

# Nippon Paper Group ESG Databook 2022

Nippon Paper Group publishes this ESG Databook to report to a wide range of stakeholders on its ESG (Environment, Society, Governance) initiatives. The Group also publishes an integrated report to communicate its long-term value creation.

This ESG disclosure has been prepared in accordance with the GRI Standards: Core option, and items are organized in line with the Group's important issues (materiality)\*.

\* Nippon Paper Group's important issues (materiality).

[https://www.nipponpapergroup.com/english/csr/npg\\_ir\\_e\\_materiality.pdf](https://www.nipponpapergroup.com/english/csr/npg_ir_e_materiality.pdf)

## Period Covered

Fiscal 2021: April 1, 2021–March 31, 2022

Includes information from before April 1, 2021 and after March 31, 2022. 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, 2022 for Nippon Paper Industries Co., Ltd. and all 54 of its consolidated subsidiaries.

### Scope of Environmental Coverage

The scope of the report covers the basic environmental policies, systems, environmental accounting, environmental 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; Nippon Paper Crecia; Nippon Paper Papylia; Opal\*<sup>1</sup>; Jujo Thermal; Siam Nippon Industrial Paper; Nippon Seitai; Kyouei Seitai; N&E; Daishowa Uniboard; Nippon Paper Development; GAC; Amapá Florestal e Celulose\*<sup>2</sup>; Nippon Dynawave Packaging

\*1 Paper Australia Pty Ltd.; Maryvale Mill.

\*2 In some cases referred to as AMCEL in this report.

(The contribution to total consolidated sales of the companies listed here was 89%.)

(Sales data includes trading companies that are members of the Nippon Paper Group and sell Group-made products to outside buyers.)

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
- SASB Standards (VRF)
- ISO 26000, etc.

Guideline comparison table

<https://www.nipponpapergroup.com/english/csr/gri/>

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## 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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Publication date: September 2022

Previous issue: September 2021

Next issue scheduled: September 2023

Website

<https://www.nipponpapergroup.com/english/csr/>

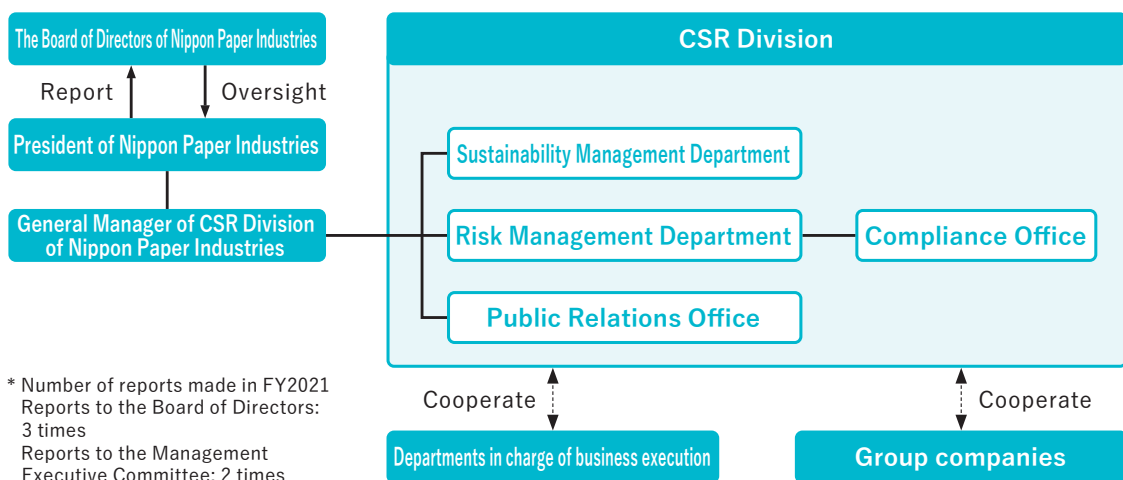
# Sustainability Management

Nippon Paper Industries signed and joined the UN Global Compact in 2004. The Company promotes sustainability management that pursues both social and environmental sustainability and the future growth of the Company by realizing the Group Mission based on the Ten Principles of the UN Global Compact in four areas (human rights, labor, environment, and anti-corruption).

## Establishment of Policy and System

|      |  |
|------|--|
| 1993 | ● Formulated Environmental Charter (Nippon Paper Industries)   |
| 2003 | ● Established the CSR Committee to promote the building of a management system to fulfill its corporate social responsibility  |
| 2004 | ● Formulated the “Philosophy and Basic Policy on Product Safety,” “Philosophy and Basic Policy on Human Rights, Employment and Labor,” “Philosophy and Basic Policy on Safety and Health Measures” and “Philosophy and Principles for Social Contribution Activities”  |
| 2005 | ● Formulated the “Principles and Basic Policies Concerning Raw Materials Procurement”  |
| 2008 | ● Established the CSR Division to reinforce CSR management   |
| 2016 | ● Formulated the “Basic Policy on the Preservation of Biodiversity ”based on the Philosophy of “Nippon Paper Group Environmental Charter”  |
| 2022 | <ul style="list-style-type: none"> <li>● Formulated the “Nippon Paper Group Human Rights Policy” to enhance the effectiveness of its efforts to respect human rights, with the aim of achieving the Group Mission</li> <li>● Revised the “Principles and Basic Policies Concerning Raw Materials Procurement” to enhance the effectiveness of its efforts to address social issues, including human rights and climate change</li> </ul> |

## Promotion Structure



## Initiatives regarding Sustainability

### — Employee Education

#### Educational achievements (FY2021)

| Themes and topics   | Number of participants |
|---|------------------------|
| Relationship between SDGs and the Group’s products and services*1 | 4,670*2                |
| Relationship between SDGs and the Group’s corporate activities*1  | 4,743*2                |

\*1 Implemented for the Nippon Paper Group

\*2 Target of aggregation :Nippon Paper Industries (as of July 8, 2022)

### — Providing Awareness-raising Opportunities

The Company holds lectures provided by external experts to business partners and Group employees, with a theme selected from a viewpoint of sustainability, on a periodic basis. In FY2021, it streamed a seminar entitled “Aiming for Carbon Neutrality by 2050: Roles Played by Forests,” which was viewed by about 850 participants.

# Enhancement of Governance

》 [Corporate Governance Policy](#) (see P. 73)

》 [Basic Policy for Establishing the Internal Control System](#) (Japanese only)

[https://www.nipponpapergroup.com/ir/governance/internal\\_control\\_system/](https://www.nipponpapergroup.com/ir/governance/internal_control_system/)

》 [Corporate Governance Report](#)

<https://www.nipponpapergroup.com/english/ir/governance/>

## Initiatives for Strengthening Corporate Governance

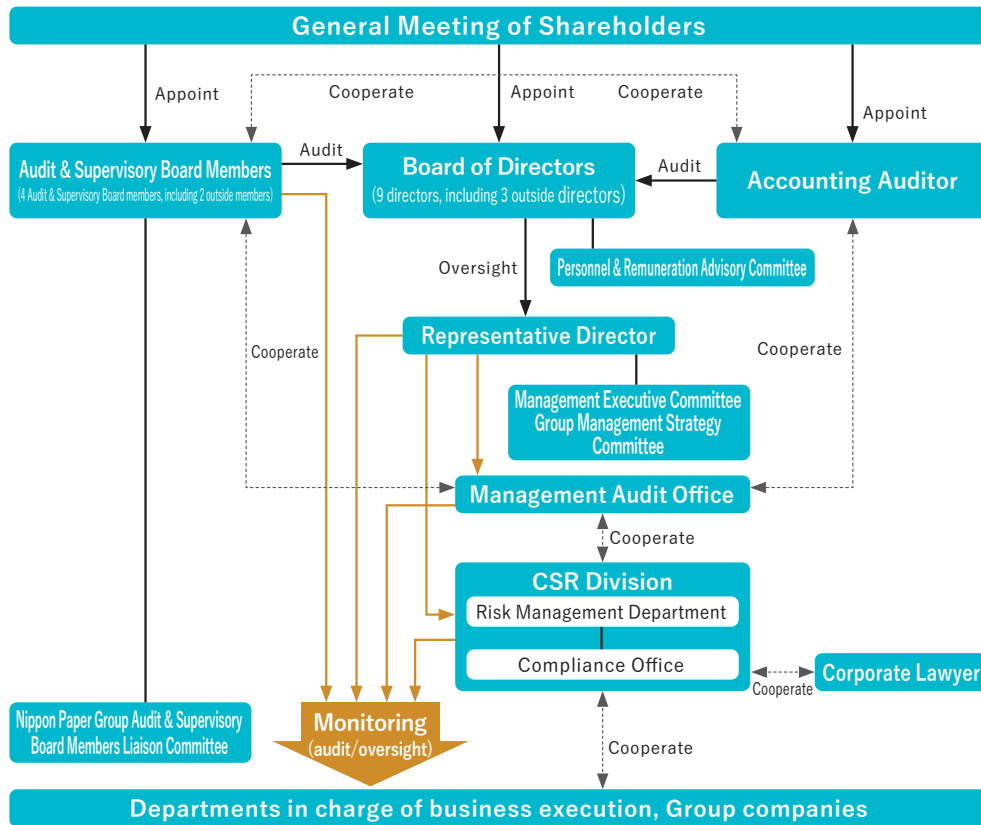
|        |  |
|--------|--|
| FY2006 | <ul style="list-style-type: none"> <li>● Formulated the Basic Policy for Establishing the Internal Control System</li> <li>● Shortened director terms to one year from two</li> </ul>  |
| FY2013 | <ul style="list-style-type: none"> <li>● Adopted an executive officer system</li> <li>● Began appointing one independent outside director</li> </ul>   |
| FY2015 | <ul style="list-style-type: none"> <li>● Established the Corporate Governance Policy</li> <li>● Began evaluating the effectiveness of the Board of Directors</li> </ul>  |
| FY2016 | <ul style="list-style-type: none"> <li>● Established the Personnel &amp; Remuneration Advisory Committee</li> <li>● Increased the number of independent outside directors to two</li> </ul>  |
| FY2019 | <ul style="list-style-type: none"> <li>● Increased the number of independent outside directors to three</li> <li>● Appointed one female outside director and one female outside Audit &amp; Supervisory Board member</li> <li>● Ensured the Personnel &amp; Remuneration Advisory Committee consists mainly of outside directors</li> <li>● Introduced the Board Benefit Trust as a stock compensation system</li> </ul> |
| FY2020 | <ul style="list-style-type: none"> <li>● Revised part of the Corporate Governance Policy concerning the policy for determining director remuneration</li> </ul>  |
| FY2021 | <ul style="list-style-type: none"> <li>● Added quarterly reports on operational issues as part of the agenda for meetings of the Board of Directors, in addition to existing monthly reports on operations</li> </ul>  |

## Corporate Governance Structure

### Overview

|   |  |
|---|--|
| Type of Organization                                      | Company with Audit & Supervisory Board Members   |
| Chairperson of the Board of Directors                     | Chairperson and Director: Fumio Manoshiro  |
| Directors   | 9 (including 2 male and 1 female outside directors)  |
| Audit & Supervisory Board Members                         | 4 (including 1 male and 1 female outside Audit & Supervisory Board member)   |
| Independent Officers                                      | 5 (including 3 outside directors and 2 outside Audit & Supervisory Board members)  |
| Board of Directors Meetings Held in FY2021                | Number of meetings: 13<br><ul style="list-style-type: none"> <li>● Average rate of attendance by directors: 100.0% (outside directors: 100.0%)</li> <li>● Average rate of attendance by Audit &amp; Supervisory Board members: 100.0%</li> </ul> |
| Audit & Supervisory Board Members Meetings Held in FY2021 | Number of meetings: 14<br><ul style="list-style-type: none"> <li>● Average rate of attendance by Audit &amp; Supervisory Board members: 100.0%</li> </ul>  |
| Independent Accounting Auditor                            | Ernst & Young ShinNihon LLC  |

Corporate Governance Structure (As of July 1, 2022)



— Board of Directors

- The role of the Company’s Board of Directors is stipulated in the Corporate Governance Policy. The Board is chaired by the Chairperson who is a director without representative authority.
- The Board of Directors shall bear the supervisory function of management as a whole and make the most appropriate decisions for the Company through deliberations, etc. on the execution of important business issues that are to be decided, under laws, regulations, and the Articles of Incorporation, by the Board of Directors. The Board of Directors shall also oversee the status of the execution of duties by the president and representative director and other corporate officers.
- In view of the importance of environmental and social challenges related to sustainability, the Board of Directors shall raise awareness among officers and employees, strive to facilitate the sustainable development of society, and enhance the corporate value of the Group by promoting active efforts to resolve challenges while giving consideration to stakeholders.
- The Company’s Board of Directors is made up of internal directors who have excellent abilities to execute and manage each business in their charge and outside directors who have specialized knowledge and extensive expertise. In this way, the balance and diversity of knowledge, experience, and abilities are ensured.
- One-third of the Company’s Board of Directors is made up of outside directors. Furthermore, the Company has appointed one female outside director and one female outside Audit & Supervisory Board member.
- The Company made a list of skills it expects each director in November 2021. Each skill has been identified from the standpoint of management strategies and priority issues, and designated taking into account management priorities toward achieving the basic Policy of the 2030VISION and the Group Mission.

→ Nippon Paper Group’s important issues (materiality). [https://www.nipponpapergroup.com/english/csr/npg\\_ir\\_e\\_materiality.pdf](https://www.nipponpapergroup.com/english/csr/npg_ir_e_materiality.pdf)

## Directors' Skill Matrix

| Position   | Name               | Skills               |                    |                    |                           |                            |                |       |                        |                  |
|--|--------------------|----------------------|--------------------|--------------------|---------------------------|----------------------------|----------------|-------|------------------------|------------------|
|  |                    | Corporate management | ESG/Sustainability | Finance/accounting | Personnel/Human resources | Risk management/Governance | Technology/R&D | Sales | Purchasing/Procurement | Internationality |
| Chairperson and Director                             | Fumio Manoshiro    | ○                    | ○                  |                    | ○                         |                            |                |       |                        | ○                |
| President and Representative Director                | Toru Nozawa        | ○                    | ○                  | ○                  |                           | ○                          |                |       |                        |                  |
| Executive Vice President and Representative Director | Kazumori Fukushima | ○                    |                    |                    | ○                         |                            | ○              | ○     |                        |                  |
| Director   | Masanobu Iizuka    | ○                    |                    |                    |                           |                            | ○              |       |                        | ○                |
| Director   | Tomoyasu Itakura   | ○                    |                    | ○                  |                           | ○                          |                |       |                        |                  |
| Director   | Tomomi Nojiri      |                      | ○                  |                    |                           |                            | ○              | ○     |                        |                  |
| Outside Director                                     | Makoto Fujioka     | ○                    | ○                  |                    |                           | ○                          |                |       |                        |                  |
| Outside Director                                     | Yoko Hatta         |                      |                    | ○                  |                           | ○                          |                |       |                        | ○                |
| Outside Director                                     | Yutaka Kunigo      | ○                    | ○                  |                    |                           |                            |                |       | ○                      |                  |

\* The above list does not represent all the knowledge and experience held by each director.

## Director Attendance at Board of Directors Meetings (FY2021)

| Position   | Name               | Attendance in FY2021 |        |
|--|--------------------|----------------------|--------|
| Chairperson and Director                             | Fumio Manoshiro    | 13/13                | 100.0% |
| President and Representative Director                | Toru Nozawa        | 13/13                | 100.0% |
| Executive Vice President and Representative Director | Kazumori Fukushima | 10/10                | 100.0% |
| Director and Managing Executive Officer              | Atsushi O'haru     | 10/10                | 100.0% |
| Director and Managing Executive Officer              | Masanobu Iizuka    | 13/13                | 100.0% |
| Director and Executive Officer                       | Tomoyasu Itakura   | 10/10                | 100.0% |
| Outside Director                                     | Makoto Fujioka     | 13/13                | 100.0% |
| Outside Director                                     | Yoko Hatta         | 13/13                | 100.0% |
| Outside Director                                     | Yutaka Kunigo      | 13/13                | 100.0% |

## — Management Executive Committee

- Usually, the Company's Management Executive Committee meets once a week to deliberate on important business issues under the authority of the president to assist in the execution of the president's duties.
- Committee membership is basically composed of the president, other directors (excluding outside directors) and general managers who do not serve as directors.
- Meetings of the Management Executive Committee, held once a month, are attended by outside directors and general managers of the Company's mills in order to share information on monthly financial results among management.

## — Group Management Strategy Committee

- The Company's Group Management Strategy Committee meets as necessary and deliberates on management strategies by business segment and other important matters related to the Group.
- Committee membership is composed of the Company's management, including outside directors, and presidents of major companies of the Nippon Paper Group.

## — Audit &amp; Supervisory Board Members and Audit &amp; Supervisory Board

- The Audit & Supervisory Board members of the Company attend important meetings, such as meetings of the Board of Directors, the Management Executive Committee, and the Management Strategy Committee. In addition to strict monitoring of the execution of business by directors, the auditors also audit whether all company operations are conducted strictly legally and appropriately by means of on-site audits of each division, business site, and company in the Group.
- The Audit & Supervisory Board periodically holds meetings with the representative directors, working to deepen mutual understanding.
- The Audit & Supervisory Board also strives to enhance group audits by strengthening cooperation with auditors of each Group company.

### — Management Audit Office

- The Company's Management Audit Office is directly under the President's control. It conducts an internal audit of the Company and each Group company. It also conducts a comprehensive evaluation of the maintenance and operation of the internal control system as it relates to financial reporting.
- The Management Audit Office also holds monthly information exchange meetings with the Audit & Supervisory Board Members to ensure cooperation between Audit & Supervisory Board Members and internal audits.

### — Personnel & Remuneration Advisory Committee

- Committee membership is composed of three outside directors who are independent officers, the Company's President and Representative Director, and General Manager of the Personnel & General Affairs Division.
- The Company's Personnel & Remuneration Advisory Committee receives inquiries from the Board of Directors on matters such as the selection process, qualifications, and reasons for nomination of director and Audit & Supervisory Board member candidates, the criteria for determining the independence of outside officers, and the remuneration system for directors. The committee responds to inquiries regarding appropriateness while obtaining appropriate involvement and advice from independent outside directors and conducting inquiries based on its assessment of the Company's business performance and other factors.
- The Board of Directors shall make decisions regarding nomination of directors and Audit & Supervisory Board members, and compensation for directors etc., after receiving reports from the Personnel & Remuneration Advisory Committee.
- In FY2021, opinions on evaluation for representative directors were exchanged in addition to previous agendas.
- The number of periodic meetings is to be increased to four times per year starting from FY2022 to enhance agendas covered.

#### Attendance at Personnel & Remuneration Advisory Committee (FY2021)

| Position  | Name               | Attendance in FY2021 |        |
|---|--------------------|----------------------|--------|
| President and Representative Director                 | Toru Nozawa        | 3/3                  | 100.0% |
| Outside Director                                      | Makoto Fujioka     | 3/3                  | 100.0% |
| Outside Director                                      | Yoko Hatta         | 3/3                  | 100.0% |
| Outside Director                                      | Yutaka Kunigo      | 3/3                  | 100.0% |
| General Manager, Personnel & General Affairs Division | Koichiro Takahashi | 3/3                  | 100.0% |

### Independent Officers

- The Company designates all outside directors who meet the requirements as independent officers.
- When appointing candidates for outside directors or outside Audit & Supervisory Board members, the Company judges their independence by taking into consideration whether they satisfy the independence criteria provided by the Tokyo Stock Exchange and the requirements for independence provided by laws and regulations (having not served as director, employee, etc. of the Company and its subsidiaries in the past), in addition to considering the existence of any conflicts of interest with general shareholders.

### Evaluation of the Effectiveness of the Board of Directors

- The Company's Board of Directors has been conducting self-evaluations of its effectiveness since FY2015.
- Once per year, the secretariat of the Board of Directors conducts a survey of the directors and Audit & Supervisory Board members regarding management and the discussions held at its meetings. The results of the survey are reported to the Board of Directors, which analyzes and evaluates its effectiveness through deliberations, etc. on the reported contents and works toward improvement based on the results thereof.

## — Initiatives in FY2021

- Evaluation of the effectiveness of the Board of Directors conducted in FY2020 identified the following two challenges: (i) to hold discussions from a medium- to long-term perspective; and (ii) to enhance matters to be reported and secure more time for deliberation.
- In regard to holding discussions from a medium- to long-term perspective, the Board of Directors held repeated discussions and deepened understanding of medium- to long-term strategic issues during the course of formulation of the “2030VISION” announced in May 2021 as well as the “Medium-Term Business Plan 2025.” Meanwhile, in order to enhance matters to be reported, the Board started to gather quarterly reports on operational issues concerning technological departments, R&D departments, raw materials departments, logistics departments, sales departments, and CSR departments, in addition to existing monthly reports on operations. Also, it was confirmed that the understanding of the contents of deliberated matters had improved by providing prior explanations according to projects.
- A questionnaire survey conducted in FY2021 identified the following challenges: follow-ups of important projects, enhancement of discussions to monitor the progress of and take measures to achieve targets set out in the “2030VISION” and the “Medium-Term Business Plan 2025,” and increasing opportunities for opinion exchange between outside directors and representative directors. The Company will work to strengthen governance through these initiatives.

## Officer Remuneration

- The Board of Directors decides remuneration for officers after receiving a report from the Personnel & Remuneration Advisory Committee.
- The standard amount of monthly remuneration for directors shall be decided according to their responsibilities within the Company. Of that, 70% shall be fixed and the remaining 30% shall be, in principle, paid after adjustment based on the degree of achievement of the Medium-Term Business Plan. The standard amount is determined using objective survey data from outside sources and considering factors including the Company’s performance, the scale of business, and managerial circumstances. Performance indices are established to effectively function as motivation to achieve performance targets, they are reevaluated as necessary in response to changes of circumstance.
- Monthly remuneration for outside directors and outside Audit & Supervisory Board members shall be fixed. In light of their responsibilities, contributions to the executive shareholding association are on a voluntary basis.
- The Company has introduced Board Benefit Trust (BBT) as a stock compensation plan since FY2019 for directors (excluding outside directors) separately from their monthly compensation. The objective of BBT is to further clarify the link between the compensation provided to directors and the Company’s share value and thereby increase directors’ motivation to contribute to improving the Company’s medium- to long-term performance and increasing its corporate value by sharing the benefits and risks associated with share price fluctuations with shareholders.
- The composition ratio of fixed remuneration, performance-based remuneration, and stock remuneration provided to directors is appropriately established based on the objectives of each type of remuneration.

### Total Amount of Remuneration, etc. for Directors and Audit & Supervisory Board Members\*1 (FY2021)

|   | Number of Executives*2 | Total Amount of Remuneration, etc. by Type |                                |                    | Total Amount  |
|---|------------------------|--|--------------------------------|--------------------|---------------|
|   |                        | Fixed Remuneration                         | Performance-Based Remuneration | Stock Remuneration |               |
| Directors                                   | 12                     | ¥297 million                               | ¥72 million                    | ¥31 million        | ¥401 million  |
| (Outside directors)                         | (3)                    | (¥38 million)                              | (—)                            | (—)                | (¥38 million) |
| Audit & Supervisory Board Members           | 5                      | ¥58 million                                | —                              | —                  | ¥58 million   |
| (Outside Audit & Supervisory Board Members) | (2)                    | (¥13 million)                              | (—)                            | (—)                | (¥13 million) |

\*1 Figures are rounded down to the nearest million yen.

\*2 Includes three directors and one Audit & Supervisory Board member who resigned during FY2021.

**Remuneration for Internal Directors**

|                       | Fixed Remuneration  | Performance-Based Remuneration   | Stock Remuneration  |
|-----------------------|---|--|---|
| Method                | Cash payment  |  | Points granted  |
| Payment allowance     | Up to ¥700 million per year   |  | Up to 25,000 points per year<br>(1 point = 1 share)             |
| Payment period        | Monthly<br>(no bonuses or retirement benefits)                                |  | Director resignation<br>(cumulative points converted to shares) |
| Calculation method    | Determined according to their respective responsibilities                     |  | Points granted according to their respective responsibilities   |
|                       | 70% paid as fixed remuneration  | 30% paid, in principle, after adjustment based on the degree of achievement of the Medium-Term Business Plan                                     |   |
| Performance standards | —   | 70%: Consolidated results<br>(mainly net sales and operating income)<br>30%: Non-consolidated results<br>(mainly net sales and operating income) | —   |
| Other                 | Fixed amounts contributed to the Company's executive shareholding association |  | —   |

## Cultivation of Successors to the President and Directors

### — Successor to the President

- The Company intends to develop candidates for succession to the presidency by placing them in important roles such as executives and directors.
- Personnel matters related to executives and directors who are potential presidential candidates are deliberated by the Personnel & Remuneration Advisory Committee, which is an advisory body that reports to the Board of Directors. The Board of Directors, upon receiving the report, will carefully examine its contents, deliberate, and decide on the candidate.
- The Board of Directors supervises the development of candidates to become the next president in a systematic and ongoing manner.
- The process for the appointment and dismissal of the president is the same as that for candidates for directors, in that the Personnel & Remuneration Advisory Committee conducts a review and submits a report based on consultations with the Board of Directors.

### — Developing Candidates for Directors

From the standpoint of securing human resources capable of assuming management in the future, the Company makes a point of placing employees—particularly those in career-track positions—in various positions and rotations in different departments. It also tries to appoint employees as early as possible to positions as managers and other important posts and positions in which they assist management, such as the top management of affiliated companies and overseas subsidiaries. In this manner, it strives to develop a robust base of employees with highly sophisticated expertise and work experience, cultivating them for selection as the next generation of director candidates.

### — Policy for Executive Training, etc.

- To support the execution of duties by directors, the Company provides information on matters necessary for their roles and functions (such as economic conditions, industry trends, legal compliance, corporate governance, finance, and accounting) on an ongoing basis.
- The Company also ensures opportunities to participate in external training based on the needs of individual directors to assist officers in executing their duties.



# Risk Management

## Basic Policy

- ① Prioritizing human life and safety
- ② Continuing business

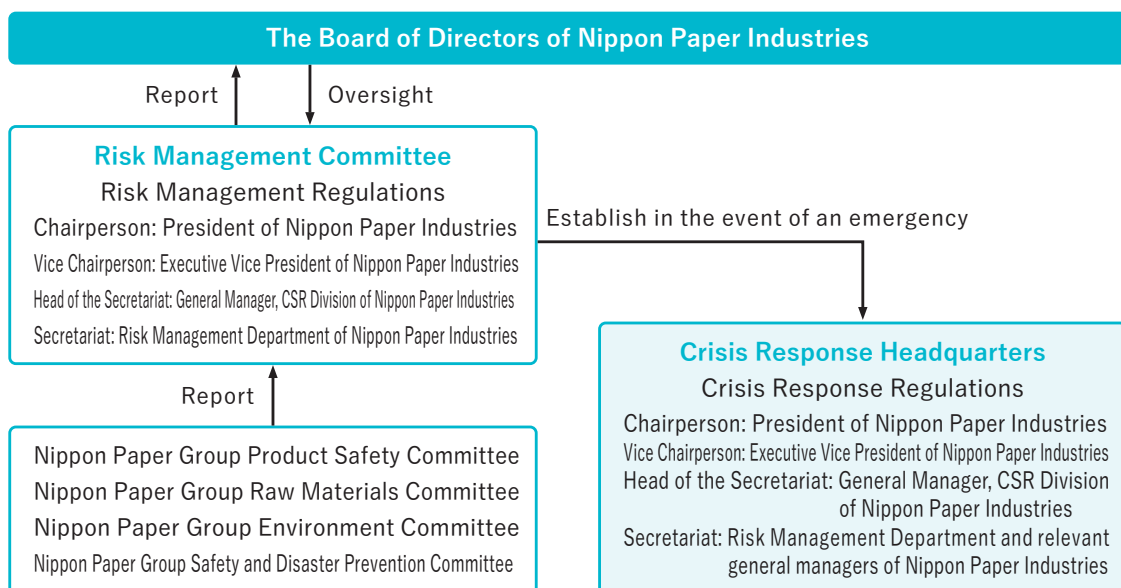
Under these policies, the Company will follow and comply with the guidance and recommendations of national and regional governments.

All possibilities that may result in a physical or economical loss or a loss of credit or disadvantage to the Nippon Paper Group are considered risks to the Group, which are as follows;

- (1) Legal and regulatory compliance risk
- (2) Labor-related risk
- (3) Business-related risk
- (4) Finance-related risk
- (5) Disaster-related risk
- (6) Information systems-related risk
- (7) Other risks

## Promotion Structure

- The Company has established its Risk Management Committee, which is chaired by the president and representative director, operates under the supervision of the Board of Directors of the company, and holds meetings at least once a year. In normal operations, the committee regularly identifies and evaluates the Group’s risks, considers and deliberates measures to reduce its risks, and when the risks occur in reality, and reports the results to the Board of Directors.
- Committees chaired by each general manager of a department of the Company which is in charge of risks in respective fields related to product safety, procurement of raw materials, the environment, and safety and disaster prevention examine and deliberate such risks and report the results to the Board of Directors of the Company through the Risk Management Committee.
- In an emergency, a Crisis Response Headquarters will be launched. The crisis response headquarters swiftly carry out initial responses and BCPs (business continuity plans) in emergencies, depending on risks, such as earthquakes, typhoons, and infectious diseases.



## Risk Management Activities

### — Risk Identification

In FY2021, risk assessment was carried out for the Company (headquarters and mills) and five consolidated and non-consolidated subsidiaries. Through the assessment, the Group not only identified risks but also confirmed those that had emerged in FY2021 and those that would become increasingly significant. Based on discussions on the assessment results by related departments and the Risk Management Committee, the Company's business risk is recognized as described below.

|   | Summary   | Main initiatives to mitigate risks  |
|---|---|---|
| Major risks related to management strategies                            | <b>Risks related to delays in business structure transformation and creating new businesses</b> <ul style="list-style-type: none"> <li>Response to the market contraction in the paper business</li> </ul>  | <ul style="list-style-type: none"> <li>A shift of management resources to growth businesses such as the daily-life products business, etc.</li> <li>Promotion of development of paper products which will replace plastics, mainly for containers and packaging</li> <li>Expanded use of woody biomass such as cellulose nano fibers (CNF)</li> <li>Expansion of overseas business and development of synergistic effects with existing businesses</li> </ul> |
|   | <b>Risks related to climate change</b> <ul style="list-style-type: none"> <li>Response to the full-fledged introduction of carbon pricing and emission trading</li> </ul>   | <ul style="list-style-type: none"> <li>Reduction of greenhouse gas (GHG) emissions</li> <li>Conversion to renewable energy-sourced fuels</li> <li>Maximization of the value of forests such as improving the productivity of forest resources held</li> </ul>   |
|   | <b>Risks of fluctuations in product demand and market conditions</b> <ul style="list-style-type: none"> <li>Fluctuations in demand based on economic conditions, etc.</li> <li>Fluctuations in product prices based on developments in market conditions, etc.</li> </ul>   | <ul style="list-style-type: none"> <li>Reorganization of production structure</li> <li>Cost-cutting efforts</li> <li>Securing profits by maintaining sales prices</li> <li>Tapping into new needs</li> </ul>  |
|   | <b>Risks related to raw material and fuel procurement, and international transportation</b> <ul style="list-style-type: none"> <li>Price fluctuations due to global and Japanese market conditions</li> <li>Global shortage of container transportation capacity</li> <li>Surging ocean freight rates due to a hike in prices of raw materials and fuels</li> </ul> | <ul style="list-style-type: none"> <li>Utilization of pre-order schemes</li> <li>Building relationships with shipping companies</li> <li>Consideration of joint transportation and procurement with other companies</li> <li>Long-term contracts and multiple purchases</li> </ul>  |
| Major risks related to the business environment and business activities | <b>Risks related to production facilities</b> <ul style="list-style-type: none"> <li>Problems occurring at facilities</li> <li>Fires</li> </ul>   | <ul style="list-style-type: none"> <li>Regular inspection of production facilities</li> <li>Strategic renewals of vulnerable areas</li> </ul>   |
|   | <b>Risks related to natural disasters and infectious diseases</b> <ul style="list-style-type: none"> <li>Earthquakes, tsunamis, typhoons, and floods</li> <li>COVID-19</li> </ul>   | <ul style="list-style-type: none"> <li>Establishment of the Crisis Response Headquarters</li> <li>Formulation of BCM (business continuity management)</li> <li>Formulation and revision of infectious disease response guidelines</li> </ul>  |
|   | <b>Risks related to environmental laws and regulations</b>  | <ul style="list-style-type: none"> <li>Response to amendments to environmental laws and regulations</li> </ul>  |
|   | <b>Risks related to retention of human resources and labor affairs</b> <ul style="list-style-type: none"> <li>Retention of human resources, in an appropriate manner, based on the human resources strategies</li> </ul>  | <ul style="list-style-type: none"> <li>Development of a working environment premised upon flexible and diverse work styles</li> <li>Operation of the Occupational Safety and Health Management System</li> </ul>  |
|   | <b>Risks arising from product liability</b>   | <ul style="list-style-type: none"> <li>Enrollment in product liability insurance</li> <li>Establishment and utilization of the Product Safety Committee</li> </ul>  |

— Formulation of BCPs

- The Company continues to formulate BCPs based on the BCM scheme it worked on in FY2020, to address large-scale natural disasters, which have become more frequent in recent years.
- The Company (headquarters) not only stockpiled food and daily commodities but also added supplies for when it launches the Crisis Response Headquarters, along with identifying critical operations. In addition, BCPs organized by each department are made known within the Company.
- The Company (mills) is working to revise the existing BCPs to incorporate earthquakes, tsunamis, typhoons, floods, and volcanic eruptions as expected disasters.
- Each Group company has confirmed that the establishment of the Crisis Response Headquarters has been almost completed. The group will further organize and enhance its BCPs.

**Holding of Risk Management Committee meetings and reporting to the Board of Directors (FY2021)**

|                                     | Number of Times | Attendees   |
|-------------------------------------|-----------------|---|
| Risk Management Committee           | 1               | <p><b>Nippon Paper Industries</b><br/>                     President, Executive Vice President, and all general managers (General Manager, CSR Division; General Manager, Personnel &amp; General Affairs Division; General Manager, Corporate Planning Division; General Manager, International Business Division; General Manager, Biomass Material Business Division; General Manager, Financial Division; General Manager, Raw Materials and Purchasing Division; General Manager, Research and Development Division; General Manager, Technical &amp; Engineering Division; General Manager, Energy Business Division; General Manager, Sales Planning Division; General Manager, Paper-Pak Sales Division; General Manager, Chemical Sales Division; General Manager, Newsprint Sales Division; General Manager, Printing Paper Sales Division; General Manager, Business Communication Paper Sales Division; and General Manager, Duplex Board &amp; Packaging Paper Sales Division)</p> <p><b>Nippon Tokai Industrial Paper Supply</b><br/>                     President</p> |
| Reporting to the Board of Directors | 1               | <p><b>Nippon Paper Industries</b><br/>                     Chairman, President, Executive Vice President, and all directors</p>   |

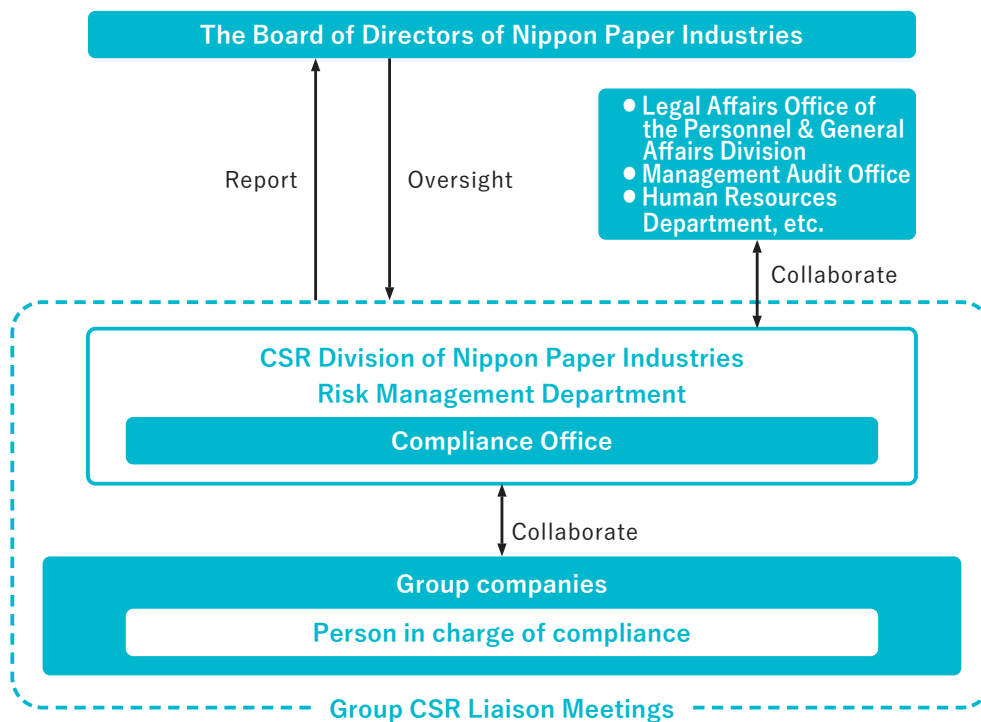
# Compliance

» [Corporate Governance Policy \(see P. 73\)](#)

» [Nippon Paper Group Action Charter and Nippon Paper Industries Codes of Conduct \(see P. 80\)](#)

- Based on the Nippon Paper Group’s Action Charter, the Group’s position is that “Compliance goes beyond laws and regulations to include decency, common sense, customs, and other rules and ‘social norms’ that are expected by society in general, and the Group is called upon to respond to the expectations and trust of society.”
- The Company has established the Compliance Office, and continually carries out activities that raise Group employees’ awareness of compliance.
- In addition to the Company, its Group companies also have their respective codes of conduct.

## Promotion Structure



## Specific Initiatives

### — Personal Information Protection

- In accordance with the Personal Information Protection Law, the Company tracks and manages the personal information held by each department, including the timing and purpose of use, in a control ledger.
- The ledgers are reviewed annually to ensure proper management.

→ Basic Policies of Nippon Paper Industries Concerning Privacy Protection: <https://www.nipponpapergroup.com/english/terms/>

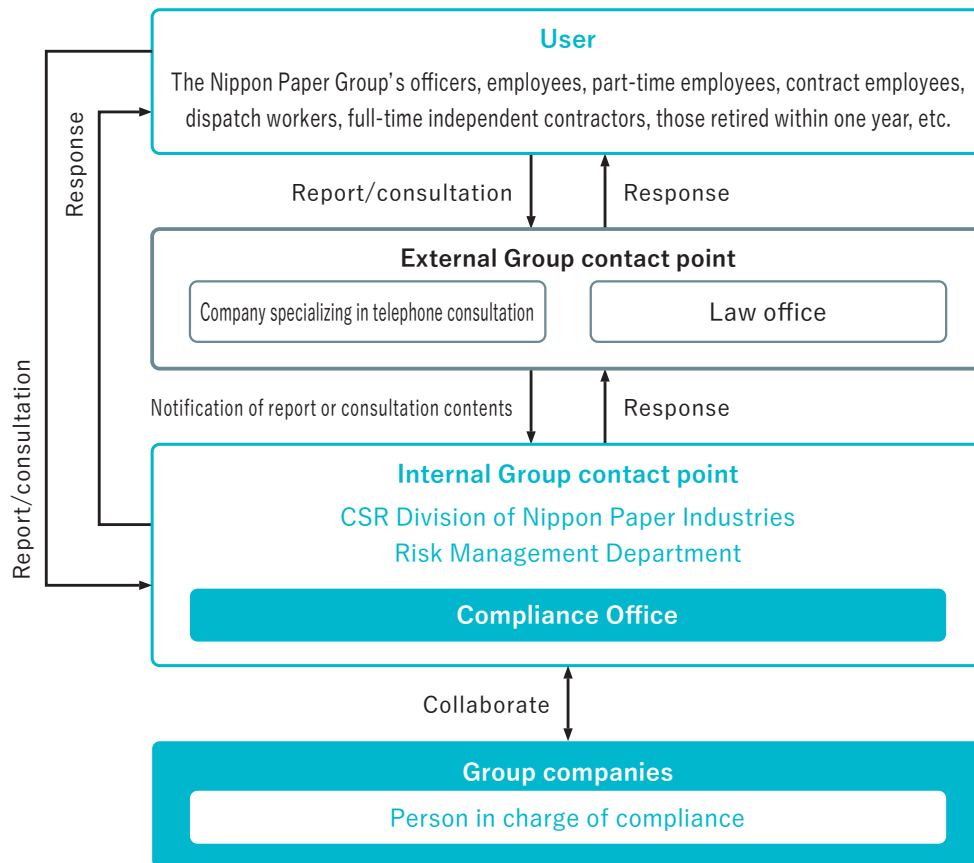
### — Intellectual Property Rights Protection

The Group places great importance on intellectual property rights in all its business activities. The Group also adheres strictly to all applicable laws and regulations.

**— Internal Whistleblower System “Nippon Paper Group Helpline”**

- The Company has set up the Nippon Paper Group Helpline which makes it possible for employees to directly report and consult on any conduct that violates laws, regulations, social norms, or corporate ethics and that may become a problem in the workplace. The Company periodically notifies employees about the Helpline.
- The Company has distributed compliance cards to all Group employees, contractors, etc. to inform them about the Helpline, and that it accepts a wide range of consultations and reports through multiple channels including telephone, email, and mail.
- The Nippon Paper Group Helpline can even be used anonymously under the protection of privacy.
- The Nippon Paper Group Helpline Regulations, which stipulates the operation of the Nippon Paper Group Helpline, corresponds to the amended Whistleblower Protection Act, which came into force in June 2022.
- The operation status is reported to the Board of Directors of the Company, and in addition, to Audit & Supervisory Board members and the Management Executive Committee on a quarterly basis.
- Opinions, etc. from third parties who are not eligible for the use of the Helpline are accepted through “Contact Us” on the Nippon Paper Group website, and are appropriately handled by the Compliance Office and other relevant departments.

→ “Contact Us” on the Nippon Paper Group website:  
<https://www.nipponpapergroup.com/english/inquire/>



**Number of Reports Made to Helpline**

| FY2017 | FY2018 | FY2019 | FY2020 | FY2021 |
|--------|--------|--------|--------|--------|
| 32     | 33     | 46     | 39     | 43     |

• To reinforce measures to prevent harassment issues, which made up the largest number of reports in FY2021, the Company started a harassment avoidance training program mainly for managers and supervisors at mills of the Company in the second half of FY2021.

## — Preventing Corruption

- “Fairness” is one of the Values that the Group’s employees place importance on to realize its Mission.
- The Nippon Paper Group Action Charter stipulates that “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.”
- The Nippon Paper Codes of Conduct specifically state that the Company will engage in “fair, transparent, and liberal manner.”
- During the course of the compliance training program that it conducts strategically, the Group educates its employees so that they would not have any inappropriate relationships with Japanese and overseas local government agencies and employees in places where the Group conducts business or would not give or receive improper gains to or from customers, business partners, etc. through sales or purchasing activities. The Group also implements corrective measures if any suspicious incident arises.
- In FY2021, the Group was subject to no legal actions whatsoever involving incidents of corruption or public legal cases regarding corruption, anti-competitive behavior, anti-trust, or monopolizing practices.

→ Nippon Paper Group’s Basic Policy on Prevention of Bribery of Public Officials:  
[https://www.nipponpapergroup.com/english/ir/BasicPolicyonPreventionofBribery\\_EN.PDF](https://www.nipponpapergroup.com/english/ir/BasicPolicyonPreventionofBribery_EN.PDF)

→ Nippon Paper Group’s Basic Policy on Compliance with Competition Laws:  
[https://www.nipponpapergroup.com/english/ir/BasicPolicyonCompliancewithCompetitionLaws\\_EN.PDF](https://www.nipponpapergroup.com/english/ir/BasicPolicyonCompliancewithCompetitionLaws_EN.PDF)

## — Compliance Education

- The Group systematically carries out compliance training.
- Furthermore, compliance training is carried out in sessions such as training for new supervisors and new employees, including training for executives of the Company and its Group companies.

### Educational achievements (FY2021)

| Category                           | Themes and topics                                   | Number of sessions held                         | Number of participants       |
|------------------------------------|---|---|------------------------------|
| Compliance                         | • What is compliance? <sup>*1</sup>                 | Once a year                                     | About 5,300 <sup>*2</sup>    |
|                                    | • Harassment-related topics                         | 22 sessions in total                            | About 820 in total           |
| Legal affairs <sup>*1</sup>        | • Prevention of insider trading                     | One course at a time, every six months, in turn | 5,494 in total <sup>*2</sup> |
|                                    | • Exclusion of anti-social forces                   |   |                              |
|                                    | • Protection of personal information                |   |                              |
|                                    | • Preparation and storage of contract documents     |   |                              |
|                                    | • Compliance with anti-bribery/competition laws     |   |                              |
|                                    | • Raising sensitivity to legal risks                |   |                              |
| Intellectual property rights       | • Basic information, etc. concerning patents        | 19 sessions in total                            | 1,324 in total               |
| Information Security <sup>*1</sup> | • Prevention of information leakage incidents, etc. | Once a year                                     | About 6,600 <sup>*3</sup>    |

\*1 Provided as an e-learning course

\*2 Only for Nippon Paper Industries

\*3 For those including contractors, etc.

# Dialogue with Stakeholders

» [Corporate Governance Policy \(→P.73\)](#)

» [Disclosure Policy \(→P.82\)](#)

» [Corporate Governance Report](#)

<https://www.nipponpapergroup.com/english/ir/governance/>

## Activities in Detail

### — Annual General Meeting

- Nippon Paper Industries works to energize its general shareholders' meetings and ensure smooth exercise of shareholders' voting rights.
- The Company sent out advance notice of convocation of the 98th Ordinary General Meeting of Shareholders to be held on June 29 2022, and published the contents on the Group website well ahead of time. The Company has also accepted the exercise of voting rights on the Internet through the "Smart Voting" website for exercising voting rights for smartphones.
- At the venue of the Meeting, the Company thoroughly took preventive measures against COVID-19 including asking visitors to wear masks, conducting body temperature checks, sanitizing their hands with alcohol-based sanitizers, and arranging the seating to ensure ample space between seats.

→ Annual General Meeting information:  
<https://www.nipponpapergroup.com/english/ir/shareholder/meeting/>

### — IR Activities

- The Corporate Planning Department is responsible for the Company's IR activities. The Corporate Planning Department, along with other relevant departments, engages in constructive dialogues with shareholders and investors and gathers management analysis and opinions from the perspective of capital providers.
- In addition, IR activities are regularly reported at the Group Management Strategy Committee Meeting (reported once in FY2021).

#### IR Activities in FY2021

| IR activities                              | Number of times |
|--|-----------------|
| Operating results and Management briefings | 2 times         |
| Operating results briefings                | 2 times         |
| Individual meetings                        | 80 times        |

### — Communication Activities

- The Company mails shareholder newsletters to shareholders twice a year.
- The Group operates its website to communicate information on the Company's activities to a wide range of stakeholders as and when it becomes available. "The Group publishes information on corporate activities to a broad range of stakeholders, and receives questions and opinions through the website."
- The Group has established the Nippon Paper Group Risk Communication guidelines, and it works to communicate with local governments and communities with regard to environmental issues in those areas where the Group's mills are located (→P.31).
- The Company held discussions between the President and mid-level employees and managers from July 2021 to April 2022 with the aim of promoting the 2030 Vision and Medium-Term Business Plan 2025 (total of 46 sessions, 691 participants).

#### Main communication activities

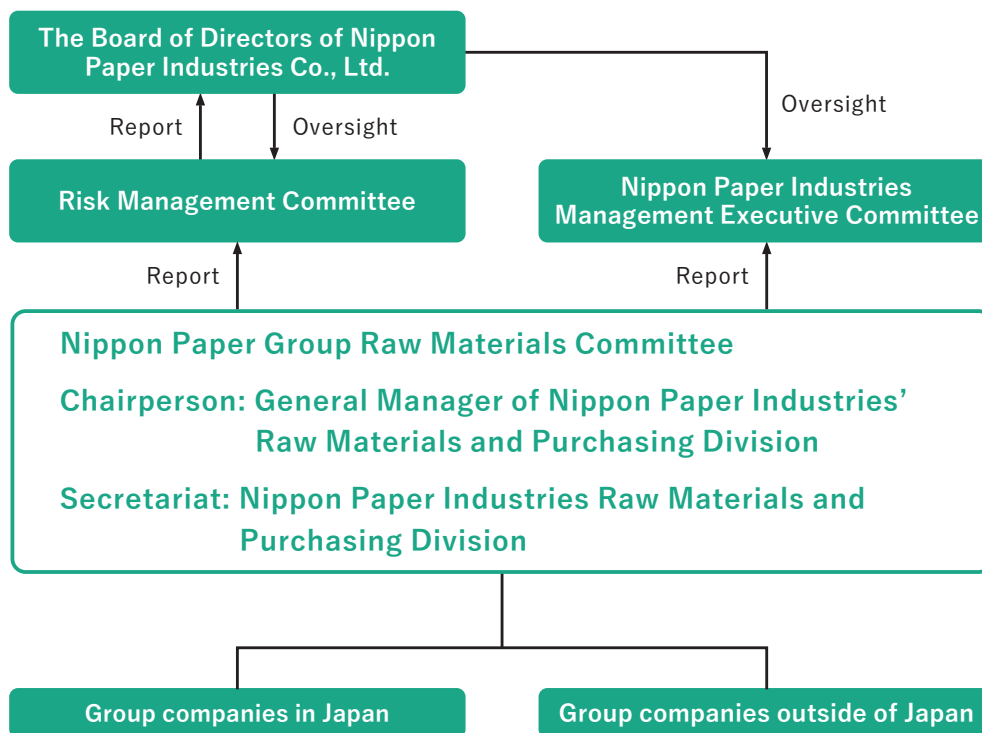
| Stakeholder                                  | Major point of contact   | Means of communication   |
|--|--|--|
| Employees                                    | Human resource sections  | Labor-management councils, labor-management committees   |
| Customers                                    | Sales sections, Product safety sections Customer assistance channels | Individual interviews, inquiries to customer relations sections                                      |
| Suppliers                                    | Procurement sections   | Individual interviews, inquiries to customer relations sections                                      |
| Local communities, NPOs/ NGOs                | Responsible sections within mills, CSR sections                      | Risk communication, Individual interviews  |
| The media                                    | Public relations sections  | Press releases, interviews   |
| Students                                     | Human resource sections  | Individual interviews, meetings  |
| Shareholders (shareholders, investors, etc.) | General affairs sections, IR section                                 | General shareholders' meetings, shareholder communications, integrated reports, explanatory meetings |

# Policy and Management

## 》 Principles and Basic Policies Concerning Raw Materials Procurement (see P. 83)

- The Nippon Paper Group revised the Principles and Basic Policies Concerning Raw Materials Procurement in September 2022.
- In the process of its revision, the Group has had discussions with external experts and incorporated stakeholders' opinions.
- The Group also communicates the content of these Principles and Basic Policies to suppliers around the world by making both Japanese and English language versions and displaying them on its website.
- The Group conducts regular questionnaire surveys and interviews to audit critical suppliers regarding these concerns.

## Structure for Promoting Raw Materials Procurement Management





# Sustainable Procurement of Wood Raw Materials

## Key points of sustainable wood resources procurement

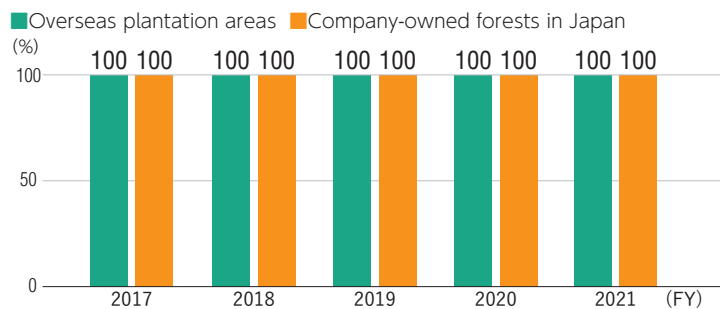
- 1) Sourcing from sustainable forests (sustainability)
- 2) Clearly identifying the origin of timber (traceability)
- 3) Maintaining full accountability (accountability)

## Sustainable Procurement of Wood Raw Materials

### — Procurement from Own Forest

- The Group procures woody raw materials with proper planning and management.
- The Group also obtains third-party forest certification regarding the sustainability of these forests.
- The Group is promoting overseas afforestation business and utilization of company-owned forests in Japan and aiming for stable procurement by utilizing its own resources.

#### Forest Certification Acquisition Rate in Company-owned Forests



Forest Certification (Japanese only):

<https://www.nipponpapergroup.com/csr/forest/sustainability/certification/>

### — Procurement from Other Forests

- The Group is working to build a procurement system that enables it to trace woody raw materials back to the forests from which they were sourced.
- The Group utilizes forest certification schemes as a tool to check that procurement of woody raw materials is being conducted appropriately.

### — Enhancement of the Group's Supply Chain Management

- The Group carries out the following as a supplier risk assessment.
  - ▶ New supplier: By conducting site visits and supplier questionnaires (including the consideration of environment and society), the Group confirms whether it meets the Nippon Paper Group's procurement policy and whether it has any risks before starting trading.
  - ▶ Existing supplier: Check for risks through regular site visits and annual supplier surveys (including the consideration of the environment and society) before continuing trading.
- The Group checks the status of forest certification and the background of resources at the time of contract with the supplier.
- The Group takes corrective actions with suppliers which, it is determined, present high risks.

### — Improve Employee Skills Related to Procurement

The company provides in-house training on sustainable resource procurement which is taken by all employees\* involved in the procurement of wood raw materials.

\* 18 participants (As of April 1, 2022)

## Eradicating Illegal Logging

- Nippon Paper Industries, Nippon Paper Papyrus and Nippon Paper Creca have established a Legality Certification Due Diligence System Manual for the purpose of verifying the legality of the wood raw materials that they procure. The companies carry out due diligence of all wood raw materials procured both in Japan and overseas.
  - ▶ New business partner: Implemented at the time of starting trading
  - ▶ Existing business partners: Conducted regularly every year
- In FY2021, the Group carried out due diligence and verified the legality of all of its wood raw materials.

→ Legality Certification Due Diligence System Manual (Japanese only)  
<https://www.nipponpapergroup.com/csr/DDmanual.pdf>

### — Response to the Clean Wood Act

Nippon Paper Industries, Nippon Paper Papyrus, Nippon Paper Creca and Nippon Paper Lumber completed their registrations as both a Type 1 and Type 2 Wood-related Businesses under the Act on Promotion of the Distribution and Use of Legally Harvested Wood (the Clean Wood Act). In compliance with this law, the companies confirm the legality of the covered items they handle.

#### Registration details

| Business registered     | Registration number     | Effective registration period    | Institution conducting registration          | Products   |
|-------------------------|-------------------------|----------------------------------|--|--|
| Nippon Paper Industries | JIA-CLW-I, II No. 17024 | March 19, 2018 to March 18, 2023 | Japan Gas Appliances Inspection Organization | 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 |
| Nippon Paper Papyrus    | JIA-CLW-I, II No. 19001 | April 26, 2019 to April 25, 2024 |  |  |
| Nippon Paper Creca      | JIA-CLW-I, II No. 19002 | April 26, 2019 to April 25, 2024 |  |  |
| Nippon Paper Lumber     | JPIC-CLW-I, II 54       | July 6, 2018 to July 5, 2023     | Japan Plywood Inspection Corporation         | 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         |

## Action Plan for Wood-based Raw Material Procurement

The Nippon Paper Group has put in place its Action Plan for Wood-based Raw Material Procurement to practice CSR procurement, in keeping with the Principles and Basic Policies Concerning Raw Materials Procurement.

→ Action Plan for Wood-based Raw Material Procurement (Japanese only)  
<https://www.nipponpapergroup.com/csr/forest/sustainability/actionplan/index.html>

Sustainable woody resource procurement scheme

| Principles and Basic Policies Concerning Raw Materials Procurement |   |   |
|--|---|---|
| Action Plan for Wood-based Raw Material Procurement                |   |   |
|  | Japanese Resources  | Overseas Resources  |
| Basic Policy and Scheme  | <ul style="list-style-type: none"> <li>●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.</li> </ul> | <ul style="list-style-type: none"> <li>●Respond to the requirement as an individual company using its own approach to verification, as provided in the Guideline for Verification of Legality and Sustainability of Wood and Wood Products established by Japan's Forest Agency.</li> <li>●Based on the Japan Paper Association's guideline for measures against illegal logging.</li> </ul>  |
| Implementation content   | Overall   | <ul style="list-style-type: none"> <li>●Confirmation based on a due diligence system (DDS) for verifying legality under the Clean Wood Act</li> </ul>   |
|  | Confirmation of Legality and Traceability   | <ul style="list-style-type: none"> <li>● Traceability based on the Guide line for Verification of Legality and Sustainability of Wood and Wood Products established by Japan's Forest Agency</li> <li>●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.</li> </ul>   |
|  | Confirmation of sustainability  | <ul style="list-style-type: none"> <li>●Based on information from sources such as results of supplier questionnaire surveys*(once a year) and local interviews, the following has been confirmed.                             <ul style="list-style-type: none"> <li>• Policies or systems have been established for addressing human rights and labor matters. (Workers' collective bargaining rights and free association rights, No forced labor, No child labor or discrimination, Being protected in health and safety, Considering the rights of indigenous peoples)</li> <li>• Fair transactions have been conducted.</li> <li>• Social contribution initiatives have been undertaken to improve relations with local communities.</li> <li>• The environment has been considered.</li> <li>• Logging and forest management activities that are considered to protect biodiversity have been conducted.</li> <li>• Biodiversity surveys have been conducted.</li> <li>• Forest certification has been obtained.</li> </ul> </li> <li>*target : Import chip, domestic and import pulp</li> <li>●The Group disseminates its procurement policy by describing it in the supplier questionnaire (Japanese and English).</li> </ul> |
|  | Third-Party Audits  | <ul style="list-style-type: none"> <li>The following have been implemented for all procured wood resources.</li> <li>●Annual audits by the Japan Paper Association's illegal logging monitoring project.</li> <li>●Annual risk assessments based on the due diligence system of the Programme for the Endorsement of Forest Certification (PEFC), a forest certification organization.</li> </ul>   |
| Implementation Results (FY2021)                                    | 357 chip suppliers, 7 pulp suppliers (Implemented for all suppliers) Confirmation of conformance with the above action plan   | 22 chip suppliers, 13 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

- All company-owned forests in Japan and overseas have received forest certifications.
- All wood-based raw materials are certified by FSC® or PEFC.  
(All procured chips have been produced with wood from forests with an FM certification<sup>\*1</sup> or have undergone a risk assessment for the CoC certification<sup>\*2</sup>.)

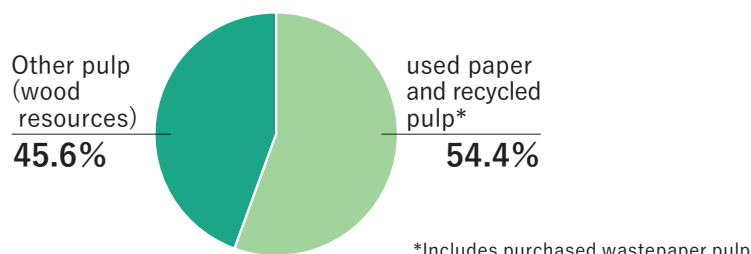
\*1 FM (Forest Management) certification: Certification of forests with sustainable forest management

\*2 CoC (Chain of Custody) certification: Certification of certified materials that are properly distributed and processed

## Current Status of Raw Materials Procurement

### — Current Status of Paper Raw Materials Procurement (Nippon Paper Group)

Breakdown of major raw materials for paper products (Consolidated companies in Japan, FY2021)



### — Initiatives aimed at stable wastepaper procurement

- The Group continues to maintain the stable procurement system that it has built over the course of many years in cooperation with the wastepaper industry.
- For the purpose of stable resource procurement for newspapers, the Company is building and expanding a “Closed Loop System” in which the Company directly purchases used newspapers collected by newspaper companies.
- In order to promote paperizing, in response to the global trend of eliminating the use of plastic by replacing it with paper, the Company is working on constructing a recycling system for presently unusable wastepaper including used food trays.

Amount of used paper and recycled pulp procured\* (FY2021)

| Used paper (kt) | Recycled pulp (kt) | Total (kt) |
|-----------------|--------------------|------------|
| 2,674           | 10                 | 2,684      |

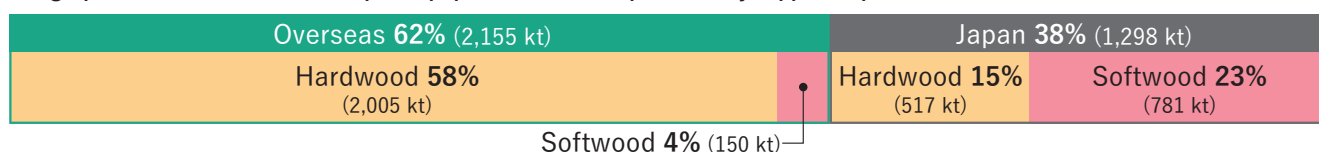
\* Target of aggregation : Consolidated companies in Japan excluding Cresia Kasuga

### — Initiatives aimed at stable wood resource procurement

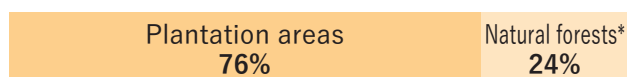
Nippon Paper Industries procures most of the woody raw materials as wood chips and some as pulp.

- ▶ Woodchips : About 60% from overseas, about 40% from Japan
- ▶ Woodchips from overseas : To ensure stable overseas procurement, sources of woodchip imports are diversified between Australia, South America, and other parts of the world.

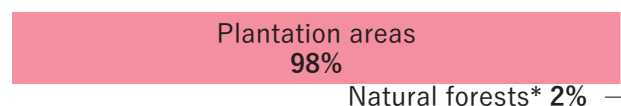
Geographic breakdown of woodchips for paper manufacture procured by Nippon Paper Industries (FY2021) (Bone dry units, kt=kilotonnes)



Hardwood resource breakdown (2,522 kt)



Softwood resource breakdown (931 kt)



\*Natural forests as indicated here refer to either wood sourced from forests certified under certification schemes, wood sourced from secondary forests, or lumber waste wood chips that can be judged to be sustainable.

Tree species and countries of origin for overseas woodchips for paper manufacture procured by Nippon Paper Industries (FY2021)

#### Hardwood

| Country      | Percentage | Species            |
|--------------|------------|--------------------|
| Vietnam      | 31%        | Acacia             |
| South Africa | 25%        | Acacia, Eucalyptus |
| Australia    | 21%        | Eucalyptus         |
| Brazil       | 11%        | Eucalyptus, Acacia |
| Chile        | 7%         | Eucalyptus         |
| Thailand     | 5%         | Eucalyptus         |
| Total        | 100%       |                    |

#### Softwood

| Country   | Percentage | Species       |
|-----------|------------|---------------|
| Australia | 86%        | Pinus radiata |
| Russia    | 14%        | Yezo spruce   |
| Total     | 100%       |               |

# Sustainable Forest Management

- Forestry management considers not only economic, but also environmental and social sustainability.

**The Nippon Paper Group definition of sustainable forest management**

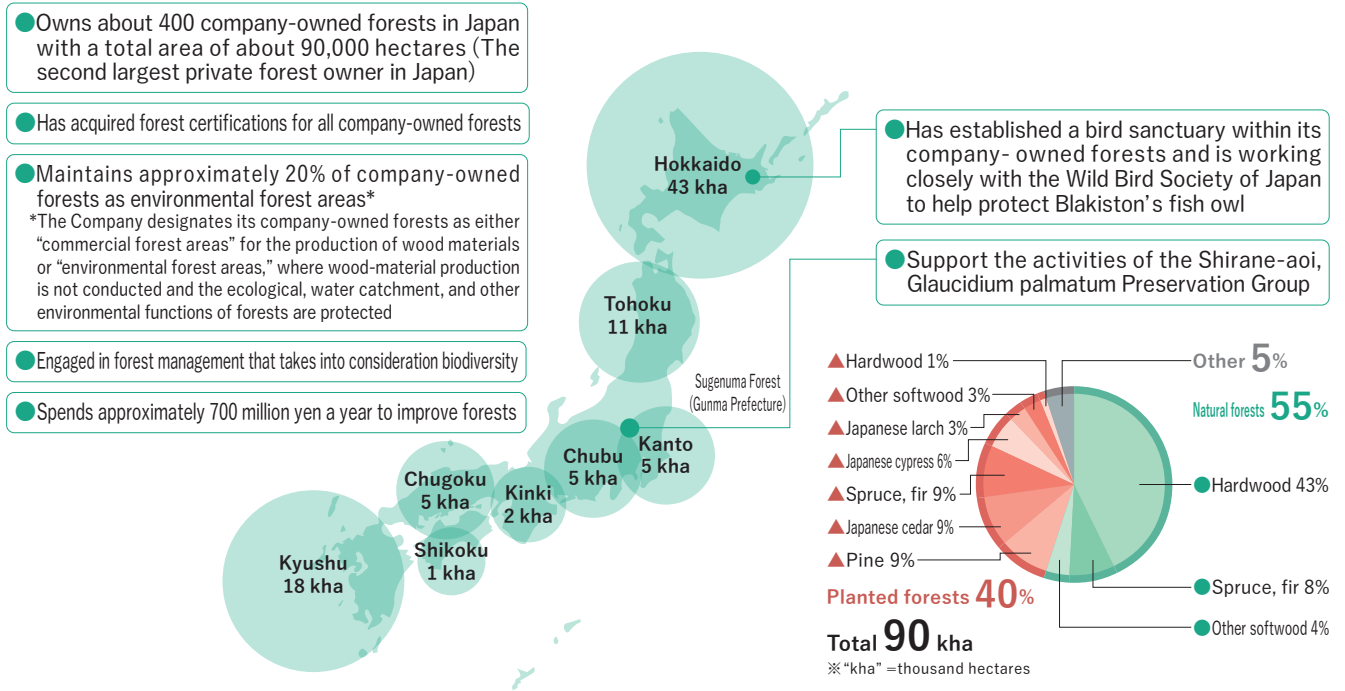
- 1) Biodiversity is preserved.
- 2) The productivity and soundness of the forest ecosystem is maintained.
- 3) Soil and water resources are conserved.
- 4) Diverse social needs are satisfied.

- All company-owned forests in Japan (90,000 hectares, at the end of 2021) have received forest certifications.
- All overseas afforestation areas managed by the Company (72,000 hectares, at the end of 2021) has received forest certifications.

## Protecting and Nurturing Japan’s Forest Resources

### — Sustainable Management of Company-Owned Forests in Japan

Nippon Paper Group, as a company owning forests and utilizing forest resources, aims to enhance the productivity of company-owned forests and carries out balanced and sustainable forest management which can fully demonstrate public interest functions such as forest biodiversity conservation and water source retention.



→ Representative company-owned forests in Japan (Japanese only)  
<https://www.nipponpapergroup.com/csr/forest/own/japan/>

## Forest Certification Status of Company-owned Forests in Japan

| Company-owned Forests in Japan (by Region) | Certification system name | Date acquired |
|--|---------------------------|---------------|
| Hokkaido                                   | SGEC                      | Dec. 2005     |
| Tohoku                                     | SGEC                      | Oct. 2007     |
| Kanto, Chubu, Kinki (partial)              | SGEC                      | Oct. 2007*    |
| Kinki, Chugoku, Shikoku                    | SGEC                      | Dec. 2006     |
| Kyushu                                     | SGEC                      | Mar. 2005     |

\*Obtained for Kitayama Forest in Shizuoka Prefecture only in December 2003.

### — Invigorating Japan's Forest Industry

- The Group is promoting the maintenance of the domestic supply chain and the further use of domestic timber, with the forestry policy based on the basic policy of “green growth through the forest, forestry and timber industries” promoted by the Government of Japan.
- The Company is implementing initiatives to utilize 90,000 hectares of Company-owned forest in various regions of Japan as a field to support forestry revitalization.

#### <Examples of Activities Utilizing Company-owned Forests>

- ▶ Afforestation of elite tree\* seedlings in company-owned forests for reforestation from FY2022 (see P.23)
- ▶ Consideration and implementation of introduction of cutting-edge technology for more sophisticated and labor-saving forestry (see P.23)
- ▶ Participation in large-scale forestry business complexes formed by public-private collaboration, aiming at streamlining forestry operation (see P.23)
- ▶ Biodiversity conservation and water source retention activities in collaboration with companies in different business fields or NPOs (see P.43-44)

\* Seedlings with great growth characteristics and very little pollen designated by the government

### — 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—ranging from good quality timber for lumber use to lower grade timber for use as wood chips for paper manufacture and wood biomass fuels—Nippon Paper Lumber is actively developing its domestic timber business with the goal of annual sales\* of domestic unprocessed timber of 1 million m<sup>3</sup>.

\* Does not include woodchips for paper manufacturing use.

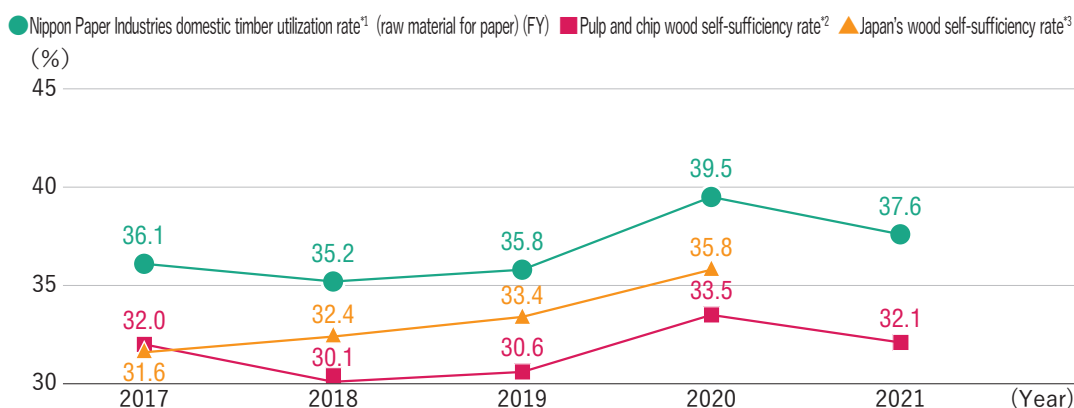
#### Domestic timber sales results by product type (Nippon Paper Lumber)



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

- The Company is working to increase the percentage of domestically produced wood it uses to make paper. This figure was 37.6% in FY2021.
- The volume of domestic wood chips used by the Company to make paper accounts for around 10% of Japan’s total timber demand. That volume is having an impact on the supply-demand balance of Japanese timber and Japan’s wood self-sufficiency rate.

Domestic timber utilization rate (Nippon Paper Industries)



\*1 It 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 Forest Agency of Japan

**CASE STUDY** Expansion of Business of Elite Seedlings for Forestry (Nippon Paper Industries)

The Company will contribute to the revitalization of forestry in Japan by expanding the business of elite seedlings for forestry in collaboration with the Forestry Agency and seedling traders. It received certifications as a “specified breeding company” due to the production of seedlings of elite trees in Hokkaido and Kumamoto as well as in Shizuoka, Tottori, Hiroshima and Oita. The Company will expand the scale of the business and spread it to the remaining area, considering the trend in demand. At the same time, it will promote value enhancement of company-owned forests by afforestation of elite trees and other seedlings one after another in reforested land owned by the Company.

**CASE STUDY** Use of Cutting-edge Technology (Nippon Paper Industries, Nippon Paper Lumber)

Nippon Paper Industries and Nippon Paper Lumber are examining the acquisition of forest resource information using a drone and aerial laser and labor saving in and streamlining of forest management in company-owned forests. The companies concluded an agreement on the implementation of cutting-edge technology on-site with Shizuoka Prefecture in May 2022, and will demonstrate cutting-edge technology using company-owned forests in Shizuoka. The Company will also streamline the creation of J-Credits\* in company-owned forests by acquiring forest information using such data.

\* J-Credit Scheme is a system to certify the amount of CO<sub>2</sub> and other greenhouse gas emissions reduced by energy saving and the use of renewable energy or absorbed through proper forest management, as “credit.”

**CASE STUDY** Public-private Collaboration in the Formation of Large-Scale Forestry Business Complexes (Nippon Paper Industries)

Since 2011, as a private-sector company that owns a forest in the Itsuki region of Kumamoto, the Company has been involved in an agreement to promote forest management in the region, alongside Kyushu Regional Forest Office, Itsuki Village, ITSUKI Forest Owner’s Cooperative, and others. Currently, the field environment is a large-scale forestry operation of over 20,000 hectares, and the partnership is engaged in reasonable road building and efficient forestry operations. In FY2021, it implemented cooperative shipping with the aim of building a stable supply chain for timber and is planning the expansion of the business.

**CASE STUDY** Supply of SGEC-Certified Wood

Nippon Paper Lumber received CoC certification of SGEC for the first time in Japan. In 2018, the Company used Nippon Paper Lumber’s CoC certification to supply SGEC-certified material from its Kitayama company-owned forest (Fujinomiya, Shizuoka) to the Exhibition Building Wooden Grid Project at the Mt. Fuji World Heritage Center, Shizuoka. This is the first case of acquiring “SGEC/PEFC CoC Project Certification” in Japan. SGEC-certified lumber from company-owned forests was also supplied for use in the construction of the Japan National Stadium, which was completed in 2019.

## Overseas Afforestation

- The Group conducts forest management by paying attention to the local residents including indigenous people, culture and tradition of each region and natural environment and ecosystem. The Group also contributes to local economies by creating employment opportunities and providing support for educational activities (see P.70).
- The Group performs afforestation work on grasslands, former farms and pastures, and on harvested plantation land, selecting and planting 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, the Group manages plantation areas appropriately with consideration of the landscape, such as keeping native waterside forests where the potential effects on the ecology are large.
- Afforestation project companies in each location engage in afforestation projects that pay consideration to biodiversity, have established protected zones on company-owned land for the protection of biodiversity, and are engaged in initiatives such as wildlife (animal and plant) habitat research (see P.43-44).
- When conducting new development, the Group carries out environmental and social assessments and gives prior briefings to local residents including indigenous people.
- The afforestation project companies conduct regular visits and meetings for communities surrounding the afforestation areas they own, in order to confirm the opinions and demands of local people with regard to their project activities. Procedures have also been established for assessing and reviewing social contribution activity programs run by these companies based on requests received from local residents via these communication activities.
- Forest certification has been obtained and maintained for all overseas afforestation projects managed by the Group.

### Overview of Overseas Forests under Nippon Paper Group Management (as of December 31, 2021)

| Company  | Country   | plantation area (10 k ha) | Background  |
|--|-----------|---------------------------|---|
| Amapá Florestal e Celulose S.A.<br>(AMCEL)         | Brazil    | 6.5                       | Wholly owned subsidiary of Nippon Paper Industries                                |
| Nippon Paper Resources Australia Pty.Ltd.<br>(NPR) | Australia | 0.7                       | Wholly owned subsidiary of Nippon Paper Industries (Management of PTP, BTP, etc.) |

### Status of forest certification acquisition for overseas afforestation projects

| Overseas plantation project by operating company | Country   | Certification system name (License no.) | Acquisition year |
|--|-----------|---|------------------|
| PTP  | Australia | Responsible Wood                        | 2006             |
| BTP  | Australia | Responsible Wood                        | 2006             |
| AMCEL  | Brazil    | FSC® (FSC®C023383)<br>CERFLOR           | 2008<br>2014     |



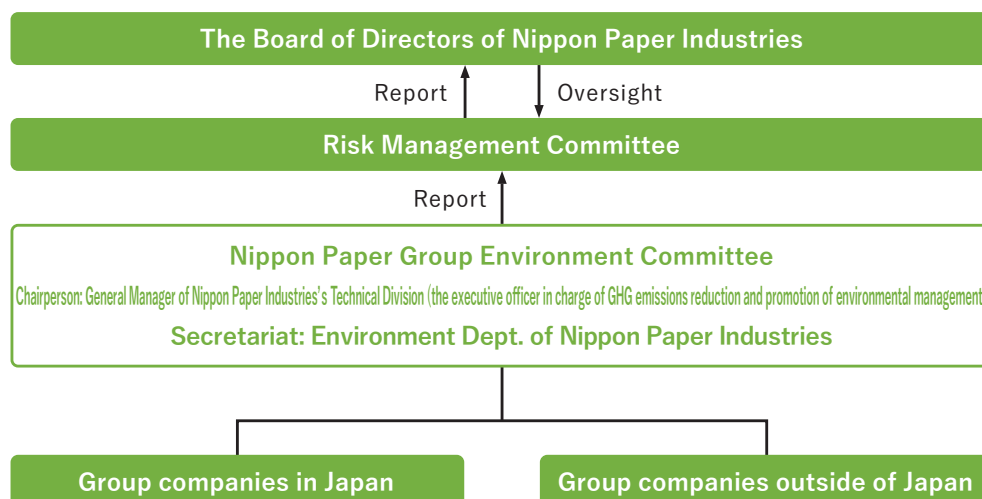
**Examples of Activities to Coexist with Local Communities (see P.70)**

| country   | Examples of Activities to Coexist with Local Communities  |   |
|-----------|---|---|
|           | Contributions to Local Communities  | Respect for indigenous peoples  |
| Brazil    | <ul style="list-style-type: none"> <li>● Vocational training for local residents in communities surrounding afforestation areas</li> <li>● Vocational training for women living in local communities (makeup, accessory making, etc.)</li> <li>● Supporting sports classes for children from low-income families</li> <li>● Partnership with military police (sponsorship of education and sports classes for children from low-income families run by military police)</li> <li>● Distribution of a food basket to low-income families</li> <li>● Financial support for protection of wild animals and environmental education activities</li> </ul> | <ul style="list-style-type: none"> <li>● Designation of areas with indigenous heritage sites identified on company-owned land as permanent protected zones</li> </ul> |
| Australia | <ul style="list-style-type: none"> <li>● Cooperation with firefighting activities in times of forest fires in the local area, as members of a fire brigade consisting of local afforestation-related companies</li> </ul>   | <ul style="list-style-type: none"> <li>● Protection of indigenous heritage sites identified in afforestation areas</li> </ul>   |

# Policy and Management

» The Nippon Paper Group Environmental Charter (see P.86)

## Environmental Management Promotion Structure



### — Environmental management systems

#### Acquisition of ISO 14001 Certification (as of March 31, 2022)

| Company Name                        | Mills/Operating Division/Production Subsidiaries   |
|-------------------------------------|--|
| Nippon Paper Industries             | Asahikawa Mill, Siraoui Mill, Akita Mill, Ishinomaki Mill, Iwanuma Mill, Nakoso Mill*, Kanto Mill, Fuji Mill, Gotsu Mill, Otake Mill, Iwakuni Mill, Yatsushiro Mill, Higashimatsuyama Mill |
| Nippon Paper Liquid Package Product | Egawa Mill, Ishioka Mill, Miki Mill  |
| Nippon Paper Crecia                 | Tokyo Mill, Kaisei Mill, Koyo Mill, Kyoto Mill   |
| Crecia-Kasuga                       | Shin-Fuji Mill   |
| Nippon Paper Papylia                | Harada Mill, Suita Mill, Kochi Mill  |
| NP Trading                          | Headquarters/Sapporo Branch Office/Chubu Branch Office/ Kansai Branch Office/Chugoku Branch Office/Kyushu Branch Office/Shizuoka Sales Office  |
| Daishowa Uniboard                   | Headquarters/Miyagi Mill   |
| N&E                                 | Headquarters Mill  |
| Nippon Paper Ishinomaki Technology  | Headquarters   |
| Opal                                | Acquired at 4 sites  |
| Jujo Thermal                        | Kaattua  |

\* Manufacturing of non-carbon paper, heat-sensitive paper, inkjet paper and other information paper and wholesaling of electric power

- Nippon Paper Industries has obtained ISO 14001 certification for 100% of its production locations.
- Nippon Paper Industries has obtained ISO 14001 certification for 50% of its environment-related matters to be reported.

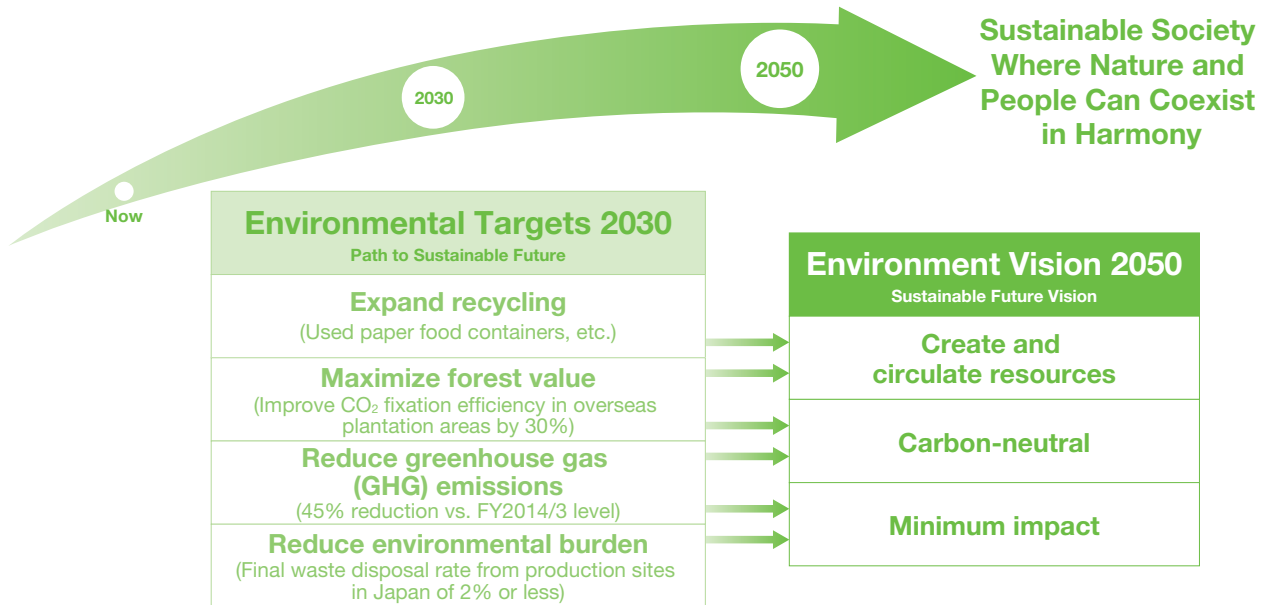
#### The status of Eco-Action 21 acquisition (as of March 31, 2022)

| Company Name         | Mills/Operating Division/Production Subsidiaries |
|----------------------|--|
| Akita Jujo Chemicals | Head Office Plant                                |

## Nippon Paper Group Environmental Vision 2050 (Sustainable Future Vision), Nippon Paper Group Environmental Targets 2030: Path to Sustainable Future

### Aiming for a Sustainable Society Where Nature and People Can Coexist in Harmony

In order to be more effective in dealing with environmental issues such as climate change, which are highly uncertain and require long-term responses and countermeasures, it is necessary to have a vision and goals based on a medium- to long-term perspective. The Group has formulated targets for 2030 by backcasting from the ideal state of the Group in 2050, and the entire Group is working together to achieve them.



## Nippon Paper Group Environmental Vision 2050 (Sustainable Future Vision)

### 1. Carbon-neutral

#### Reduce greenhouse gas emissions to virtually zero.

- ▶ Minimize greenhouse gas emissions through the efficient use of energy and the use of renewable energy sources.
- ▶ Minimize greenhouse gas emissions in the value chain through collaboration with stakeholders.
- ▶ Become carbon neutral by offsetting residual emissions through CO<sub>2</sub> absorption and fixation in forests and CO<sub>2</sub> removal technologies.

### 2. Creation and circulation of resources

#### Create sustainable forests that conserve biodiversity and procure and supply resources.

- ▶ Maintain and expand forests with multifaceted value and maximize forest value.
- ▶ Procure and supply a variety of woody biomass resources that can be used as raw materials for various products.

#### Promote the utilization of woody biomass resources to contribute to better living in a circulation-oriented society.

- ▶ Provide a variety of materials and products made from woody biomass resources.
- ▶ Promote resource circulation and product recycling as a social infrastructure.

### 3. Minimum impact

#### Minimize the environmental impact of the Group's business activities.

- ▶ Minimize the input and output of resources that impact the environment.
- ▶ Provide society with products and services that have a low environmental impact throughout their entire life cycle.

## Nippon Paper Group Environmental Targets 2030: Path to Sustainable Future

### 1. Reduce greenhouse gas emissions

#### Reduce greenhouse gas emissions through fuel conversion and energy conservation measures.

- ▶ Reduce direct greenhouse gas emissions by 45% from FY2013 levels.
- ▶ Accelerate fuel conversion and increase the ratio of non-fossil energy use to at least 60%.
- ▶ Improve total energy consumption per unit of production and distribution by 1% from the previous year.
- ▶ Reduce greenhouse gas emissions from domestic product transportation in the paper and paperboard business by 23% relative to FY2020 levels through modal shift and other measures\*.
- ▶ Collaborate with stakeholders to reduce indirect greenhouse gas emissions.

\* Applied to Nippon Paper Industries.

### 2. Promote the creation and circulating of resources

#### Promote the protection and cultivation of forest resources and biodiversity-conscious forest management.

- ▶ Improve CO<sub>2</sub> fixation efficiency in overseas forest plantations by 30% compared to 2013 levels.
- ▶ Obtain and maintain forest certification for all company forests in Japan and overseas.
- ▶ Ensure the traceability and sustainability of all woody biomass resources used.
- ▶ Promote the use of forest resources in Japan.

#### Promote the circulation of resources.

- ▶ Work to build a recycling system that promotes resource circulation
- ▶ Utilize 12,000 t/year of unused recovered paper, which has been difficult to recycle, through the development of recovered paper utilization technology.

### 3. Reduce environmental impact

#### Reduce the environmental impact of manufacturing processes.

- ▶ Reduce air pollutants by 15% and water pollutants by 15% compared to FY2018.
- ▶ Reduce the final disposal of industrial waste at production sites in Japan to 2% or less.
- ▶ Provide society with products and services that have minimal environmental impact throughout their entire life cycle.

## Nippon Paper Group Environmental Targets 2030: Path to Sustainable Future

### 1. Reduce greenhouse gas emissions

#### Reduce greenhouse gas emissions through fuel conversion and energy conservation measures.

| Target   | Progress and Status of Initiatives  |
|--|---|
| ▶ Reduce direct greenhouse gas emissions by 45% from FY2013 levels.  | The Group reduced GHG emissions (Scope 1 and 2) by 20% compared with FY2013.  |
| ▶ Accelerate fuel conversion and increase the ratio of non-fossil energy use to at least 60%.  | The non-fossil energy ratio to energy used was 46%.   |
| ▶ Improve total energy consumption per unit of production and distribution by 1% from the previous year.   | Total energy consumption per unit of Nippon Paper Industries decreased by 6% in the paper business and 1.3% in the paperboard business in production processes, and increased by 2.6% in logistics processes, compared with 2020. |
| ▶ Reduce greenhouse gas emissions from domestic product transportation in the paper and paperboard business by 23% relative to fiscal 2020 levels through modal shift and other measures*. | GHG emissions increased by 3% compared with FY2020, due to an increase in the transportation volume associated with recovery in production due to the impact of the COVID-19 pandemic.  |
| ▶ Collaborate with stakeholders to reduce indirect greenhouse gas emissions.   | The Group calculated Scope 3 emissions from major pulp and paper companies in Japan and is considering measures to reduce indirect GHG emissions.   |

\* Applied to Nippon Paper Industries.

### 2. Promote the creation and circulating of resources

#### Promote the protection and cultivation of forest resources and biodiversity-conscious forest management.

| Target   | Progress and Status of Initiatives   |
|--|--|
| ▶ Improve CO <sub>2</sub> fixation efficiency in overseas forest plantations by 30% compared to 2013 levels. | The Company conducts research and development such as elite tree selection on an ongoing basis with the aim of improving CO <sub>2</sub> fixation efficiency.  |
| ▶ Obtain and maintain forest certification for all company forests in Japan and overseas.                    | The Group has obtained and maintained forest certification (FSC <sup>*1</sup> , PEFC, and SGEC) for all of the company-owned forests in Japan and overseas.  |
| ▶ Ensure the traceability and sustainability of all woody biomass resources used.                            | The Group has worked to confirm sustainability and enhance traceability by making use of forest certification systems, and through other efforts. The wood chips and pulp used for papermaking in FY2021 were all made from wood approved by FSC <sup>*2</sup> or PEFC (including controlled wood and controlled sources). |
| ▶ Promote the use of domestic forest resources.  | The use of domestic wood at all Nippon Paper mills reached 37.6% in FY2021 (based on actual purchases).  |

#### Promote the circulation of resources.

|  |  |
|--|--|
| ▶ Work to build a recycling system that promotes resource circulation  | The Company has been conducting a test and verification project for collection of paper used for food containers since April 2021, with the support of Hamamatsu City. In addition, the Company started to build a recycling system by installing recycling facilities in Fuji Mill of Nippon Paper Industries which is slated to start operation in October 2022. |
| ▶ Utilize 12,000 t/year of unused recovered paper, which has been difficult to recycle, through the development of recovered paper utilization technology. | The amount of previously unused and hard-to-process wastepaper used in FY2021 was 22.5 tonnes (22.14 tonnes of plastic compound paper and 0.34 tonnes of used paper cups) (consumed at Kanto Mill (Soka) of Nippon Paper Industries).  |

### 3. Reduce environmental impact

#### Reduce the environmental impact of manufacturing processes.

| Target  | Progress and Status of Initiatives  |
|---|---|
| ▶ Reduce air pollutants by 15% and water pollutants by 15% compared to FY2018.  | The Group reduced air pollutants and water contaminants through initiatives related to facility improvement and energy saving. SO <sub>x</sub> 34%, NO <sub>x</sub> 22%, soot and dust 21%, COD/BOD 23%, and SS 9% (reduction rate at production sites in Japan compared with FY2018) |
| ▶ Reduce the final disposal of industrial waste at domestic production sites to 2% or less.                             | The final disposal of industrial waste at production sites in Japan was 2.1%.   |
| ▶ Provide society with products and services that have minimal environmental impact throughout their entire life cycle. | The Group sells products such as heat-sealing plastic-free paper "Lamina <sup>®</sup> " and multi-functional corrugated paper "Waterproof Liner" as products that contribute to reduction of the use of plastics, and to resource recycling.  |

\*1 FSC<sup>®</sup> Logo License No. FSC<sup>®</sup> C023383 (AMCEL:Brazil)

\*2 FSC<sup>®</sup> Logo License No. FSC<sup>®</sup> C001751 (Nippon Paper Industries)

## Strengthening Environmental Compliance

### — Two-Pronged Approach to Environmental compliance

The Group is strengthening its environmental compliance from a preventive standpoint, using a two-pronged approach of establishing frameworks for preventing problems and ensuring that no problems are missed, and engaging in its business activities while giving priority to legal compliance.

#### Two-Pronged Approach

- |   |   |
|---|---|
| <p>1. Building Systems to Prevent Problems</p> <ul style="list-style-type: none"> <li>• Building a workplace that emphasizes the importance of the environment (environmental compliance training)</li> <li>• Strengthening the system for identifying applicable laws and regulations</li> <li>• Implementing measures from both the facility and technology perspectives</li> </ul> | <p>2. Establishing a Framework that Ensures All Problems are Covered</p> <ul style="list-style-type: none"> <li>• Enhancement of environmental audits</li> <li>• Enhancement of environmental management system</li> <li>• Engaging in environmental communication and active information disclosure</li> </ul> |
|---|---|

### Environment-related\* fines and penalties

Environment-related fines and penalties (FY2021)

0 Yen

\* Decrees and regulations regarding the environment of water intake, wastewater, air, and waste

### — Systems to Ensure that the Laws and Regulations in Japan and Overseas to be Complied with are Identified

To respond accurately to wide-ranging and relatively frequent changes in environmental legislation, the Group has developed a framework which uses a legal and regulatory search system, etc. to search for and share information on revised laws and relevant trends, and which ensures a reliable approach to legal compliance.

### — Introducing Equipment and Measurement Devices to Prevent Environmental Accidents

- The Group extracts the risk of environmental accidents from two perspectives: the possibility of an accident and its impact on the environment, and introduces equipment and measurement equipment necessary for preventing accidents.
- Each Group company is engaged in continuous measures to prevent large-scale leaks of oil or chemical agents, including the installation of liquid containment barriers (oil fences, etc.) and measuring devices.

### — Environmental Audits Emphasizing Legal Compliance and Risk Control

Based on the “Environmental Management for Pollution Prevention,” an action guideline for environmental management issued by the Ministry of the Environment (MOE) and the Ministry of Economy, Trade and Industry (METI), the Group conducts regular environmental audits by double-checking through internal audits by each business site and audits by the head office’s environmental department.

#### <Examples of Environmental Audits>

- ▶ Document audit (confirmation of management records such as drainage)
- ▶ On-site audit (confirm equipment such as chemical tanks)
- ▶ Mutual audit between group companies

## Environmental Communication

The Group has also established the Nippon Paper Group Risk Communication Guidelines and is implementing initiatives based on the guidelines.

### <Examples of Environmental Communication>

- ▶ Environmental risk communication for local residents and local governments (at least once a year in principle).
- ▶ Preliminary briefing session on the environmental impact of construction and operation when introducing large equipment, etc.

## — Responses to Opinions and Complaints

- The Group has a system to accept opinions.
  - ▶ Acceptance of opinions and inquiries on the Company website
  - ▶ Establishment of a contact point for complaints and inquiries at mills
  - ▶ Utilization of an environmental monitoring system to request local residents to provide information
- When a complaint is received, the Group moves swiftly to determine possible causes, and implement emergency and permanent solutions. The Group also explains to the person who lodged the complaint what happened and what was done to resolve the situation, so that they can be satisfied that the Group has responded appropriately.

### Environment-Related Complaints in Japan (FY2021)

| Complaints | Noise/Vibration | Odor | Dust and mist dispersal | Smoke | Other | Total |
|------------|-----------------|------|-------------------------|-------|-------|-------|
| Number     | 4               | 6    | 1                       | 0     | 0     | 11    |

## — Environmental Education and Training for Employees

The Group conducts environmental education for employees.

### <Examples of Environmental Education>

- ▶ Encourage participation in pollution control-related qualifications and external training to gain specialized knowledge
- ▶ Activities to raise employees' awareness of environmental conservation (every June, Environmental Month holds a photo contest "Nippon Paper Industries Group Eco-Photo Contest" and environmental e-learning)

### Educational achievements (FY2021)

| Program Name                                       | Number of participants |
|--|------------------------|
| Let's reduce plastic waste!<br>~ New law is made ~ | Over 7,400             |

# Addressing Climate Change

- The Nippon Paper Group sees addressing climate change as one of its material issues for realizing the Group Mission.
- Under the 2030VISION, in its mid- and long-term basic policy, the Company states “reduce GHG emissions and respond to drastic changes in social conditions, including environmental issues, etc.,” and it will work to reduce GHG (greenhouse gas) emissions and implement green strategies to achieve carbon neutrality by 2050.
- Japan Paper Association, of which the Company is a member, listed five targets including “Achieving a Low Carbon Society” as environmental policy in 2012, and is working to achieve a course of action to materialize them.

### The Nippon Paper Group’s FY2030 Targets

#### Reduce GHG emissions (Scope 1 and 2) by 45% compared with FY2013

- Reduce fossil fuel use by maximizing the use of existing infrastructure

#### Green strategy

- Improve CO<sub>2</sub> fixation efficiency in overseas plantation areas by 30% compared to 2013
- Respond to demands to eliminate and reduce plastic (increase products that replace plastic with paper)



### Carbon neutrality in 2050

## Initiatives to Achieve Carbon Neutrality

- The Group is working to achieve carbon neutrality at each stage of its value chain through three key initiatives: shifting to alternative fuels (fuel conversion), promoting energy saving in production and logistics processes (energy saving) and absorbing and fixing CO<sub>2</sub> through the appropriate management of company-owned forests (carbon sequestration).
- The Company has reviewed the Group energy mix and introduced internal carbon pricing (2,000 Yen/t-CO<sub>2</sub>) from 2021 in order to accelerate the reduction of GHG emissions.

### Realize carbon neutrality



#### The Nippon Paper Group’s initiatives

##### Reduction of GHG emissions from business activities

##### Absorption and fixation of CO<sub>2</sub> in Company-owned forests

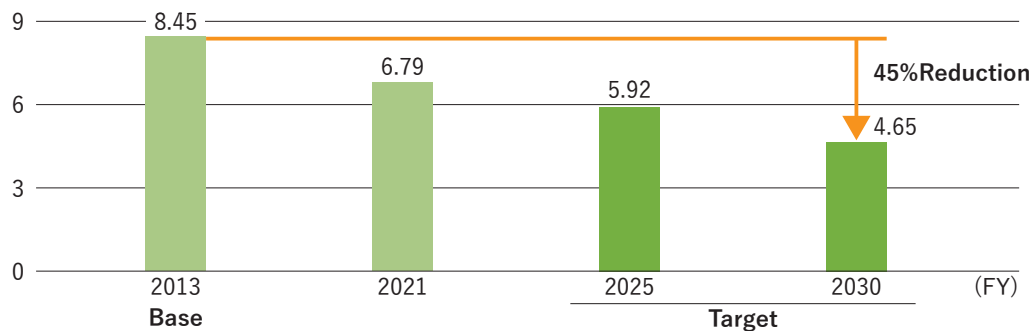
##### Fuel conversion

##### Energy conservation in manufacturing and logistics processes

##### Absorption and fixation of CO<sub>2</sub> through appropriate management of company-owned forests

### GHG Emissions (Scope 1 and 2)

(Million t-CO<sub>2</sub>)





**GHG emissions** (Scope 3, FY2021)

Scope of organizations covered : Nippon Paper Industries, Nippon Paper Crecia, Nippon Paper Papyrus

Scope of businesses covered : paper and paperboard business, daily-life products business

| Category |  | Emissions (thousand t-CO <sub>2</sub> ) |
|----------|--|---|
| 1        | Purchased goods and services   | 1,806                                   |
| 2        | Capital goods  | 97                                      |
| 3        | Fuel- and energy-related activities (not included in scope 1 or scope 2) | 1,149                                   |
| 4        | Upstream transportation and distribution                                 | 683                                     |
| 5        | Waste generated in operations  | 57                                      |
| 6        | Business travel  | 1.8                                     |
| 7        | Employee commuting   | 6.0                                     |
| 8        | Upstream leased assets   | Not applicable                          |
| 9        | Downstream transportation and distribution                               | 237                                     |
| 10       | Processing of sold products  | 67                                      |
| 11       | Use of sold products   | 0                                       |
| 12       | End-of-life treatment of sold products                                   | 173                                     |
| 13       | Downstream leased assets   | Not applicable                          |
| 14       | Franchises   | Not applicable                          |
| 15       | Investments  | Not applicable                          |
| Total    |  | 4,276                                   |

Category 2,6,7 : Applies to all businesses, including other than scope of businesses covered

Category 11 : Paper and paperboard products, which are our main products, are assumed not to use energy when using the products

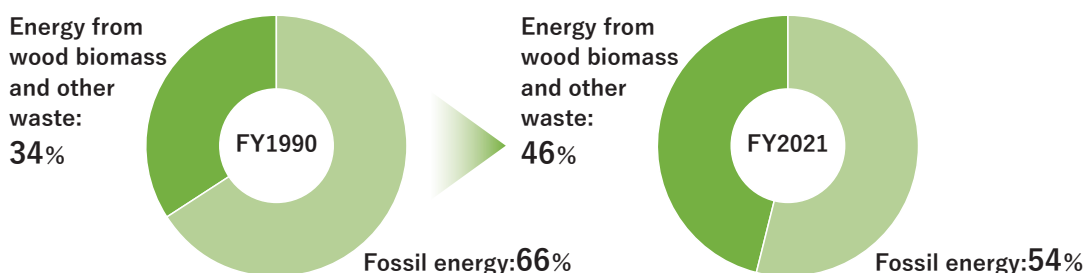
**Fuel Conversion**

- The Group uses black liquor (produced as a byproduct of the production of pulp) and construction waste materials as wood biomass fuels. At the same time, it appropriately procures wood biomass through its domestic and overseas wood biomass collection network for utilization as a renewable source of energy.
- The amount of woody biomass energy used by the Group in FY2021 was equivalent to around 3.4%\*1 of all non-fossil energy supplied in Japan (excluding nuclear and hydroelectric power).
- The Group has also installed two types of boilers—high efficiency boilers, and boilers capable of burning construction waste and other biomass fuels, used tires, RPF\*2 and other waste fuels.

\*1 Estimated by Nippon Paper Industries based on domestic primary energy supply data (finalized data for FY2020) published by the Agency for Natural Resources and Energy

\*2 RPF: Refuse derived paper and plastics densified fuel. This is a high-grade solid fuel made mainly from those paper and plastic industrial waste materials which are difficult to recycle. (From the website of Japan RPF Industry Association )

**Fossil energy usage ratio (calorie conversion) of all fuels used**



**CASE STUDY**

**Use of Torrefaction Technology and Wood Biomass Fuels**

The Company has established a torrefaction technology to manufacture new woody biomass fuel as an alternative to coal for thermal power stations.

Torrefaction is a technology that carbonizes woody biomass at a relatively low temperature. This has been developed for the production of fuels which remain relatively high in calories, are easy to crush, and have developed a water resistance that makes them suitable for outdoor storage. The fuel produced by the torrefaction technology can be used in the existing thermal power generating equipment, and contributes to the reduction of GHG emissions.

**CASE STUDY**

**In-house Production of Solid Fuel from Waste**

The Company’s Otake Mill converts the paper sludge<sup>\*1</sup> and wastepaper residues<sup>\*2</sup> produced in the manufacture of linerboard and corrugated medium (for containerboard) into solid form on site, and uses it as a form of energy to drive the mill itself. In FY2021, the mill produced 6,940 BD t<sup>\*3</sup> of fuel. Self-production of fuel from waste leads to reductions in coal usage, and also contributes to reducing the amount of waste sent for final disposal through the recycling of waste.

\*1 A sludge produced in the manufacture of paper. It contains mainly cellulose fibers and minerals drained during the paper dewatering / drying process.

\*2 Foreign matter produced when processing wastepaper.

\*3 As of April 2019, the mill has also begun accepting waste plastic refuse from the city of Otake as a raw material.

**Energy Conservation in Manufacturing and Logistics Processes**

**— Promoting energy-saving in manufacturing processes**

- The Group has been working continuously to implement energy saving at its paper mills in Japan for many years. It endeavors to increase the effectiveness of these efforts by seeking to share examples of effective initiatives with other mills.
- Knowledge obtained through efforts at mills in Japan has also been applied at the paper mills of overseas Group companies in countries such as Australia and Thailand.
- The Group is striving to save energy in and outside Japan by introducing more efficient facilities and reviewing manufacturing processes.

**<Examples of Energy-saving in Manufacturing Processes>**

- ▶ Reduction of heating steam in the system by efficiently collecting hot water (Asahikawa mill, Nippon Paper Industries)
- ▶ Use of a highly efficient beating machine at the beating process in manufacturing (Akita mill, Nippon Paper Industries)
- ▶ Utilization of a co-generation system (Use of steam with high temperature and pressure obtained in combustion at a boiler in power generation and production processes)

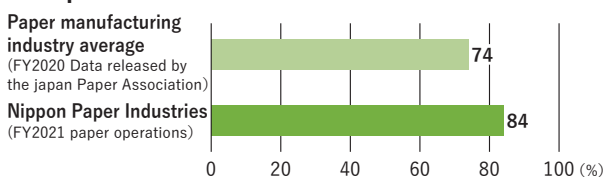
**— Promoting energy-saving in logistics processes**

The Group is working to implement green logistics that will lead to reductions in greenhouse gas emissions, from the two perspectives of improving loading efficiency and shortening transportation distances.

**<Examples of Energy-saving in Logistics Processes>**

- ▶ Promoting a modal shift (Long-distance transportation by loading a large amount of goods at one time on railroads and coastal vessels)
- ▶ Pursuing direct delivery and joint delivery (Direct delivery without going through the warehouse in cooperation with the distributor)

**Comparison of modal shift rates**



**Green Management Certifications\*** (Consolidated and non-consolidated subsidiaries in Japan as of April 15, 2022)

|                |  |
|----------------|--|
| <b>Company</b> | NIPPON PAPER LOGISTICS, Kyokushin Transport, Nanko Logistics Support, Hotoku, NP Unyu Kanto, NP Unyu Fuji, NP Unyu Kansai, and NP Unyu Iwakuni |
|----------------|--|

Of those locations that have obtained certification, 16 locations at 8 companies have obtained Green Management Certification Long-Time Commendation, which is awarded to business locations that have been certified and registered for 10 years continuously since the date of their initial registration (in the first year).

\* A system in which the Foundation for Promoting Personal Mobility and Ecological Transportation acts as a certification body and certifies and registers businesses that are making efforts above a certain level based on the Green Management Promotion Manual.

**Eco Rail Mark Certifications\*** (as of July 31, 2021)

| Company                 | Certification type                                   |
|-------------------------|--|
| Nippon Paper Industries | Eco Rail Mark for companies                          |
|                         | Eco Rail Mark for products (paper, white paperboard) |

\* The certification, established by the Ministry of Land, Infrastructure, Transport and Tourism, applies to companies (and the products of companies) which use more than given percentage of rail freight transportation, which generates lower unit CO<sub>2</sub> emissions.

**CASE STUDY Efforts for double-coupled trucks**

NIPPON PAPER LOGISTICS is participating in the creation of advanced logistics technology and new systems by investing in NEXT Logistics Japan Co., Ltd. (NLJ) in 2021 in order to optimize the working hours of truck drivers during transportation and reduce the environmental burden. Currently, as part of this, it has started the operation of NLJ's double-connected trucks\* and the efforts to change drivers at intermediate points during long-distance transportation (relay transportation).

\* Each of them has the transportation capability equivalent to roughly two heavy-duty trucks, and CO<sub>2</sub> emissions per weight of the trucks (vehicles over 21m) are reduced by about 30% compared to ordinary heavy-duty trucks (12 m vehicles) (according to NLJ actual values).

**Absorption and Fixation of CO<sub>2</sub> through Appropriate Management of Company-owned Forests**

- The Group is in compliance with the Clean Development Mechanism (CDM) of the Kyoto Protocol and considers that the forests absorb CO<sub>2</sub> while growing and the CO<sub>2</sub> is deemed emitted to the atmosphere when trees are harvested.
- The forests owned by the Group in Japan and overseas are harvested and replanted based on the business plan for the purpose of using resources.
- Part of the amount of CO<sub>2</sub> absorbed through proper forest management and continuous thinning has been certified as "J-credits\*" after inspection.
 

\* A system in which the government certifies as "credits", the amount of CO<sub>2</sub> emissions reduced through the introduction of energy-saving equipment, the use of renewable energy, and the absorption of CO<sub>2</sub> through appropriate forest management.
- The amount of net absorption of CO<sub>2</sub> in company-owned forests in Japan and overseas (amount of absorption minus amount of harvesting) was approximately 250 thousand tonnes, and the total amount of sequestered CO<sub>2</sub> was approximately 31 million tonnes.
- The Group estimates that the amount of sequestered CO<sub>2</sub> in forests in environmental protection area established in afforestation projects overseas is approximately 10 million tonnes.

**J-クレジット販売実績**

| Company                 | Credit name   | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 |
|-------------------------|---|--------|--------|--------|--------|--------|
| Nippon Paper Industries | Fuji/Kitayama company-owned forest thinning promotion project | 2cases | —      | 1case  | —      | 2cases |
| Nippon Paper Lumber     | Gunma/Sudagai company-owned forest thinning promotion project | 3cases | —      | 2cases | 1case  | 2cases |

**CASE STUDY Utilization of J-Credits**

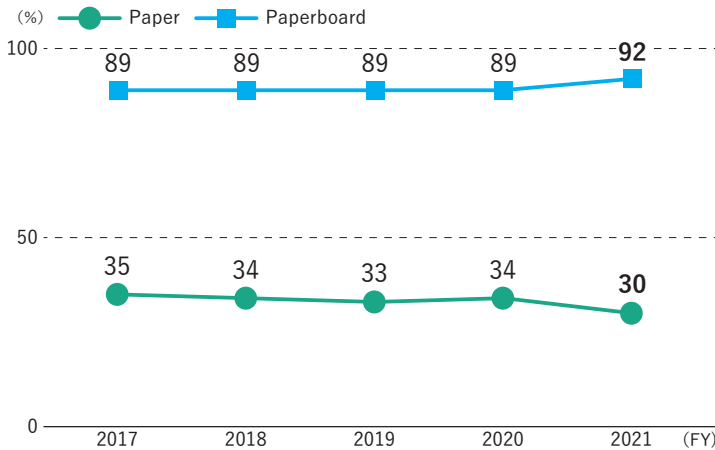
In FY2021, the Group's J-Credit was used in International Coastal Cleanup conducted by the employees of Coca-Cola System as a carbon offset (offset of 1-tonne of CO<sub>2</sub> per participant to promote reduction of CO<sub>2</sub> emissions).

# Promotion of Resource Circulation

## Initiatives for Using Wastepaper

The Nippon Paper Group considers wastepaper as important raw material and is working on the recycling of unused wastepaper.

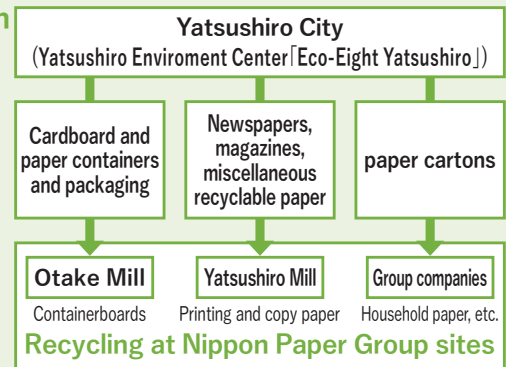
### Trend of used paper utilization rate (in Japan\*)



\*From FY2021, Crecia-Kasuga is also included in the scope

#### CASE STUDY Circular Use of Wastepaper in Collaboration with Local Governments

The Company's Yatsushiro Mill, in partnership with the city of Yatsushiro, has built a comprehensive wastepaper recycling system for the wastepaper generated in Yatsushiro. A wide variety of used paper (newspapers, magazines, corrugated cardboard, paper cartons, paper containers and packaging) collected by Yatsushiro City is accepted by the Yatsushiro Mill and other plants of the Group, recycled using facilities and technologies such as recovered paper pulp production facilities, and used as raw materials for making paper.



#### CASE STUDY Collaborative business for recycling used food paper containers (Nippon Paper Industries)

The Company has been conducting tests of self-collection of paper containers for ice cream and other foods with the support of Hamamatsu City since April 2021. This project, being carried out together with Hamamatsu Green Wave Co., Ltd. and NPO Ecolife Hamamatsu, uses collection boxes installed at Ecohama, a facility in Hamamatsu City to raise environmental awareness, and other locations where used paper containers are collected and brought to one of the Company's mills to be utilized as raw material for paper. This will contribute to raising general consumers' awareness of recycling, reducing the volume of incinerated rubbish and fixing carbon by prolonging use of woody resources.

#### CASE STUDY Closed Loop Initiatives (Nippon Paper Industries)

In order to make long-term, stable use of collected waste newspaper as a recycled resource and raw material for newsprint, the Company has constructed a closed loop scheme in which it purchases wastepaper directly from newspaper companies, which are its customers.

#### CASE STUDY Collection and Recycling of Paper Cups (Nippon Paper Industries)

The Company collects paper cups used at its head office and recycles them into material for containerboard at its Ashikaga Mill. Since this initiative was launched in September 2019, the Company has collected a total of around 363,000 cups (as of July 31, 2022).

**CASE STUDY** Paper Carton Recycling “PakUpcycle®”

The Company has conducted various initiatives with a catch phrase of “PakUpcycle®,” coined by us by combining “Pak” (beverage paper pack) and “Upcycle” (to reuse unnecessary items through processing to add value as a product).

**<Paper-Pak Carton Collection and Recycling>**

The Company has installed Paper-Pak collection boxes at Group company sites and is working to increase employee awareness of Paper-Pak recycling. In addition, the Company has positioned the collection of paper cartons as an activity that enables society as a whole to make effective use of resources, and is working with collection companies to strengthen the efforts to promote recycling at various facilities and schools. In 2017, the Company commenced collection activities using a proprietary method, primarily in Nerima City, Tokyo (four tonnes were collected in FY2021). The collected Paper Paks are used as raw material for household paper products.

**<Recycling of Beverage Paper Packs with Aluminum>**

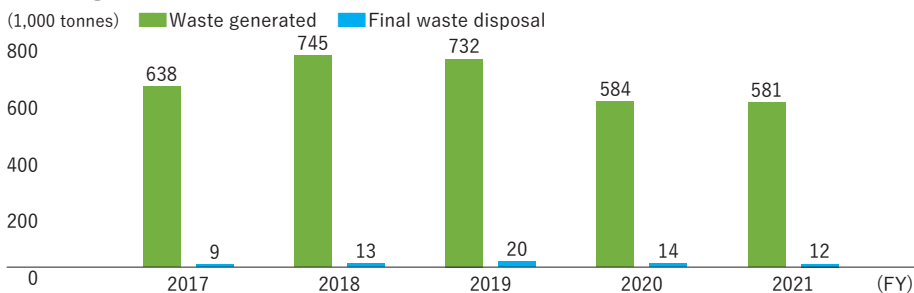
The Company is working on the development of mixture of polyethylene and aluminum jointly with RIPRO Corporation, Japan and HAGIHARA INDUSTRIES INC. to material-recycle\* the mixture processed as waste in the recycling process of the beverage paper packs with aluminum. In 2021, a boundary stake made of the mixture was introduced in several forestry unions.

\* Recycling method in which waste is recycled as raw material for a new product

## Waste Recycling

The Group is advancing initiatives such as revising production processes and making effective use of boiler ash as civil engineering material in order to reduce the amount of industrial waste sent to landfill and other forms of final disposal.

**Waste generated and final waste disposal (in Japan\*)**



\*From FY2021, Crecia-Kasuga is also included in the scope

**CASE STUDY** Circular Use of Quicklime (Nippon Paper Industries)

At its papermaking mills, the Group uses quicklime to recover chemicals used in the pulp manufacturing processes and to manufacture fillers that impart functionality to paper. Quicklime waste is generated in this process. The Group has so far disposed of this material as an industrial waste. However, the Company’ Ishinomaki and Iwanuma mills have started collaborating with a supplier that can recycle quicklime waste. Under this collaboration, the Ishinomaki and Iwanuma mills are working to reuse quicklime waste as a resource.

**CASE STUDY** Processing Coal Fly Ash from a Boiler into a Construction Material (Nippon Paper Industries)

The Ishinomaki Mill operates a coal boiler to privately generate electricity on site. In the process, combustion ash is generated in its coal boiler. The Company processes the combustion ash through heat modification, and sells the material as CfFA® (Carbon-free Fly Ash) concrete admixture. Mixing CfFA® into concrete has the effect of making it more durable and longer lasting. CfFA® has so far been adopted in earthquake recovery construction (bridges and seawalls, etc.) in the Tohoku region of Japan.

**CASE  
STUDY**

### Local Production and Consumption of Energy (Nippon Paper Industries)

At the Company's Nakoso Mill, waste generated in neighboring areas is actively used as fuel. This waste includes shiitake mushroom beds and rubber chips from artificial turf. The use of waste as fuel allows the Nakoso Mill to reduce its use of fossil fuels. The local production and consumption of fuel has not only contributed to reducing GHG emissions from the Nakoso Mill, but it has also helped to reduce waste generated in local areas.

## Response to the Plastic Resource Circulation Act

The Group is working on the control of generation and discharging of waste plastic and its recycling pursuant to the Plastic Resource Circulation Act, established in April 2022.

### — Control of Generation and Discharging

- The Group is striving to control the generation and discharging of plastic waste by encouraging simple packaging and the use of returnable containers for products in which plastic is used in its business activities.
- As for waste plastic derived from waste paper used as raw material, the Group is encouraging waste paper suppliers to prevent mixture of plastic through Japan Paper Association.

### — Recycling

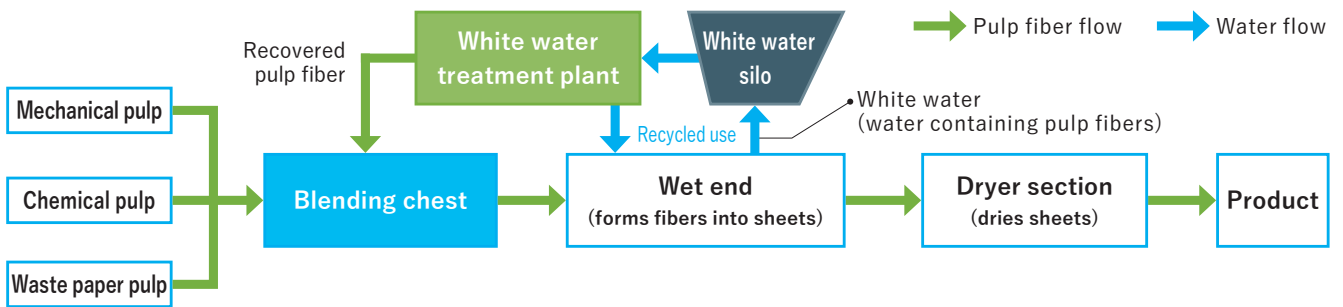
- As it is difficult to material-recycle waste plastic derived from waste paper, the Group burns and collects it as heat to use it as energy to operate mills as thermal recycling.
- The Company's Otake Mill conducts thermal recycling by transforming waste plastic and other wastes generated in Otake City as well as in the mill into solid fuel (see P. 34).

# Alleviation of Environmental Burden

## Effective Use of Water Resources

- The Group’s main mills are working on saving of water by recovering “white water,” which contains very fine pulp fibers from the wet end of the papermaking process, and recycling it.
- In FY2021, the Group has received no information from local government authorities or residents to indicate that the mills operated by the Group companies are having an environmental impact as a result of their water intake, and water risks in Japan and overseas are persistently low.

### Water Recycling System

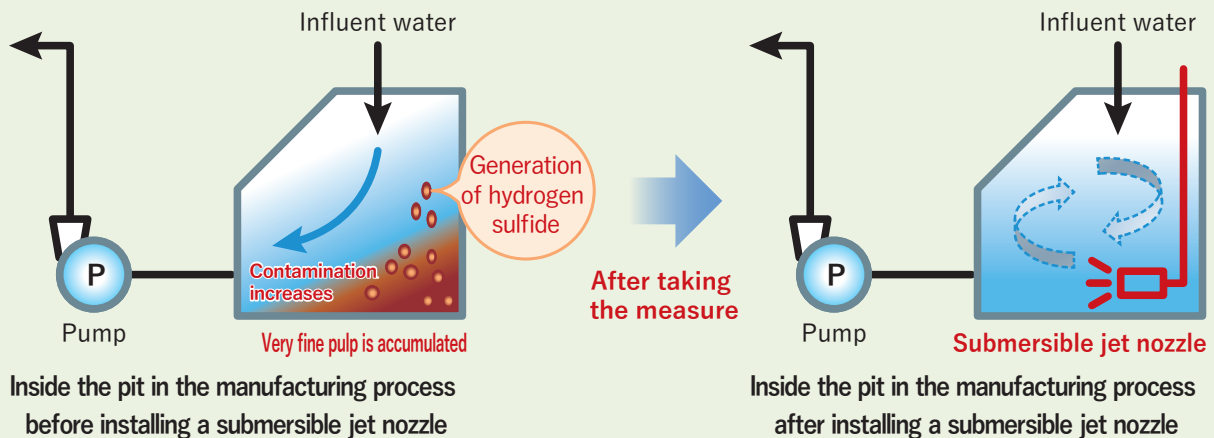


**CASE STUDY**

### Initiative for Water Saving in Manufacturing Processes (Nippon Paper Industries)

There is a concern that water saving in manufacturing process may result in an increase in recycled water, contamination of the system caused by closing the processes and the generation of hydrogen sulfide derived from corruption generated by accumulated very fine pulp. In order to save water use and mitigate the concern, the Company installed a submersible jet nozzle with an eductor effect\* in Ashikaga and Yatsushiro mills. This makes it possible to purify inside the system by eliminating the contamination at the bottom of the pit due to strong currents in the liquid. The Company will introduce the nozzle in other mills in Japan.

\* Sucking up the liquid inside the pit and discharging it with supplied water using pressure difference



## Controlling Chemical Substances

- The Group examines the chemical substances it uses in its production processes in accordance with its Chemical Substance Management Guidelines. The Group exercises risk management by monitoring how much of these substances is used and how much is released into the environment. The Group also takes corrective actions as necessary.
- The Group discloses information on its management, release, and transfer of PRTR\*-controlled substances to local stakeholders through environmental risk communications at each of its mills and other production sites.

### Amounts of Substances Subject to the PRTR Law Released and Transferred\*<sup>1</sup> (FY2021)

| Cabinet Order No.             | Chemical Substance   | Amount Released | Amount Transferred | Total released and transferred |
|-------------------------------|--|-----------------|--------------------|--------------------------------|
| 1                             | Water-soluble zinc compounds   | 300             | 0                  | 300                            |
| 2                             | Acrylamide   | 11              | 0                  | 11                             |
| 4                             | Acrylic acid and water-soluble salt                                      | 14              | 0                  | 14                             |
| 9                             | Acrylonitrile  | 1.4             | 0                  | 1.4                            |
| 53                            | Ethylbenzene   | 1.4             | 0                  | 1.4                            |
| 57                            | Ethylene glycol monoethyl ether  | 250             | 5,100              | 5,350                          |
| 80                            | Xylene   | 555             | 0                  | 555                            |
| 85                            | Glutaraldehyde   | 17              | 1.7                | 19                             |
| 127                           | Chloroform   | 39,252          | 40,000             | 79,252                         |
| 149                           | Tetrachloromethane   | 0               | 35,000             | 35,000                         |
| 154                           | Cyclohexylamine  | 730             | 0                  | 730                            |
| 186                           | Dichloromethane; Methylene dichloride                                    | 10,000          | 80                 | 10,080                         |
| 213                           | N,N-dimethylacetamide  | 130             | 190                | 320                            |
| 232                           | N,N-dimethylmethanamide  | 38              | 190                | 228                            |
| 243                           | Dioxins* <sup>2</sup>  | 764             | 4,122              | 4,886                          |
| 245                           | Thiourea   | 2,300           | 0                  | 2,300                          |
| 251                           | O,O-dimethyl O-3-methyl-4-nitrophenyl phosphorothioate;fenitrothion; MEP | 0.3             | 0                  | 0.3                            |
| 272                           | Water-soluble copper salts (except complex salts)                        | 7.9             | 0                  | 7.9                            |
| 296                           | 1,2,4-trimethylbenzene   | 491             | 0                  | 491                            |
| 297                           | 1,3,5-trimethylbenzene   | 5.9             | 0                  | 5.9                            |
| 300                           | Toluene  | 27,652          | 18,200             | 45,852                         |
| 302                           | Naphthalene  | 0.4             | 0                  | 0.4                            |
| 304                           | Lead   | 0               | 0                  | 0.0                            |
| 305                           | Lead compounds   | 0.4             | 0                  | 0.4                            |
| 318                           | Carbon disulfide   | 6,547           | 0                  | 6,547                          |
| 332                           | Arsenic and its inorganic compounds                                      | 0.4             | 0                  | 0.4                            |
| 333                           | Hydrazine  | 370             | 0                  | 370                            |
| 374                           | Hydrogen fluoride and its water-soluble salts                            | 26,130          | 0                  | 26,130                         |
| 392                           | N-hexane   | 1.4             | 0                  | 1.4                            |
| 395                           | Water-soluble salt of peroxodisulfate                                    | 1,300           | 0                  | 1,300                          |
| 400                           | Benzene  | 0.2             | 0                  | 0.2                            |
| 405                           | Boron compounds  | 20,806          | 0                  | 20,806                         |
| 406                           | Polychlorinated biphenyls; PCBs  | 0               | 7,187              | 7,187                          |
| 407                           | Poly(oxyethylene)alkyl ether(alkyl C=12-15)                              | 6.3             | 0                  | 6.3                            |
| 411                           | Formaldehyde   | 939             | 85                 | 1,024                          |
| 412                           | Manganese and its compounds  | 4.6             | 0                  | 4.6                            |
| 415                           | Methacrylic acid   | 2.0             | 0                  | 2.0                            |
| 420                           | Methyl methacrylate  | 23              | 0                  | 23                             |
| 438                           | Methylnaphthalene  | 722             | 85                 | 807                            |
| 1-044                         | Alkyl(C=12-16) (benzyl) (dimethyl) ammonium chloride                     | 866             | 0                  | 866                            |
| 1-380                         | 1-hydroxyethane-1,1-diyldiphosphonic acid                                | 2,880           | 0                  | 2,880                          |
| 2-060                         | Geraniol   | 268             | 0                  | 268                            |
| Total* <sup>3</sup> Unit : kg |  | 142,625         | 106,119            | 248,743                        |

\*1 A summary of the volumes Group companies reported in accordance with the PRTR Law.

\*2 Dioxins unit : mg-TEQ

\*3 Dioxins are not included in total data.



## Preventing Soil Pollution

- The raw materials and chemicals used by the Group's mills contain almost no heavy metals, trichloroethylene or other soil contaminants.
- FY2021 was another year in which there were no instances of contaminated soil generated at the Group companies.

## Preventing Air and Water Pollution

- The Group has introduced equipment and technology to reduce air pollutants such as sulfur oxides (SOx) and nitrogen oxides (NOx) and organic substances contained in wastewater to the standard levels designated by laws and regulations, or the levels agreed upon with local governments, or lower, before discharge.
- The Group carries out activated sludge treatment to reduce contaminants in wastewater.
- Contaminants in the air are reduced with NOx removal equipment, desulfurization equipment, a dust collector, etc.

## Preventing Noise and Vibration

The Group is engaged in efforts utilizing IoT technologies to prevent the occurrence of noise and vibrations.

CASE  
STUDY

### Development and Introduction of "e-musen junkai®" (E-wireless Patrol) System (Nippon Paper Industries, NIPPON PAPER UNITEC)

Nippon Paper Industries and NIPPON PAPER UNITEC have developed the "e-musen junkai®" (e-wireless patrol) system, which uses wireless sensors to constantly monitor equipment for signs of abnormalities. The system enables early detection of abnormalities by accumulating and monitoring the data of technology and technique of human experiences and feeling that cannot be quantified using IoT. This will contribute to the prevention of equipment problems and the solution to issues related to the difficulty in inheritance of technique due to labor shortage. The Company introduces the system in its mills and sells it in Thailand and other countries (see P. 52).

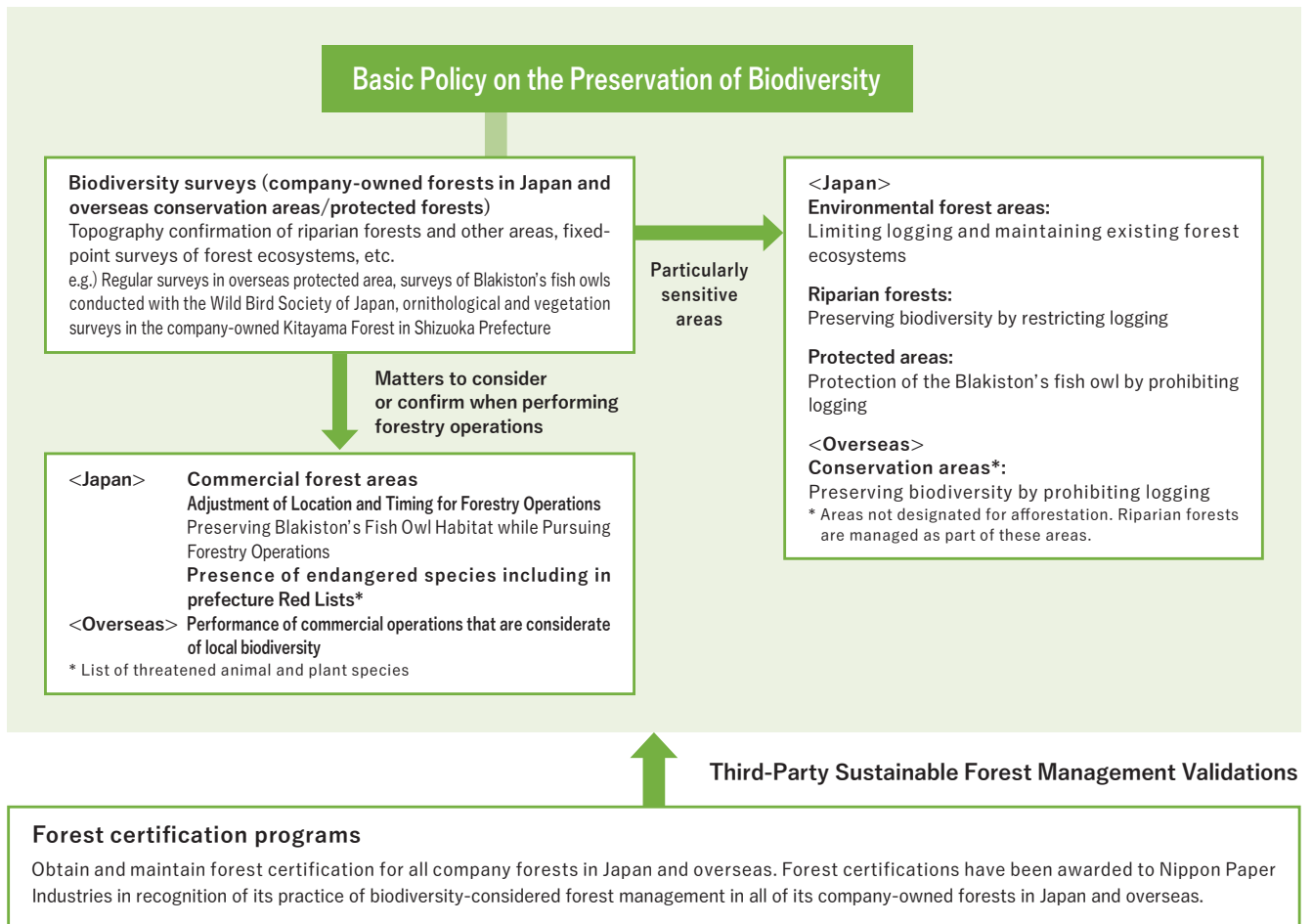
# Preserving Biodiversity

» Basic Policy on the Preservation of Biodiversity (see P. 87)

## Biodiversity Conservation Initiatives

- Nippon Paper Industries' business foundation is forest resources. In Nippon Paper Group Environmental Targets 2030, the Group has set targets for sustainable forest management that consider biodiversity.
- The Group sustainably procures wood resources, which are the raw materials for the Group's products, from properly managed forests.
- The Group manages sustainable forests in its own forests in Japan and overseas.
- In its existing businesses, topographical information on riparian forests and other landforms that need to be taken into account is confirmed and fixed-point surveys of forest ecosystems are carried out, while forests for economic use and those for environmental conservation are managed appropriately, for example by establishing protected areas and protected forests that are not logged to conserve biodiversity.
- The Group works to reduce its impact on biodiversity in its manufacturing processes of paper and other products, such as by processing wastewater and reducing greenhouse gas emissions.

### Nippon Paper Group's Biodiversity Conservation Initiatives (Summary)



**CASE STUDY**

**Preserving Blakiston’s fish owl\* habitat while Pursuing Business Activities- Collaborating with the Wild Bird Society of Japan (Nippon Paper Industries)**

The Company carries out initiatives to conduct business activities while protecting Blakiston’s fish owl habitat with the Wild Bird Society of Japan.

**Collaborating with the Wild Bird Society of Japan**

| Year | Activities  |
|------|---|
| 2010 | Entered into an agreement on the protection of wild birds with which forestland owned by the Company in Doto, Hokkaido was identified as a sanctuary.   |
| 2015 | Set a new standard for the compatibility of business activities with the preservation of Blakiston’s fish owl habitat in company-owned forests in Doto, Hokkaido. Won Biodiversity Action Award of the Ministry of the Environment. |
| 2020 | Installation of artificial nest boxes to support Blakiston’s fish owl breeding  |
| 2021 | Won Hokkaido Biodiversity Conservation Awards of the Hokkaido Government.   |



(Photo courtesy of the Wild Bird Society of Japan)

\* 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

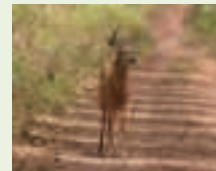
**CASE STUDY**

**Conducting Biodiversity Research Overseas (AMCEL Brazil)**

AMCEL owns approximately 300 thousand hectares of land and has set aside 170 thousand hectares as a conservation area. This conservation area includes forests of high conservation value and is home to large numbers of plant and animal species, some of which are rare or endangered.

**Biodiversity Conservation Initiatives of AMCEL**

| Activities   | Description  |
|--|--|
| Regular water inspections                                      | Installation of equipment for monitoring the quality and level of water in the afforestation area, and performance of regular water inspections                      |
| Wild animal and plant habitat research in company-owned forest | AMCEL conducts habitat research and monitoring of wild animals and fish in afforestation areas in a joint effort with multiple research institutions and ecologists. |
| Monitoring of vegetation in protected areas                    | AMCEL conducts continuous monitoring research of vegetation in protected areas   |



Monitoring wild animal life



Monitoring Vegetation

**CASE STUDY**

**Supporting the Activities of the Shirane-aoi\* wo Mamoru Kai**

To protect Shirane-aoi (*Glaucidium palmatum*: Japanese wood poppy), 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 Katashina in Tone-gun, Gunma. On the part of the Nippon Paper Group, Nippon Paper Development—which manages Nippon Paper Industries’ Sugenuma Forest—has supported the operation of the Shirane-aoi Preservation Group since its initial establishment, and has made a portion of the Sugenuma Forest available to the Group. Since 2002, Group employees have participated as volunteers in activities.

\* Designated as a “Threatened II” species for Gunma Prefecture

**CASE STUDY**

**Eradicating Invasive Plant Species from Iriomote Island~Cooperation with the Iriomote Island Ecotourism Association (Nippon Paper Industries)**

Based on the agreement concluded in 2017 with the Forest Agency Kyusyu Regional Forest Office Okinawa District Forest Office, the Company is conducting emergency countermeasures to exterminate the alien species *Amerindia leopardus*\*, which has invaded Iriomote Island, as well as conducting surveys on the state of invasion of alien plants, together with the NPO Iriomote Island Ecotourism Association, in about 9 hectares of national forests on the island.

\* A plant in the Asteraceae (sunflower) family which originated from the Americas, but was introduced throughout Okinawa for greenifying slopes and embankments, etc. It has strong propagating capabilities, and there are concerns over its impact on local ecosystems.

**CASE  
STUDY**

**Mutual cooperation in forest management with Coca-Cola Bottlers Japan**

The Company, Nippon Paper Group company Marunuma Kogen Resort and Coca-Cola Bottlers Japan Inc. (hereinafter CCBJ) cooperate for the conservation and protection of forest and water resources. They are collaborating on initiatives to keep “Healthy forest” that nurtures “rich water.” The water source area of CCBJ’s Saitama Mill and Iwatsuki Mill are located in part of Suganuma company-owned forest in Katashina Village, Gunma Prefecture (1,746 ha), and the Group promotes the activities of forest conservation and maintenance.

## Other environment-related data

### Environmental Accounting\* (Domestic)

\* Calculation standards are based on the Environmental Accounting Guidelines 2005

#### Environmental Conservation Costs (FY2021)

(Millions of Yen)

| Categories                               | Main contents  | Investment | Cost   |
|--|--|------------|--------|
| (1)Business area costs                   |  |            |        |
| ①Pollution prevention costs              | Measures against air pollution, water pollution, noise and vibration   | 1,643      | 11,677 |
| ②Global environmental conservation costs | Company-owned forest in Japan nursery care, overseas plantation business, energy-saving investment   | 2,293      | 687    |
| ③Resources circulation costs             | Efficient use of resources, cost of waste management   | 2,415      | 8,136  |
| (2)Upstream/downstream cost              | Expenses related to collection, recycling, and disposal of pallets and packing materials   | —          | 3,596  |
| (3)Administration cost                   | Costs for employee training, maintaining ISO 14001, analysis of air and water quality, and management of various conferences   | —          | 286    |
| (4)R&D cost                              | Product development that contributes to environmental conservation, such as promoting the use of recovered paper, and reduction of environmental impact at the manufacturing stage | —          | 2,876  |
| (5)Social activity costs                 | Social contribution activities, group support, corporate action report, Eco-Products   | —          | 62     |
| (6)Environmental remediation costs       | Pollution Health Compensation Levy   | —          | 443    |
| Total                                    |  | 6,351      | 27,763 |

#### Environmental conservation impacts (FY2021)

| Categories   | Environmental Impact Indicators | Results                                      | YoY Change |               |
|--|---------------------------------|--|------------|---------------|
| Effects related to resources introduced to business activities             | Plantation projects overseas    | Overseas plantation areas                    | 72kha      | Down 11kha    |
|  | Energy-saving measures          | Fuel reduction (Heavy oil equivalent)        | 35,576kl   | Down 1,9062kl |
| Effects related to environmental impact and waste from business activities | Greenhouse gas emissions        |  | 5.58Mt     | Down 0.17Mt   |
|  | Air pollutant emissions         | NOx emissions (NO equivalent)                | 6,807t     | Down 461t     |
|  |                                 | SOx emissions (SO2 equivalent)               | 2,362t     | Up 350t       |
|  |                                 | Soot and dust emissions                      | 900t       | Up 32t        |
|  | Effluent                        |  | 799Mt      | Up 1Mt        |
|  | Water contaminant emissions     | COD/BOD emissions                            | 37,633t    | Down 5,562t   |
|  |                                 | SS emissions                                 | 18,042t    | Down 516t     |
| Final waste disposal   |                                 | 12.1kt                                       | Down 2.1kt |               |
| Effects related to goods and services produced from business activities    | Product recycling               | Recycled paper utilization rate (paper)      | 30%        | Down 4%       |
|  |                                 | Recycled paper utilization rate (paperboard) | 92%        | Up 3%         |
|  | Shipping material recycling     | Pallet recovery rate                         | 42%        | Down 4%       |

#### Environmental Benefits of Environmental Conservation (FY2021)

(Millions of Yen)

| Effect   | Amount |
|--|--------|
| Income from company-owned forests in Japan                   | 690    |
| Reduced expenses from energy saved                           | 1,935  |
| Reduced disposal expenses through the effective use of waste | 3,494  |
| Gain on sales from the recycled waste                        | 464    |
| Reduced expenses through the recycling of shipping material  | 1,566  |
| Total  | 8,149  |

## Balance of Materials

### Balance of Materials for All Businesses (Principal Materials) (3 years)

[Units] GWh = Gigawatt hours, BDt = Bone-dry tonnes, ADt = Air-dry tonnes Note: t indicates Tonnes(also called Metric Tons)

|   |   | Unit                      | FY2019*1 | FY2020*1 | FY2021*1 |       |
|---|---|---------------------------|----------|----------|----------|-------|
| <b>Input</b>                                  |   |                           |          |          |          |       |
| Energy Input                                  | Purchased electricity                         | GWh                       | 2,100    | 1,934    | 2,425    |       |
|   | Oil   | Thousand kl               | 447      | 578      | 434      |       |
|   | Coal  | Thousand t                | 2,637    | 2,039    | 2,287    |       |
|   | Gas   |                           | 272      | 299      | 302      |       |
|   | Other fossil fuels                            |                           | 28       | 23       | 27       |       |
|   | Non-fossil fuels*2                            |                           | 5,997    | 5,347    | 5,919    |       |
|   | (Of which Black liquor)                       |                           | 4,643    | 3,985    | 4,307    |       |
| Chemical substances subject to the PRTR Law*3 | Amount handled                                | t                         | 9,270    | 11,568   | 11,094   |       |
| Water Intake                                  | Amount of total water intake                  | Million t                 | 930      | 880      | 953      |       |
|   | River water                                   |                           | 757      | 710      | 615      |       |
|   | Industrial water                              |                           | 143      | 140      | 291      |       |
|   | Well water                                    |                           | 29       | 29       | 46       |       |
|   | Public water supply                           |                           | 1        | 1        | 1        |       |
|   | Rainwater                                     |                           | 0        | 0        | 0        |       |
|   | Seawater, sea, ocean                          |                           | 0        | 0        | 0        |       |
|   | External waste water                          |                           | 0        | 0        | 0        |       |
| Raw Material                                  | Woodchips                                     | Thousand BDt              | 5,228    | 5,446    | 4,699    |       |
|   | Logs  | Thousand ADt              | 805      | 702      | 857      |       |
|   | Pulp  |                           | 512      | 446      | 492      |       |
|   | Recycled paper(Pulp)                          |                           | 2,705    | 3,202    | 2,802    |       |
|   | Base Paper                                    |                           | 102      | 123      | 122      |       |
|   | Others  |                           | —        | —        | 384      |       |
| <b>Output</b>                                 |   |                           |          |          |          |       |
| Gas Emissions                                 | GHG emissions                                 | Million t-CO <sub>2</sub> | 7.40     | 6.90     | 6.79     |       |
|   | (Scope 1)                                     |                           | 6.62     | 6.26     | 5.83     |       |
|   | (Scope 2)                                     |                           | 0.78     | 0.64     | 0.96     |       |
|   | Emissions by type of greenhouse gas (Scope 1) |                           |          |          |          |       |
|   | CO <sub>2</sub>                               | Million t-CO <sub>2</sub> | 6.09     | 5.79     | 5.38     |       |
|   | CH <sub>4</sub>                               |                           | 0.02     | 0.03     | 0.03     |       |
|   | NO <sub>2</sub>                               |                           | 0.50     | 0.44     | 0.43     |       |
|   | SOx emissions                                 | Thousand t                | 3.97     | 2.83     | 3.02     |       |
|   | NOx emissions                                 |                           | 10.82    | 9.39     | 8.99     |       |
|   | Soot and dust                                 |                           | 1.61     | 1.10     | 1.23     |       |
| Chemical substances subject to the PRTR Law*3 | Amount released                               |                           | t        | 141      | 150      | 143   |
| VOCs (volatile organic compounds)*4           | Amount transferred                            | t                         | 80       | 94       | 106      |       |
|   | Emissions                                     | t                         | 41       | 49       | 51       |       |
| Waste Water                                   | Waste water total                             | Million t                 | 905      | 843      | 890      |       |
|   | Public water                                  |                           | 896      | 835      | 877      |       |
|   | Sewerage                                      |                           | 9        | 8        | 13       |       |
|   | COD/BOD                                       | Thousand t                | 59       | 53       | 50       |       |
|   | BOD   |                           | —        | —        | 43       |       |
|   | COD   |                           | —        | —        | 7        |       |
|   | SS  |                           | 26       | 24       | 25       |       |
|   | Nitrogen                                      |                           | 1.5      | 1.3      | 1.3      |       |
|   | Phosphorous                                   |                           | 0.2      | 0.2      | 0.2      |       |
| Waste   | Total Waste Generated                         | Thousand BDt              | 989      | 760      | 848      |       |
|   | Final disposal subtotal                       |                           | 141      | 72       | 102      |       |
|   | Recycled subtotal                             |                           | 848      | 688      | 746      |       |
|   | Hazardous waste generation*5                  |                           | BDt      | —        | 1,541    | 1,610 |
| Products manufactured                         | Paper, Household Paper                        | Million t                 | 4.02     | 3.29     | 3.64     |       |
|   | Paperboard                                    | Thousand t                | 2.04     | 1.88     | 1.90     |       |
|   | Pulp  |                           | 239      | 221      | 156      |       |
|   | Paper container                               |                           | 88       | 92       | 95       |       |
|   | Chemical products                             |                           | 100      | 93       | 62       |       |
|   | Building materials                            |                           | 126      | 80       | 197      |       |
| Electricity                                   | Electricity                                   |                           | GWh      | 2,199    | 2,384    | 2,199 |

\*1 Coverage : FY2019 [https://www.nipponpapergroup.com/english/csr/npg\\_csrr2020\\_e\\_all.pdf#page=2](https://www.nipponpapergroup.com/english/csr/npg_csrr2020_e_all.pdf#page=2)  
FY2020 [https://www.nipponpapergroup.com/english/csr/npg\\_esgdb2021\\_e\\_contents.pdf](https://www.nipponpapergroup.com/english/csr/npg_esgdb2021_e_contents.pdf)  
FY2021 [https://www.nipponpapergroup.com/english/csr/npg\\_esgdb2022\\_e\\_contents.pdf](https://www.nipponpapergroup.com/english/csr/npg_esgdb2022_e_contents.pdf)

\*2 Biomass fuels (including black liquor) and waste fuels

\*3 Japan only. Dioxins are not included in total data.

\*4 Coverage:Nippon Paper Industries, Nippon Paper Crecia, Nippon Paper Papylia

\*5 Only in Japan, Aggregated by specially controlled industrial waste

## Balance of Materials in the Pulp and Paper Businesses in Japan(Principal Materials) (3 years)

[Units] GWh = Gigawatt hours, BDt = Bone-dry tonnes, ADt = Air-dry tonnes Note: t indicates Tonnes(also called Metric Tons)

|   |   | Unit                          | FY2019*1 | FY2020*1 | FY2021*1 |
|---|---|-------------------------------|----------|----------|----------|
| <b>Input</b>                                  |   |                               |          |          |          |
| Energy Input                                  | Purchased electricity                     | GWh                           | 895      | 804      | 985      |
|   | Oil                                       | Thousand kl                   | 159      | 147      | 137      |
|   | Coal                                      | Thousand t                    | 1,773    | 1,619    | 1,521    |
|   | Gas                                       |                               | 97       | 101      | 140      |
|   | Other fossil fuels                        |                               | 27       | 23       | 27       |
|   | Non-fossil fuels*2                        |                               | 4,281    | 3,582    | 3,823    |
|   | (Of which Black liquor)                   |                               | 3,130    | 2,561    | 2,803    |
| Chemical substances subject to the PRTR Law*3 | Amount handled                            | t                             | 402      | 341      | 482      |
| Water Intake                                  | Amount of water intake                    | Million t                     | 805      | 757      | 756      |
|   | Water intensity                           | t /product-t                  | 155      | 168      | 158      |
| Raw Material                                  | Woodchips                                 | Thousand BDt                  | 4,102    | 3,344    | 3,453    |
|   | Logs                                      |                               | 28       | 23       | 20       |
|   | Pulp                                      | Thousand ADt                  | 424      | 350      | 393      |
|   | Recycled paper(Pulp)                      |                               | 2,619    | 2,658    | 2,693    |
|   | Base Paper                                |                               | —        | —        | 0.4      |
|   | others                                    |                               | —        | —        | 0.3      |
| <b>Output</b>                                 |   |                               |          |          |          |
| Gas Emissions                                 | GHG emissions                             | Million t-CO <sub>2</sub>     | 6.00     | 5.49     | 5.51     |
|   | (Scope 1)                                 |                               | 5.56     | 5.17     | 5.04     |
|   | (Scope 2)                                 |                               | 0.44     | 0.31     | 0.47     |
|   | GHG emissions intensity during production | t-CO <sub>2</sub> / product-t | 1.16     | 1.24     | 1.15     |
|   | SOx emissions                             | Thousand t                    | 3.2      | 1.7      | 2.1      |
|   | NOx emissions                             |                               | 8.2      | 7.0      | 6.5      |
|   | Soot and dust                             |                               | 1.3      | 0.8      | 0.9      |
| Chemical substances subject to the PRTR Law*3 | Amount released                           |                               | t        | 97       | 104      |
|   | Amount transferred                        |                               | 0.22     | 6        | 15       |
| VOCs (Volatile Organic Compounds)             | Amount released                           | t                             | 41       | 49       | 51       |
| Waste Water                                   | Waste water total                         | Million t                     | 789      | 731      | 729      |
|   | COD/BOD                                   | Thousand t                    | 40       | 36       | 38       |
|   | SS  |                               | 18       | 16       | 18       |
|   | Nitrogen                                  |                               | 1.4      | 1.2      | 1.3      |
|   | Phosphorous                               |                               | 0.1      | 0.1      | 0.2      |
| Waste   | Total Waste Generated                     | Thousand BDt                  | 700      | 553      | 582      |
|   | Final disposal subtotal                   |                               | 19       | 13       | 12       |
|   | Recycled subtotal                         |                               | 681      | 541      | 570      |
| Products manufactured                         | Paper, Household Paper                    | Million t                     | 3.6      | 2.9      | 3.1      |
|   | Paperboard                                |                               | 1.6      | 1.6      | 1.6      |
|   | Pulp                                      | Thousand t                    | 14       | 11       | 17       |

 \*1 Coverage : FY2019/Nippon Paper Industries, Nippon Paper Crecia,Nippon Paper Papyrus  
 FY2020/Nippon Paper Industries, Nippon Paper Crecia,Nippon Paper Papyrus

FY2021/Nippon Paper Industries, Nippon Paper Crecia,Nippon Paper Papyrus,Crecia-Kasuga,Fukuda Paper MFG

\*2 Biomass fuels (including black liquor) and waste fuels

\*3 Japan only. Dioxins are not included in total data.

## Other environment-related

### External Awards for Environmental Conservation Activities (FY2021)

| Award   | Recipient                           |
|---|-------------------------------------|
| Sainokuni Saitama Small and Medium Enterprise CO <sub>2</sub> Reduction Grand Prize "Outstanding performance award" | GAC                                 |
| Fukushima Minpo Fukushima industry award "Special Prize"  | Nippon Paper Industries Nakoso Mill |

### Environmentally-participating initiatives and external collaboration, etc.

| Name   | Organizer                             | Year of participation |
|--|---------------------------------------|-----------------------|
| GX League Basic Concept                                    | KEIDANREN (Japan Business Federation) | 2022                  |
| Task Force on Climate-related Financial Disclosures (TCFD) |                                       | 2021                  |
| Committee on Nature Conservation                           | KEIDANREN (Japan Business Federation) | 1992                  |
| Japan Partnership for Circular Economy                     | KEIDANREN (Japan Business Federation) | 2021                  |
| Initiative for Biodiversity Conservation                   | KEIDANREN (Japan Business Federation) | 2021                  |



# Safety Improvement and Stable Supply of Products

» Philosophy and Basic Policy on Product Safety (see P. 87)

## Product Safety Management Promotion System



\* Nippon Paper Industries, Nippon Paper Crecia, Nippon Paper Papyrus, Kokuei Paper, Nippon Paper Lumber, Daishowa Uniboard, Nippon Seitai, Kyoei Seitai, NP Trading, Flowric, Opal, Jujo Thermal, Siam Nippon Industrial Paper, Dyna Wave Holding Asia, Akita Jujo Chemicals (As of June 30, 2022)

- The Group complies with laws, regulations, etc. in Japan and overseas, and strives to ensure product safety using management methods appropriate to each business or product.
- The Nippon Paper Group Product Safety Subcommittee exchanges information and opinions related to product safety among Group companies, discusses countermeasures if there are any concerns and reports to the Nippon Paper Group Product Safety Committee.
- Product Safety Committees or similar organizations have been established at each Group company to promote product safety activities.

## Approach toward Product Safety

- The Group operates a broad range of businesses including package, household paper, healthcare, and chemicals businesses, in addition to paper and paperboard businesses.
- The Group ensures, and reviews as necessary, the product safety by managing businesses and products according to their characteristics, in accordance with laws, regulations, etc. including the Food Sanitation Act and the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices (Pharmaceutical and Medical Device Act).
- With regard to food-related products, the Group engages in management in accordance with legal regulations on food safety, management systems and standards, and acquires certifications such as FSSC 22000 as necessary.

### FSSC 22000 Certification Status (as of March 31, 2022)

| Company Name                        | Mill, Operating Division            |
|-------------------------------------|-------------------------------------|
| Nippon Paper Industries             | Gotsu Mill*1                        |
| Nippon Paper Liquid Package Product | Egawa Mill, Ishioka Mill, Miki Mill |
| Opal                                | Acquired at seven locations         |
| Nippon Dynawave Packaging*2         |                                     |

\*1 CMC (carboxymethyl cellulose), cellulose powder, stevia and licorice sweeteners (all for use in food)

\*2 Acquired certification for the manufacture of liquid packaging boards

**ISO 22000 Certification Status** (as of March 31, 2022)

| Company Name         | Mill, Operating Division     |
|----------------------|------------------------------|
| Nippon Paper Papyrus | Kochi Mill*                  |
| Opal                 | Opal Cartons NZ Christchurch |
| Jujo Thermal         | Kaattua                      |

\* Production of liquid filter papers and food packaging papers that come into direct contact with food

**Akita Prefecture HACCP Certification Status** (as of March 31, 2022)

| Company Name         | Mill, Operating Division |
|----------------------|--------------------------|
| Akita Jujo Chemicals | Headquarters factory     |

**Halal Certification\*<sup>1</sup> Status** (as of March 31, 2022)

| Company Name            | Mill, Operating Division |
|-------------------------|--------------------------|
| Nippon Paper Industries | Gotsu Mill* <sup>2</sup> |

\*1 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.

\*2 Certification obtained for the nucleic acid (RNA-M), dissolving pulp and CMC (carboxymethyl cellulose)

**— Response to the Positive List System for Food Product Utensils, Containers, and Packaging**

- Food product utensils, containers, and packaging (made of synthetic resin) of the Group, as well as base paper for them, are in conformance with the Positive List System (which allows only substances that have been evaluated as safe; “PL System”) for synthetic resins stipulated by the Food Sanitation Act.
- Introduction of a PL System for paper and paperboard is also under consideration, and the Group is preparing to respond.

## Quality Management Initiatives

Each Nippon Paper Group company works to acquire ISO 9001 international quality management standard certification as necessary and has established a system for quality management suited to the characteristics of its products to ensure, and review from time to time, maintaining required quality.

### ISO 9001 Certification Status (as of March 31, 2022)

| Company Name                                      | Mill, Operating Division  |
|---|---|
| Nippon Paper Industries                           | Shiraoi Mill* <sup>1</sup> , Akita Mill, Nakoso Mill* <sup>2</sup> , Kanto Mill, Fuji Mill Yoshinaga, Gotsu Mill* <sup>3</sup> , Otake Mill, Iwakuni Mill* <sup>4</sup> , Chemical Sales Division Higashimatsuyama Mill         |
| Nippon Paper Industries CNF-related* <sup>5</sup> | Research and Development Division's Fuji Innovative Materials Research Laboratory, Ishinomaki Mill's Cellulose Nanofiber Development Section, Biomass Material Business Division's Biomass Materials Sales Promotion Department |
| Nippon Paper Crecia                               | Tokyo Mill  |
| Nippon Paper Papylia                              | Harada Mill, Suita Mill, Kochi Mill   |
| Nippon Seitai                                     | Hokkaido Office, Maebashi Mill, Saitama Mill, Kansai Office   |
| Kyouei Seitai                                     |   |
| NIPPON PAPER UNITEC                               | Five head office sites at headquarters (plant engineering/electricity/control systems/mechatronics/construction)  |
| Nippon Paper Ishinomaki Technology                | Headquarters  |
| GAC   | Headquarters/Mill, Marketing Division   |
| Flowric   | Headquarters, Concrete Research Center, Nagoya Mill   |
| N&E   | Head Office Plant   |
| Opal  | 28 locations certified  |
| Jujo Thermal                                      | Kauttua   |
| Siam Nippon Industrial Paper                      |   |
| Nippon Dynawave Packaging                         |   |
| TS Plastics                                       |   |

\*1 Certified for pulp and 10 machines for the production of base paper for food, and cellulose powder.

\*2 Certified for the production of non-carbon paper, thermal paper, ink-jet paper and other business communication papers

\*3 Certified for the production of CMC, cellulose powder, nucleic acid and yeast

\*4 Chemical Production Department is certified

\*5 Obtained certification for the design, development, and manufacturing of TEMPO-oxidized pulp, TEMPO-oxidized metal supported pulp, TEMPO-oxidized CNF, and CNF-reinforced resin businesses

### — Quality Audits at Companies Making Paper Containers for Liquids

The Paper-Pak Sales Division of the Company implements the following initiatives at the business locations of Nippon Paper Liquid Package Product, which are production bases:

- ▶ Provide quality and technical support as needed
- ▶ Conduct on-site quality meetings and audits of product safety and hygiene on an annual basis

### — Paper and Paperboard Business Quality Assurance Initiatives

The paper and paperboard business of the Company implements the following initiatives for quality assurance:

- ▶ Assign technical experts to each sales division of the paper and paperboard business to listen directly to customers' needs and wants
- ▶ Make use of internal database, etc. which links production, sales, and technical departments to share necessary information among all personnel who are engaged in quality management
- ▶ The Risk Management Department, which is not a quality management department, audits the operational status of the above to confirm its proper operation.

## — Responding to Instances of Defective Products

The Group has put a management system in place to prevent product defects, and also has prepared responsive measures just in case any product defects do occur.

### < Example: Paper and Paperboard Business of Nippon Paper Industries >

- ▶ Establish reporting lines in case of a defect and launch an emergency organization as necessary
- ▶ Ensure traceability
- ▶ Take out product liability insurance (PL insurance) for main products
- ▶ Implement countermeasures horizontally to prevent similar defects

## — Initiatives toward Guaranteeing Wastepaper Pulp Blending Ratios, etc.

The Company has established respective systems to manage percentages of wastepaper pulp content in its products, certified forests, and the use of its products made with wood from forest thinning, among other things, in order to meet requirements of customers.

- ▶ At the head office, procedures have been established and followed for identification of brands subject to management, issuance of certificates, etc.
- ▶ The Company manages production procedures at each of the Group's mills, based on the ISO 14001 environmental management system.
- ▶ Operational management of the foregoing is confirmed through internal and external audits, and each department makes revisions as necessary.

## The Stable Supply of Products

The Group is implementing the following initiatives to ensure stable supply of products:

- ▶ To provide customers with the necessary supply at the necessary time, the Group works to secure stable raw materials supply and systematically develops and updates production facilities.
- ▶ Sales departments and production units coordinate on developing flexible and lean production plans and manage inventories appropriately.
- ▶ In December 2020, the Group established business continuity management (BCM) standards in the event that it becomes difficult to carry out normal business due to large-scale disasters, infectious diseases, etc. Each department then formulates business continuity plans (BCPs) based on those standards and revises them as necessary.

CASE STUDY

### Establishment of a System to Respond to Earthquakes and Other Disasters (Nippon Paper Industries)

In the event of damage to production equipment and facilities as a result of a major disaster, the Newsprint Sales Division of the Company has a system in place to follow the emergency response guidelines established by the Japan Paper Association's Newsprint Committee to maintain the smooth supply of newsprint.

CASE STUDY

### Development and Introduction of "e-musen junkai®" (e-wireless patrol) System (Nippon Paper Industries, NIPPON PAPER UNITEC, and Sakurai)

In the past, signs of abnormalities in equipment have been discovered mainly by people patrolling production facilities. With the e-wireless patrol system, IoT technology is used to accumulate temperature and vibration acceleration data on equipment in operation, enabling the monitoring of trends in these numerical data. This helps to prevent equipment problems and stabilizes operations (see P. 41).

The Company is installing the e-wireless patrol system at all of the mills in Japan and selling it to companies outside the Group. The Company sells the system in Thailand as well.



"e-musen junkai" (e-wireless patrol) system webpage (Sales company: Sakurai) (Japanese only): <https://www.sakurai.co.jp/landing/e-musen/index.html>

# Responses to Changes in the Social Environment

## Identifying Customers' Needs

Nippon Paper Group engages in proactive communication to identify customer needs across a wide range of areas, from day-to-day sales activities to quality patrols by engineering staff.

- ▶ Respond to customers engaged in CSR procurement \*<sup>1</sup> with questionnaires and other materials concerning our CSR initiatives
- ▶ Be registered as a supplier with a global platform for disclosure of information relating to CSR procurement
  - EcoVadis (Nippon Paper Industries): Registered in 2016, and won a Gold Medal in 2021
  - Sedex (Nippon Paper Liquid Package Product Egawa Mill): Registered in 2019, and undergone SMETA audits of its CSR assessments
- ▶ Accepting factory tours\*<sup>2</sup> and inspections
- ▶ Holding technical lectures for customers (Nippon Paper Industries)
  - Conducting technical lectures “Paper-Pak School” for customers in charge of filling machines at dairy and beverage companies in the Technical Center of Nippon Paper Liquid Package Product (in Gokamachi, Ibaraki Prefecture).
- ▶ Customer consultation desk (Nippon Paper Crecia)
  - Offering a system whereby the opinions and questions of customers can be utilized for the further development and improvement of products.



\*1 Activities whereby an enterprise attempts to fulfill its social responsibilities when procuring raw materials across its entire supply chain by demanding that suppliers engage in environmental and social initiatives.

\*2 Restrictions on factory tours in some areas to prevent the spread of COVID-19.

## System for Advancing New-product Development

- The Group has established its New Product Development Committee to accelerate business structure transformation.
- The committee discusses themes related to the development of new products and new businesses (such as the development of products derived from wood resources in line with growing environmental awareness), and (1) selects a person responsible for the development, (2) allocates resources, and (3) determines whether to continue/discontinue the themes properly.
- New Product Development Team under the committee searches for themes related to new products and new businesses, and manages the progress of development themes.



## Products that Contribute to the Building of a Sustainable Society

As a comprehensive biomass company shaping the future with trees, the Group develops various businesses that maximize the use of renewable woody resources using diverse technologies and expertise, and the products and services it provides have a high affinity with building a sustainable society and SDGs (Sustainable Development Goals)\*. The Group is developing various products using woody resources procured from forests with sustainable management. Furthermore, the Company utilizes the characteristics of woody resources and provides environmentally friendly products which reduce usage of fossil-based raw materials and improve recyclability and transportation efficiency etc.

\* As a comprehensive biomass company shaping the future with trees, the business development of the Nippon Paper Group will contribute to the achievement of the SDGs.

# Respect for Human Rights

## 》 The Nippon Paper Group Human Rights Policy (→P.88)

- This Policy has been prepared in Japanese and English and is available to all stakeholders in the world on the Nippon Paper Group website.
- In addition to this Policy, all business entities of the Group comply with laws and regulations including minimum wages.

### The Nippon Paper Group's Commitments Relating to Human Rights

|      |   |  |
|------|---|--|
| 2004 | ● Signed and began participating in the United Nations Global Compact   | ● Expressed support for the Ten Principles in four areas, including human rights every year in the CSR Report and Integrated Report (Message from the President)   |
| 2004 | ● Formulated the Philosophy and Basic Policy on Human Rights, Employment and Labor  | —  |
| 2005 | ● Formulated the Principles and Basic Policies Concerning Raw Materials Procurement   | ● Became advocate for consideration of human rights throughout the supply chain  |
| 2022 | ● Formulated the Nippon Paper Group Human Rights Policy by revising the existing Philosophy and Basic Policy on Human Rights, Employment and Labor. | <ul style="list-style-type: none"> <li>● Revised in accordance with international human rights norms, endorsing the UN's Guiding Principles on Business and Human Rights</li> <li>● Declared respect for human rights in all business activities of the Group</li> </ul> |
| 2022 | ● Revised the Principles and Basic Policies Concerning Raw Materials Procurement  | ● Revised the content to make the response to social issues such as respect for human rights and climate change more effective   |

## Promotion Structure

The Group has established its Risk Management Committee, which is chaired by the president and representative director, operates under the supervision of the Board of Directors of the Company, and holds meetings at least once annually. This risk management promotion structure handles risks related to the Group's human rights (see P.9).

## Human Rights Due Diligence

### — Past initiatives

|       |   |
|-------|---|
| 2007- | ● Confirmed initiatives related to human rights in audits for overseas chip suppliers based on the Action Plan for Wood-based Raw Material Procurement  |
| 2011- | ● Confirmed initiatives related to human rights in CSR audits for overseas consolidated companies   |
| 2015- | <ul style="list-style-type: none"> <li>● Conducted on-site interviews concerning human rights at overseas chip suppliers</li> <li>● Conducted interviews concerning human rights at contractors in Japan</li> </ul> |
| 2021- | ● Conducted human rights due diligence by the Human Rights Working Group  |

### — Human Rights Due Diligence

- The Company launched the Human Rights Working Group and introduced human rights due diligence in 2021.
- Since 2022, the Company has listed and evaluated human rights risks (forced labor, child labor, freedom of association, discrimination, customer-related risks, and community-related risks) for all stakeholders (employees and customers of the Company itself and the Group companies, local communities, etc.) in value chains related to the paper and paperboard business, the paper carton business, and the chemical business. Then the Group has identified the highest priority human rights risks and considered countermeasures for these.
- The Company will continue to regularly evaluate human rights risks and work to expand the scope of coverage.

## Activities Related to Respect for Human Rights

### — Confirmation of Consideration for Human Rights at Overseas Wood Chip Suppliers

- Based on the Principles and Basic Policies Concerning Raw Materials Procurement, the Company has employees in charge of procurement or local representatives visit overseas wood chip suppliers to conduct interviews covering matters such as health, hygiene, safety, disaster preparedness, working conditions, and local environmental concerns.
- The target area of the surveys is all countries from which the Company procures wood chips, with priority given to countries with high-volume transactions or high risks.
- The contents of the interviews and inspections are reviewed annually. Based on the results of the interviews, the Company carries out improvements of human rights.

#### Results of On-Site Surveys of Overseas Chip Suppliers

| Year of Survey | Country                | Results            |
|----------------|------------------------|--------------------|
| FY2017         | Vietnam, United States | No problems found. |
| FY2018         | Vietnam, Chile         | No problems found. |
| FY2019         | Malaysia, Russia       | No problems found. |
| FY2020         | Thailand               | No problems found. |
| FY2021         | Australia              | No problems found. |

### — Human Rights Surveys at Contracted Mills in Japan

- The Company sends surveys to contracted mills in Japan and has them conduct a self-check, mainly to confirm compliance with labor and safety laws and regulations (once a year).
- Survey results are shared with the human resource managers of each mill for the purpose of support for improvements.
- Follow-up surveys have been conducted since FY2019.

### — Internal Human Rights Surveys

The Group conducts annual CSR surveys to confirm the status of human rights initiatives at each Group company.

### — 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
- The Group conducts compliance training (see P.14) to encourage all employees to help prevent harassment in the workplace.

## — Labor Initiatives

The Group supports the universal principles advocated by the UN Global Compact (freedom of association and recognition of the right to collective bargaining) (see P. 2).

## — Local Community Initiatives

The initiatives to consider the human rights of local people in the vicinity of the Group operations are as follows:

- ▶ Environmental risk communications (see P.31)
- ▶ Human rights considerations for overseas forest plantations (see P.24-25)

## — Relationships with External Organizations

- The Company has been a member of Amnesty International Japan since 2007 and has the opportunity to share opinions at least once a year. In FY2021, the Company exchanged opinions about matters such as consideration for human rights at overseas wood chip suppliers and women's participation and advancement in the workplace.
- The Company has participated in EcoVadis since 2016 and is registered as a supplier. In 2021, the Company's human rights and other initiatives were evaluated and the Company was awarded a Gold Medal (see P.53).
- The Company is a member of the Global Compact Network Japan's Human Rights Due Diligence Subcommittee and exchanges information and opinions on recent human rights trends and each company's efforts.

## — Remedy Mechanism

- The Company accepts inquiries regarding concerns about any possible violation of human rights through the Nippon Paper Group Helpline (→P.13), which the Company set up as an internal whistleblower system.
- Inquiries are also accepted through the Group's corporate website in both Japanese and English from anyone.
- The Company's Compliance Office and associated departments respond to inquiries received through the Nippon Paper Group Helpline and the Group's corporate website.
  - ▶ Number of human rights complaints: 18 (Nippon Paper, FY2021)
- The Group was subject to no legal actions whatsoever regarding human rights in FY2021.

→ Nippon Paper Group Inquiries  
<https://www.nipponpapergroup.com/english/inquire/>



# Realizing Diverse Work Styles

## Improving Its Working Environment for Diverse Work Style

- Nippon Paper Industries focuses on improving its working environment where employees can demonstrate their abilities more. The Company is also working to create a working environment that realizes diverse work styles and to review its working system.
- In addition to promoting diversity through the development of an environment that realizes diverse work styles, the Company is formulating a BCP for situations that require responses, such as pandemics.

### <Examples of systems related to working conditions>

- ▶ Term-end allowance system that reflects the contribution to corporate performance
- ▶ Annual paid leave
- ▶ Compensation such as allowances and substitute leave for overtime work and work other than general working hours (early morning work, late night work, etc.)
- ▶ Half-day unit acquisition of expired annual paid leave (preserved leave)
- ▶ Acquisition of expired annual leave for volunteer activities
- ▶ A system that allows employees to apply the preserved leave (expired annual paid leave) for short-term childcare (paid leave can be used)
- ▶ Financial assistance for employees transferred alone (without their family) who are not the head of their household
- ▶ A system to allow employees to take leave when accompanying their spouses during an overseas assignment
- ▶ A system to allow employees to take leave for volunteering (Japan Overseas Cooperation Volunteers, etc.)
- ▶ A system to overseas personnel (treatment tailored to other countries. For those seconded from Japan, overseas secondment system, hardship allowance, etc.)
- ▶ Guaranteeing exercise of civil rights\*

\* If employees exercise their right to vote or any other civil rights or perform a public duty during working hours for an unavoidable reason, they must be given the time required for such action based on their request and they shall be deemed to have worked during that time.

### Systems introduced and revised in FY2021

- ▶ Elimination of the core time (the time during which employees must be at work) of the flextime system
- ▶ A system to work from home (permanent system) (target persons: employees who handle work that can be done from home and who can work autonomously)
- ▶ A system for taking annual paid leave in hourly increments

### Systems introduced and revised in April 2022

- ▶ Application of expired annual paid leave to absence from work related to fertility treatment and pregnancy and intermittent absence from work associated with treatment of a disease
- ▶ Extension of a period of application of childcare support measures, etc. (extended from before enrollment in elementary school to the end of the third grade of elementary school)
- ▶ Revision of the salary increase rule for those who have taken childcare leave or nursing-care leave

## — Response to the Act on Advancement of Measures to Support Raising Next-Generation Children

- In April 2021, the Company formulated its Action Plan based on the Act on Advancement of Measures to Support Raising Next-Generation Children, which supports employees in balancing work and childcare.
- The Company 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 childcare, and paid leave for child-rearing.
- The Company has been designated by Japan's Minister of Health, Labour and Welfare as a company that supports child rearing and has obtained the right to display the Kurumin mark (2016 certification).

## — Initiatives to Help Employees Balance Work with Nursing Care Commitments

- The Company has established schemes that exceed the provisions stipulated by Japanese law regarding nursing-care leave and other considerations for supporting employees in maintaining a balance between work and care-giving commitments.
- The Company issued a Nursing Care Handbook summarizing information necessary for achieving a balance between work and nursing care, including preparation for care-giving, necessary actions, and details of support offered by the company and by society. The handbook has also been posted on the Company's internal intranet to enable employees to access it at any time.

## Work-Life Balance Indicators

(— is unaggregated)

|  | Scope                           | Unit             | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 |
|--|---------------------------------|------------------|--------|--------|--------|--------|--------|
| Employees taking child-care leave                          | Consolidated companies in Japan | Persons          | 26     | 23     | 23     | 28     | 30     |
| Male   |                                 | Persons          | 0      | 3      | 2      | 5      | 13     |
| Female   |                                 | Persons          | 26     | 20     | 21     | 23     | 17     |
| Recently giving birth                                      |                                 | %                | 100    | 100    | 100    | 92     | 94     |
| Who returned to work                                       |                                 | %                | 100    | 90     | 100    | 100    | 99     |
| Employees taking maternity/paternity leave                 | Consolidated companies in Japan | Persons          | 148    | 183    | 203    | 154    | 170    |
| Male   |                                 | Persons          | 122    | 163    | 184    | 129    | 152    |
| Female   |                                 | Persons          | 26     | 20     | 19     | 25     | 18     |
| Average number of days taken for maternity/paternity leave | Consolidated companies in Japan |                  |        |        |        |        |        |
| Male   |                                 | Days             | 3.4    | 3.7    | 3.8    | 4.0    | 4.0    |
| Female   |                                 | Days             | 78.0   | 79.2   | 67.9   | 77.7   | 88.9   |
| Employees taking nursing-care leave                        | Consolidated companies in Japan | Persons          | 1      | 2      | 1      | 0      | 1      |
| Total number of working hours                              | Nippon Paper Industries         |                  |        |        |        |        |        |
| Non-management employees                                   |                                 | Hours per person | 1,903  | 1,900  | 1,885  | 1,861  | 1,870  |
| All employees  |                                 | Hours per person | 1,927  | 1,923  | 1,894  | 1,888  | 1,905  |
| The rate of annual paid leave taken by employees           | Consolidated companies in Japan | %                | —      | —      | 74.4   | 64.7   | 70.8   |
|  | Nippon Paper Industries         | %                | 71.8   | 75.1   | 76.6   | 67.9   | 73.6   |

### — Initiatives to Shorten Working Hours

- The Company aims to make the total average working hours per year less than 1,850 hours for all employees, and is working on initiatives to promote the taking of annual paid leave, to thoroughly implement an office leaving time no later than 7:00 p.m. and no-overtime days, and improve work efficiency at each department.
- The Company has been promoting work-life balance since FY2021 by enabling flexible work styles for employees through the work-from-home system and the flextime system with no core time.

### — Welfare

The Company has the following welfare programs.

#### <Examples of welfare programs>

- ▶ Provision of company housing, single dormitories, etc.
- ▶ Provision of recreational facilities
- ▶ Supporting property formation (property formation savings, the employee stockholding association (which regular employees can join), housing loan system, etc.)

# Active Roles for Diverse Personnel

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## Recruitment and Employment

The Nippon Paper Group strives to stabilize employment and continue to recruit new employees and hire without discrimination based on the “Nippon Paper Group Human Rights Policy.”

- ▶ Clearly and formally communicate the recruitment process to all recruitment candidates
- ▶ Instruct interviewers in training sessions to prohibit discrimination based on race, religion, nationality, place of origin, gender, educational background, etc.
- ▶ Employment based on the place of operation

### — Recruitment of New Graduates

The Company discloses information on the hiring of new graduates on its website.

### — Mid-career Hiring

In addition to utilizing human resources within the company, the Company is also hiring mid-career employees, and will continue to do so in the future.

### — Employment of People with Disabilities

- As of April 1, 2022, the employment rate of persons with disabilities in Nippon Paper Industries is 2.35%, achieving the statutory employment rate of 2.3%. The Company will continue to maintain and improve the employment rate at each site.
- The Company aims to achieve the employment rate of people with disabilities of 2.8% by 2030 (120% of the statutory employment rate).
- In order to avoid mismatches at the time of recruitment, the Company provides pre-training at workplaces before new hires join the Company. In addition, to ensure retention of new hires after joining the Company, we conduct regular follow-up interviews at one, three, and six months and a year after they joined the Company.
- The Company assigns people with disabilities to workplaces in consideration of the nature of their disabilities.
- The head office of Nippon Paper Industries is equipped with barrier-free toilets which can be used by not only people with disabilities but also by anyone. Mills are pushing forward with the installation of barrier-free toilets one after another.

### — 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 FY2002, Nippon Paper Industries introduced a reemployment system to allow employees to work up to the age of 65.
- In response to the amended Law Concerning Stabilization of Employment of Older Persons, which took effect in April 2013, the Company has 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.

### — Rehiring Retired Employees

The Company has established a system that allows employees who have retired for any reason to play an active role in the Company again by making use of the experience and abilities cultivated while at the Company.

### — Dispatched Workers

The cost of accepting dispatched workers is borne by the Company.

## Employment Indicators

|   | Scope  | Unit    | FY2017 | FY2018 | FY2019 | FY2020 | FY2021 |
|---|--|---------|--------|--------|--------|--------|--------|
| Number of employees on a consolidated basis* <sup>1</sup>                               | Consolidated companies                             | Persons | 12,881 | 12,943 | 12,592 | 16,156 | 16,129 |
| Male  |  | Persons | 11,451 | 11,503 | 11,118 | 13,984 | 13,926 |
| Female  |  | Persons | 1,430  | 1,440  | 1,474  | 2,172  | 2,203  |
| Number of overseas employees  |  | Persons | 2,582  | 2,587  | 2,504  | 5,961  | 6,050  |
| Male  |  | Persons | 2,257  | 2,263  | 2,158  | 4,965  | 5,038  |
| Female  |  | Persons | 325    | 324    | 346    | 996    | 1,012  |
| Percentage of upper management from the local community                                 |  | %       | 80.6   | 82.1   | 89.3   | 94.7   | 94.6   |
| Number of new graduates hired   | Consolidated companies in Japan                    | Persons | 245    | 200    | 182    | 214    | 209    |
| Male  |  | Persons | 220    | 171    | 146    | 167    | 166    |
| Female  |  | Persons | 25     | 29     | 36     | 47     | 43     |
| Number of mid-career recruits   | Consolidated companies in Japan                    | Persons | 198    | 204    | 222    | 172    | 122    |
| Male  |  | Persons | 169    | 180    | 199    | 149    | 109    |
| Female  |  | Persons | 29     | 24     | 23     | 23     | 13     |
| Number of employees seeking reemployment after retirement                               | Nippon Paper Industries                            | Persons | 46     | 168    | 95     | 80     | 126    |
| Number of employees reemployed after retirement age                                     | Nippon Paper Industries                            | Persons | 46     | 168    | 95     | 81     | 126    |
|   | Consolidated companies in Japan                    | Persons | 227    | 332    | 296    | 301    | 591    |
| Average age of employees* <sup>1</sup>  | Consolidated companies in Japan                    | Years   | 43.4   | 43.4   | 43.7   | 43.6   | 44.4   |
| Male  |  | Years   | 43.4   | 43.3   | 43.6   | 43.6   | 44.4   |
| Female  |  | Years   | 43.5   | 43.6   | 43.7   | 43.5   | 43.9   |
| Average years of employment* <sup>1</sup>   | Consolidated companies in Japan                    | Years   | 19.4   | 19.3   | 19.2   | 18.8   | 19.0   |
| Male  |  | Years   | 19.6   | 19.5   | 19.3   | 19.1   | 19.3   |
| Female  |  | Years   | 18.0   | 17.8   | 17.8   | 17.0   | 16.9   |
| Turnover rate(Includes employees leaving at the mandatory retirement age)* <sup>1</sup> | Consolidated companies in Japan                    | %       | 2.6    | 5.7    | 4.6    | 3.0    | 3.3    |
| Number of Managers* <sup>1*2</sup>  | Nippon Paper Industries                            | Persons | 1,095  | 1,134  | 1,112  | 1,132  | 1,218  |
| Female  |  | Persons | 27     | 26     | 27     | 30     | 33     |
|   | Consolidated companies in Japan                    | Persons | 2,305  | 2,227  | 2,302  | 2,385  | 2,404  |
| Female  |  | Persons | 55     | 55     | 62     | 67     | 69     |
|   | Consolidated companies outside Japan* <sup>3</sup> | Persons | 139    | 151    | 196    | 358    | 556    |
| Female  |  | Persons | 20     | 24     | 33     | 82     | 129    |
| Percentage of female employees in management* <sup>1*2</sup>                            | Nippon Paper Industries                            | %       | 2.47   | 2.29   | 2.43   | 2.65   | 2.71   |
|   | Consolidated companies in Japan                    | %       | 2.39   | 2.47   | 2.70   | 2.81   | 2.87   |
|   | Consolidated companies outside Japan* <sup>3</sup> | %       | 14.4   | 15.9   | 16.8   | 22.9   | 23.2   |
| Dispatched workers* <sup>1</sup>  | Consolidated companies in Japan                    | Persons | 105    | 89     | 108    | 111    | 105    |
| Male  |  | Persons | 39     | 41     | 47     | 46     | 38     |
| Female  |  | Persons | 66     | 48     | 61     | 65     | 67     |
| Percentage of dispatched workers  | Consolidated companies in Japan                    | %       | 1.0    | 0.8    | 1.1    | 1.1    | 1.0    |
| Number of part-time workers* <sup>1</sup>   | Consolidated companies in Japan                    | Persons | 431    | 465    | 512    | 514    | 465    |
| Male  |  | Persons | 245    | 293    | 293    | 290    | 279    |
| Female  |  | Persons | 186    | 172    | 219    | 224    | 186    |

\*1 Fiscal year-end data

\*2 Percentage of only full-time employees which excludes associate directors, employees commissioned for specific purposes, employees on temporary assignment from other companies, and other non-full-time personnel

\*3 Managerial personnel at the level of section manager or positions higher

## — Other Employment-related Information

- The Company conducts risk assessments and respond to labor issues related to new business and existing business.
- The Company did not carry out layoffs in FY2021.
- There were no employees affected by the Company's M&As in FY2021.

### Number of Employees by Age Group (Nippon Paper Industries, March 31, 2022)

|                     | Unit    | Less than 30 | 30 to 50 | Over 50 | Total |
|---------------------|---------|--------------|----------|---------|-------|
| Number of employees | Persons | 931          | 3,041    | 2,551   | 6,523 |
| Male                | Persons | 852          | 2,798    | 2,289   | 5,939 |
| Female              | Persons | 79           | 243      | 262     | 584   |

### Number of Employees by Region (March 31, 2022)

|                     | Unit    | Japan  | Oceania | Asia | North America | Other |
|---------------------|---------|--------|---------|------|---------------|-------|
| Number of employees | Persons | 10,150 | 4,465   | 241  | 515           | 758   |
| Male                | Persons | 8,955  | 3,694   | 178  | 442           | 657   |
| Female              | Persons | 1,195  | 771     | 63   | 73            | 101   |

## Promotion of Women's Participation and Advancement in the Workplace

The Company obtained "L-boshi certification (level 2)" from the Tokyo Labor Bureau in February 2022.

### — Responding to 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

In order to create an employment environment in which diverse human resources can demonstrate their abilities and play an active role throughout their lives, the Company will formulate an action plan as follows.

##### 1. Planning period

Five years from April 1, 2021 to March 31, 2026

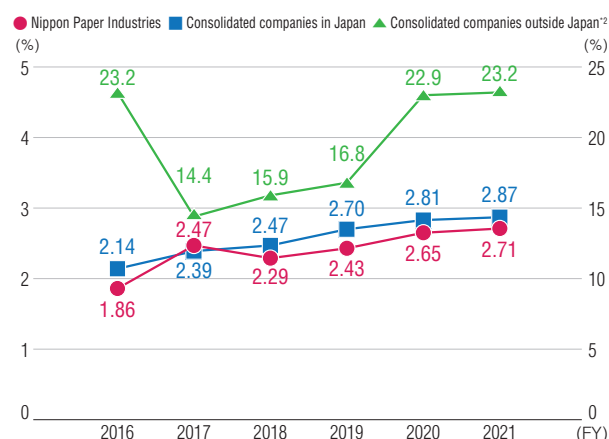
##### 2. Contents

**Goal 1** The Company will set the ratio of female employees, compared to male employees, promoted to section manager from a lower rank in the previous three business years at 80% or higher.

**Goal 2** At head office divisions, which have no production sites, the rate of usage of systems such as flexitime, taking leave in hourly increments and working from home will be set at 70% for both men and women to promote diversity.

### — Percentage of Female Employees in Management and Hiring of New Graduates for Career-Track Positions

#### Percentage of Female Employees in Management\*1



\*1 Percentage of only full-time employees which excludes associate directors, employees commissioned for specific purposes, employees on temporary assignment from other companies, and other non-full-time personnel

\*2 Managerial personnel at the level of section manager or positions higher

#### Hiring of new graduates for career-track positions (Nippon Paper Industries)

|                     | Unit    | FY2018 | FY2019 | FY2020 | FY2021 | FY2022 |
|---------------------|---------|--------|--------|--------|--------|--------|
| Career-track hires  | Persons | 53     | 50     | 48     | 43     | 48     |
| Female              | Persons | 13     | 13     | 17     | 13     | 19     |
| Percentage of women | %       | 25     | 26     | 35     | 30     | 40     |

## Initiatives Aimed at Developing Human Resources

### – Training Personnel to Match the Group’s Ideal Vision

The Company’s ideal vision for personnel is “leaders who will promote change,” and the Company is implementing the following initiatives to strengthen the development of such personnel.

- ▶ Hiring human resources with the abilities to continue attempting new challenges, to exercise fair judgement and to engage in teamwork by involving those around them, and the mental strength to overcome difficulties
- ▶ As the Company’s goal to develop “autonomous human resources”, promoting the development of leaders with a global perspective who can take on new challenges

### – Leadership Training System

Nippon Paper Industries trains its career-track employees through OJT (on-the-job training), planned rotations and OFFJT (off-the-job training, including grade-specific training and selective training programs).

- ▶ Fostering leaders with broad perspectives who do not become fixated on a single issue, by transferring them to various positions both within and outside their department, and at affiliate companies in a planned manner
- ▶ In addition to grade-specific training until employees are promoted to management roles, they are also dispatched to overseas business locations under the Company’s overseas assignment system in OFF-JT
- ▶ After employees are promoted to management positions, the Company also conducts training for further promotion, etc.

### – The Five Pillars of Human Resources Development

The Company provides its employees with fair learning opportunities, and has developed a system for enabling those with motivation and abilities to further increase their skills, with a focus on the following five key points.

#### ① Support for self-development and voluntary skill acquisition

- ▶ Correspondence education (Approximately 240 courses)  
Examples of courses: logical thinking, accounting, presentations, languages, etc.
- ▶ Selective group training  
Training examples: accounting, leadership, logical communication, etc.
- ▶ Job-level-based training such as that for new hires, groups based on the year of joining the Company, and new managers, is conducted jointly by Group members.
- ▶ Job-level-based training at the head office
- ▶ Job-level-based training at mills is conducted not just for a single mill but together with neighboring mills.
- ▶ Dispatching employees to colleges/universities in Japan (to obtain a degree)

#### ② Assignment of the right people to the right positions

- ▶ Implementation of employee surveys to ascertain what kind of job assignments they wish to have (target: all employees, once a year).
- ▶ Introduction of an internal recruitment system so that individual employees can consider their skills and how they want to develop their careers, and then apply for positions posted by any Nippon Paper Group member company.
- ▶ Introduction of an “internal side occupations program\*”

\* A system in which an employee is allowed to be engaged in operations of a department in which they are interested, while retaining the position in their own organization

#### ③ Development of employees capable of acting on a global stage

- ▶ Recruiting applicants and implementing a short-term internship and long-term dispatch system for overseas bases of the group.

#### ④ Reinforcement of production frontline capabilities

- ▶ Creating a committee to strengthen frontline capabilities in FY2006 in all mills.  
Organizing and 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

- ▶ Offering 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.

## — Provision of Education and Training

- In FY2021, the number of hours of education per employee at consolidated companies in Japan was 5.1 hours.
- The Company's educational expenses related to human resource development supervised by the Human Resources Department in FY2021 amounted to ¥41,754,032. The educational expense per employee who received education was ¥52,323 and the time required for education per such person was 17.6 hours.

### Major Training Sessions Provided (Nippon Paper Industries, FY2021)

| Type of training, etc.  |                 | Expense<br>(Thousand Yen) | Hours per person | Number of<br>participants |
|-------------------------|-----------------|---------------------------|------------------|---------------------------|
| Career advancement      | Job-level-based | 34,425                    | 224.5            | 269                       |
|                         | Selective       | 1,525                     | 21               | 91                        |
| Training for evaluators |                 | 4,688                     | 7.5              | 179                       |
| Language training       |                 | 1,116                     | 2                | 259                       |

### CASE STUDY Implement Small Group Activities\*<sup>1</sup> Globally

The Group engages in small group activities both in Japan and overseas. These activities help attendees to better understand operations in their respective workplaces, and to share examples of good practices from other workplaces both in Japan and abroad.

- ▶ Nippon Paper Industries: Holding companywide presentation meeting\*<sup>2</sup> (once a year)
- ▶ Nippon Paper Group (including overseas): presentation meeting\*<sup>3</sup> (once a year)

\*1 Employees form small groups and work together to achieve improvements in areas such as business operations and quality, and to reduce costs

\*2 Held online in FY2021 to prevent the spread of COVID-19

\*3 Held online for Japanese Group companies only in FY2021 to prevent the spread of COVID-19

## Engagement Enhancement

### — Fair Evaluation and Compensation

- The Company carries out the following as part of a fair and transparent personnel examination.
  - ▶ Inform employees of salary system (salary standards and salary increase procedure)
  - ▶ Clarification of evaluation criteria
  - ▶ Conducting review sessions, in which managers provide feedback on performance evaluations (target: all general employees, twice per year).
  - ▶ Introduction of outside companies specializing in human resource assessment to enhance objectivity for decisions on promotions to management and other positions
- The Company has adopted a "Performance Evaluation System" under which compensation to employees is determined depending on their performance.
- The Company has established a program such as president awards, business site manager awards, president awards for patents, and outstanding technician awards, to recognize special achievements.
- The Company has established a system under which incentives are paid to achievements of employees.
  - ▶ e-Kaizen Program: A proposal system for business improvement. The impact of proposals is evaluated in points and incentives are paid according to the points
  - ▶ Invention Compensation System: Appropriate consideration will be paid to employee invention in accordance with the Patent Act
- There is no difference between male and female in the salary system of the Company.

### — Engagement Survey

- The Company has conducted an employee engagement survey once in two years since 2019.
- The Company considers that this survey is important to reinforce the relationship of employees to the Company so that they head in the same direction and grow together. The Company strives to promote communication, improve the working environment, and make such other efforts based on the results obtained through the surveys.

## Industrial Relations

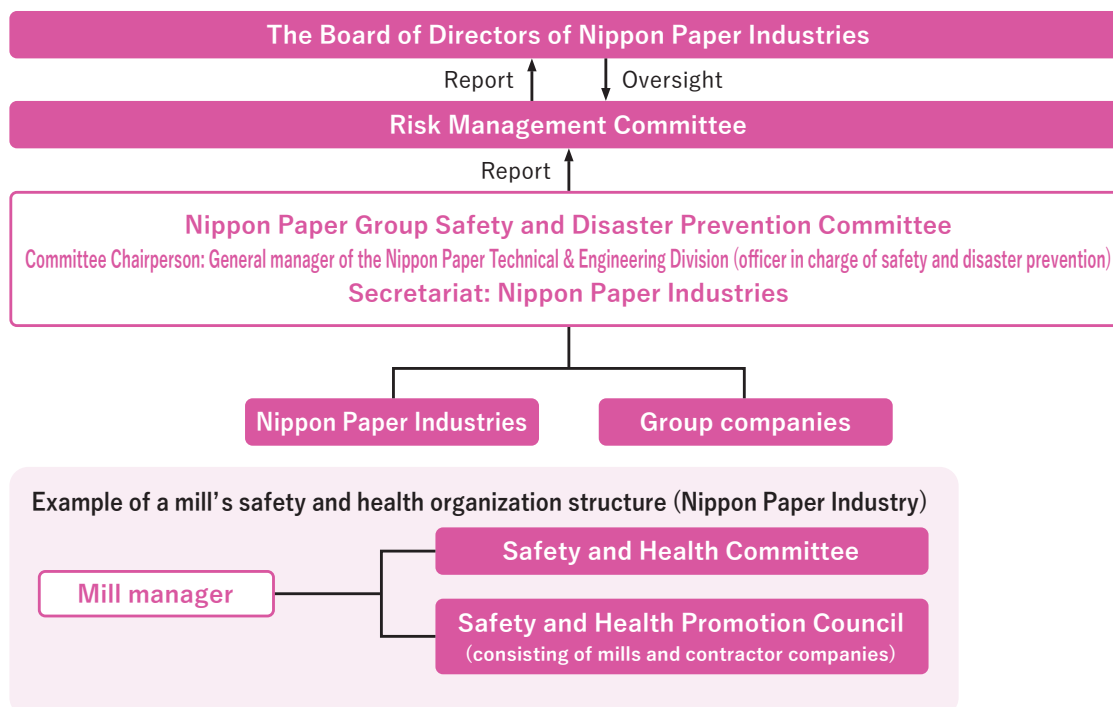
- The Group participates in the United Nations Global Compact and supports the universal principle of labor standards advocated by the United Nations regarding “approval of freedom of association and the right to collective bargaining.”
- Labor unions have been formed at Nippon Paper Industries and the 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.
- The Company has adopted a union-shop system and all of the employees covered by collective bargaining agreements are union members. (Number of labor union members as of March 31, 2022: 4,613)
- Under the shared objective of building a better company, the Company has established a series of dedicated committees on labor-management issues, covering areas such as the operation of labor and management agreements, and staffing adjustment measures. Based on the agreements between employees and the management, the Company takes various measures and works to improve the working conditions and environment. In addition to these efforts, regular central meetings of leadership from both sides provide a forum to discuss diverse issues including corporate management and working conditions.



# Occupational Safety and Health

» Philosophy and Basic Policy on Safety and Health Measures (see P.90)

## Occupational Safety and Health Promotion Structure



- Nippon Paper regularly holds health and safety meetings attended by both employees and management, including safety and health personnel from the head office, mills, and labor unions, where the opinions of employees are represented.
- Meetings of the Safety and Health Committee and Safety and Health Promotion Council (consisting of mills and contractors) are held separately at each location including mills and offices once a month.
- The Company promotes safety and health management activities by cooperating and collaborating with management and employees, as well as contractors and related sub-contractors working at each location.
- The Nippon Paper Group Philosophy and Basic Policy on Safety and Disaster Prevention also applies to any contractors and sub-contractors working on site.

### — Occupational Safety and Health Management System

- The Group operates its own Nippon Paper Occupational Safety and Health Management System (NPSS)\*.
- \* 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 relating 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 comfortable working environments. In addition to existing work, if there is new work or a change in work, the Group predicts health and safety risks and takes preventive measures.
- The Group formulates and promotes safety and health plans for each mill, business site, and Group company, and conducts Mill Safety Audits at least once a year as part of its drive to improve safety standards.
  - The Company also incorporates into its safety activities any advice from external experts on ways to improve its standards, including safety diagnoses conducted by the Japan Industrial Safety and Health Association.

### Acquisition of ISO 45001 Certification (as of the end of 2021)

|                                       | Number of certified companies | Total number of companies |
|---------------------------------------|-------------------------------|---------------------------|
| Consolidated Group companies in Japan | 0                             | 28                        |
| Consolidated companies outside Japan  | 2*                            | 12                        |
| <b>Total</b>                          | <b>2</b>                      | <b>40</b>                 |

\* Certified companies: Jujo Thermal and Opal (Opal has ISO45000 certification at 14 locations and AS4801 certification at 9 locations)

### External Awards for Safety Activities (FY2021)

| Award  | Awarded Company, Office  |
|--|--|
| 61st National Conference of the Pulp and Paper Industry on Safety and Health (Safety Award)            | Nippon Paper Industries Iwanuma Mill and Nippon Paper Papyrus Suita Mill |
| 61st National Conference of the Pulp and Paper Industry on Safety and Health (Safety Excellence Award) | Nippon Paper Industries Kushiro and Iwakuni Mills                        |
| 2022 Company with an Excellent Safety and Health Environment (Gold Medal)*                             | Siam Nippon Industrial Paper   |

\*Received the 2022 award

## Efforts regarding Hygiene and Health

### — Disease Prevention and Early Detection Initiative

The Group implements the following initiatives aimed at preventing illnesses or detecting them at an early stage:

- ▶ Many Group companies that are members of the Nippon Paper Industries Health Insurance Union check for lifestyle diseases together with regular physical examinations.
- ▶ Improve work environments based on the results of regular workplace visits by industrial physicians.
- ▶ Conduct medical examinations for the spouses of employees

### — Tackling Mental Health

The Company implements the following initiatives on mental health:

- ▶ Internet-based mental health care and counseling services for all employees.
- ▶ Regular stress checks that ask employees to fill out a form once a year.

## Efforts regarding Safety and Disaster Prevention

In July 2020, the Company formulated and implemented the Medium-Term Safety Activity Plan.

### Medium-Term Safety Activity Plan

|   |   |           |   |           |  |
|---|---|-----------|---|-----------|--|
| <b>Plan pillars</b>                       | (1) Developing safe working environments, (2) Managing risks, (3) Training personnel to work safely   |           |   |           |  |
| <b>Ultimate Environment</b>               | Eliminating all personal injuries* <sup>1</sup> within its mills  |           |   |           |  |
| <b>The goal</b>                           | To build a foundation for achieving zero disasters based on an independent safety-conscious climate   |           |   |           |  |
| <b>Plan Duration</b>                      | 2020-2025   |           |   |           |  |
| <b>Performance Indicators<sup>2</sup></b> | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; padding: 5px;">2020-2022</td> <td style="padding: 5px;">Serious occupational accident eradication measures period (Serious occupational accidents: 0, Frequency rate for lost-worktime injuries: 0.4)</td> </tr> <tr> <td style="padding: 5px;">2023-2025</td> <td style="padding: 5px;">Period for preparing for zero occupational accidents (Serious occupational accidents: 0, Frequency rate for lost-worktime injuries: 0.1)</td> </tr> </table> | 2020-2022 | Serious occupational accident eradication measures period (Serious occupational accidents: 0, Frequency rate for lost-worktime injuries: 0.4) | 2023-2025 | Period for preparing for zero occupational accidents (Serious occupational accidents: 0, Frequency rate for lost-worktime injuries: 0.1) |
| 2020-2022                                 | Serious occupational accident eradication measures period (Serious occupational accidents: 0, Frequency rate for lost-worktime injuries: 0.4)   |           |   |           |  |
| 2023-2025                                 | Period for preparing for zero occupational accidents (Serious occupational accidents: 0, Frequency rate for lost-worktime injuries: 0.1)  |           |   |           |  |

\*1 This ultimate environment includes all stakeholders on Nippon Paper Group premises including Group employees, employees of contractors working on site, and visitors from outside.  
\*2 Mill management indicators are determined every 12 months

## — Safety Education

- The Nippon Paper Group promotes further safety and health awareness by providing opportunities for safety education throughout the Group, including to employees, contractors, and sub-contractors.
- The Company formulates annual Occupational Safety and Health Management System plans at each of its mills and offices, and implements safety education. It also has a system to review and improve educational content and the intended audience as necessary.
- The Company without fail implements the education mandated under the Industrial Safety and Health Act based on the Guidelines on Safety and Health Education established by the Ministry of Health, Labour and Welfare. It also implements education on topics such as emergency lifesaving, heat stroke prevention, and traffic safety, as well as safety education to visitors.
- The Company encourages participation in safety-related qualifications (e.g., RST\*) and external training to gain specialized knowledge.

\*Rodosho (Ministry of Labor in Japanese) Safety and Health Education Trainer

- The Company conducts a survey once a year to keep abreast of the status of safety and health education at each of its mills and offices.

## — Ensuring Thorough Safety on Site

- Based on its mission of eliminating all personal injuries within its mills, the Company conducts safety patrols in collaboration with labor unions and contractors, and gives instructions and guidance to correct unsafe practices.
- Provide personal protective equipment and other safety equipment for safety and health-related work.
- Provide guidance to contractors and promote voluntary safety activities, including risk prediction and risk assessments.

## — Responding to Work Tasks with a High Risk of Injury

The Group implements the following measures for operations with a high risk of injury:

- ▶ Manage facilities in accordance with Japan's Industrial Safety and Health Law and other laws and regulations, and regularly evaluate workplace environments.
- ▶ In locations where chemical substances are handled, the Group investigates the dangers and toxicity of these substances and uses what it learns to take appropriate risk reduction measures and manage residual risks.

## — Preparing for Natural Disasters and Fires

The Group implements the following measures in preparation for natural disasters and fires:

- ▶ Create disaster preparedness manuals reflecting local hazard map information.
- ▶ Conduct regular disaster preparedness training in cooperation with local fire departments and other public safety authorities.
- ▶ Undergo regular disaster prevention surveys by specialist risk assessment companies.\*

\*At Nippon Paper Industries

## — Raising awareness of traffic safety

The Group implements the following initiatives aimed at raising awareness of traffic safety:

- ▶ Conduct traffic safety education and seminars.
- ▶ Participate in traffic safety campaigns hosted by local police stations.

## Occupational Accidents

### Frequency rate for occupational accidents requiring time off from work<sup>\*1</sup>

(Calendar year)

|   | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|------|------|------|------|------|------|
| Nippon Paper Industries   | 0.15 | 0.65 | 1.21 | 0.73 | 0.39 | 0.51 |
| Nippon Paper Group <sup>*2</sup>                                  | 0.10 | 0.69 | 1.16 | 0.54 | 0.37 | 0.46 |
| Nippon Paper Group <sup>*2</sup><br>(contractors only)            | 0.57 | 0.61 | 0.54 | 0.98 | 1.10 | 0.62 |
| Manufacturing industry  | 1.15 | 1.02 | 1.20 | 1.20 | 1.21 | 1.31 |
| Pulp, paper and converted paper<br>product manufacturing industry | 1.31 | 1.46 | 1.88 | 1.94 | 1.54 | 1.85 |

\*1 Indicates how often occupational accidents occur in terms of the number of accidents causing injuries or deaths per million work hours.

\*2 Scope: Manufacturing locations of Nippon Paper Industries, Nippon Paper Crecia, Nippon Paper Papylia, and Nippon Paper Liquid Package Product

### Occupational Accident Severity Rate<sup>\*1</sup>

(Calendar year)

|   | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|------|------|------|------|------|------|
| Nippon Paper Industries   | 0.01 | 0.03 | 0.02 | 0.03 | 0.01 | 0.04 |
| Nippon Paper Group <sup>*2</sup>                                  | 0.01 | 0.02 | 0.03 | 0.03 | 0.01 | 0.03 |
| Nippon Paper Group <sup>*2</sup><br>(contractors only)            | 0.04 | 0.03 | 0.47 | 0.55 | 1.10 | 0.09 |
| Manufacturing industry  | 0.07 | 0.08 | 0.10 | 0.10 | 0.07 | 0.06 |
| Pulp, paper and converted paper<br>product manufacturing industry | 0.04 | 0.24 | 0.22 | 0.63 | 0.39 | 0.06 |

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

\*2 Scope: Manufacturing locations of Nippon Paper Industries, Nippon Paper Crecia, Nippon Paper Papylia, and Nippon Paper Liquid Package Product

### Number of work-related employee/contractor fatalities of Nippon Paper Group<sup>\*</sup>

(Calendar year)

|                                 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---------------------------------|------|------|------|------|------|
| Nippon Paper<br>Group Employees | 0    | 0    | 0    | 0    | 0    |
| Contractors                     | 0    | 1    | 1    | 2    | 0    |
| Total                           | 0    | 1    | 1    | 2    | 0    |

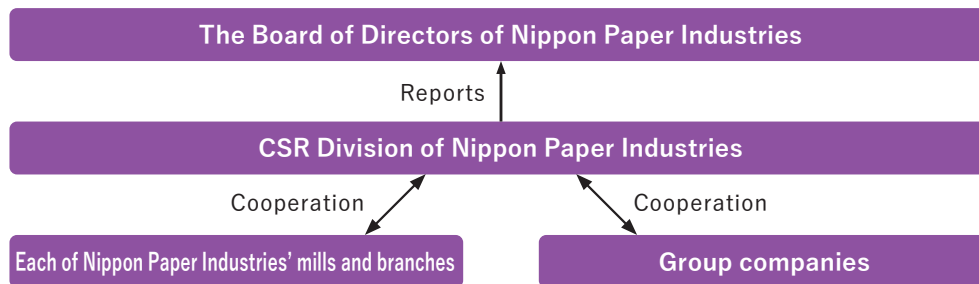
\*Scope: Manufacturing locations of Nippon Paper Industries, Nippon Paper Crecia, Nippon Paper Papylia, and Nippon Paper Liquid Package Product

• In 2021 there were no work-related fatalities in the Group.

# Co-existence with Communities

》 Philosophy and Principles of Social Contribution Activities (see p.91)

## Structure for Promoting Social Contribution Activities



## Social Contribution Activities

Personnel responsible for social contribution activities at each of the Company's mills and other Group companies constantly engage in the following locally focused activities in their communities.

- ▶ Increase the community involvement of Group company's mills and overseas affiliates
- ▶ Promote activities that effectively utilize the resources and expertise of each Group company
- ▶ Promote corporate citizenship activities in which 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

### Social Contribution Activity Expenses (Nippon Paper Industries)

|   | FY2019 | FY2020 | FY2021 |
|---|--------|--------|--------|
| Social Contribution Activity Expenses (Donation Amount) (Million Yen) | 87     | 75     | 58     |

### — Support for Employees' Social Contribution Activities

The Company systematically supports employees' participation in volunteer activities.

- ▶ A system to allow employees to take leave for volunteering (Japan Overseas Cooperation Volunteers, etc.)
- ▶ Acquisition of expired annual leave for volunteer activities

## The Nippon Paper Group's principal social contribution activities

| Principal activities  | Specific examples   |  |
|---|---|--|
| <b>Local community activities</b>                               |   |  |
| Cleaning activities   | <a href="#">Cleaning activities around business sites, etc</a><br>Donation of flower seedlings to elementary schools, etc   |  |
| Local community safety and disaster prevention                  | Children's "emergency 110" patrol project(110 is the number to dial for emergency assistance in Japan)  |  |
|   | <a href="#">Traffic safety initiatives</a>  |  |
|   | Cooperation in preventing bank transfer fraud<br>Participation in fire brigades in afforestation areas*   |  |
| Preserving local community cultures                             | Donation of stand-type paper bags (to put used disposable chopsticks and towels after meals), etc. to elementary and junior high schools to coincide with hometown lunch days   |  |
| Respect for indigenous peoples                                  | <a href="#">Protecting indigenous heritage sites*</a>   |  |
|   | <a href="#">Designating indigenous heritage sites as permanent protected zones*</a>   |  |
| Holding and participating in local events                       | Participating in and sponsoring local events<br>Opening of recreational facilities to the public  |  |
|   | Copier-paper sale in support of the Pink Ribbon Campaign<br><a href="#">Distributing food baskets to low-income families*</a><br><a href="#">Participating in and cosponsoring social welfare events</a>                                      |  |
| Providing awareness-raising opportunities                       | Sustainability Lecture (on-demand distribution)   |  |
| Advancing science and technology                                | <a href="#">Supporting the Fujihara Foundation of Science</a>   |  |
| Disaster relief activities                                      | Donations in the event of a natural disaster<br>Loan of temporary housing land for victims of heavy rain disasters  |  |
|   | <b>Environmental activities</b>   |  |
| Utilizing company- owned forests                                | Supporting the activities of the Shiraneaoi Preservation Group  |  |
| Preserving biodiversity   | Conducting business activities while protecting Blakiston's fish owl habitat<br>Improving breeding conditions for the Blackiston's fish owl by installing artificial nesting boxes<br>Eradicating invasive plant species from Iriomote Island |  |
|   | Promoting recycling activities  | Collection and recycling of used paper cups in-house<br>Recycling Paper-Pak containers |
|   | Accountability to local communities   | Environmental risk communication   |
| <b>Educational activities</b>                                   |   |  |
| Utilizing company-owned forests                                 | <a href="#">Conducting the annual School of Friendship for Forests and Paper</a>  |  |
| Providing opportunities to tour group companies and their mills | Acceptance of factory tours   |  |
| Employment support  | Internships that welcome students for opportunities to experience a workplace<br><a href="#">Implementation of vocational training for community residents around plantations*</a>  |  |
|   | Classes taught by employees   | <a href="#">Cooperation in teaching school classes</a>                                 |
| Music appreciation  | <a href="#">Sponsoring music competitions</a>   |  |
| Providing educational opportunities through sports              | <a href="#">Supporting sports classes for children from low-income families*</a>  |  |
| Providing products to classrooms                                | Providing in-house products to educational institutions   |  |

\*Overseas activities

## External Evaluation

### Main ESG indices adopted



2022 CONSTITUENT MSCI JAPAN  
ESG SELECT LEADERS INDEX

2022 CONSTITUENT MSCI JAPAN  
EMPOWERING WOMEN INDEX (WIN)

Nikkei Climate 1.5°C Target Index

### Environmental rating



DBJ Environmental Rating  
The Development Bank of Japan rated us in their highest rank (“Environmental consideration is particularly advanced”).  
November 2018



Top level “AAA”  
“ESG / SDGs evaluation-type found procurement”:  
Awarded by Sumitomo Mitsui Banking Corporation

## Supplementary Data

### Principal organization memberships (as of July 2022)

| Organization  | Position            |
|---|---------------------|
| Japan Paper Association                               | Vice Chairman       |
| Japan Tappi   | President           |
| Forest Management Association                         | Director            |
| Japan Woody Bioenergy Association                     | Director            |
| Agricultural Resource Certification Council           | Director            |
| Paper Recycling Promotion Center                      | Vice President      |
| Japan Paper Exporters' Association                    | Director            |
| Japan Paper Importers' Association                    | Director            |
| Japan Association of Milk Packaging and Machinery     | Chairman            |
| Committee for Milk Container Environmental Issues     | Vice Chairman       |
| Association of Large-scale On-site Power-plant Owners | Director            |
| NanoCellulose Japan                                   | Chairman            |
| Japan Clean Ocean Material Alliance                   | Executive Secretary |

### Political contribution amount (Nippon Paper Industries)

|  | FY2019 | FY2020 | FY2021 |
|--|--------|--------|--------|
| Political contribution amount (thousand yen) | 140    | 35     | 100    |

## Status of CoC certification acquisition at principal production sites (as of July 31, 2022)

| Company Name                       | FSC®  |                               | PEFC  |
|------------------------------------|---|-------------------------------|---|
|                                    | Mill, Production Company  | License no.                   | Mill, Production Company                        |
| Nippon Paper Industries            | Asahikawa Mill  | FSC®C001751                   |   |
|                                    | Shiraoi Mill  |                               | Shiraoi Mill                                    |
|                                    | Ishinomaki Mill   |                               | Ishinomaki Mill                                 |
|                                    | Iwakuni Mill  |                               | Iwakuni Mill                                    |
|                                    | Yatsushiro Mill   |                               | Yatsushiro Mill                                 |
|                                    | Iwanuma Mill  |                               |   |
|                                    | Akita Mill  | FSC®C133166                   | Akita Mill                                      |
|                                    | Nakoso Mill   | FSC®C020977                   |   |
|                                    | Soka Mill   | FSC®C133163                   |   |
|                                    | Ashikaga Mill   |                               |   |
|                                    | Fuji Mill Yoshinaga, Fuji   | FSC®C133678                   | Fuji Mill Yoshinaga                             |
|                                    | Otake Mill  | FSC®C132226                   | Otake Mill                                      |
| Gotsu Mill                         | FSC®C154187   |                               |   |
| Other Nippon Paper Group Companies | Nippon Paper Papylia<br>Harada Mill, Kochi Mill                       | FSC®C005984                   | Nippon Paper Papylia<br>Harada Mill, Kochi Mill |
|                                    | Nippon Paper Crecia<br>Kaisei Mill, Koyo Mill, Kyoto Mill, Tokyo Mill | FSC®C124287                   |   |
|                                    | Nippon Dynawave Packaging   | FSC®C131932                   | Nippon Dynawave Packaging                       |
|                                    | Siam Nippon Industrial Paper  | FSC®C135609                   |   |
|                                    | Jujo Thermal  | FSC®C012566                   | Jujo Thermal                                    |
|                                    | Opal Opal Cartons Auckland  | FSC®C127957                   | Opal Opal Cartons Auckland                      |
|                                    | Opal Cartons Christchurch   |                               | Opal Cartons Christchurch                       |
|                                    | Opal Australian Paper Maryvale Mill                                   | FSC®C002059                   | Opal Australian Paper Maryvale Mill             |
|                                    | Opal Australian Paper Preston   |                               | Opal Australian Paper Preston                   |
|                                    | Opal Cartons Botany   | FSC®C127957                   |   |
|                                    | Opal Cartons Heidelberg   |                               |   |
|                                    | Opal Cartons Regency Park   |                               |   |
|                                    | Opal Fibre Packaging Launceston                                       |                               | Opal Fibre Packaging Launceston                 |
|                                    | Opal Fibre Packaging Brooklyn   |                               | Opal Fibre Packaging Brooklyn                   |
|                                    | Opal Fibre Packaging Scoresby   |                               | Opal Fibre Packaging Scoresby                   |
|                                    | Opal Fibre Packaging Revesby  |                               | Opal Fibre Packaging Revesby                    |
|                                    |   | Opal Bag Solutions Thomastown |   |
|                                    |   | Opal Bag Solutions Revesby    |   |



## Corporate Governance Policy

### Chapter 1 General Provisions

#### Article 1 (Purpose)

This Policy defines guidelines of basic views on the Company's corporate governance so that the Nippon Paper Group (hereinafter referred to as the "Corporate Group) can achieve sustainable growth and medium to long term increases in corporate value based on the Corporate Group's philosophy itemized below:

#### Corporate Group's Philosophy

**Mission** - Reason for existence in society and significance -

The Nippon Paper Group aims to contribute to better living and cultural progress everywhere it does business

**Vision** - Vision for implemented the philosophy -

A corporate group that meets the following requirements and is sustainably needed by society

1. Drive social sustainability through our business
2. Delight our customers
3. Instill pride in employees
4. Give back to society

**Values** - Values to which employees attach importance to implement the philosophy, and judgment criteria -

Challenge : Embrace new challenges

Fairness : Be fair

Teamwork : Champion teamwork

**Slogan** - Near-term policy factored in the business environment -

#### Nippon Paper Group : Shaping the future with trees

Constantly creating new value and contributing to better living and cultural progress, as a comprehensive biomass company shaping the future with trees.

Over many years, we have nurtured trees, made paper, and offered a wide range of products that support people's life and culture.

We have managed forests in an appropriate manner, and pursued a variety of businesses by fully utilizing wood resources out of sustainably managed forests.

Those businesses address social issues such as global warming and depletion of resources on earth, and contribute to running sustainable society.

Going forward, we will continue to provide a wide range of products and services that make the most of the outstanding properties of wood, as we strive to maximize the value of sustainable forest resources for the future.

**Article 2 (Basic views on corporate governance)**

1. The Company shall make the top priority of management further enhancing management transparency among its stakeholders including shareholders, in order to achieve fair management. To ensure separation between business execution and management supervision, the Company shall adopt the executive officer system and strive to strengthen the supervisory function of the Board of Directors. In addition, the Company shall, as the headquarters for managing the Group, promote its growth strategy, monitor businesses under its control, and promote legal compliance. The Company shall work on further reinforcing corporate governance by providing the following policies:
  - (i) The Company shall, having respect for shareholders' rights, work to put in place an environment where its shareholders can exercise their rights in an appropriate manner and ensure the substantive equality of shareholders.
  - (ii) The Company shall recognize the importance of social responsibilities and public duties, strive to appropriately collaborate with various stakeholders including shareholders, employees, customers, business partners, creditors, and local communities, and develop a corporate culture and climate for business to be operated in a sound manner based on strict self-discipline.
  - (iii) The Company shall provide for its disclosure policy separately, make appropriate disclosures of corporate information including non-financial information, and strive to ensure the transparency of corporate management.
  - (iv) The Company shall work on strengthening the functions of the Board of Directors based on fiduciary responsibility and accountability to shareholders. It shall promote the use of independent outside directors, establish voluntary committees to ensure the transparency of procedures concerning executive appointments and compensation in particular, and have independent outside directors as key members. It shall make analyses and evaluations on the effectiveness of the Board of Directors as a whole and strive to improve the functions of the Board of Directors.
  - (v) The Company shall have constructive dialogues with shareholders, in order to contribute to its sustainable growth and medium- to long-term increases in corporate value.
2. The Board of Directors shall, as core management principles that all of the Company's officers and employees share, and on which all activities rely, separately provide the Nippon Paper Group Action Charter and the Nippon Paper Codes of Conduct.

## Chapter 2 The Company's Corporate Governance Structure

### Article 3 (Roles of the Board of Directors)

1. The Board of Directors shall bear the supervisory function of management as a whole including the execution of duties by executing persons, ensure fair and transparent management, and make the most appropriate decisions for the Company through decisions, etc. on the important execution of business that are to be made by the Board of Directors under laws and regulations.
2. Regarding the execution of business other than the execution of important business set forth in the preceding Paragraph and its decisions, its authority shall be delegated to the President & Representative Director and other Corporate Officers, and the Board of Directors shall supervise the status of the execution of duties by the President & Representative Director and other Corporate Officers.
3. Outside directors shall, to enhance the Corporate Group's sustainable growth and medium to long-term corporate value, supervise the execution of business by the Board of Directors, the senior management, etc., and conflicts of interest between the Company and the senior management, etc., from the viewpoint of stakeholders.
4. In view of the importance of environmental and social challenges related to sustainability, the Board of Directors shall provide various philosophies and basic policies regarding social responsibilities to be performed by Corporate Group companies, raise awareness of officers and employees, and strive to facilitate the sustainable development of society and enhance the corporate value of the Corporate Group by promoting active efforts to resolve challenges while giving consideration to stakeholders.

### Article 4 (Composition of the Board of Directors)

1. The Company's board members shall number 12 or fewer members as provided for by the Articles of Incorporation. While based on the necessary and appropriate number to ensure the effective management system required for a holding company that bears the supervisory function for executing the Group's business and substantive discussions at board meetings, the composition of the Board of Directors shall also be decided by fully taking into account the viewpoint of ensuring diversification and expertise in the Board of Directors.
2. The Company's Board of Directors shall ensure a balance of knowledge, experience and abilities within the Board of Directors as a whole and diversification by having it composed of inside directors who have excellent abilities to execute and manage each business in charge and outside directors who have specialized knowledge and extensive experience.

### Article 5 (Nomination policy of nominees for directors)

1. The Board of Directors shall decide nominees for directors of the Company from among a wide variety of human resources on the condition that they have all the requirements listed below:
  - (i) Those who have extensive knowledge of and a wealth of experience in the Corporate Group's management control s and business operations; and

- (ii) Those who fully understand the social responsibilities and missions of the Company's business and can exercise management control and perform business operations in a fair and precise manner based on strict self-discipline.
2. Notwithstanding the provision set forth in the preceding Paragraph, nominees for outside directors shall be decided from among a wide variety of human resources on the condition that they meet all the requirements listed below:
- (i) Those who meet the criteria for judging independence provided for by the Tokyo Stock Exchange and are deemed not likely to generate conflicts of interest with general shareholders
  - (ii) Those who understand the Company's management philosophy and have a full understanding of the Corporate Group's social responsibilities and roles; and
  - (iii) Those who fully recognize the role of an outside director can supervise the Company's directors and management and can offer precise and appropriate opinions and advice using expert knowledge and experience in the fields of corporate management, economics, legal affairs, accounting, tax affairs, auditing,

**Article 6 (Nomination policy of nominees for statutory auditors)**

1. The Board of Directors shall, with the consent of the Board of Statutory decide nominees for the Company's statutory auditors from among a wide range of human resources on the condition that they meet all the requirements listed below:
- (i) Those who have extensive knowledge and a wealth of experience of the Corporate Group's management controls and business operations; and
  - (ii) Those who can conduct audits on the status of business execution by directors from a fair and objective standpoint and can contribute to enhancing the soundness and transparency of management
2. Notwithstanding the provision set forth in the preceding Paragraph, nominees for outside statutory auditors shall be decided from among a wide range of human resources with the consent of the Board of Statutory Auditors on the condition that they meet all the requirements listed below:
- (i) Those who meet the criteria for judging independence provided for by the Tokyo Stock Exchange and are deemed not likely to generate conflicts of interest with general shareholders
  - (ii) Those who understand the Company's management philosophy and have a full understanding of its social responsibilities and roles;
  - (iii) Those who fully recognize the role of an outside statutory auditor and can audit the status of business execution by directors from a neutral and objective viewpoint and contribute to enhancing the soundness and transparency of management using expert knowledge and experience in the fields of corporate management, economics, legal affairs, accounting, tax affairs, audit, etc.

**Article 7 (Policy for directors and statutory auditors training, etc.)**

1. The Company shall continuously provide information on economic circumstances, industry trends, legal compliance, corporate governance, financial accounting and other matters that directors and statutory auditors require for performing their roles and functions as well as give support for the execution of duties of directors and statutory auditors by ensuring opportunities to participate in external training that each director and statutory auditor desires.
2. In addition to the preceding Paragraph, the Company shall ensure outside directors and outside statutory auditors have opportunities for forming a full understanding through explanations from each division in charge, director in charge, or other suitable persons of the Corporate Group's management strategy, business plans, status of each business, business environment, business challenges, when they assume the relevant post and in a timely manner during their tenure of office.

**Article 8 (Policy for deciding compensation, etc. of directors and statutory auditors)**

1. Regarding a director's monthly compensation, his/her base compensation shall be decided according to his/her job responsibilities at the Company. Of that, 70% shall be fixed and the remaining 30% shall be paid on a sliding scale based on the achievement of the mid-term management plan. The base compensation shall be determined by using objective external survey data and taking into consideration the Company's business performance, business size, business environment, etc. Performance indicators shall be set to function effectively as motivation for achieving performance targets, and reviewed as necessary according to changes in the business environment. In addition, directors shall contribute a certain amount of their monthly compensation to the Directors' Shareholding Association to acquire treasury shares. Meanwhile, they shall receive neither bonuses nor directors' retirement benefits.
2. The Company shall pay stock-based compensation to directors by way of the Board Benefit Trust in order to further clarify the linkage between director compensation and its stock value and have them share with its shareholders not only the benefits of an increase in share prices but also the risks of a decline in share prices, thereby increasing their consciousness of the need to contribute to the improvement of the Company's business performance and to increasing in its corporate value over a medium- to long-term. For share-based compensation, treasury shares acquired through a trust with the monetary contributions from the Company and monetary equivalent of treasury shares converted at market value shall be given to directors through the trust. The number of shares to be provided shall be calculated based on the number of points according to job responsibilities. In principle, share-based compensation shall be paid upon retirement of directors. The composition ratio of fixed compensation, performance-linked compensation, and share-based compensation for directors shall be appropriately set in light of the purpose of each compensation.
3. Regarding outside directors and outside statutory auditors, monthly compensation shall be fixed. Meanwhile, in view of their job responsibilities, contributions to the Directors' Shareholding Association shall be left to their discretion.

#### **Article 9 (Personnel & Remuneration Advisory Committee)**

1. The Company shall, as an advisory body to the Board of establish the Personnel & Remuneration Advisory Committee whose key members are independent outside directors to further enhance corporate governance.
2. The Personnel & Remuneration Advisory Committee shall, with regard to the nomination process, quality and the reason for nomination of nominees for the Company's directors and statutory auditors, the criteria for judging the independence regarding independent outside directors, directors' compensation structure, etc., study their appropriateness, etc. upon receipt of inquiries from the Board of Directors and submit recommendations in consideration of evaluations of the Company's business performance, etc.
3. The members of the Personnel & Remuneration Advisory Committee shall be composed of the President & Representative Director General Manager for Personnel & General Affairs Division and independent outside directors, and Manager of Personnel Department shall serve as the secretariat of the Committee.
4. The Personnel & Remuneration Advisory Committee shall proceed with its studies while receiving appropriate involvement and advice from independent outside directors.
5. The Board of Directors shall, after receiving recommendations from the Personnel & Remuneration Advisory Committee, make a decision on nominations for directors and statutory auditors, compensation for directors, etc.

### **Chapter 3 Responses to Protect Stakeholders' Interests**

#### **Article 10 (Management system for related party transactions)**

In case the Company conducts transactions with its officers, major shareholders, etc. (related party transactions), it shall, in advance, submit the said transactions to the Board of Directors and obtain its approval, except in clear cases where the said transaction terms and conditions are similar to those of general transactions, so that such transactions may not harm the Company, common interests of shareholders, etc. Material facts on the said transactions shall be reported to the Board of Directors.

#### **Article 11 (Policy for strategic holding of stocks, etc.)**

1. The Company considers it critical to build cooperative relationships with various companies to expand business and achieve sustainable development. From the long-term viewpoint of enhancing the Company's corporate value, the Company shall hold stocks that it deems strategically necessary, taking into comprehensive account importance on business strategy, relationships with business partners, etc.
2. Of listed stocks held based on the preceding Paragraph (hereinafter, "strategic holdings of stocks"), major stocks shall be verified with regard to the effects of holding them, etc. in terms of the medium to long term economic rationale for holding, maintaining, and reinforcing comprehensive relationships with business partners and reports thereon shall be made to the Board of Directors on a regular basis every year.

3. Regarding the exercise of voting rights on strategic holdings of stocks, the Company shall closely examine the contents of proposals and appropriately exercise rights after making a judgment on whether or not the said proposals will contribute to increasing the corporate value of the Company and the investee company. Regarding proposals that impair the corporate value of the Company and the investee company, the Company shall not agree to vote for them.

#### **Article 12 (Whistle blowing system)**

1. The Company shall set up a whistle blowing system (Nippon Paper Group Help Line) so that the Corporate Group's employees, etc. may directly report to or consult with a contact within the Group or external contact office outside day-to-day reporting lines with regard to acts violating laws and regulations, social norms, corporate ethics, company rules, etc. or inappropriate acts without having concerns about the risk of suffering disadvantageous treatment and also so that such reports and consultations may be objectively verified and dealt with in an appropriate manner.
2. The operational status of the whistle blowing system shall be reported to the operating manager by the unit responsible for operations on a case-by-case basis and the operating manager shall make reports to the Board of Directors where appropriate. In addition, the unit responsible for operations shall make regular reports to the statutory auditors with regard to the status of whistle blowing from the Corporate Group's employees, etc.

### **Chapter 4 Dialogues with Shareholders, etc.**

#### **Article 13 (Policy for constructive dialogues with shareholders, etc.)**

1. The Company shall attach importance to constructive dialogues with shareholders, etc. and strive to have dialogues with them at various opportunities.
2. The Company shall, through constructive dialogues with shareholders, etc., make efforts to obtain their understanding on the Corporate Group's management policy and simultaneously work on the Corporate Group's sustainable growth and medium to long term increase of corporate value by listening to the opinions of shareholders, etc., and absorbing analyses of management and opinions from the standpoints of capital providers, etc. to reflect them in its management.

### **Supplementary Provisions**

#### **Article 1 (Enforcement of the Policy)**

The Policy shall come into force as from November 5, 2015

#### **Article 2 (Amendment and repeal of the Policy)**

Amendment and repeal of the Policy shall require approval from the Board of Directors

## 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 the corporate development and the personal contentment of individual employees, and create a company filled with dream and hope.

## Codes of Conduct

### 1. Fulfillment of social responsibilities

- (1) We shall contribute to society through our business activities, centered on paper manufacturing, as a good corporate citizen.
- (2) When conducting businesses overseas, we shall respect local cultures and customs,
- (3) We shall stand up firmly against antisocial factions and groups.

### 2. Fair, transparent and liberal corporate activities

- (1) We shall not become involved in a cartel, collusive behavior, inappropriate labeling or other acts that violate the provisions and spirit of Anti-Trust Law and related regulations, and we shall conduct fair business transactions.
- (2) We shall not become involved not only in bribery of public officers, illegal political contributions or offering of profits, but also in actions that could be conceived as back-scratching or cozy relations with legislature or administrative bodies.
- (3) We shall not become involved in after-hours entertainment or gift giving that is unacceptable given community standards and general business practice.

### 3. Winning trust of customers

- (1) We shall consistently provide products and service that are socially useful, of high quality and with a high degree of safety, and environmentally friendly.
- (2) We shall provide quality labels and other product information accurately and fairly, to enable customers



to make informed choices.

- (3) We shall take every opportunity to listen to the opinions of customers, and endeavor to maximize customer satisfaction.

#### **4. Strict handling of corporate information**

- (1) We shall manage business information, intellectual property rights, customer information, personal information and other important internal information strictly and appropriately.
- (2) We shall not obtain or use information on customers or competitors in an illegal way.
- (3) We shall respect the intellectual property rights of others.

#### **5. Fair and positive disclosure of corporate information**

We shall positively disclose not only business-related information but also fair and reliable information on our environmental and community activities to our customers, consumers, shareholders, investors, business partners, regional communities, administrative bodies, employees and other stakeholders.

#### **6. Active involvement with environmental issues**

- (1) We shall promote afforestation projects, to create and make effective use of sustainable forest resources.
- (2) We shall promote energy conservation, the use of wastepaper and other measures to effectively use resources that are limited in quantity.
- (3) We shall manage and reduce all types of discharge and waste generated in the course of corporate activities.
- (4) We shall research and develop manufacturing technologies, and products and services that are in harmony with the environment.

#### **7. Desirable mindset of employees**

- (1) To act with a willingness to improve oneself and to take up challenges, to make corporate development consistent with personal contentment.
- (2) To abide by laws, regulations and social codes, and to be responsible for one's own conduct.
- (3) To respect each other's human rights and to consider the positions of others when taking action.
- (4) To distinguish at all times between official and private settings, and to avoid using business positions for personal benefit.
- (5) To refrain from using for private purposes nonpublic information obtained in one's company or in the course of business.

Established on April 1, 2004

## Disclosure Policy

### 1. Basic Disclosure Stance

Nippon Paper Group (the Group) pursues a fundamental policy of disclosing corporate information proactively and fairly to all Group stakeholders, and raising the level of management transparency in accordance with its Action Charter and Codes of Conduct.

### 2. Criteria for Disclosure

1. The Group conducts expeditious disclosure based on the principles of transparency, fairness and consistency, in line with the Japanese Corporate Law, Financial Instruments and Exchange Act and other relevant laws, as well as the Rules on Timely Disclosure of Corporate Information (the Rules on Timely Disclosure) stipulated by the securities listing regulations of security exchanges.
2. Even for information that does not fall under the categories stipulated in the relevant laws and the Rules on Timely Disclosure, the Group carries out rapid and accurate disclosure of information useful to stakeholders and the broader society, to the fullest extent possible, regardless of any advantages or disadvantages that may accrue to the Group as a result of such information disclosure.

### 3. Methods of Disclosure

1. Information disclosure pursuant to the Rules on Timely Disclosure is conducted through the Timely Disclosure network (TDnet) operated by the Tokyo Stock Exchange (TSE) and media organizations such as press clubs affiliated with these securities exchanges.
2. For information that does not fall under the categories stipulated in the Rules on Timely Disclosure, depending on the importance and urgency of the information in question, the Group carries out disclosure through an appropriate method or methods, including the issuing of press releases and the holding of press conferences.
3. The information disclosed in accordance with the two methods outlined above is posted promptly on the Group's Web site.

### 4. Silent Period

To prevent unauthorized release of earnings information and ensure fairness, the Group observes a "silent period" from the day following the closing date of each fiscal period until the date on which each set of financial results is announced. During the silent period, as a rule, the Group refrains from responding to questions regarding its financial results and from making related comments. However, in the event that during the silent period it becomes clear to Group management that results are likely to differ substantially from forecasts previously disclosed, the Group will effect an information disclosure in the appropriate manner.

## 5. Disclaimers

1. Any information disclosed by the Group that is not historical fact comprises forward-looking statements, which have been made based on judgments and assumptions using the best information available at the time of disclosure. Actual results may differ materially from forecasts due to a range of contingencies, including, but not limited to, macroeconomic conditions and other external factors.
2. While the Group endeavors to ensure the accuracy of the information it discloses, the Group does not guarantee or give any warranty as to the accuracy, timeliness or completeness of the information or material it discloses, or of any information provided by external Web sites linked from the Group's Web site. Furthermore, the Group assumes no liability or responsibility for any damage to users of this Web site, or to users' computers or other property, arising from users' access, use or downloading of any information or materials provided on this Web site.
3. Information disclosed by the Group is provided solely for the purpose of facilitating greater understanding of the Group. No information is disclosed for the purpose of soliciting investments. Any investment decisions made by users of this information are made at the user's own discretion and risk.

## 6. Changes to Information Disclosed and Disclosure Policy

1. Any information disclosed by the Group is subject to change without notice.
2. The Group may, without notice, amend or change this disclosure policy, as it deems appropriate.

### **The Nippon Paper Group**

#### **“Principles and Basic Policies Concerning Raw Materials Procurement”**

Since the establishment of the “Philosophy and Basic Policy Concerning Raw Materials Procurement” on October 5, 2005, the Nippon Paper Group (the “Group”) has been developing a raw materials procurement system that can be deemed credible by a wide range of stakeholders. The Group has been striving to implement this through managing its global supply chain in a way to address relevant environmental and social challenges. To achieve its mission, which is “to contribute to better living and cultural progress everywhere it does business,” the Group has revised the Group’s procurement policy to the “Principles and Basic Policies Concerning Raw Materials Procurement” (the “Policies”). The revision is intended to enable the Group to address issues such as human rights and climate change more effectively. At the same time, the Group has recently established the “Wood Resources Procurement Guidelines” (the “Guidelines”) for forest resources, which are the core resources of the Group’s business operations.

The Policies and the Guidelines were prepared by studying relevant guidelines such as the “OECD Due Diligence Guidance for Responsible Business Conduct” and other guidelines, and based on advice from external experts. Moreover, both the Policies and the Guidelines conform to the “Nippon Paper Group Human Rights Policy”, which has been developed according to international standards relating to human

rights. The “Nippon Paper Group Human Rights Policy” is based on the “Guiding Principles on Business and Human Rights” developed by the United Nations, and also aligns with the “International Bill of Human Rights” and the “ILO Declaration on Fundamental Principles and Rights at Work”.

The Policies and the Guidelines are communicated to all stakeholders by publishing them on the Group’s website in both Japanese and English. The Group also works to build a sustainable supply chain in cooperation with suppliers through risk minimization and improvement processes in accordance with the Policies and the Guidelines.

#### ■ Governance

The Policies and Guidelines are reviewed once a year by the Nippon Paper Group Raw Materials Committee under the supervision of the Board of Directors of Nippon Paper Industries Co., Ltd., based on changing social situations and business trends.

#### ■ Scope of Application

The Policies and Guidelines cover all raw materials and fuels procured by Nippon Paper Industries Co., Ltd., and its consolidated subsidiaries, for the manufacture of products.

#### [Principles]

We shall strive to contribute to better living and cultural progress everywhere it does business through implementing sustainable procurement practices for raw materials in collaboration with our suppliers. To do this, we shall make our best effort to identify social and environmental issues relating to our procurement practices and to address the challenges identified.

#### [Basic Policies]

1. Legal compliance and fair and equitable transactions
  - (1) We respect international standards and comply with relevant laws and regulations.
  - (2) We conduct fair business transactions and provide equitable opportunities for competition.
  - (3) We adequately manage information obtained through our procurement activities.
  
2. Addressing social issues
  - (1) We ensure prevention of human rights violations and workers’ rights violations by facilitating the efforts to respect human rights issues\* within our supply chains.
    - \* Anti-discrimination or harassment, anti-forced labor or child labor, respect for workers’ rights (the right to organize, bargain and act collectively), prevention of low-wage labor and excessive working time, ensuring occupational safety and health, etc.
  - (2) We promote our initiatives to respect the rights of local communities\* in the regions where we procure

raw materials. By doing so, we aim to harmoniously coexist with local communities and to contribute to the community development.

\* Ensuring provision of sufficient information in advance and seeking the understanding of local communities in utilizing land and resources in the relevant area, respect for the rights and culture of indigenous peoples, provision of support and employment opportunities to local residents, etc.

- (3) We carry out confirmation to ensure that we do not procure illegally harvested wood, conflict minerals and other resources that may involve human rights violations.

Note: This Paragraph 2 of the Policies aligns with the “Nippon Paper Group Human Rights Policy”.

### 3. Addressing environmental issues

- (1) We use forest and water resources sustainably for the conservation of such resources.
- (2) We minimize our negative impact on biodiversity and take measures for its conservation.
- (3) We carry out procurement in a manner that contributes to energy saving and reduction of greenhouse gas emissions as part of our response to climate change.
- (4) We seek to make effective use of resources and to reduce waste by promoting the use of recycled materials, such as used paper, to contribute to building a society based on a circular economy.
- (5) We work to mitigate any potential environmental impact by procuring raw materials with chemical substances that have been properly managed and handled.

### 4. Ensuring traceability and monitoring

- (1) We ensure traceability according to the levels of associated risks and implement Paragraphs 1 to 3 of the Policies above throughout our supply chain during our procurement activities.
- (2) We conduct monitoring and aim to minimize the risk and impact of the implementation of Paragraphs 1 to 3 of the Policies.
- (3) We conduct interviews with suppliers who do not conform with Paragraphs 1 to 3 of the Policies, request improvement, and provide support to help with such improvement. If no improvement is made, we review whether to continue transactions with them.

### 5. Communication with stakeholders

- (1) We reflect on our dialogues with stakeholders on our processes to improve our procurement activities.
- (2) We actively disclose information about the Group’s procurement activities.

(Revised on September 1, 2022)

## Wood Resources Procurement Guidelines

The Nippon Paper Group is committed to addressing social and environmental challenges including human

rights issues in accordance with the “Principles and Basic Policies Concerning Raw Materials Procurement”. The Group strives to source its raw materials according to the “Wood Resources Procurement Guidelines” below in order to use forest resources sustainably.

\* Applicable to whole logs, wood products, woodchips and pulp for paper manufacture, and wood biomass for fuels that have been procured by Nippon Paper Industries Co., Ltd. or its consolidated subsidiaries in order to manufacture their relevant products.

1. We do not procure illegally harvested wood.
2. We are committed to the promotion of zero deforestation and do not engage in procurement that is complicit in forest reduction or degradation.
3. We do not engage in procurement that contributes to the degradation of forests that are categorized as High Conservation Value (HCV), such as forests with biodiversity importance, and forests with High Carbon Stock (HCS).
4. We promote forest resource management and resource procurement that contribute to the increase of CO2 absorption and fixation from forests.
5. We strive to vitalize the forestry industry of relevant countries and promote the use of wood resources originating from the countries where products are manufactured for the Group.
6. We promote the use of recycled materials such as sawmill residues, wood construction waste, and unused wood materials.
7. We aim to increase procurement of wood resources that are audited or certified by third parties such as forest certification systems.
8. We ensure traceability of the wood resources we procure to confirm the point of origin, the forest type, and the forest management method.
9. We actively hold dialogues and engage with our suppliers to promote communication throughout the supply chain.

(Established on September 1, 2022)

## **The Nippon Paper Group Environmental Charter**

### **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

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

### **Basic Policy on the Preservation of Biodiversity**

#### **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.

(Established April 1, 2016)

### **Philosophy and Basic Policy on Product Safety**

#### **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.

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

### Nippon Paper Group Human Rights Policy

The Nippon Paper Group adopted the “Philosophy and Basic Policy on Human Rights, Employment and Labor” on October 1, 2004, stipulating respect for human rights, including non-discrimination, prohibition on forced labor and child labor. We also adopted the “Philosophy and Basic Policy Concerning Raw Materials Procurement” on October 5, 2005, stipulating respect for human rights through the entire supply chain as a basic policy, and thereby promoting dialogues with stakeholders concerning raw materials procurement.

Against this backdrop and based on these previous measures taken, we hereby adopted the Nippon Paper Group Human Rights Policy, aiming at fulfilling our group mission, “contributing to better living and cultural progress everywhere it does business”, and in order to ensure increased effectiveness in respecting human rights.

This Policy was drafted in accordance with the international standards including principles concerning fundamental rights expressed in the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work, guided by the UN Guiding Principles on Business and Human Rights, and with advice given by external experts. The Policy was approved by the board of directors of the Nippon Paper Industries, Co., Ltd. on May 30, 2022.

This Policy is drafted in dual languages (Japanese and English) and is made known to all stakeholders by disclosing it through website of the Nippon Paper Group.

#### ■ Scope of Application and Expectations for Business Partners

This Policy applies to all directors, officers, and employees of the Nippon Paper Group.

The Nippon Paper Group expects that our business partners, including suppliers, promote measures concerning respect for human rights in collaboration with us, and we will exercise leverage for their support



and compliance with this Policy.

#### ■ Compliance with Applicable Laws and Regulations

The Nippon Paper Group complies with laws and regulations applicable in each country and region where we conduct business activities. Provided that, in case there is any conflict between the international human rights standards and laws and regulations of each country and region, we will seek ways to honor the principles of the internationally recognized human rights.

#### ■ Human Rights Due Diligence

The Nippon Paper Group establishes the process of human rights due diligence in accordance with the steps based on the UN Guiding Principles on Business and Human Rights, and endeavors to prevent or mitigate adverse impacts on human rights.

#### ■ Dialogue and Consultations with Stakeholders

In implementing this Policy, the Nippon Paper Group will hold sincere consultations with stakeholders potentially affected by our business activities.

#### ■ Education

The Nippon Paper Group provides periodic education and training for all directors, officers, and employees to ensure appropriate implementation of this Policy.

#### ■ Remedies

In case we identify that we have caused adverse human rights impacts directly or indirectly, the Nippon Paper Group will take remedial measures through dialogue and appropriate procedure, utilizing existing grievance mechanisms. In particular, as grievance mechanisms in accordance with the UN Guiding Principles on Business and Human Rights, we notify and operate the “Nippon Paper Group Helpline”, which enables consultation and direct reporting for all directors, officers, and employees. We also operate the “Application Form for Inquiries concerning the Nippon Paper Group”, which enables reporting from outside companies through our website.

#### ■ Information Disclosure

The Nippon Paper Group discloses information on measures taken concerning human rights through our website, etc..

#### ■ Material Issues concerning Human Rights

The Nippon Paper Group recognizes our material issues concerning human rights as attached, and will proceed with measures to respect human rights based on this Policy. We will try to review material issues at an appropriate timing following changes in social circumstances or business trends.

Date of adoption: May 30, 2022

[Annex attached]

[Annex]

|  |
|--|
| <p><b>1. Prohibition on Discrimination and Harassment</b></p> <p>We do not discriminate people on grounds including nationality, race, national origin, sex, age, religion, disease, disability, sexual orientation and gender identity. We do not conduct any act of harassment, including sexual harassment and power harassment.</p>  |
| <p><b>2. Prohibition of Forced Labor and Child Labor</b></p> <p>We do not allow forced labor in any form of employment. We do not allow employment of children under minimum age of employment specified by laws and regulations of each country and region.</p>   |
| <p><b>3. Respect for Labor Rights</b></p> <p>We respect workers' freedom of association, right to collective bargaining and right to act collectively. We strive to prevent low-wage labor and excessive working time.</p>   |
| <p><b>4. Facilitation of Pleasant Working Environment</b></p> <p>We understand the importance of occupational safety and health as well as maintaining workers' work-life balance, and try to promote physical and mental health. We establish and maintain structures to make the most of the individuality and capabilities of a diverse range of human resources, and promote personal training and skill development programs to help improve individual employees' abilities and skills.</p>  |
| <p><b>5. Co-existence with Regions and Local Communities</b></p> <p>We understand the possibility that our business activities could give impact on local communities, including socially vulnerable group of people, including children, older persons, indigenous peoples, migrants, national and ethnic minorities, and different risks that may be faced depending on attribution including sex. We will strive to coexist with local communities. We also endeavor to conserve environment which future generations may live without anxiety.</p> |

## Philosophy and Basic Policy on Safety and Health Measures

### 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.

(Established on October 1, 2004)

## **Philosophy and Principles for Social Contribution Activities**

### **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.

(Established on April 1, 2004)

The Nippon Paper Group endorsed the Task Force on Climate-related Financial Disclosures (TCFD) in April 2021 with the aim of disclosing appropriate information on its response to climate change issues.

## Governance

The Group has positioned the reduction of GHG emissions as a management issue and has been working on it by setting quantitative targets since 2008. The Board of Directors of the Company regards addressing climate change issues as an important issue in realizing the Group's Mission. In addition to the Risk Management Committee, the Nippon Paper Group Environmental Committee reports on and oversees the Company's efforts. From FY2021, the director in charge of GHG emission reduction and environmental management has been reporting to the Board of Directors on issues once a quarter.

## Risk Management

The assessment of and response to climate change-related risks is integrated into the Group's risk management system and is managed by the Risk Management Committee (see P.9 of ESG Databook 2022). In order to appropriately foresee risks, the Nippon Paper Group Environmental Committee, established under the Risk Management Committee, collects and analyzes information, identifies climate-related risks and promotes countermeasures. The Group has also set up a Climate Change Strategy Working Group to gather information and forecast risks.

## Indicators and Targets (FY2030)

The Group will continue to analyze 1.5°C scenarios, expand indicators and targets, and strengthen risk management.

- GHG reduction plan: GHG emissions (Scope 1+2) 45% reduction (compared to FY2013)  
Non-fossil energy use ratio of 60% or more
- Amount of investment to address climate-related risk: ¥52.0 billion
- Internal carbon price: Introduced in FY2021, but temporarily ceased being used in FY2022 due to a surge in the price of fuels such as coal

## Strategy and Scenario Analysis

As a scenario analysis for the year 2021, the Company drew up a vision of society against the backdrop of growing awareness of ESG issues. Using two different scenarios (1.5°C scenario and 4.0°C scenario), the Company conducted qualitative and quantitative assessments of the impacts of climate change risks and opportunities as of 2030 and 2050 on its financial plans, and reported the results to the Board of Directors.

### — Scenario Analysis Methods

#### (1) Establishing an image of society

##### 1.5°C scenario (RCP 2.6)

All kinds of policies will be introduced to keep temperature rise below 1.5°C, and at the same time, society as a whole will take action to limit temperature rise. As a result, temperatures will rise slowly, and therefore, by 2030, there will be little change from the current situation in terms of severe disasters, temperature rises, and precipitation patterns. In markets, production and consumption activities giving priority to environment conservation such as an increase in ethical consumption, will increase.

##### 4°C scenario (RCP 8.5)

No policies will be introduced to control temperature rise. While some stakeholders will take actions to limit temperature rise from the perspective of promoting ESG management, regardless of whether policies are introduced or not and regardless of what society as a whole is doing, society generally will not take actions to limit temperature rise. As a result, temperatures will rise more rapidly than in the 1.5°C scenario, and the frequency of severe disasters will increase, temperatures will rise, and precipitation patterns will be more changeable in 2030 than in the current situation.

(2) Evaluation Items

Risk: likelihood of occurrence, timing of occurrence, timing of impact, financial impact

Opportunity: likelihood of occurrence, timing of occurrence, timing of impact, financial impact, market growth

— Summary of Analysis Results

Since the pulp and paper industry is an energy-intensive industry, transition factors such as the introduction of policies and changes in market needs are major risks, as well as physical factors such as an increase in the number of catastrophic disasters. In response to this, the Company is focusing on 45% reduction of GHG emissions, shift to multiple production sites, and green strategy. In regard to GHG emission reduction in particular, the Company will work to ensure strategic resilience by taking additional measures and achieving GHG reduction targets at an early stage through accelerated realization of scenarios in the 2030 Vision.

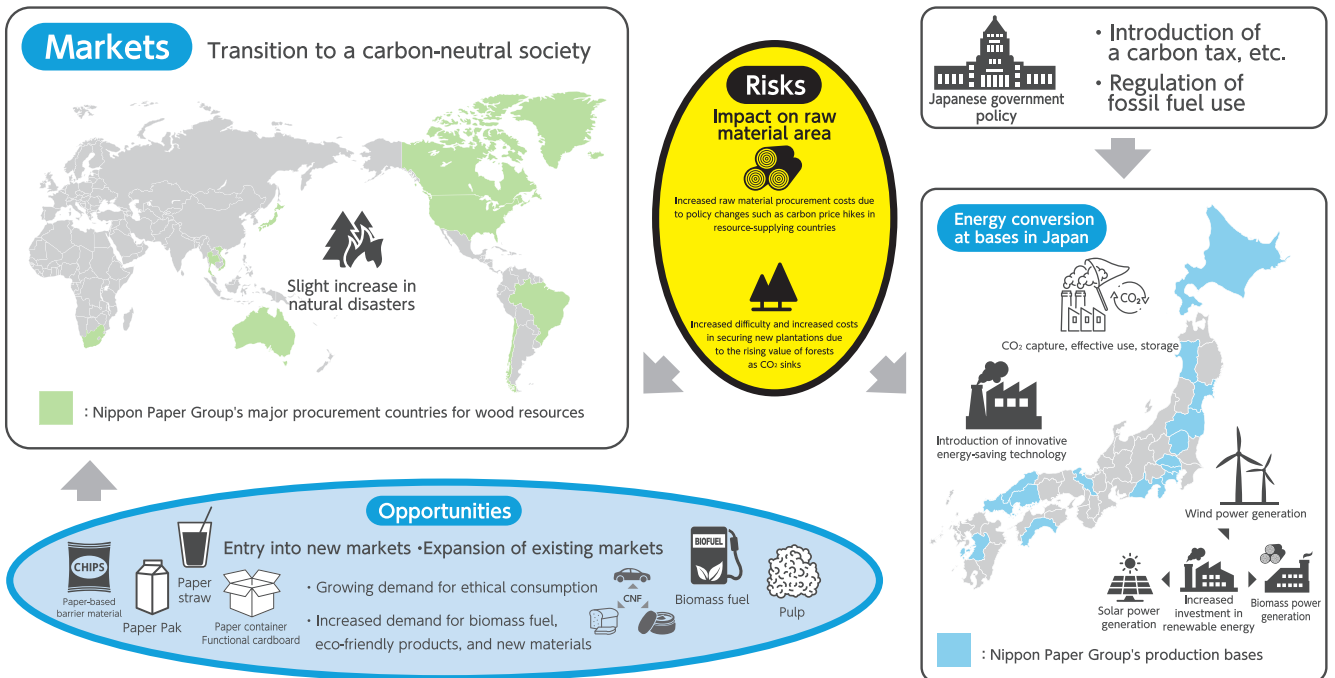
On the other hand, there are many opportunities for the Company to leverage its strengths to enter, and grow in, markets that are being created and expanded due to the introduction of policies and changes in market needs. As for adaptation to climate change, measures to shift to multiple production sites will lead to increased sales, while the development and sale of environmentally friendly and adaptive products needed by society will also provide opportunities for growth in a market that is expected to expand.

**[1.5°C scenario]**

2030

Costs such as a carbon tax will increase.

On the other hand, new business opportunities such as biofuels, environmentally friendly products, and new materials will emerge.

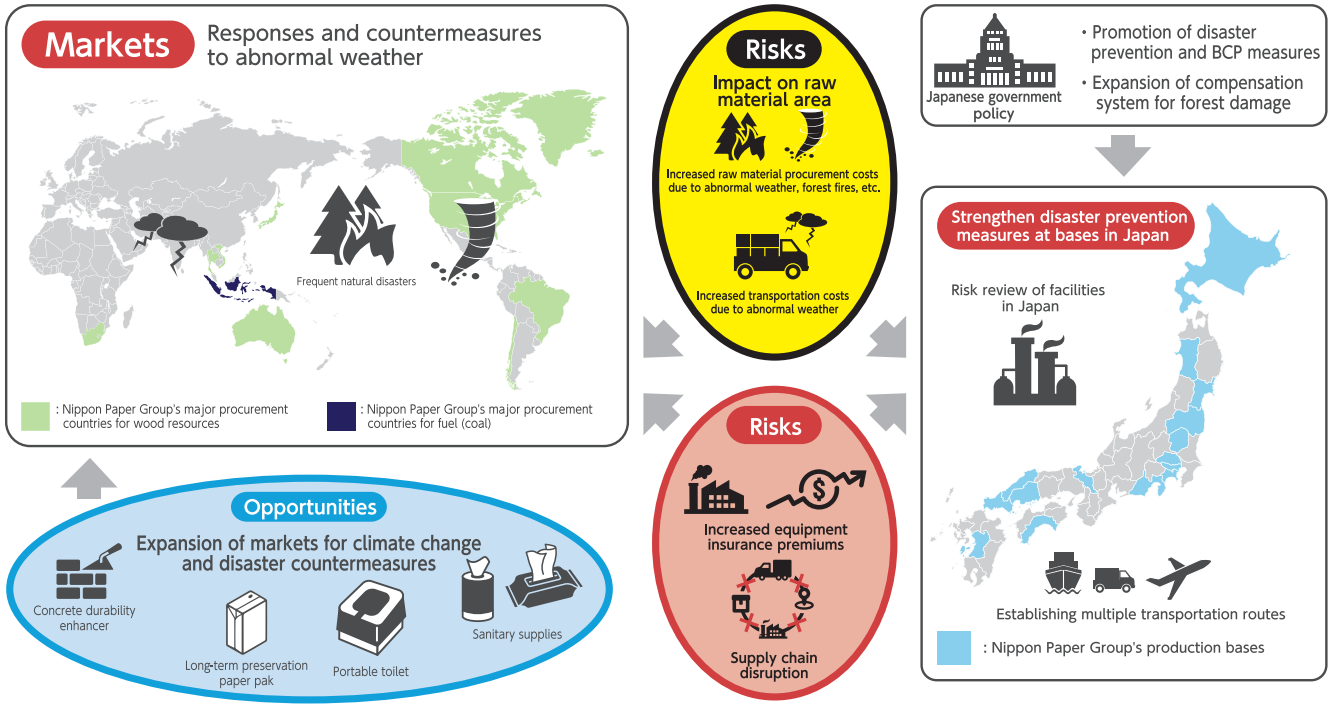


**[4°C scenario]**

2030

**Increased physical risk.**

On the other hand, business opportunities for climate change and disasterresponse products will expand.



**Climate Change-Related Risks**

**Risks as of 2030**

| Factors            |  | Impact on the Company   | Risk assessment |               |
|--------------------|--|---|-----------------|---------------|
|                    |  |   | 1.5°C scenario  | 4°C scenario  |
| Transition factors | Policy introduction (e.g., carbon tax, changes in energy mix)                              | • Energy procurement costs will increase.   | High            | Low           |
|                    |  | • Capital investment costs for fuel conversion and energy conservation will increase.   |                 |               |
|                    |  | • Raw material procurement costs will increase.   |                 |               |
|                    |  | • Increased acquisition cost of plantation project sites  |                 |               |
| Transition factors | Changes in market needs  | • Increased procurement costs for certified wood chips  | Medium          | Medium        |
|                    |  | • Development costs and capital investment costs for reducing environmental impact will increase.   | Medium          | Low to medium |
|                    |  | • Sales from non-renewable power generation projects will decrease.   | High            | Low           |
| Physical factors   | Increase in the number of severe disasters (frequent typhoons and heavy rains)             | • Stoppage of raw material procurement, production, product transportation, etc., resulting in reduced production volume and delayed or halted deliveries of products | Medium to high  | High          |
|                    |  | • Procurement, manufacturing, and logistics costs will increase.  |                 |               |
|                    | Increase in temperature and change in precipitation patterns                               | • Increase in turbidity of rivers, etc., from which water is taken, resulting in production stoppage and delay or stoppage of deliveries of products                  | Medium          | High          |
|                    |  | • Losses in the company's plantation assets   |                 |               |
|                    | • Raw materials will become difficult to procure and procurement costs will increase.      |   |                 |               |
|                    | • Costs for search for alternative materials and technology development will increase.     |   |                 |               |
|                    | • Sales volume decreases or sales price declines due to difficulty in maintaining quality. |   |                 |               |

## 1. Transition Factors

### 1-1. Risks Mainly Due to the Introduction of Policy

#### <Hikes in carbon and fuel prices due to introduction of carbon tax, etc.>

Under the 1.5°C scenario, carbon prices will increase mainly due to the introduction of policies such as carbon taxes, emissions trading schemes, and bans on the use of coal-fired power generation. At the same time, it is expected that fossil fuel prices will rise, and fuel procurement costs will increase. Since the pulp and paper industry is energy-intensive, financial plans are at risk of being significantly affected by the introduction of these policies.

Under the 4°C scenario, carbon prices will not increase and fossil fuel prices are not expected to rise significantly because no policies will be introduced, but changes in supply and demand for fossil fuel will occur and fuel prices will fluctuate. This is already part of the Company's normal risk management and the risk of being affected is considered to be small.

Meanwhile, in response to risk of rising fossil fuel prices expected in the 1.5°C scenario in which all kinds of policies will be introduced, the Group will make maximum use of its Nippon Paper Lumber biomass procurement network, which is one of the largest timber procurement companies in Japan, reducing this risk by accelerating the shift to non-fossil fuels.

In addition, in regard to carbon price hikes due to the introduction of emissions trading schemes and carbon tax, the Group will mitigate risk of an impact on financial plans related to carbon price hikes at an early stage by taking speedier actions to reduce GHG emissions. As part of its measures to reduce GHG emissions, the Group employs energy-saving measures to reduce the use of coal on an ongoing basis. As an indicator, the Group is improving energy consumption per unit of paper and paperboard at its mills by at least 1% per annum. At the same time, the Group is also working on initiatives such as a shift to recycled fuels such as biomass and waste fuels, and to maximize the use of black liquor\* which is a carbon-neutral fuel.

While the Group has set a target of achieving "45% reduction of GHG emissions (compared to FY2013)" in its 2030 Vision, the path to be followed for achieving the target has become much clearer through the execution of various measures. In addition, social demand for reduction of GHG emissions and the possibility of carbon price hikes are growing. Accordingly, the Group has judged that actions are needed to be taken in a manner speedier than ever, and has begun looking at reducing GHG emissions targets even further.

The Group will mitigate risk of an impact on financial plans related to carbon price hikes at an early stage by considering reorganization of the production system, reducing GHG emissions in an integrated manner, and achieving low-carbon consumption early through steps such as controlling output from, or even ceasing the operation of, coal boilers.

The Group believes that there is a high possibility of carbon price hikes triggered by future introduction of emissions trading schemes and other such systems. Therefore, the Group will also work to mitigate risks by participating actively in creating systems, rules, etc., for example through the GX League Basic Concept advocated by the Ministry of Economy, Trade and Industry, so that these systems will contribute to growth of companies.

\* Black liquor is comprised mainly of a wood component, lignin, and created as a by-product during the course of pulp manufacturing.

#### <Changes in energy composition>

In the 1.5°C scenario, there is a risk that the demand for biomass fuels will increase due to policies to promote the introduction of renewable energy, causing fuel prices to rise and procurement costs to increase. At the same time, under the current FIT system, there is a risk that the procurement cost of wood chips for paper production will also increase due to competition with biomass fuels.

This phenomenon is already apparent, but under the 4°C scenario, no further policy tightening will take place, and price fluctuations will remain within our normal risk management.

In response to procurement risk associated with increased demand for biomass fuel due to the introduction of policies, the Company believes that it can procure biomass fuel in a stable and low-cost manner by making maximum use of the biomass procurement network of Nippon Paper Lumber, one of the largest wood procurement companies in Japan. With regard to wood chips for papermaking, the Company will reduce risks by securing raw materials and stabilizing purchase prices by strengthening relationships of trust based on our long track record with existing suppliers and developing and adopting inexpensive local resources.

#### <Impact on raw material procurement>

Since the Company imports most of the raw materials necessary for its manufacturing from overseas, it may be affected by the policy trends of resource-supplying countries. Under the 1.5°C scenario, carbon prices are expected to be raised due to stricter policies in resource-supplying countries, and there is a risk that raw material procurement costs will increase.

The Company collects information on policies in resource-supplying countries and strives to predict the occurrence of risks, while at the same time trying to reduce risks by diversifying supply sources.

### <Expansion of the carbon credit market>

In the 1.5°C scenario where the world is aiming for carbon neutrality (net zero CO<sub>2</sub>), the market is expected to expand due to increased demand for carbon credits. As a result, the demand for credits from forest absorption is expected to increase, and there is a risk that an increase in the number of plantation projects, for the purpose of creating credits, will lead to an increase in the price of land suitable for plantation and an increase in the cost of land acquisition for the Company's plantation business. Such trends have already been seen in some regions.

On the other hand, under the 4°C scenario, some stakeholders may secure plantation land from the perspective of promoting ESG management, regardless of whether policies are introduced or not, and regardless of the movements of society as a whole, but the risk of such actions on the Company's plantation business is considered to be small.

Expansion of the plantation business requires a large area of suitable land for plantation, so rising land prices may pose a risk to the Company. However, the Company can reduce this risk by utilizing its strengths, such as its proprietary technology for breeding and propagating highly efficient CO<sub>2</sub>-fixing trees and operating plantation businesses in cooperation with third parties.

## 1-2. Risks Arising Primarily from Changes in Market Needs

### <Rapid increase in demand for environmentally friendly products>

Under the 1.5°C scenario, demand for environmentally friendly products is expected to increase, and there is a risk that technology development costs, capital investment costs, etc. will increase in response to this demand while products and services with high environmental burden will no longer be selected in the market.

In the future, the market is expected to favor products and services derived from renewable raw materials, due to expectations of being environment friendly. Therefore, the Company believes that by accurately identifying and forecasting customer needs and further promoting the "paperization" that it is already working on, the Company will be able to promote the replacement of materials with renewable biomass materials, reduce risks associated with changes in market needs, and at the same time seize this as an opportunity to expand its business. The Company will further accelerate reduction of GHG emitted over the course of product manufacturing. At the same time, by taking advantage of the fact that its production bases are dispersed throughout Japan, the Company will offer products that contribute to the reduction of GHG emissions throughout the supply chain by shortening the transportation distance to delivery destinations and reducing GHG emissions during transportation through the use of multiple production bases.

In addition, as part of changes in market needs, under the 1.5°C scenario, the demand for certified paper based on the forest certification system, which indicates that the paper is made from forest resources that have been properly managed, will increase more than ever due to the heightened awareness of the whole society about the proper management and use of forests, which will increase the procurement cost of certified wood chips that are a limited resource. To reduce this risk, the Company will maintain and continue good relationships with certified timber suppliers, and at the same time, it will secure certified timber in a stable and efficient manner by acquiring certification in new plantation areas and by supporting suppliers in expanding certified resources.

## 2. Physical Factors

### 2-1. Risk Due to the Increase in the Number of Severe Disasters

#### <Damage to production bases and distribution networks>

Under the 4°C scenario, severe disasters such as typhoons and torrential rains are expected to become more frequent, and the probability of damage to production bases and distribution networks is expected to increase, so the risk of a decrease in production volume due to temporary production stoppages and delays or stoppages in deliveries will become greater. In addition, in the event that the power supply is interrupted due to damage to power lines or other essential services, there is a risk that production sites that do not have their own power generation facilities will be forced to temporarily suspend production.

Although the Company cannot control the occurrence of natural disasters, it is working to reduce risks by establishing elaborate systems to ensure business continuation, such as backup systems for production and inventory controls. The Company is also trying to reduce risks by promoting measures to adapt to climate change, such as bulking up equipment installation sites and installing in-house power generation equipment for use in times of disaster.

#### <Deterioration of water intake quality>

The Company's main business, pulp and paper, uses water in its manufacturing process. If the water quality (turbidity) of the rivers, etc. from which water is taken deteriorates due to typhoons or heavy rains, product quality cannot be maintained, and there is a risk that production will be suspended until the water quality improves. This event is already occurring, but is expected to become more frequent under the 4°C scenario. Natural disasters are unavoidable, but the Company is taking measures to ensure that operations can continue as long as possible by strengthening its water intake purification facilities and methods, and at the same time, working to reduce risks by developing a detailed system for business continuity in case production is suspended.



## 2-2. Risk Due to Rising Temperatures and Changing Precipitation Patterns

### <Forest fire occurrence>

As temperature rises, under the 4°C scenario, forest fires are expected to occur more frequently around the world.

Since the Company's business model is based on forest resources, fires in the forests of its wood chip suppliers or in its own forests could pose a major risk in terms of stable procurement of raw materials and procurement costs. In addition, in the event that the Company's own forests are damaged by fire, there is a risk that the value of the Company's own forests will decline, and revenue from the Company's plantation business will decrease. In order to reduce these risks, the Company is strengthening its fire prevention and extinguishing systems in its own forests, and at the same time, it is trying to reduce these risks by dispersing its own forests and suppliers in multiple countries and regions.

### <Deterioration in plant growth>

The growth of plants is greatly affected by temperature and rainfall. Since the Company uses plant-derived raw materials such as wood chips, various types of pulp, starch, etc., there is a risk that procurement of raw materials will become difficult and procurement costs will rise in the 4°C scenario where plant growth is expected to decline due to rising temperatures and changes in rainfall patterns. In the event that the Company has difficulty in procuring raw materials, it would be hard to maintain the quality and function of its products, which may be a risk that its sales volume and price decrease. However, the Company is working to reduce these risks by diversifying its raw material supply sources and continuing to search for alternative materials.

— Opportunities for Business Expansion

Opportunities as of 2030

| Factors  |  | The Company's opportunities   | The Company's strength  | Market growth  |                       |                       |
|--|--|---|---|--|-----------------------|-----------------------|
|  |  |   |   | 1.5°C scenario   | 4°C scenario          |                       |
| Transition factors   | Policy introduction (e.g., carbon tax, changes in energy mix)  | • Renewable energy will be introduced.  | • Demand for power generation facility locations will increase.   | • Company-owned forests and land in Japan, etc.<br>• Biomass fuel production technology<br>• Fuel procurement network<br>• Existing boiler facilities and operation technologies                                     | Expansion             | Stable                |
|  |  |   | • Demand for biomass fuels will increase.   |  |                       |                       |
|  |  |   | • Waste-derived fuels such as refuse derived paper and plastics densified fuel (RPF) and waste tire-derived fuel will be utilized more often.   |  |                       |                       |
|  |  | • Next-generation vehicles are becoming increasingly popular.   | • Storage batteries will spread and demand for raw materials for storage batteries will increase.   | • CMC Technology and Production Facilities<br>• CNF Technology and Production Facilities   | Significant expansion | Expansion             |
|  |  |   | • Demand for CNF will increase due to the need to reduce the weight of automobiles.   |  |                       |                       |
|  |  | • Carbon credit market will be activated.   | • Demand for forest absorption credits will increase.   | • Company-owned forests in Japan<br>• Forest management technology<br>• Breeding and propagation technology  | Significant expansion | Stable                |
|  | • Resources will become more difficult to obtain due to stricter policies in resource-providing countries. | • Demand for domestic lumber will increase.   | • Company-owned forests and in japan seedling businesses<br>• Recycled paper procurement network<br>• Collaboration with Stakeholders<br>• Unused recovered paper recycling technology  | Expansion  | Stable                |                       |
|  |  | • Demand for recycled paper will increase.  |   |  |                       |                       |
|  | • Carbon recycling is advancing (utilization of carbon resources).   | • Increasing demand for carbon fixation and utilization by forests  | • Breeding technology for high CO <sub>2</sub> fixation efficiency trees<br>• Company-owned forests in Japan  | Expansion  | Stable                |                       |
|  |  | • Demand for chemical raw materials using carbon-neutral CO <sub>2</sub> will increase.                   | • Biomass-derived CO <sub>2</sub> supply infrastructure (recovery boilers)<br>• Chemical CO <sub>2</sub> fixation and utilization technology  | Significant expansion  | Stable                |                       |
|  | Transition to a decentralized society  | • Increasing local production and local consumption of energy   | • Small scale fuel demand will increase.  | • Fuel procurement network   | Expansion             | Stable                |
|  |  | • Decentralization of product consumption   | • Increased opportunities to sell products with reduced CO <sub>2</sub> emissions during distribution while handling shipments from each production site  | • Multiple production sites  | Expansion             | Stable                |
| Changes in market needs                                      | • Demand for environmentally friendly products will increase.  | • Demand for biomass materials will increase as the need for paperizing increases due to decarbonization. | • Woody biomass materials development technologies (CNFs, paper-based packaging materials, liquid containers, functional corrugated cardboards, biocomposites, etc.)<br>• Technologies to extract and utilize lignin<br>• Technology for recycling unused waste paper | Significant expansion  | Expansion             |                       |
|  |  | • Demand for lignin products will increase.   |   |  |                       |                       |
|  | • Demand for environmentally friendly products will increase.  | • Demand for paper made from sustainably sourced forest materials will increase.                          | • Track record of procuring certified forest materials<br>• Relationship of trust with excellent suppliers<br>• Sustainable forest management   | Expansion  | Expansion             |                       |
|  |  | • Demand for products that reduce GHG emissions from livestock farming will increase.                     | • Cellulose material utilization technology   | Expansion  | Stable                |                       |
|  |  | • Demand for halogen-free resins with low environmental burden will increase.                             | • Functional resin technology   | Expansion  | Expansion             |                       |
| Physical factors   | Increase in the number of catastrophic disasters   | • Increasing demand for stable supply of products   | • Increased need to purchase from suppliers with established elaborate systems for business continuity  | • Multiple production sites  | Expansion             | Significant expansion |
|  |  | • Overseas raw material suppliers and distribution networks are damaged.                                  | • Demand for domestic lumber will increase.   | • Domestic Company-owned forests and seedling Businesses<br>• Recycled paper procurement network<br>• Fuel procurement network<br>• Collaboration with stakeholders<br>• Unused recovered paper recycling technology | Expansion             | Significant expansion |
|  |  |   | • Demand for recycled paper will increase.  |  |                       |                       |
|  |  |   | • Domestic demand for waste-derived fuels and biomass fuels will increase.  |  |                       |                       |
|  | • Increasing need to strengthen buildings  | • Demand for concrete admixtures and other materials will increase.                                       | • Admixture for concrete (fly ash) technology   | Expansion  | Expansion             |                       |
| • Demand for long-term food storage will increase.           | • Demand for long-term storage aseptic paper pak will increase.  | • Total System Supplier   | Expansion   | Expansion  |                       |                       |
| Increase in temperature and change in precipitation patterns | • Decreases in the amount of plant growth  | • Demand for environmental stress tolerant trees will increase.   | • Breeding and propagation technology   | Expansion  | Expansion             |                       |

## 1. Transition Factors

### 1-1. Opportunities Associated with the Introduction of the Policy

#### <Increase in demand for renewable energy>

In the 1.5°C scenario, policies are expected to promote the introduction of renewable energy, which will increase the demand for locations to install solar, wind, and small hydroelectric power generation facilities, as well as the demand for biomass fuels.

The Company owns its forests and land in Japan, and it has an opportunity to expand its business of supplying renewable energy in cooperation with power generation companies. Increasing demand for biomass fuels will provide an opportunity to expand the biomass fuel sales business by making maximum use of the procurement network of Nippon Paper Lumber, one of the largest wood collection and sales companies in Japan.

In the 1.5°C scenario, where a rapid increase in demand for renewable energy is expected, the Company believes that it has the tangible and intangible assets, such as biomass boilers and facilities and technologies that use black liquor, a carbon-free fuel, to meet this demand, and can quickly respond to this market expansion and capture business opportunities.

#### <Dissemination and expansion of next-generation vehicles>

Since the transportation sector accounts for about 20% of Japan's CO<sub>2</sub> emissions, it is predicted that next-generation vehicles such as electric vehicles will become more popular in the future.

In March 2021, the New Industry Creation Hatchery Center (NICHe) at Tohoku University announced that it had discovered that CNFs have a powerful energy storage effect, and that it had succeeded in developing the world's first dry, lightweight supercapacitor by using the Company's TEMPO-oxidized CNF<sup>\*1</sup> to create an uneven surface with a controlled CNF surface shape. In addition to enabling high-voltage charging in a shorter period of time than conventional lithium-ion batteries, CNF-based energy storage is a technology that is expected to solve the problem of increasing energy storage capacity, which is currently an issue for electric vehicle batteries, and could make a significant contribution to the spread of electric vehicles, etc. The global supercapacitors market was valued at approximately USD 5.02 billion in 2021, and is expected to grow at a rate of 23.9% per annum from 2022 to 2030, reaching USD 22.5 billion in 2030.<sup>\*2</sup>

With the spread of next-generation vehicles, the need to reduce vehicle weight is expected to increase further. The size of the fiber-reinforced plastics market, including automotive components, was USD228.4 billion in 2019 and is expected to reach USD295.6 billion by 2027.<sup>\*2</sup> Currently, glass (glass fiber) and carbon (polymer-reinforced carbon fiber) are the most commonly used fibers for reinforcing materials, but with the spread of electric vehicles and other vehicles, there is a growing need for lightweight materials to further improve fuel efficiency. The specific gravity (weight per unit volume) of CNF is lower than that of other fibers, making it a highly effective lightweight fiber. In addition, CNF is a carbon-neutral, plant-derived material with multifaceted value in environmental conservation, as it has less performance degradation due to material recycling than glass fiber reinforced resin. The global market scale of CNF is expected to be about USD70 million in 2022, but it is expected to expand to about USD250 million by 2030, as it is gradually adopted as a composite reinforcing material for automotive components.<sup>\*3</sup>

The diffusion of next-generation vehicles is a highly feasible event in both scenarios, with or without the introduction of policies, but in the 1.5°C scenario, the diffusion will be rapid due to policy support. The Company believes that it has the technological superiority and technological development capability to respond to this rapid spread, and that it can promptly respond to the rapid market expansion and grow the Company's business.

\*1 Cellulose Nano Fiber

\*2 Report by Report Ocean (U.S.) dated December 17, 2020

\*3 Source: Yano Research Institute, [https://www.yanoresearch.com/en/press-release/show/press\\_id/2959](https://www.yanoresearch.com/en/press-release/show/press_id/2959)

#### <Expansion of the carbon credit market>

In the 1.5°C scenario where the world is aiming for carbon neutrality (net zero CO<sub>2</sub>), the carbon credit market is expected to expand due to increased demand, and the demand for forest absorption credits is expected to increase accordingly.

The Company owns approximately 90,000 hectares of its forests in Japan and operates tree plantation projects in various overseas countries. In addition to forest management technology cultivated through the management of Company-owned forests in Japan and overseas plantation projects, the creation of carbon credits by utilizing the Company's unique breeding and propagation technology that enables highly efficient CO<sub>2</sub> fixation is expected to enable the Company to enter the expanding market and capture business opportunities. The Company is committed to making contribution to formulation of rules regarding how forest absorption credits should be shaped and utilized from a forest owner's perspective, through such initiatives as the GX League Basic Concept advocated by the Ministry of Economy, Trade and Industry.

### <Strengthen the policies of resource-providing countries>

Since the Company imports most of the raw materials necessary for its manufacturing from overseas, it may be affected by the policy trends of resource-supplying countries. In the 1.5°C scenario, there is a risk that raw material procurement costs will increase if resource-providing countries tighten their policies and raise carbon prices. On the other hand, the Company owns forests in Japan and utilizes such resources, and at the same time, it operates a seedling business that contributes to creation of new resources. The Company has also established diversified procurement networks in Japan for resources such as fuels and recovered paper. Accordingly, the Company is able to make a shift to utilization of domestic resources. In addition, the Company has already become one of the top-ranked companies in Japan in terms of the domestic timber utilization rate.

The Company is working with stakeholders to create a closed-loop recycling system for recovered paper, and at the same time, it is leveraging its strengths to make efficient and stable use of diverse resources, such as utilizing technologies to make use of paper that is difficult to recycle, such as used paper containers for food and beverage applications.

With the aim of establishing a used paper container recycling business, the Company is working to install facilities for recycling paper containers for foods and beverages in Fuji Mill, which is slated to start operation in the fall of 2022. In addition, the Company recycles used paper containers in cooperation with Hamamatsu City, and has established a scheme for separation and collection of paper cups and paper pak products. The Company aims to collect and use unused recovered paper, such as used paper containers, stably (12,000 tons per year) in 2030.

Under the 1.5°C scenario, the Company expects the impact of the policies of resource-providing countries to occur within five years, but the Company believes it can maintain and expand its business by taking advantage of its access to domestic resources.

### <Promotion of carbon recycling>

In the 1.5°C scenario, carbon recycling, which is the process of capturing and reusing CO<sub>2</sub> from the atmosphere, is expected to progress rapidly, along with the reduction of GHG emissions through the reduction of fossil fuel use.

In the Company's overseas tree plantation business, by continuing the cycle of planting, cultivation, logging (wood chip production), and reforestation, the Company's forests absorb and fix atmospheric CO<sub>2</sub> into the forest every year and use it as a woody biomass resource. As an example, the annual production volume of wood chips by AMCEL (Brazil), the Group's plantation company, is equivalent to approximately 1.5 million tonnes of forest CO<sub>2</sub> absorption. By positioning its overseas plantation business as a carbon recycling business and promoting the use of its proprietary breeding and propagation technologies that enable highly efficient CO<sub>2</sub> fixation, the Company can improve its CO<sub>2</sub> absorption and fixation capacity and contribute to the recycling of carbon resources, not just in the Company's own forests.

The Company aims to improve the CO<sub>2</sub> fixation efficiency in overseas tree plantation projects by 30% by FY2030, as compared with FY2013. The Company intends to secure future resources for the Company by contributing to improvement of productivity of forests across the globe and an increase in CO<sub>2</sub> fixation through provision of our breeding and propagation technologies and plantation technologies to other companies. The Company entered into a strategic partnership agreement concerning a plantation project in Indonesia with Marubeni Corporation in 2022, and commenced provision of technological support. In addition, the Company aims to secure about 0.1 million hectares of new plantation resources mainly in Asia. Since CO<sub>2</sub> derived from biomass obtained from sustainable forests is considered carbon neutral, carbon negativity (negative emissions) can be achieved by separating and recovering the CO<sub>2</sub> generated from the combustion of biomass fuels and storing it underground or recycling it.

In the future, with the practical application of technologies for CO<sub>2</sub> separation, underground storage, and recycling, the Company can expect to achieve carbon negativity using CO<sub>2</sub> generated from biomass boilers and black liquor-fueled recovery boilers operating in Japan.

## 1-2. Opportunities Associated with Transition to a Decentralized Society

Under the 1.5°C scenario, the transition from a metropolitan-intensive society to a decentralized society is expected to proceed. As a result, local production and local consumption of energy will increase, and small-scale demand for fuel will likely increase. This trend has already begun, but it is expected to accelerate under the 1.5°C scenario.

In response, the Company will have the opportunity to expand its biomass fuel sales business by making full use of the biomass procurement network of Nippon Paper Lumber, which is one of the largest wood collection and sales networks in Japan. In addition, with the shift to a decentralized society, the places of consumption of products are also expected to become more dispersed.

In the 4°C scenario, regardless of the temperature rise, there will be a shift to decentralization, but at a slower rate than in the 1.5°C scenario, in part due to the impact of increased risk of infectious diseases.

In both scenarios, the Company believes that it can maintain and expand its business by taking advantage of the fact that its mills are dispersed throughout Japan and by responding to the decentralization.

### 1-3. Opportunities Arising from Changes in Market Needs

#### <Increase in demand for biomass materials>

The Company has built a business model based on carbon-neutral forest resources, which enables it to provide products that meet the needs of customers who prefer environmentally friendly products. There is an ongoing movement to switch from plastic to paper packaging as a means of solving the problem of ocean plastic. In the 1.5°C scenario, this trend will be further accelerated in combination with climate change issues, and the demand for the use of biomass materials in various products other than packaging materials is considered to increase.

As part of the Company's strategy to meet the increasing demand for biomass materials, it is promoting "paperization" under the slogan, "Let paper do what it can do". In addition to developing and marketing "SHIELDPLUS®", a paper packaging material with unprecedentedly excellent barrier properties against oxygen and water vapor, the Company has also developed and started marketing products such as "waterproof liner", a multifunctional base paper for corrugated board that is a sustainable alternative to Styrofoam boxes, "SPOPS®", a replaceable paper container, and "School POP®", which enables drinking without using straws.

Moreover, biomass composites, which are made of "KC FLOCK®", powdered cellulose created by finely grinding pulp, and plastic, are under consideration for various applications as a material with low environmental burden, as the Company can reduce the use of plastic while improving the strength by using biomass composites. It believes that, by providing powdered cellulose suitable for composite material, it can respond to changing market needs and capture and expand business opportunities.

#### <Increased demand for products derived from sustainable forests>

The Company confirms the legality and sustainability of all wood raw materials it procures and ensures traceability through its supplier questionnaires, site visits and audits. At the same time, all of its woody raw materials are FM (Forest Management) materials under the forest certification system and have been risk assessed and managed.

In addition to utilizing the forest certification system, the Company has adopted a due diligence system to confirm the legality and sustainability of its wooden raw materials, and it has established a system that enables it to promptly respond to inquiries from customers regarding raw material procurement. In addition, in order to supply certified forest paper, for which demand has been increasing in recent years, the Company will establish a system to secure certified forest materials in cooperation with suppliers.

The Company's sustainable procurement of forest resources is based on trusting relationships with its suppliers that it has built over the years, and the Company ensures certainty through its due diligence system and forest resource creation in procurement activities. Moreover, the Group's "Philosophy and Basic Policy Concerning Raw Materials Procurement" was revised in 2022 to strengthen the contents, and the "Principles and Basic Policies Concerning Raw Materials Procurement" was newly established under said policy with the aim of, among others, responding to demand of customers by improving the reliability of wood raw materials that the Group uses.

The Company has been producing various products ranging from pulp to dispersants for industrial use and additives for use in lead-acid batteries which use lignin as a raw material, aiming for full use of wood resources. The Company is committed to continuing to provide environmentally friendly products using sustainable wood resources as raw materials.

#### <Increase in products that reduce greenhouse gas emissions>

The amount of greenhouse gases generated during the conversion of cattle excrement into fertilizer accounts for about 30% of the total emissions from the agriculture, forestry, and fisheries sectors in Japan, and research is being conducted to reduce these emissions.

Using the Company's proprietary technology to extract only cellulose fiber, which is easily digestible by cattle, from wood chips, it is developing livestock feed with superior fiber content and nutritional value. Feeding highly digestible feed to cows is expected to reduce the amount of water in their excrement and reduce the greenhouse gases produced when making fertilizer.

Reducing greenhouse gas emissions from the livestock industry is a global challenge, and a 1.5°C scenario could accelerate efforts to achieve this goal and expand the market for feedstuffs with the potential to reduce emissions. The Company believes that it can capture this business opportunity by utilizing the technologies it has accumulated in the pulp and paper business.

## 2. Physical Factors

### 2-1. Opportunities Due to the Increase in the Number of Severe Disasters

#### <Increase in demand for stable supply of products>

Severe weather disasters, such as typhoons and torrential rains, are expected to cause damage to production bases and distribution networks, further intensifying the demand from customers to maintain a stable supply of products.

In response, the Company is working to formulate a detailed system for business continuity. It is developing a system that will allow it to manufacture products at multiple plants. Since severe disasters are expected to become more frequent in the 4°C scenario, the Company believes that it can take advantage of the fact that its factories are dispersed throughout Japan to accelerate the transition to a more flexible production system and further strengthen its system for business continuity.

Also, in the event that its overseas raw material suppliers are damaged and opportunities for domestic timber, recovered paper and domestic non-fossil fuel use expand significantly, the Company can take advantage of its strong timber, recovered paper and fuel procurement network as well as its efforts to secure recovered paper raw materials in collaboration with its customers. Furthermore, it believes that it can also maintain and expand its business by utilizing its unused recovered paper recycling technology and making extensive use of domestic resources.

#### <Increasing need for strengthening of buildings>

The Company sells “CfFA®”, an admixture for concrete made from coal ash, a byproduct of in-house power generation, by modifying it with its unique technology. “CfFA®” is also used in earthquake reconstruction projects, as it can be used to make concrete more durable and longer lasting.

In the 4°C scenario, severe disasters caused by typhoons and torrential rains will become more frequent, and this market is expected to grow as the strength of buildings needs to be improved. On the other hand, even in the 1.5°C scenario where severe disasters do not occur frequently, demand is expected to increase for earthquake countermeasures, etc. The Company believes that it can maintain and expand its business by utilizing its unique technologies.

#### <Increase in demand for long-term storage food containers>

The market for containers for long-term storage is expected to grow, as local governments and households are becoming increasingly concerned about the importance of storing emergency food supplies to prepare for severe disasters that are expected to occur not only in a 4°C scenario but also in a 1.5°C scenario.

The Company sells FUJIPAK, which enable room-temperature distribution and long-term storage of beverages and tofu. In addition, the “non-aluminum FUJIPAK,” which does not use aluminum foil and can be distributed at room temperature, is attracting attention as an environmentally friendly container because it improves recyclability and reduces greenhouse gas emissions.

The Company has developed a new container, NSATOM®, which enables it to fill a wider variety of contents in addition to its long-term storage function. Since paper containers that can be stored for a long time are expected to contribute to de-PE and food loss prevention, it will continue to develop new containers that meet the needs of the market and strengthen the Company’s stable supply system.

### 2-2. Rising Temperatures and Changing Precipitation Patterns

#### <Increasing demand for environmental stress tolerant plants>

Since plants cannot move on their own, environmental changes such as rising temperatures can cause stress and result in poor growth, development of plants that can tolerate high temperatures, salt damage, and drought has long been underway.

Under the 4°C scenario, the demand for environmental stress tolerant plants may increase because the appropriate areas for plant growth are expected to change and decrease due to climate change.

The Company has been developing tree breeding and propagation technologies for many years and has developed a number of proprietary technologies for these. Because tree breeding takes time, it will be difficult to expand the business rapidly in 2030, but the Company will work to expand its business quickly after 2030, when the value of forests will further increase toward carbon neutrality.



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# Shaping the Future with Trees

**NIPPON PAPER GROUP  
Integrated Report 2022**

For the Fiscal Year Ended March 31, 2022

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#### Editorial Policy

This report is intended to promote understanding among stakeholders, such as shareholders and investors, regarding how the Company will achieve sustainable growth in the future by presenting its pursuits toward enhancing profitability and sustainability management through the Nippon Paper Group's value creation story.

This year's report has been further enhanced with more content, including a list of important management issues (materiality) and initiatives and progress status to realize the 2030VISION, as well as shows the value generated by the Three Circulations. The Group hopes to convey its vision for creating diverse values in an integrated manner, and for achieving sustainable growth.

#### About the Cover

The cover conveys a message of the dynamism of the business model of the Three Circulations and development of the Nippon Paper Group.

#### Disclaimer

Statements in this report concerning plans, forecasts, strategies, beliefs, and other forward-looking information related to Nippon Paper Industries Co., Ltd. and companies comprising its corporate group, other than those of historical fact, are forecasts of future business performance based on the judgments of management at Nippon Paper Industries Co., Ltd. and Nippon Paper Group companies in light of currently available information.

Accordingly, please refrain from making investment decisions based solely on forecasts of business performance in this integrated report.

Actual business performance may differ significantly from these forecasts due to changes in a variety of factors.

#### Reporting Period

FY2022/3: April 1, 2021 to March 31, 2022

This report contains some information dated prior to April 1, 2021 and after April 2022. The points in question have been dated.

#### Reporting Organization

Nippon Paper Industries Co., Ltd. is the main subject of this report. However, data calculations include the Company and all 54 consolidated subsidiaries as of March 31, 2022.

#### Reference Guidelines

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

#### Guideline Comparison Table

<https://www.nipponpapergroup.com/english/csr/gri/>

Published in September 2022

Publisher: Nippon Paper Industries Co., Ltd.

<https://www.nipponpapergroup.com/english>

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## Group Mission

### Mission

The Nippon Paper Group aims to contribute to better living and cultural progress everywhere it does business.

### Vision

1. Drive social sustainability through our business
2. Delight our customers
3. Instill pride in employees
4. Give back to society

### Value

Challenge, Fairness, Teamwork

### Slogan

#### Shaping the Future with Trees —Nippon Paper Group—

Constantly creating new value and contributing to better living and cultural progress, as a comprehensive biomass company shaping the future with trees.

Over many years, we have nurtured trees, made paper, and offered a wide range of products that support people's lives and culture.

We have managed forests in an appropriate manner, and pursued a variety of businesses by fully utilizing wood resources sourced from sustainably managed forests. Those businesses address social issues such as global warming and depletion of resources on Earth, and contribute to running a sustainable society.

Going forward, we will continue to provide a wide range of products and services that make the most of the outstanding properties of wood, as we strive to maximize the value of sustainable forest resources for the future.

# Shaping the Future with Trees



## Important Issues (Materiality) to Realize the Group Mission

The Nippon Paper Group has clearly identified material issues in order to meet the four requirements of its Vision included in the Group Mission, as it addresses changes in the surrounding environment. Additionally, it has added the promotion of business structure transformation, which it has undertaken in the 2030VISION, as materiality, and is also promoting sustainability management in which it pursues social and environmental sustainability alongside corporate growth.

| Mission | The Nippon Paper Group aims to contribute to better living and cultural progress everywhere it does business. |  |  |
|---------|---|--|--|
|         | Meet These Requirements and Be a Corporate Group Permanently Needed by Society                                | Nippon Paper Group's Materiality   | Reasons for Selection and Contributions to SDGs  |
| Vision  | 1<br>Drive social sustainability through our business   | <b>Achieve the following through the value chain:</b> <ul style="list-style-type: none"> <li>● Response to climate change</li> <li>● Utilization of sustainable forest resources</li> <li>● Preservation of biodiversity</li> <li>● Reduction of environmental burden</li> <li>● Promotion of resource circulation</li> <li>● Respect for human rights</li> </ul>            | Forest resources are the foundation of the Nippon Paper Group. The environment, society, and the economy are closely related issues, and must be addressed across the entire value chain.<br>  |
|         | 2<br>Delight our customers  | <ul style="list-style-type: none"> <li>● Response to changes in the social environment (consideration for the environment, healthcare, etc.)</li> <li>● Stable supply of products, enhanced safety</li> </ul>  | Customer needs evolve as society changes. The stable supply of sought-after products, product safety and quality assurance are necessary endeavors.<br>  |
|         | 3<br>Instill pride in employees   | <ul style="list-style-type: none"> <li>● Realization of diverse work styles</li> <li>● Active participation of diverse human resources</li> <li>● Promotion of occupational safety and health</li> </ul>   | It is necessary to create workplaces within the Group where diverse human resources can maximize their ability to create value, in order to support the growth of society and the economy.<br> |
|         | 4<br>Give back to society   | <b>In addition to business growth achieved through activities 1 to 3 above, the Group will realize the following:</b> <ul style="list-style-type: none"> <li>● Promotion of business structure transformation</li> <li>● Enhancement of corporate governance</li> <li>● Coexistence with local communities and society</li> <li>● Communication with stakeholders</li> </ul> | To contribute to building a sustainable society, generating stable profits from business is a prerequisite. The Group aims to become a corporate group that is needed by society.<br>          |

### Formulation Process

The Group selected issues that need to be addressed in order to achieve its Group Mission internally, cross-checking with existing material issues and verifying them through guidelines, etc. In addition, it carried out deliberations and made decisions at the Nippon Paper Board of Directors through confirmation of external opinions and dialogue with experts.

## A Brief Look at the Nippon Paper Group

### Nippon Paper Group, a Comprehensive Biomass Company Shaping the Future with Trees

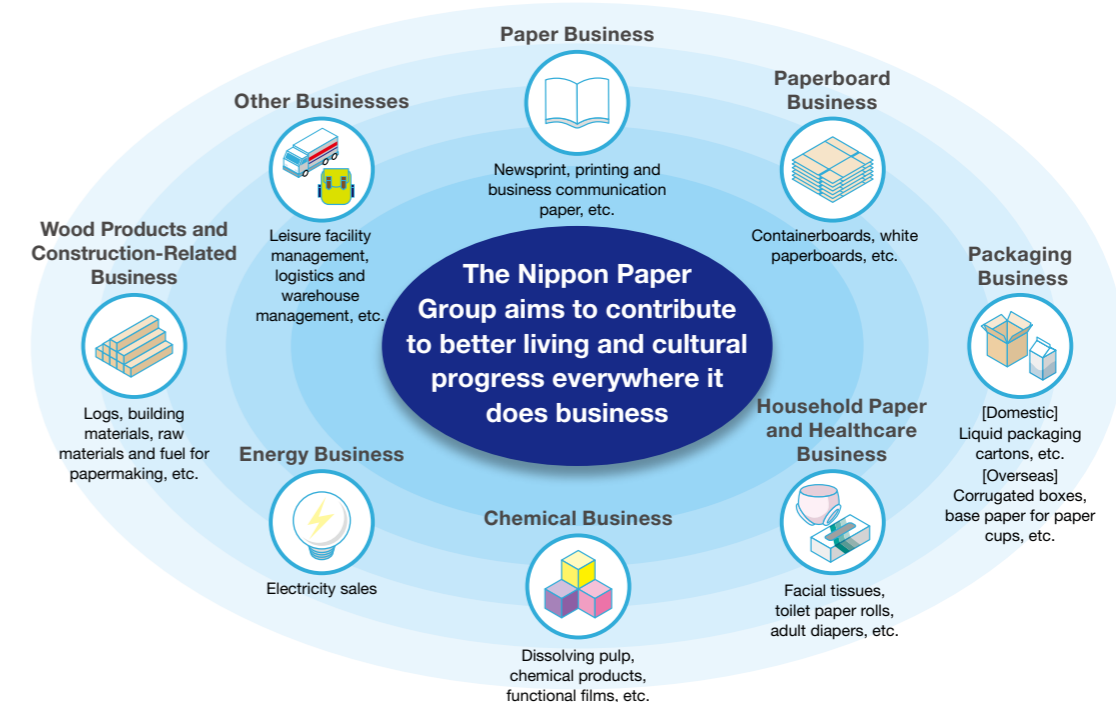
**What it means to be a comprehensive biomass company:** A company group that consists of multiple businesses which generate stable profits and realize better living and cultural progress. It achieves this by using diverse technologies and know-how to maximize the use of renewable wood resources. This provides a wide range of products that help form a circulation-oriented society, supporting profit growth.

### Scale of Business

(as of March 31, 2022)

|                                    |                             |                                |   |
|------------------------------------|-----------------------------|--------------------------------|---|
| Consolidated total assets          | ¥1,639.3 billion            | Managed Forest Areas           | Approx. 160,000 hectares                        |
| Net sales                          | ¥1,045.1 billion (FY2022/3) | Domestic Company-owned forests | Approx. 90,000 hectares / Approx. 400 locations |
| Operating income                   | ¥12.1 billion (FY2022/3)    | Overseas plantation areas      | Approx. 70,000 hectares                         |
| Number of employees (consolidated) | 16,129                      | Number of Group Companies      | 159   |
|                                    |                             | Domestic affiliated companies  | 116   |
|                                    |                             | Overseas affiliated companies  | 43  |

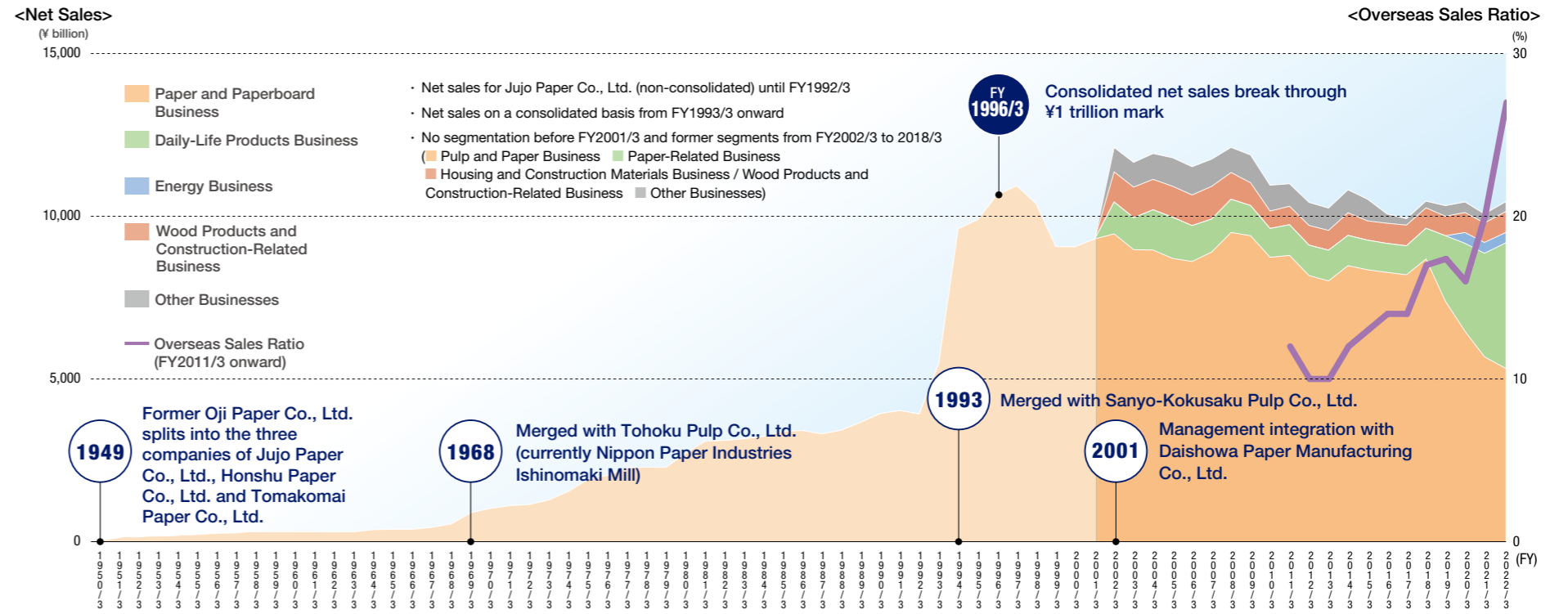
### Diverse Products and Services



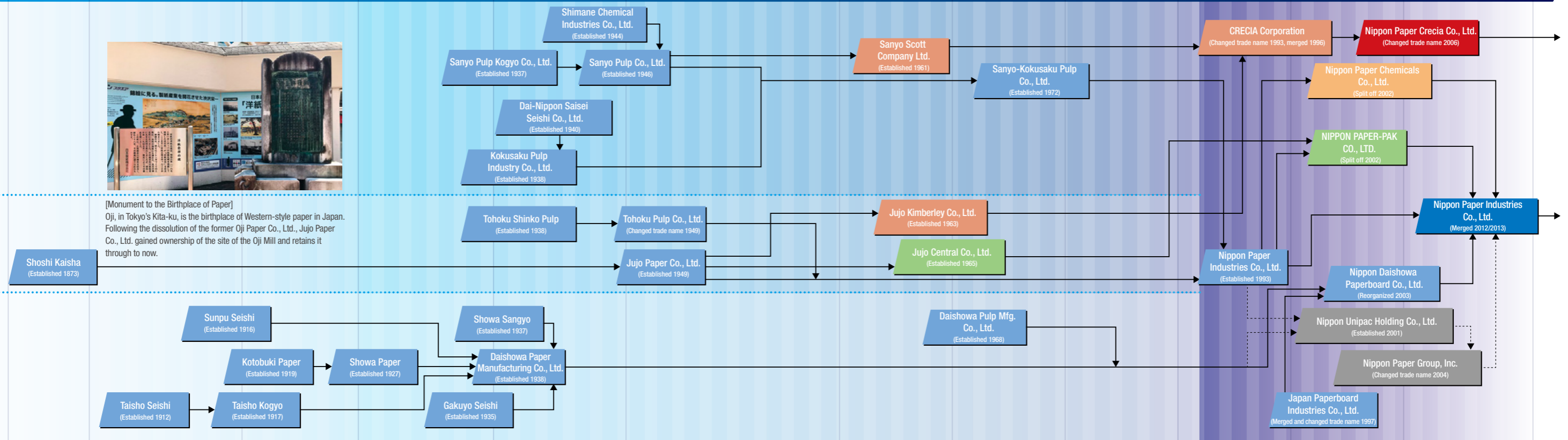
# History of the Nippon Paper Group

## Moving Forward into the Future, Together with Trees

The Nippon Paper Group has walked through the years, hand-in-hand with the history of paper in Japan, and has expanded the Company scale and business domain through mergers and integration. Nippon Paper Industries is advancing business development as a comprehensive biomass company using diverse technologies and know-how to maximize the use of renewable wood resources.



### 1873 ..... 1910 ..... 1920 ..... 1930 ..... 1940 ..... 1950 ..... 1960 ..... 1970 ..... 1980 ..... 1990 ..... 2000 ..... 2010 ..... 2020



### Main Overseas Businesses

|  |   |  |   |   |  |
|--|---|--|---|---|--|
| <p><b>1992</b> Established Jujo Thermal Oy, a thermal paper production company jointly with Ahlstrom Corporation</p> | <p><b>2006</b> Jointly acquired Amapá Florestal e Celulose S.A. (AMCEL), a Brazilian plantation and wood chips production and export business</p> | <p><b>2009</b> Acquired all shares of Paper Australia Pty Ltd (Australian Paper)</p> | <p><b>2012</b> Established Siam Nippon Industrial Paper Co., Ltd., a joint venture with SCG Paper Public Company Limited for machine-glazed paper</p> | <p><b>2016</b> Acquired Nippon Dynawave Packaging Company, LLC, the liquid packaging board business of Weyerhaeuser Company</p> | <p><b>2020</b> Acquired Orora Limited's paperboard and fiber-based packaging business in Australia and New Zealand and formed Opal</p> |
|--|---|--|---|---|--|



Toru  
Nozawa

President and  
Representative Director  
Nippon Paper Industries  
Co., Ltd.

## Pursuing Our Vision for 2030 and Being Determined to Achieve Our Group Mission

### Boosting Transformation of the Business Structure while Responding to Changes in Society

#### Nippon Paper Group's Expected Role Remains Unchanged

When I look back at the past year, what sticks out is that the global spread of COVID-19 continued from 2020 without slowing down, and has now entered its third year. In addition, the nature of greenflation\*1 has become clear. In association with responses to climate change, the balance of supply and demand for coal has collapsed and sent prices skyrocketing, and it has become clear that we must assume the prices of products and services related to the environment will not decrease going forward. On top of this, there was also the invasion of Ukraine by Russia. Since this issue continues to drag on, we cannot measure the impact it will have on global society and the economy, and are deeply concerned.

When considering these drastic global changes from the perspective of the Group's management, we first clearly recognize that products such as packaging, household paper

and healthcare products and liquid packaging cartons are essential products closely linked to daily life, and that demand will not decrease even if COVID-19 spreads. However, from the perspective of life during and after the COVID-19 pandemic, we must continue to observe society's trajectory. Meanwhile, it is our view that demand for graphic paper, such as newsprint, printing and business communication paper, will continue to decline.

Due to surges in the price of goods resulting from Russia's invasion of Ukraine, we may possibly face an economic recession in the future, and the global economy may begin to shrink, but I have envisioned various business scenarios and am taking action. Circumstances will continue to be tough for the Group, but the role it fulfills as "a comprehensive biomass company shaping the future with trees" will not change. First, we will implement specific measures to address short-term issues, then steadily advance measures to achieve the goals set out in the 2030VISION and Medium-Term Business Plan 2025.

\*1 Greenflation: A term created by combining "green," which expresses consideration toward the environment, with "inflation," which means an increase in the price of goods

## Message from the President

### Unsatisfied with Inability to Achieve Profit Goals despite Increasing Prices in the First Year of the Medium-Term Business Plan

Total global demand increased starting around the summer of 2021. Moreover, costs for raw materials and fuel, logistics, and human resources are rising. Against that background, we firmly resolved to implement price revisions for a great number of products including printing paper, business communication paper and containerboards. We also declared to customers that we would continue to work toward reducing GHG emissions. All employees banded together and gained the understanding of customers through persistent but polite explanations and numerous negotiations. I view this price revision as a tremendous success.

Nevertheless, looking at the first year of Medium-Term Business Plan 2025 now that it has ended, I feel unsatisfied with our inability to achieve the profit goals, and take responsibility as the leader of management. We will accelerate the Group's initiatives in order to keep pace with changes in society and the environment, and quickly get back on track to achieve the targets of Medium-Term Business Plan 2025.

### Recovering Graphic Paper and Increasing the Profitability of Growing Businesses Are Urgent Issues

Issues the Group must address in the near term are clear. One is recovering graphic paper. The other is increasing the earnings of businesses other than graphic paper.

For graphic paper, in addition to a decline in demand, many coal boilers are used as power sources in paper mills in Japan, and the surge in the price of coal, which serves as fuel, is causing massive cost increases that were previously unthinkable. Responding to the fact that earnings are being severely harmed, we will improve production efficiency and reduce coal consumption by converting to non-fossil fuels and consolidating production. In the past year, we reduced production capacity by about 500,000 tonnes, but when considering the future decline in demand, I have to say that the number of paper machines is still very high. We must refine the production structure while anticipating a continual decline in demand. In the process, we will not simply reduce production capacity but also define a vision for each paper machine, which includes conversion to packaging paper, while simultaneously promoting the streamlining of facilities at each mill and advancing reorganization of the production structure and reduction of coal consumption together as one.

With regard to business other than graphic paper, we were able to steadily increase sales with a focus on the Daily-Life Products Business, but due to the impact from surging prices for raw materials and fuel, profit ended up decreasing year on year. In businesses such as Packaging, Household Paper and Healthcare, Chemical, and Energy, sales growth and increases

in profit are essential for business structure transformation. Since the latter half of FY2022/3, we have been working on price revisions for many products including household products and liquid packaging cartons, and will first aim to recover the profit which had declined.

In addition, further surges in the price of goods, including fuel prices, which have been affected by the Russian invasion of Ukraine, have surpassed a level that can be absorbed through our internal efforts, so I think additional revisions to product prices are needed. I have already declared similar revisions to some products such as printing paper, and negotiations regarding other products are underway. I will provide customers with a full explanation in order to gain their understanding.

### Accelerate the Transformation of the Business Structure by Improving the Profitability of Opal

Next, I will speak about business overall from a medium- to long-term viewpoint.

In 2021, we clearly identified issues to take on in order to achieve our vision for 2030. In the Paper and Paperboard Business, current issues related to graphic paper will be tackled with a sense of urgency. Meanwhile, we will continue to capture steady demand for containerboards and white paperboards both domestically and overseas.

In the Daily-Life Products Business, we set a target for operating income of ¥27.5 billion in Medium-Term Business Plan 2025, which breaks down into ¥17.5 billion domestically and ¥10.0 billion overseas. We have already implemented measures to achieve this target, and will evaluate new measures to expand business even further while ensuring their efficacy.

As for the domestic Paper-Pak, Household Paper and Healthcare, and Chemical businesses, from a production standpoint, reinforcements to facilities are proceeding in line with the plan, while from a sales standpoint, we are expanding sales of unique products that will enable differentiation from competitors such as School POP® strawless milk cartons for schools and shifting toilet paper rolls to long-lasting rolls. As the path for each business is clearly visible, we will concentrate efforts on increasing profitability going forward while continuing to make timely investments in anticipation of demand trends.

As for overseas business, capital investments at Nippon Dynawave Packaging Company, LLC (NDP) in North America, such as in pulp drying machines, have proven effective, leading to increased profits. Since it is assumed that U.S. demand for paper carton boards will continue to be steady amid the trend toward replacing plastics, we will strive for further increases in profit.

Meanwhile, although Opal in Australia was heavily impacted by the COVID-19 pandemic and logistical disruptions, results for FY2022/3 differed greatly from originally expected profit levels. We understand that improving Opal's earnings is a crucial issue in accelerating transformation of the business

structure. In order to capture demand for corrugated boxes in Australia, where continued growth is anticipated, we will move ahead with insourcing production of boards, including conversion of paper machines, while swiftly restoring conditions for profitability by steadily generating synergetic effects.

I visited Opal just the other day. As the COVID-19 pandemic is still ongoing, it was the first time to visit in person in a long time. I felt that corporate governance had been strengthened in the time since my last visit, and that Opal's management policy is fully entrenched throughout Opal. Among investments the Group has made, the investment in Opal was particularly large. As an integrated supplier covering from boards to package converting, Opal will band together as one to establish a solid business foundation in Oceania for starters, and produce results at all costs.

When it comes to the Energy and Wood/Building Material businesses, the keyword is "biomass." At Nippon Paper Ishinomaki Energy Center Ltd., we have carried out renovations to increase the biomass combustion ratio, and are aiming to expand the renewable energy supply. In January 2023, a power generation facility using 100% woody biomass will be launched at Yufutsu Energy Center, LLC. Construction is proceeding smoothly, and the facility will aim to become a profit source at an early stage once operations commence. In addition, against the background of increasing domestic demand for biomass fuel, Nippon Paper Lumber Co., Ltd. will maximize the procurement and sales networks for wood chips for papermaking it has built up nationwide and aims to handle 3.7 million tonnes of fuel in FY2026/3.

However, when continuously making investments toward growth, I am always conscious of maintaining financial discipline. I will be mindful of future financial trends and keep an eye on our cash status.

## Endless Pursuit of Achieving the Group Vision

### Addressing Climate Change and Accelerating Reduction of GHG Emissions

Since the Company signed the Global Compact in 2004, it has continued to support the Ten Principles covering four areas. In the 2030VISION, we have established a stance to promote sustainability management that will address the demands of society alongside corporate growth through the achievement of the Group Mission. We will accelerate the transformation of the business structure and produce profit, and generate value that helps us build a sustainable society.

In order to realize a sustainable society, the world urgently

### Shaping the Possibilities of Cellulose in an Aim Toward the Vision for 2030

In the 2030VISION, we have established sustainable forest resources and cellulose as business foundations, and set out the Three Circulations business model and a green strategy. We will work on maximizing the value of forest resources while advancing the expansion of new businesses and products.

The key to maximizing the value of forest resources lies in the breeding and proliferation technologies which we have uniquely cultivated. By harnessing those technologies, with elite trees, which have excellent growth potential, the Company will be able to both develop forest resources and enable increases in the amount of CO<sub>2</sub> absorption and fixation. We will also work on initiatives to expand the seedling production business nationwide in an effort to proliferate elite cedar and cypress trees and more.

Meanwhile, regarding new businesses and products, we have invested many resources in research and development aimed at broadening the use of cellulose procured from sustainable forests, and are building up a track record. For example, with regard to cellulose nanofibers, based on our experience working to expand sales of chemical products, we are boosting the sales expansion of the Company's unique carboxymethylated CNF, which is manufactured at the Gotsu Mill. Biocomposite, a composite material made from wood resources and resin that helps reduce GHG emissions, is expected to be deployed in various industrial fields such as automotive components. Additionally, we have developed highly digestible cellulose for cattle using domestically produced materials, and this cellulose is being introduced at ranches nationwide. In these and other ways, unconventional uses for cellulose are expanding.

In summary, I am confident that achieving the Group's Vision for 2030 as set out in the 2030VISION will be the path to survival for the Group 10 years down the road. I call on all of the Group's employees to move ahead with confidence.

needs to address the issue of climate change. Alongside its efforts to reduce GHG emissions to date, the Company endorsed the recommendations of the TCFD (Task Force on Climate-related Financial Disclosures) in April 2021, and set a target for FY2031/3 of reducing GHG emissions by 45% compared with FY2014/3 on the path to achieving carbon neutrality in 2050. However, since global trends toward carbon neutrality are moving even faster, I believe the Group must also answer the call, and have appointed the General Manager of the Technical & Engineering Division as the person in charge of promoting environmental management, including reduction of the Group's GHG emissions. Currently, we are

## Message from the President

holding many discussions to further initiatives ahead of schedule. To be specific, we will swiftly shift from coal to waste-oriented fuels while considering significant reductions in coal consumption alongside reorganization of the Paper Business's production structure. Furthermore, it is well understood that energy saving is the challenge for the paper industry overall to achieve carbon neutrality in 2050. Within the Company, we will set our sights on introducing new technologies that can be implemented practically and expected to result in energy saving as well as new endeavors for water saving. On top of this, we will continue to harness black liquor by expanding uses of cellulose.

### Aiming to Be a Corporate Group Where Diverse Personnel Can Thrive

Human resource training is essential to realize our Group Vision and contribute to solving social issues. In our Group Mission, among the four requirements set out as an ideal corporate vision, we have established the requirements of "delight our customers" and "instill pride in employees." I have contemplated these two requirements for a long time.

Delighting our customers involves assessing customers' concerns and proposing countermeasures and solutions while demonstrating a scientific foundation based on knowledge and expertise. The Group is transforming through the development of new business so that market-oriented concepts can arise. I also believe that there is a firmly established stance of working in collaboration with other companies and university-affiliated research institutes on issues that the Group cannot solve alone.

Instilling pride in our employees requires situations in which our employees feel a sense of corporate growth, including earnings. In addition, it is necessary to create a workplace where personnel with diverse viewpoints can engage actively. Up until now, the Group has repeatedly carried out mergers and consolidation, so it already has a corporate culture of diversity among personnel as a foundation. I feel that this serves as a unique trait and strength of the Group. On the point of motivating each and every employee as a member of a diverse workforce, I would like everyone to broaden their horizons beyond their positions or tasks. To this end, we will concentrate on education for personnel development.

Additionally, I feel that having employees take charge of new businesses, which includes utilizing the internal side occupation program that Nippon Paper Industries began earnestly in April 2022, is an effective way of generating motivation among employees. Everyone will become highly motivated and be willing to accept challenging tasks.

This was established as a management issue in the 2030VISION and Medium-Term Business Plan 2025, but we will work even harder than before on personnel reassignment in order to advance business structure transformation. That will bring opportunities to take on new challenges amid collaborations with external organizations and Group businesses.

Experiences of success from those challenges will emerge that convey job satisfaction, which I think will give rise to a never-before-seen shift in the mindset of employees.

### Generating Changes in Conduct through Dialogue with Employees

From the perspective of personnel, FY2022/3 was a year in which I personally concentrated on talks with employees amid the COVID-19 pandemic. When the 2030VISION and Medium-Term Business Plan 2025 were formulated in May 2021, I made the entire Group aware of the necessity for acceleration, while also conducting 46 sessions of open discussion with approximately 700 employees of the head office and mills over a span of more than six months beginning in June 2021. I wanted everyone to be on the same page, so I directly asked employees whether they understood the 2030VISION and Medium-Term Business Plan 2025, and explained that I would be observing each employee's individual efforts.

Many different conversations arose from the open discussions, such as issues that appear to be the harmful effects of a vertically-divided organization. As for things that I felt should be changed, action was taken immediately and changes are being made.

This also led to discussions with employees from the sales departments about our financial performance. Over the course of those discussions, there was a change in awareness which made us realize we would have to work on raising product prices with unwavering determination, and I feel that this change resulted in persistent action during negotiations about the price of paper. This also applies to other businesses.

I had the feeling that everyone was diligent, and had the tendency to make sure everything was arranged perfectly before taking action, so I spoke about the value of aggressively moving things forward. I also intended to communicate the importance of breaking down walls between each company and generating profit as an overall group. I feel that barriers between organizations have collapsed in a positive way, and changes are occurring in the awareness and actions of employees.

### Working Tirelessly on Strengthening Governance

In 2021, the Company significantly changed its way of thinking about management. For many years, mills were positioned as the profit centers in the Paper Business. However, I decided that, in order to accelerate the transformation of the business structure, the sales divisions would act as the profit center and take responsibility for the ultimate profit and loss, much like other business divisions.

From the perspective of demonstrating the monitoring functions of the Board of Directors, I selected chief officers from the departments for raw materials, technology, research and

development, and logistics whose roles are to bridge each division in the entire Group, and determined that they would file regular reports with the Board of Directors on a quarterly basis, an initiative which was implemented starting in the fall of 2021. I also determined a person to be responsible for the execution of business duties and clearly identified a structure to steadily promote countermeasures, particularly in regard to important management issues such as reducing GHG emissions and reorganizing the production structure of the Paper Business.

Meanwhile, from the perspective of strengthening the Company's governance, I would like to mention that we are doing as much as possible to increase opportunities for outside directors to observe the entire Group and offer their opinions.

When promoting management strategies including investments, the Company periodically holds Group Management Strategy Committee meetings, and engages in discussions from various angles that feature participation by not only those from relevant divisions but a wide variety of people such as presidents from main Group companies and our outside directors. Outside directors also attend the meetings of the Management Executive Committee, which makes decisions about the execution of management projects and files reports, when monthly results are reported. I also make sure to talk openly with outside directors about matters that may be thought of as unpleasant. I am proud to say that sharing information frankly with outside directors in this way is leading to enhanced discussions within the Board of Directors. In reality, many opinions have been provided by outside directors, and even in occasions aside from the Board of Directors meetings, there has been an increase in opportunities for outside directors and executive officers to exchange opinions about various projects and topics.

### Growing as a Company that Generates Profit Based on the Group Mission

The thing that I bear in mind as the most important above all else is achieving the Group Mission. I tell myself that I must not lose my strong sense of duty to achieve the Group Mission under any circumstances, no matter how harsh business conditions may be. That is what it means to continually grow as a comprehensive biomass company.

Within the 2030VISION, we once again defined what it means to be a comprehensive biomass company in concrete terms that are easily understood: "A company group that consists of multiple businesses which generate stable profits and realize better living and cultural progress. It achieves this by using diverse technologies and know-how to maximize the use of renewable wood resources. This provides a wide range of products that help form a circulation-oriented society, supporting profit growth." I always emphasize this as the essence of being a "comprehensive biomass company" in various situations both inside and outside the Company.

This is a repeat of what I have already said, but to achieve the Group Mission, we will head in the intended direction as a united Group, without deviating from our axis as a comprehensive biomass company, and be fully committed to achieving growth as a company and job satisfaction for employees. In order to do so, I will stand at the head of all Group employees as the president and lead the way forward.

Toru Nozawa  
President and Representative Director  
Nippon Paper Industries Co., Ltd.





Firmly moving ahead to accelerate the transformation of the business structure and striving to improve corporate value

**Tomoyasu Itakura**

Director, Executive Officer, and General Manager, Financial Division  
Nippon Paper Industries Co., Ltd.

**Amidst a Harsh Business Environment, I Feel Top-Line Growth Is Certain**

Let us look back at the first year of Medium-Term Business Plan 2025 from a financial perspective. Financial targets for Medium-Term Business Plan 2025 call for net sales of ¥1,100.0 billion and operating income of ¥40.0 billion or more in FY2026/3, the final year of the plan. The Nippon Paper Group has stated it will reach its target for operating income "at an early stage," and is aiming to achieve this before FY2026/3.

We believe that if we can achieve operating income of ¥40.0 billion, EBITDA will reach a level of approximately ¥100.0 billion, and we will meet the goal of stably generating ¥100.0 billion EBITDA. Additionally, we will improve the net debt/equity ratio, another target, to 1.5 times by applying the cash we have obtained to investment toward growth and repayment of interest-bearing debt. We aim for ROE of 5.0% or more, and believe this can be achieved if we exceed this profit level. The aim of Medium-Term Business Plan 2025 is to achieve these

targets at an early stage, and lead the way to a stable condition in terms of both cash and income.

As a starting point for Medium-Term Business Plan 2025 at the time when financial results were announced in May 2021, the target for operating income for the first year was ¥25.0 billion. We made price revisions to many products in response to the subsequent global surge in raw material and fuel prices. However, operating income in FY2022/3 only reached ¥12.1 billion as the positive impact on the profit front because those revisions will only start to appear in FY2023/3. This was an extremely grim figure to kick off Medium-Term Business Plan 2025, and resulted from changes in the environment that were far greater than anticipated.

Nevertheless, net sales, which were projected to be ¥1,030.0 billion, totaled ¥1,045.1 billion, and I feel that top-line growth is certain. The situation is that profit is not following the growth of net sales, so I have renewed my determination to steer the Group forward securely through cost measures or other means.

**Working with Full Determination on the Three Important Issues**

Although there is an emerging sense of recovery from the COVID-19 pandemic, the situation between Russia and Ukraine appears to have no end in sight, and changes in the external environment, such as differences between Japanese and U.S. interest rates and fluctuations in exchange rates, are becoming more drastic. Under these circumstances, we will get back on track to achieving the targets of Medium-Term Business Plan 2025 as quickly as possible by enacting bold measures to build a business foundation that is not susceptible to fluctuations in the external environment in order to achieve operating income of ¥40.0 billion or more at an early stage.

Recently, the major challenges have been rebuilding the foundation of the Paper Business and expanding the earnings of growing businesses such as the Daily-Life Products Business. In FY2023/3, we will make additional revisions to product prices, while advancing the following three items as important issues. First is accelerating the reduction of coal consumption. Global trends toward a reduction of greenhouse gas (GHG) emissions have been picking up speed, and the Group itself is determined to accelerate reduction measures. On top of this, the recent surge in coal prices has become a significant drag on earnings. The Group had previously been purchasing approximately 300,000 tonnes of Russian coal per year, but has stopped making new purchases. Under normal circumstances, I imagine the Group would have increased the amount of coal purchased from other regions, but it is working to reduce its consumption without purchasing an alternative from another region by coming up with various ideas involving machine operation and inventory management. This initiative

will not come to fruition easily, but reducing coal consumption will lead directly to improvements in earnings, so the Group will move ahead proactively. Also, the Group is already shifting to fuels other than coal and implementing steady energy-saving countermeasures in order to reduce coal consumption over the medium to long term. Nippon Paper Industries produces kraft pulp (KP), which serves as a raw material for paper, but if the Group improves the operational rate of the recovery boiler that uses black liquor, a byproduct of that production process, as fuel, it will be possible to reduce the burden of coal boilers. By harnessing this strength that is unique to the paper industry, we can positively move forward toward reducing GHG emissions.

The second issue is further acceleration of the transformation of the Paper Business, as demand for graphic paper, particularly for newsprint and printing and business communication paper, is expected to decrease even further going forward. This will be achieved through a combination of reevaluation of the production structure, steady cost reductions such as cutting fixed costs, and improvements to production efficiency. As for the areas in which we are unable to absorb the cost increases even through self-help efforts, we will once again conduct price revisions, and move full speed ahead toward structural transformation. As the transformation of the Paper Business is essential to build a competitive business foundation, we will work with extraordinary determination.

The third important issue is improving the profitability of Opal. In FY2022/3, operating income was impacted by COVID-19 and logistics turmoil, and ended up with the unfortunate result of a loss. However, results indicate a trend toward gradual recovery. For instance, synergetic effects between the former Australian Paper and the paperboard and fiber-based packaging business acquired from Orora Limited are being manifested. First of all, in

**Trends in Net Sales (FY2018/3–FY2022/3 Results and Medium-Term Business Plan 2025 Targets)**

(¥ billion)

| Business                               | FY2018/3 Results | FY2019/3 Results | FY2020/3 Results | FY2021/3 Results | FY2022/3 Results | MTBP 2025 Targets |
|--|------------------|------------------|------------------|------------------|------------------|-------------------|
| Paper and Paperboard                   | 675.8            | 674.0            | 646.7            | 568.3            | <b>532.1</b>     | 490.0             |
| Daily-Life Products                    | 258.4            | 266.2            | 270.2            | 317.9            | <b>386.5</b>     | 460.0             |
| Energy                                 | 17.8             | 36.2             | 33.0             | 33.4             | <b>31.8</b>      | 45.0              |
| Wood Products and Construction-Related | 62.8             | 59.8             | 61.6             | 59.9             | <b>64.5</b>      | 75.0              |
| Other                                  | 31.7             | 32.5             | 32.3             | 27.8             | <b>30.2</b>      | 30.0              |
| <b>Total</b>                           | <b>1,046.5</b>   | <b>1,068.7</b>   | <b>1,043.9</b>   | <b>1,007.3</b>   | <b>1,045.1</b>   | <b>1,100.0</b>    |

\* Results for FY2018/3 to FY2020/3 have been restated to reflect the segment classification of results for FY2021/3 onward.

## Message from the Executive Officer Responsible for Finance

FY2023/3, we will achieve a turnaround, and aim for expansion of profit in FY2024/3 and beyond. Specifically, in order to address demand for corrugated boxes in Australia, where future growth is anticipated, we will move ahead with constructing a new corrugated box plant, and work on price revisions in order to fire back in response to cost increases such as rising fuel prices. The entire Group will offer backing support in order to harness the strengths of its integrated packaging production system from raw material procurement to manufacturing.

### Actively Conducting Strategic Investment That Will Lead to Growth

From the perspective of strategic investment to achieve “accelerate the transformation of the business structure” as adopted in Medium-Term Business Plan 2025, investment toward growth is key above all else. Transformation of the business structure was advocated in the Sixth Medium-Term Business Plan as well. In FY2022/3, in contrast to the ¥532.1 billion in net sales from the Paper and Paperboard Business, net sales from other businesses such as the Daily-Life Products Business was ¥513.0 billion. The breakdown of total net sales has shifted to approximately 50/50. We have furthered investment and product development in line with increased market demand, and in the Household Paper Business, are

shifting all toilet paper rolls to long-lasting rolls. In the Chemical Business, we have undertaken construction to handle increased production of functional coating resin products and high-performance cellulose in response to demand. The outcome of investments, including these, will fully emerge beginning in FY2023/3. Near-term profitability may seem disappointing, but when looking ahead to future sustainable growth, we must definitely not stop investment toward growth. We will continue timely investments while assessing the status of demand and the market, envisioning sowing seeds in the early stages of the five-year period of Medium-Term Business Plan 2025 and reaping the rewards in the second half.

Of course, while we boldly conduct these strategic investments, it is a given that we will uphold financial discipline. With regard to the target of reducing the net debt/equity ratio to 1.5 times, we will regulate financial discipline while aiming to achieve this in the latter half of Medium-Term Business Plan 2025. Based on that understanding, in order to concentrate efforts on investment toward growth, we will carefully select investments related to existing business, while working to improve our balance sheets by reshaping our asset portfolio along with securing cash by advancing sales of assets such as cross-shareholdings.

The areas where we will actively conduct investment going forward include the aforementioned Household Paper and

Chemical Businesses, as well as the Packaging Business. For the domestic Packaging Business, the Group signed a licensing agreement with Elopak ASA for the Oceania region in March 2022, and will aim to expand sales routes primarily in Australia. We believe that the Daily-Life Products Business, which consists of the Packaging, Household Paper and Healthcare, and Chemical Businesses, will serve as a pillar of our growth, and that we must actively conduct investment in these three areas.

Meanwhile, there is a need to actively conduct investment aimed at reducing GHG emissions. In consideration of earnings not in the near term but in the future, this will become an indispensable initiative which includes technological revolution.

We must not simply shut down existing facilities, but replace them with businesses or facilities in anticipation of growth, and continue investment in order to establish a structure that will boost earnings while turning the dual wheels of foundation businesses and growing businesses in a well-balanced manner.

### Accumulate Profit through Transformation of the Business Structure

Through these initiatives, we will accelerate the transformation of the business structure and realize improvements in corporate value. We view keeping the net debt/equity ratio at 1.5 times as a minimum goal. First of all, we will improve the ratio to 1.5 times during Medium-Term Business Plan 2025, and generate cash by securely producing operating income of ¥40.0 billion or more. By applying this to investments in growth, we will build a business structure of high earnings.

In order to do so, we intend to liquidate idle assets and reduce interest-bearing debt, while accumulating net income. Currently, the Paper Business is still experiencing difficulties, and we are not generating enough cash to invest capital. Although net income will be constrained by temporary costs associated with the shutdown of the N6 paper machine at the Ishinomaki Mill and the withdrawal from the paper and pulp business at the Kushi Mill, we understand that accelerating the transformation of the business structure at an unprecedented level going forward is an issue that must be addressed.

That is precisely why we must create a blueprint aimed at reorganizing the Paper Business and shifting to growing businesses as soon as possible, and present it to those both inside and outside the Company including investors and shareholders. In that sense, we will aim to achieve full-scale improvements to ROE in the final year of Medium-Term Business Plan 2025, and have declared that we will concentrate efforts on improvement while dealing with “hardships” in the first half of the plan. That is one point I hope everyone can understand.

Furthermore, as an indicator to evaluate and measure corporate value, we are internally advancing considerations

toward the implementation of ROIC (return on invested capital). Currently, the Paper and Paperboard Business, which has a large amount of invested capital, is not generating profit as expected, but we think that increasing the amount of invested capital aimed at growth and raising profit generated from that business is the objective of ROIC. From that perspective, the growth of the Daily-Life Products Business, including Opal, which is one of the important issues in the current fiscal year, will lead to improvements to ROIC.

### Address Strengthening Profitability with Unwavering Determination

We are strongly aware that improvement to corporate value is the most important issue to meet the expectations of shareholders. We are currently still in a transitional period, including the transformation of the business structure, so we have not yet reached the stage at which we can confidently tell shareholders that we can provide sufficient returns. We intend to increase capital efficiency with a sense of urgency, and enhance shareholder equity by accumulating profit.

In that way, we are focused on profitability in Medium-Term Business Plan 2025. In order for us to get back on track out of the current harsh conditions as soon as possible for Medium-Term Business Plan 2025, we will implement measures ahead of schedule. That result will lead to improvements in corporate value and meet the expectations of shareholders, so we intend to intently pursue all possible means and present results.

To bolster profitability and improve corporate value, we are working on the three important issues with unwavering determination in the current fiscal year. At present, we are in a period of instability, and feel a strong sense of crisis. However, if we persevere and are able to securely get back on track for Medium-Term Business Plan 2025, I think we will be able to move toward the future growth. I believe it is my duty to show our stakeholders that we are on a firm path, and intend to work hard with strong determination.

## Financial Strategy

### Financial Policy

The Nippon Paper Group’s financial policy is to enhance cash-flow generation capabilities by carrying out appropriate fund procurement to finance investments that enable sustainable growth, while maintaining a sound financial position.

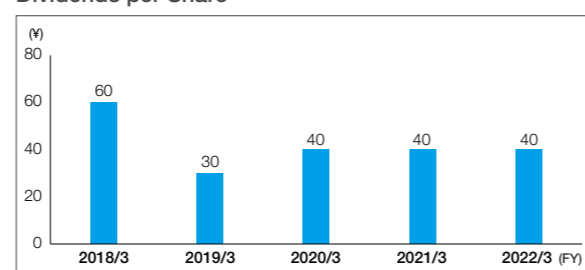
### Fund Procurement Policy

In the course of undertaking fund procurement, the Nippon Paper Group strives to diversify its procurement methods to ensure stable financing. Concurrently, the Group seeks to extend repayment terms and standardize repayment amounts. Specifically, the Group procures funds through various sources when necessary, including borrowings from financial institutions and the issuance of commercial paper and corporate bonds, by estimating their amount based on the capital investment plan for the entire Group. Moreover, in order to maintain the liquidity of fund procurement, the Group has concluded commitment line agreements of ¥50.0 billion in total with major financial institutions.

### Shareholder Return Policy

The Nippon Paper Group’s basic policy on shareholder returns is to continuously provide stable dividends based on a comprehensive consideration of business results, increases in internal reserves, and other factors, and by taking into account the Group’s management soundness and increases in shareholder value over the long term. The Group will put internal reserves to good use in expanding its business and strengthening its management foundation going forward, as it strives to increase its corporate value.

### Dividends per Share



### Policy on Ensuring Financial Stability

Nippon Paper Industries closely monitors (1) EBITDA, (2) the net debt/equity ratio, and (3) the debt repayment period as important indicators of financial discipline. The Company seeks to maintain stable credit ratings and improve them by upholding and enhancing financial discipline. The Company believes that keeping stable credit ratings and improving them are important management issues. Please refer to page 30 for the Company’s targets under Medium-Term Business Plan 2025.

As of July 2022, the credit ratings acquired by the Company are as follows.

|   | Long-term Bonds | Short-Term Bonds (CP) |
|---|-----------------|-----------------------|
| Rating and Investment Information, Inc. | BBB+            | a-2                   |
| Japan Credit Rating Agency, Ltd.        | A               | -                     |

# The Nippon Paper Group's Value Creation Story

Sustainable growth as a comprehensive biomass company

The Nippon Paper Group has formulated the Nippon Paper Group 2030VISION from its materiality and the Three Circulations business model. By maximizing use of management resources and conducting business activities grounded in the basic policies of the 2030VISION, it will achieve its sustainable growth and build a circulation-oriented society that maximizes use of wood resources. This will enable the Group to realize its mission of "The Nippon Paper Group aims to contribute to better living and cultural progress everywhere it does business."

## Medium- to long-term business opportunities and risks anticipated by the Group

Medium- to long-term opportunities

- Shift to a carbon-neutral society
- Population increase and economic growth in developing countries
- Increased consumer awareness of health and hygiene
- Growth of e-commerce

Medium- to long-term risks

- Progress of digital transformation
- Declining population in Japan
- Emergence of geopolitical risks
- Increase in natural disasters
- Trends in environmental laws and regulations

Mission

Contribute to better living and cultural progress everywhere the Group does business

### Input

Important management resources

**Intellectual capital**  
Technologies developed from using wood resources

**Natural capital**  
Wood resources procured from Japan and overseas

**Social and relationship capital**  
Collaboration with a wide array of partners

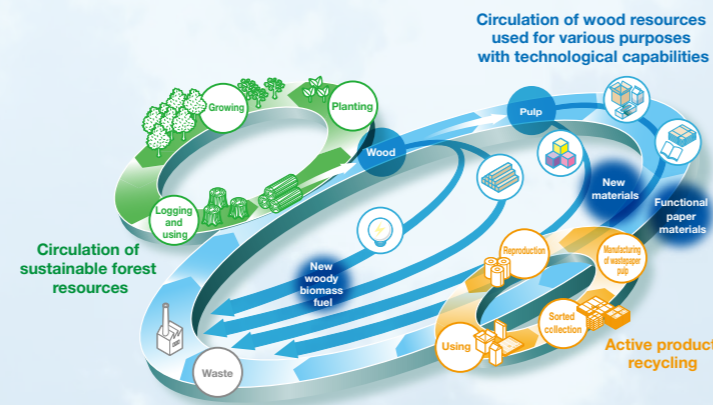
**Human capital**  
Diverse human resources who create value

**Financial capital**  
Financial base supporting business

**Manufactured capital**  
Production facilities and sites to create diverse products

**Materiality**  
to realize the Vision in the Group Mission

**Carbon-neutral business model**  
realized through the Three Circulations



## Nippon Paper Group 2030VISION

Basic policies

- 1 Reallocate management resources to growing businesses
- 2 Respond to rapid changes in the social landscape such as GHG reduction and environmental issues

### Output

Creations from business

Products and services that contribute to formation of a circulation-oriented society

### Outcome

Value created

- Realizing sustainable growth for the Nippon Paper Group
- Build a circulation-oriented society that maximizes use of wood resources

Value circulation

Customers

Business partners

Shareholders and investors

Employees

Local communities

Global environment

Profit returns and contributions to stakeholders



# Important Management Resources

The Nippon Paper Group has over the course of many years of business activities accumulated management resources, its source for creating value. As the value creation capital of the Group, they are the driving force behind the Three Circulations, the business model to realize carbon neutrality, and achieving sustainable growth for the Group as a comprehensive biomass company.

## Intellectual Capital Technologies Developed from Using Wood Resources

The Group has accumulated technologies for breeding, propagation, and plantations to produce its own wood resources that form raw materials. The Group possesses R&D capabilities that enable it to create various biomass products from wood resources, and aims to make competitive new businesses and materials through collaboration with such partners as companies in other industries, universities and research institutions. For intellectual property, focus is being placed on patent applications in growing fields and new business fields, as well as on expanding global business, and the number of overseas patent applications is increasing.

### Main technological developments Maximizing the value of forests

#### Breeding, propagation and plantation technologies

- 2017 Developed DNA marker technology to select eucalypt plantation trees based on DNA data
  - 2019 AMCEL developed eucalypt plantation trees with outstanding growth and CO<sub>2</sub> absorption features
  - 2022 Signed a strategic partnership agreement with Marubeni Corporation and aim to forest growing stock through technical guidance provided to Marubeni's plantation business company in Indonesia
- ⇒ **Promoted enhanced forest productivity and expanded the CO<sub>2</sub> fixation amount**

### Expand biomass products

#### Papermaking and coating technologies\*2

- 2016 Developed SHIELDPLUS® paper barrier packaging material
  - 2019 Developed Lamina® heat-sealable paper for packaging without using plastic film
  - 2020 Developed SHIELDPLUS II with improved resistance to bending of barrier properties and adapted for rotogravure printing
- ⇒ **Packaging responding to needs in the trend to replace plastic with paper**

#### Biorefinery technology\*3

- 2019 Developed Genki Morimori® highly digestible cellulose for feedlot cattle made from wood resources
  - 2022 Jointly developed lignin-additive concrete with Obayashi Corporation and Flowric Co., Ltd.
- ⇒ **Paved the way for applications of wood resources such as pulp**

#### Nano-defibrillation technology\*4

- 2010 Research on practical application of TEMPO-oxidized CNFs adopted for use in a NEDO project
  - 2016 Developed carboxymethylated CNF useable in food and cosmetics applications
  - 2021 Succeeded in world's first LED lighting verification after working on development of CNF electricity storage bodies
- ⇒ **Promote widespread development of CNF applications**

\*2 Technology to make pulp fiber (cellulose) into a uniform sheet and apply coating depending on the type of paper  
\*3 Technology to chemically process the three main components of trees (cellulose, hemicellulose and lignin)  
\*4 Technology to defiber pulp fibers to the nano level

## Natural Capital Wood Resources Procured from Japan and Overseas

Wood resources that form the basis of the Group's business are procured from sustainably managed forests. In addition, the Group has built a network in Japan and overseas to procure a stable and continuous supply of wood resources.

|  |   |
|--|---|
| ■ <b>Managed forest area</b><br>(as of December 31, 2021)                              | Approx. <b>160,000</b> hectares<br>(Domestic Company-owned forests) |
|  | Approx. <b>90,000</b> hectares<br>(Overseas plantation areas)       |
|  | Approx. <b>70,000</b> hectares                                      |
| ■ <b>Forest certification rate in Company-owned forests</b>                            | <b>100%</b>   |
| ■ <b>Wood chips procured by Nippon Paper Industries for use in paper</b><br>(FY2022/3) | <b>3,453,000</b> BD tonnes*5  |

\*5 Bone dry tonnes

## Social and Relationship Capital Collaboration with a Wide Array of Partners

The Group has, through its many years of business development, built partnerships with a diverse range of stakeholders spanning industries, the public sector and academia, including business partners, customers and suppliers, governments and public administrations and universities and research institutes. It aims to further strengthen these relationships and expand business.

### Initiative examples

- **Participating in a project subsidized by the New Energy and Industrial Technology Development Organization (NEDO) to develop CNF-related technologies together with manufacturers such as UBE Corporation and Sumitomo Rubber Industries, Ltd.**
- **Forging a capital and business alliance agreement with Shikoku Kakoki Co., Ltd. in 2019 to expand the packaging business. In addition to acquiring a portion of shares in Elopak ASA, a Memorandum of Understanding was signed in 2022, and based on a licensing agreement with Elopak, a local subsidiary was established to conduct sales of paper cartons and filling machines in the Oceania region.**
- **Promoting recycling together with companies and NPOs from 2021 in Hamamatsu City, Shizuoka Prefecture, by conducting a demonstration project for recycling used paper cartons.**

## Human Capital Diverse Human Resources Who Create Value

The Group's strength is the fusion of human resources from different backgrounds after mergers and integrations. The Group has over 16,000 employees in Japan and overseas, and by strengthening employee engagement, it promotes creation of organizations in which these human resources can maximize their abilities.

|   |                   |
|---|-------------------|
| ■ <b>Number of employees (consolidated)</b><br>(as of March 31, 2022)                       | <b>16,129</b>     |
| ■ <b>Ratio of employees at overseas consolidated subsidiaries</b><br>(as of March 31, 2022) | <b>37.1%</b>      |
| ■ <b>Training time per employee*6</b><br>(FY2022/3)   | <b>17.6</b> hours |

\*6 Applies to Nippon Paper Industries Co., Ltd. Training conducted under jurisdiction of Personnel Department, Head Office/Per participant

## Financial Capital Financial Base Supporting Business

Of the ¥350.0 billion in strategic investments the Group plans to make by FY2031/3, approximately 80% will be allocated to growing businesses to accelerate the transformation of the business structure and strengthen earnings capabilities. In addition, by ensuring stable EBITDA of ¥100.0 billion, it will strengthen the financial base.

|  |                         |
|--|-------------------------|
| ■ <b>Consolidated total assets</b><br>(as of March 31, 2022) | <b>¥1,639.3</b> billion |
| ■ <b>Shareholders' equity</b><br>(as of March 31, 2022)      | <b>¥426.9</b> billion   |
| ■ <b>EBITDA</b><br>(FY2022/3)                                | <b>¥81.5</b> billion    |

## Manufactured Capital Production Facilities and Sites to Create Diverse Products

The Group has production sites in Japan and overseas, and efficient production activities are carried out through cooperation among Group companies. The foundation business's land and facilities can be used as a resource to expand growing businesses.

|  |  |
|--|--|
| ■ <b>Number of Group companies</b><br>(as of March 31, 2022) | <b>159</b>                                 |
|  | (Domestic affiliated companies) <b>116</b> |
|  | (Overseas affiliated companies) <b>43</b>  |
| ■ <b>Capital investment amount</b><br>(FY2022/3)             | <b>¥58.1</b> billion                       |

# Initiatives for Materiality and the 2030VISION

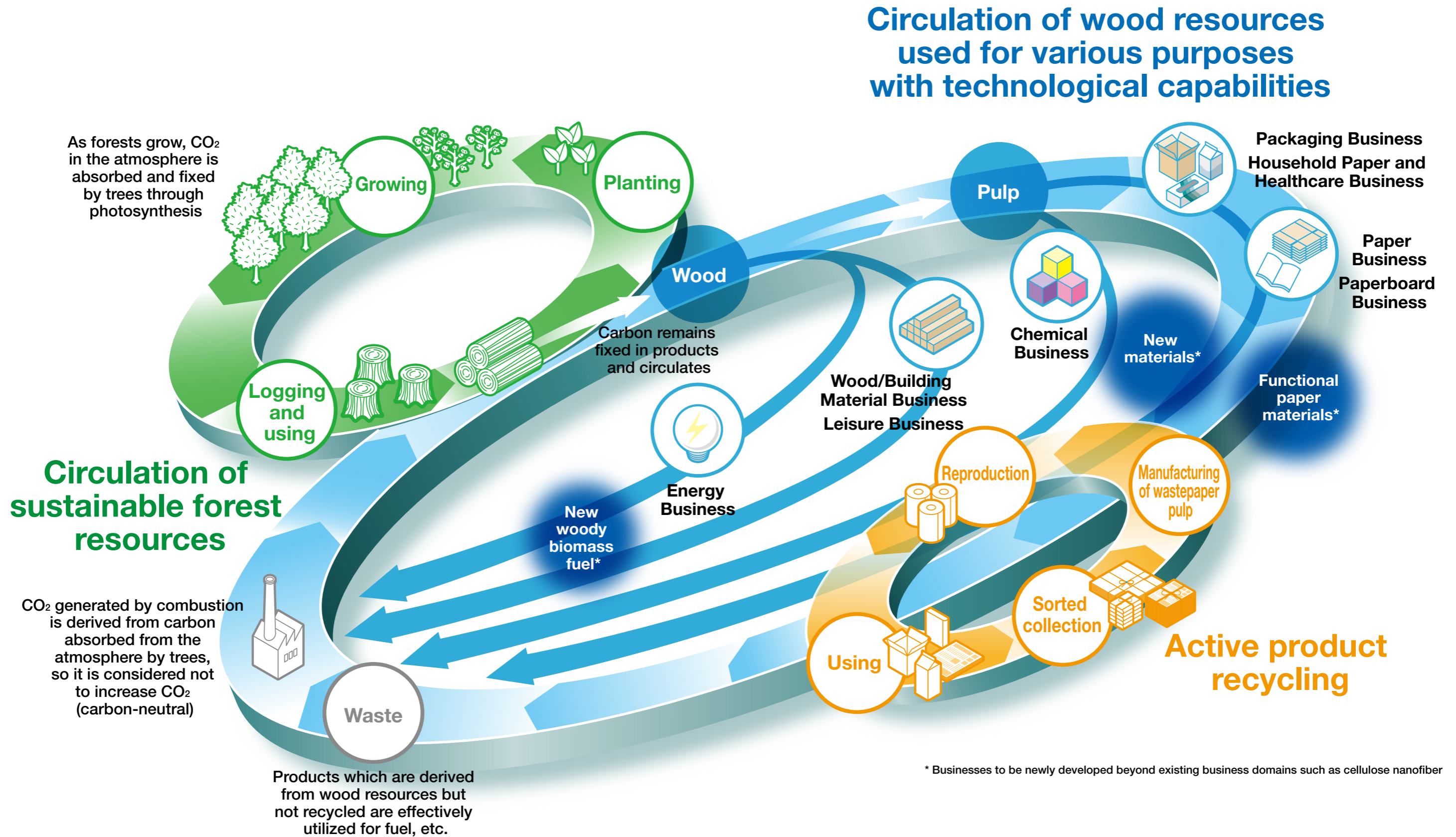
The Nippon Paper Group will pursue sustainability management through initiatives under themes responding to Materiality and the 2030VISION, aiming to realize the Group Mission.

| Vision  | Materiality (Important Management Issues)   | 2030VISION Themes  | Key Performance Indicators (KPI) to Achieve by FY2031/3<br>Scope ■ Nippon Paper Group ■ Nippon Paper Industries Co., Ltd.  | Main Progress and Initiative Status in FY2022/3   | Integrated Report 2022 Related Pages                   |
|---|---|--|--|---|--|
| 1<br>Drive social sustainability through our business                             | Response to climate change  | GHG reductions   | <b>Reduction of GHG emissions through energy-saving measures and fuel conversion</b> <ul style="list-style-type: none"> <li>Reduce GHG emissions (Scope 1 + Scope 2) by 45% compared with FY2014/3</li> <li>Improve total energy intensity in production and logistics by 1% year on year</li> <li>Use non-fossil fuels in 60% or more of total energy used</li> </ul> | <ul style="list-style-type: none"> <li>GHG emission volume (Scope1 + Scope 2) Reduction by 20% compared with FY2014/3</li> <li>Changed Nippon Paper Industries total energy intensity in production (compared with 2020): Paper business -6%, Paperboard business -1.3%, Logistics +2.6%</li> <li>Ratio of non-fossil fuels usage 46% of total energy usage</li> </ul>  | <a href="#">→ P.28-29</a><br><a href="#">→ P.68-69</a> |
|   |   |  | <b>Response to climate change initiatives</b>  | <ul style="list-style-type: none"> <li>Participated in the 2021 Ministry of the Environment Scenario Analysis in line with the TCFD recommendations</li> <li>Endorsed the GX League Basic Concept in June 2022</li> </ul>   | <a href="#">→ P.68-69</a>                              |
|   | Utilization of sustainable forest resources<br>Preservation of biodiversity           | Pursuit of a green strategy (maximize value of forest resources)         | <b>Improvement of forest productivity and expansion of CO<sub>2</sub> fixation amount by using breeding and proliferation technologies</b> <ul style="list-style-type: none"> <li>Improve CO<sub>2</sub> fixation efficiency in overseas plantations by 30% compared with 2013</li> <li>Secure plantations, mainly in Asia</li> </ul>                                  | <ul style="list-style-type: none"> <li>Conducted ongoing R&amp;D on selection of elite plants, etc.</li> <li>Concluded a strategic partnership agreement in March 2022 with Marubeni Corporation for its plantation business in Indonesia</li> </ul>  | <a href="#">→ P.24-25</a><br><a href="#">→ P.64-65</a> |
|   |   |  | <b>Utilization of Company-owned forests in Japan to revitalize domestic forestry</b> <ul style="list-style-type: none"> <li>Expand elite tree seedling production business for forestry</li> </ul>   | <ul style="list-style-type: none"> <li>Obtained certification as a specified proliferator of elite trees such as cedar and cypress (Shizuoka Prefecture, Tottori Prefecture, Hiroshima Prefecture and Oita Prefecture)</li> <li>Signed an agreement with Shizuoka Prefecture in May 2022 for on-site implementation of advance technology in forestry and provide Company-owned forests in Shizuoka Prefecture as the fields for implementation</li> </ul>  | <a href="#">→ P.24-25</a><br><a href="#">→ P.64-65</a> |
|   |   |  | <b>Acquisition and maintenance of forestry certification for all Company-owned forests in Japan and overseas</b>   | <ul style="list-style-type: none"> <li>Maintained 100% forest certification acquisition rate in Company-owned forests in Japan and overseas</li> </ul>  | <a href="#">→ P.64-65</a>                              |
|   | Reduction of environmental burden   | Reduction of environmental burden  | <b>Reduction of environmental burden generated in the manufacturing process</b> <ul style="list-style-type: none"> <li>Reduce air pollutants by 15% and water pollutants by 15% compared with FY2019/3</li> <li>Keep final disposal volume of industrial waste materials at domestic production sites at 2% or lower</li> </ul>  | <ul style="list-style-type: none"> <li>Reduced at domestic production sites (compared with FY2019/3): SOx 34%, NOx 22%, dust 21%, COD/BOD 23%, SS 9%</li> <li>Final disposal volume of industrial waste materials: 2.1%</li> </ul>  | <a href="#">→ P.66-67</a>                              |
|   |   |  | <b>Promotion of recycling of resources</b> <ul style="list-style-type: none"> <li>Build a system for stable procurement of wastepaper</li> <li>Promote collection and utilization of unused, difficult-to-treat wastepaper such as food and beverage containers</li> </ul>   | <ul style="list-style-type: none"> <li>Started a collaboration to build a circulation system for wastepaper recycling with Yatsushiro City, Kumamoto Prefecture and Otake City, Hiroshima Prefecture</li> <li>Decided in September 2021 to introduce recycling facilities at Fuji Mill for paper containers used for food and beverages, such as paper cups and paper cartons (Scheduled to be operational in October 2022)</li> </ul>  | <a href="#">→ P.28-29</a>                              |
| Respect for human rights  | Respect for human rights  | <b>Implementation of human rights due diligence</b>                      | <ul style="list-style-type: none"> <li>Formulated the Nippon Paper Group Human Rights Policy in May 2022</li> <li>Conducting a human rights risk assessment since February 2022 by a working group on respect for human rights</li> </ul>  | <a href="#">→ P.59</a>  |  |
| 2<br>Delight our customers  | Response to changes in the social environment   | Pursuit of a green strategy (expand biomass products)                    | <b>Expansion of biomass products</b> <ul style="list-style-type: none"> <li>Respond to demand to move away from plastic and reduced plastic use (Expand products for trend to replace plastic with paper)</li> </ul>   | <ul style="list-style-type: none"> <li>Expanded adoption of School POP® (strawless paper cartons) (FY2023/3 forecast: 13 prefectures, over 170 municipalities)</li> <li>Established the NPG Product promotion center in June 2022 to strengthen market-oriented approach</li> </ul>   | <a href="#">→ P.26-27</a>                              |
|   | Stable supply of products, safety improvement   | Stable supply of products<br>Product safety and quality control          | <b>Engagement in stable production, response to natural disasters (strengthen BCP)<br/>Establishment and improvement of a product safety management structure</b>  | <ul style="list-style-type: none"> <li>Carried out building reinforcement work (Iwanuma Mill), water intake facility submergence prevention work (Gotsu Mill)</li> <li>Established crisis response headquarters regulations at main Group companies (Applicable companies: 32)</li> </ul>   | <a href="#">→ P.56-58</a>                              |
| 3<br>Instill pride in employees   | Realization of diverse work styles<br>Active participation of diverse human resources | Enhancement of ease of working and job satisfaction                      | <b>Enhancement of employee engagement, including promotion of diversity</b> <ul style="list-style-type: none"> <li>Total working hours of 1,850 hours/year or lower</li> <li>Retention rate after 10 years of employment of 80% or higher</li> <li>Ratio of women managerial-track employees to be 40% or higher by FY2026/3</li> </ul>                                | <ul style="list-style-type: none"> <li>Total working hours: 1,905 hours</li> <li>Retention rate of employees who joined the Company in FY2012/3 65%</li> <li>Ratio of women among new graduates in managerial-track recruits FY2023/3 40%</li> <li>Acquired Eruboshi certification in February 2022 (Certification stage 2)</li> </ul>  | <a href="#">→ P.70-71</a>                              |
|   | Promotion of occupational safety and health   | Maximization of utilization of human resources                           | <b>Assurance of safety and hygiene for working people</b> <ul style="list-style-type: none"> <li>Serious disaster cases of 0/year</li> </ul>   | <ul style="list-style-type: none"> <li>Serious disaster cases in FY2022/3: 0</li> </ul>   | <a href="#">→ P.58</a>                                 |
| 4<br>Give back to society   | Promotion of business structure transformation  | Expansion of growing businesses  | <b>Net sales target of ¥1,300.0 billion, of which Daily-Life Products Business has 50% or more<br/>Investment of approximately 80% of the strategic investment budget of ¥350.0 billion in growing businesses</b>  | <ul style="list-style-type: none"> <li>Daily-Life Products Business net sales: ¥386.5 billion (Accounting for 37% of overall net sales)</li> <li>Strategic investment in FY2022/3: ¥43.0 billion (of which 99% was allocated to growing businesses)</li> </ul>  | <a href="#">→ P.30-31</a>                              |
|   |   | Early positive contribution from new businesses and innovative materials | <b>Expansion of new uses of cellulose and commercialization of innovative materials<br/>Net sales target of ¥65.0 billion for new businesses</b> <ul style="list-style-type: none"> <li>Establish structure to mass-produce CNF and manufacturing technologies (FY2024/3)</li> <li>Launch new businesses using pulp manufacture facilities</li> </ul>                  | <ul style="list-style-type: none"> <li>Expanded practical adoption of CNF in food and cosmetics applications</li> <li>Launched actual sales of "Genki Morimori®" wood-based feed in FY2023/3</li> <li>Rolled out sample works at biocomposite exhibition, etc.</li> </ul>   | <a href="#">→ P.26-27</a>                              |
|   |   | Reformation of structure of foundation businesses                        | <b>Stronger competitiveness of the Paper and Paperboard Business</b> <ul style="list-style-type: none"> <li>Reduce costs</li> <li>Build an ideal production structure</li> </ul>   | <ul style="list-style-type: none"> <li>(Paper) Kushiro Mill withdrew from the pulp and paper business and the Ishinomaki Mill reduced production capacity by approximately 500,000 tonnes by halting the N6 paper machine</li> <li>(Paperboard) Conducted investment to raise logistical efficiency (Otake Mill) and improve quality (Fuji Mill)</li> <li>(Operational stability) Reduced production cutbacks by approximately 60% from the FY2020/3 level by improving facility health, focusing on power and recovery and fiberlines</li> </ul> | <a href="#">→ P.40-41</a>                              |
|   |   | Expansion in overseas markets  | <b>Overseas sales ratio: 30% or more</b>   | <ul style="list-style-type: none"> <li>Overseas sales ratio in FY2022/3: 27%</li> <li>Opal decided to construct a new box plant in the state of Victoria (Scheduled to be operational in FY2024/3)</li> <li>Acquired shares in Elopak ASA, accelerated overseas rollout of domestic Packaging Business</li> </ul>   | <a href="#">→ P.42-43</a>                              |
|   | Enhancement of governance   | Stronger functions of the Board of Directors                             | <b>Improvement of effectiveness of the Board of Directors</b>  | <ul style="list-style-type: none"> <li>Enhanced the agenda for the Personnel &amp; Remuneration Advisory Committee</li> </ul>   | <a href="#">→ P.50-55</a>                              |
| Coexistence with local communities and society<br>Communication with stakeholders | Assurance of transparency in corporate management                                     | <b>Public and fair disclosure of Company information</b>                 | <ul style="list-style-type: none"> <li>Environmental risk communication in FY2022/3: 19 cases (Domestic production sites)</li> <li>Meetings between outside directors and institutional investors in FY2022/3: 2 times</li> </ul>  | <a href="#">→ P.37</a>  |  |

# Nippon Paper Group's Business Development as a Comprehensive Biomass Company

## "Three Circulations"

The Nippon Paper Group will achieve a carbon-neutral business model through the Three Circulations as a comprehensive biomass company shaping the future with trees.



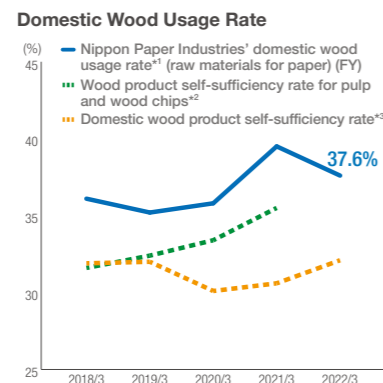
# Pursue Maximization of Forest Value through Company-Owned Forests in Japan and Overseas

Forests not only provide value as a raw material source for the Nippon Paper Group, a comprehensive biomass company shaping the future with trees that provides various products, they also create important value for society and the environment. The Group will leverage the unique technologies and knowledge it has cultivated until now while continuing to provide diverse value through the appropriate management of the approximately 160,000 hectares of forests it owns in Japan and overseas.

## Value Created through the Circulation of Forest Resources



Plantation areas with a vast improvement in productivity (Left: Before improvement Right: After improvement)



<sup>\*1</sup> Calculation includes waste wood chips from domestic sawmills  
<sup>\*2</sup> Source: "Yearbook of Pulp and Paper Statistics," Ministry of Economy, Trade and Industry  
<sup>\*3</sup> Source: "Wood Demand and Supply Chart" (Self-sufficiency ratio of wood for industrial use), Ministry of Agriculture, Forestry and Fisheries

### Monetary Value of Public Interest Functions of Company-Owned Forests in Japan

Approx. **¥350.0 billion**

Estimates based on the 2017 ecosystem service value evaluation related to corporate biodiversity preservation activities published by the Ministry of the Environment

## Expansion of CO<sub>2</sub> Sinks Using Forests

Nippon Paper Industries is engaged in research and development as it believes that improving forest productivity (which means raising the CO<sub>2</sub> fixation efficiency rate) is important for maximizing the value of forests. Securing wood resources and raising productivity will promote the stable procurement of woody raw materials and raise quality and lower costs while contributing to the realization of carbon neutrality by expanding CO<sub>2</sub> sinks.

### Improving the CO<sub>2</sub> fixation efficiency rate by strengthening unique breeding and propagation technologies

The Company aims for a 30% improvement in the CO<sub>2</sub> fixation efficiency rate at overseas plantation areas by FY2031/3 (compared with 2013) by further strengthening unique breeding and propagation technologies to improve forest productivity.

### Securing new wood resources

The Company aims to expand forest resource reserves by 100,000 hectares, mainly in Asia, by FY2031/3.

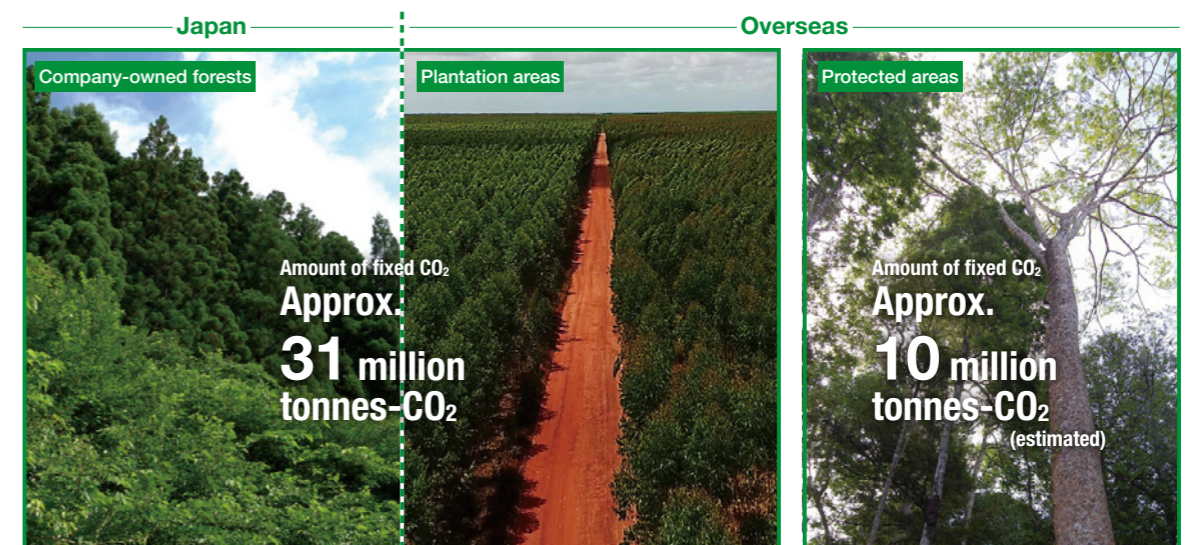
The Company and Marubeni Corporation signed a strategic partnership in March 2022 and aim to improve forest growing stock through technical guidance provided to PT. Musi Hutan Persada (MHP), Marubeni's plantation business company in Indonesia.

## The Group's Concept of Forests as CO<sub>2</sub> Sinks

The Company logs and plants trees in Company-owned forests in Japan and overseas based on a business plan for the purpose of using forest resources.

In 2021, the net increase in Company-owned forests in Japan and overseas plantations was approximately 250,000 tonnes-CO<sub>2</sub> (net absorption: absorption volume—logged volume) and the total amount of fixed

CO<sub>2</sub> at the end of 2021 was approximately 31 million tonnes-CO<sub>2</sub>. In addition to this, the amount of fixed CO<sub>2</sub> due to forests in the environmental protection areas set up by the overseas plantation business is estimated at approximately 10 million tonnes-CO<sub>2</sub>. The Company will continue to study and consider the value and functions of these protected areas.



## Expansion of the Elite Tree<sup>\*4</sup> Seedlings Business for Forestry

The Nippon Paper Group is working in collaboration with the Ministry of Agriculture, Forestry and Fisheries, local governments and seedlings businesses to contribute to the revitalization of domestic forestry through expansion of the seedlings business for forestry by providing elite tree seedlings. In addition, when reforesting Company-owned forests, seedlings from elite and other trees produced within the Company will be used and sequentially planted to raise the value of Company-owned forests.



Production of elite tree seedlings

<sup>\*4</sup> Strains of trees such as cedar, cypress, larch, etc. that have excellent characteristics such as 1.5 times or greater growth and half or less the amount of pollen production

# Circulation of Wood Resources Used for Various Purposes with Technological Capabilities

## Generating Products that Will Realize the Creation of a Circulation-Oriented Society with Solid Technology that Maximizes Use of Wood Resources

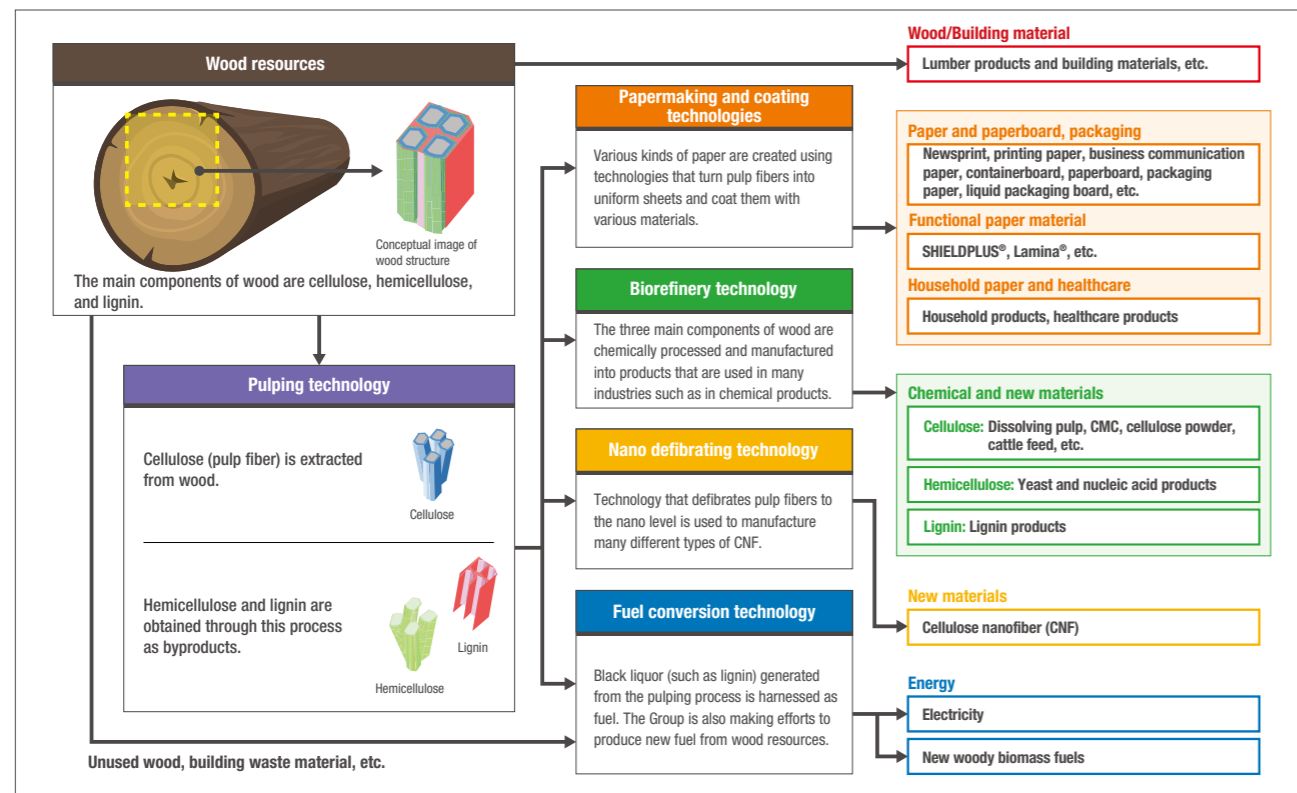
The Nippon Paper Group develops business that utilizes renewable wood resources at many stages, based on the accumulation of a wide range of technologies, including pulping, and know-how. It will strive to boost profitability while contributing to the creation of a carbon-neutral society by expanding the provision of products and services generated from wood resources as “a comprehensive biomass company shaping the future with trees.”

### Value Created through the Circulation of Wood Resources



\* Replacing fossil-derived products with biomass products utilizing wood resources will increase the CO<sub>2</sub> fixation amount for society overall.

### Products and Services Generated from Technology that Maximizes Use of Wood Resources



### Development and Sales Expansion of Biomass Products

The Group develops not only paper but also a variety of biomass products that use wood resources as a raw material. It is thought that if biomass products are widely popularized in society and sales can be expanded, the use of those products could lead to CO<sub>2</sub> fixation. Therefore, the Group aims for business growth harnessing technological capabilities and contributions toward the creation of a carbon-neutral society.

#### Expanding Sales of Environmentally Friendly Paper Carton (School POP®)

Sales of School POP® strawless milk cartons for school lunches are accelerating amid the global trend toward replacing plastics with paper. These products, which are compatible with traditional filling machines and feature improved functions such as ease of opening and drinking, were developed in June 2020, after which they were first adopted in Kochi Prefecture, and their adoption has expanded to 13 prefectures and over 170 municipalities as of April 2022. Approximately 1.4 billion paper cartons are used annually for milk in Japanese school lunches, but in FY2023/3, it is expected that over 200 million School POP® cartons will be supplied in one year, making up 15% of the total amount. If one straw weighs 0.5 g, then approximately 100 tonnes of disposable plastic can be reduced, and this product's

contribution to fostering environmental awareness in educational settings has also been positively evaluated. The Group began production at three locations in 2022, and aims to expand sales further by establishing a structure capable of supplying the entire country.



Expansion of regions where strawless cartons are used in school lunches through the popularization of School POP®

#### Accelerating the Commercialization of Cellulose Nanofiber (CNF)

The Group is developing applications for CNF, formed from pulp defibrated to the nano level. As for TEMPO-oxidized CNF and carboxymethylated CNF, for which mass production has begun, the Group is continuing to work on expanding its lineup in anticipation of an increase in the number of adoptions and development of new functions. Facilities at the Gotsu Mill, which produces carboxymethylated CNF, are expected to achieve full operation through an expansion of successful adoptions primarily concentrated in food products and cosmetic uses, and CNF business will be developed in earnest as the Company's unique business. For CNF-reinforced resin, the Group promotes technological development and sample works, and aims for these products to be used at an early stage. In terms of uses in development, the electrical storage properties of CNF were discovered through the results of collaborative research with Tohoku University in 2021. Following this, the Group succeeded at carrying out the world's first

LED lighting verification outside of an academic experiment, and is aiming to exhibit a prototype at Expo 2025 in Osaka, Kansai. It will continue to accelerate initiatives toward early commercialization by strengthening collaboration both inside and outside the Company.



Dorayaki from TAGONOTSUKI CO., LTD.



Cosmetic product BIOFEAT from Nippon Paper Papylia



LED lighting that relies on a CNF-based electricity storage body

#### Development of Cattle Feed (Genki Morimori®)

The Group has developed cattle feed from wood resources by utilizing its cultivated pulping technology. Highly refined and high-quality cellulose is singularly extracted through the treatment process to remove lignin from wood, which makes it possible to obtain stable quality, creating an easily digestible and effective source of energy. The fact that it is produced domestically and can be supplied throughout the year is also a strength. In addition to increased milk yield and improvements in

breeding, the feed has also been shown to promote the health of fattened cattle. The Group will promote these strengths and results and work to increase adoption by ranches.



Genki Morimori®

# Using Hard-to-Recycle Unused Wastepaper

For many years, the Nippon Paper Group has actively used wastepaper as raw material for paper production. Going forward, by simultaneously addressing customer needs for replacing plastic with paper and the recycling of paper products, the Group intends to increase demand for biomass products, which in turn will expand the market for replacing plastic with paper. For that reason, Nippon Paper Industries will construct a collection system for used paper cartons for food, which were hard to recycle, and aim to expand sales of biomass products.

## Value Created through Product Recycling



**Makoto Hasegawa**  
General Manager, Recycling Promotion Office, Technical & Engineering Division  
Nippon Paper Industries Co., Ltd.

The Company is further developing the market for replacing plastic with paper and working to expand sales of biomass products by promoting recycling of paper that had previously been hard to recycle, such as used paper cartons for food.

In October 2022, the Company will begin operating recycling facilities for paper cartons for food and beverages, such as paper cups, at its Fuji Mill. It uses the high-quality, intensely white recycled pulp produced at these facilities as raw material for paper, and provides paper products in a wide variety of areas including paper, paperboard and household paper. In doing so, it aims to further develop the market for replacing plastic with paper. It also plans to annually collect and use 12,000 tonnes of wastepaper, including paper cartons that are hard to recycle, in 2030.

On the other hand, there are two major issues involved with this recycling promotion. One is the construction of a collection system for used paper cartons for food. For example, it is up to municipalities to decide whether used paper cartons are counted as trash or recyclable resources. In addition, the food

residue that adheres to the paper cartons may cause decomposition and unpleasant smells, so the cartons must be washed. With the support of Hamamatsu City in Shizuoka Prefecture, the Company has been conducting verification tests for the separation and collection of used paper cartons from homes in the city since April 2021. It has also been conducting verification tests to wash and collect used paper cups at places such as event spaces in Tokyo and Hokkaido. Through these tests, it has been studying the establishment of a separation and collection scheme for paper cartons. Additionally, it is working to establish a collection system together with customers, such as B-to-C paper carton manufacturers and retailers with close ties to consumers as the key to raising awareness of recycling paper cartons among consumers.

The other issue is promoting the use of recycled pulp. The entire Group must establish new sales strategies that involve engaging with customers to develop products with environmental appeal and broaden the range of applications. The Group has received feedback from customers desiring a visual depiction of recycling and products generated from collected paper cartons, and will work to provide paper products that offer recycling as a new value.

Going forward, the Group will broaden initiatives aimed at promoting active product recycling together with customers, and advance business expansion and the use of new resources through mutually beneficial relationships.

## Initiatives for Carbon Neutrality

# Utilizing Accumulated Technology and Experience and Further Reducing Coal Consumption

The Nippon Paper Group aims for sustainable Group growth and the realization of a circulation-oriented society that maximizes wood resources.

In response to the surge in coal prices, the Group is accelerating initiatives for reducing coal consumption that will lead to earnings improvements and carbon neutrality.



**Yasuhito Murakami**  
Executive Officer  
General Manager, Technical & Engineering Division  
(In charge of GHG emissions reduction and promotion of environmental management)  
Nippon Paper Industries Co., Ltd.

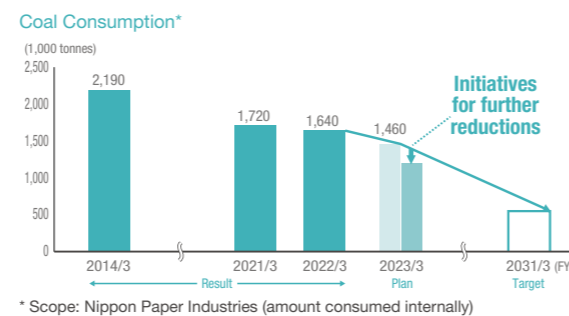
The manufacturing process of creating products from wood resources requires a large amount of energy, so fuel procurement is an important management issue that affects earnings.

The Group took the global oil crisis as an opportunity to achieve cheap, stable procurement, and converted to a mix of fuels primarily focused on coal

with high calorific value. Meanwhile, it has accumulated a great amount of know-how regarding biomass power generation by utilizing woody biomass fuel and non-fossil-type waste-oriented fuels in order to reduce GHG emissions in manufacturing processes. In recent years, it has also been working on reviewing the production structure of the Paper Business, and plans to reduce coal

consumption to 1.46 million tonnes in FY2023/3, but is working on reducing this amount even further through additional measures.

Prices for raw materials and fuel began to surge in the latter half of FY2022/3, and the price of coal in particular skyrocketed in response to the Russian invasion of Ukraine, dealing a direct blow to the Group's earnings. As an emergency measure to improve earnings, within the Group, the technology and sales departments have been intensively collaborating on operations that limit coal



consumption to the fullest extent while maximizing production efficiency by, for example, narrowing down the number of production items. Additionally, from the perspective of carbon neutrality as a way of addressing climate change, the Group must realize the scenarios from the 2030VISION ahead of schedule.

### Technology and Operational Experience Will Accelerate Energy Conversion

In addition to coal, prices for crude oil, natural gas, and woody biomass fuel have been surging around the world with companies scrambling to compete, but the Group will continue its shift away from coal to domestic waste-oriented fuels.

Through construction and operation of various biomass power generation facilities, the Group has accumulated know-how covering operational stability such as adapting combustion to fuels with different calorific values and forms and technology that limits the adhesion and corrosion of ash with a low melting point at areas of heat transfer within facilities. In addition, with regard to the three circulating fluidized bed boilers at the Akita, Fuji, and Otake Mills, where the percentage of coal consumption is currently high, the Group is considering remodeling the facilities to increase the ratio of waste-oriented fuels used. It will also work on fuel procurement that maximizes its internal procurement network.

Maximizing the permissible use of black liquor generated from the pulp manufacturing process is also one of the Company's key strategies. Using pulp to create a large number of biomass products other than paper and

paperboard, black liquor, a carbon-neutral fuel, will increase in abundance and be used to accelerate energy conversion.

### Undertaking Energy Saving with New Ideas

Energy saving is an incredibly important measure in energy-intensive industries. The Group has set a target of improving total energy intensity in manufacturing by one percentage point or more per year, but this will not be easy.

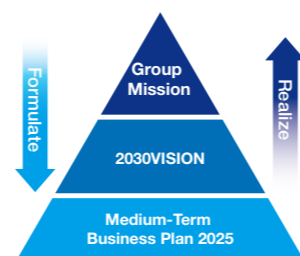
However, right now as energy costs are rising, it is critical to limit the consumption of fuel and electricity through higher energy efficiency. For instance, although using a large volume of water in the papermaking process is necessary from the standpoint of paper quality, a significant amount of energy is lost. Going forward, we will incorporate new technologies, and I think that we will require new ideas to simultaneously maintain and improve water and energy saving as well as quality. We will once again review the energy saving measures that we have undertaken up to this point while identifying the causes of energy loss in various processes, and proactively advance effective measures to save energy.

Based on the presumption of surging prices for raw materials and fuel, the Group will establish operational structures that reduce coal consumption such as fuel conversion and energy saving, as well as advance the reorganization of the Paper Business's production structure in an integrated manner. By pursuing both cost and quality using flexible ideas and reducing GHG emissions, we aim to be a company that is trusted and chosen by customers.

# Progress on Medium-Term Business Plan 2025

The Nippon Paper Group formulated the 2030VISION as a guideline that clarifies its goals for 2030 and business challenges to realize the Group Mission. Medium-Term Business Plan 2025 is an action plan established for the five years from FY2022/3 to FY2026/3 to realize the 2030VISION.

Although the business environment encompassing the Group is changing rapidly and dramatically, it is aware of the current situation and challenges and will rapidly propose and implement measures to realize Medium-Term Business Plan 2025.



## Basic Policy

Medium-Term Business Plan 2025 has the basic strategy to accelerate the transformation of business structure and reallocate management resources to growing businesses, accelerate enhancing profitability of new businesses and reinforce competitiveness of foundation businesses.

This medium-term business plan is positioned as an extremely important initiative to set the Group on a growth

trajectory, placing greatest emphasis on a sense of speed in each business within growth sectors, identifying demand trends and advancing appropriate measures. Moreover, by maximizing utilization of resources at each production site in the paper business, it aims to enhance investment efficiency and pass on the technical skills and know-how of Nippon Paper Group employees.

## Progress in the First Year

In FY2022/3, net sales increased steadily, but operating income decreased compared with the previous fiscal year due to the impact of the spread of COVID-19 and surging raw materials and fuel prices. As a result, EBITDA and ROE remained below the levels of the previous year.

However, in the foundation businesses, progress on reduction of paper production capacity went as planned, and measures incorporated in the medium-term business plan for new and growing businesses were implemented. Moreover, in the latter half of FY2022/3, price revisions were carried out for

many products, including paper, paperboard, household paper and paper carton products.

|                              | FY2020/3 Results | FY2021/3 Results | FY2022/3 Results | MTBP 2025 Targets                       |
|------------------------------|------------------|------------------|------------------|---|
| Net sales (¥ billion)        | 1,043.9          | 1,007.3          | 1,045.1          | ¥1,100.0 billion                        |
| Operating income (¥ billion) | 35.0             | 19.2             | 12.1             | ¥40.0 billion or more at an early stage |
| EBITDA (¥ billion)           | 97.8             | 86.9             | 81.5             | Stably ¥100.0 billion                   |
| Net D/E ratio (times)        | 1.75             | 1.86             | 1.89             | 1.5 to 1.6 times                        |
| ROE                          | 3.7%             | 0.8%             | 0.5%             | 5.0% or more                            |

## Our Understanding on Current Business Environment (Risks and Opportunities)

The unstable global situation caused by the Russian invasion of Ukraine is showing signs of being prolonged and disruptions in the supply chain, including congestion of maritime transportation, are causing dramatic rises in prices. Even in Japan, the business environment encompassing the Group has changed significantly as prices for fuel and raw materials have surged

and the yen has continued to weaken dramatically beyond expectation. While advancing initiatives to leverage opportunities such as growing demand to replace plastic with paper, the Company is also keenly aware of the importance of responding appropriately to pressing risks such as surging prices for fuel and raw materials and shrinking demand for paper.

| Changing Business Environment  | Risks   | Opportunities  |
|--|---|--|
| Prolonged Ukrainian impact (continued disruption to the global supply chain) | · Lingering high fuel and raw material prices, including for coal                                     | · Increased sales opportunities for items such as lumber and pulp  |
| Inflation and foreign exchange fluctuations (possible recession)             | · Acceleration of shrinking demand for paper<br>· Rise in various costs                               | · Improvement in export environment due to the weak yen  |
| Continued congestion of maritime transportation                              | · Rise in logistics costs<br>· Sluggish fuel and raw material procurement and product shipment        | · Recovery in demand for domestic products   |
| Further escalation of requirements to reduce GHG emissions                   | · Selection of products based on the amount of GHG emissions<br>· Rushed introduction of a carbon tax | · Enhanced value of forest resources<br>· Expanded market for biomass products<br>· Establishment of a system for carbon credits |
| Acceleration of elimination and reduction of plastic                         | · Reversion to plastic use through such means as establishment of reuse technologies                  | · Replacing plastic with paper and rising demand for biomass products  |
| Entrenchment of new lifestyle patterns brought about by COVID-19             | · Further reduction in demand for graphic paper due to such factors as advances in digitalization     | · Expanded sales opportunities for household products addressing increased consumer awareness of health and hygiene              |

## FY2023/3 Important Issues

The business environment for the paper business is becoming increasingly harsh due to the soaring price of coal, and reducing coal consumption is not only an issue in regard to decreasing GHG emissions, but also directly relates to earnings. In addition, growing businesses may secure a certain level of earnings under this harsh environment, but Opal's earnings

have been slow to recover and early measures are essential. To improve these situations, in FY2023/3, the Company will make additional revisions to product prices including paper, paperboards, and liquid packaging boards, while tackling the following three important issues.

| Important Issues                                    | Main Initiatives   |
|---|--|
| <b>(1) Accelerate reduction of coal consumption</b> | <ul style="list-style-type: none"> <li>· Limit or temporarily shut down coal boilers</li> <li>· Consolidate maintenance shutdowns of production facilities</li> </ul>  |
| <b>(2) Structural reform of the Paper Business</b>  | <ul style="list-style-type: none"> <li>· Reduce variable and fixed costs not bound by conventional concepts</li> <li>· Maximize production efficiency in such ways as narrowing down product grades</li> <li>· Propose plans to reorganize the production structure from a medium- to long-term perspective</li> </ul> |
| <b>(3) Improve the profitability of Opal</b>        | <ul style="list-style-type: none"> <li>· Firmly capture sales opportunities through market growth</li> <li>· Assure emergence of synergistic effects</li> <li>· Strengthen the integrated packaging production system</li> </ul>   |

## Strengthen New and Growing Businesses

New and growing businesses generally progressed as planned, including development of new products, promotion of expanded sales and launching operation of new facilities. Going forward, the aim is to achieve Medium-Term Business

Plan 2025 by steadily realizing the effects of each of these measures and expanding earnings by responding to changing trends in demand and the economic environment, and striving to respond to new needs that help resolve social issues.

| Business                       | Main Progress in FY2022/3   | Main Initiatives for FY2023/3 Onward   |
|--------------------------------|---|--|
| Paperboard                     | <ul style="list-style-type: none"> <li>· Expanded sales of kraft linerboard with high burst strength</li> </ul>   | <ul style="list-style-type: none"> <li>· Expand distribution functions through Diamond Trading Inc.</li> <li>· Develop high-value-added products utilizing proprietary kraft pulp</li> </ul>   |
| Domestic Packaging             | <ul style="list-style-type: none"> <li>· Expanded adoption of School POP®, strawless milk cartons</li> <li>· Launched operations of state-of-the-art CI flexo printing press</li> </ul>   | <ul style="list-style-type: none"> <li>· Expand sales of high-value-added products such as NSATOM®</li> <li>· Deepen relations with Elopak ASA, pursue new business opportunities</li> <li>· Strengthen collaboration with NDP</li> </ul>  |
| Overseas Packaging             | <ul style="list-style-type: none"> <li>· Appearance of synergistic effects</li> <li>· Acquired new, large-scale contract for copy paper</li> </ul>  | <ul style="list-style-type: none"> <li>· Firmly capture sales opportunities through market growth</li> <li>· Assure emergence of synergistic effects</li> <li>· Strengthen the integrated packaging production system by constructing a new corrugated box plant, upgrading equipment at existing corrugated box plants, etc.</li> </ul> |
|                                | <ul style="list-style-type: none"> <li>· Expanded pulp sales due to operation of pulp drying machine</li> <li>· Launched operations of the metal belt calendar</li> </ul>   | <ul style="list-style-type: none"> <li>· Develop high-value-added products in collaboration with the domestic Packaging Business</li> <li>· Maximize sales volume of dry pulp</li> </ul>   |
| Household Paper and Healthcare | <ul style="list-style-type: none"> <li>· Shifted all toilet paper rolls to long-lasting rolls</li> </ul>  | <ul style="list-style-type: none"> <li>· Maximize pulp utilization within the Group</li> <li>· Improve quality through unique technologies, launch new products</li> </ul>   |
| Chemical/New Materials         | <ul style="list-style-type: none"> <li>· Increased production capacity of functional cellulose-coated resins</li> <li>· Expanded application of cellulose products, including CNF</li> <li>· Succeeded in verification of an LED light in a CNF electricity storage body</li> </ul> | <ul style="list-style-type: none"> <li>· Develop markets for new cellulose products and establish manufacturing technologies at an early stage</li> <li>· Assure emergence of capital investment effects</li> </ul>  |
| Energy                         | <ul style="list-style-type: none"> <li>· Commissioned by NEDO for an outsourcing project to research CCUS</li> <li>· Converted the Suzukawa Energy Center to a biomass mono-firing power plant</li> </ul>   | <ul style="list-style-type: none"> <li>· Operations at Yufutsu Energy Center</li> </ul>  |
| Wood/Building Material         | <ul style="list-style-type: none"> <li>· Expanded sales of biomass fuel</li> </ul>  | <ul style="list-style-type: none"> <li>· Expand the domestic log handling volume</li> <li>· Further strengthen the biomass fuel/non-fossil fuel businesses</li> </ul>  |

# Promoting Change and Acceleration through Proactive Statements Aimed at Sustainable Growth



As the social environment undergoes drastic changes, the Nippon Paper Group is working to accelerate the transformation of the business structure as “a comprehensive biomass company shaping the future with trees,” and governance must be strengthened even further. In this roundtable discussion, Makoto Fujioka, Yoko Hatta, and Yutaka Kunigo spoke from the perspective of outside directors.

## Leadership by the Board of Directors sought in an age of uncertainty

— In an age of uncertainty, what do you think about the role of the Board of Directors in corporate management?

**Fujioka:** Unimaginable circumstances, whether it be the COVID-19 pandemic or Russia’s invasion of Ukraine, have had an extensive impact on corporate activities. We need to fully comprehend that we have entered an age in which the unthinkable has actually occurred.

In the business world, a common perception about the age of “VUCA” (Volatility, Uncertainty, Complexity, Ambiguity) began to spread in the 2010s. In other words, the pandemic and the emergence of geopolitical risks are not coincidental or temporary phenomena. I believe that the economy and society were already undergoing a paradigm shift, and that the various problems occurred due to the previously mentioned impacts. Even though we are in an age which has an extremely

uncertain business environment as I explained, companies need to squarely address the issues, generate social value, and achieve sustainable growth. The role of the Board of Directors, which is the core of corporate governance, is becoming increasingly significant.

It is important to consider the specific roles of the Board of Directors from three perspectives. First, although sudden shifts require short-term action, in ordinary times, the Board of Directors takes a long-term view and ascertains the direction society and the economy are headed. Second, it creates a resilient, flexible management structure capable of responding immediately in emergencies. Third, it views unforeseen circumstances, occurring in what seems like a constant stream, as both threats and business opportunities. Based on these perspectives, I think the Board of Directors is required to fulfill the role of a guide, ushering the Company in the right direction. It does this by continuously collecting information about the business environment with its antenna raised high and monitoring management.

## The approach to utilize outside directors is advancing

— How do you evaluate Nippon Paper Industries’ Board of Directors?

**Hatta:** I was appointed as an outside director in 2019, but prior to that, agenda items were circulated just before Board meetings which then proceeded quietly, with hardly any discussion, and agenda items being merely approved according to their drafts. However, my impression is that things have changed quite a bit. The opinions of outside directors are being sought considerably more, and opportunities for outside directors to ask questions are also increasing. Against a market environment in which demand for paper is continuing to decrease significantly, I feel that the awareness of a crisis which requires the Company to change is growing much stronger.

**Kunigo:** Since consideration of the 2030VISION and Medium-Term Business Plan 2025 began, President Nozawa earnestly listened to the opinions of outside directors who said that strategic discussions were necessary, and we became able to have various kinds of discussions. There is now a structure in which, aside from Board of Directors meetings, outside directors also attend meetings of the Group Management Strategy Committee and Management Executive Committee, and are able to ask questions. I am convinced that the Company is incredibly open.

Actually, since Medium-Term Business Plan 2025 was initiated, outside directors have been consulted beforehand in many cases about projects that have yet to be drafted as agenda items. Opinions regarding projects currently under consideration on the execution side are heard, so I think the Company has a rare openness. Additionally, I feel the fact that information is being shared beforehand in such a way leads to constructive dialogue at Board of Directors meetings.

**Fujioka:** I have been serving as an outside director for six years, but feel that the Company has truly changed over that time. Discussions have become incredibly active, explanations about projects are given successively even outside the monthly Board of Directors meetings, and opportunities for discussion have been increasing right before my eyes. There have been some months where I worked on the Company’s business for nine days out of the month. Since 2021, quarterly operational reports have been made by each chief officer and discussions have taken a medium- to long-term perspective at Board of Directors meetings. I think this is a very important change when it comes to creating and enhancing corporate value.

— What type of roles do you think you fulfilled as outside directors at Board of Directors meetings in FY2022/3? Also, what kind of stance did you take when making statements?

**Hatta:** Overall, there were many opportunities to ask questions. Naturally, there were some questions which the executive side was unable to explain, but there were many opportunities for outside directors to question things that had not yet been noted. Also, requests for follow-up reports on important

projects after they had been decided were accepted, and we were able to thoroughly monitor each project.

What I am mindful of is questioning those on the execution side from my end to confirm whether an environment is being established that will make it possible to implement the project and whether there are any bottlenecks that will hinder progress. At that time, I make sure to include the phrase “Please work on it with a sense of urgency.” Currently, in addition to the pandemic, the unimaginable has occurred through Russia’s invasion of Ukraine, affecting the entire world. It is precisely because I am keenly aware of this age of uncertainty that I believe acceleration is critical no matter what I do.

**Kunigo:** Over the course of the year, I made sure to serve as the “watchman of the medium-term plan” at all costs. I examine whether measures incorporated in Medium-Term Business Plan 2025 are being achieved or if progress toward achievement is being made. That is the perspective I hold to be most valuable.

Additionally, I make sure to employ my abundant prior experience and offer my opinions with an outside viewpoint as an expert when it comes to initiatives involving energy and decarbonization, including capital investment in infrastructure.

**Fujioka:** I have reviewed the minutes of the meetings over the past year, and have come to make statements from various angles, including some statements about issues that appear difficult, from a medium- to long-term perspective, in order to further improve the Group’s value. I naturally make statements not only at Board of Directors meetings but also when the execution side is at the planning stage, many of which have been incorporated into actual measures.

For instance, when the 2030VISION and Medium-Term Business Plan 2025 were formulated, I suggested it would be necessary to spread awareness to every single employee on-site to achieve them. Then on the day when the medium-term business plan was announced, President Nozawa himself broadcast a video message to all employees. On top of this, an employee survey was conducted, and the responses have been used to spread awareness of Medium-Term Business Plan 2025 and the 2030VISION. Furthermore, when I proposed the necessity for highly in-depth discussions directly with the president outside Board of Directors meetings, he personally explained the policies aimed at achieving the medium-term business plan before the Personnel & Remuneration Advisory Committee, and opportunities were made for outside directors to ask questions about points of concern and offer their opinions. Beginning in FY2023/3, the number of meetings held increased from the original two times per year to four, which has led to an increase in opportunities for discussion.



**Seeking development of management personnel qualified through diverse business experience**

— From a medium- to long-term perspective, experience in what areas and what types of skills are required of personnel responsible for the Group's management?



**Kunigo:** The Group is making efforts to drastically change its business structure under Medium-Term Business Plan 2025, so I think that people who have gained experience through a wide range of businesses are ideal. In particular, in order to expand the Daily-Life Products Business further, it will be a requirement that such people possess accumulated experience in a business that deals closely with consumers.

Meanwhile, in terms of temperament, leadership that rallies those around them is a must. As the Group's organization is flat, leadership that continuously increases involvement is extremely critical. One more important thing is of course tenacity since

the current management environment is harsh.

**Hatta:** I think being able to see from diverse perspectives and accurately assess what must be achieved and being able to use that skill as an axis for progress is important. However, they will not be able to listen flexibly to other people's opinions if they are too self-assertive, so I think someone who is confident in their way of thinking and has a strong determination to take responsibility while being able to listen to the opinions of those around them is necessary for the Group's management. It is also important to be able to take initiative with a sense of urgency.

**Fujioka:** There are certainly skills required by each division such as sales, research and development, and technology. Additionally, what I want to look for is the ability to develop business. The ability to implement and develop innovative changes from new perspectives is surely necessary even in existing businesses, and in the Daily-Life Products Business, the ability to create new businesses and develop them overseas will become valuable. In addition, in order to make close contact with customers and develop business after gathering information, I think the ability to cross divisions and collaborate with others, including partner companies, will become necessary.

If cases emerge in which the Group, as a comprehensive biomass company, exits the traditional paper business and conducts business broadly in new developing markets, the range and number of management personnel with those abilities will surely become important. For that reason, I think it will be necessary for the Company to invest in personnel development, and enable these people to accumulate experience from the standpoint of taking on responsibility in a range of business divisions, such as managerial experience in overseas businesses or subsidiaries, from a young age.

**Measures undertaken in the first year of the plan were largely praised**

**Looking ahead, "speed" and "lateral communication" will become necessary**

— How do you evaluate the progress of the 2030VISION and Medium-Term Business Plan 2025 in the past year as outside directors?

**Kunigo:** Due to the impact of unthinkable environmental changes, it is true that we are seeing nothing but unfavorable figures. However, the key point to focus on is whether or not the Group can fully apply managerial resources and not use the pandemic or the invasion of Ukraine as excuses. On that point, my evaluation is that measures are being achieved to a certain extent. I also have the impression that steady progress is being made on non-financial initiatives as well.

I fully agree with Chairman and Director Manoshiro and President Nozawa that there is a need to accelerate the speed at which measures are undertaken. Despite the impact from the prolonging of the COVID-19 pandemic and the invasion of Ukraine, the orientation of the measures undertaken in Medium-Term Business Plan 2025 is accurate. However, in addition to the decline in paper demand, we have been forced to address the surge in coal prices, which is precisely why I think acceleration is most crucial. In addressing important management issues, we must make efficient use of people, items, and money. By having people accelerate the speed of decision-making and increasing the circulation of items and money, we should be able to improve the efficiency of limited managerial resources.

For instance, the Group's coal boiler facilities are massive in scale, and changing the way they are handled overnight would be difficult. For that reason, in order to rapidly decrease coal consumption, leadership must be demonstrated. More to that point, if unprecedented leadership, by not only the president but the entire management class, can be demonstrated, decision-making will accelerate even further. For important management issues such as reducing GHG emissions, the Company clarified the responsibilities of executive officers in June 2022. I have very high hopes that those officers will promote the acceleration of information gathering and decision-making.

**Hatta:** In an internal company survey conducted after the formulation of the 2030VISION and Medium-Term Business

Plan 2025, feedback was received from those concerned about a further decline in paper demand going forward. Meanwhile, although I understand the importance of acceleration, it will be difficult to maintain that mindset, and even if those at the top are rushing around, those below will not keep up. In order to accelerate, we must ensure that all employees share a sense of crisis, and maintain their commitment to working together. In perceiving social and economic trends and taking action appropriately as a company in the capital intensive industry that owns massive facilities, a large amount of cash is naturally required, and marketing ability is critical to generating cash and transforming the business structure. I think it will be difficult to produce results immediately, but steadily making efforts is important.

— In last year's integrated report, you said that one of the Group's issues was "lateral communication." Have you seen improvements to this in the past year?

**Hatta:** It appears that the employees have developed a strong tendency to work hard solely on managing their own positions in a business model involving the mass production of paper. Through Medium-Term Business Plan 2025, all employees recognized the necessity of lateral communication and realized that action must be taken, but just like before, the mindset that the Company should sustain its own position remains. To break free of that mindset, efforts are being made to cooperate horizontally across organizations, such as launching a team to collaborate on research, technology, logistics, and more. The team issues a report every quarter, and I feel it has started to serve a purpose. Amid an environment where change is inevitable, these gradual adjustments are reassuring.



**Kunigo:** This ties into the conversation about consulting outside directors about projects before they are drafted as agenda items, but I feel that there is strong enthusiasm toward listening to external opinions.

**Fujioka:** I strongly feel that sharing of awareness toward innovative changes and enthusiasm for those changes is rising. That is perhaps why the number of agenda items being brought to the Board of Directors is on the rise. The level of activity throughout the Company overall is undoubtedly increasing. Amid what has of course recently been a harsh business environment, although the results

of these efforts may not become visible immediately, I am confident that they will emerge in the medium to long term.

**Maximizing managerial resources, honing sales abilities, and expecting a transformation into a true comprehensive biomass company**

— What kind of expectations do you all have for the future growth of the Group?

**Hatta:** It is important now to harness the advanced potential of wood and explore future business development. In order to do so, I think it will be extremely difficult if the Group continues to employ conventional methods. I think utilizing the capabilities of young people and making concrete efforts as a unified group while proactively incorporating diverse opinions through active discussion will lead to acceleration.

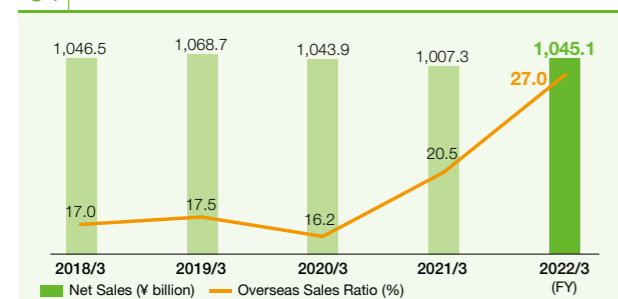
**Kunigo:** First of all, I often speak about harnessing the expertise of operators at manufacturing sites. Second, because many of the Company's products use materials from the uppermost stream, differentiating the products themselves is difficult, and the reality is that profit margins are slim. For precisely that reason, we expect to expand our business in wood resources, especially cellulose, and actively shift downstream, closer to consumers. Additionally, as for the point of using Company-owned forests, I think they have further potential.

**Fujioka:** I spoke about this in last year's roundtable discussion, but I have strong expectations that the Company will transform into a true comprehensive biomass company based on its slogan of "shaping the future with trees." Wood is itself a renewable resource, and the Company will be able to help form a circulating economy through the development of businesses utilizing that wood. In other words, by developing business, it will be able to improve the very social value it provides. With the human resources, technological capabilities, and wood resources it owns and manages and the partnerships it has built up in a wide range of areas, the Group could make it happen. I believe that effectively exploiting these managerial resources will make it possible to realize its Vision and become a unique and meaningful company. For that reason as well, it will be necessary to strengthen collaboration with a focus on sales departments across the entire Group and improve sales capabilities.



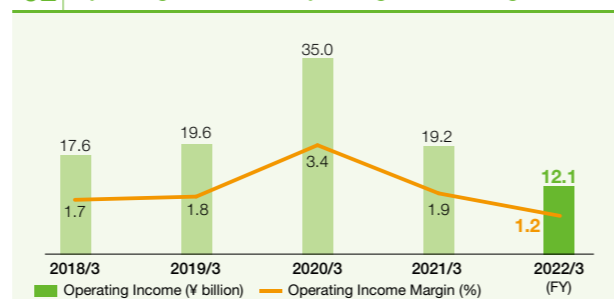
## Financial Highlights

### 01 Net Sales and Overseas Sales Ratio



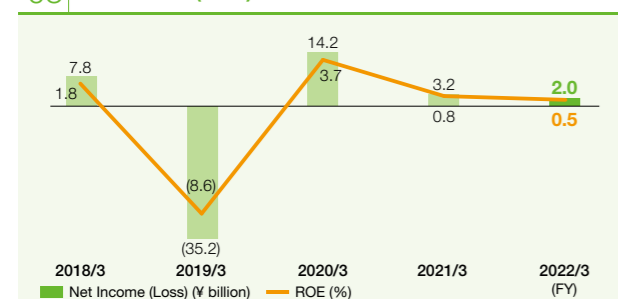
Net sales in FY2022/3 totaled ¥1,045.1 billion, exceeding the previous fiscal year, due in part to a rebound from decreased demand during the COVID-19 pandemic. In addition, the overseas sales ratio grew to 27.0%, partially because of the full-year contribution from the paperboard and fiber-based packaging business of Opal, which was transferred to the Nippon Paper Group in 2020.

### 02 Operating Income and Operating Income Margin



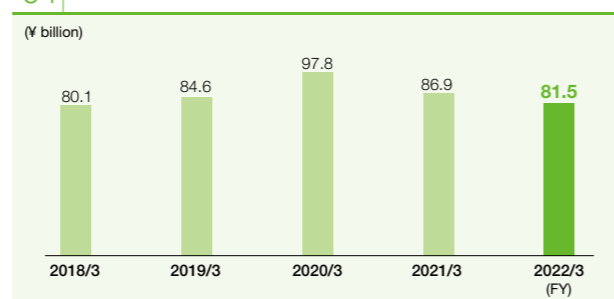
In FY2022/3, operating income was ¥12.1 billion, while the operating income margin was 1.2%. Both were lower than the previous fiscal year due largely to the impact of surges in fuel prices. In Medium-Term Business Plan 2025, the Group aims to achieve operating income of ¥40.0 billion or more at an early stage, and will advance initiatives to improve earnings.

### 03 Net Income (Loss)\*1 and ROE\*2



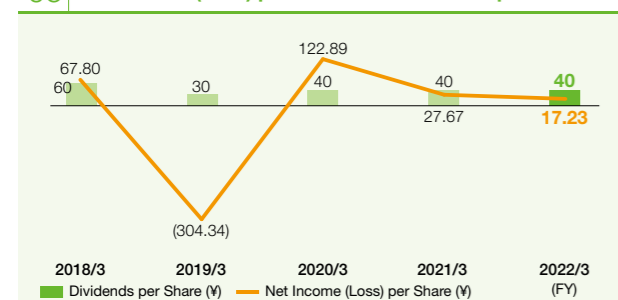
As a result of recording expenses incurred from the reorganization of the production structure undertaken to accelerate the business structure transformation as extraordinary loss, net income in FY2022/3 was ¥2.0 billion. The Group will improve ROE by the latter half of Medium-Term Business Plan 2025, and targets ROE of 5.0% or more.

### 04 EBITDA\*3



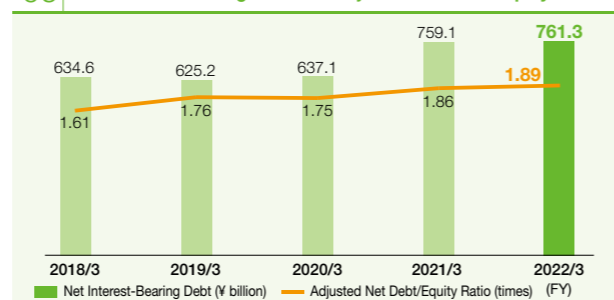
EBITDA has remained in the ¥80.0–90.0 billion range for the past few years, and totaled ¥81.5 billion in FY2022/3. The Group aims to stably record EBITDA of ¥100.0 billion in order to enhance the usage of capital such as for investment toward growth and repayment of debts and shareholder returns.

### 05 Net Income (Loss) per Share and Dividends per Share



Net income per share in FY2022/3 was ¥17.23. The Group has established a basic policy of determining shareholder returns after comprehensively considering factors such as results and the status of internal reserves, and paid dividends per share of ¥40 in FY2022/3.

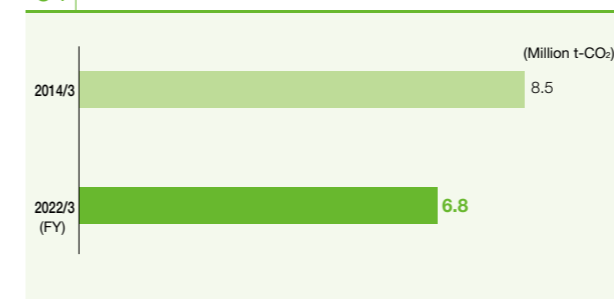
### 06 Net Interest-Bearing Debt and Adjusted Net Debt/Equity Ratio\*4



Net interest-bearing debt at the end of FY2022/3 increased slightly from the previous fiscal year, and the adjusted net debt/equity ratio was 1.89 times. The Group will accelerate business structure transformation, aiming to achieve an adjusted net debt/equity ratio of 1.5 to 1.6 times, a target of Medium-Term Business Plan 2025.

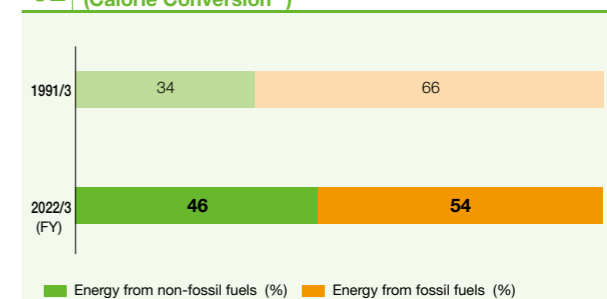
## Non-Financial Highlights

### 01 Greenhouse Gas Emission Volume\*1



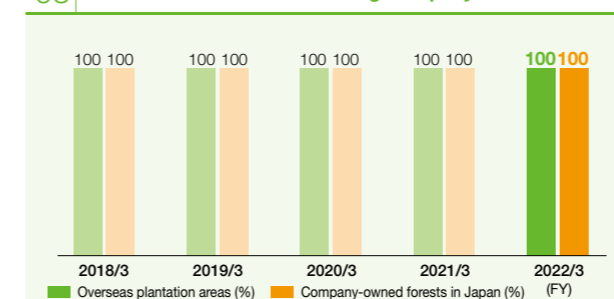
The Company promotes energy conservation measures and fuel conversion to woody biomass and waste-oriented fuels aiming for carbon neutrality by 2050, while advancing scenarios depicted in the 2030VISION ahead of schedule, through additional measures.

### 02 Non-Fossil Energy Use Ratio in the Group\*1 (Calorie Conversion\*2)



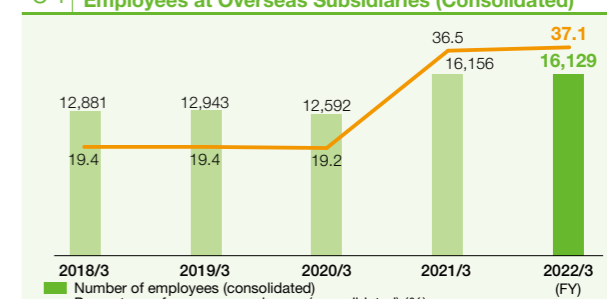
In order to reduce GHG emissions, the Company works to improve the non-fossil energy use ratio, while promoting resource circulation in Japan by accelerating the conversion from fossil fuels such as coal to non-fossil fuels like woody biomass and waste-oriented fuels.

### 03 Forest Certification Rate among Company-Owned Forests



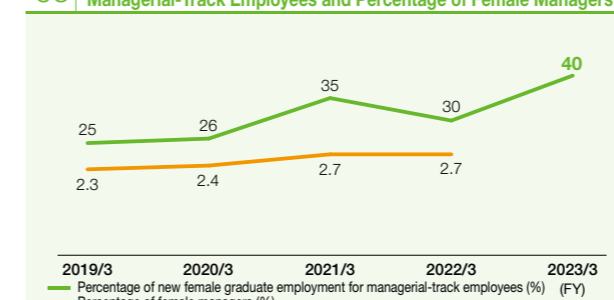
The Company conducts sustainable forest management with consideration for the environment, society, and the economy in the approximately 160,000 hectares of forests it manages both in Japan and overseas, and has obtained forest certification for all of them.

### 04 Number of Employees (Consolidated) and Percentage of Employees at Overseas Subsidiaries (Consolidated)



The Company is making advancements in reassigning employees to new businesses and growing businesses in order to accelerate business structure transformation. In growing businesses, it focuses on capturing overseas markets, and continues to expand business with a focus on Southeast Asia and Oceania, where population increase and economic growth are expected.

### 05 Percentage of New Female Graduate Employment for Managerial-Track Employees and Percentage of Female Managers\*3



In order to promote diversity, the Company formulated the Action Plan for the Advancement of Women in April 2021. It is working on arranging environments to achieve its targets and on increasing the number of women hired for managerial-track employment.

### 06 Number of Meetings Attended by Outside Directors (Average of Three People in FY2022/3)

- Board of Directors meetings: 13 times
- Group Management Strategy Committee meetings: 23.3 times
- Personnel & Remuneration Advisory Committee meetings: 3 times
- Meetings with institutional investors: 2 times
- Management Executive Committee meetings: 11.3 times
- Other meetings: 47 times

The Company continues to ensure opportunities for outside directors to attend meetings with institutional investors and meetings to discuss business strategy and enhance functions in order to strengthen corporate governance.

\*1 Profit (loss) attributable to owners of parent \*2 Return (loss) on equity (ROE) = Profit (loss) attributable to owners of parent / [Average of balances at the beginning and end of fiscal year (Shareholders' equity + Accumulated other comprehensive income)] x 100 \*3 EBITDA = Operating income + Depreciation + Interest income + Dividend income + Amortization of goodwill \*4 Adjusted net debt/equity ratio = (Net interest-bearing debt - Equity-type debt) / (Shareholders' equity + Equity-type debt\*) \*5 Equity-type debt: The amount of debt financed by hybrid loans that has been recognized as equity credit by ratings agencies (50% of the financed amount)

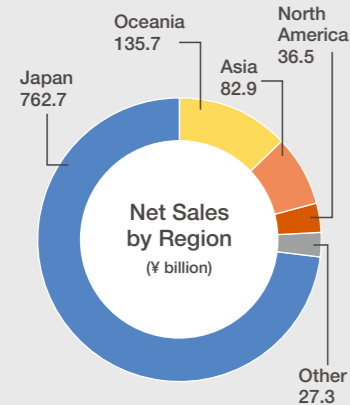
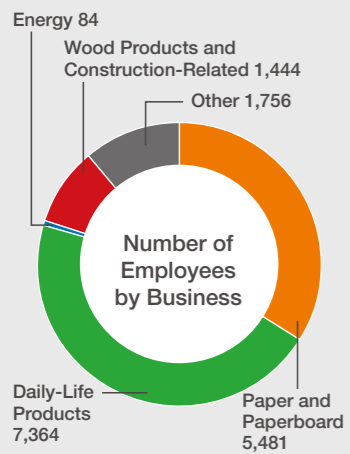
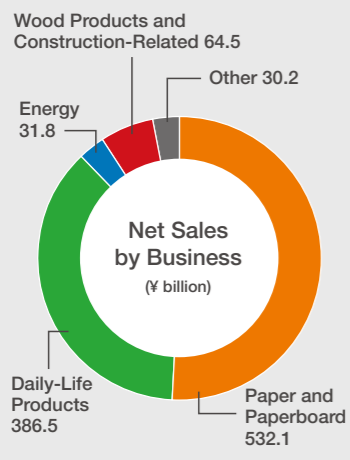
\*1 Consolidated and non-consolidated subsidiaries \*2 Estimate by Nippon Paper Industries based on domestic primary energy supply data (finalized data for FY2020/3) by the Agency for Natural Resources and Energy \*3 Nippon Paper Industries



## FY2022/3 Results

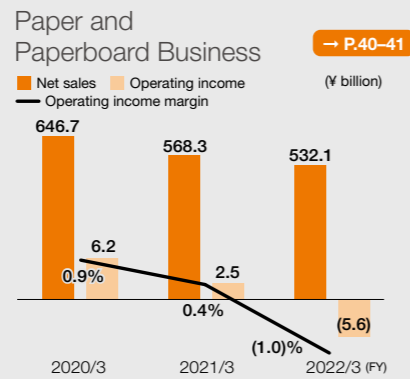
[ Net sales ]  
**¥1,045.1 billion**

[ Operating income ]  
**¥12.1 billion**



## Main Products and Services / Key Indices

## Overview of Business and Financial Results

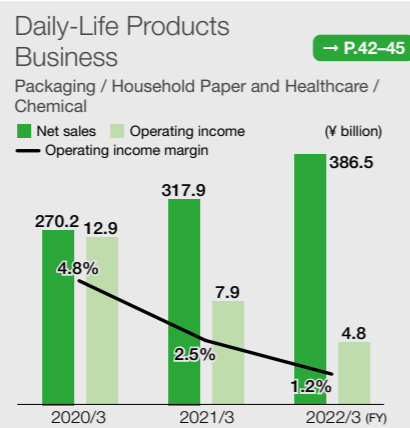


**Paper:** Newsprint, printing paper, business communication paper, industrial paper, functional specialty paper, functional paper  
**Paperboard:** Containerboards, white paperboards

Net sales: **¥532.1 billion** (Down 6.4% YoY)  
 Operating income: **¥(5.6) billion**  
 Consolidated subsidiaries: **9** subsidiaries (5 domestic, 4 overseas)

**Paper:** Develops and sells environmentally friendly products that leverage paper's recyclability and biodegradability, in addition to products that pursue paper's function of conveying information.  
**Paperboard:** Supplies products with outstanding safety, adhesion, and ease of conversion through environmentally friendly, cutting-edge manufacturing technology and product development that responds to the changing times.

Sales volume of newsprint in Japan decreased from the previous fiscal year, mainly due to the impact of the halt of operations caused by earthquakes. Sales volume of printing paper in Japan increased from the previous fiscal year, reflecting a rebound from a large decline in demand caused by the COVID-19 pandemic in the previous fiscal year. Sales volume of containerboards in Japan rose from the previous fiscal year, owing to steady demand for processed foods and mail-order products, in addition to a recovery in demand for industrial products and similar items. Operating loss was recorded due to surging prices for raw materials and fuel, such as coal, oil, and wood chips, for both paper and paperboard. The effects of the price revisions announced in the latter half of 2021 will emerge primarily in FY2023/3.

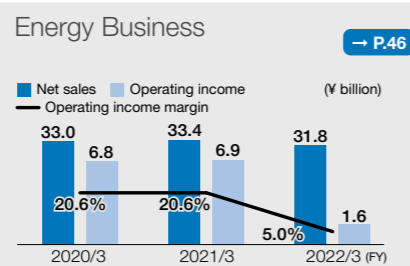


**Packaging:** Liquid packaging cartons (domestic), corrugated boxes (overseas)  
**Household Paper and Healthcare:** Facial tissues, toilet paper rolls, adult diapers  
**Chemical:** Dissolving pulp, chemical products, functional coating resin products, functional films

Net sales: **¥386.5 billion** (Up 21.6% YoY)  
 Operating income: **¥4.8 billion** (Down 39.6% YoY)  
 Consolidated subsidiaries: **24** subsidiaries (5 domestic, 19 overseas)

**Packaging:** In Japan, engages in a variety of operations, ranging from conversion of liquid packaging boards to sales and maintenance services for filling machines. Overseas, produces and converts materials for packaging at Opal and Nippon Dynawave Packaging Company, LLC (NDP).  
**Household Paper and Healthcare:** Provides a wide variety of products, including household product brands Kleenex® and SCOTTIE®, healthcare products and business-use products.  
**Chemical:** Provides chemical and other products harnessing technologies to utilize wood resources for various materials and coating technology developed through paper production.

In the domestic Packaging Business, sales volume of liquid packaging cartons decreased slightly from the previous fiscal year due to the effects of the COVID-19 pandemic. In the overseas Packaging Business, net sales increased, and losses contracted because of the steady operation of NDP's pulp drying machine, in addition to improved earnings at Opal. In the Household Paper and Healthcare Business, net sales increased year on year mainly due to a rebound from a decline in demand caused by the COVID-19 pandemic in the previous fiscal year. However, earnings decreased due to surging prices for raw materials and fuel, such as pulp. In the Chemical Business, earnings improved, supported by an increase in sales volume of dissolving pulp and a recovery in market price. In addition, demand for functional films and chemical products remained mostly firm.

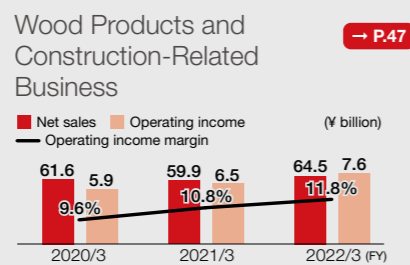


Electricity sales

Net sales: **¥31.8 billion** (Down 4.8% YoY)  
 Operating income: **¥1.6 billion** (Down 76.9% YoY)  
 Consolidated subsidiaries: **1** subsidiary (1 domestic)

Engages in the power generation business using woody biomass fuels and other energy sources, harnessing operational expertise from in-house power generation. Also develops new woody biomass fuels with a view to building a carbon-neutral society.

In the Energy Business, net sales decreased due to the end of volatility mitigation measures in the feed-in tariff (FIT) system to promote renewable energy. Operating income decreased mainly due to soaring prices for raw materials and fuel, such as coal.

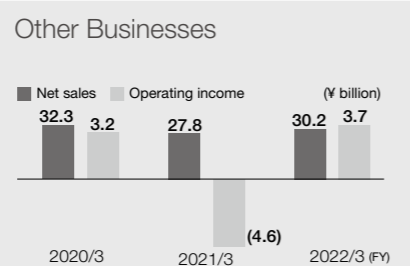


Logs, building materials, raw materials and fuel for papermaking

Net sales: **¥64.5 billion** (Up 7.7% YoY)  
 Operating income: **¥7.6 billion** (Up 17.1% YoY)  
 Consolidated subsidiaries: **13** subsidiaries (9 domestic, 4 overseas)

Buys and sells logs and building materials from Japan and overseas, and supplies items such as fuel wood chips, fully utilizing the Nippon Paper Group's domestic wood materials and imported materials procurement networks. Conducts plantation businesses in Brazil, producing and selling wood chips.

In the Wood/Building Material Business, net sales and earnings both increased due to factors such as surging prices reflecting a supply shortage for lumber on a global scale, as well as an increase in the number of housing starts and growth in sales volume of fuel wood chips. Overseas, sales of wood chips at AMCEL were firm.



Leisure facility management, logistics and warehouse management

Net sales: **¥30.2 billion** (Up 8.4% YoY)  
 Operating income: **¥3.7 billion**  
 Consolidated subsidiaries: **7** subsidiaries (7 domestic)

The leisure business operates facilities such as ski resorts, campsites, and golf ranges. The logistics business transports paper products shipped from Nippon Paper Group mills and other sites and provides storage services at warehouses.

In the leisure business, net sales increased year on year owing to factors such as an increase in the number of visitors to ski resorts and golf ranges following facility expansions, despite being impacted by the spread of COVID-19. In the logistics business, a recovery in demand for paper and paperboard products resulted in an increase in net sales.

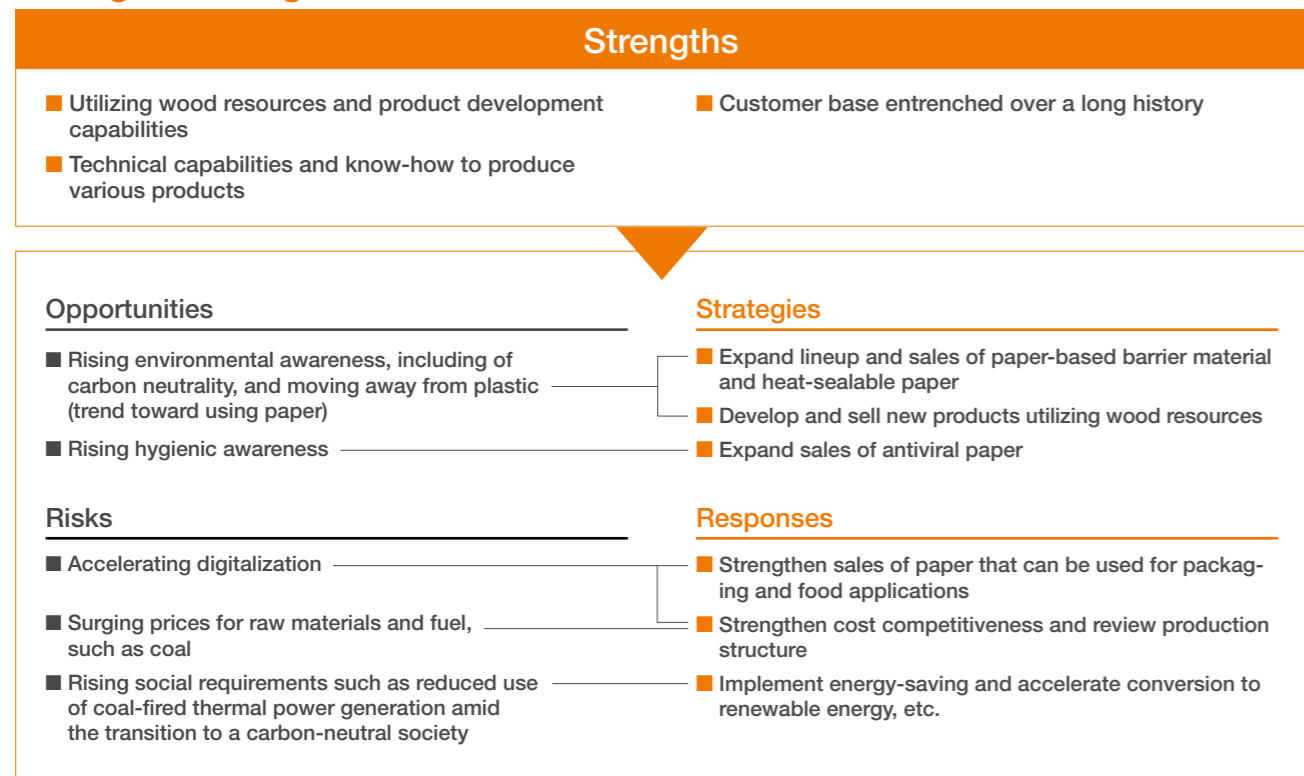


\* Results for FY2020/3 have been reconstructed to reflect the reportable segments used for FY2021/3 onward  
 \* Operating income in other businesses for FY2021/3 results includes ¥6.0 billion in expenses related to the acquisition of the packaging division of Orora Limited in Australia and New Zealand



## Paper Business

### Strengthen Cost Competitiveness and Profitability through a Reorganized Production Structure



### Growth Strategies

The markets for newsprint, printing paper and copy paper appear likely to shrink even further as digitalization accelerates due to the spread of COVID-19. Moreover, FY2022/3 endured significant impacts from such factors as logistics disruptions caused by the COVID-19 pandemic and rising raw material and fuel prices from greenflation accompanying climate change measures.

The Company is focusing on two points from Medium-Term Business Plan 2025, strengthening cost competitiveness and reviewing production structure.

Regarding the first point of strengthening cost competitiveness, the Company is accelerating a decrease in the consumption of coal, of which the price is surging. The Company is working on energy-saving and fuel conversion to biomass and other fuels, controlling output of coal boilers and maximizing production efficiency by narrowing production items, and building an operating structure that achieves a reduction in the consumption of coal.

On the second point of reviewing the production structure, the Company will make proposals for a new, reorganized production structure during the first half of FY2023/3 and progress restructuring in anticipation of reduced demand for paper.

Meanwhile, moves toward carbon neutrality and reduced use of plastic are accelerating globally, and applications for wood resources are expected to expand given they have outstanding biodegradability and are renewable. The Company aims to establish a position within the flexible paper market by

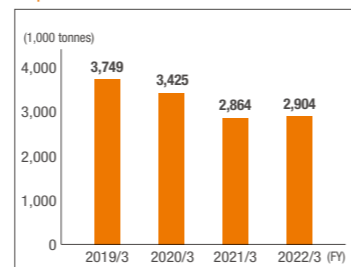
enhancing the lineups and expanding sales of SHIELDPLUS® paper-based barrier material and Lamina® heat-sealable paper. In addition, as the trend of switching to paper for packaging and food applications is progressing, the Company will aim to strengthen sales of products for these applications.

The Company will implement reorganization of the production structure while rigorously reducing costs and expanding sales of paper products that respond to resolving social issues.

Production Capacity Reduction Implemented since FY2019/3

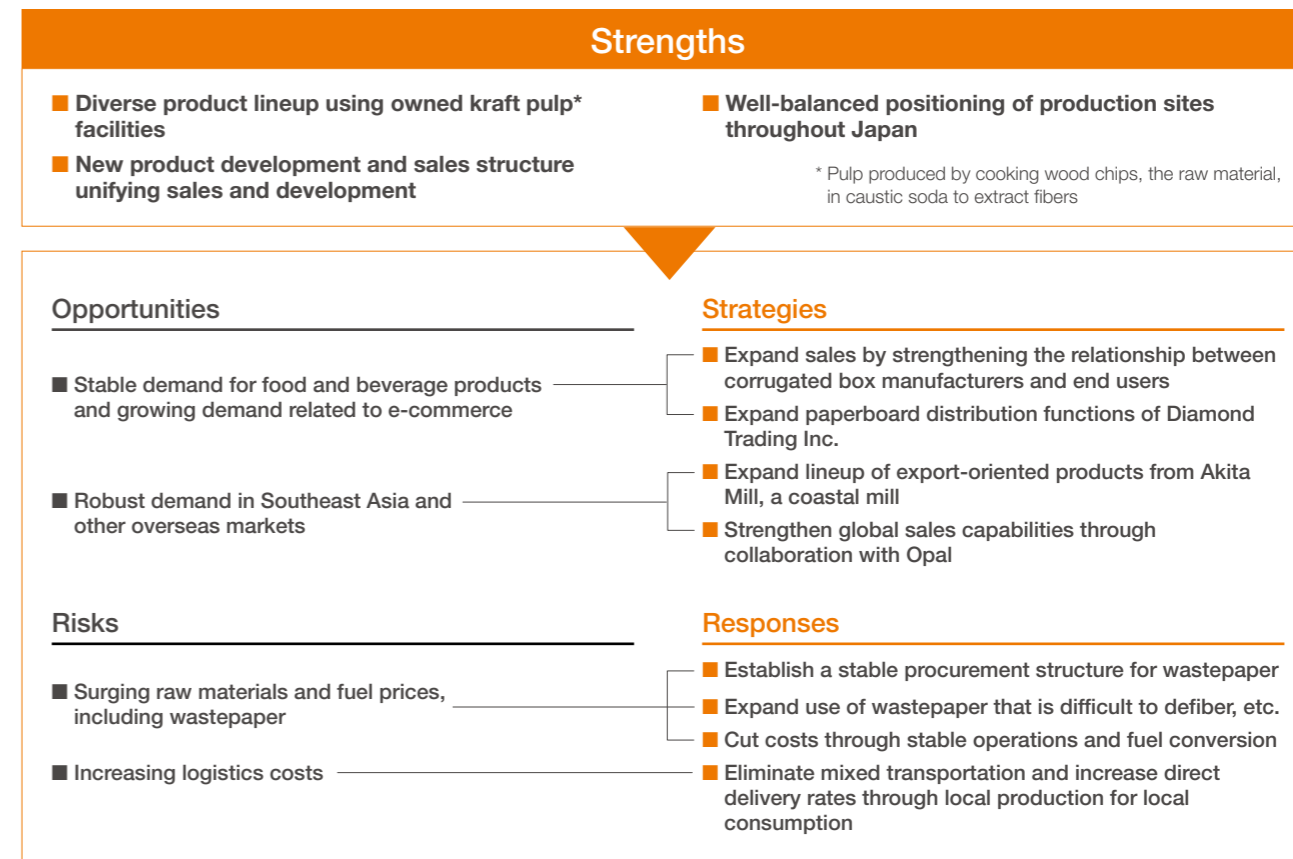
| FY     | Details   | Reduced Capacity (1,000 tonnes/year) |
|--------|---|--------------------------------------|
| 2019/3 | Akita Mill: Shut down 1 coating machine<br>Ishinomaki Mill: Shut down 1 coating machine   | 233                                  |
| 2020/3 | Fuji Mill: Withdrew from the paper business<br>Kushiro Mill: Shut down 1 paper machine<br>Hokkaido Mill-Yufutsu: Withdrew from the paper business | 531                                  |
| 2022/3 | Kushiro Mill: Withdrew from the pulp and paper business   | 221                                  |
| 2023/3 | Ishinomaki Mill: Shut down 1 paper machine  | 271                                  |

Paper Sales Volume



## Paperboard Business

### Expand Sales by Maximizing Utilization of Kraft Pulp Facilities



### Growth Strategies

Amid a trend of global greenflation, FY2022/3 saw a significant impact from the rising prices of raw materials and fuel. To ensure cost competitiveness not affected by the prices of raw materials and fuel, the Company is progressing toward fuel conversion at an early stage as well as further strengthening the structure for stable procurement of wastepaper and moving forward on initiatives to expand use of such items as wastepaper that is difficult to defiber.

In terms of sales, corrugated boxes are expected to hold strong going forward, supported by a wide array of needs as there is stable demand for use as a packaging material for daily necessities such as food and beverages and demand related to e-commerce is growing. To capture this growing market in the



Akita Mill possesses kraft pulp facilities

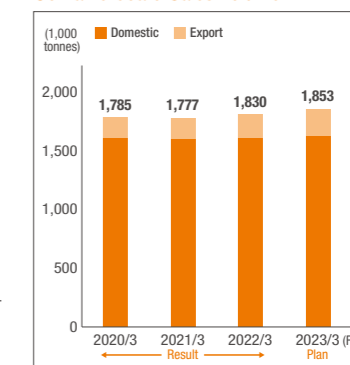
future, Diamond Trading Inc. was launched in April 2022 following the merger of the paperboard business of the Nippon Paper Group's NP Trading Co., Ltd. and the Mitsubishi Corporation Group's Mitsubishi Corporation

Packaging Ltd. The expanded distribution functions will strengthen sales capabilities for paperboard and industrial paper.

In addition, the Company will focus on development of high-value-added products using kraft pulp manufactured in-house and working to differentiate from competitors. And while leveraging development capabilities as a comprehensive paper manufacturer to develop unique containerboards, efforts are also moving forward to expand the product lineup in response to robust demand in Southeast Asia and other overseas markets. Utilizing its well-balanced positioning of production sites throughout Japan, including the coastal Akita Mill, the Company will stably supply products within Japan and overseas.

Going forward, while ensuring to address stable demand, the Company will also expand containerboard sales.

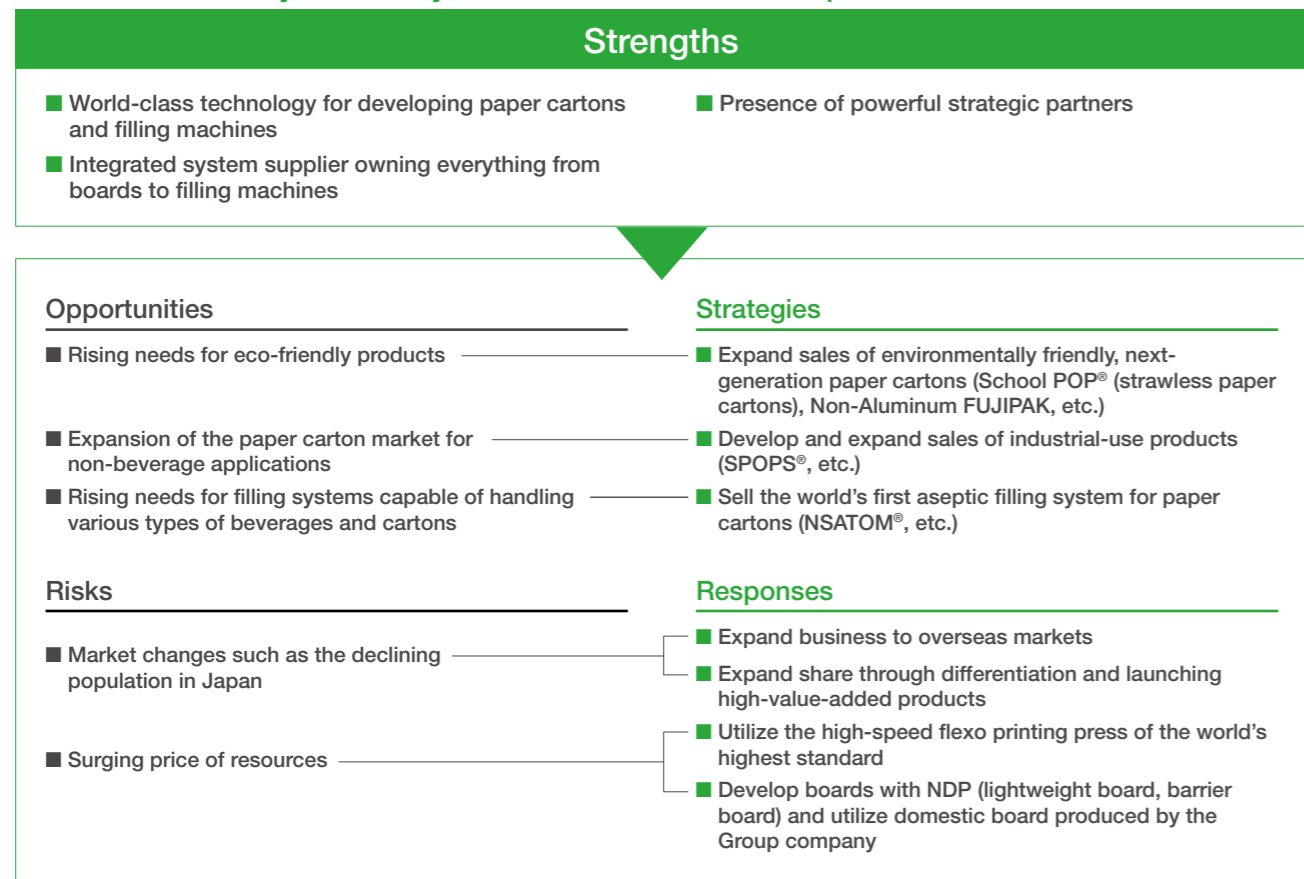
Containerboard Sales Volume





## Domestic Packaging Business

### Develop Business in Overseas Markets and Expand Sales of Environmentally Friendly, Next-Generation Paper Cartons



### Growth Strategies

Due to the impact of COVID-19, the domestic market has been on a downward trend for the past several years, but needs are increasing in Japan and overseas for the new type of environmentally friendly paper carton Nippon Paper Industries has been developing.

To respond to this business environment, the Company is focusing on two points: expanding business to overseas markets and expanding sales of environmentally friendly, next-generation paper cartons.

The first point of expanding business to overseas markets involved acquiring a stake in Elopak ASA, a liquid packaging carton company, in June 2021. In March 2022, the Company



Thomas Körmendi, CEO of Elopak ASA, and Yasuhito Obayashi, Senior Managing Executive Officer of Nippon Paper Industries Co., Ltd.

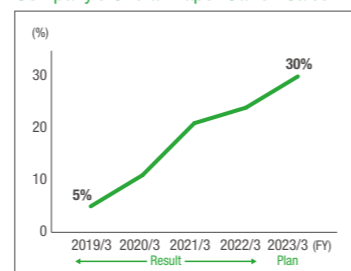
concluded a licensing agreement in the Oceania region, established a local subsidiary in June 2022, and set up a sales structure for Elopak and Nippon Paper Industries brand paper cartons and Shikoku Kakoki Co., Ltd.'s filling machines. The Company is aiming to capture a 10%

share of the Oceania region market over the coming five years.

On the second point of expanding sales of next-generation paper cartons, there has been a drastic expansion in areas using School POP® (strawless paper cartons for schools) throughout Japan and an increase in the number of adoptions of environmentally friendly paper cartons, Non-Aluminum FUJIPAK, and SPOPS® due to rising environmental awareness. A transition to these new containers has been taking place since 2016, and they are forecast to make up 30% of the Company's paper carton sales in 2022. In addition, the CI flexo printing press operational from October 2021 is a state-of-the-art facility with advanced printing capabilities and will strengthen production of high-value-added products and cost competitiveness.

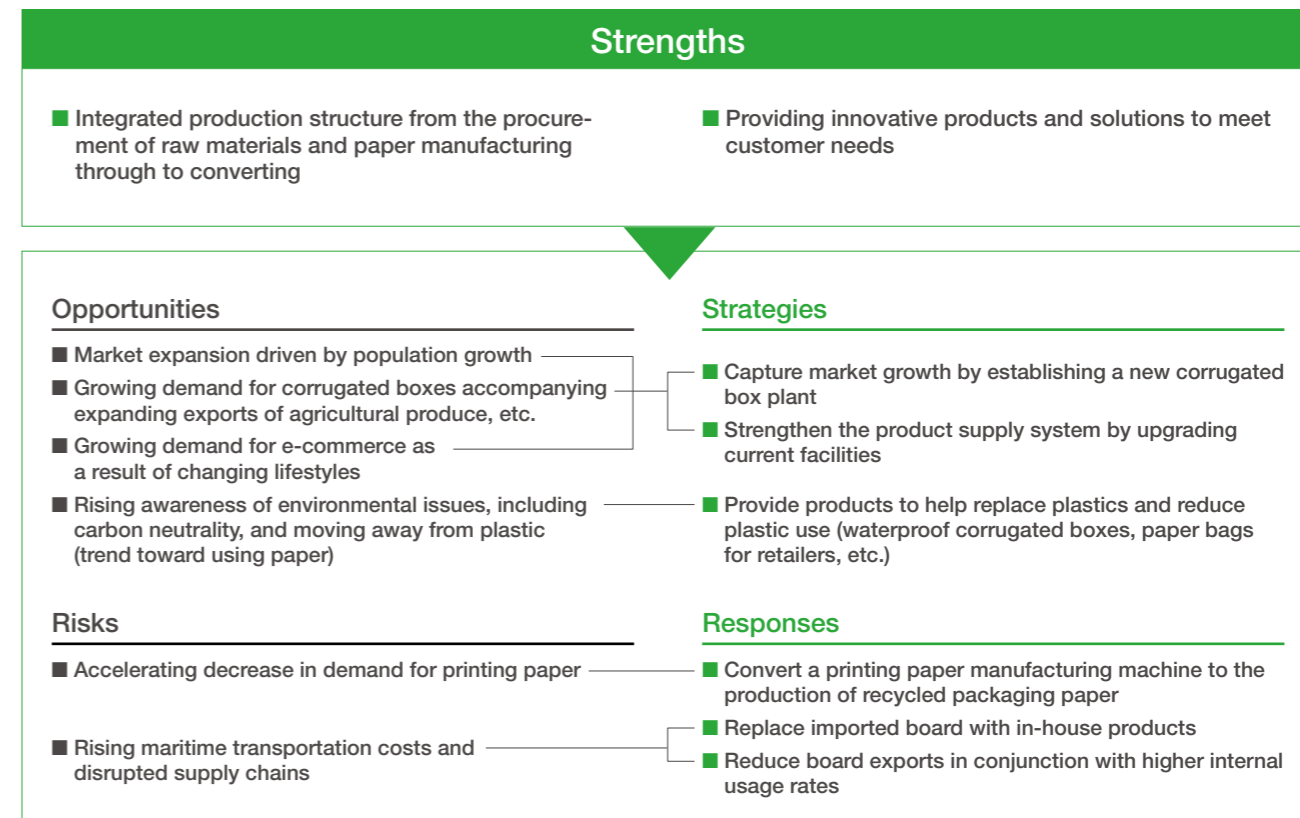
The Paper-Pak Business will steadily strengthen its business foundation as one of the world's leading integrated system suppliers.

Percentage of New Products among the Company's Overall Paper Carton Sales



## Opal

### Further Strengthen the Integrated Packaging Production Structure



### Growth Strategies

In Australia, demand for corrugated boxes is expected to expand in line with market growth, due to an increase in population and rise in e-commerce, but the impact of COVID-19, including a sudden increase in working from home, is accelerating the decrease in demand for printing paper. In addition, soaring energy prices and maritime transportation costs are causing disruptions in the supply chain.

To respond to this changing business environment, Opal is focusing on strengthening its integrated production structure from raw material procurement through to packaging board production and converting. Specifically, one printing paper machine was converted to produce recycled packaging paper, which is being supplied to the packaging division. Promoting expanded use of internally produced packaging board decreases the impact of fluctuations on export markets and supply chain risks.



Waterproof corrugated boxes used as an alternative to styrofoam

In addition, a new corrugated box plant will be constructed in Victoria, Australia to cater for growing market demand. Facilities at the existing corrugated box plants will be upgraded in sequence and the product supply



Conceptual image of the completed new corrugated box plant in Victoria, Australia

system will be strengthened.

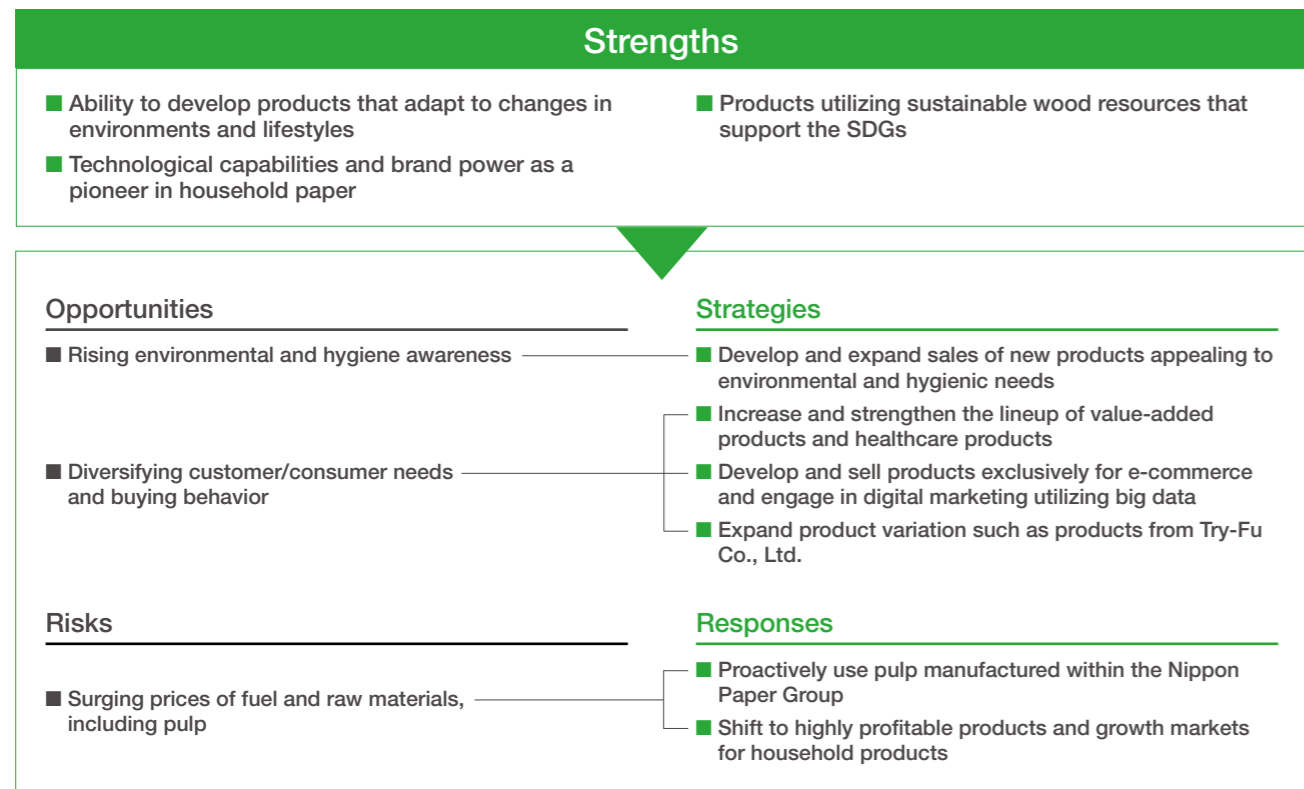
Rising environmental awareness and the introduction of new regulations have led to a growing trend to switch packaging from plastic materials, with a higher environmental impact, to paper materials. To respond promptly to these market needs, collaboration between Opal's Paper and Packaging Divisions is escalating, which will lead to expanded sales of packaging products.

In addition to improving current profitability, Opal will continue to shift its strategic focus from graphic paper to the Packaging business including corrugated boxes, and accelerate structural reform to increase profitability into the future.



## Household Paper and Healthcare Business

### Always Hygienic: Develop and Nurture Products to Solve Social Issues



### Growth Strategies

The spread of COVID-19 has raised global awareness of the environment and hygiene. Significant changes in lifestyle environments have diversified consumer needs and buying behaviors. Nippon Paper Crecia Co., Ltd. is focusing on expanding sales of products that improve consumer convenience and reduce the burden on the environment by developing new products for and expanding its lineup that appeals to environmental and hygienic needs.

The long-lasting rolls, which were switched from standard 12-roll toilet paper products in April 2021, will improve consumer convenience by decreasing the number of replacements, saving space and making them easier to carry. It will also contribute to reducing CO<sub>2</sub> emissions by improving transportation efficiency and reducing the use of materials such as packaging film and toilet paper cores. Long-lasting rolls' share of the toilet paper roll market has been expanding every year, and production facilities for long-lasting rolls will be increased and strengthened to meet demand.

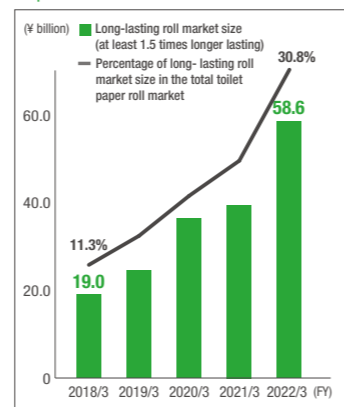
In the fast-growing e-commerce market, efforts are being made to strengthen digital marketing, such

as utilizing big data to develop products suitable for the e-commerce format.

Meanwhile, rising global demand for hygienic paper and disruptions in logistics networks have had a significant impact in causing surging prices of pulp and other raw materials and fuel, but the Nippon Paper Group has expanded use of stable quality and cost competitive pulp produced within the Group and strived to reduce the impact of market fluctuations.

The aim for the Household Paper and Healthcare Business is to continuously expand business and grow sales by developing products anticipating customer needs while responding to changes in the environment and society.

Long-Lasting Roll Market Size and Percentage of its Size in the Total Toilet Paper Roll Market



\* Source: INTAGE SRI+ data (aggregate sales, toilet paper market, April 2017–March 2022)  
 \* Long-lasting roll is defined as toilet paper rolls that are 1.5 times longer than a conventional roll, based on 50 m for a single-ply roll or 25 m for a two-ply roll (excluding Premium 4R) (defined by Nippon Paper Crecia)

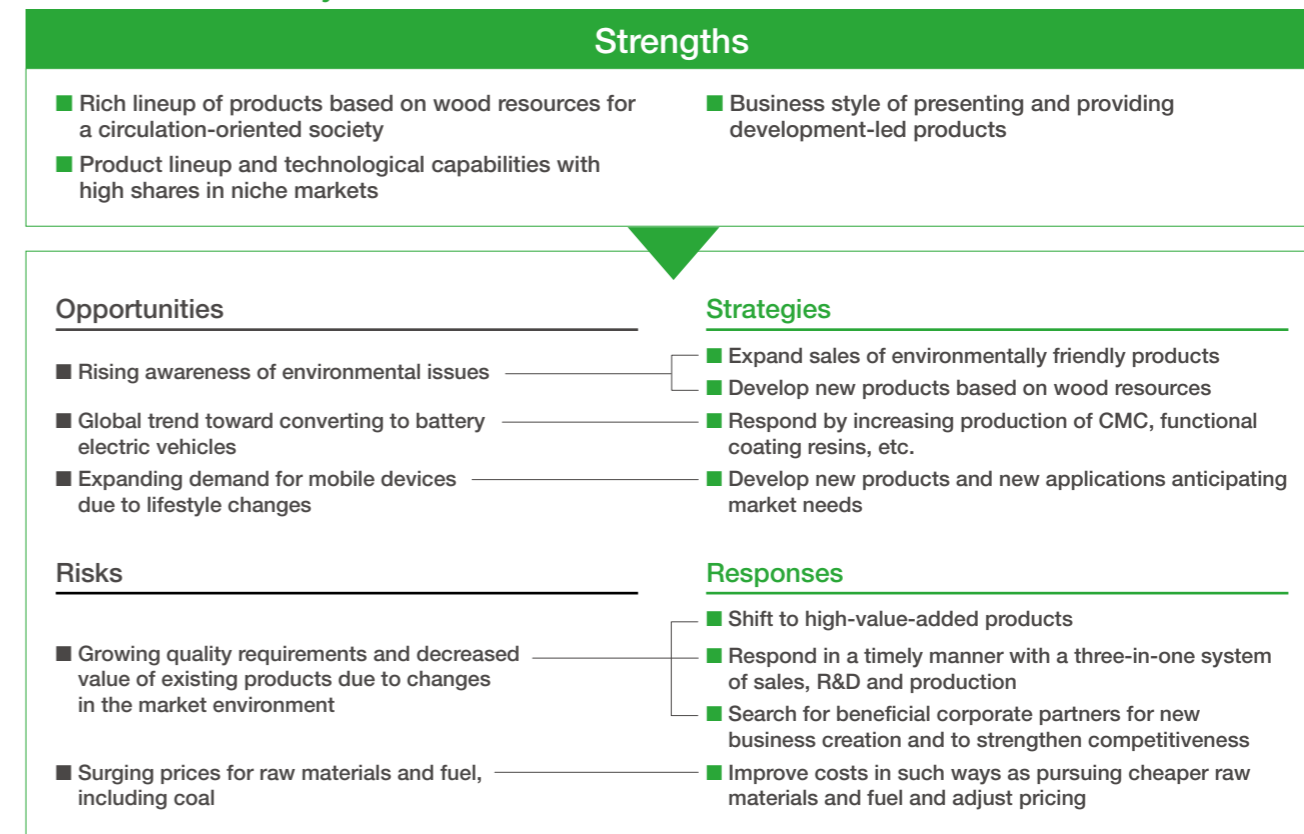


The SCOTTIE® Toilet Rolls FLOWERPACK 3 times long use 4 Rolls



## Chemical Business

### Aim to Grow Business with Environmentally Friendly Products that Meet Society's Needs



### Growth Strategies

At a time when awareness of environmental issues is growing globally, there is increasing demand for renewable raw materials. Moreover, the environment surrounding the Chemical Business is changing dramatically due to factors such as the automotive industry accelerating its shift to battery electric vehicles (BEVs).

In reaction to rising environmental awareness, focus will be placed on expanding sales of environmentally friendly products such as cellulose and lignin products derived from renewable wood resources. Leveraging development-led sales proposals, the Company will proceed with development and provision of products derived from wood resources, anticipating social trends. In response to the shift to BEVs,

production of CMCs and functional coating resins has been increasing in preparation for market expansion. For automotive applications, CMCs are

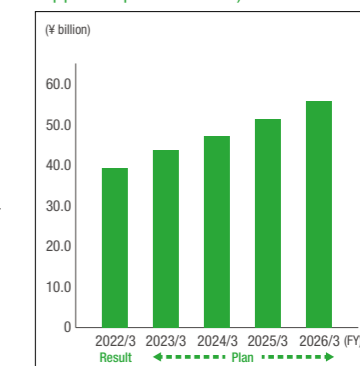
used in lithium-ion battery (LiB) applications, and functional coating resins are added to paints used on plastic car parts that must be lightweight. Sales of these products are growing steadily and the Company will continue to provide them in Japan and overseas.

Quality requirements are increasing in response to rapidly changing market environments, and a shift to high-quality, highly functional products that meet customer needs is underway. In addition, strengthening collaboration with corporate partners in which mutually beneficial relationships can be built will lead to generating new business and enhancing competitiveness.

The Chemical Business aims to expand business to achieve Medium-Term Business Plan 2025 through timely provision of products that meet customer needs by utilizing a three-in-one system of sales, R&D and production.



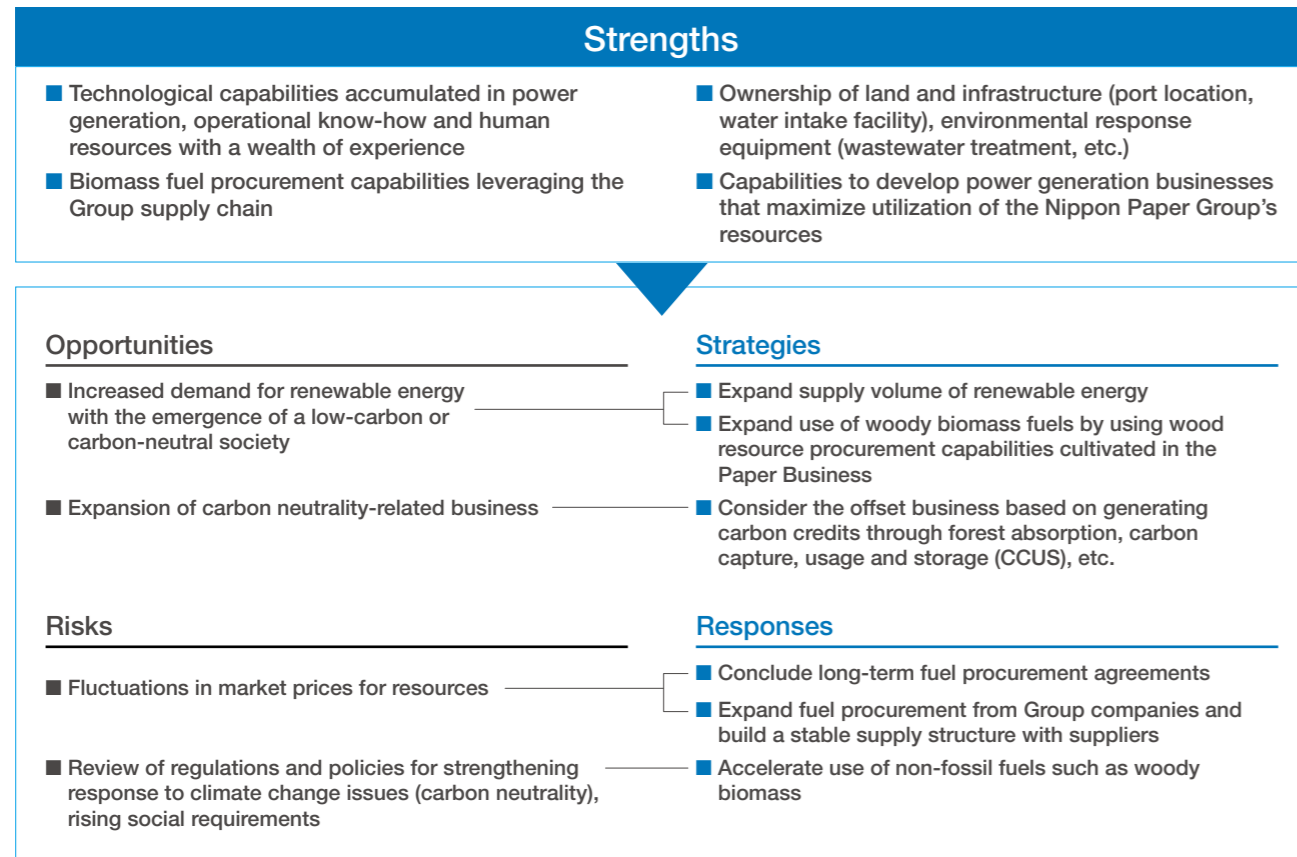
Net Sales (Chemical Sales Division, Nippon Paper Industries)





## Energy Business

### Further Enhance Renewable Energy Supply Capacity



### Growth Strategies

In response to global moves to build a carbon-neutral society, social requirements concerning climate change issues are rising in Japan as well and there is increasing demand for renewable energy.

Currently, the Nippon Paper Group is aiming to further expand its renewable energy supply capacity and will start operating two dedicated biomass power generation facilities in FY2023/3.

The first is the Suzukawa Energy Center. By modifying an existing coal-fired thermal power generation facility with a generation capacity of 112 MW, the plant became the first pulverized coal-fired boiler in Japan to switch from coal-fired to woody biomass-fired fuel, and started operating in June 2022.

The second is the Yufutsu Energy Center. The newly established woody biomass power generation facility has a generation capacity of 75 MW and utilizes the Shiraoui Mill Yufutsu site and infrastructure. Construction is moving ahead steadily and operations are scheduled to start in January 2023.



The Yufutsu Energy Center currently under construction

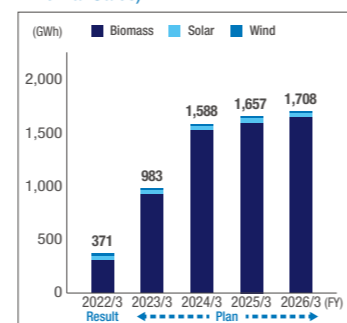
In addition, the Nippon Paper Ishinomaki Energy Center, a power generation

facility with a generation capacity of 149 MW and partly fired by woody biomass fuel, is undergoing modifications to increase the biomass co-firing ratio from its current maximum of 30%. With construction scheduled for completion in November 2023, the center will further expand its renewable energy supply capacity.

While expanding biomass power generation supply volume, stable procurement of biomass fuel is also being strengthened. Progress is being made on utilizing wood resource procurement capabilities cultivated in the Paper Business and building a stable supply system with suppliers.

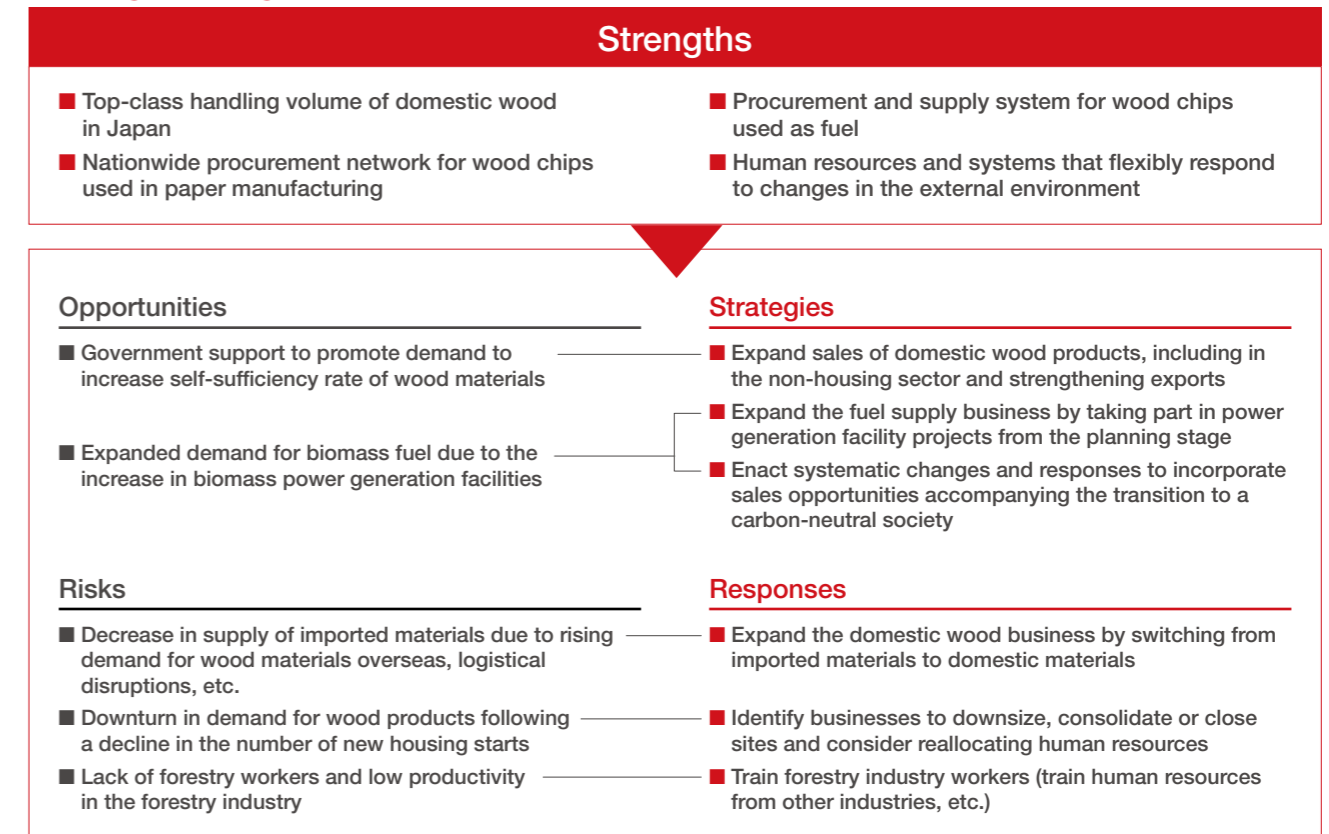
As a result of these initiatives, the sale of electricity from renewable energy will expand to approx. 1.7 million MWh in FY2026/3 from approx. 0.4 million MWh in FY2022/3. The aim is to secure stable earnings over the medium to long term and grow our Energy business while keeping a close watch on policies and social trends.

Sales Amount of Power from Renewable Energy (Power Business Exclusive for External Sales)



## Wood/Building Material Business

### Toward Expanding Domestic Wood Business and Strengthening the Fuel Business



### Growth Strategies

Lumber used in domestic housing is currently mostly comprised of imported materials. However, there are concerns about the stable supply of imported lumber and soaring prices due to such factors as rising demand for lumber overseas and disruptions to logistics networks. Moreover, amid the global movement to a carbon-neutral society, growing demand is forecast for biomass fuels due to the increase in biomass power generation in Japan.

To respond to these changes in the business environment, the basic strategies of Medium-Term Business Plan 2025 are "expand the domestic wood business" and "strengthen fuel businesses."

With regard to the first issue of expanding the domestic wood business, switching from imported material to domestic material will raise the ratio of domestic wood used. The objective is to handle one million m<sup>3</sup> of domestic logs annually by FY2026/3, the final year of Medium-Term Business Plan 2025, through maximum utilization of procurement and sales networks, one of the



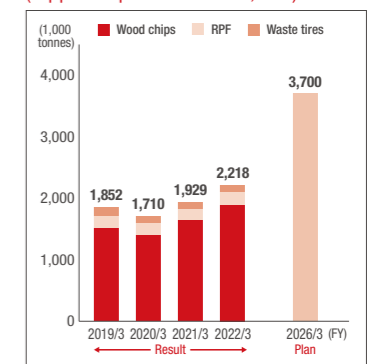
Domestic logs

Nippon Paper Group's strengths.

As for the second issue of strengthening fuel businesses, participating in biomass power generation facility projects from the planning stage will help to capture sales opportunities and expand the fuel supply business. Within the Group as well, efforts to transition to a carbon-neutral society will be strengthened in such ways as preparing a fuel supply system for the Yufutsu Energy Center, which is scheduled to start operations in January 2023.

Regarding the volume of fuel handled, the aim is to handle 3.7 million tonnes by FY2026/3, increasing from approximately 2.2 million tonnes in FY2022/3. Nippon Paper Lumber Co., Ltd. aims to continue to be a leading company in the domestic wood business and to work to further expand the Nippon Paper Group's Wood/Building Material Business.

Volume of Fuel Handled (Nippon Paper Lumber Co., Ltd.)




# Directors and Audit & Supervisory Board Members (as of June 29, 2022)

Note: The "Number of Company Shares Held" is as of March 31, 2022, and includes shares held by the Nippon Paper Industries executive shareholding association.

## Directors

The Company designates all outside directors who meet the requirements as independent officers. When appointing candidates for outside director or outside Audit & Supervisory Board member, the Company judges their independence by taking into consideration whether they satisfy the independence criteria provided by the Tokyo Stock Exchange and the requirements for independence provided by laws and regulations (having not served as director, employee, etc. of the Company and its subsidiaries in the past), in addition to considering the existence of any conflicts of interest with general shareholders.




**Number of Company Shares Held**  
22,622 shares

**Brief History**  
1959 Born  
1981 Joined Jujo Paper Co., Ltd.  
2014 Appointed Director, NPI  
2019 Appointed President and Representative Director, NPI (current position)

**Important Position**  
· President and Corporate Officer

**Toru Nozawa**  
President and Representative Director




**Number of Company Shares Held**  
9,772 shares

**Brief History**  
1960 Born  
1984 Joined Jujo Paper Co., Ltd.  
2019 Appointed Director, NPI (current position)

**Important Position**  
· Managing Executive Officer and Chief Executive Officer, Opal

**Masanobu Iizuka**  
Director



**Number of Company Shares Held**  
4,611 shares

**Brief History**  
1963 Born  
1986 Joined Sanyo-Kokusaku Pulp Co., Ltd.  
2022 Appointed Director, NPI (current position)

**Important Position**  
· Executive Officer and General Manager, Sales Planning Division

**Tomomi Nojiri**  
Director



**Number of Company Shares Held**  
41,273 shares

**Brief History**  
1953 Born  
1975 Joined Jujo Paper Co., Ltd.  
2006 Appointed Director, Nippon Paper Industries Co., Ltd. (NPI)  
2014 Appointed President and Representative Director, NPI  
2019 Appointed Chairman and Director, NPI (current position)

**Fumio Manoshiro**  
Chairman and Director




**Number of Company Shares Held**  
14,150 shares

**Brief History**  
1958 Born  
1980 Joined Sanyo-Kokusaku Pulp Co., Ltd.  
2021 Appointed Executive Vice President and Representative Director, NPI (current position)

**Important Positions**  
· Executive Vice President, Corporate Officer and Aide to the President  
· President and Representative Director, Nippon Paper Creca Co., Ltd.

**Kazumori Fukushima**  
Executive Vice President and Representative Director



**Number of Company Shares Held**  
6,004 shares

**Brief History**  
1964 Born  
1988 Joined Jujo Paper Co., Ltd.  
2021 Appointed Director, NPI (current position)

**Important Position**  
· Executive Officer and General Manager, Financial Division

**Tomoyasu Itakura**  
Director




**Number of Company Shares Held**  
1,000 shares

**Brief History**  
1950 Born  
1975 Studied abroad at Harvard Business School in the U.S. (obtained an MBA)  
1987 General Manager, Energy Conservation Division, International Energy Agency (IEA) (stationed in France)  
1996 Deputy Director-General for Trade and Industry, Ministry of International Trade and Industry (currently Ministry of Economy, Trade and Industry)  
2001 Ambassador Extraordinary and Plenipotentiary to the United Arab Emirates  
2013 Director, Executive Vice President, and Senior Executive Officer, Nippon Light Metal Co., Ltd. (until 2015)  
2015 Senior Director, Japan Association for Chemical Innovation (until 2019)  
2016 Outside Director, Eagle Industry Co., Ltd. (current position)  
Outside Director, NOK CORPORATION (current position)  
Appointed Outside Director, NPI (current position)

**Important Positions**  
· Outside Director, NOK CORPORATION  
· Outside Director, Eagle Industry Co., Ltd.

**Makoto Fujioka**  
Outside Director




**Number of Company Shares Held**  
0 shares

**Brief History**  
1952 Born  
1997 Partner, KPMG LLP New York Office  
2002 Partner, KPMG Peat Marwick Tax Corporation (currently KPMG Tax Corporation) (until 2014)  
2008 Auditor, International Christian University (current position)  
2015 Outside Audit & Supervisory Board Member, Kobayashi Pharmaceutical Co., Ltd. (current position)  
2016 Outside Auditor, IHI Corporation (until 2020)  
Appointed Outside Audit & Supervisory Board Member, NPI (until 2019)  
2019 Appointed Outside Director, NPI (current position)  
2022 Outside Director (Member of the Audit Committee), Ajinomoto Co., Inc. (current position)  
Outside Director (Audit & Supervisory Committee Member), KOEI CHEMICAL CO., LTD. (current position)

**Important Positions**  
· Auditor, International Christian University  
· Outside Audit & Supervisory Board Member, Kobayashi Pharmaceutical Co., Ltd.  
· Outside Director (Member of the Audit Committee), Ajinomoto Co., Inc.  
· Outside Director (Audit & Supervisory Committee Member), KOEI CHEMICAL CO., LTD.

**Yoko Hatta**  
Outside Director

## Audit & Supervisory Board Members




**Number of Company Shares Held**  
5,512 shares

**Brief History**  
1960 Born  
1983 Joined Jujo Paper Co., Ltd.  
2019 Appointed Audit & Supervisory Board Member, NPI  
2021 Appointed Senior Audit & Supervisory Board Member, NPI (current position)

**Important Position**  
· Audit & Supervisory Board Member, Nippon Paper Creca Co., Ltd.

**Kazunari Tatsu**  
Senior Audit & Supervisory Board Member




**Number of Company Shares Held**  
0 shares

**Brief History**  
1951 Born  
1976 Assistant Judge, Tokyo District Court  
2006 Judge, Tokyo High Court  
2007 Chief Judge, Niigata District Court  
2009 Presiding Judge, Tokyo High Court  
2015 Chief Judge, Yokohama District Court  
2016 Registered as attorney at law (Tokyo Bar Association)  
Visiting Attorney, Mori Hamada & Matsumoto (current position)  
2020 Appointed Outside Audit & Supervisory Board Member, NPI (current position)

**Important Position**  
· Visiting Attorney, Mori Hamada & Matsumoto

**Takafumi Okuda**  
Outside Audit & Supervisory Board Member




**Number of Company Shares Held**  
0 shares

**Brief History**  
1954 Born  
2014 Representative Director and Executive Vice President, Tokyo Gas Co., Ltd. (until 2017)  
2017 Chairman and Director, Tokyo Gas Engineering Solutions Corporation (until 2020)  
2020 Appointed Outside Director, NPI (current position)  
2022 Outside Director, ISE CHEMICALS CORPORATION (current position)  
Outside Director, Chiyoda Corporation (current position)

**Important Positions**  
· Outside Director, ISE CHEMICALS CORPORATION  
· Outside Director, Chiyoda Corporation

**Yutaka Kunigo**  
Outside Director




**Number of Company Shares Held**  
11,142 shares

**Brief History**  
1962 Born  
1984 Joined Jujo Paper Co., Ltd.  
2021 Appointed Audit & Supervisory Board Member, NPI (current position)

**Important Position**  
· Audit & Supervisory Board Member, NP Trading Co., Ltd.

**Tomoyoshi Nishimoto**  
Audit & Supervisory Board Member



**Number of Company Shares Held**  
0 shares

**Brief History**  
1962 Born  
2005 Director, BUSICOM Co., Ltd. (currently OAG BUSICOM Co., Ltd.)  
2008 Outside Audit & Supervisory Board Member, DUSKIN CO., LTD. (until 2016)  
2010 Representative Director and President, GEN Co., Ltd. (current position)  
2017 Outside Corporate Auditor, MISUMI Group Inc. (current position)  
2019 Appointed Outside Audit & Supervisory Board Member, NPI (current position)  
2020 Outside Director, Optex Group Co., Ltd. (current position)  
2021 Outside Corporate Auditor, MEIKO NETWORK JAPAN CO., LTD. (current position)

**Important Positions**  
· Representative Director and President, GEN Co., Ltd.  
· Outside Corporate Auditor, MISUMI Group Inc.  
· Outside Director, Optex Group Co., Ltd.  
· Outside Corporate Auditor, MEIKO NETWORK JAPAN CO., LTD.

**Nanako Aono**  
Outside Audit & Supervisory Board Member





**Basic Stance**

Nippon Paper Industries strives to strengthen corporate governance based on the Group Mission to achieve sustainable growth and improve medium- to long-term corporate value.

The Company's highest management priority is to further enhance management transparency to shareholders and other stakeholders and to realize fair management. The Company has adopted an executive officer system and is working to

strengthen the oversight function of its Board of Directors to ensure the separation of business execution and management oversight. As the command center of the Nippon Paper Group, the Company is implementing growth strategies, monitoring businesses under its control, and promoting risk management and compliance.

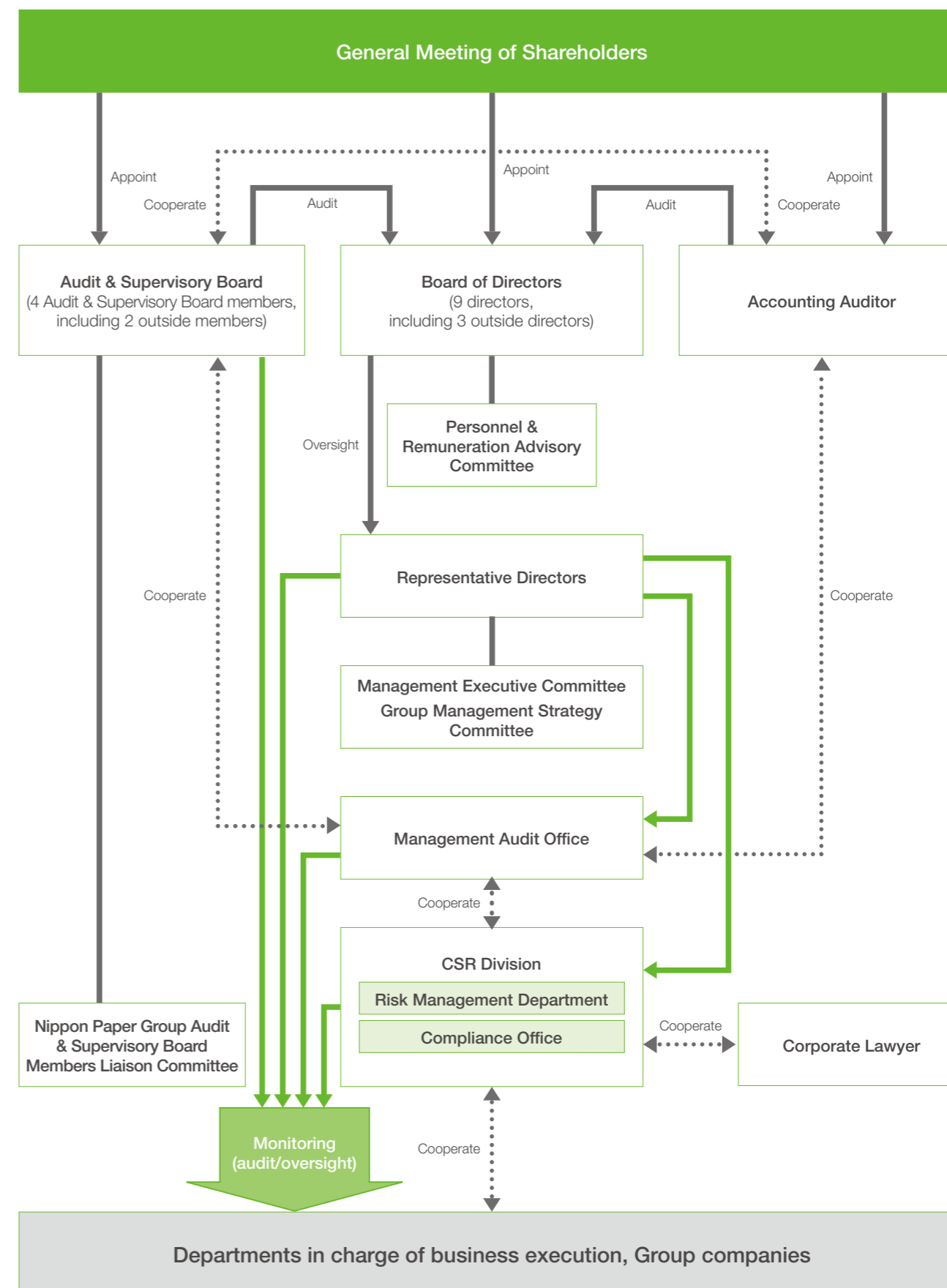
**Initiatives for Strengthening Corporate Governance**

- FY2007/3** – Formulated the Basic Policy for Establishing the Internal Control System  
– Shortened director terms to one year from two
- FY2014/3** – Adopted an executive officer system and began appointing independent outside directors
- FY2016/3** – Established the Corporate Governance Policy  
– Began evaluating the effectiveness of the Board of Directors
- FY2017/3** – Established the Personnel & Remuneration Advisory Committee  
– Increased the number of independent outside directors to two
- FY2020/3** – Increased the number of independent outside directors to three  
– Appointed one female outside director and one female outside Audit & Supervisory Board member  
– Ensured the Personnel & Remuneration Advisory Committee consists mainly of outside directors  
– Introduced the Board Benefit Trust as a stock compensation system
- FY2021/3** – Revised part of the Corporate Governance Policy concerning the policy for determining director remuneration
- FY2022/3** – Introduced quarterly operational issues reports in the agenda for Board of Directors meetings, in addition to conventional monthly business reports

**Corporate Governance Structure**

|  |  |
|--|--|
| <b>Type of Organization</b>                                    | Company with Audit & Supervisory Board   |
| <b>Chairman of the Board of Directors</b>                      | Chairman and Director: Fumio Manoshiro   |
| <b>Number of Directors</b>                                     | 9 (including 3 outside directors)  |
| <b>Number of Audit &amp; Supervisory Board Members</b>         | 4 (including 2 outside Audit & Supervisory Board members)  |
| <b>Number of Independent Officers</b>                          | 5 (including 3 outside directors and 2 outside Audit & Supervisory Board members)  |
| <b>Board of Directors Meetings Held in FY2022/3</b>            | Number of meetings: 13<br>• Average rate of attendance by directors: 100.0% (outside directors: 100.0%)<br>• Average rate of attendance by Audit & Supervisory Board members: 100.0% |
| <b>Audit &amp; Supervisory Board Meetings Held in FY2022/3</b> | Number of meetings: 14<br>• Average rate of attendance by Audit & Supervisory Board members: 100.0%  |
| <b>Accounting Auditor</b>                                      | Ernst & Young ShinNihon LLC  |

Corporate Governance Structure (as of July 1, 2022)



## Board of Directors

The role of the Company's Board of Directors is stipulated in the Corporate Governance Policy. The Board of Directors shall bear the supervisory function of management as a whole and make the most appropriate decisions for the Company through deliberations, etc. on the execution of important business issues that are to be decided, under laws, regulations, and the Articles of Incorporation, by the Board of Directors. The Board of Directors shall also supervise the status of the execution of duties by the president and representative director and other corporate officers. In view of the importance of environmental and social challenges related to sustainability, the Board of Directors shall raise awareness among officers and employees, and strive to facilitate the sustainable development of society and enhance the corporate value of the Nippon Paper Group by promoting active efforts to resolve

challenges while giving consideration to stakeholders.

The Company's Board of Directors shall ensure a balance of knowledge, experience, abilities, and diversification by comprising internal directors who have excellent abilities to execute and manage each business in their charge and outside directors who have specialized knowledge and extensive experience. The board shall ensure a 1/3 ratio of outside directors among board members and appoint one female outside director and one female outside member of the Audit & Supervisory Board.

In addition, in November 2021, the Company made a list of the skills it expects each director to display. Each skill is identified from the standpoint of management strategy and priorities, and is designated taking into account the basic policy of the 2030VISION and materiality.

## Skill Matrix of Directors

| Position   | Name               | Skills               |                    |                    |                       |                            |                |       |                      |                  |  |
|--|--------------------|----------------------|--------------------|--------------------|-----------------------|----------------------------|----------------|-------|----------------------|------------------|--|
|  |                    | Corporate Management | ESG/Sustainability | Finance/Accounting | Human Resources/Labor | Risk Management/Governance | Technology/R&D | Sales | Purchase/Procurement | Internationality |  |
| Chairman and Director                                | Fumio Manoshiro    | ○                    | ○                  |                    | ○                     |                            |                |       | ○                    |                  |  |
| President and Representative Director                | Toru Nozawa        | ○                    | ○                  | ○                  |                       | ○                          |                |       |                      |                  |  |
| Executive Vice President and Representative Director | Kazumori Fukushima | ○                    |                    |                    | ○                     |                            | ○              | ○     |                      |                  |  |
| Director   | Masanobu Iizuka    | ○                    |                    |                    |                       |                            | ○              |       |                      | ○                |  |
| Director   | Tomoyasu Itakura   | ○                    |                    | ○                  |                       | ○                          |                |       |                      |                  |  |
| Director   | Tomomi Nojiri      |                      | ○                  |                    |                       |                            | ○              | ○     |                      |                  |  |
| Outside Director                                     | Makoto Fujjoka     | ○                    | ○                  |                    |                       | ○                          |                |       |                      |                  |  |
| Outside Director                                     | Yoko Hatta         |                      |                    | ○                  |                       | ○                          |                |       |                      | ○                |  |
| Outside Director                                     | Yutaka Kunigo      | ○                    | ○                  |                    |                       |                            |                |       | ○                    |                  |  |

\* The above list does not represent all the knowledge and experience held by each director.

## Management Executive Committee

Usually, the Company's Management Executive Committee meets once a week to deliberate on important management-related matters under the authority of the president to assist in the execution of the president's duties. Committee membership is basically composed of the president, other directors (excluding outside directors) and general managers who do

not serve as directors.

Meetings of the Management Executive Committee, held once a month, are attended by outside directors and general managers of the Company's mills in order to share information on monthly financial results among management.

## Group Management Strategy Committee

The Company's Group Management Strategy Committee meets as necessary to deliberate on management strategies by business segment and other important matters related to

the Group. Committee membership is composed of the Company's management, including outside directors, and presidents of major companies of the Group.

## Audit & Supervisory Board Members and Audit & Supervisory Board

Members of the Company's Audit & Supervisory Board attend important meetings, such as meetings of the Board of Directors, the Management Executive Committee, and the Group Management Strategy Committee. In addition to strict monitoring of the execution of business by directors, the auditors meticulously audit whether all company operations are conducted legally and appropriately, through on-site

audits of each division, business site, and Group company.

The Audit & Supervisory Board periodically holds meetings with the representative directors, working to deepen mutual understanding. The Audit & Supervisory Board also strives to enhance Group audits by strengthening cooperation with auditors of each Group company.

## Management Audit Office

The Company's Management Audit Office is directly under the president's control, and it conducts an internal audit of the Company and each Group company and a comprehensive evaluation of the maintenance and operation of the internal control system as it relates to financial reporting. It also holds

monthly information exchange meetings with the Audit & Supervisory Board members to ensure coordination between audits by the Audit & Supervisory Board members and audits by internal auditors.

## Personnel & Remuneration Advisory Committee

The Company's Personnel & Remuneration Advisory Committee is composed of the three independent outside directors, the president and representative director, and the general manager of the Personnel & General Affairs Division. The committee receives inquiries from the Board of Directors on matters such as the selection process, qualifications, and reasons for nomination of director and Audit & Supervisory Board member candidates, the criteria for determining the independence of outside officers, and the remuneration system for directors. The committee responds to inquiries regarding appropriateness while obtaining proper involvement and advice from independent outside directors and

conducting inquiries based on its assessment of the Company's business performance and other factors. The Board of Directors shall make decisions regarding nomination of directors and Audit & Supervisory Board members, compensation for directors, etc. after receiving reports from the Personnel & Remuneration Advisory Committee.

In FY2022/3, the Personnel & Remuneration Advisory Committee met three times with an attendance rate of 100% for all members. The committee introduced the exchange of opinions on the evaluation of the representative directors. Furthermore, from FY2023/3 onward, the committee will hold regular meetings four times yearly and work to expand on the agenda.

## Evaluation of the Effectiveness of the Board of Directors

To continuously strengthen its functions, the Company's Board of Directors has been conducting self-evaluations of its effectiveness since FY2016/3. Once per year, the secretariat of the Board of Directors conducts a survey of the directors and Audit & Supervisory Board members regarding management

and the discussions held at its meetings. The results of the survey are reported to the Board of Directors, which analyzes and evaluates its effectiveness through deliberations, etc. on the reported contents and works toward improvement based on the results thereof.

## FY2022/3 Initiatives

The evaluation of the effectiveness of the Board of Directors in FY2021/3 presented two issues: (1) Conducting discussions taking into account a medium- to long-term standpoint and (2) Enhancement of reporting items and securing more time to deliberate.

Repeated discussions taking into account a medium- to long-term standpoint occurred with the formulation process for the 2030VISION and Medium-Term Business Plan 2025, which were announced in May 2021, thus deepening awareness of medium- to long-term strategic issues. Regarding the enhancement of reporting items, in addition to conventional monthly business reports, quarterly operational issue reports were introduced for the technical & engineering, research and

development, raw materials and purchasing, logistics, sales and CSR divisions. Furthermore, it has been confirmed that prior explanations for each case have improved the level of understanding of the deliberations.

In the FY2022/3 survey, the issues extracted were following up on important projects, monitoring progress on the 2030VISION and Medium-Term Business Plan 2025 and expanding deliberation on measures to achieve goals, and increasing opportunities for exchanges of opinion between outside directors and the representative directors. These initiatives aim to strengthen governance.

**Officer Remuneration**

The Board of Directors decides remuneration for officers after receiving a report from the Personnel & Remuneration Advisory Committee.

**Monthly Remuneration**

The standard amount of monthly remuneration for directors shall be decided according to his/her responsibilities within the Company. Of that, 70% shall be fixed and the remaining 30% shall be paid after adjustment based on the Company's performance in relation to the medium-term business plan. The standard amount is determined using objective survey data from outside sources and giving consideration to factors including the Company's performance, scale of business, and

managerial circumstances. Performance indices are established to effectively function as motivation to achieve performance targets, and are reevaluated as needed in response to changes in circumstances.

Monthly remuneration for outside directors and outside Audit & Supervisory Board members shall be fixed. In light of their responsibilities, contributions to the executive shareholding association are on a voluntary basis.

**Stock Remuneration Plan**

From FY2020/3, the Company has introduced the Board Benefit Trust (BBT) as a stock compensation plan, in addition to monthly remuneration. The objective of the BBT is to further clarify the link between the compensation provided to directors and the Company's share value and thereby increase directors' motivation to contribute to improving the Company's medium- to long-term performance and increasing its

corporate value by sharing the benefits and risks associated with share price fluctuations with shareholders.

The composition ratio of fixed remuneration, performance-based remuneration, and stock remuneration provided to directors is appropriately established based on the objectives of each type of remuneration.

**Total Amount of Remuneration, etc. for Directors and Audit & Supervisory Board Members\*1 (FY2022/3)**

|  | Number of Executives*2 | Total Amount of Remuneration, etc. by Type |                                |                    | Total Amount  |
|--|------------------------|--|--------------------------------|--------------------|---------------|
|  |                        | Fixed Remuneration                         | Performance-Based Remuneration | Stock Remuneration |               |
| Directors  | 12                     | ¥297 million                               | ¥72 million                    | ¥31 million        | ¥401 million  |
| (of which outside directors)                         | (3)                    | (¥38 million)                              | (-)                            | (-)                | (¥38 million) |
| Audit & Supervisory Board members                    | 5                      | ¥58 million                                | -                              | -                  | ¥58 million   |
| (of which outside Audit & Supervisory Board members) | (2)                    | (¥13 million)                              | (-)                            | (-)                | (¥13 million) |

\*1 Figures are rounded down to the nearest million yen.

\*2 Includes three directors and one Audit & Supervisory Board member who resigned during FY2022/3.

**Remuneration for Internal Directors**

|                       | Fixed Remuneration  | Performance-Based Remuneration   | Stock Remuneration  |
|-----------------------|---|--|---|
| Method                | Cash payment  |  | Points granted  |
| Payment allowance     | Up to ¥700 million per year   |  | Up to 25,000 points per year (1 point = 1 share)              |
| Payment period        | Monthly (no bonuses or retirement benefits)                                   |  | Director resignation (cumulative points converted to shares)  |
| Calculation method    | Determined according to their respective responsibilities                     |  | Points granted according to their respective responsibilities |
|                       | 70% paid as fixed remuneration  | 30% paid after adjustment based on the Company's performance in relation to the medium-term business plan                            |   |
| Performance standards | -   | 70%: Consolidated results (Mainly net sales, operating income)<br>30%: Non-consolidated results (Mainly net sales, operating income) | -   |
| Other                 | Fixed amounts contributed to the Company's executive shareholding association |  | -   |

**Cultivation of Successors to the President and Directors**

**Successor to the President**

The Company develops candidates for succession to the president by placing them in successively important roles such as executives and directors. Personnel matters related to executives and directors who are potential presidential candidates are deliberated by the Personnel & Remuneration Advisory Committee, which is an advisory body that reports to the Board of Directors. The Board of Directors, upon receiving the report, will carefully examine its contents, deliberate, and decide on the candidates.

Through this process, the Board of Directors supervises the development of candidates to become the next president in a systematic and ongoing manner.

The process for the appointment and dismissal of the president is the same as that for candidates for directors, in that the Personnel & Remuneration Advisory Committee conducts a review and submits a report based on consultations with the Board of Directors.

**Developing Candidates for Directors**

From the standpoint of securing human resources capable of assuming management roles in the future, the Company makes a point of placing employees—particularly those in career-track positions—in various positions and rotations in different departments. It also makes an effort to appoint employees as early as possible to positions as managers and

other important posts and positions in which they assist management, such as the top management of affiliated companies and overseas subsidiaries. In this manner, it strives to develop a robust base of employees with highly sophisticated expertise and work experience, cultivating them for selection as the next generation of director candidates.

**Policy for Executive Training, etc.**

To support the execution of duties by directors, the Company provides information on matters necessary for their roles and functions (such as economic conditions, industry trends, legal

compliance, corporate governance, finance, and accounting) on an ongoing basis. It also ensures opportunities to participate in external training based on the needs of individual directors.



### Basic Stance

The Nippon Paper Group conducts risk management during normal operation, and in the event of emergencies, with the aim of preventing managerial risks from manifesting and minimizing the impact of those that do occur. All possibilities that may result in a physical or economical loss or a loss of credit or disadvantage to the Group are considered risks to the Group.

|                       |   |
|-----------------------|---|
| <b>Basic Policies</b> | (1) Prioritizing human life and safety<br>(2) Continuing business<br>Under the aforementioned policies, we will follow and comply with the guidance and recommendations of national and regional governments. |
|-----------------------|---|

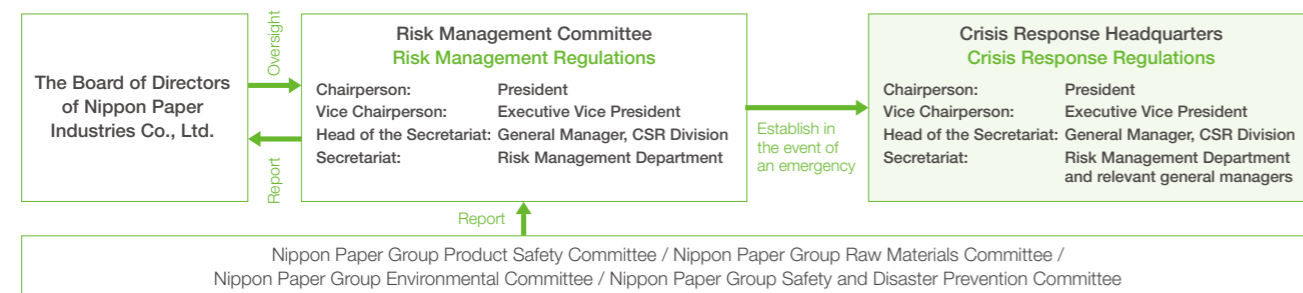
### Promotion Structure

Nippon Paper Industries Co., Ltd. has established its Risk Management Committee, which is chaired by the president and representative director under the supervision of the Board of Directors, and meetings are held once per year or more. The Risk Management Department established within the CSR Division serves as the secretariat. In normal operations, the committee regularly identifies and evaluates the Group's risks, considers and deliberates measures to reduce its risks and at the time when the risks occur in reality, and reports them to the Board of Directors.

In addition, the respective risks relating to Product Safety,

Raw Materials and Purchasing Division, Environment, and Safety and Disaster Prevention, are examined and discussed in committees chaired by the General Managers of the respective responsible division in the Company. They are then reported to the Company's Board of Directors via the Risk Management Committee.

In the event of an emergency, a crisis response headquarters will be launched. The crisis response headquarters swiftly carries out initial responses and BCPs (business continuity plans) in the event of emergencies depending on risks such as natural disasters and infectious diseases.



### Risk Management Activities

#### Maintenance of BCP

To address major natural disasters that have become more frequent in recent years, the Group continues to maintain a BCP based on the BCM (business continuity management) framework it worked to develop in the previous fiscal year.

The Company's head office has selected crucial operations, along with adding supplies that will be needed when it launches a Crisis Response Headquarters, along with stockpiling food and daily commodities. In addition, the BCPs drawn

up by each department are made known within the Company. The Company's mills are working to revise existing BCPs around the assumed disaster scenarios of earthquakes, tsunamis, typhoons, floods and volcanic eruptions. Moreover, Group companies have established crisis response regulations and have put in place a system to launch a response headquarters in the event of an emergency. Going forward, the Group will strive to establish and enhance its BCP.

| Committee Meetings Held (FY2022/3)                   | Number of Times | Attendees   |
|--|-----------------|---|
| Risk Management Committee                            | 1               | Nippon Paper Industries / President, Executive Vice President, All general managers<br>Nippon Tokai Industrial Paper Supply / President |
| Report to Nippon Paper Industries Board of Directors | 1               | Nippon Paper Industries / Chairman, President, Executive Vice President, and all directors  |

### Risk Identification

In FY2022/3, the Risk Management Committee carried out an identified sampling of risks from the Company (head office and mills) and consolidated subsidiaries, and five non-consolidated. Through the survey, the Group identified risks. Risks that emerged in FY2022/3 and risks that will assume increasing

importance in the future were also confirmed. Based on the results, discussions were held in the relevant departments and the Risk Management Committee, and the Company's business risks were considered based on the conceptual framework outlined below.

|   | Summary   | Main Risk Mitigation Measures  |
|---|---|--|
| Major Risks Associated with Management Strategies                           | Risks associated with delays in business structure transformation and the creation of new businesses<br>• Addressing the market contraction in the Paper Business   | <ul style="list-style-type: none"> <li>• Reallocate management resources through such means as investing in growing businesses such as the Daily-Life Products Business and repositioning personnel</li> <li>• Develop paper products to replace plastics, primarily for containers and packaging</li> <li>• Expand use of woody biomass such as CNF</li> <li>• Expand overseas business initiatives and capture synergies with existing businesses</li> </ul> |
|   | Risks associated with climate change<br>• Addressing the full-fledged introduction of carbon pricing and emissions trading  | <ul style="list-style-type: none"> <li>• Reduce GHG emissions</li> <li>• Convert fuels to renewable energy</li> <li>• Pursue maximization of forest value through such means as improving the productivity of forest resource holdings</li> </ul>  |
|   | Risk of fluctuations in product demand and market conditions<br>• Fluctuations in demand based on factors such as economic conditions<br>• Fluctuations in product prices based on factors such as market conditions  | <ul style="list-style-type: none"> <li>• Reorganize the production structure</li> <li>• Reduce costs</li> <li>• Secure profits by maintaining sales prices</li> <li>• Create new needs</li> </ul>  |
|   | Risks associated with raw material and fuel procurement and international transportation<br>• Price fluctuations due to international and domestic market conditions<br>• Global shortage of container transportation capacity<br>• Surging marine freight rates due to rising raw material and fuel prices | <ul style="list-style-type: none"> <li>• Utilize pre-order schemes</li> <li>• Build relationships with shipping companies</li> <li>• Consider joint transportation and procurement with other companies</li> <li>• Make purchases based on long-term contracts and from multiple suppliers and regions</li> </ul>  |
| Main Risks Associated with the Business Environment and Business Activities | Risks associated with production facilities<br>• Problems occurring at facilities<br>• Fires  | <ul style="list-style-type: none"> <li>• Regularly inspect production facilities</li> <li>• Systematically update vulnerabilities</li> </ul>   |
|   | Risk of natural disasters and infectious diseases, etc.<br>• Earthquakes, tsunamis, typhoons, floods<br>• COVID-19  | <ul style="list-style-type: none"> <li>• Launch a Crisis Response Headquarters</li> <li>• Establish BCM (Business Continuity Management)</li> <li>• Formulate and revise infectious disease response guidelines</li> </ul>   |
|   | Environment-related legal risks   | <ul style="list-style-type: none"> <li>• Respond to changes in environmental laws and regulations</li> </ul>   |
|   | Human resource recruitment and labor-related risks<br>• Recruit optimal human resources based on human resource strategy  | <ul style="list-style-type: none"> <li>• Develop workplaces premised on flexible and diverse work styles</li> <li>• Implement the Occupational Safety and Health Management System</li> </ul>  |
|   | Risks based on product liability  | <ul style="list-style-type: none"> <li>• Enroll in product liability insurance</li> <li>• Establish and utilize Product Safety Committees</li> </ul>   |

### Compliance

Based on the Nippon Paper Group's Action Charter, the Group's position is that "Compliance goes beyond laws and regulations to include decency, common sense, customs, and other rules, and 'social norms' that are expected by society in general, and

we are called upon to respond to the expectations and trust of society." The Group continually carries out activities that raise employees' awareness of compliance.

#### Promotion Structure

The Compliance Office, which the Company set up within the CSR Division, strives to enhance collaboration on compliance with the compliance managers of Group companies and reports on its

activities to the Board of Directors as well as to the Audit & Supervisory Board members and the Management Executive Committee on a quarterly basis in Group Compliance Liaison Meetings.

#### Compliance Activities

The Nippon Paper Group's Action Charter states that "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." The Company strategically carries out compliance training. It works to provide training to ensure there are no inappropriate relationships with local governments or civil servants where it conducts business in Japan and overseas, or there is no transfer of inappropriate economic gains to or from customers, business partners, or others. If there are any cases of suspected misconduct, corrective actions are taken to deal with the situation.

The Company has set up the Nippon Paper Group Helpline. The helpline makes it possible for employees to directly report and consult on any conduct that violates laws and regulations or conduct that may become a problem in the workplace from a corporate ethics point of view. Reports and consultations may also be made anonymously. The Company periodically notifies employees about the helpline. Opinions and other reports from third parties other than those eligible to use the helpline are accepted through the Contact Us webpage of the Nippon Paper Group's corporate website.



## Product Safety

The Group has made “delighting our customers” (by accurately responding to the needs of customers) one of the requirements of the Vision to realize its Group Mission. Supplying products needed by society with assured product safety and quality is a critical issue that a manufacturing company should address as

a matter of course. The Group ensures safety and quality based on the Philosophy and Basic Policy of Product Safety, and strives for the stable supply of diverse products indispensable for daily living.

### Promotion Structure

The Nippon Paper Group Product Safety Committee, chaired by the general manager of the CSR Division, manages activities related to the Group’s product safety and reports on these activities to the Risk Management Committee. The Group

complies with laws, regulations, etc. in Japan and overseas, and strives to ensure product safety using management methods appropriate to each business or product.

### Product Safety Activities

The Group has been working to re-establish its risk management framework by bringing external consultants onboard from FY2021/3, with the aim of bolstering product safety management.

In FY2022/3, the Group compiled the results of questionnaires and interviews of Group companies carried out during the previous fiscal year to assess the current situation, and confirmed that there were no urgent matters to address

regarding product safety management. On the other hand, the Group has implemented measures such as revising how it runs the Nippon Paper Group Product Safety Committee and formulating minimum standards, with a view to strengthening collaboration among Group companies and solving issues such as standardizing variations in management standards.

Going forward, the Group will keep conducting activities to continually upgrade its product safety management framework.



## Occupational Safety and Health

The Group upholds instilling pride in employees as a necessary condition of its Vision to realize its corporate Group Mission. This is based on the prerequisite of ensuring the safety and health of employees at each of the Group’s locations, which is a critical issue for maintaining sound management. The Group formulated a Philosophy and Basic Policy on Safety and Health

Measures and constructed a system for occupational safety and health under which all employees and members of management are united. It maintains the health of employees, realizes comfortable and friendly work environments and helps to prevent disasters.

### Promotion Framework

The Nippon Paper Group Safety and Disaster Prevention Committee, which is chaired by the general manager of the Technical & Engineering Division, supervises occupational safety and health and disaster prevention activities and reports on these to the Risk Management Committee. For use in the case of a disaster, the Group has established a communication

system between the mills and the head office as well as the departments within the head office. It has also established and operates a system to report necessary information to the Nippon Paper Group Safety and Disaster Prevention Committee and top management.

### Initiatives for Preventing Work-Related Accidents

Guided by its mission of ensuring that nobody is injured within the premises of its mills, the Group works closely with labor unions and partner companies to prevent work-related accidents. Top management conveys this mission to employees through lectures during the new-year period, visits to mills, in-house newsletters, and other means.

Moreover, the Group implements its own system (NPSS\*) for continuously pursuing occupational safety and health

management activities at the organizational level. By doing so, it strives to improve safety and health levels through the prevention of occupational accidents, promotion of workers’ health, and creation of comfortable work environments.

Additionally, in 2020, the Company formulated a medium-term management plan centered on safety initiatives (2020–2025) as part of efforts to construct a foundation for preventing work-related accidents.

\* Nippon Paper Occupational Safety and Health Management System

## Respect for Human Rights

The Group established its Philosophy and Basic Policy on Human Rights, Employment and Labor in 2004 to clearly indicate its position on respect for human rights and established its Philosophy and Basic Policy Concerning Raw Materials Procurement in 2005. The Group is continually implementing activities to respect human rights across the entire supply chain, such as strictly conducting annual supplier surveys on the procurement of wood resources, which is its business foundation. In May 2022, the Group formulated the Nippon Paper Group Human Rights Policy by revising the

existing Philosophy and Basic Policy on Human Rights, Employment and Labor. The new policy was created as a means of carrying out more effective activities to respect human rights in an effort to realize the Group Mission. Based on activities undertaken so far, the Group has established a policy that endorses the UN’s Guiding Principles on Business and Human Rights and meets global standards.

In accordance with this policy, the Group will reinforce respect for human rights across the entire value chain.

### Promotion Structure and Relief

The Group addresses human rights risks under a risk management promotion structure headed by the president and representative director and supervised by the Board of Directors of the Company.

In addition to the Nippon Paper Group Helpline system, which the Company set up as an internal whistleblower

system, the Group accepts inquiries regarding concerns about any possible violation of human rights through the Group’s corporate website (<https://www.nipponpapergroup.com/english/inquire>). (Organizations in charge: The Company’s Compliance Office and associated departments)

### Human Rights Due Diligence

The Company launched its Human Rights Working Group in 2021, introducing human rights due diligence. From 2022, the Company has listed the human rights risks of all stakeholders in value chains related to the Paper and Paperboard Business, Paper-Pak Business, and the Chemical Business.

Subsequently, the Company has evaluated those risks, identified high-priority human rights risks and considered risk mitigation measures. Going forward, the Company will continue to regularly evaluate human rights risks, along with working to expand the scope of such risks.

### Activities Related to Respect for Human Rights

Based on exchanges of opinions with Amnesty International Japan, the Company has been conducting the activities described below every year since 2015.

#### Human Rights Surveys at Subcontracted Mills in Japan

The Company sends surveys to subcontracted mills in Japan once a year and has them conduct a self-check, mainly to confirm compliance with labor and safety laws and regulations. Survey results are shared with the human resource managers of each mill for the purpose of supporting improvements. In addition, the Company conducts follow-up surveys to verify the current status of improvements on human rights issues.

#### Confirmation of Consideration for Human Rights at Overseas Wood Chip Suppliers

Based on the Philosophy and Basic Policy Concerning Raw Materials Procurement, the Company has employees in charge of procurement visit overseas wood chip suppliers to conduct interviews covering matters such as health, hygiene, safety, disaster preparedness, and local environmental concerns from the perspective of respect for human rights. In FY2022/3, the Company carried out inspections in Australia and confirmed that there were no problems.

#### An inspection in Australia



Signboards draw attention to safety precautions



A portable firefighting system used for initial responses to fires



Designation of an assembly point for emergencies



# Procurement

## Basic Stance

The Nippon Paper Group is working to build a sustainable raw materials procurement system that earns the trust of a broad range of stakeholders by practicing supply chain management with consideration for the environment and society. The Group

is striving to improve the level of its raw materials procurement by conducting procurement activities in accordance with its Principles and Basic Policies Concerning Raw Materials Procurement and promoting dialogue with stakeholders.

## Promotion Structure

The Group has established the Nippon Paper Group Raw Materials Committee, which is chaired by the general manager of the Raw Materials and Purchasing Division at Nippon Paper Industries. This committee discusses key issues related

to raw materials procurement for the entire Group, such as policies on raw materials procurement, and reports on these issues to the Board of Directors through the Risk Management Committee.

## Revision of the Principles and Basic Policies Concerning Raw Materials Procurement

The Group established the Principles and Basic Policies Concerning Raw Materials Procurement (hereinafter, "Procurement Policies") in October 2005 and has promoted sustainable procurement in accordance with the Procurement Policies. As of September 2022, the Group has now revised the Procurement Policies to allow it to address issues such as respect for human rights and climate change more effectively, with a view to realizing the Group Mission. In addition, the Wood Resources Procurement Guidelines has been newly created under the Procurement Policies to highlight resources procured from forests, which are the Group's business foundation.

with an emphasis on dialogue with stakeholders, the review panel held a series of discussions to exchange thoughts and ideas with external experts in various fields and reflected their insights in the revised policies (P.62–63).

During the revision process, the Group set up a review panel (Secretariat: Nippon Paper Industries Raw Materials and Purchasing Division) within the Nippon Paper Group Raw Materials Committee. The review panel convened the general managers of major Group companies' procurement departments and the Company's relevant departments, and discussions were held over a period of about one year. Additionally,

As part of this revision, an Introduction section was added as a preface to the Procurement Policies. In the Preamble, the Group sets forth the purpose of the revision and the international standards and guidelines to which it referred. It also clearly states that the Procurement Policies follows the principles established in the Nippon Paper Group Human Rights Policy, which was revised in May 2022, and it lays out a governance structure for the Procurement Policies to be reassessed under the supervision of the Board of Directors.

Going forward, to conduct procurement in accordance with the revised Procurement Policies, the Group will draw up a specific action plan and work to build a sustainable supply chain in collaboration with suppliers. Concurrently, the Group will keep on conducting active dialogue with stakeholders.

### Principles and Basic Policies Concerning Raw Materials Procurement (Summary)

(Established in October 2005, revised in September 2022)

For the full text



**Principles** We shall strive to contribute to better living and cultural progress everywhere we do business by implementing sustainable procurement practices for raw materials in collaboration with our suppliers. To do this, we shall make our best effort to identify social and environmental issues relating to our procurement practices and to address the challenges identified.

- Basic Policies**
- 1. Legal compliance and fair and equitable transactions**  
Respect for international standards and compliance with relevant laws and regulations, for business transactions and the provision of equitable opportunities for competition, and adequate information management
  - 2. Addressing social issues**  
Respect for human rights (prevention of human rights violations, as well as workers' rights violations), respect for community rights, avoidance of illegally harvested wood and conflict minerals
  - 3. Addressing environmental issues**  
Sustainable use of forest and water resources, conservation of biodiversity, efficient energy use, reduction of greenhouse gas emissions, active use of recycled materials as raw materials, and adequate management and handling of chemical substances
  - 4. Ensuring traceability and monitoring**  
Traceability, monitoring, and requests to our suppliers for improvement of their practices
  - 5. Communication with stakeholders**  
Holding dialogue with stakeholders and active information disclosure

## Procurement of Wood Resources

The Group maximizes use of renewable wood resources through diverse technology and know-how. As the use of wood resources is indispensable to the Group, it has constructed a system to continually procure resources that are generated from sustainable forest management.

### Key Points in the Group's Procurement of Wood Resources

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

## Creation of the Wood Resources Procurement Guidelines

The Nippon Paper Group has newly formulated the Wood Resources Procurement Guidelines under the Procurement Policies revised in September 2022. The Group will further bolster its procurement system for sustainable forest resources.

### Wood Resources Procurement Guidelines (Summary) (Established in September 2022)

1. Prohibit the procurement of illegally harvested wood
2. Commitment to the promotion of zero deforestation
3. Prohibit the procurement of High Conservation Value (HCV) forest resources
4. Procurement that contributes to the increase of CO<sub>2</sub> absorption and fixation from forests
5. Promote the use of domestic forest resources
6. Promote the use of sawmill residue and unused wood materials
7. Promote the procurement of wood resources that are audited or certified
8. Ensure traceability to the origin of wood
9. Dialogue and engagement with suppliers

For the full text



## Management of Suppliers

Raw material for paper, which is the Group's main product, consists of wood resources such as wood chips and waste-paper. Of the Company's paper raw materials, about 60% of its wood chips are procured from overseas, while the remaining amount comes from within Japan. This requires supply chain management both within and outside Japan.

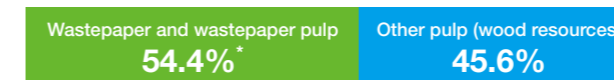
the sustainability of domestic wood materials based on trade association certification for legal authenticity. Moreover, the Company receives third-party verification, utilizing annual forest certification audits and the due diligence system for legal certification stipulated in the Clean Wood Act, which was introduced in Japan in 2017.

In addition to ensuring the legality of wood material supplies, the Company has formulated an action plan to carry out procurement of wood resources that takes into consideration human rights, labor, local communities, and the preservation of biodiversity. The action plan has been in effect since 2007.

Going forward, to promote procurement in accordance with the Procurement Policies revised in 2022 and the newly formulated Wood Resources Procurement Guidelines, the Company will bolster the action plan it is currently implementing as it seeks to gain the understanding of suppliers, with a view to building a wood resources procurement system that is even more highly trusted by customers and other stakeholders.

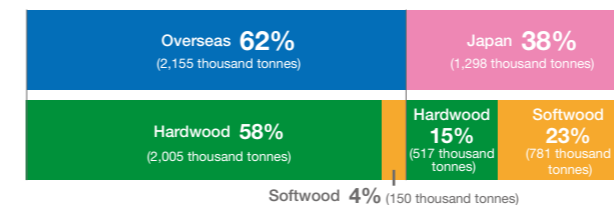
To ensure sustainability, each year the Company conducts surveys and on-site interviews with its overseas suppliers of wood materials. As for domestic wood materials, it confirms

### Breakdown of Main Raw Materials in Paper Products (Domestic Consolidated Subsidiaries) (FY2022/3)



\* Includes purchased wastepaper pulp

### Breakdown of Wood Chips for Paper Manufacturing Procured by Nippon Paper Industries (FY2022/3)



### Details of Supplier Surveys

- Basic information on forests from which materials were sourced (type of tree, compliance with laws and regulations related to forests, etc.)
- Status on obtaining forest certifications
- Establishment of policy and systems for human rights and labor policies
- Implementation of biodiversity efforts, etc.

### Number of Implementations of Nippon Paper Industries' Action Plan for Procurement of Wood Resources (FY2022/3)

|          |  |
|----------|--|
| In Japan | 357 wood chip suppliers, 7 pulp suppliers<br>(Implemented for all suppliers, compliance verified at all suppliers) |
| Overseas | 22 wood chip suppliers, 13 pulp suppliers<br>(Implemented for all suppliers, compliance verified at all suppliers) |

## Dialogue with Experts (Revisions to the Procurement Policy)

### Together with Stakeholders Aim to Establish a Sustainable Raw Materials Procurement System

The Nippon Paper Group has been moving forward on revising the Philosophy and Basic Policy Concerning Raw Materials Procurement formulated in 2005 towards achieving the Group Mission to contribute to better living and cultural progress everywhere it does business. As part of that process, the Group held repeated dialogues with outside experts, received their valuable advice on structure and wording, and reflected this in the revisions (P. 60–61). This section summarizes the opinions of the experts who took part in the revision process on the revised policy and their expectations of the Group regarding its implementation.

The Group will continue to emphasize stakeholder dialogue

going forward and work together with suppliers for sustainable raw materials procurement.



## The Company's Risk Management and Procurement Policy



**Ms. Mari Momii**  
Representative,  
deepgreen consulting

I highly commend how the Introduction and Philosophy sections are organized to give detailed explanations of what the policy is aiming for, who the targeted stakeholders are, what it regards as risks, and what it seeks to resolve.

Procurement policies are a tool to reduce a company's negative impact and minimize risk. On the other hand, they can also be a way to clarify the positive impact a company is trying to achieve from an ESG aspect and be used as a branding opportunity by clarifying its own initiatives. These revisions contain clear statements about minimizing risk and reference to governance, which I feel makes the Company's stance clearer than before.

Ensuring risk management and traceability in the supply chain can no longer be replaced by third-party certification alone, and companies are being required to perform their own verification. Based on the policy revisions, I expect that verification and response to higher-risk cases will not only reach as far as primary suppliers, but throughout the entire supply chain.

## Linking Social Issues such as Human Rights to Environmental Issues



**Ms. Akiko Sato**  
Liaison Officer,  
Business and Human Rights,  
UNDP

I believe the Introduction accurately communicates the objective of this policy and its contents will serve as an axis going forward. Corporate policies and thoughts about SDGs can all be built around a core value of human rights. Environmental issues are always linked to human rights, and themes such as climate change, preservation of biodiversity and respect for the rights of indigenous peoples can all be explained from a human rights perspective. In this respect, this revised policy is based on the Nippon Paper Group Human Rights Policy in addition to the Group Mission, and human rights are firmly incorporated into the core values as a starting point.

However, regarding the division of Social Issues and Environmental Issues within the revised policy, it may be necessary to promote awareness within the Company so that these two matters are not discussed independently, as it is a common practice in global sustainability context to connect them. The relationship between the environment, climate change and human rights, in addition to initiatives for business and human rights, are globally common issues that are ever increasingly growing in importance. These are not all things where changes will be immediately obvious. I expect the Company to keep a close focus on global developments and continue responding to them to make steady progress, step by step.

## Importance of Monitoring and Process Improvement



**Mr. Kiyoshi Kamikawa**  
Research Fellow,  
Forest Economic Research  
Institute

I felt that clearly indicating the connections between the Group Mission, its Human Rights Policy and Procurement Policies in the Introduction made it easily understandable. I think it was also good that it stipulated more detailed guidelines for procurement of wood resources, the foundation of the Group's business. Implementation of the policy will require monitoring, but I commend the sound inclusion of references to "Ensuring traceability and monitoring."

Actions based on the policy concerning procurement of raw materials should not just be carried out, there must also be a checking system. Moreover, it is conceivable that a process may arise to review the policy itself, so I think the creation of such a system and its process should include dialogue with stakeholders from various standpoints. It would be more convincing to announce that the dialogue will be held regularly with some fixed group of members, rather than just held from time to time.

In addition, when taking action, I think specific targets and milestones toward achieving them should be set, alongside proactive disclosure of information including the improvement process, which would lead to enhancing the Company's evaluation and value.

## Expecting Continued Dialogue with Stakeholders



**Ms. Chiaki Furusawa**  
Forest Group, Project Manager,  
WWF Japan

These revisions newly stipulated the procurement policy for wood resources, and incorporation of important key terms such as "zero forest destruction," "biodiversity" and "high conservation value (HCV)" is commendable. However, society, beyond environmental NGOs, has a strong interest in the definitions of these terms. To acquire credibility for properly implementing the revised policy, the Company needs to be able to clearly explain terminology to suppliers, in addition to its shared in-house understanding.

This time, I felt that throughout the process the Company emphasized dialogue with stakeholders such as we NGOs, and took the stance of closely listening to outsiders' opinions while revising the policy. By setting up continuous opportunities for dialogue with various stakeholders, including NGOs, I think it will become easier to ascertain risks in procurement activities. In some cases, issues may appear that do not conform with the policy. However, even in those cases, through dialogue with stakeholders it would be possible to come up with measures for improvements that I would then like to see implemented.

## Creating Corporate Value in a Global Society



**Mr. Minoru Matsubara**  
Executive Officer,  
Responsible Investment Division,  
Resona Asset Management Co., Ltd.

During the policy revision process, the Governance section was added after the Introduction. As I expected, executive management's involvement in the policy was made clear, and this is commendable. Risk monitoring and risk management are crucial to a company's governance, and I think policy decisions and governance at the executive management level should be clarified.

The global trend in ESG investment is naturally to focus on the environment, but considerable weight is also being given to social issues. Companies are increasingly being asked to think not only of being profitable in accounting terms, but also about how they will be involved and create value in the long term from the perspective of social sustainability. For investors to assess a company's activities, it will be an important factor that companies establish a system to gather opinions from stakeholders, communicate these to the executive level and disclose information about actions taken in relation to this. There is an advancing trend toward direct engagement from the standpoint of shareholders and investors to raise the corporate value of companies in which they invest, so to be able to take part in this kind of dialogue was an extremely valuable opportunity for me.

Going forward, I want the Company to continue dialogue with stakeholders, breathe life into the revised policy and disseminate this among each and every employee and activate it.

# Forest Management



## Basic Stance

Forests possess tremendous value to the Group as a management resource. For this reason, the Group nurtures forest resources on its own while also procuring sustainable woody materials from outside sources.

The Company manages and operates approximately 160,000 total hectares of forests both within and outside Japan with consideration toward the environment, society, and the economy, and has obtained forest certifications for all of them. At the same time, it is undertaking various initiatives

to maximize the value of forest resources.

**Values Emphasized by the Group  
in Usage of Forest Resources**

- Sustainable forest management and productivity improvement
- Maintaining a supply chain for forest resources
- Fulfilling public interest functions of forests including preservation of biodiversity

## Sustainable Forest Management and Productivity Improvement

Overseas, the Group manages approximately 70,000 total hectares of plantation areas in Brazil and Australia, where it conducts sustainable forest management with consideration toward local residents, regional culture and traditions, as well as the natural environment and ecosystem (see P.65). It also contributes to local communities by, for instance, giving consideration to indigenous peoples and providing them with support for educational activities.

In Japan, it possesses approximately 90,000 hectares of Company-owned forests in approximately 400 locations nationwide. It manages these areas by categorizing approximately 80% as commercial forest areas for harvesting woody

materials, and approximately 20% as environmental forest areas where woody materials are not harvested and environmental functions such as ecosystem maintenance and water resource preservation (watershed) are maintained, and conducts balanced, sustainable forest management.

The Company has also harnessed the unique breeding and proliferation technologies and forest management technologies it has cultivated over many years, and contributes to building a carbon-neutral society while enhancing its forest resources through productivity improvement per unit area (= improving the CO<sub>2</sub> fixation efficiency rate) (see P.24–25).

## Maintaining a Supply Chain for Wood Resources (Activation of plantation business in Japan)

Over many years, the Group has built up a supply chain with partners such as owners of forests, forestry businesses, wood processing businesses, and distribution companies both within Japan and overseas to effectively utilize forest resources. With regard to Japanese woody materials in particular, it is moving ahead with procurement using a supply chain in Japan, which is the Company's strength, and actively promoting the use of Japanese materials.

In recent years, the value of Japanese woody materials has been reconsidered due to factors including biomass fuel and

increased demand for woody materials such as building materials due to lumber shortages. However, in the Japanese plantation business, many problems have been revealed such as worker shortages and increasing costs to address damage by wild animals. The Group will maintain supply chains in Japan to continue utilizing forest resources in Japan going forward, while employing its breeding and proliferation technologies and Company-owned forests, and undertaking various initiatives to solve these issues (see P.24–25).

### CASE STUDY Improving the Efficiency of the Forest Industry through Consolidation of Operations

As a private company that owns mountain forests in the Ikitsuki region of Kumamoto Prefecture, the Company participates in an agreement to promote forest management in the Ikitsuki region through a public-private partnership together with the Kyushu Regional Forest Office, Ikitsuki Village, the IKITSUKI Forest Owner's Cooperative, and various corporations, among others. Through this agreement, a large-scale forestry business complex currently spanning over 20,000 hectares has been formed, and in addition to evaluating technical aspects such as wood chip production within forests for efficient operation, trials for stable supply through collaboration with the downstream supply chain, as well as evaluations of countermeasures against worker shortages by securing annual workloads for large areas of land, are underway.

### CASE STUDY Harnessing Cutting-Edge Technology

Using Company-owned forests as a testing field, the Group is continuing to gather forest resource information using drones and aerial laser measurements and considering ways to reduce labor and improve the efficiency of forest management. In May 2022, it signed an agreement related to the on-site implementation of cutting-edge technology with Shizuoka Prefecture, and will demonstrate cutting-edge technology, etc. by utilizing its Company-owned forests in that area.



Using a drone to gather forest resource information in Company-owned forests in Kitayama, Shizuoka Prefecture

## Fulfilling Public Interest Functions in Forests Including Preservation of Biodiversity

Forests possess public interest functions such as CO<sub>2</sub> absorption and fixation, ecosystem maintenance, water resource preservation (watershed) and disaster prevention. The Group has particularly emphasized preservation of biodiversity among its services for forest ecosystems for procurement of sustainable resources and formulated the Basic Policy on the

Preservation of Biodiversity in 2016. In addition to its own Company-run initiatives, through cooperation with various stakeholders, the Group will maintain and increase public interest functions held by forests, such as the preservation of biodiversity, and their value (see P.24–25).

### CASE STUDY Balancing Preservation of the Natural Habitat of Blakiston's Fish Owls with Business Activities

In 2010, in collaboration with the Wild Bird Society of Japan, the Company established a shared conservation area for Blakiston's fish owls, which has been designated as a critically endangered species in a list made by the Ministry of the Environment, at its Company-owned forests in Hokkaido Prefecture. In addition, the Company operates the facility based on a standard of balancing preservation of the natural habitat with economic activity.



Blakiston's fish owl (Photo courtesy of the Wild Bird Society of Japan)

### CASE STUDY Survey on Biodiversity in Overseas Plantation Businesses

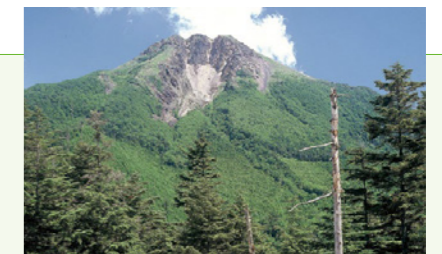
AMCEL, a plantation business company located in Brazil, established approximately 170,000 hectares of its approximately 300,000 hectares of Company-owned land as conservation areas. The conservation areas are home to much wildlife and include forests with high conservational value where rare and endangered species live. As initiatives for the preservation of biodiversity, AMCEL continues to conduct surveys monitoring vegetation within the conservation areas and the habitation of wild animals and fish within Company-owned land.



Biodiversity survey being conducted (AMCEL)

### CASE STUDY Mutual Collaboration with Coca-Cola Bottlers Japan Inc.

The Company and the Group's Marunuma Kogen Ski Resort have agreed to mutual collaboration with Coca-Cola Bottlers Japan Inc. in regard to the preservation and conservation of forest and water resources, and will work together on initiatives to preserve healthy forests that generate abundant water. Based on the agreement, the three companies will carry out forest preservation and maintenance management activities in certain areas of the forests (in Gunma Prefecture) owned by the Company to preserve watershed capabilities.



Company-owned forests in Sugenuma, Gunma Prefecture

### CASE STUDY Joining the 30by30 Alliance for Biodiversity

The Company has joined the 30by30 Alliance for Biodiversity, which was established by the Ministry of the Environment together with voluntarily participating companies, local governments, and organizations to achieve the international goal of conserving 30% or more of land and sea areas as natural environment areas by 2030. In FY2023/3, as a case study for testing and verifying the screening process on the Nature Coexistence Site (tentative name) scheduled to be certified by the ministry in FY2024/3, the Company has declared it will provide information about its Company-owned forests in Ho-oh (Yamanashi Prefecture), among others.



Company-owned forests in Ho-oh, Yamanashi Prefecture





# Environmental Management

## Basic Stance

The Nippon Paper Group provides society with a wide range of products and services through the effective use of wood, a renewable resource. At the same time, its manufacturing processes use a great deal of energy and water. Bearing this in mind, the Group has formulated the Nippon Paper Group Environmental Charter. The Group practices environmental management that contributes to the formation of a

circulation-oriented society by working from a long-term perspective to reduce environmental impact, promote resource recycling, conserve biodiversity, and respond to climate change. Under the 2030VISION, the Group has identified these priorities as materiality for realizing the Group Mission and will contribute to building a sustainable society through its business activities.

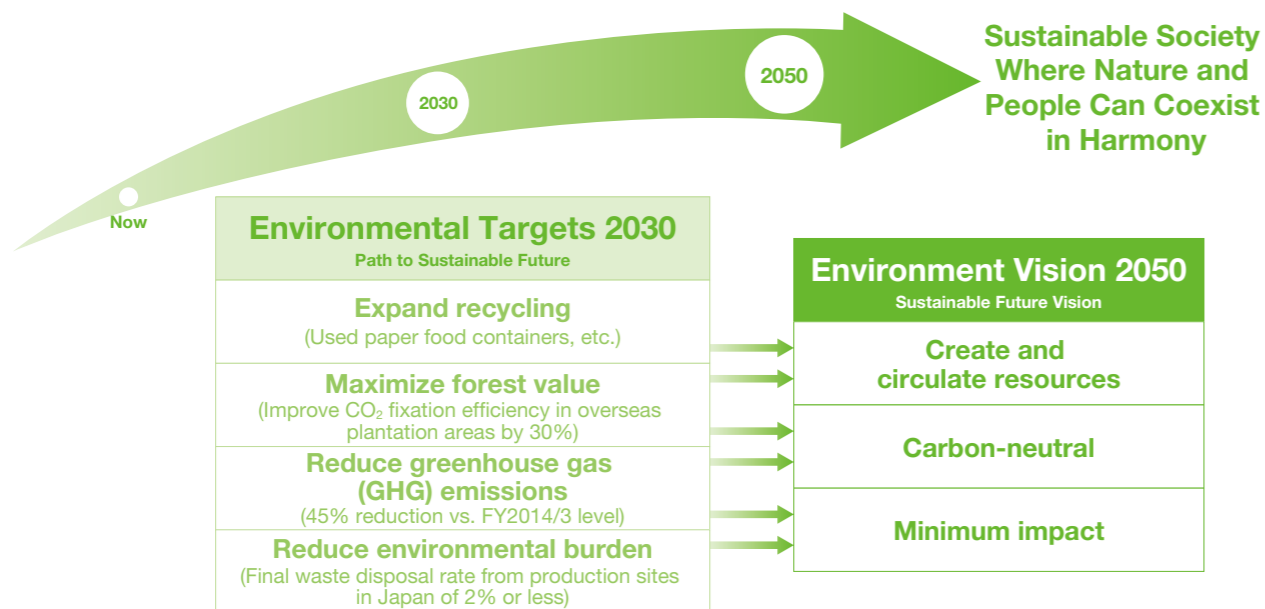
## Promotion Structure

The Nippon Paper Group Environmental Committee, chaired by the general manager of the Technical Division, who is also the executive officer in charge of GHG emissions reduction and promotion of environmental management at Nippon Paper Industries, identifies management risks related to the Group's environmental activities and promotes countermeasures. Additionally, the committee manages and assesses the proper implementation of the Environmental Targets in accordance with the Nippon Paper Group Environmental Charter and reports to the Board of Directors through the Risk Management Committee.

With the aim of creating corporate value through environmental management, the Group regularly convenes the New Product Development Committee, and promotes the development of products derived from wood resources in line with growing environmental awareness. The Management Executive Committee deliberates and decides on environmental management policies and measures based on this information, and incorporates them into business strategies to address environmental risks and capture business opportunities, thereby enhancing the resilience of the Company's growth strategies.

## Aiming for a Sustainable Society Where Nature and People Can Coexist in Harmony

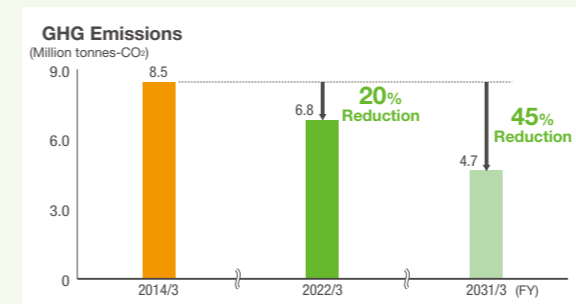
In order to be more effective in dealing with environmental issues such as climate change, which are highly uncertain and require long-term responses and countermeasures, it is necessary to have a vision and goals based on a medium- to long-term perspective. The Group has formulated targets for 2030 by backcasting from the ideal state of the Group in 2050, and the entire Group is working together to achieve them.



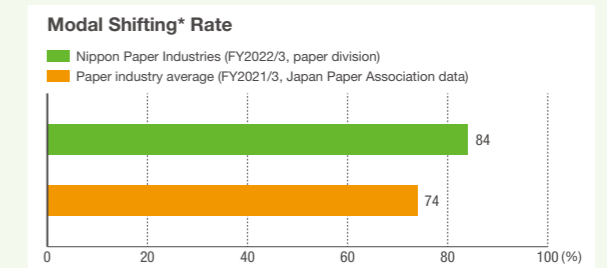
## FY2022/3 Results for Environmental Targets 2030 (Excerpt)

### 1. Reduce GHG Emissions

**Target:** Reduce direct GHG emissions (Scope 1 and 2) by 45% compared with FY2014/3.  
**Progress:** Reduced by 20% compared with FY2014/3.



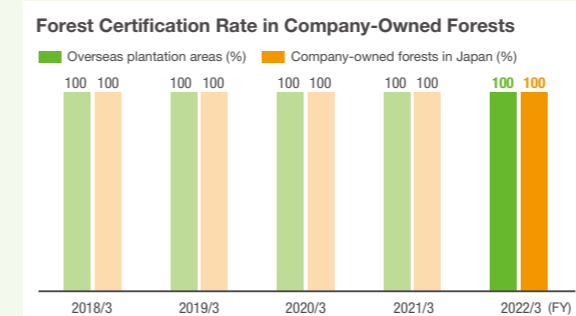
**Target:** Reduce GHG emissions from product transportation within Japan in the Paper and Paperboard Business by 23% compared with FY2021/3. (Nippon Paper Industries)  
**Progress:** Increased by 3% compared with FY2021/3 due to increase in transportation because of the recovery in production from the COVID-19 pandemic.



\* Long-distance transportation by such means as rail or ship in Japan while carrying a large load of cargo at one time

### 2. Promote Creation of Resources and Circulation of Use

**Target:** Acquire and maintain forest certification for all Company-owned forests, both in Japan and overseas.  
**Progress:** Continued to acquire and maintain forest certification for all Company-owned forests, both in Japan and overseas.



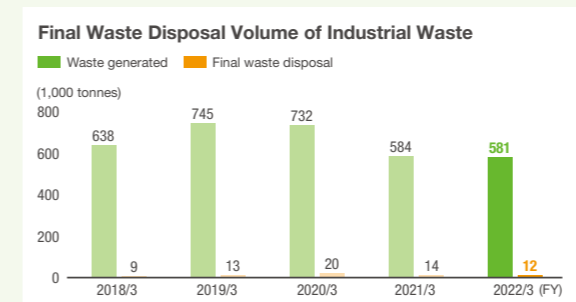
**Target:** Use 12,000 tonnes/year of unused wastepaper, which had conventionally been difficult to re-use, but can be re-used now due to development of technology to utilize wastepaper.  
**Progress:** Used 22.5 tonnes of unused, difficult-to-process wastepaper.



Crushed paper cups

### 3. Reduce Environmental Burden

**Target:** Final waste disposal volume of industrial waste from domestic production sites of 2% or less.  
**Progress:** Final waste disposal volume of industrial waste of 2.1%.



**Target:** Provide society with products and services that have a minor impact on the environment through their overall life cycle.  
**Progress:** Sold products such as Lamina® paper (heat-sealable without using plastics), that contribute to the reduction of plastic volume used and to resource circulation.



Lamina® in use

## Addressing Climate Change

### Aiming for Carbon Neutrality in 2050

The Nippon Paper Group sees addressing climate change as one of its material issues for realizing the Group Mission. Under the 2030VISION, in its basic policy, the Company states, “respond to rapid changes in the social landscape including GHG reduction and other environmental issues,” and it will work to reduce GHG (greenhouse gas) emissions and implement green strategies to achieve carbon neutrality by 2050.

**The Nippon Paper Group's FY2031/3 Targets**  
 Reduce GHG emissions (Scope 1 and 2) by 45% compared with FY2014/3

- Reduce fossil fuel use by maximizing the use of existing infrastructure

**Green strategy**

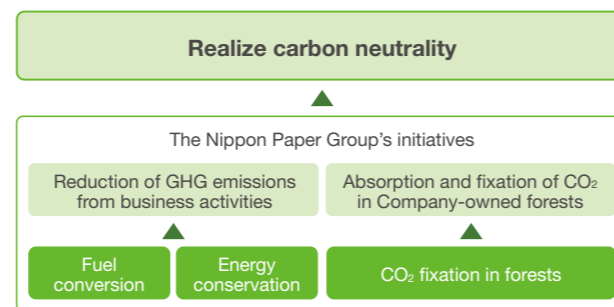
- Improve CO<sub>2</sub> fixation efficiency in overseas plantation areas by 30% compared with 2013
- Respond to demands to eliminate and reduce plastic (expand products that replace plastic with paper)

Carbon neutrality in 2050

### Initiatives to Reduce GHG Emissions

The Group has worked on fuel conversion, energy saving in manufacturing and logistics processes, and carbon fixation in forests as three pillars for GHG reduction. In FY2022/3, the Group made even further aggressive initiatives on fuel conversion and reduced the fossil energy use ratio (calorie value)\* to 55%.

\* Scope: The Nippon Paper Group's main production sites in Japan



### Addressing TCFD

In April 2021, the Group endorsed the Task Force on Climate-related Financial Disclosures (TCFD) with the aim of disclosing appropriate information on its response to addressing climate change issues.

Nippon Paper Group  
ESG Databook 2022



#### Governance

The Group has identified the reduction of GHG emissions as a management issue. Since 2008, the Group has established quantitative targets for reducing GHG emissions and has worked to achieve those targets.

The Company regards addressing climate change issues as a material issue in realizing the Group Mission, and it receives reports on initiatives from the Risk Management Committee and Nippon Paper Group Environmental Committee and monitors them. Since FY2022/3, the executive officer in charge of GHG emissions reduction and promotion of environmental management has also been reporting on these and other issues to the Board of Directors on a quarterly basis.

#### Risk Management

Assessments of and responses to climate-related risks are integrated into the Nippon Paper Group's risk management structure and are managed by the Risk Management Committee (see P. 56).

In order to properly foresee risks, the Nippon Paper Group Environmental Committee, established under the Risk Management Committee, collects and analyzes information, identifies climate-related risks and promotes countermeasures. In addition, the Group has established the Climate Change Strategy Working Group to collect information and forecast risks.

#### Indicators and Targets (FY2031/3)

In the future, the Group will refine 1.5°C scenario analysis to enhance and broaden its indicators and targets, and strengthen risk management.

GHG emissions reduction plan: GHG emissions (Scope 1 and 2) reduced by 45% in FY2031/3 compared with FY2014/3  
 Non-fossil energy use ratio 60% or more

Investment to address climate-related risks: ¥52.0 billion

Internal carbon pricing: Temporarily suspended due to rising prices of coal and other fuels

### Scenario Analysis and Strategy

The Group drew up a vision of society taking into account the growing awareness of ESG issues and conducted quantitative and qualitative assessments of the impact of climate change-related risks and opportunities on financial plans,

mainly in the domestic paper and pulp business, using two scenarios: one in which temperature rise is limited to 1.5°C and the other in which it rises by 4°C or more.

### Risk Identification and Assessment

The Group is affected significantly by physical risks because its business foundation comprises forest resources. Additionally, the Group purchases raw materials from overseas. For this reason, the Group also closely monitors the climate change countermeasures of countries from which it procures raw materials as a risk factor. On the other hand, in Japan, the Group is affected by regulatory risk such as a carbon tax and energy policies.

To address transition risk, the Group will take multifaceted measures to reduce risk to achieve GHG emission reduction

targets as quickly as possible, ahead of the scenario depicted in the 2030VISION.

Regarding physical risk, the Group strives to spread out and diversify the geographic location of its plantation areas and suppliers of wood chips and other resources. Concurrently, as a means of mitigating damage to production bases and logistics networks, the Group has established an elaborate structure for business continuity, such as backup production and inventory management. Through these efforts, the Group endeavors to reduce risk.

#### Risks Assessed to Have a Large Financial Impact (Some excerpts are shown below)

| Type of Risk    |            | Phenomena with Significant Impact on Financial Plans                 |  |
|-----------------|------------|--|--|
| Transition risk | Regulatory | Increasing price of carbon, such as the introduction of a carbon tax | <ul style="list-style-type: none"> <li>Rising fuel prices and renewable energy surcharges</li> <li>Increasing capital investment expenses for fuel conversion and energy saving</li> </ul>   |
| Physical risk   | Acute      | Losses due to catastrophic disasters                                 | <ul style="list-style-type: none"> <li>Stoppage in the delivery of supplies and products as logistics networks are cut off</li> <li>Interrupted production due to rising turbidity of water intake from rivers</li> <li>Production stoppage due to damage at production sites</li> </ul> |
|                 | Chronic    | Rising temperatures and changes such as precipitation                | <ul style="list-style-type: none"> <li>Increased price of woody supplies and other plant-based materials due to frequent forest fires and a decline in plant growth</li> </ul>   |

### Identification and Assessment of Opportunities

Climate-related risks also simultaneously present opportunities. The Nippon Paper Group will implement a green strategy combining its tangible assets, such as mill facilities and Company-owned forests, and its intangible assets, such as its raw material procurement networks and technological

capabilities developed over many years. In this way, the Group will be able to enter markets that offer growth prospects in step with changes in the environment and social conditions such as expansion of ethical consumption, thereby capturing opportunities to drive growth in its businesses.

#### Opportunities in Existing and Growing Markets (Some excerpts are shown below)

| Predicted Phenomena                                    | The Nippon Paper Group's Strengths  |
|--|---|
| Stricter government policies                           | <ul style="list-style-type: none"> <li>Widespread use of storage batteries due to progress on electrification</li> <li>Further reduction of vehicle weight</li> <li>Progress on carbon recycling</li> </ul>   |
| Changes in consumer tastes and preferences             | <ul style="list-style-type: none"> <li>Technologies for using tree components</li> <li>Cellulose nanofiber (CNF) development technologies and production facilities</li> <li>Breeding technology for trees with a high CO<sub>2</sub> fixation efficiency and Company-owned forests in Japan</li> <li>Chemical CO<sub>2</sub> fixation and utilization technology</li> <li>Biomass-derived CO<sub>2</sub> supply infrastructure (recovery boilers)</li> </ul> |
| Increased demand for environmentally friendly products | <ul style="list-style-type: none"> <li>Expand demand for products using biomass materials</li> <li>Biomass material development technology</li> <li>Recycling technology and wastepaper procurement networks</li> </ul>   |
| Losses due to catastrophic disasters                   | <ul style="list-style-type: none"> <li>Rising needs in trend to replace plastic with paper</li> <li>Increased demand for products that reduce live-stock-derived GHG emissions</li> <li>Multifunctional packaging material technology, barrier packaging technology, long-term liquid preservation technology</li> <li>Technologies using cellulose materials</li> </ul>  |
| Rising temperatures and changes such as precipitation  | <ul style="list-style-type: none"> <li>Buildings are required to be more resilient</li> <li>Trees that can withstand high temperatures, drought, and pests are needed</li> <li>Manufacturing technology for fly ash concrete admixture</li> <li>Tree breeding and propagation technologies</li> </ul>   |



### Basic Stance

The Nippon Paper Group, as a requirement of its Vision for the Group Mission, has positioned the realization of diverse work styles and active participation of diverse human resources as key issues, based on the principle of instilling pride in employees.

The Group adopted a basic strategy to accelerate the transformation of the business structure under Medium-Term Business Plan 2025 to achieve the 2030VISION. In a society

with a declining birthrate and an aging population, focus will be placed on developing and securing human resources, as well as shifting human resources to growing businesses. Moreover, to realize diverse work styles, the Group will move forward on creating organizations where diverse types of people are able to maximize their abilities, and which aim for better engagement with employees.

### Utilizing Human Resources

The Group ascertains human resource needs in new and growing businesses and redeploys human resources in line with the progress of business structure transformation. At the same time, proactively recruiting human resources with specialist knowledge and experience from outside of the Company rejuvenates the organization.

When launching a new business or mass-producing a new product, human resources who can perform stable operations

are necessary. In line with business development, the Group properly allocates employees who have accumulated exceptional operational skills at its mills in the Paper Business. Moreover, to respond to the decrease in the working-age population in Japan, focus is being placed on leadership training for employees hired by mills, and efforts are being made to realize flexible and diverse work systems and programs that meet the needs of employees.

### Developing Human Resources

#### Ideal Human Resources for the Group

The Group has formulated values that employees should emphasize to realize the Group Mission.

Nippon Paper Industries, the core company of the Group, looks for the following when hiring employees: 1) constant seeking of new challenges, 2) exercising fair judgment and acting accordingly, 3) having the ability to work in an inclusive team, and 4) having the mental fortitude to overcome hardships.

In addition, as leaders advance the push to accelerate the transformation of the business structure, managerial-track

employees are trained and their careers are shaped with the aim of becoming “autonomous human resources” who can take action to achieve their own goals, “challenger human resources” who can take on new challenges, or “global human resources” who can excel in a global business field.

Values and judgment standards employees must emphasize to achieve the Group Mission  
**Challenge Fairness Teamwork**

#### Employee Training

The Company supports the autonomous development of its employees after joining the Company through the regular provision of distance and group training opportunities and the development of a professional qualification incentive system.

Training of newly recruited managerial-track employees has been conducted jointly by the Company and main Group companies continuously since FY2011/3 with the aim of Group-wide development of employees. The Company also conducts stratified education jointly at multiple mills located in close proximity to each other so that employees can develop a broad perspective through interaction with others outside the mill where they work.

Training for managerial-track employees aims to accumulate a wide variety of experiences through a combination of on-the-job training and planned rotations. In addition, through stratified education and optional training, opportunities for employees to cultivate an awareness of their responsibilities as

leaders and develop necessary skills and techniques are provided. Furthermore, to develop global human resources, TOEIC tests and overseas training are offered.

#### Nippon Paper Industries' Main Education and Training System

|        |   |
|--------|---|
|        | Stratified education<br>(Training for new employees and new supervisors, promotion and appointment training, elective training, etc.) |
| OFF-JT | Optional training<br>(Distance learning, group training, a professional qualification incentive system, etc.)                         |
|        | Overseas site dispatch system, training course for middle management, assessor training, other  |
|        | On-the-job training, rotation   |

### Enhancing Employee Engagement

The Company is working on building relationships to ensure growth for both employees and companies by realizing diverse work styles and promoting diversity as well as improving job satisfaction.

#### Realizing Diverse Work Styles

The Company is moving forward on establishing work environments to realize diverse work styles and is reviewing work systems in response to changes in society, such as promotion

of diversity and the pandemic. Moreover, it is also working to improve operational efficiency and review work styles, as well as to shorten overall work hours.

#### Systems Introduced/Revised (Nippon Paper Industries)

| April 2020  | April 2021  | April 2022  |
|---|---|---|
| <ul style="list-style-type: none"> <li>Half-day unit acquisition of expired annual paid leave (preserved leave)</li> <li>A system that allows employees to apply the preserved leave (expired annual paid leave) for short-term childcare (paid leave can be used)</li> <li>Financial assistance for employees transferred alone (without their family) who are not the head of their household</li> <li>A system to allow employees to take leave when accompanying their spouses during an overseas assignment</li> </ul> | <ul style="list-style-type: none"> <li>Elimination of the core time (the time during which employees must be at work) of the flextime system</li> <li>A system to work from home (permanent system) (Target persons: Employees who handle work that can be done from home and who can work autonomously)</li> <li>A system for taking annual paid leave in hourly increments</li> </ul> | <ul style="list-style-type: none"> <li>Application of expired annual paid leave to absence from work related to fertility treatment and pregnancy and intermittent absence from work associated with treatment of a disease</li> <li>Extension of a period of application of childcare support measures, etc.</li> <li>Revision of the salary increase rule for those who have taken childcare leave or nursing-care leave</li> </ul> |

#### Total Number of Working Hours (Nippon Paper Industries)

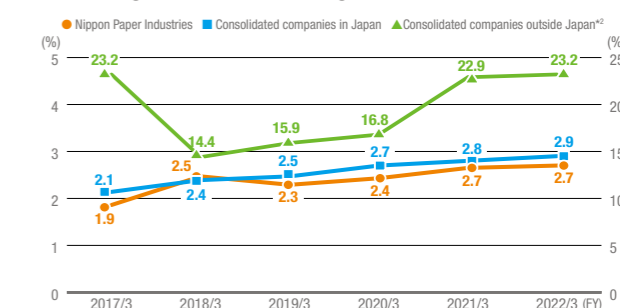
|                               | FY2018/3    | FY2019/3    | FY2020/3    | FY2021/3    | FY2022/3    |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|
| Total Number of Working Hours | 1,927 hours | 1,923 hours | 1,894 hours | 1,888 hours | 1,905 hours |

#### Promoting Diversity

The Company aims for diverse human resources to display their abilities to the maximum extent. From the standpoint of women's active participation, the Company formulated the Action Plan for the Advancement of Women in April 2021 and is moving ahead on creating an effective environment to achieve its goals. The Company recruited very few women in the past, so improving the ratio of women in management will take time, but the number of women recruited as

managerial-track employees and the number of workplaces where women are assigned are both on the increase.

#### Percentage of Female Managers\*1



\*1 Percentage of only full-time employees which excludes associate directors, employees commissioned for specific purposes, employees on temporary assignment from other companies, and other non-full-time personnel  
\*2 Managerial personnel at the level of section manager or positions higher

#### Number of Managerial-Track Employees and Percentage of Women (Nippon Paper Industries)

|                                      | FY2021/3 | FY2022/3 | FY2023/3 |
|--------------------------------------|----------|----------|----------|
| Number of managerial-track employees | 48       | 43       | 48       |
| (Percentage of women)                | (35%)    | (30%)    | (40%)    |

#### Enhancing Employee Job Satisfaction

The Company conducted a trial of internal side occupations as a measure to enhance employee job satisfaction at the head office from September 2021 until March 2022, and officially introduced the system from FY2023/3. The Company will accelerate the transformation of the business structure through

the effects of enhancing motivation by enabling employees to get involved in operations in which they have an interest but are different from their normal work, fostering a corporate culture where employees aim for autonomous growth and strengthening organizational capabilities.

# Eleven-Year Financial and Non-Financial Summary

Nippon Paper Industries Co., Ltd. and Consolidated Subsidiaries\*1  
Fiscal Years Ended March 31

(Millions of yen)

|  | FY2012/3  | FY2013/3  | FY2014/3  | FY2015/3  | FY2016/3  | FY2017/3  | FY2018/3  | FY2019/3  | FY2020/3  | FY2021/3  | FY2022/3  |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Profit / Loss (Fiscal Year)                                      |           |           |           |           |           |           |           |           |           |           |           |
| Net sales  | 1,042,436 | 1,025,078 | 1,081,277 | 1,052,491 | 1,007,097 | 992,428   | 1,046,499 | 1,068,703 | 1,043,912 | 1,007,339 | 1,045,086 |
| Cost of sales  | 803,653   | 796,411   | 844,603   | 825,576   | 800,185   | 787,464   | 846,109   | 871,218   | 832,151   | 803,686   | 872,011   |
| Operating income   | 36,524    | 25,145    | 28,536    | 23,656    | 22,623    | 23,764    | 17,613    | 19,615    | 35,048    | 19,233    | 12,090    |
| Ordinary income  | 6,057     | 23,081    | 28,188    | 23,204    | 17,123    | 26,994    | 18,649    | 23,901    | 30,524    | 12,276    | 14,490    |
| Profit (loss) attributable to owners of parent                   | (41,675)  | 10,652    | 22,770    | 23,183    | 2,424     | 8,399     | 7,847     | (35,220)  | 14,212    | 3,196     | 1,990     |
| Cash flows from operating activities                             | 60,114    | 65,978    | 75,763    | 81,846    | 52,419    | 87,087    | 44,944    | 59,760    | 67,036    | 84,197    | 72,378    |
| Cash flows from investing activities                             | (46,626)  | (61,766)  | (24,861)  | (42,483)  | 16,270    | (65,278)  | (62,731)  | (47,461)  | (70,113)  | (182,945) | (61,247)  |
| Free cash flow   | 13,488    | 4,212     | 50,902    | 39,363    | 68,689    | 21,809    | (17,787)  | 12,299    | (3,077)   | (98,748)  | 11,131    |
| Financial Position (End of Fiscal Year)                          |           |           |           |           |           |           |           |           |           |           |           |
| Total assets   | 1,527,635 | 1,497,729 | 1,480,894 | 1,495,622 | 1,390,918 | 1,388,885 | 1,429,892 | 1,390,814 | 1,363,469 | 1,547,326 | 1,639,286 |
| Total current assets   | 546,344   | 507,335   | 505,417   | 484,498   | 502,912   | 486,205   | 490,479   | 515,407   | 496,871   | 533,764   | 617,934   |
| Total property, plant and equipment                              | 752,501   | 747,423   | 729,179   | 715,406   | 669,298   | 686,813   | 717,927   | 677,613   | 680,524   | 782,012   | 774,989   |
| Other non-current assets   | 228,789   | 242,970   | 246,297   | 295,716   | 218,707   | 215,867   | 221,484   | 197,792   | 186,074   | 231,549   | 246,363   |
| Total liabilities  | 1,160,983 | 1,101,269 | 1,054,309 | 1,005,881 | 966,233   | 953,974   | 986,493   | 995,470   | 976,892   | 1,122,605 | 1,200,682 |
| Total net assets   | 366,652   | 396,460   | 426,584   | 489,740   | 424,685   | 434,911   | 443,398   | 395,343   | 386,577   | 424,721   | 438,604   |
| Interest-bearing debt  | 838,285   | 830,220   | 775,597   | 731,834   | 703,831   | 678,504   | 693,562   | 688,703   | 689,937   | 828,870   | 898,125   |
| Other  |           |           |           |           |           |           |           |           |           |           |           |
| Capital investment   | 57,172    | 53,323    | 47,162    | 48,518    | 46,899    | 51,289    | 72,765    | 60,338    | 70,636    | 57,929    | 58,107    |
| Depreciation   | 74,352    | 64,903    | 63,181    | 61,374    | 57,672    | 55,083    | 57,892    | 60,422    | 58,705    | 63,357    | 66,549    |
| Research and development expenses                                | 6,484     | 6,348     | 5,690     | 5,431     | 5,555     | 5,622     | 6,013     | 6,694     | 6,051     | 6,217     | 5,672     |
| Per Share Data (Yen)   |           |           |           |           |           |           |           |           |           |           |           |
| Profit (loss) attributable to owners of parent                   | (359.90)  | 92.00     | 196.67    | 200.27    | 20.95     | 72.57     | 67.80     | (304.34)  | 122.89    | 27.67     | 17.23     |
| Cash dividends   | 30.00     | 40.00     | 40.00     | 50.00     | 60.00     | 60.00     | 60.00     | 30.00     | 40.00     | 40.00     | 40.00     |
| Financial Indicators   |           |           |           |           |           |           |           |           |           |           |           |
| Operating income margin  | 3.5%      | 2.5%      | 2.6%      | 2.2%      | 2.2%      | 2.4%      | 1.7%      | 1.8%      | 3.4%      | 1.9%      | 1.2%      |
| EBITDA (Millions of yen)   | 114,754   | 93,752    | 96,333    | 89,467    | 85,145    | 83,571    | 80,137    | 84,583    | 97,779    | 86,940    | 81,546    |
| Return (loss) on equity (ROE)                                    | (10.9%)   | 2.8%      | 5.6%      | 5.1%      | 0.5%      | 2.0%      | 1.8%      | (8.6%)    | 3.7%      | 0.8%      | 0.5%      |
| Return on assets (ROA)   | 1.2%      | 2.3%      | 2.7%      | 2.2%      | 2.0%      | 2.6%      | 1.9%      | 2.2%      | 2.7%      | 1.3%      | 1.3%      |
| Return on invested capital (ROIC)                                | 1.5%      | 2.9%      | 3.3%      | 2.8%      | 2.4%      | 3.2%      | 2.3%      | 2.9%      | 3.5%      | 1.6%      | 1.7%      |
| Adjusted net debt/equity ratio (times)                           | 1.94      | 1.89      | 1.70      | 1.55      | 1.47      | 1.49      | 1.61      | 1.76      | 1.75      | 1.86      | 1.89      |
| Overseas sales ratio   | 10.1%     | 9.7%      | 12.0%     | 13.3%     | 13.8%     | 14.3%     | 17.0%     | 17.5%     | 16.2%     | 20.5%     | 27.0%     |
| ESG Indicators*2   |           |           |           |           |           |           |           |           |           |           |           |
| Percentage of outside directors                                  | 0%        | 0%        | 11.1%     | 11.1%     | 12.5%     | 22.2%     | 22.2%     | 22.2%     | 33.3%     | 33.3%     | 33.3%     |
| Forest certification acquisition rate                            | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      | 100%      |
| GHG emissions*3 (Million tonnes-CO <sub>2</sub> )                | -         | -         | 8.5       | -         | -         | -         | 8.1       | 7.9       | 7.4       | 6.9       | 6.8       |
| Waste recycling rate*4   | 96.7%     | 95.8%     | 95.9%     | 98.2%     | 97.6%     | 98.4%     | 98.6%     | 98.3%     | 97.3%     | 97.6%     | 97.9%     |
| Percentage of female managers*5                                  | -         | 1.49%     | 1.48%     | 1.57%     | 1.60%     | 1.86%     | 2.47%     | 2.29%     | 2.43%     | 2.65%     | 2.71%     |
| Lost-time injury frequency rate (LTIFR)*6                        | 0.37      | 0.58      | 0.53      | 0.62      | 0.44      | 0.40      | 0.64      | 0.77      | 0.79      | 0.79      | 0.55      |
| Number of employees on a consolidated basis (end of fiscal year) | 13,407    | 13,052    | 13,107    | 12,771    | 11,741    | 13,057    | 12,881    | 12,943    | 12,592    | 16,156    | 16,129    |

\*1 Nippon Paper Industries Co., Ltd. merged with and absorbed its parent company Nippon Paper Group, Inc. and was publicly listed on April 1, 2013.

For this reason, figures for FY2013/3 and prior fiscal years represent the financial results of Nippon Paper Group, Inc.

\*2 Data available on a continuing yearly basis have been provided for comparison purposes, considering changes in the scope of aggregation and similar factors.

\*3 Scope: Consolidated and non-consolidated subsidiaries

\*4 Scope: Consolidated subsidiaries in Japan

\*5 Scope: Nippon Paper Industries

\*6 Scope: Manufacturing offices belonging to Nippon Paper Industries, Nippon Paper Papyrus, Nippon Paper Crecia, and Nippon Paper Liquid Package Product (including affiliated companies)

· Free cash flow = Cash flows from operating activities + Cash flows from investing activities

· Interest-bearing debt = Short-term borrowings + Long-term debt

· EBITDA = Operating income + Depreciation + Dividend income + Interest income + Amortization of goodwill

· Return (loss) on equity (ROE) = Profit (loss) attributable to owners of parent / [Average of balances at the beginning and end of fiscal year (Shareholders' equity + Accumulated other comprehensive income)] x 100

· Return on assets (ROA) = (Ordinary income + interest expense) / Total assets at end of fiscal year x 100

· Return on invested capital (ROIC) = (Ordinary income + Interest expense) / (Year-end shareholders' equity + Year-end accumulated other comprehensive income + Year-end balance of interest-bearing debt) x 100

· Adjusted net debt/equity ratio = (Net interest-bearing debt - Equity-type debt) / (Shareholders' equity + Equity-type debt)

· Equity-type debt: The amount of debt financed by hybrid loans that has been recognized as equity credit by ratings agencies (50% of the financed amount)

Corporate Overview

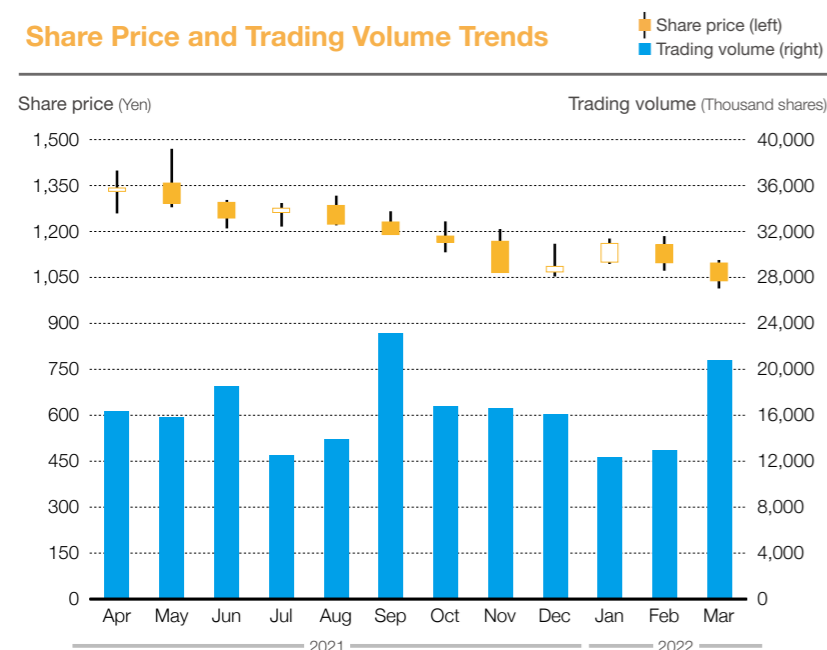
|                               |  |
|-------------------------------|--|
| <b>Company Name</b>           | Nippon Paper Industries Co., Ltd.  |
| <b>Head Office</b>            | 4-6 Kanda-Surugadai, Chiyoda-ku, Tokyo 101-0062, Japan   |
| <b>Establishment</b>          | August 1, 1949   |
| <b>Number of Employees</b>    | 5,237 non-consolidated<br>16,129 consolidated  |
| <b>Capital</b>                | ¥104,873 million   |
| <b>Shares</b>                 | Number of shares authorized to be issued 300,000,000 shares<br>Number of shares issued 116,254,892 shares (including 361,839 shares of treasury stock) |
| <b>Number of Shareholders</b> | 167,005  |

Major Shareholders

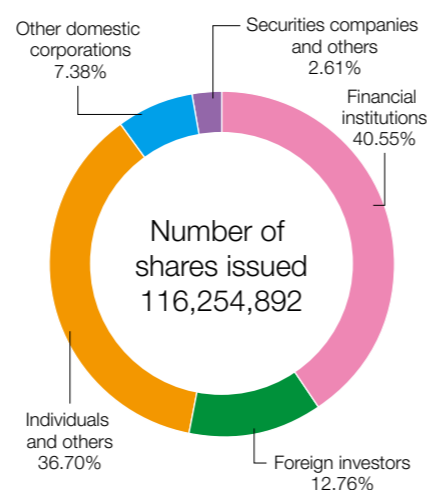
| Name  | Shares Held | Shareholding Ratio (%) |
|---|-------------|------------------------|
| The Master Trust Bank of Japan, Ltd. (Trust Account)                            | 17,355,700  | 14.98                  |
| Custody Bank of Japan, Ltd. (Trust Account)                                     | 8,946,200   | 7.72                   |
| Ichigo Trust Pte. Ltd.  | 4,590,800   | 3.96                   |
| Nippon Paper Industries Co., Ltd. Employee Share Ownership Association          | 3,174,729   | 2.74                   |
| Nippon Life Insurance Company   | 2,473,165   | 2.13                   |
| Nippon Paper Industries Co., Ltd. Business Partners Share Ownership Association | 2,276,500   | 1.96                   |
| TAIJU LIFE INSURANCE COMPANY LIMITED  | 2,258,900   | 1.95                   |
| Mizuho Bank, Ltd.   | 2,000,000   | 1.73                   |
| The Norinchukin Bank  | 1,700,065   | 1.47                   |
| State Street Bank West Client - Treaty 505234                                   | 1,148,100   | 0.99                   |

\* The shareholding ratio was calculated after deducting 361,839 shares of treasury stock.

Share Price and Trading Volume Trends



Percentage of Shares Held by Shareholder Type



ESG Databook 2022

The Nippon Paper Group has issued the ESG Databook 2022 on its website at the same time as this report. In the ESG Databook 2022, the Group discloses information on activities related to ESG (Environmental, Social, and Governance) to all stakeholders. The ESG Databook 2022 was prepared in accordance with the Core option of the Global Reporting Initiative (GRI) Sustainability Reporting Standards.

[https://www.nipponpapergroup.com/english/csr/npg\\_esgdb2022\\_e\\_ALL.pdf](https://www.nipponpapergroup.com/english/csr/npg_esgdb2022_e_ALL.pdf)



Online Resources

IR Library:

<https://www.nipponpapergroup.com/english/ir/library/>



Sustainability Website:

<https://www.nipponpapergroup.com/english/csr/>



Securities Report (Japanese only):

<https://disclosure.edinet-fsa.go.jp/>  
(EDINET code: E11873)



Corporate Governance Report:

<https://www.nipponpapergroup.com/english/ir/20220704ecg.pdf>



External Evaluations



FTSE Blossom Japan



FTSE Blossom Japan Sector Relative Index



2022 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

2022 CONSTITUENT MSCI JAPAN EMPOWERING WOMEN INDEX (WIN)



The Development Bank of Japan (DBJ) has awarded Nippon Paper Industries **its highest** environmental rating, citing its particularly advanced environmental initiatives. Environmental rating acquired: November 2018



Sumitomo Mitsui Banking Corporation (SMBC) has awarded Nippon Paper Industries **the AAA rating**, its highest rating for ESG / SDGs assessment-based financing.