detect needs for mental health care services.

● **Initiatives for work entailing high risks of injuries or diseases**

Nippon Paper Group strives to prevent injuries and diseases by reducing risks in work where the potential of an explosion or fire, or injury or disease, is a concern. We manage our facilities in accordance with the Industrial Safety and Health Law and other laws and regulations, and monitor our workplace environments. In locations where chemical substances are handled, we investigate the dangers and toxicity of these substances and use what we learn to take appropriate risk measures and manage residual risks.

Efforts regarding Safety and Disaster Prevention

Working steadily from various angles

● **Safety education**

In its efforts to ensure high safety awareness, the Nippon Paper Group places considerable weight on safety education for all employees, including those in management.

Nippon Paper Industries puts in place an annual Occupational Safety and Health Management System plan at each of its mills and offices, which then implements various education programs covering every stage of an employee's career from initial hiring through to supervisor training. Constantly renewing safety awareness, we are endeavoring to achieve accident-free workplaces.

● **In-plant safety measures**

Based on its mission of eliminating all personal injuries within its mills, Nippon Paper Industries has implemented safety patrols and education initiatives in collaboration with the labor union and subcontractors. In safety patrols, we provide instructions and guidance for immediately correcting unsafe conditions. As a principal employer, we also provide information, reference materials, venues, and other resources, and have confirmed that subcontractors are

conducting safety education properly. Furthermore, we enhance workplace safety by providing guidance on, and encouraging voluntary efforts, including risk prediction and risk assessment before engaging in work.



Safety patrol

● **Natural disaster and fire countermeasures**

In preparation for natural disasters, each location of the Nippon Paper Group has created disaster preparedness manuals reflecting local hazard map information and the characteristics of their particular operations and geographic location. They also cooperate with local fire departments and other public safety authorities to conduct regular disaster preparedness training.

At Nippon Paper Industries, individual business locations undergo regular disaster prevention surveys by a company specializing in risk assessment.



As part of disaster preparedness training, emergency measures for responding to insured personnel

● **Traffic safety initiatives**

The Nippon Paper Group actively participates in traffic safety education and in various traffic safety campaigns of local police authorities. Every effort is made to ensure that all employees remain conscious of the need to drive safely.



Course using a test vehicle to teach traffic safety

Status of Occupational Accidents

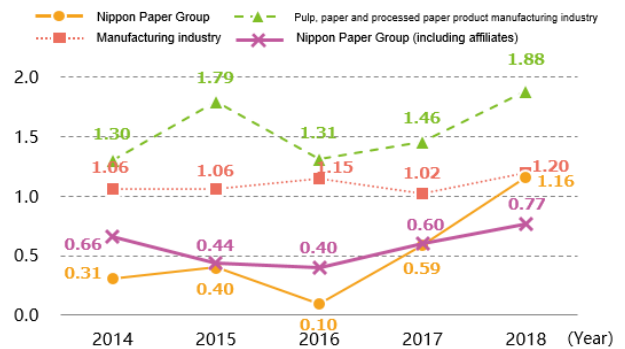
Eliminating occupational accidents

We strive to make safety top priority at all the Group's business sites, and we consider even one occupational accident to be too many. In 2018, one serious occupational accident occurred within the Nippon Paper Group (including subcontractors)*. The frequency rate for occupational accidents requiring time off from work came to 0.77, and the occupational accident severity rate worsened to 0.30, due to occupational accidents involving Group employees and subcontractor and construction company employees working in our facilities. To help ensure the safety of all workers, we are enhancing risk assessment and danger prediction activities and safety patrols. In the same vein, we are taking steps to improve communication with subcontractors and construction companies, and to provide them with proper guidance.

* The manufacturing facilities of Nippon Paper Industries Co., Ltd.; Nippon Paper Crecia Co., Ltd.; Nippon Paper Papylia Co., Ltd.; and Nippon Paper Liquid Package Product Co., Ltd.

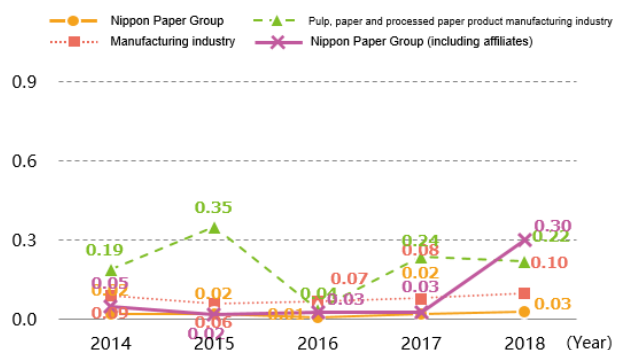
Frequency rate for lost-worktime injuries

Indicates how often occupational accidents occur, in terms of the number of accidents causing injuries or deaths per million work hours.



Occupational accident severity rate

Indicates the seriousness of occupational accidents, in terms of the number of workdays lost per 1,000 work hours.



Report: Fatal In-House Accident

On November 6, 2019, a fatal accident occurred at a cooperative parking lot at the Iwakuni Mill of Nippon Paper Industries Co., Ltd.

Overview of the Accident

Location : Cooperative parking lot at the Iwakuni Mill of Nippon Paper Industries Co., Ltd.

Subject : 39-year-old employee who had worked at the company 14 years and 10 months

Operation : Relocation of construction vehicle

Situation : When moving a truck crane being used for operations, the driver started the engine from outside the vehicle without checking the gear status beforehand and was crushed by the moving vehicle.

Countermeasure : When starting the vehicle engine, always check (while seated in the driver seat) that the vehicle is in neutral and press on the clutch when starting the engine.

Maintenance of a Vigorous Organization

With a deep respect for fundamental human rights and the unique characteristics of each individual, the Nippon Paper Group consistently recruits new graduates and actively employs women and people with disabilities.

Basic Stance

Developing a dynamic organization where diverse employees can demonstrate their capabilities

Employees with different personalities stimulating one another and helping each other deepen their knowledge serve to invigorate the workplace. Amid forecasts of a drop in Japan's working-age population, diversification of workforces is becoming increasingly vital to ensuring ongoing growth. Our aim is to be a vigorous organization emphasizing the spirit of Challenge, Fairness, and Teamwork - the values included in the Group Mission the Nippon Paper Group definitively stated in 2015.

Recruitment and Employment

Advancing discrimination-free hiring

The Nippon Paper Group employs approximately 13,000 people in and outside of Japan. In its efforts to fulfill its responsibilities to communities, the Group strives to ensure stable employment while continuously recruiting new employees.

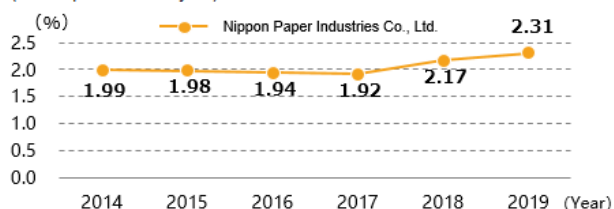
Furthermore, based on its Philosophy and Basic Policy on Human Rights, Employment and Labor (see page 51), the Group promotes discrimination-free recruitment and employment. The Group employs a selection process that bases decisions on test and interview results. Factors including nationality, place of birth, gender and level of school completed have no place in selection decisions.

● Recent and future hiring of people with disabilities

Nippon Paper Industries Co., Ltd. participates actively in recruiting events sponsored by local municipalities and organizations. As a result, our percentage employment of people with disabilities was 2.31% as of April 1, 2019, exceeding the statutory employment rate, which was revised to 2.2% in April 2018.

As this statutory employment rate is slated to rise to 2.3% in April 2021, we will continue working to increase employment at our business locations.

The rate of employment of people with disabilities (as of April 1 of each year)



● Promoting the employment of elderly persons

The Nippon Paper Group has implemented its Reemployment after Retirement System to respond to the needs of a super-aged society and to facilitate the passing on of skills.

In fiscal 2002, Nippon Paper Industries introduced a reemployment system to allow employees to work up to the age of 65. Furthermore, in response to the amended Law Concerning Stabilization of Employment of Older Persons, which took effect in April 2013, we have prepared rules that will allow employees of retirement age to continue working based on their desire and skills, at least until they begin to receive pensions.

Performance in reemploying workers who reach the mandatory retirement age^{1, 2}

(Regular employees of Nippon Paper Industries and consolidated companies in Japan)

Fiscal years	(Persons)					
	2013	2014	2015	2016	2017	2018
Nippon Paper Ind. Employees seeking reemployment	51	112	172	185	46	168
People reemployed	53	112	172	185	46	168
Consolidated companies in Japan People reemployed	—	309	327	331	227	332

¹ Beginning with fiscal 2014, figures cover consolidated companies in Japan and management employees. Until fiscal 2013, figures covered only non-management employees at Nippon Paper Industries

² Depending on staffing conditions and other factors, the company may request employees to continue working beyond the retirement age, and some employees have agreed to do this. This is why the number of people reemployed sometimes exceeds the number of retirees requesting to be reemployed.

Employment data

	Units	FY2018
No. of employees on a consolidated basis ^{1,2}	Persons	12,943
Men	Persons	11,503
Women	Persons	1,440
Overseas	Persons	2,587
Men	Persons	2,263
Women	Persons	324
Percent of upper management from The local community	%	82.1%
Part-time workers ^{1,2}	Persons	477
Men	Persons	301
Women	Persons	176
New graduates hired ³	Persons	200
Men	Persons	171
Women	Persons	29
Mid-career hires ³	Persons	204
Men	Persons	180
Women	Persons	24
Average age of employees ^{1,3}	Age	43.4
Men	Age	43.3
Women	Age	43.6
Average years of employment ^{1,3}	Years	19.3
Men	Years	19.5
Women	Years	17.8
Turnover rate ^{1,3} (Includes employees leaving at the mandatory retirement age)	%	5.7
Dispatched workers ^{1,3}	Persons	89
Men	Persons	41
Women	Persons	48

¹ Fiscal year end

² Data scope: Consolidated companies

³ Data scope: Consolidated companies in Japan

Employees by Age Group

(Nippon Paper Industries Co., Ltd., March 31, 2019)

	Units	Less than 30	30 to 50	Over 50	Total
No. of employees	Persons	952	3,243	1,476	5,671
Men	Persons	894	3,014	1,352	5,260
Women	Persons	58	229	124	411

Numbers¹ of overseas subsidiaries and employees by region (as of December 31, 2018)

	No. of companies	Men	Women	Total
North America	4	452	82	534
Australia	5	1,071	126	1,197
Asia	12	753	405	1,158
Europe	4	149	50	199
South America	3	474	53	527
Total	28	2,899	714	3,615

¹ Including non-consolidated subsidiaries

² TS Plastics SDN.BHD. is not included (acquired March, 2019)

Overseas Subsidiary Employees by Type of Employment (as of December 31, 2018)

	Units	Full-time	Temporary	Total
North America	Persons	533	1	534
Australia	Persons	1,197	0	1,197
Asia	Persons	645	513	1,158
Europe	Persons	187	12	199
South America	Persons	527	0	527
All overseas subsidiaries	Persons	3,089	526	3,615

Promoting Work-Life Balance

Realizing a balanced workplace environment

The Nippon Paper Group strives to establish an ideal workplace environment that allows employees to reach their full potential while balancing work and family needs. Nippon Paper Industries, for example, has introduced flextime work hours for its head office, research facilities, branches, and the administrative sections of its mills.

● Work-style reform approaches

Nippon Paper Industries Co., Ltd. is striving to reduce the overall number of hours workers spend on the job. This is a work-style reform intended to create vibrant workplace environments. The Company believes that helping individual employees maintain a desirable work-life balance will give rise to time and energy that will ultimately result in added growth for the Company

● Reducing Overall Working Hours

Nippon Paper Industries Co., Ltd. has set the goal of reducing average annual working hours for its workforce to less than 1,850 hours per person. (The actual figure for fiscal 2017 was approximately 1,927 hours.) In fiscal 2018, we conducted management training for general managers that included business process reviews. Having undergone this training, the managers are now working to clarify job instructions at their worksites and streamline operations by reviewing business processes. We have also set the objective of ensuring that employees take annual leave and leave the office before 7:00pm. Given that average individual work hours among all employees totaled around 1,923 hours, we fell short of our targets. As part of our efforts to consider ways to reduce total hours, we are working to first get a better understanding of actual work content. In fiscal 2017, we augmented our work timetable management system, which covers all employees, including management, with a function that tracks the times personal computers are turned on and off, and analyzed and checked the data in detail. Based on these results, we are promoting reexamination of workstyle as part of our ongoing effort to meet our goals.

● Helping employees balance work and child care

The Nippon Paper Group revised its action plan, in April 2016, and strives to support its employees in maintaining work and child-care balance in accordance with Japan's Act on Advancement of Measures to Support Raising Next Generation Children. As one example, Nippon Paper Industries has implemented systems that exceed the provisions stipulated under Japan's Child Care and Family Care Leave Act. This includes extensions to the exemption period for overtime working hours, the application period for child care and paid leave for child rearing. Based on these actions, we have been designated by Japan's Minister of Health, Labour and Welfare as a company that supports child rearing and have obtained the right to display the Kurumin mark.

Data on balancing work and personal lives

	Units	FY2018
Employees taking child-care leave ¹	Persons	23
Men	Persons	3
Women	Persons	20
recently giving birth	%	100
who returned to work	%	90
Employees taking maternity/paternity leave ¹	Persons	183
Men	Persons	163
Women	Persons	20
Average number of days taken for maternity/ paternity leave ¹		
Men	Days	3.7
Women	Days	79.2
Employees taking nursing-care leave ¹	Persons	2
Total number of working hours ²	Hours	1,900
The rate of annual paid leave taken by employees		
Consolidated companies in Japan	%	58.3
Non-management employees of Nippon Paper Industries	%	75.1

¹ Data scope: Consolidated companies in Japan

² Data scope: Non-management employees of Nippon Paper Industries

Women in the Workplace

Creating greater opportunities for women

Organizational invigoration, and securing human resources against the backdrop of a declining birthrate, are two considerations that add to the importance of giving women opportunities to succeed in the workplace.

Case

Diversity management seminar

(Nippon Paper Industries Co., Ltd.)

Nippon Paper Industries Co., Ltd. held its third diversity management seminar in September 2018.

In the first part of this three-part seminar, representatives from the Personnel Department introduced the company's efforts related to work-style reform and organizational invigoration. In the second part, Eiichi Morita, of the beyond global group, spoke about the importance of increasing employee engagement to promoting work-style reform and the link between an ability to welcome diverse perspectives and innovation. In the third part, Hatsunori Kiriya, former Senior Executive Officer & President Asia of the Proctor & Gamble Company used examples from P&G to describe the essence of work-style reform and offer suggestions about how companies could gain and sustain competitiveness in a global environment, as well as on how to succeed at diversity. Approximately 120 employees attended the seminar, engaging in lively discussions among themselves.



Diversity management seminar

Responding to the Act on Promotion of Women's Participation and Advancement in the Workplace

In working to create conditions that enable women to advance their careers, Nippon Paper Industries Co., Ltd. established in April 2016 an Action Plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace.

Action Plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace

(Adopted by Nippon Paper Industries Co., Ltd. in April 2016)

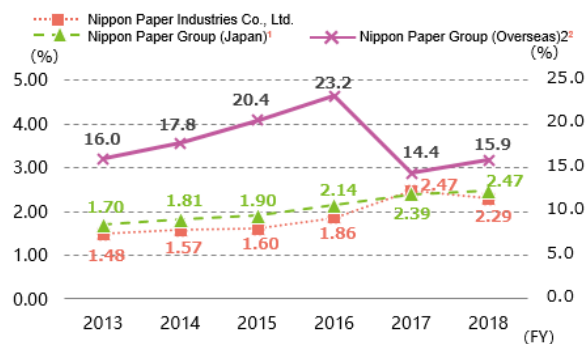
1. Make women at least 25% of new graduate hires for career-track positions.
2. For career-track women hired 8 to 12 fiscal years ago*, achieve an average continuous employment rate that is at least 80% that of the rate for men.
3. To expand the range of roles performed by women at production sites, identify issues that would arise with the assignment of women to each workplace, consider solutions for these issues, and develop concrete plans for the workplaces to which women will be assigned.

* Women who joined the company during the fiscal years 2004 to 2008.

Female management participation and recruiting

At Nippon Paper Industries a large proportion of jobs is made up of those jobs in the production mills, where recruitment of women in the past has been low, leading to low participation by women in our management ranks now. To remedy this situation, and double the participation of women in management by fiscal 2020, we are expanding the range of workplaces to which women are assigned.

Percentage of female employees in management



exclude associate directors, employees commissioned for specific purposes, employees on temporary assignment from other companies, and other non-full-time personnel to present percentages of only full-time employees.

¹ Figures are for the Nippon Paper Group's consolidated companies in Japan.

² Includes all managers of sections and higher level organizational units as of December 31.

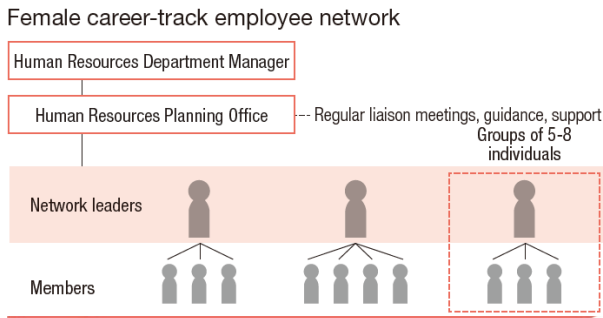
Hiring of new graduates for career-track positions (Nippon Paper Industries Co., Ltd.)

Fiscal years	2014	2015	2016	2017	2018
Career-track hires	34	52	61	56	53
Women	6	11	11	14	13
Men	28	41	50	42	40
Percent women (%)	18	21	18	25	25

● **Network for career-track women**

Nippon Paper Industries Co., Ltd. has created a companywide network for career-track women in all of its workplaces. Within the network, leaders collaborate with the Human Resources Planning Office to help network members address career-building concerns. In addition, group activities are organized in two-year terms. In the first, which began in November 2015, network members identified issues that could hinder women’s careers, and they developed recommendations on matters such as systems for which needs will likely grow. The second term of group activities began in January 2018.

Through the network, we also conduct career training aimed at helping female career-track employees overcome career-building challenges with the assistance of their immediate supervisors.



Initiatives Aimed at Developing Human Resources

Support for the improvement and exercise of professional skills

The Nippon Paper Group has identified five key elements for providing employees with equal opportunities for learning and for creating a framework enabling ambitious, capable individuals to further enhance their skills.

(1) Support for self-development and voluntary skill acquisition

The Nippon Paper Group supports employee selfdevelopment and voluntary skill acquisition through means such as group training and rewards for acquiring professional qualifications. In addition, job-level-basetraining, such as that for hires and new managers, is conducted jointly by Group members to promote the development of employees throughout the Group. And

training is pursued from a broad perspective; joblevel-based training at mills, for example, is conducted not just for a single mill but together with neighboring mills.

Furthermore, Group employees can meet self-determined skill needs by taking any of approximately 280 correspondence courses and joint training. Every employee is offered not only the ability to choose courses they want to take but also precious, mutually stimulating opportunities for joint training with colleagues from other Group companies.

Training time for individual employees
(Consolidated companies in Japan) **5.7 hours per year**

(2) Assignment of the right people to the right positions

Nippon Paper Industries periodically surveys employees to ascertain what kind of job assignments they wish to have. Based on the results of these surveys, every effort is made to match employee strengths with job types.

In addition, the Nippon Paper Group has implemented an internal recruitment system. Under this system, individual employees can consider their skills and how they want to develop their career, and then apply for a position posted by a Nippon Paper Group member.

(3) Development of employees capable of acting on a global stage

Nippon Paper Industries and other Group companies have put in place programs such as one for overseas study. This program is supported by the dispatch of personnel to overseas education institutions and by overseas assignments to the various offices of Nippon Paper Group. Through actions such as this, Nippon Paper Industries Co., Ltd. is striving to strengthen awareness and education, so that all of its career-track employees will be capable of taking on overseas assignments.



Internal training session

Case

Overseas Assignment System

(Nippon Paper Industries Co., Ltd.)

Nippon Paper Industries Co., Ltd. has implemented an overseas assignment system for career-track technical employees. The purpose of this system is to develop human resources capable of working overseas. Participants spend a year and a half at a North American, Australian, or other overseas location to experience work at these operations. They also use this time to improve their language skills. Through this system, participants improve their professional skills and work to understand different cultures and lifestyles by living and working overseas. They also enhance their awareness of the need to build careers as people capable of working in a global arena.



On overseas assignment (Paper Australia Pty Ltd.)

Case

Implement small group activities globally

Nippon Paper Group is implementing small group activities in and outside Japan. The purpose of these activities is to achieve improvements in areas such as operations, quality, and costs. In fiscal 2018, Nippon Paper Industries Co., Ltd. held its 26th company-wide presentation meeting, while the Group held its tenth presentation meeting, with participation by 10 Group companies located in Japan and overseas. The presentations helped attendees to better understand their own workplaces and consider good practices from other workplaces in Japan and abroad.



Team judged most outstanding at the 26th Group-wide Presentation Conference

(4) Reinforcement of production frontline capabilities

Human resource capabilities at the production frontline represent the heart of the manufacturing process. The Nippon Paper Group passes on to each generation the technologies and skills nurtured over a lengthy period to maintain and improve the capabilities of its human resources.

Nippon Paper Industries created a committee to strengthen frontline capabilities in fiscal 2006. Nippon Paper Industries has organized and is operating systems under which technologies and skills that should be carried forward at individual production sites are identified, and training is prioritized based on analyses of the strengths and weaknesses of, and skills needed by, individuals.

(5) Support for the planning of lives and careers

Given the hike in the public pension eligibility age, implementation of a defined-contribution pension system, and increasing diversification of lifestyles, employees must consider a number of factors when planning their careers and life after retirement. Therefore, core companies within the Nippon Paper Group offer Life Plan Seminars and other types of seminars to enhance employee understanding of each company's and the government's programs, as well as the need to develop meaningful life plans that include health management.

Fair Evaluation and Compensation

Evaluation based on skills and performance

As part of its efforts to practice fair and transparent personnel evaluations, Nippon Paper Industries lays out clear evaluation criteria and conducts review sessions, in which managers provide feedback on performance evaluations, for all non-management employees. Review sessions are an opportunity to ensure that employees understand and accept evaluation results and for setting the skill development direction for individual employees. For decisions on promotions to management and other positions, the assistance of outside companies specializing in human resource assessment is called upon to enhance objectivity.

Industrial Relations

Improving the workplace environment through labor and management consensus

The Nippon Paper Group strives to maintain a sound relationship with its employees. Labor unions have been formed at Nippon Paper Industries and the majority of its consolidated subsidiaries. Irrespective of the existence of a labor union, however, every effort is made to maintain smooth industrial relations at all Group companies.

For example, under the common objective of building a better company, Nippon Paper Industries has established a variety of committees that cover such fields as the operations of labor and management agreements, and staffing adjustments. Labor-management agreements provide the basis for a variety of initiatives, as well as efforts to improve the workplace environment. On the top of these endeavors, regular central meetings of both sides' leaders provide a forum to discuss diverse issues including corporate management and working conditions.

At Nippon Paper Industries, there are 4,633 labor union members (as of March 31, 2019). Workplaces are union shops and all of the employees covered by collective bargaining agreements are union members.

● **Discussions of working conditions**

Major changes to working conditions, such as alterations to personnel systems and personnel downsizing, are in principle implemented on the basis of prior discussions between labor and management. Nippon Paper Group companies do not unilaterally impose changes on employees.

Routine communication is critical for gaining employee understanding of company actions. The Group strives to engage in dialog with employees and labor union to provide such information as financial results.

Responsibility to Communities

As a comprehensive biomass company creating new products and growing its businesses, the Nippon Paper Group manages broad expanses of forests and owns large-scale production sites, so it has significant impacts on local communities and the people who live and work in them. Coexistence with these communities is critical to our own continued existence.



* Please refer to our Integrated Report 2019 P.72

Indicators	Key Objectives	Performance (fiscal 2018)
Materiality	Coexistence with Local Communities and Society at Large	
Communication opportunities	Gaining understanding of the Nippon Paper Group's business activities, in local Communities and society at large	Welcomed local school, neighborhood association and other groups for tours, and engaged in other activities, such as joint sponsorship of events
Evaluations by stakeholders	As a member of society, we shall proudly promote activities that contribute to social development. (Philosophy for social contribution activities)	Gathered various opinions and evaluations from stakeholders connected with our activities (To be used to improve activities)

Policy and Management

The Nippon Paper Group engages in a variety of social contribution activities to garner the trust of and remain close to local residents

Basic Stance

Coexisting with local communities, contributing to the advancement of society as a whole

As one of its members, the Nippon Paper Group aims to contribute to society as a whole. While continuing to provide needed products, we would like to play a useful role in protection of the global environment and in the advancement of culture and local communities. We are confident that building a consistent track record along those lines will earn the trust of society and allow us to continue our business activities in coexistence with local communities.

The initiatives we engage in, both inside and outside Japan, include cleanups of the areas around our mills and plants, support for vocational training in afforestation areas, and other locally focused activities; and operation of the School of Friendship for Forests and Paper, mill tours, and other activities making use of forests and other Group resources.

Philosophy and Principles for Social Contribution Activities (established on April 1, 2004)

Philosophy

As a member of society, we shall proudly promote activities that contribute to social development.

Principles

1. We shall pursue activities that contribute to cultural heritage and development.
2. We shall pursue activities that contribute to conservation and improvement of the environment.
3. We shall pursue activities that contribute to the development of communities.

Specific activity themes

- Increase the community involvement of Group company mills and overseas affiliates
- Promote activities that effectively utilize the resources and expertise of each Group company
- Promote corporate citizenship activities in which our employees play an active role
- Effectively use the company-owned forests in Japan (about 90,000 hectares)
- Employ effective PR inside and outside the Group

● Structure for promoting social contribution activities

The CSR Division takes the lead in promoting Group-wide social contribution activities. Each Group company appoints a person responsible for overseeing social contribution activities. Each responsible person develops a thorough understanding of social contribution activities undertaken to date, and works to upgrade and expand their content and details.

Nippon Paper Group's principal social contribution activities

Principal activities	Specific examples	Page
Local community activities		
Cleaning activities	Appreciation event at Asahiyama Zoo	—
Local community safety and disaster prevention	Children's "emergency 110" patrol project (110 is the number to dial for emergency assistance in Japan)	—
	Traffic safety initiatives	55
Preserving local community cultures	Participation in fire brigades	—
	Supporting Asukayama Takigi Noh plays	—
Respect for indigenous people	Making wild herb habitat available to indigenous people	—
	Protecting indigenous heritage sites	66
Holding and participating in local events	Participating in and sponsoring local events	—
	Opening of recreational facilities to the public	—
	Holding summer festivals and other events	—
Social welfare activities	Copier-paper sale in support of the Pink Ribbon Campaign	—
	Participating in and cosponsoring social welfare events	—
	Purchasing products made by social welfare groups	—
Community education	Holding of CSR lectures (public seminars)	—
Advancing science and technology	Supporting the Fujihara Foundation of Science	66
Disaster relief activities	Donations of money and emergency supplies	—
Environmental activities		
Tree planting activities	Marunuma Highland Tree-Planting	67
	Utilizing the Group's proprietary technology	38
Preserving biodiversity	Conducting business activities while protecting Blakiston's fish owl habitat	37
	Supporting the activities of the Shiraneaoi Preservation Group	38
	Eradicating invasive plant species from Iriomote Island	—
Promoting recycling activities	Operating the Recycle Plaza Shiyukan	—
	Recycling Paper-Pak containers	35
Accountability to local communities	Environmental risk communication	28
Educational activities		
Providing opportunities to tour group companies and their mills	Programs that welcome junior high school students for opportunities to experience a workplace	—
Utilizing company-owned forests	Holding the School of Friendship for Forests and Paper	67
Employment support	Internships, and programs that welcome students for opportunities to experience a workplace	—
	Supporting vocational training for local women	66
Classes taught by employees	Cooperation in teaching school classes	—
Music appreciation	Inviting students to concerts	—
Providing educational opportunities through sports	Cosponsoring the Fukuchiyama Marathon	—
Providing products to classrooms	Provision of paper products, printed materials and publications	—

⇒ For more about major social contribution activities of the Nippon Paper Group please see <https://www.nipponpapergroup.com/csr/society/activity/> (Japanese only)

Coexistence with Local Communities and Society at Large

Continuing to pursue business activities in coexistence with local communities

Employment Support

Case

Supporting vocational training for local women

(Brazil, AMCEL S.A.)

AMCEL supports vocational training for local women in cooperation with local government in the Brazilian state of Amapa, where the company is located. By helping to increase the skills of women living in low-income areas, the company aimed to help them protect their families, increase their income, improve their quality of life and safety, and promote development of the local community.

Women who took part in the course and learned the techniques gained opportunities for taking jobs or creating businesses, providing them with more lifestyle choices. These women can also share their newfound skills with other members of the community, creating a virtuous circle.



Vocational training underway

Advancing Science and Technology

Case

Supporting the Fujihara Foundation of Science

(Nippon Paper Industries Co., Ltd.)

Considered the “Nobel Prize of Japan,” the Fujihara Award, presented by the Fujihara Foundation of Science, a public interest incorporated association, recognizes outstanding contributions to science and technology by Japanese scientists. Nippon Paper Industries lends financial support to the Foundation to promote science and technology.

At the 60th Fujihara Awards ceremony, held in June 2019, Kouhei Ohnishi, a Project Professor at the Keio



Second from the left is Professor Ohnishi. Second from the right is director Eisuke Nishida of RIKEN.

University Global Research Institute (KGRI), and Eisuke Nishida, a Director of RIKEN Center for Biosystems Dynamics Research (BDR), were presented with award certificates, medals, and 10 million yen each.

Respect for indigenous People

Case

Protecting indigenous heritage sites

(Australia, Nippon Paper Resources Australia Pty. Ltd.)

In 2016, ancient aboriginal stone tools were discovered on the PTP plantation, one of the Australian plantation projects managed by Nippon Paper Resources Australia Pty. Ltd. Experts performed an on-site survey,

and in 2017 the area was registered as an aboriginal heritage site. In 2018, a sign forbidding unauthorized access was erected to help preserve the site. Dialogue with local aboriginal organizations will be continued and steps such as the posting of signs to protect heritage sites will be taken to keep them in their current condition.



Stone tool discovered on the PTP plantation



Sign to help preserve the site

Corporate Identity Sharing

Conducting activities that enable local residents and employees to physically experience the essence of the Nippon Paper Group

Utilizing Company-Owned Forests

Case

Conducting the annual School of Friendship for Forests and Paper

(Nippon Paper Industries Co. Ltd., Nippon Paper Development Co., Ltd.)

The School of Friendship for Forests and Paper is a hands-on course on the natural environment utilizing forests (approximately 90,000 hectares) owned by Nippon Paper Industries in Japan. With the aim of introducing participants to the beauty and abundance of forests owned by the company, the school is also an opportunity to experience the connection between forests and paper, an essential item for everyday life. This initiative was first launched in the Sugenuma forest of Gunma Prefecture in October 2006.

The common programs that make up the school draw heavily on the knowledge and experience of employees. With Group employees serving as guides, for example, participants enjoy walking through the forest and making paper from twigs they pick up. Participants are gathered from general public with the cooperation of the Japan Philanthropic Association. Since its inception at the Sugenuma company-owned forest, through fiscal 2018, the school has been conducted 23 times, for a total of 769 participants, including parents and children, and students from local schools.

Since 2007, the Toyono School of Friendship for Forests and Paper has been held in Nippon Paper Industries' Toyono forest in Kumamoto Prefecture. Organized mainly by the company's Yatsushiro Mill, particular emphasis is placed on activities deeply rooted in the local community. One program of this school incorporates such activities as a mill tour and is one example of how activities are modified to accommodate the needs of each region.



Children listening to explanations by a member of staff



A ceremonial photograph of all involved parties

⇒ For more about the Forest and paper friendship school please see <https://www.nipponpapergroup.com/morikami/> (Japanese only)

Case

Marunuma Highland Tree-Planting 2019 held

(Nippon Paper Industries Co., Ltd.)

Nippon Paper Industries is advancing initiatives aimed at leaving a thriving forest to future generations. As part of that effort, tree-planting activities were begun in the company's Sugenuma Forest in Gunma Prefecture in May 2010. The eighth iteration of this activity - the Marunuma Highland Tree Planting 2018 - took place in May 2019. The number of participants, both Nippon Paper Group people and others, mainly from Tokyo, was about 90 in all.

Following staff members' instructions, participants help to plant some 350 seedlings in five varieties, including beech and Mongolian oak, that will be used for transplanting.



Participants planting trees

