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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/>

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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 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. 
	2 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. 
	3 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. 
	4 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. 

### 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

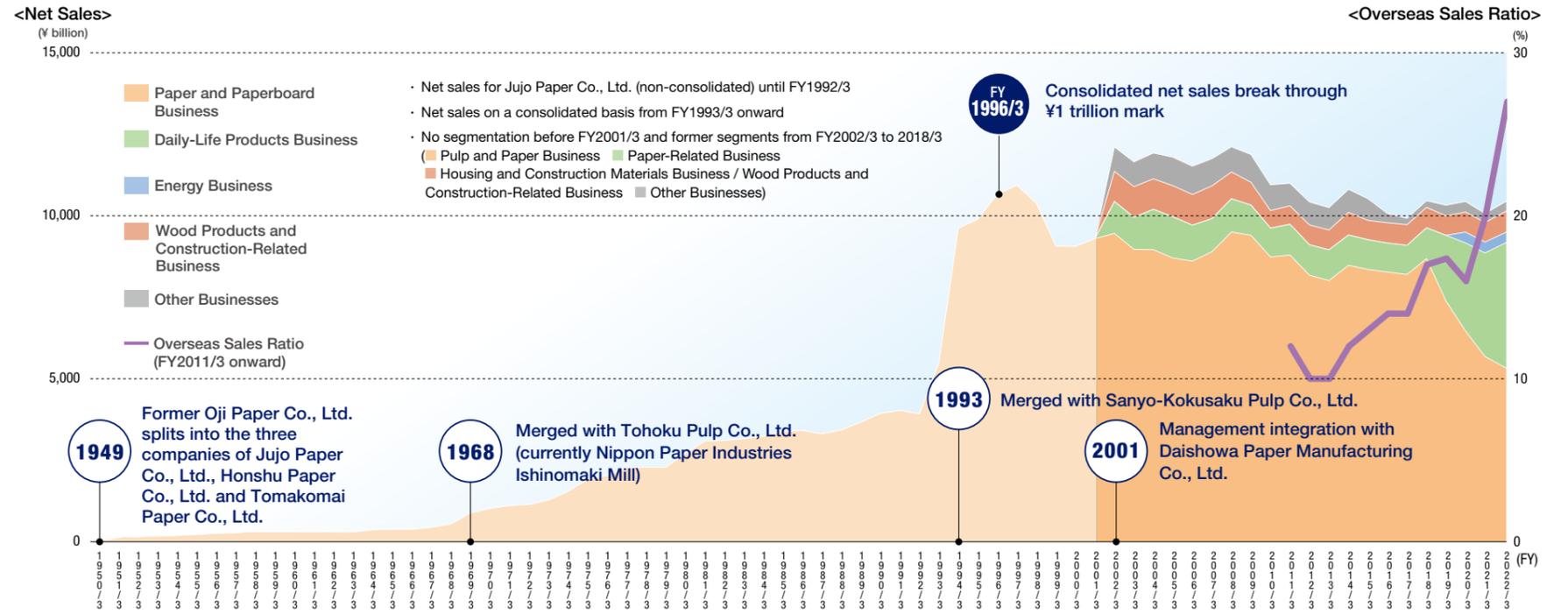
### Diverse Products and Services



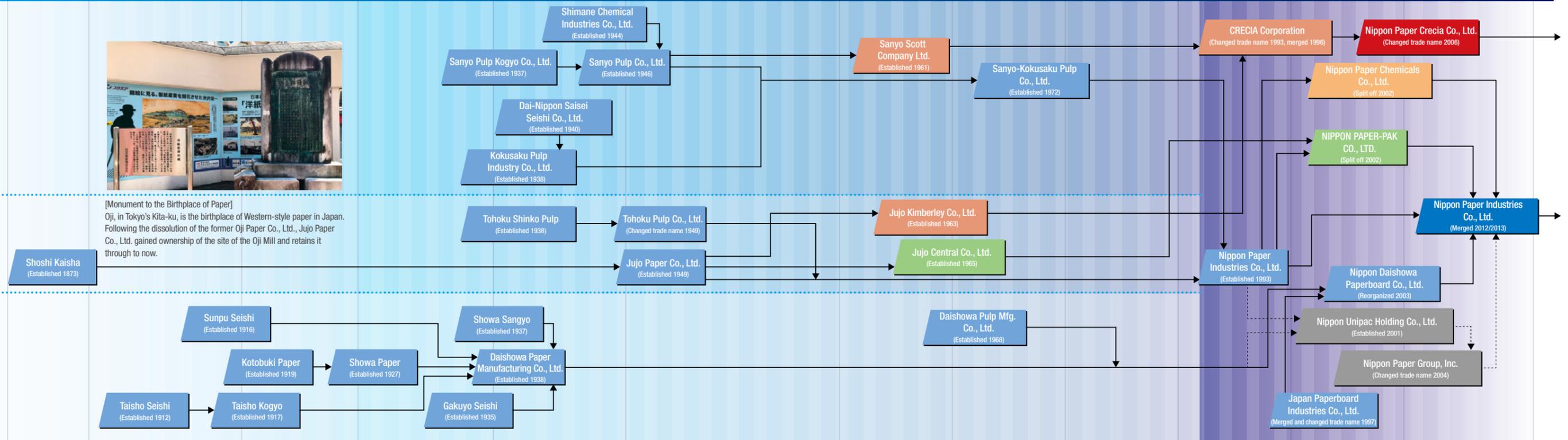
# History of the Nippon Paper Group

## 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>
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**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.

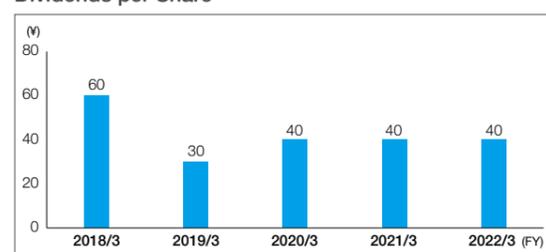
### Fund Procurement Policy

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

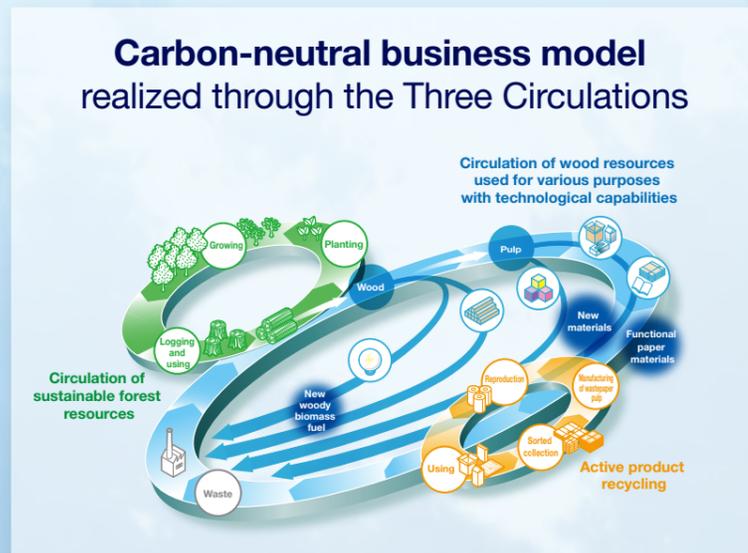
Contribute to better living and cultural progress everywhere the Group does business

### 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



## 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



# 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> (as of December 31, 2021)	Approx. <b>160,000</b> hectares (Domestic Company-owned forests)
	Approx. <b>90,000</b> hectares (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> (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> (as of March 31, 2022)	<b>16,129</b>
■ <b>Ratio of employees at overseas consolidated subsidiaries</b> (as of March 31, 2022)	<b>37.1%</b>
■ <b>Training time per employee*6</b> (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> (as of March 31, 2022)	<b>¥1,639.3</b> billion
■ <b>Shareholders' equity</b> (as of March 31, 2022)	<b>¥426.9</b> billion
■ <b>EBITDA</b> (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> (as of March 31, 2022)	<b>159</b>
<b>(Domestic affiliated companies)</b>	<b>116</b>
<b>(Overseas affiliated companies)</b>	<b>43</b>
■ <b>Capital investment amount</b> (FY2022/3)	<b>¥58.1</b> billion

# Initiatives for Materiality and the 2030VISION

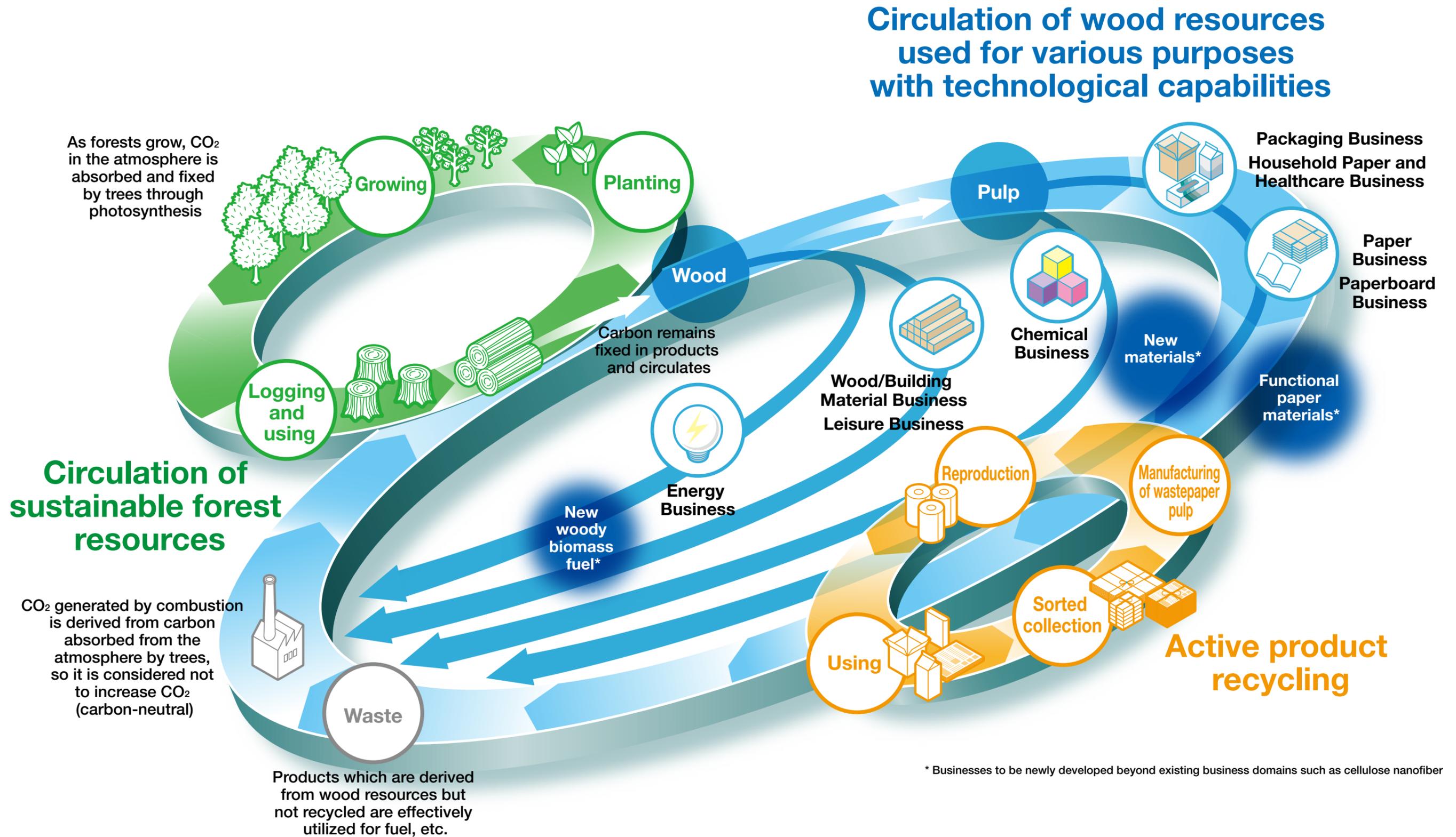
The Nippon Paper Group will pursue sustainability management through initiatives under themes responding to Materiality and the 2030VISION, aiming to realize the Group Mission.

Vision	Materiality (Important Management Issues)	2030VISION Themes	Key Performance Indicators (KPI) to Achieve by FY2031/3 Scope ■ Nippon Paper Group ■ Nippon Paper Industries Co., Ltd.	Main Progress and Initiative Status in FY2022/3	Integrated Report 2022 Related Pages
① 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> <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 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> <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> <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 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 Product safety and quality control	<b>Engagement in stable production, response to natural disasters (strengthen BCP) 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 Instill pride in employees	Realization of diverse work styles 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 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 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 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 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.



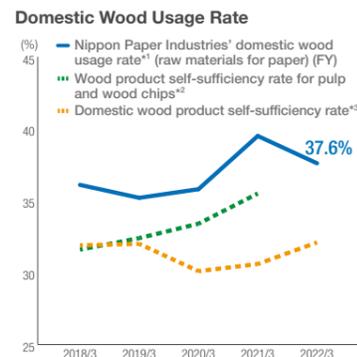
# Pursue Maximization of Forest Value through Company-Owned Forests in Japan and Overseas

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.

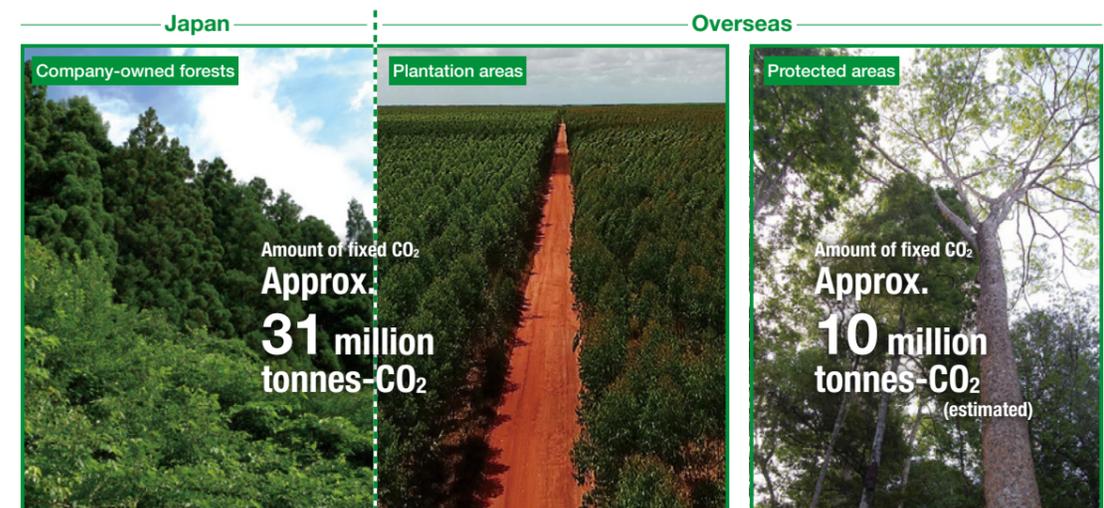
▶ The Company and Marubeni Corporation signed a strategic partnership in March 2022 and aim to improve forest growing stock through technical guidance provided to PT. Musi Hutan Persada (MHP), Marubeni's plantation business company in Indonesia.

## 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

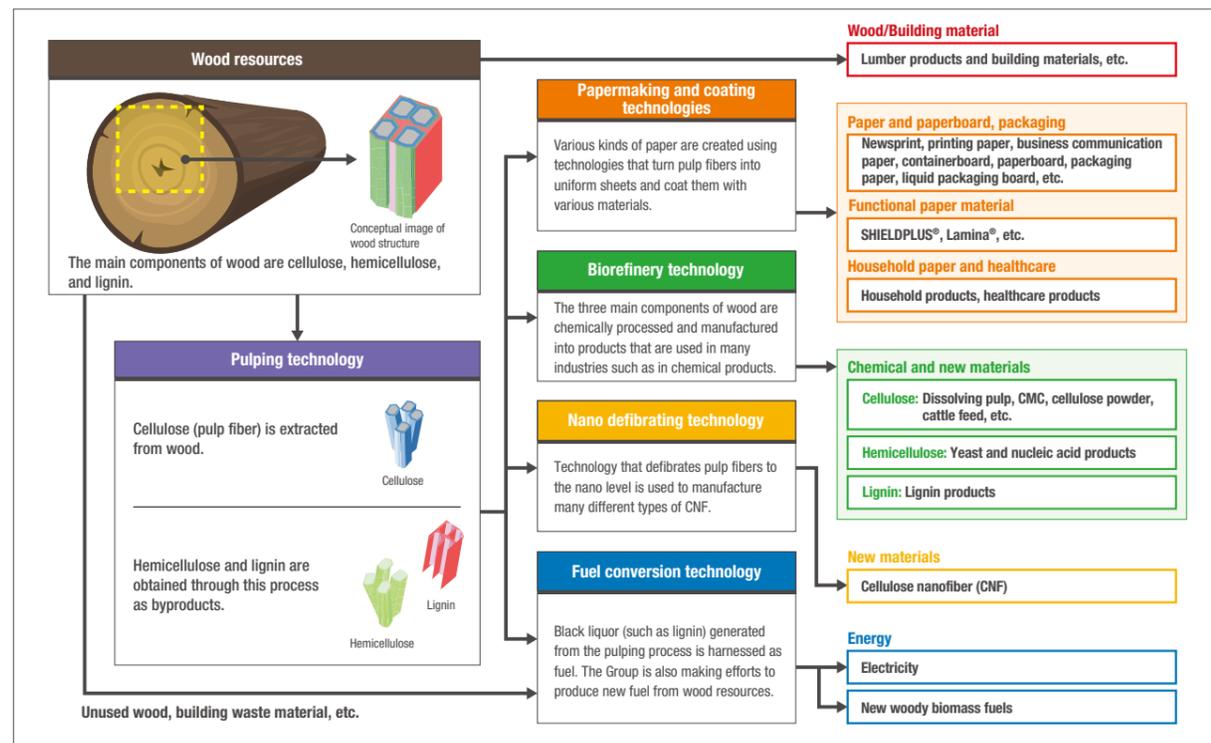
The Nippon Paper Group develops business that utilizes renewable wood resources at many stages, based on the accumulation of a wide range of technologies, including pulping, and know-how. It will strive to boost profitability while contributing to the creation of a carbon-neutral society by expanding 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.

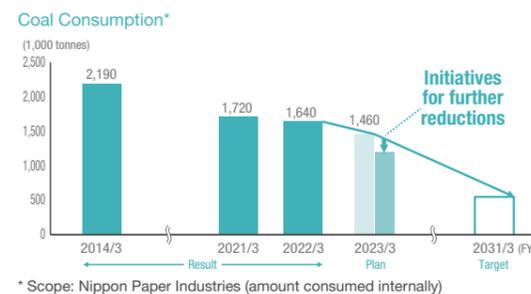
The manufacturing process of creating products from wood resources requires a large amount of energy, so fuel procurement is an important management issue that affects earnings.

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.

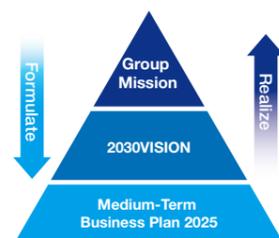
However, right now as energy costs are rising, it is critical to limit the consumption of fuel and electricity through higher energy efficiency. For instance, although using a large volume of water in the papermaking process is necessary from the standpoint of paper quality, a significant amount of energy 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 · Rise in various costs	· Improvement in export environment due to the weak yen
Continued congestion of maritime transportation	· Rise in logistics costs · 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 · Rushed introduction of a carbon tax	· Enhanced value of forest resources · Expanded market for biomass products · 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	Opal	<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>
	NDP	<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



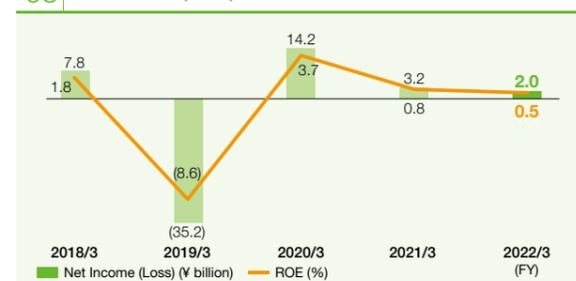
Net sales in FY2022/3 totaled ¥1,045.1 billion, exceeding the previous fiscal year, due in part to a rebound from decreased demand during the COVID-19 pandemic. In addition, the overseas sales ratio grew to 27.0%, partially because of the full-year contribution from the paperboard and fiber-based packaging 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



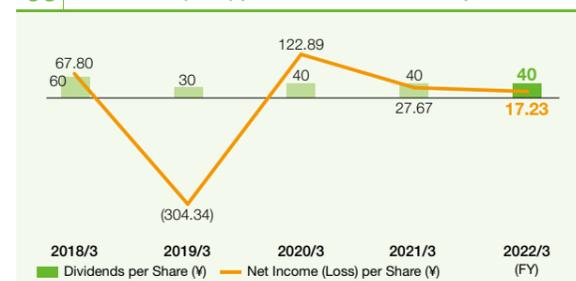
As a result of recording expenses incurred from the reorganization of the production structure undertaken to accelerate the business structure transformation as extraordinary loss, net income in FY2022/3 was ¥2.0 billion. The Group will improve ROE by the latter half of Medium-Term Business Plan 2025, and targets ROE of 5.0% or more.

### 04 EBITDA\*3



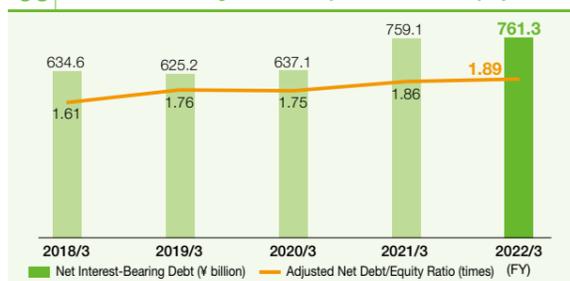
EBITDA has remained in the ¥80.0–90.0 billion range for the past few years, and totaled ¥81.5 billion in FY2022/3. The Group aims to stably record EBITDA of ¥100.0 billion in order to enhance the usage of capital such as for investment toward growth and repayment of debts and shareholder returns.

### 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.

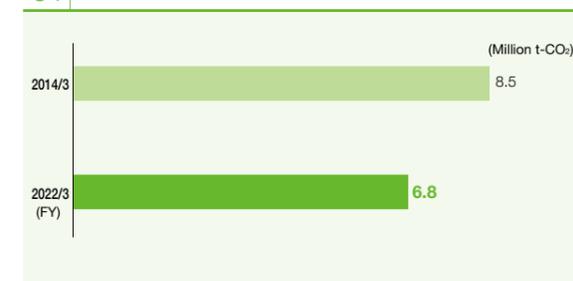
### 06 Net Interest-Bearing Debt and Adjusted Net Debt/Equity Ratio\*4



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.

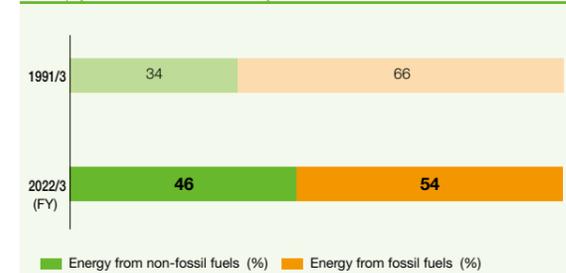
## Non-Financial Highlights

### 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)



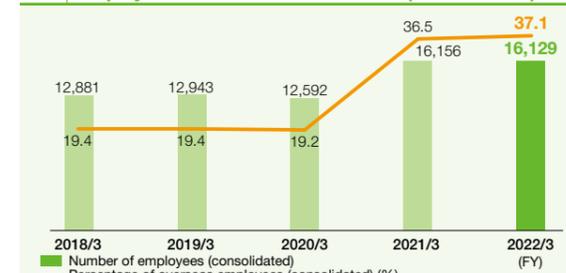
In order to reduce GHG emissions, the Company works to improve the non-fossil energy use ratio, while promoting resource circulation in Japan by accelerating the conversion from fossil fuels such as coal to non-fossil fuels like woody biomass and waste-oriented fuels.

### 03 Forest Certification Rate among Company-Owned Forests



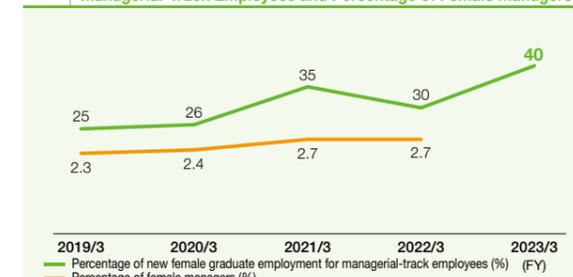
The Company conducts sustainable forest management with consideration for the environment, society, and the economy in the approximately 160,000 hectares of forests it manages both in Japan and overseas, and has obtained forest certification for all of them.

### 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.

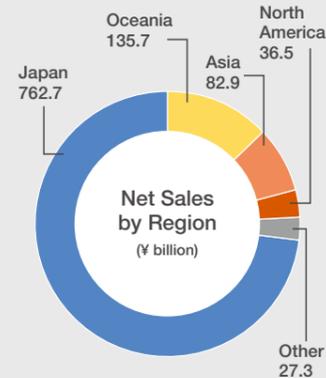
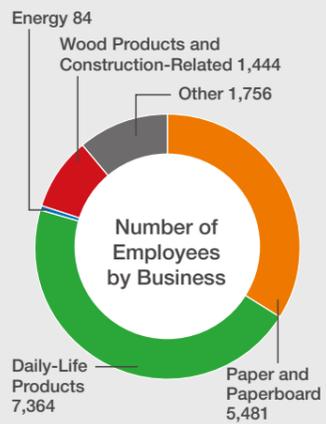
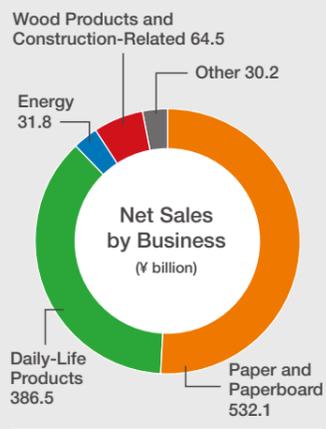
\*1 Profit (loss) attributable to owners of parent \*2 Return (loss) on equity (ROE) = Profit (loss) attributable to owners of parent / [Average of balances at the beginning and end of fiscal year (Shareholders' equity + Accumulated other comprehensive income)] x 100 \*3 EBITDA = Operating income + Depreciation + 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



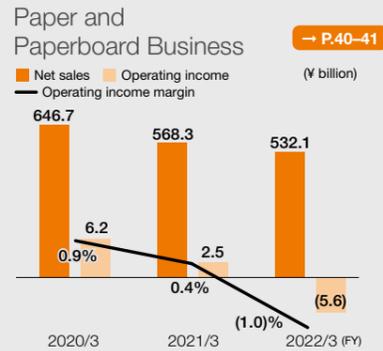
FY2022/3 Results

[ Net sales ]  
**¥1,045.1 billion**  
 [ Operating income ]  
**¥12.1 billion**



Main Products and Services / Key Indices

Overview of Business and Financial Results

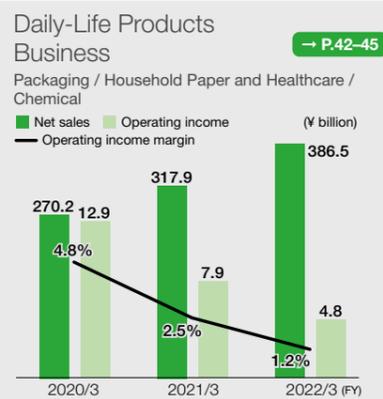


**Paper:** Newsprint, printing paper, business communication paper, industrial paper, functional specialty paper, functional paper  
**Paperboard:** Containerboards, white paperboards

**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.

Net sales: **¥532.1 billion** (Down 6.4% YoY)  
 Operating income: **¥(5.6) billion**  
 Consolidated subsidiaries: **9** subsidiaries (5 domestic, 4 overseas)

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.

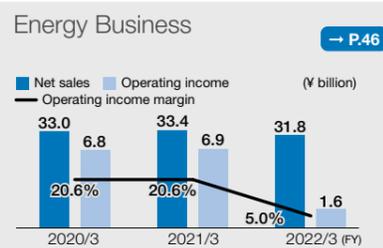


**Packaging:** Liquid packaging cartons (domestic), corrugated boxes (overseas)  
**Household Paper and Healthcare:** Facial tissues, toilet paper rolls, adult diapers  
**Chemical:** Dissolving pulp, chemical products, functional coating resin products, functional films

**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.

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)

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.

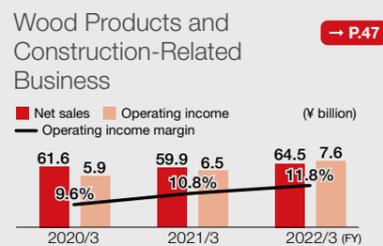


Electricity sales

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.

Net sales: **¥31.8 billion** (Down 4.8% YoY)  
 Operating income: **¥1.6 billion** (Down 76.9% YoY)  
 Consolidated subsidiaries: **1** subsidiary (1 domestic)

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.

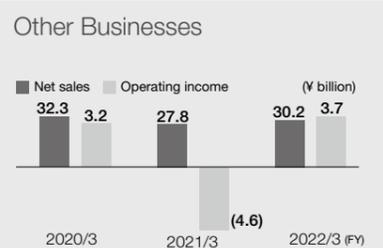


Logs, building materials, raw materials and fuel for papermaking

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.

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)

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

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.

Net sales: **¥30.2 billion** (Up 8.4% YoY)  
 Operating income: **¥3.7 billion**  
 Consolidated subsidiaries: **7** subsidiaries (7 domestic)

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.

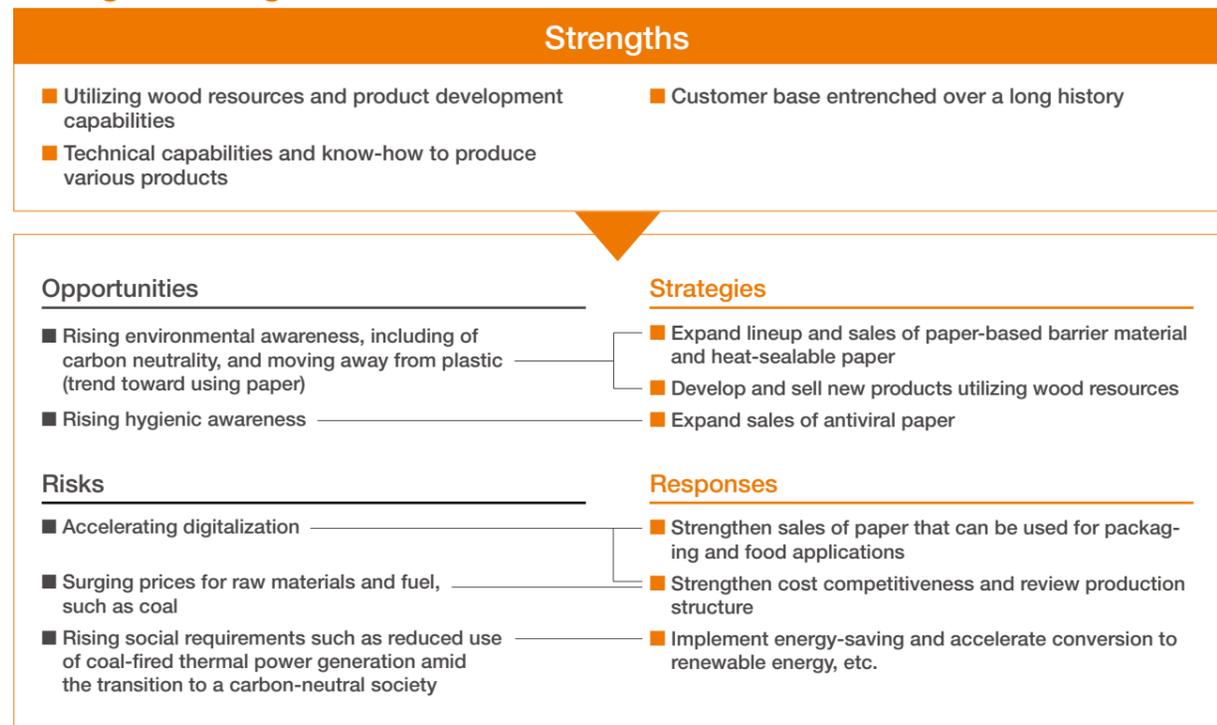


\* Results for FY2020/3 have been reconstructed to reflect the reportable segments used for FY2021/3 onward  
 \* Operating income in other businesses for FY2021/3 results includes ¥6.0 billion in expenses related to the acquisition of the packaging division of Orora Limited in Australia and New Zealand



## 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

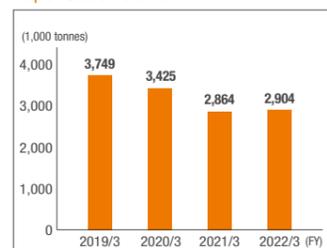
enhancing the lineups and expanding sales of SHIELDPLUS® paper-based barrier material and Lamina® heat-sealable paper. In addition, as the trend of switching to paper for packaging and food applications is progressing, the Company will aim to strengthen sales of products for these applications.

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

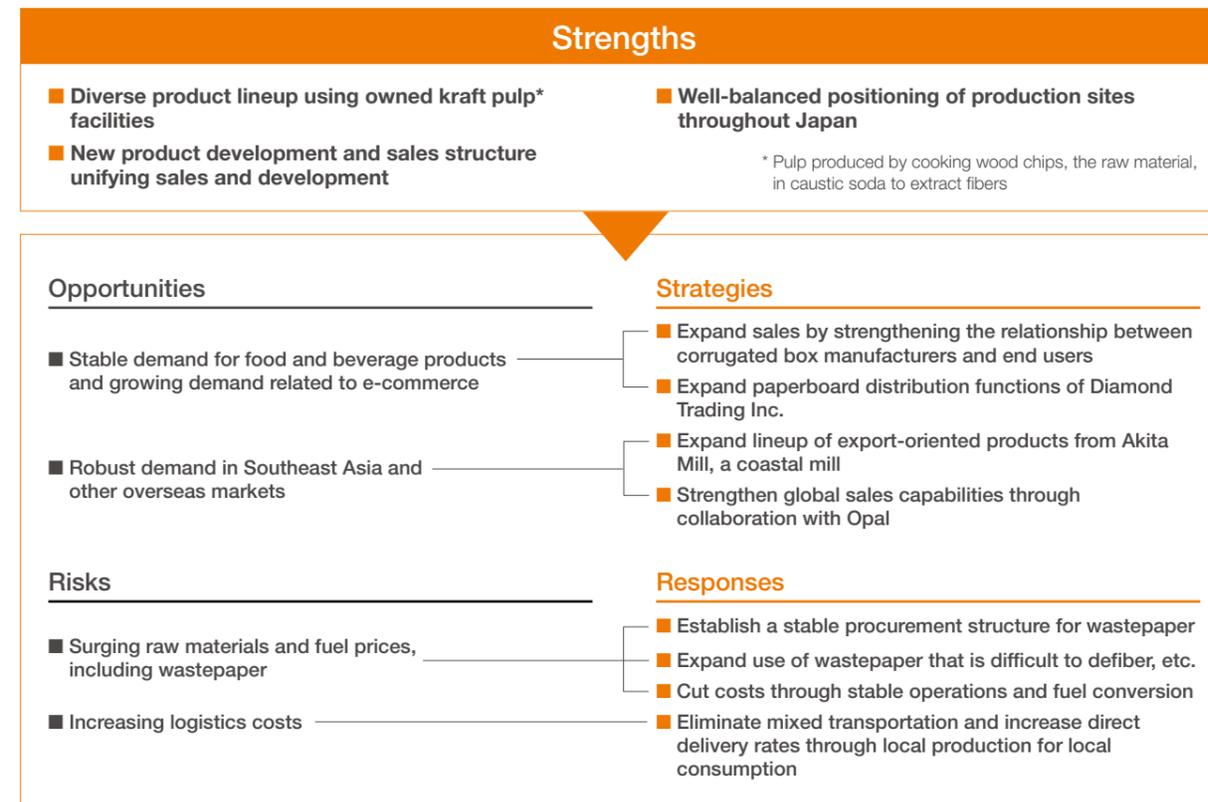
FY	Details	Reduced Capacity (1,000 tonnes/year)
2019/3	Akita Mill: Shut down 1 coating machine Ishinomaki Mill: Shut down 1 coating machine	233
2020/3	Fuji Mill: Withdrew from the paper business Kushiro Mill: Shut down 1 paper machine Hokkaido Mill-Yufutsu: Withdrew from the paper business	531
2022/3	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

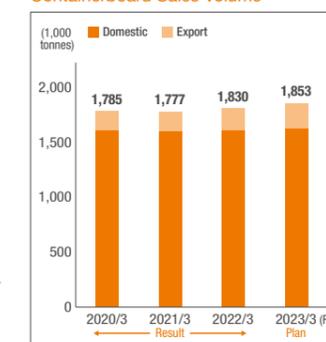
future, Diamond Trading Inc. was launched in April 2022 following the merger of the paperboard business of the Nippon Paper Group's NP Trading Co., Ltd. and the Mitsubishi Corporation Group's Mitsubishi Corporation

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.

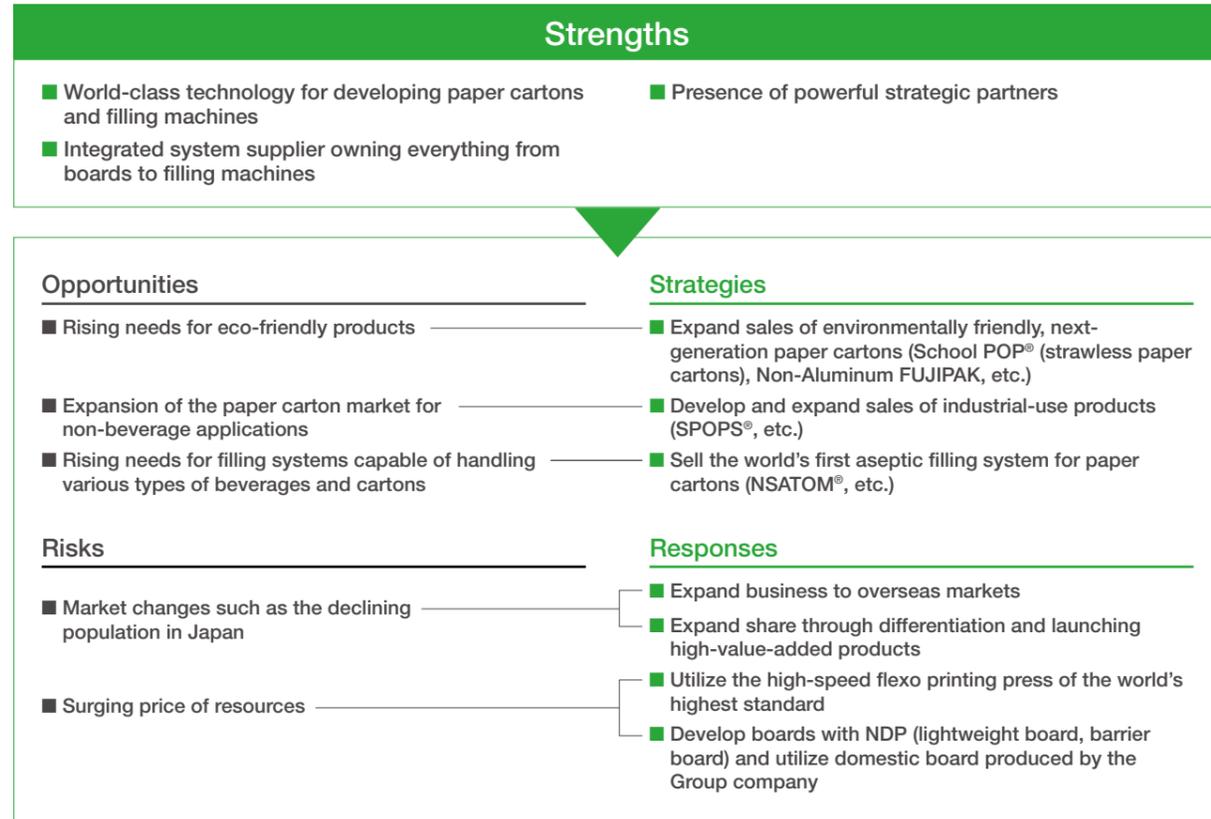
Containerboard Sales Volume





## 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.

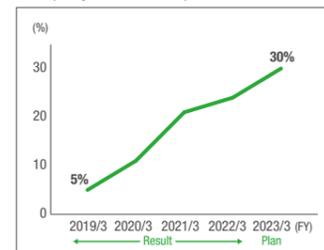
concluded a licensing agreement in the Oceania region, established a local subsidiary in June 2022, and set up a sales structure for Elopak and Nippon Paper Industries brand paper cartons and Shikoku Kakoki Co., Ltd.'s filling machines. The Company is aiming to capture a 10%

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.

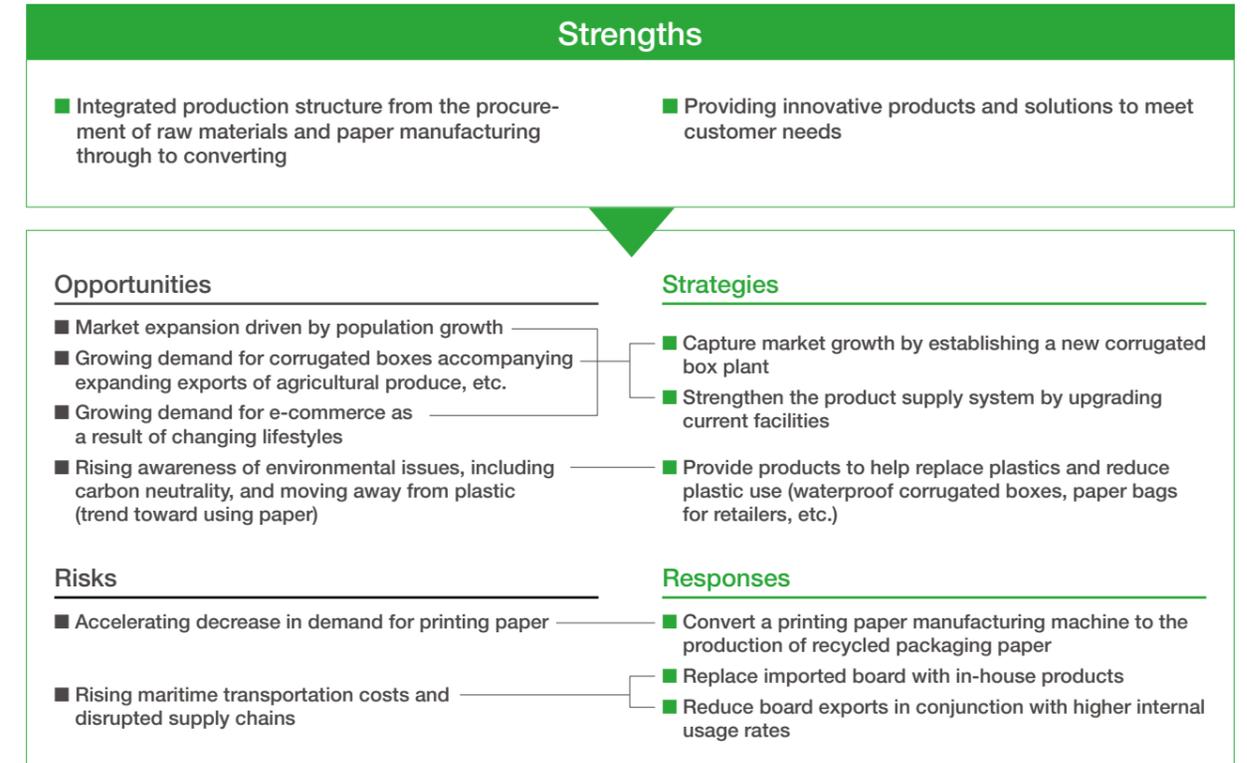
The Paper-Pak Business will steadily strengthen its business foundation as one of the world's leading integrated system suppliers.

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.

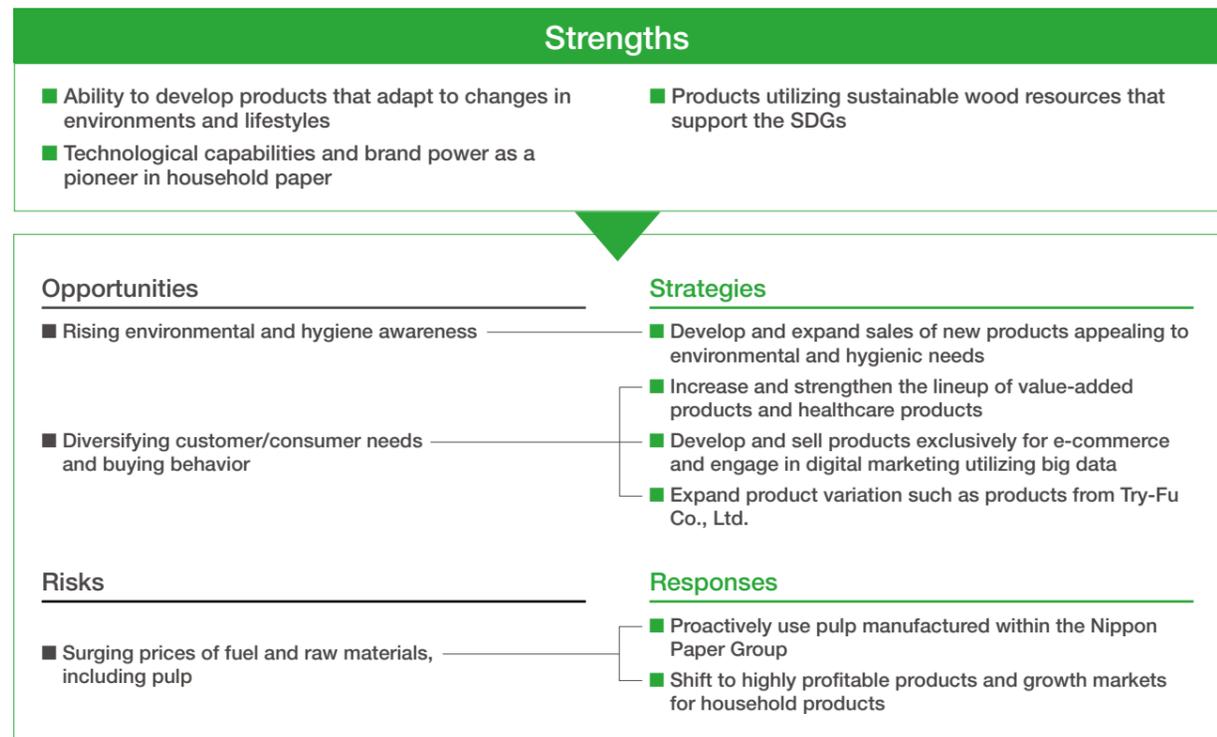
Rising environmental awareness and the introduction of new regulations have led to a growing trend to switch packaging from plastic materials, with a higher environmental impact, to paper materials. To respond promptly to these market needs, collaboration between Opal's Paper and Packaging Divisions 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.

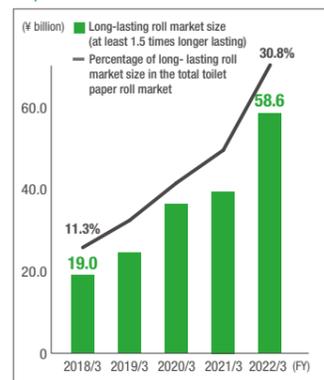
In the fast-growing e-commerce market, efforts are being made to strengthen digital marketing, such

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)

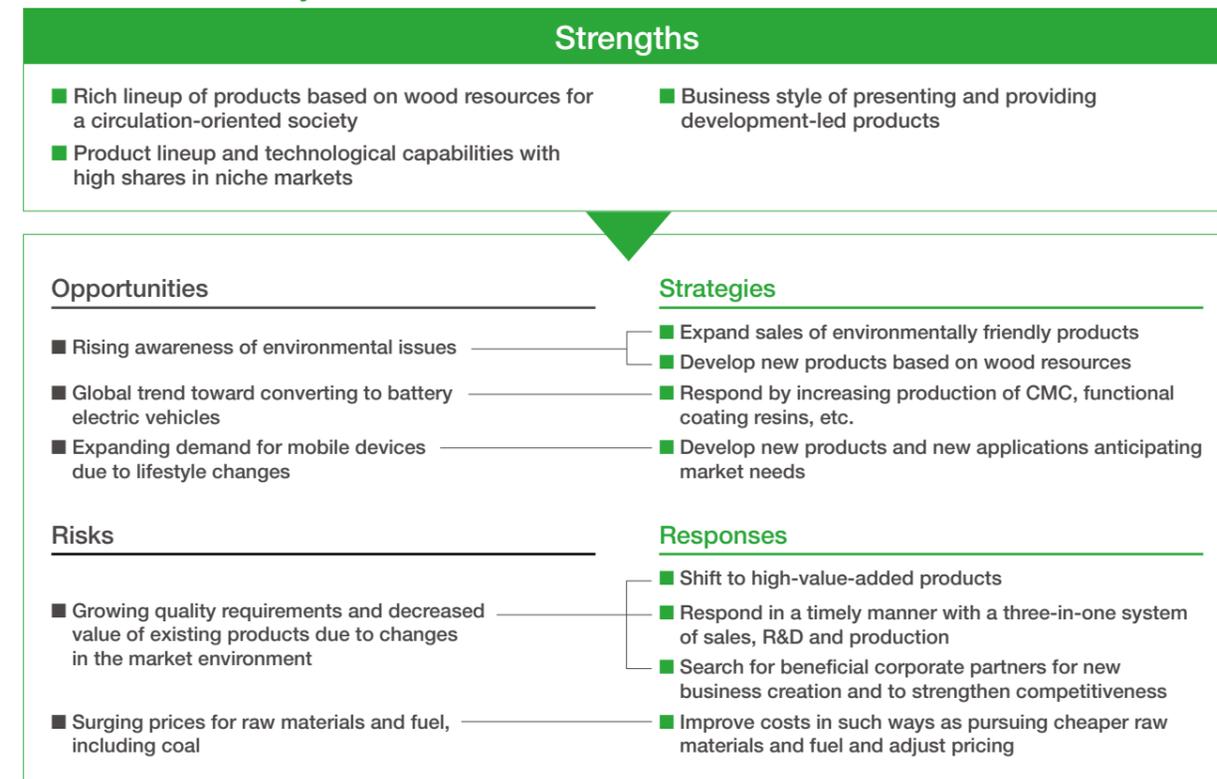


The SCOTTIE® Toilet Rolls FLOWERPACK 3 times long use 4 Rolls



## 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

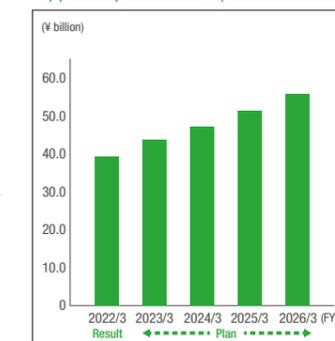
used in lithium-ion battery (LiB) applications, and functional coating resins are added to paints used on plastic car parts that must be lightweight. Sales of these products are growing steadily and the Company will continue to provide them in Japan and overseas.

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.



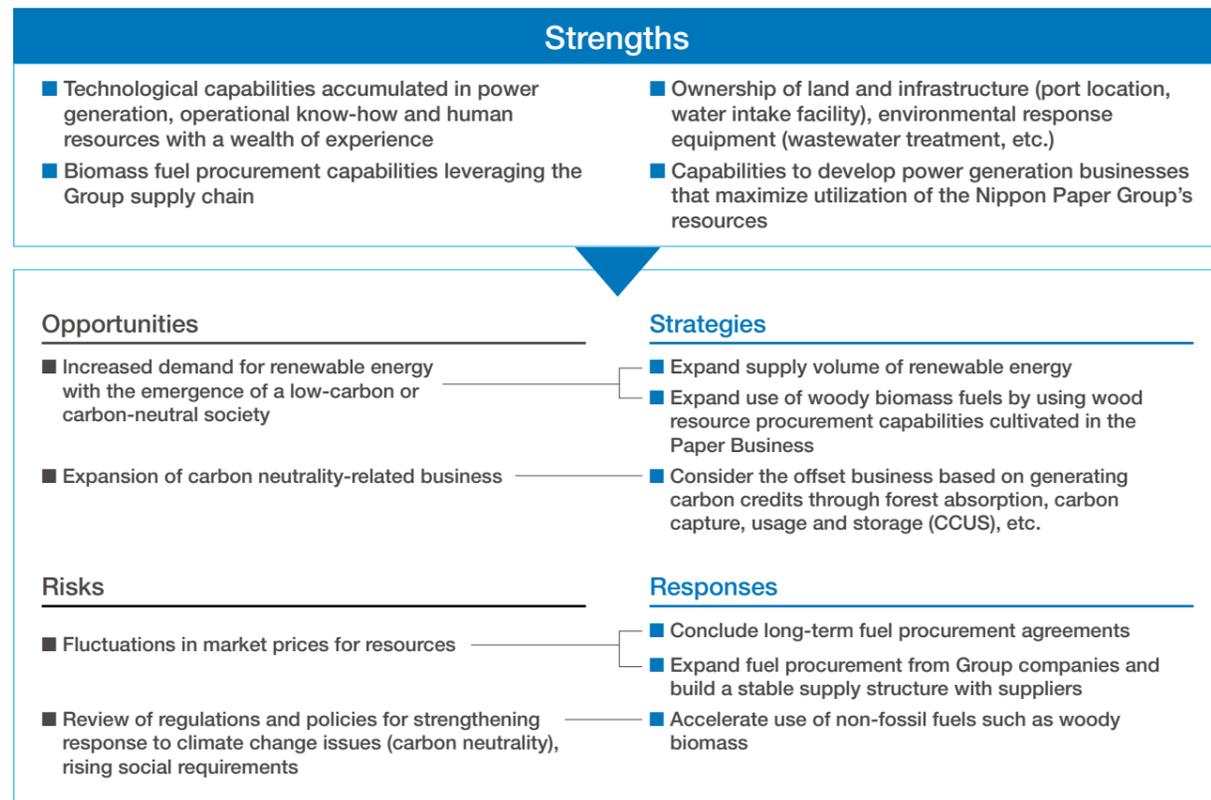
Net Sales (Chemical Sales Division, Nippon Paper Industries)





## 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 Shiraoi 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

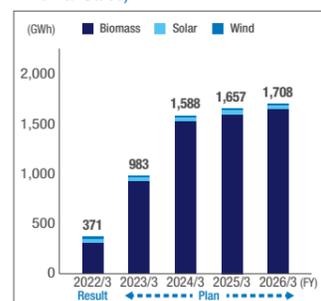
In addition, the Nippon Paper Ishinomaki Energy Center, a power generation

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.

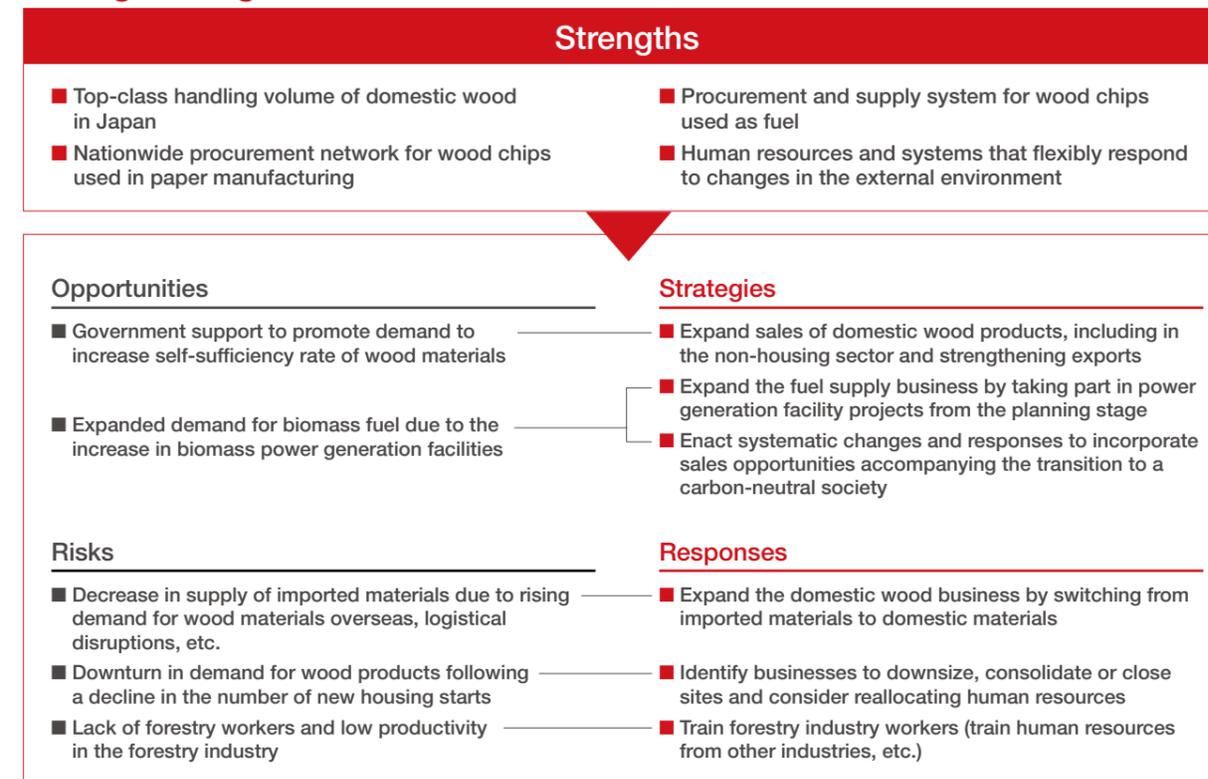
As a result of these initiatives, the sale of electricity from renewable energy will expand to approx. 1.7 million MWh in FY2026/3 from approx. 0.4 million MWh in FY2022/3. The aim is to secure stable earnings over the medium to long term and grow our Energy business while keeping a close watch on policies 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



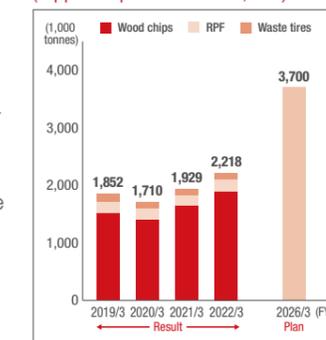
Domestic logs

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.

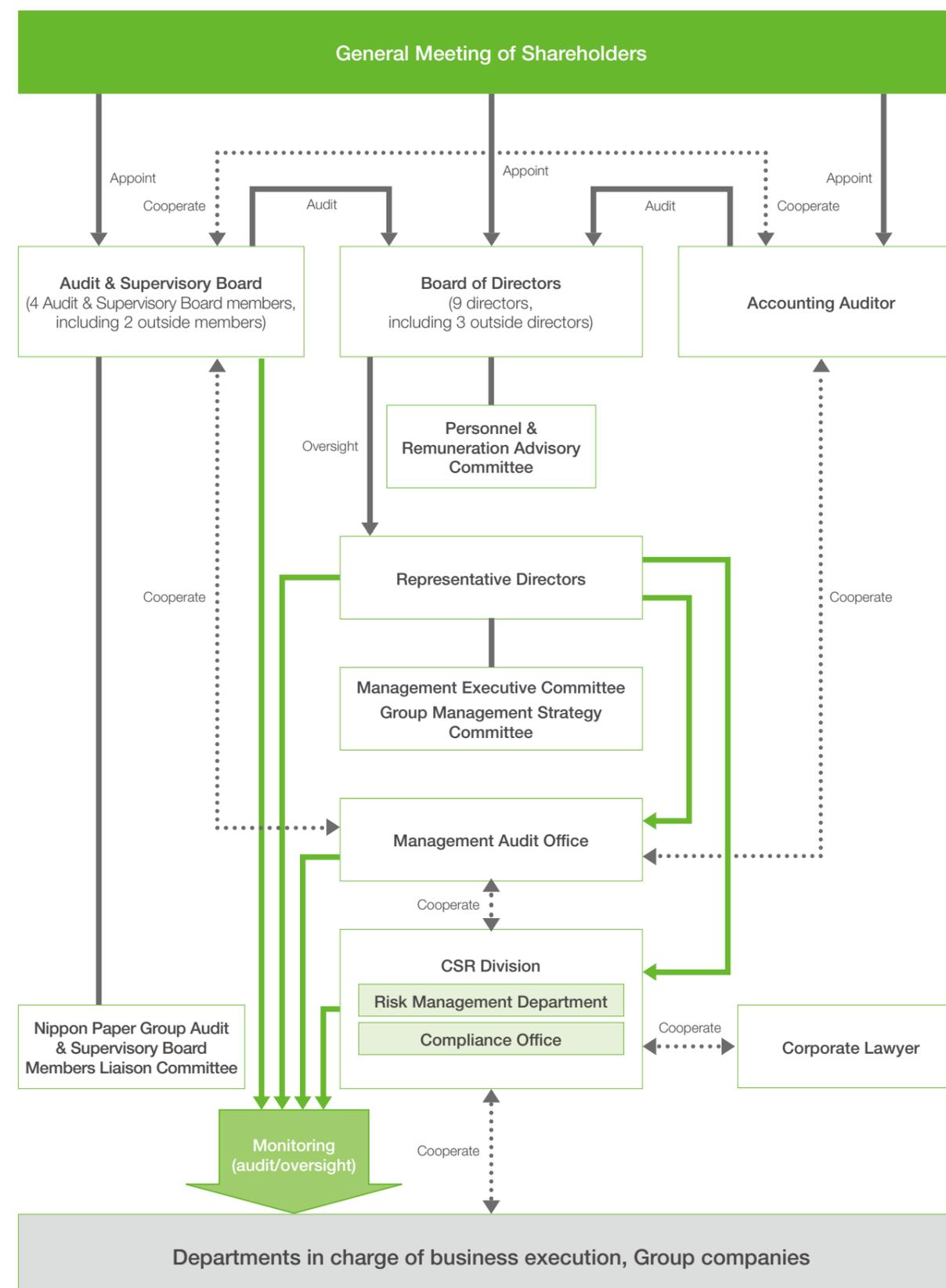
### Initiatives for Strengthening Corporate Governance

- 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 • Average rate of attendance by directors: 100.0% (outside directors: 100.0%) • 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 • 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) 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 (2) Continuing business Under the aforementioned policies, we will follow and comply with the guidance and recommendations of national and regional governments.
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### 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 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 • 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 • 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 • Fluctuations in demand based on factors such as economic conditions • 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 • Price fluctuations due to international and domestic market conditions • Global shortage of container transportation capacity • 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 • Problems occurring at facilities • 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. • Earthquakes, tsunamis, typhoons, floods • 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 • 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.

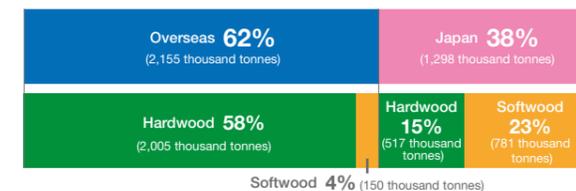
To ensure sustainability, each year the Company conducts surveys and on-site interviews with its overseas suppliers of wood materials. As for domestic wood materials, it confirms

### 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 (Implemented for all suppliers, compliance verified at all suppliers)
Overseas	22 wood chip suppliers, 13 pulp suppliers (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

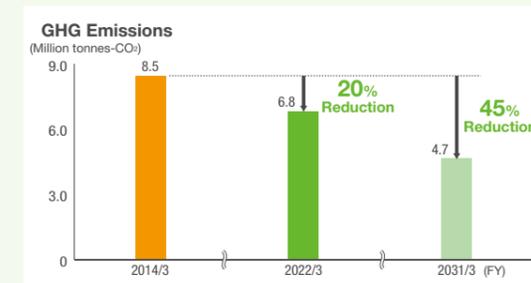
In order to be more effective in dealing with environmental issues such as climate change, which are highly uncertain and require long-term responses and countermeasures, it is necessary to have a vision and goals based on a medium- to long-term perspective. The Group has formulated targets for 2030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



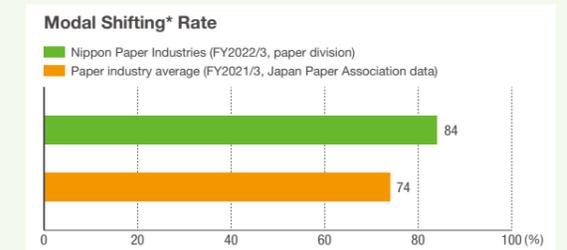
## FY2022/3 Results for Environmental Targets 2030 (Excerpt)

### 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.



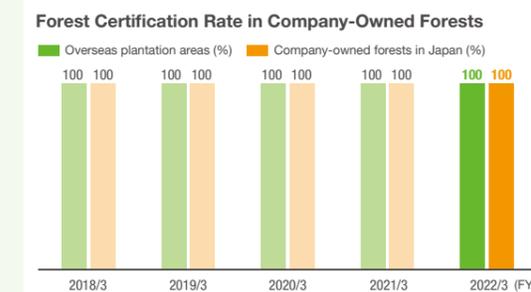
**Target:** Reduce GHG emissions from product transportation within Japan in the Paper and Paperboard Business by 23% compared with FY2021/3. (Nippon Paper Industries)  
**Progress:** Increased by 3% compared with FY2021/3 due to increase in transportation because of the recovery in production from the 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.



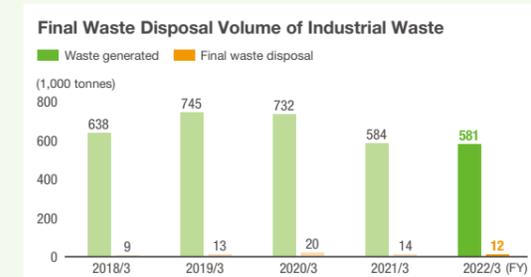
**Target:** Use 12,000 tonnes/year of unused wastepaper, which had conventionally been difficult to re-use, but can be re-used now due to development of technology to utilize wastepaper.  
**Progress:** Used 22.5 tonnes of unused, difficult-to-process wastepaper.



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**

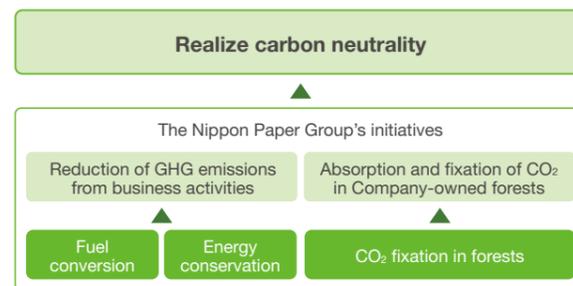
- Improve CO<sub>2</sub> fixation efficiency in overseas plantation areas by 30% compared with 2013
- Respond to demands to eliminate and reduce plastic (expand products that replace plastic with paper)

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> </ul>	<ul style="list-style-type: none"> <li>Technologies for using tree components</li> </ul>
	<ul style="list-style-type: none"> <li>Further reduction of vehicle weight</li> </ul>	<ul style="list-style-type: none"> <li>Cellulose nanofiber (CNF) development technologies and production facilities</li> </ul>
	<ul style="list-style-type: none"> <li>Progress on carbon recycling</li> </ul>	<ul style="list-style-type: none"> <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>
Changes in consumer tastes and preferences	<ul style="list-style-type: none"> <li>Expand demand for products using biomass materials</li> </ul>	<ul style="list-style-type: none"> <li>Biomass material development technology</li> <li>Recycling technology and wastepaper procurement networks</li> </ul>
Increased demand for environmentally friendly products	<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> </ul>	<ul style="list-style-type: none"> <li>Multifunctional packaging material technology, barrier packaging technology, long-term liquid preservation technology</li> <li>Technologies using cellulose materials</li> </ul>
Losses due to catastrophic disasters	<ul style="list-style-type: none"> <li>Buildings are required to be more resilient</li> </ul>	<ul style="list-style-type: none"> <li>Manufacturing technology for fly ash concrete admixture</li> </ul>
Rising temperatures and changes such as precipitation	<ul style="list-style-type: none"> <li>Trees that can withstand high temperatures, drought, and pests are needed</li> </ul>	<ul style="list-style-type: none"> <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 (Training for new employees and new supervisors, promotion and appointment training, elective training, etc.)
OFF-JT	Optional training (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



#### 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

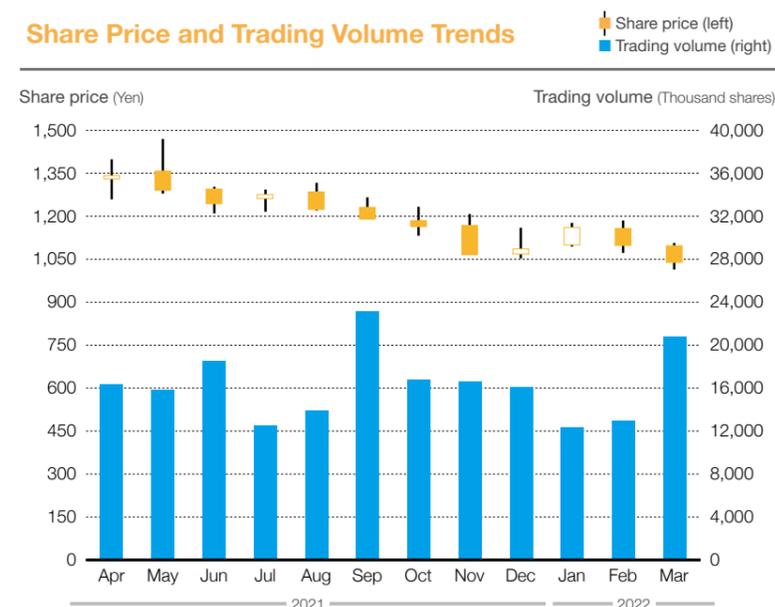
<b>Company Name</b>	Nippon Paper Industries Co., Ltd.
<b>Head Office</b>	4-6 Kanda-Surugadai, Chiyoda-ku, Tokyo 101-0062, Japan
<b>Establishment</b>	August 1, 1949
<b>Number of Employees</b>	5,237 non-consolidated 16,129 consolidated
<b>Capital</b>	¥104,873 million
<b>Shares</b>	Number of shares authorized to be issued 300,000,000 shares Number of shares issued 116,254,892 shares (including 361,839 shares of treasury stock)
<b>Number of Shareholders</b>	167,005

### Major Shareholders

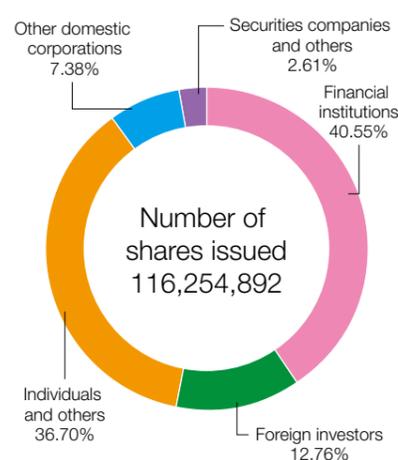
Name	Shares Held	Shareholding Ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	17,355,700	14.98
Custody Bank of Japan, Ltd. (Trust Account)	8,946,200	7.72
Ichigo Trust Pte. Ltd.	4,590,800	3.96
Nippon Paper Industries Co., Ltd. Employee Share Ownership Association	3,174,729	2.74
Nippon Life 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.