

Rengo Group Natural Capital Conservation Initiatives

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1 Introduction

The Rengo Group's business activities are built on the abundant gifts of nature. These gifts are created by natural capital such as the forests, soil, water, and air. In order to pass on nature's abundance to the future and realize a society that coexists with the global environment, we are advancing initiatives aimed at the conservation of natural capital.

2 Medium- to Long-Term Targets

The Rengo Group has set both long- and medium-term environmental targets for the conservation of natural capital, and carries out initiatives to achieve these targets.

■ Long-term targets

Rengo Group Environment Action 2050 sets long-term environmental targets for 2050 based on three initiative themes: response to climate change, expansion of the circular economy, and conservation of natural capital. With respect to the conservation of natural capital, we aim to minimize negative impacts on natural capital.

Rengo Group Environment Action 2050

The Rengo Group will solve environmental issues through packaging innovation and create a society that coexists with the global environment.

- We aim to achieve net zero GHG emissions across the entire value chain.
- We aim to maximize the use of non-fossil resources and recycled materials by efficiently recycling resources.
- We aim to minimize negative impacts on natural capital.

■ Medium-term targets

Eco Challenge 2030 sets forth the Rengo Group's quantitative and qualitative medium-term environmental targets for FY3/2031, and adds a fourth theme—provision of sustainable packaging to the three original themes: (1) response to climate change, (2) expansion of the circular economy, and (3) conservation of natural capital. The main measures under each of these initiative themes do not simply address one of the areas—climate change, the circular economy, or natural capital—but instead address multiple areas. All of these initiatives contribute to the conservation of natural capital.

Eco Challenge 2030

Materialities	Initiative themes	Climate change	Circular economy	Natural capital	Main measures	Medium-term targets
Creating New Value as a "Packaging Provider"	Provision of sustainable packaging	✓	✓	✓	1. Develop and promote environmentally friendly paper products	(1) Reduce the average grammage of corrugated board* ¹ by 0.5% year-on-year Scope: Rengo as a standalone entity and domestic consolidated companies
		✓	✓	✓	2. Promote environmentally friendly plastic products	(2) Reduce CFP of containerboard* ² Scope: Rengo as a standalone entity and domestic consolidated companies
		✓		✓	3. Promote low-carbon packaging	Increase the share of environmentally friendly plastic products to 20% of net sales Scope: Rengo as a standalone entity and domestic and overseas consolidated companies
Coexisting with the Global Environment	Response to climate change	✓		✓	1. Reduce GHG emissions	Expand the scope of products subject for CFP calculation Scope: Rengo as a standalone entity and domestic consolidated companies
		✓		✓	2. Adapt to risks	Reduce GHG emissions (Scope 1 + 2* ³) by 46% compared to FY3/2014 Scope: Rengo as a standalone entity and domestic consolidated companies * ⁴
	Expansion of the circular economy	✓	✓	✓	1. Strengthen corrugated board resource circulation systems	Continue monitoring to prepare for flood risks Scope: Rengo as a standalone entity and domestic consolidated companies
		✓	✓	✓	2. Establish plastic resource circulation systems	(1) Achieve a recovered paper usage ratio of 99% or more in paperboard * ⁵ Scope: Rengo as a standalone entity and domestic consolidated companies
		✓	✓	✓	3. Use water resources efficiently	(2) Promote the use of paperboard pulp made from unused wood resources* ⁶ Scope: Rengo as a standalone entity and domestic consolidated companies
	Conservation of natural capital			✓	1. Manage and utilize Nationally Certified Sustainably Managed Natural Sites	Promote initiatives for plastic recycling Scope: Rengo as a standalone entity and domestic and overseas consolidated companies
		✓	✓	✓	2. Prevent environmental accidents and pollution	Reduce water usage per unit production* ⁷ by 22% compared to FY3/2024 Scope: Rengo as a standalone entity and domestic and overseas consolidated companies
						Continue ecological monitoring surveys Scope: Rengo as a standalone entity and domestic and overseas consolidated companies

* 1 Weight per 1 m²

* 2 Target year for achievement is FY3/2026

* 3 Adjusted GHG emissions based on the Act on Promotion of Global Warming Countermeasures

* 4 Excluding non-manufacturing sites such as offices and warehouses

* 5 Target year for achievement is FY3/2028

* 6 Lumber residues, forest residues, old lumber, etc.

* 7 Water usage divided by net sales

3 Relationship between Business Activities and Nature

The Rengo Group's business activities are predicated on the abundance of natural capital, so the loss of nature could have severe impacts on our operations. Accordingly, we assess the relationship between our business activities and nature and implement various measures to minimize our impacts on nature, which in turn minimizes the impacts on our business activities.

(1) Impacts of business activities on nature

One of the Rengo Group's core businesses is the Paperboard and Packaging-Related Business. We identify the inputs and outputs of each step of our business activities and assess how much of impacts they have on nature. In the assessment, we use an analysis tool ENCORE^{*1} recommended by the Taskforce on Nature-related Financial Disclosures (TNFD)^{*2} to assess three steps: raw material procurement, which is critical to our business activities, product manufacturing, and transportation (Figure 1).

For inputs, we know that we are reliant on natural capital: various fossil fuels used as energy sources; wood chips, pulp, and paperboard, which are our wood resources; recovered paper, a recycled resource; and water resources. As far as outputs, when we manufacture products, we also emit chemical substances and waste into the air and water, and we recognize that our business activities could have impacts on the environment. Recycled resources such as recovered paper are generally not included in natural capital, but we see recovered paper as one form of natural capital. This is because if it is traced back, recovered paper originally comes from wood resources, and it makes up the majority of raw materials we use for products in the Paperboard and Packaging-Related Business.

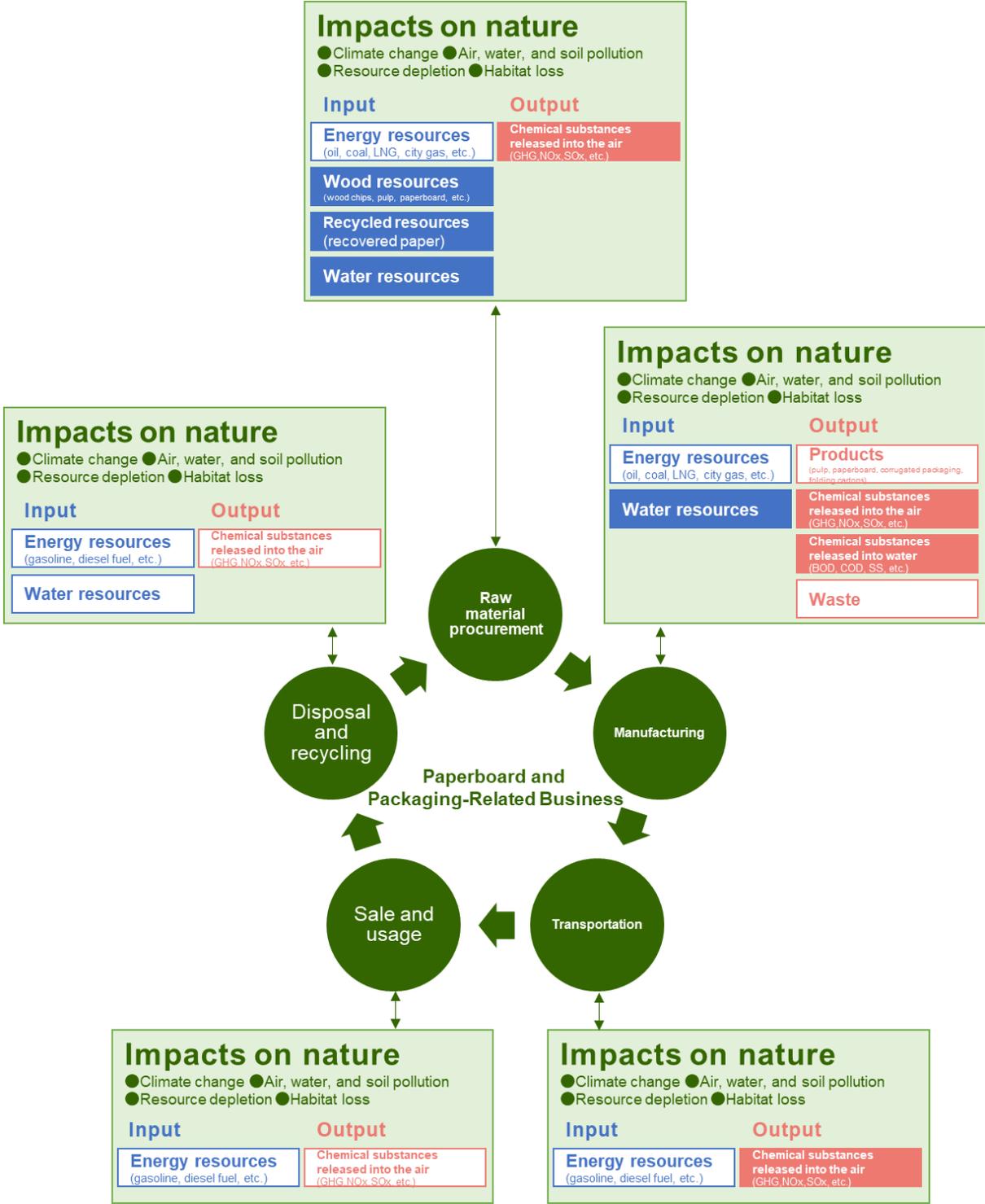
According to the results of the assessment performed using ENCORE, the use of water and raw materials such as wood chips, pulp, paperboard, and recovered paper, along with the discharging of chemical substances into the air and water could contribute to climate change and resource depletion and have serious impacts on the environment. This made it important that we carry out initiatives targeting these areas with major impacts on nature as part of our efforts for the conservation of natural capital.

* 1 A free online tool that can be used to objectively analyze and assess how individual business types and business formats depend on and impact natural capital

* 2 A taskforce that has created an international framework that companies use when assessing the natural capital-related risks and opportunities of their own business activities and when disclosing the impacts of these risks and opportunities from a financial standpoint

Figure 1: Relationship between the Paperboard and Packaging-Related Business and Nature

■ ■ : Items with major impacts on nature



Created based on the Business & Biodiversity Interrelationship Map® from the Japan Business Initiative for Biodiversity (JBIB)

(2) Impacts on business activities

The Rengo Group envisioned potential future scenarios for the areas of its Paperboard and Packaging-Related Business with major impacts on nature. Then we organized information about how those scenarios would affect our business activities and initiatives to implement.

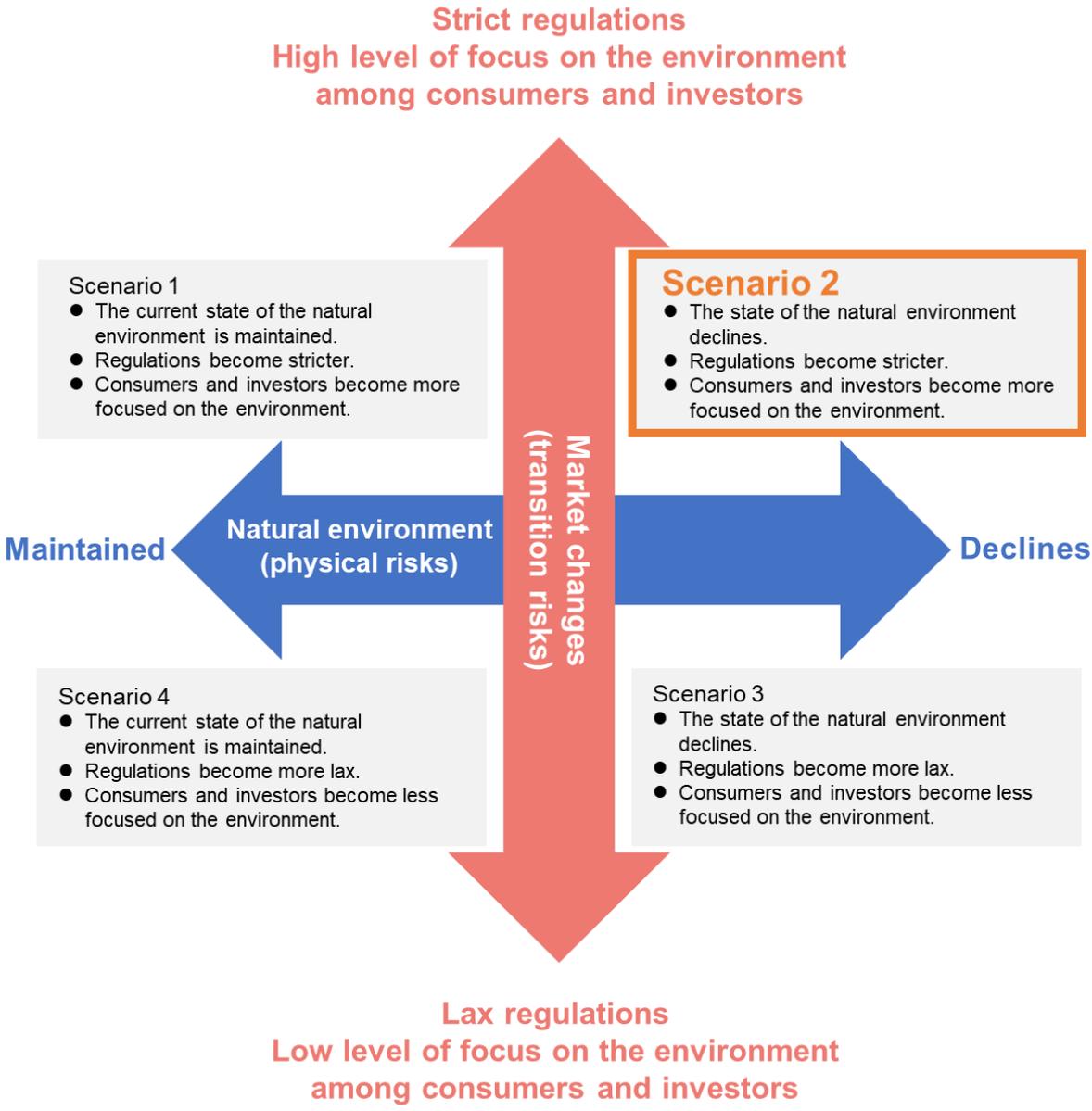
■ Assessment method

Using the TNFD Recommendations for reference, the Rengo Group plotted the physical risks^{*1} related to the natural environment along the horizontal axis and the transition risks^{*2} related to market changes along the vertical axis (Figure 2). Within this, we considered the scenario in which the state of the natural environment declines, regulations become stricter, and consumers and investors become more focused on the environment (Scenario 2) and assessed the effects this would have on our business activities.

* 1 Risks caused by physical factors such as the loss of natural capital due to natural disasters

* 2 Risks caused by societal changes aimed at improving or preventing the decline of the natural environment

Figure 2: Scenario details



Created based on the TNFD Recommendations (September 2023)

■ Assessment results

In Scenario 2, where the state of the natural environment declines, regulations become stricter, and consumers and investors become more focused on the environment, global warming proceeds and river flooding and inland flooding caused by heavy rains occur more frequently. As a result, the Rengo Group's production sites may not only suffer direct damage but also face operational suspensions due to an inability to procure raw materials, leading to negative impacts such as declining net sales and increasing material costs.. Furthermore, growing environmental awareness could result in increased demand for recovered paper, which is a recycled resource. This could cause the price of recovered paper to soar, increasing procurement costs.

On the other hand, if the increased focus on the environment leads to greater demand for environmentally friendly products, this could be expected to increase our corporate value through launching resource-saving products that use fewer raw materials, low-carbon products, and other sustainable products.. Furthermore, promoting the use of recovered paper, a recycled resource, and conserving the ecosystems of forests, which are sources of wood chips, pulp, and paperboard, could also have positive impacts such as increased corporate value.

We have set targets and is implementing initiatives for the conservation of natural capital with the aims of reducing negative impacts and increasing positive impacts.(Table 1)

Table 1: Impacts of envisioned phenomena on the Rengo Group and the initiatives it is implementing

Scope: Paperboard and Packaging-Related Business

Envisioned phenomena		Impacts on the Group	Group initiatives	Information disclosures					
Types	Items	Negative and positive impacts	Reduction of negative impacts and increase of positive impacts	i	ii	iii	iv	v	
Physical risks	Acute	River flooding and inland flooding caused by heavy rains	<ul style="list-style-type: none"> Reduction of net sales due to operational suspensions. Increased contract manufacturing costs due to operational suspensions and increased disaster recovery costs 	<ul style="list-style-type: none"> Initiative: Mitigate risks Reduce GHG emissions Initiative: Adapt to risks Continue monitoring to prepare for flood risks Initiative: Assess monetary losses caused by flooding Calculate financial impacts of floods on individual businesses Initiative: Ensure effectiveness of BCPs for all sites through Group-wide coordination Initiative: Enroll in insurance against damages caused by climate change 					
	Transition risks	Policies	Tightening of regulations regarding wood resources	<ul style="list-style-type: none"> Increased procurement costs due to soaring pulp prices 	<ul style="list-style-type: none"> Initiative: Develop pulp-free paperboard (100% recovered paper) 				
Markets		Increased demand for recycled materials	<ul style="list-style-type: none"> Increased procurement costs due to soaring recovered paper prices 	<ul style="list-style-type: none"> Initiative: Strengthen corrugated board resource circulation systems Promote the use of previously unused recovered paper 					
Opportunities	Products and services	Increased demand for environmentally friendly products	<ul style="list-style-type: none"> Increase in corporate value through launching resource-saving products and low-carbon products 	<ul style="list-style-type: none"> Initiative: Develop and promote environmentally friendly paper products Reduce the average grammage of corrugated board CFP of containerboard 					
	Sustainable use	Promotion of the use of recycled materials	<ul style="list-style-type: none"> Increase in corporate value through the expanded use of recovered paper. 	<ul style="list-style-type: none"> Initiative: Strengthen corrugated board resource circulation systems Improve recovered paper utilization rate for paperboard Promote the use of previously unused recovered paper Strengthen supply chain coordination Conduct awareness-raising activities (outreach classes, display of recycling symbol) 					
	Efficient use	Promotion of the use of unused materials	<ul style="list-style-type: none"> Increase in corporate value through greater use of unused wood resources 	<ul style="list-style-type: none"> Initiative: Strengthen corrugated board resource circulation systems Promote the use of paperboard pulp made from unused wood resources 					
	Ecosystem conservation	Forest ecosystem conservation	<ul style="list-style-type: none"> Increase in corporate value launching certified forest products 	<ul style="list-style-type: none"> Initiative: Supply FSC®-certified products Acquire FSC certification (CoC certification) Initiative: Implement illegal logging countermeasures Strengthen traceability of procured pulp for paperboard 					
Local ecosystem conservation		<ul style="list-style-type: none"> Greater trust from stakeholders 	<ul style="list-style-type: none"> Initiative: Manage and utilize Nationally Certified Sustainably Managed Natural Sites Initiative: Prevent environmental incidents and pollution Initiative: Use water resources efficiently 						

Information disclosures

- i. Rengo website (<https://www.rengo.co.jp/english/>)
- ii. Integrated Report (https://www.rengo.co.jp/english/financial/img/pdf/2025_english.pdf)
- iii. Environmental Data Book (https://www.rengo.co.jp/old_english/sustainability/info/report/img/pdf/databook2025_en.pdf)
- iv. TCFD Disclosure (<https://www.rengo.co.jp/english/sustainability/environment/tcf/2024/>)
- v. Eco Challenge 2030 medium-term environmental targets (<https://www.rengo.co.jp/english/sustainability/policy/ecochallenge/>)

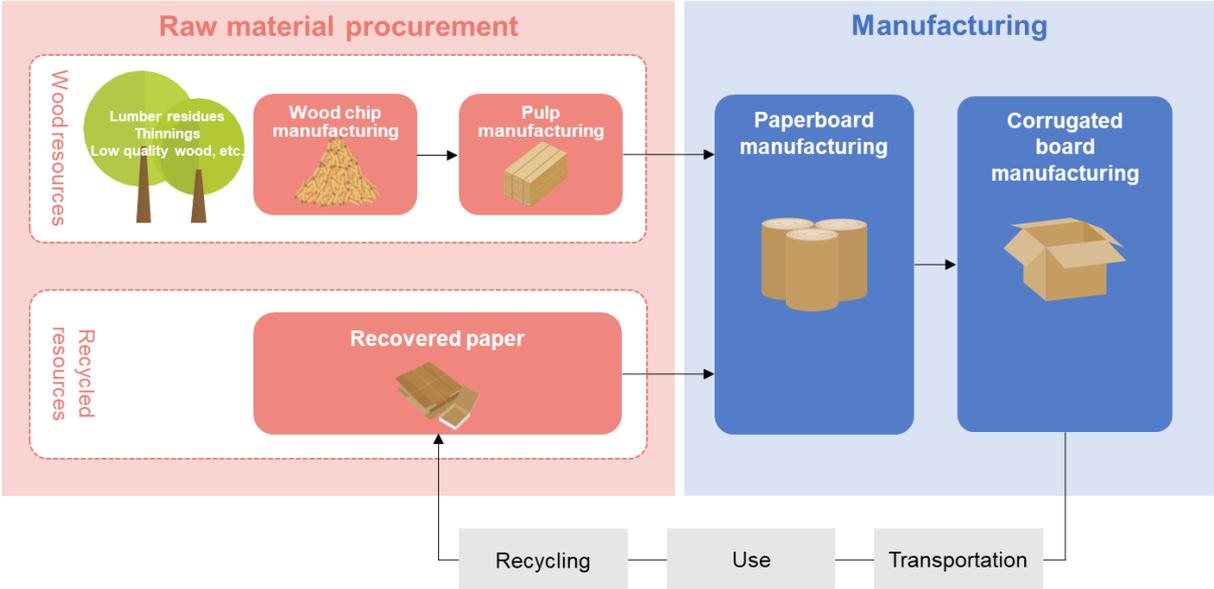
4 Initiatives for Conservation of Natural Capital

In its Paperboard and Packaging-Related Business, the Rengo Group actively implements initiatives for the conservation of natural capital by using raw materials sustainably and by developing environmentally friendly products and technologies.

(1) Raw material initiatives

The paperboard and corrugated board manufactured by the Rengo Group's Paperboard and Packaging-Related Business are circular economy products supported by well-established recovered paper recycling systems. The main raw material used in paperboard is recovered paper, and it also uses some pulp. Recovered paper is a recycled resource, but it is originally made from wood resources, so we are working to sustainably use both recovered paper and pulp.

Life cycle of paperboard and corrugated board

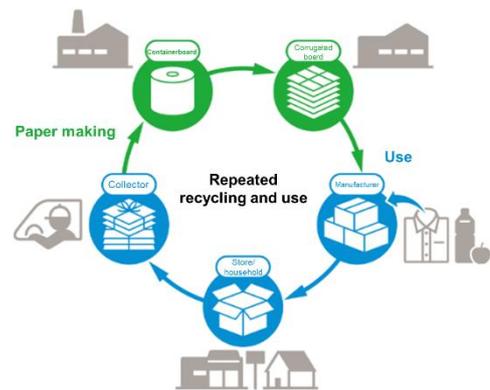


■ Strengthen corrugated board resource circulation systems

Envisioned phenomena		Impacts on the Group	Group initiatives
Types	Items	Negative and positive impacts	Reduction of negative impacts and increase of positive impacts
Opportunities	Sustainable use Promotion of the use of recycled materials	<ul style="list-style-type: none"> Increase in corporate value through the expanded use of recovered paper. 	<ul style="list-style-type: none"> Initiative: Strengthen corrugated board resource circulation systems Improve recovered paper utilization rate for paperboard

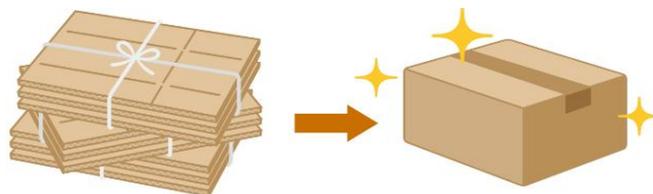
Improve recovered paper utilization rate for paperboard

To maintain the recovered paper recycling system for paperboard and corrugated board, the Rengo Group is expanding its use of recovered paper. Recovered paper, which serves as the raw material for paperboard, consists of recovered corrugated board, magazines, and miscellaneous paper. To use the precious resource of recovered paper as effectively as possible, we have introduced dedicated equipment for processing confidential documents at our paperboard mills. This equipment is used to turn confidential documents, which were previously incinerated due to information leakage concerns, into raw material. Furthermore, we have developed technologies to increase the blend ratios of recovered paper while maintaining the quality of our products, and we have improved our technologies to use previously unused recovered paper such as difficult-to-process paper. Through these efforts, we are working to further expand our use of recovered paper.



This equipment is used to turn confidential documents, which were previously incinerated due to information leakage concerns, into raw material. Furthermore, we have developed technologies to increase the blend ratios of recovered paper while maintaining the quality of our products, and we have improved our technologies to use previously unused recovered paper such as difficult-to-process paper. Through these efforts, we are working to further expand our use of recovered paper.

By increasing our recovered paper utilization rate, we can reduce the amount of pulp we use. We are curbing timber harvesting and contributing to the conservation of forest ecosystems by sustainably using wood resources.



Recovered paper utilization rate: **98.6%**

The percentage of recovered paper used as raw material in all paperboard products (FY3/2025)

■ Implement illegal logging countermeasures

Envisioned phenomena		Impacts on the Group		Group initiatives	
Types		Items		Negative and positive impacts	
				Reduction of negative impacts and increase of positive impacts	
Opportunities	Ecosystem conservation	Forest ecosystem conservation	<ul style="list-style-type: none"> Increase in corporate value Launching certified forest products 	<ul style="list-style-type: none"> Initiative: Implement illegal logging countermeasures Strengthen traceability of procured pulp for paperboard 	

Strengthen traceability of procured pulp for paperboard

The Rengo Group has defined a Procurement Policy for Wood Raw Materials to ensure that wood raw materials are procured from suppliers that do not engage in illegal logging, and practices environmentally and socially friendly procurement.

We procure approximately 90% of the wood pulp from domestic suppliers and the remaining 10% from overseas suppliers. All of the pulp that we procure has received forest management certification from a third-party certification body. In order to confirm that raw materials are procured in accordance with our procurement policy, we undertake annual audits by the Japan Paper Association's Monitoring Service against Illegal Logging. This audit confirms that all of the pulp we procure was manufactured from wood raw materials that were obtained legally. Furthermore, once a year, we conduct CSR questionnaires to our main suppliers, including pulp suppliers, to assess their CSR efforts and clarify issues.

Illegal logging not only causes environmental damage but also has major social and economic impacts, including effects on the lives of indigenous people and on businesses engaged in legal logging. We will promote responsible procurement by strengthening our coordination with suppliers and striving to ensure traceability.

Composition of countries of origin for purchased pulp (FY3/2025)

Countries of origin	Composition (%)
Japan	89.8
Brazil	6.2
Chile	3.1
South Africa	0.9

■ Supply FSC®-certified products

Envisioned phenomena		Impacts on the Group	Group initiatives
Types	Items	Negative and positive impacts	Reduction of negative impacts and increase of positive impacts
Opportunities	Ecosystem conservation Forest ecosystem conservation	• Increase in corporate value launching certified forest products	Initiative: Supply FSC®-certified products • Acquire FSC certification (CoC certification)

Acquire FSC certification (CoC certification)

As a company that utilizes wood resources, Rengo fulfills its responsibility by using the FSC forest certification system, which promotes appropriate forest management, in the procurement of raw materials and the manufacture and supply of products. We procure pulp produced from certified forests that are managed appropriately and other low-risk materials, and we acquire FSC certification (CoC certification) for all products made from these materials. We have created a structure for supplying paperboard and corrugated packaging nationwide with certifications that cover everything from paperboard mills to corrugated plants.

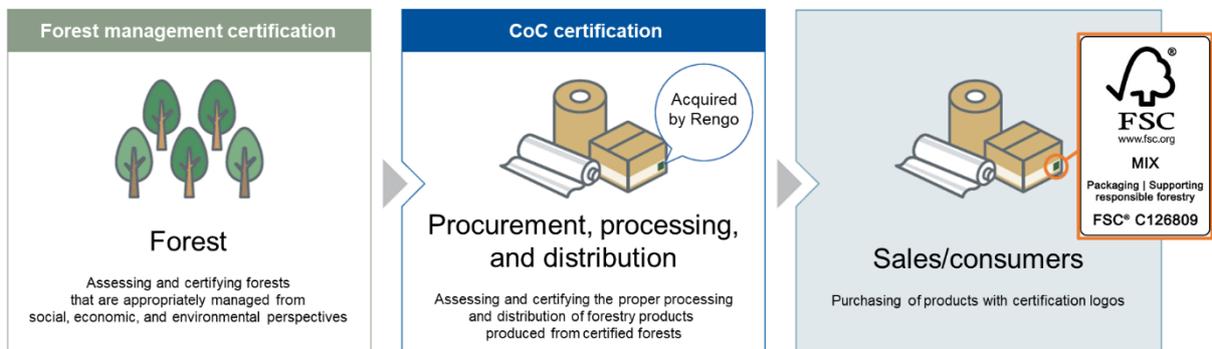
By using the forest management certification system, we are supporting sustainable forest management and contributing to the conservation of forest ecosystems.

FSC certification (CoC certification) acquisition results*

December 2013: Boxboard
 July 2014: Chipboard
 February 2015: All types of containerboard
 August 2015: All types of corrugated packaging and folding cartons
 Jul 2016: Tube board
 September 2020: Cellulose-related products from the Takefu Plant

* FSC®C119241, FSC®C126809

Forest management certification system



* The product label shown on this page is a sample product label.

(2) Technology and product development initiatives

In its Paperboard and Packaging-Related Business, the Rengo Group utilizes its packaging technologies cultivated over many years to develop environmentally friendly technologies and products. This is supported by its integrated structure that covers manufacturing everything from paperboard to corrugated board.

■ Develop and promote environmentally friendly paper products

Envisioned phenomena		Impacts on the Group	Group initiatives
Types	Items	Negative and positive impacts	Reduction of negative impacts and increase of positive impacts
Opportunities	Products and services Increased demand for environmentally friendly products	<ul style="list-style-type: none"> Increase in corporate value through launching resource-saving products and low-carbon products 	<ul style="list-style-type: none"> Initiative: Develop and promote environmentally friendly paper products Reduce the average grammage of corrugated board CFP of containerboard

Reduce the average grammage of corrugated board*

The Rengo Group is developing products that help reduce resource and energy usage. We are reducing the weight of our core product, corrugated board (reducing the average grammage*). Our corrugated board packaging is designed considering the features of inner contents and logistics conditions such as transportation and storage, and we are able to reduce the weight of packaging products by optimizing the thickness of corrugated board and the average grammage of paperboard that is laminated to it. The issue is how to reduce weight while maintaining the strength and other properties of the corrugated board. We combine various initiatives, such as developing lightweight containerboard, making corrugated board thinner, and applying our ingenuity to packaging designs, to make corrugated board more lightweight.

These corrugated board reductions decrease our use of raw materials (recovered paper and pulp). Making corrugated board lighter also helps improve the transportation efficiency of the supply chain as a whole, reducing its environmental impacts, such as by lowering its energy consumption and GHG emissions.

* Weight per 1 m²

Reduction of corrugated board thickness

C-flute features	Reduced thickness by approx. 20% compared to A-flute
	Maintains the strength equivalent to A-flute
Delta-flute features	Reduced use of corrugating medium by approx. 8% compared to B-flute
	Reduced thickness by approx. 25% compared to B-flute
	Improved compression strength by approx. 35% compared to E-flute