

The Nippon Paper Group, a Company That Shapes the Future with Trees



Wood resources

- ✓ Renewable
- ✓ Biodegradable
- ✓ Carbon neutral

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Technology and expertise for maximizing the use of trees

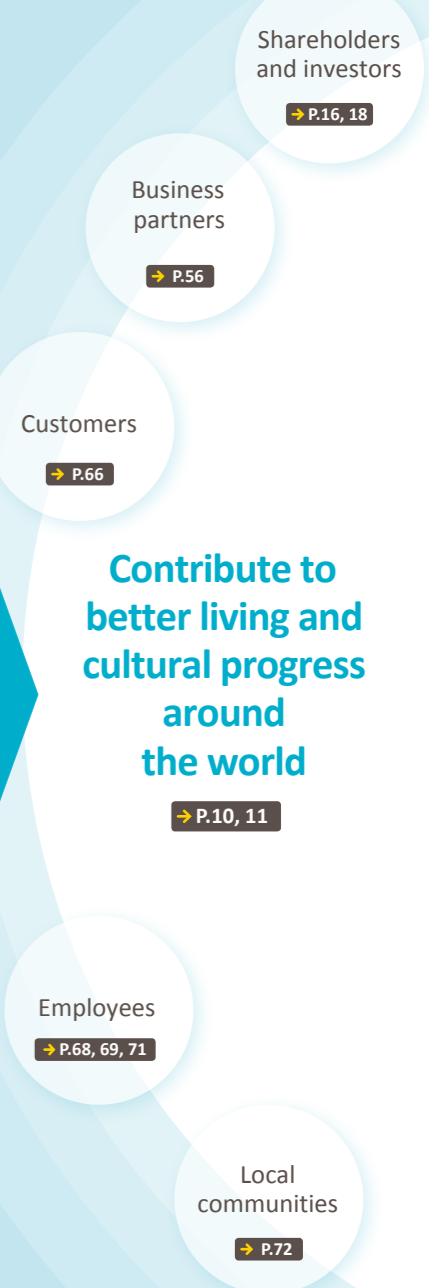
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Developing a Variety of Businesses out of Trees



Contribute to better living and cultural progress around the world

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Business Conditions

- Shift away from the use of plastic due to the issue of marine plastic pollution
- Move toward low-carbon society
- Declining birthrate and aging population
- Digitalization

The Characteristics of Wood Resources

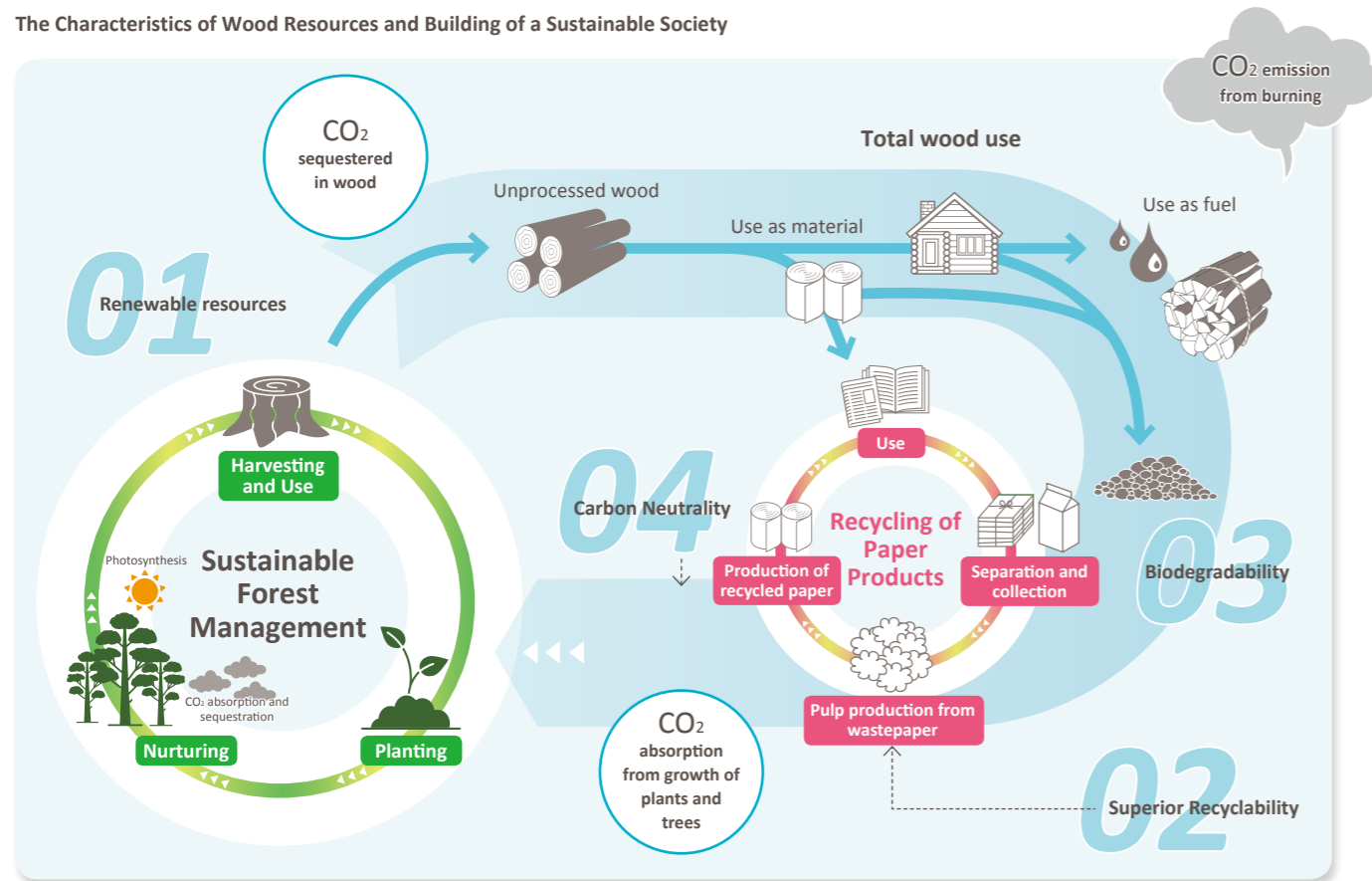
A Strong Affinity for Building a Sustainable Society

Trees sequester CO₂ from the atmosphere as they grow, and forests can be sustainable if they are properly cultivated and managed. The use of wood resources, therefore, helps to fight global warming, and because wood resources are renewable, their use also prevents resource depletion. When these resources are disposed of, they are returned to the environment and, therefore, burning them does not increase the amount of CO₂ in the air. In other words, the use of wood resources follows a carbon neutral philosophy in that the CO₂ created is offset by the CO₂ absorbed.

In this way, wood resources have a strong affinity for building a sustainable society, a shared goal among humanity.

The Nippon Paper Group nurtures and manages forests sustainably and effectively uses and recycles their biomass resources, wasting nothing in the process, to pursue a wide range of businesses, and in doing so, serves as a comprehensive biomass company that takes advantage of the characteristics of wood resources stated above.

The Characteristics of Wood Resources and Building of a Sustainable Society



01

Renewable resources



Wood is a renewable resource unlike oil, minerals, and other exhaustible resources. Appropriate management of forests post-felling, such as planting and maintenance, enables its sustainable use.

Nippon Paper Industries possesses 173 thousand hectares of Company-owned forests in Japan and overseas, all of which are subject to proper forest management and maintain forest certifications.

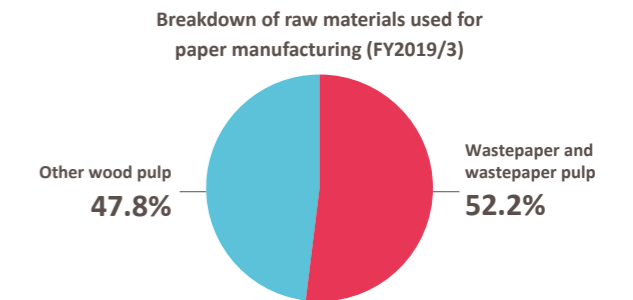
Company-owned forests worldwide
173 thousand hectares

02

Superior Recyclability



Paper can be recycled to create new products through separation and collection after use. Wastepaper accounts for over half of the raw materials used in paper products produced by the Nippon Paper Group.



03

Biodegradability



In the best-case scenario, wood resources are recycled to the highest degree possible. However, if these resources do get discarded, they can be broken down by microorganisms and other means to be returned to nature.

In recent years, marine plastic pollution has become a problem. The Nippon Paper Group is promoting the development of products that contribute to resolving environmental problems, driven by the slogan "let paper do what it can do."

Biodegradability Test Results for SHIELDPLUS® Square-Bottom Bags



04

Carbon Neutrality



Trees absorb and hold CO₂ from the atmosphere as they grow. It is believed, therefore, that the release of CO₂ when wood resources are burned does not result in any net increase in atmospheric CO₂. The ongoing effective use of wood resources from properly managed, sustainable forests constitutes a carbon-neutral cycle that adds no CO₂ to the atmosphere.

CO₂ sequestered in Company-owned forests* (as of the end of 2018)

32 million tons

* According to the rules of the Clean Development Mechanism included in the Kyoto Protocol, CO₂ emissions are recorded at the time of logging. The volume of sequestered CO₂ remains fixed as new planted saplings and forest stock increases compensate for CO₂ emissions.

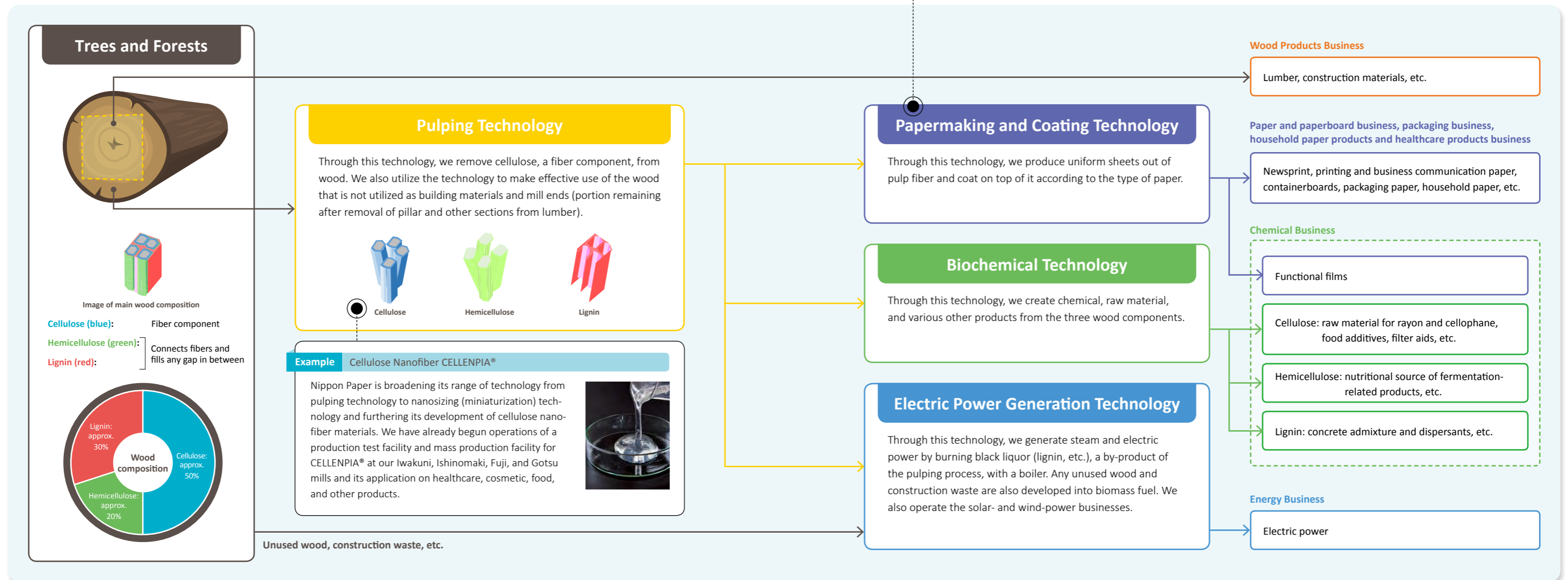
Technology and Expertise for Maximizing the Use of Trees

As a comprehensive biomass company, the Nippon Paper Group endeavors to maximize the use of trees in all facets of its business.

We have also accumulated a diverse lineup of technologies for wood processing, pulping, papermaking and coating, biochemical, power generation, and other processes. We will continue to leverage our existing technologies to advance forward with the development of new technologies and products that maximize the use of trees.

Example SHIELDPLUS® Series

While paper is easy to process, it does not offer gas or moisture barrier properties due to its large air gap. The Nippon Paper Group applies its coating paper production technology to form thin, uniform barrier layers by coating papers with significantly uneven surfaces. In this way, the Group is promoting the development of the SHIELDPLUS® series of barrier packaging materials, which performs on a par with the variety of barrier-film options available.



Value Provided by the Nippon Paper Group

The Nippon Paper Group develops a variety of businesses out of trees in keeping with its corporate philosophy of contributing to “better living and cultural progress around the world.” Under this philosophy, “cultural progress” serves as the universal value and “better living” represents the value that enriches one’s lifestyle. Here are some examples of the value we provide.



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Promotion of Printing Culture

Reading / writing / communication

Key Products

- Newsprint
- Printing paper

Effective Distribution through Packaging

Packaging / protection of contents / transport

Key Products

- Linerboards, corrugated mediums
- Packaging paper

Creation of Environmentally Friendly Packages

Preservation of quality and flavor / reduction of single-use plastics

Key Products

- Barrier packaging materials
- Paper straws
- New-shape cartons with closures

Realization of Convenient and Comfortable Lifestyles

Cleanup / skin protection / support for daily life (food, daily necessities)

Key Products

- Long-length toilet rolls
- Healthcare products made of cellulose nanofiber (CNF) deodorant sheets
- High-performance cellulose (CMC)
- Functional materials

Reduction of CO₂ Emissions

Weight reduction / support for daily life (automobiles) / biomass power generation technology and operational know-how


Key Products

- CNF
- High-performance cellulose (CMC) for lithium-ion batteries
- Biomass fuels



The Nippon Paper Group at a Glance

📄 Paper and paperboard business



Main Products and Services

Paper

- Newsprint
- Printing paper
- Business communication paper
- Industrial paper

Paperboard

- Containerboards
- White paperboards

Specialty paper

Functional paper

Ratio of Net Sales

69.1%

Net Sales and Operating Income (Loss)

¥ billion

Year	Net sales	Operating income (loss)	Operating income margin
2017/3	722.5	0.5	0.1%
2018/3	741.7	(6.3)	(0.8)%
2019/3 (FY)	738.5	(8.1)	(1.1)%

📦 Daily-life products business



Main Products and Services

Packaging

- Liquid packaging boards
- Liquid packaging cartons

Household paper and healthcare

- Facial tissue
- Toilet paper rolls
- Products for mild incontinence
- Adult diapers

Chemical

- Dissolving pulp
- Cellulose products
- Chemical products
- Functional coating resin products
- Functional films

Ratio of Net Sales


18.9%

Net Sales and Operating Income

¥ billion

Year	Net sales	Operating income	Operating income margin
2017/3	160.9	12.5	7.8%
2018/3	192.5	12.0	6.2%
2019/3 (FY)	201.7	11.6	5.8%

💡 Energy business



Ratio of Net Sales

3.4%

Main Products and Services


Wholesale electric power sales

Net Sales and Operating Income

¥ billion

Year	Net sales	Operating income	Operating income margin
2017/3	14.6	3.5	24.0%
2018/3	17.8	4.1	23.0%
2019/3 (FY)	36.2	7.9	21.8%

🪵 Wood products and construction related business



Ratio of Net Sales

5.6%

Main Products and Services

Lumber and construction materials

- Lumber
- Building materials
- Raw materials and fuel for paper manufacturing


Construction related

Net Sales and Operating Income

¥ billion

Year	Net sales	Operating income	Operating income margin
2017/3	63.5	4.4	6.9%
2018/3	62.8	4.5	7.2%
2019/3 (FY)	59.8	4.9	8.2%

🌿 Other businesses



Ratio of Net Sales

3.0%

Main Products and Services

Warehousing and logistics

Leisure facilities operation

- Ski resorts
- Bowling alleys

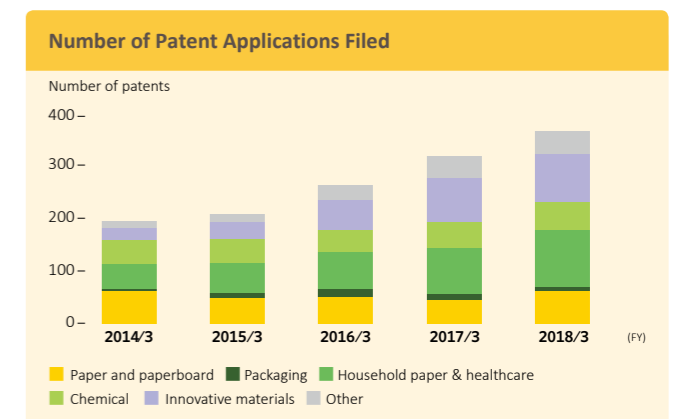
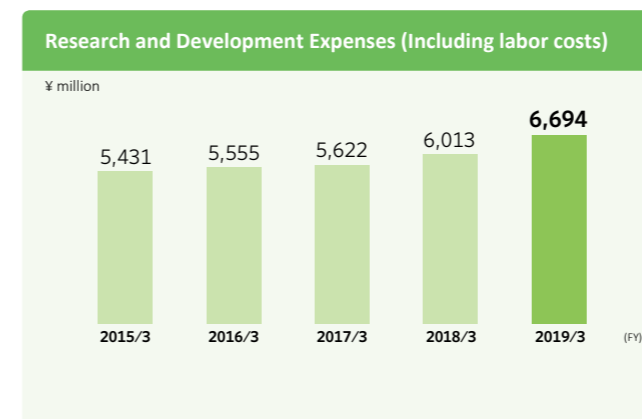
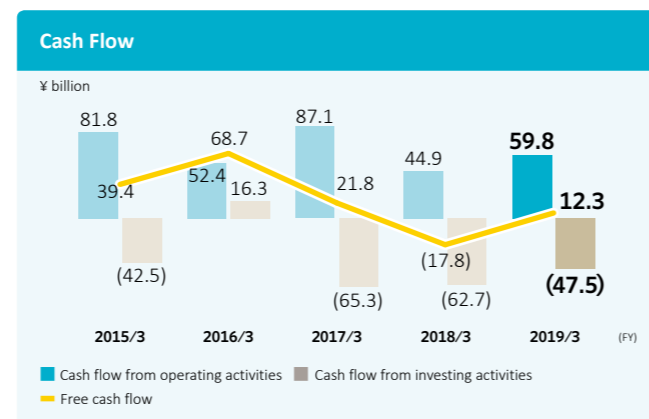
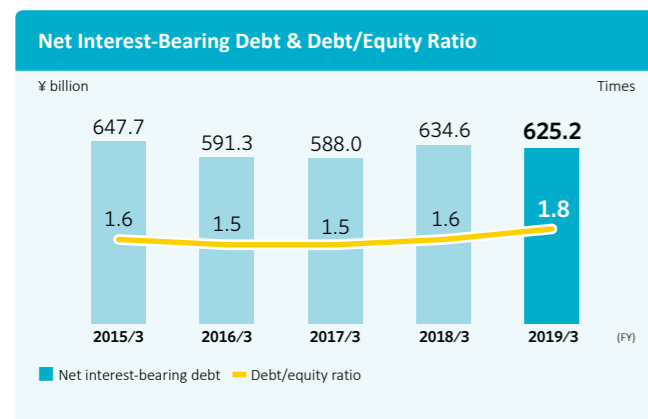
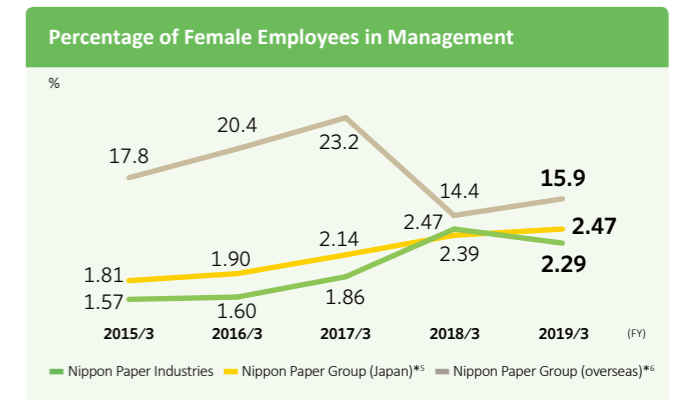
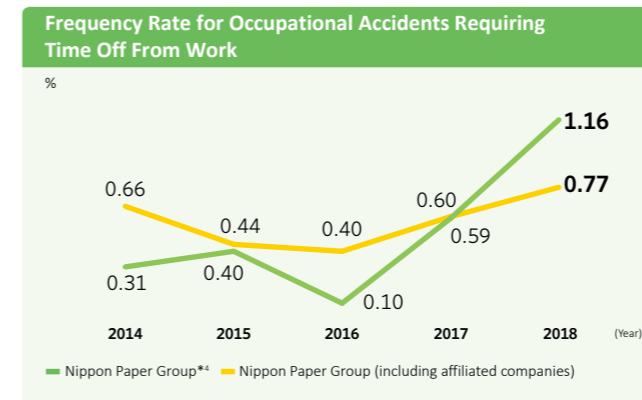
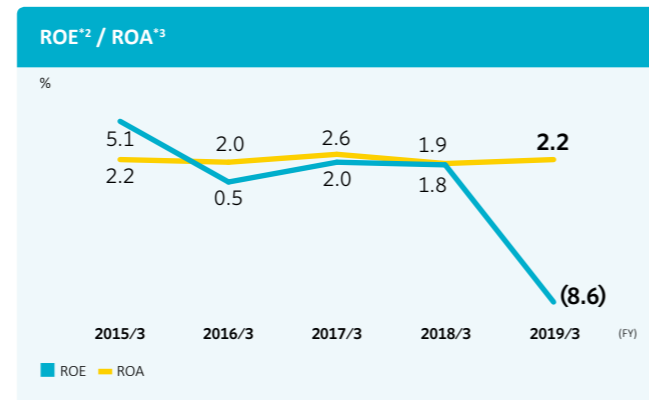
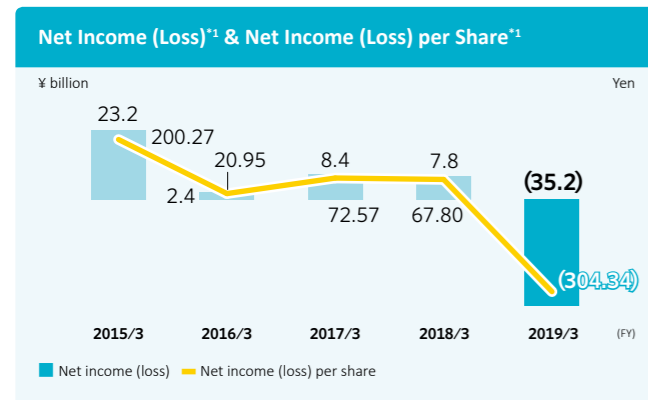
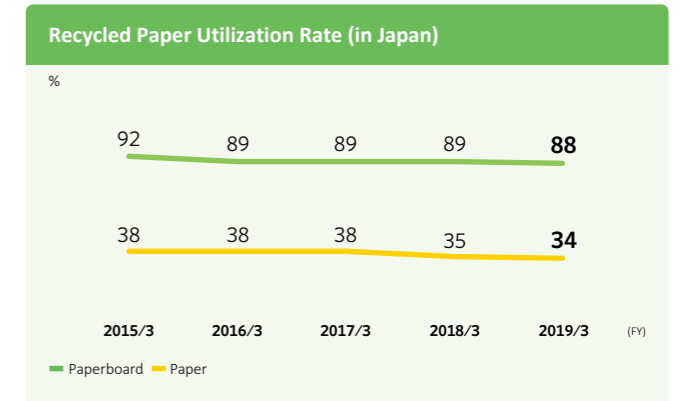
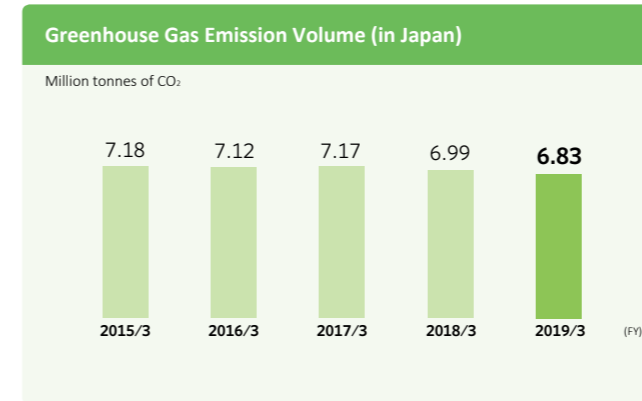
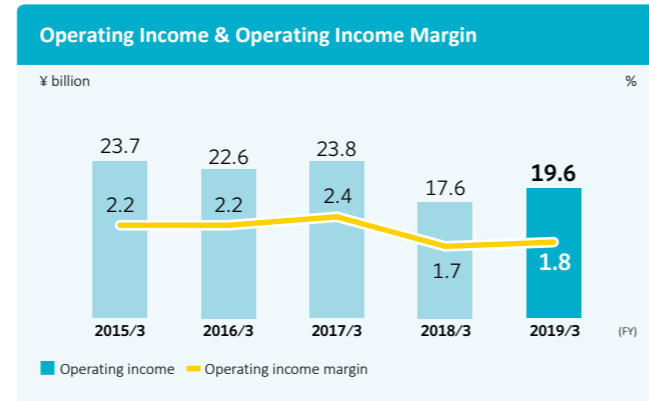
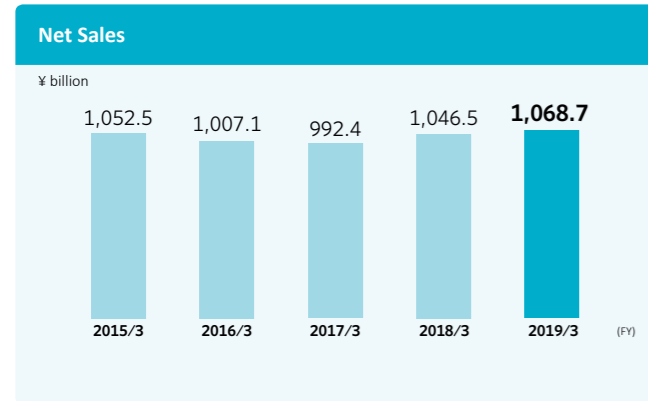
Net Sales and Operating Income

¥ billion

Year	Net sales	Operating income	Operating income margin
2017/3	30.9	2.9	9.4%
2018/3	31.7	3.3	10.4%
2019/3 (FY)	32.5	3.3	10.2%

* Segment sales and operating income for FY2017/3 are simplified estimates as the segment classification was changed on April 1, 2018.

Financial & Non-Financial Highlights



¹ Profit (loss) attributable to owners of parent

² Return on equity (ROE) = Profit (loss) attributable to owners of parent / [Average of beginning and end of year (Shareholders' equity + Accumulated other comprehensive income)] × 100

³ Return on assets (ROA) = (Ordinary income + Interest expense) / Total assets × 100

⁴ Manufacturing offices belonging to Nippon Paper Industries Co., Ltd., Nippon Paper Crecia Co., Ltd., Nippon Paper Industries Papyrus Co., Ltd., and Nippon Paper Liquid Package Product Co., Ltd.

⁵ Figures are for the Nippon Paper Group's consolidated companies in Japan.

⁶ Includes all managers of sections and higher level organizational units as of December 31 each year.