C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Fuji Seal Group started manufacturing and selling cap seals in 1958. Since that time, we have continuously developed our products in response to changes in customers, markets, and product containers. Fuji Seal provides shrink sleeve labels, self-adhesive labels (pressure sensitive labels), spouted pouches, and packaging machinery on a global scale. Utilizing the technology and capabilities of the Group, we provide total packaging solutions to meet our customers needs in a wide range of areas, such as food, beverages, dairy, home & personal care and pharmaceutical products.

・Shrink Sleeve Labels

Fuji Seal is a global pioneer in the development of distinctive shrink labels, a core product of its business. Utilizing the characteristics of film, which shrink when heat is applied, Fuji Seal's unique shrink sleeve labels are able to fit perfectly to containers of any shape or material. Applying attractive printing and various processing techniques to transparent plastic film, Fuji Seal shrink sleeve labels become the face of customer products. Our shrink sleeve labels contribute to product quality as well as further environmental protection efforts thanks to the addition of special functions such as light-shielding and weight-saving.

・Self-adhesive Labels (Pressure Sensitive Labels)

Self-adhesive labels are pre-glued labels that are also known as pressure sensitive labels. Fuji Seal's self-adhesive labels contribute to the promotion of customer products. Our POP (point of purchase) labels and campaign seals enhance the effectiveness of store advertising. Our self-adhesive labels also boast a high share of the battery label market. With the addition of Pago to the Group, we will offer a wider range of self-adhesive label solutions on a global scale.

・Soft Pouches (Spouted Pouches)

Soft Pouches, which are generally called spouted pouches, combine the features of a flexible pouch with the functionality of bottles. In addition to their lightweight and space-saving features, the attachment of spouts to soft pouches makes packaging more user friendly. Helping to reduce waste after use, spouted pouches are used in a wide array of areas, such as beverages, food, home & personal care and pharmaceuticals.

・Machinery

Fuji Seal listens attentively to customer needs and proposes an optimized combination of packaging machinery such as label feeders, label applicators and peripheral production line equipment. We provide technical support and services at every location to meet global demands.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	April 1 2021	March 31 2022	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

France
Germany
India
Indonesia
Italy
Japan
Mexico
Netherlands
Poland
Spain
Switzerland
Thailand
United Kingdom of Great Britain and Northern Ireland
United States of America
Viet Nam

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

JPY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	JP3813800004

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board Chair	Board of Directors at Fuji Seal Group has formulated the Group Basic Environmental Policy in relation to climate-related issues (environmental issues). The Chairman of the Board of Directors and the Directors are responsible for deliberating and formulating this Group Policy, and based on this policy, they are also responsible for the following: Board of Directors deliberates and decides on the medium-term management plan, which includes targets for reducing our production waste. The Chairman reviews and guides the strategy and key action plans to position ESG as a top management priority. Specifically, in December 2020, Board of Directors decided to completely revise our environmental policy, which had been in place since 2008 and was fully revised in January 2021. In addition, under the supervision of Board of Directors, the Group Sustainability Committee, chaired by the COO, is responsible for setting environment-related goals, promoting action plans, monitoring progress, and evaluating achievements. The Executive Officers in charge of regions, business operations, and functions, as well as their organizations, are responsible for addressing climate-related issues as follows: The Chairperson of Board of Directors (Representative Executive Officer, Chairperson and CEO) shall determine and monitor the monthly reporting requirements for environmental initiatives by the Executive Officers in charge of the regions. Executive Officers in charge of the regions shall report on how environmental issues are being addressed at board meetings and in monthly reports. Executive Officer in charge of business operations shall reduce the environmental impact of the manufacturing processes of each business. Executive Officer in charge of development shall promote product development that contributes to reducing environmental impact, hold regular development meetings four times a year.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	Considering the risks and opportunities associated with climate change, marine plastic issues, and resource depletion, the Board of Directors has deliberated and formulated the latest medium-term management plan (announced in February 2021) and determined new environmental KPIs, which include increasing the sales ratio of environmentally friendly products, reducing CO2 emissions and waste. The Board of Directors checks progress of the initiatives, provides guidance to officers in each region, and supervises each initiative with respect to these goals and risk management at each meeting of the Board of Directors.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	The Company transitioned to a "Company with Nominating Committee, etc." (then called "Company with Committees") in June 2004 in order to (1) strengthen the governance of the entire group management, (2) improve management transparency for shareholders and investors, (3) clarify the roles of each operating company and group management and improve the efficiency and quality of group strategies, and (4) utilize outside directors to broaden the perspective of the company's strategy and speed up the response to change. The Nominating Committee is responsible for the appropriate management of the Group. The Nominating Committee considers and decides on the selection and dismissal of directors and executive officers in light of the selection criteria, etc., with the aim of contributing to the establishment of an appropriate management structure for the Group. In order to be a company that contributes to the realization of a sustainable society by resolving ESG issues through packaging, the Nominating Committee appoints directors who are knowledgeable about and able to promote decarbonization, eco-design, diversity, and work-life balance. Specifically, our directors directly supervise and lead the development of environmentally friendly products, and host the Sustainability Committee as a chairperson, which was established in 2020 to promote and support FSG's sustainability management, and work together to promote sustainability management across the board. The "Sustainability Environmental Management" section in the Director Skill Chart on our website clearly states that two directors are able to serve the role.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Under the direction of CEO, the following Executive Officers and organizations are working on climate-related issues. FSG appoints four Executive Officers for Regions, who are responsible for the execution of operations in each Region, as well as Executive Officers responsible for Shrink Label Business , Pressure Sensitive Label Business, Spout Pouch Business, and Machinery Business, and Executive Officer responsible for Development to manage each business and function.

Executive Officers responsible for Regions (Japan, US, Europe and ASEAN) report how they address environmental issues at Board of Directors meetings and in monthly reports (as the regional executive officer is responsible for the overall operation of the business, including addressing environmental issues).

Executive Officers for Business Sectors are responsible for promoting the reduction of the environmental impact from manufacturing processes (both in terms of assessing and managing climate-related risks and opportunities), and monitors them as part of their duties (as efforts to reduce the environmental impact of manufacturing processes vary from business to business and Executive Officers for Business Sectors are appropriate for review and implementation to mitigate such problems).

The COO is responsible for promoting product development that contributes to reducing environmental impact, etc. (both assessing and managing climate-related risks and opportunities), and for monitoring through meetings and deliberations (since the executive officer in charge of development needs to take the lead in reducing environmental impact in new product development, etc.). The Executive Officers hold regular development meetings four times a year.

Under the supervision of the Board of Directors, the Group Sustainability Committee, chaired by the COO, sets environment-related goals, promotes action plans, monitors progress, and evaluates achievements, thereby clarifying the management risks of climate change and setting issues to be addressed. The Group Sustainability Committee consists of a chairperson, committee members, and a secretariat. The chairman in the committee is the COO, and the committee members are the General Manager of the Environmental Sustainability Promotion Office, the executive officer in charge of human resources, the executive officer in charge of safety and disaster prevention and purchasing, and others appointed by the chairperson as necessary. The committee members examine and decide on the organization and promotion system for sustainability, establish new regulations, and examine and promote action plans.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	The "performance-linked compensation" has been introduced to its executive officers. The percentage of total remuneration varies from 0% to 30%, and the calculation items include consolidated net sales and operating income ratio for a single year, financial indicators important for management strategy, and non-financial indicators such as environmental indicators and human resource development.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Supply chain engagement	
Chief Operating Officer (COO)	Monetary reward	Emissions reduction target Supply chain engagement	
Other C-Suite Officer	Monetary reward	Emissions reduction target Supply chain engagement	Other C-Suite officer means Executive Officer in charge of each region (Japan, Americas, Europe and ASEAN)

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	2	5	
Long-term	5		Longer term means more than five years for us, and we do not specify an end date as we are conscious of sustainability in the future.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

A significant financial or strategic impact is defined as an event that results in the suspension of factory operations for seven or more consecutive days or an impact of 300 million yen or more in terms of sales. Such an event would cause the inability to provide a stable supply of our label or pouch products, both in normal times and in emergencies, to those products that are positioned as part of our Essential Business, which are essential to society. One example of this is the restriction on the supply of product labels, including those for essential businesses, after the Great East Japan Earthquake in 2011. The scope of the impact can include both direct operation and supply chains, where we would not be able to carry out our manufacturing activities in the normal course of business, from purchasing raw materials to manufacturing products and shipping them to our customers. This would result in a significant expenditure to address potential or actual risks, a significant decrease in revenues due to emerging risks, and a reduction in business over the medium to long term.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Description of the process of climate-related risk management:
Using our proprietary "risk map" method, risk assessment is carried out regularly for climate-related risks as a main part of risk management.
1) Create a risk map by evaluating the degree of impact and the likelihood of occurrence for each possible risk to visualize their importance.
2) Estimate the impact and occurence of each risk item onto management over the short, medium, and long terms. Then, identify the most important risk items and determine their priority as a part of risk assessment.
3) The updated risk map is reviewed and approved by the Board of Directors multiple times a year, and each division and region then formulates and implements countermeasures to manage their own risks based on the approved risk map.

Description of the process of managing climate-related opportunities:
(1) At the end of every fiscal year, the impact of each opportunity and feasibility of action are reviewed in a global development meeting attended by R&D members from each region, and key opportunity items are identified based on customer/market needs and technical challenges.
(2) The identified key opportunity items are reviewed by Board of Directors and approved as global development projects.
(3) The remained development proposals are handled by the relevant regional development departments as local development projects.

Case Studies/Examples of Process Application to Physical Risks
In recent years, extreme weather events such as typhoons and torrential rains have increased due to climate change. These physical risks are defined in our Risk Map 2021 as high in impact and low in frequency. Therefore, we mitigate the identified risks by applying insurance coverage against such natural disasters.
In fact, the torrential rains in Hiroshima in June 2018 caused a significant damage to a customer's factory and a subcontractor located near the factory, while our manufacturing machinery installed at the subcontractor was also damaged by the floods. The damage, which amounted to 246 million yen, was fully covered by insurance, which helped to minimize the financial damage.

Case Study/Example of Applying the Process to Transitional Opportunities
We see the development of new markets by solving problems related to climate change as one of the major opportunities. Anticipating the market impact of reducing CO2 emissions in our customers' production and delivery, we decided to follow our opportunity management process to develop a higher volume-efficiency pouch. As a result, we succeeded in developing "Fuji Pouch" (a bottle-like soft pouch with a faucet) and its production machinery in Japan. Compared to conventional bottle containers, Fuji Pouch can reduce the amount of plastic used by more than 70%, and with a 50% improvement in volumetric efficiency, it can also improve transportation efficiency by 50%, contributing to CO2 reduction. These products were launched in the market in 2016 and are widely used in daily necessities such as shampoo, conditioner, and food products, and have been adopted by many customers including major global customers who are focusing on environmental measures such as climate change, as they can greatly contribute to reducing the weight and weight of containers.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	According to the risk map for fiscal 2021 approved by Board of Directors, among the climate-related risks, inappropriate responses to legal and regulatory issues are considered to have moderate impact on management and high likelihood of occurrence. For this reason, regional environmental managers monitor GHG emissions and energy use in accordance with the laws and regulations in each country or region, under the direction of the executive officer in charge of each region (Japan, America, Europe and ASEAN). However, if changes in laws and regulations, such as CFC emission control laws and energy conservation laws, were to be made, there would be a risk that our business, financial condition and operational results may be affected materially and adversely if we fail to take appropriate actions. For example, if these environmental standards were to reduce allowed emission levels of hazardous substances that we currently report for under the PRTR Act, we may be required to install more sophisticated treatment equipment, which could have an adverse financial impact. In addition, we pay an annual recycling fee of approximately 19 million yen as a consignment fee for packaging recycling under the Containers and Packaging Recycling Law, but if this fee were to increase due to further emission controls or mandatory recycling in order to mitigate climate change, there would be a risk that our financial condition could be affected adversely. For example, in UK a plastic packaging tax comes into effect in April 2022, imposing a tax of 200 pounds per ton if the recycled material content is lower than 30%. In addition, if we were unable to comply with these laws and regulations, there would be a risk that our reputation for corporate social responsibility could be damaged, resulting in decine of our sales turnover.
Emerging regulation	Relevant, always included	According to the risk map for fiscal 2021 approved by Board of Directors, among the climate-related risks, inappropriate responses to legal and regulatory issues are considered to have moderate impact on management and high likelihood of occurrence. While we generally benefit from enhanced regulations of our customers' products, demand for our services and products could be adversely affected by amendments or repeals of laws or changes in regulatory enforcement policies regarding those laws. An example of regulations that may affect our business is the financial impact risk from carbon taxes. If a carbon price is implemented to the level recommended by the Carbon Pricing Leadership Coalition ("CPLC") ($40 to $100 per tonne of CO2 in 2030), an additional annual expenditure of approximately 0.7-1.6 billion yen would be required, which would impact our financial status significantly. In addition, there is a risk that our business, which manufactures and sells labels for PET bottle beverage, will be significantly affected by the certification of environmentally friendly products and the requirement for businesses to reduce emissions and recycle resources under the Law Concerning the Promotion of Resource Recycling of Plastics, which went into effect in April 2022. Therefore, under the leadership of the Executive Officer, we are working to reduce the emission of greenhouse gases and strengthen the development and supply of environmentally friendly products.
Technology	Relevant, always included	The risk map for fiscal 2021 approved by Board of Directors defines the risk of business transformation due to rising environmental issues, including climate change, as having high impact on management and low likelihood of occurrence. Specifically, in the absence of technological innovation in such areas as the development of low-carbon products and systems, we may not be able to provide products that meet the standards demanded by the markets and customers, which could lead to a decline in sales. Therefore, investment in technological innovation, such as the development of low-carbon products and systems, is considered to be the key to our market expansion, and the risks and impacts are discussed at the global development meetings based on market conditions, customer requirements and technical difficulties, with the Board of Directors making the final decisions.
Legal	Relevant, always included	According to the risk map for fiscal 2021 approved by Board of Directors, among the climate-related risks, inappropriate responses to legal and regulatory issues are considered to have moderate impact on management and high likelihood of occurrence. In this area, the risk is considered to be lawsuits from citizens and other stakeholders due to inappropriate responses to CFC emission control laws and energy conservation laws. Therefore, under the direction of the executive officers in charge of each region (Japan, the United States, Europe and ASEAN), our environmental and manufacturing managers are working to reduce CFC and energy emissions in accordance with the laws and regulations in each country.
Market	Relevant, always included	The risk map for fiscal 2021 approved by Board of Directors defines the risk of business transformation due to rising environmental issues, including climate change, as having high impact on management and low likelihood of occurrence. In this category, there is a possibility that the market shift to more sustainable packaging, such as biomass, which emits less CO2 in total over its life cycle, will be more demanding and rapid, and there is also a risk of business continuity against a shift to paper products. Therefore, we are introducing products such as RecShrinkTM, which was developed as a recyclable plastic packaging label with lower environmental impact to meet or exceed market expectations.
Reputation	Relevant, always included	In the risk map for fiscal 2021 approved by Board of Directors, among the climate-related risks, reputational damage is identified as having high impact on management and low likelihood of occurrence. Poor publicity from investors, consumers, employees and other stakeholders due to a lack of action on climate change issues could result in a decline in stock value and employee shortages, among other risks. IR, HR and corporate planning departments monitor this risk under the guidance of the CEO. And related key issues are discussed at board meetings. The methods to disclose non-financial information of FSG include statutory financial statements and business reports for General Meeting of Shareholders, the publications in our website such as Integrated Reports, Sustainability Reports and Environmental Reports as well as environmental rating platforms such as CDP, EcoVadis and Sedex.
Acute physical	Relevant, always included	The risk map for fiscal year 2021 approved by Board of Directors indicates that among climate-related risks, natural disasters, which are physical risks of an urgent nature, have high impact on management and low likelihood of occurrence. Loss of sales due to inability to produce due to natural disasters such as typhoons and floods, and loss of confidence due to inability to supply essential products are considered as such risks. Therefore, a business continuity plan is prepared under the direction of CEO and discussed in Board of Directors.
Chronic physical	Relevant, always included	In the risk map for fiscal 2021 approved by Board of Directors, chronic physical risks have moderate impact on management and are considered to have moderate likelihood of occurrence. As our main product, shrink sleeve labels are made of heat-shrinkable film. One of the chronic physical risks where the average temperature increases due to the greenhouse gas effect will make the product shrunk before use and therefore the product will lose its value as a packaging product. This makes it impossible to supply products that meet the customer specifications, and there is a risk that we may be in breach of contract with our customers and suppliers. To mitigate this risk, we continue to implement energy-saving activities such as updating large energy-consuming production and air-conditioning equipment and replacing lighting equipment with LEDs.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Demand for our services and products can be at risk of being adversely affected by the amendment or repeal of laws related to new regulations or changes in regulatory enforcement policies.
According to the 1.5°C scenario, if the newly established carbon tax is levied at the level of $135-245/t-CO2eq, it would result in an increase in expenditures of 2.8-5.1 billion yen annually, assuming that the current emission levels are maintained, which could have a significant impact on our business. Therefore, we have set a CO2 emission reduction target for the entire Fuji Seal Group globally in the future, with the aim of achieving a 1% reduction in emissions each year.
As a concrete example in 20201, our plants in Thailand replaced two new magnetic-bearing chillers. The replacement has resulted in a significant reduction in electricity consumption, which in turn has reduced annual CO2 emissions by 333 t.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
2800000000

Potential financial impact figure – maximum (currency)
5100000000

Explanation of financial impact figure
The financial impact is based on our CO2 emissions in 2021.
If the new carbon tax of $135-245/t-CO2eq is imposed on our CO2 emissions in Scope 1+Scope 2, and we maintain the emission level as it is, the new tax will result in an additional USD6-15M/year where Scope 1+Scope 2=175,000t-CO2/year x USD135-245/t-CO2, which is an additional payment of JPY 2.8-5.1 billion annually.

Cost of response to risk
2693000000

Description of response and explanation of cost calculation
Under the direction of executive officer in charge of each region (Japan, the United States, Europe and ASEAN), the environmental and production managers are working to reduce and control GHG emissions and energy use in order to comply with the laws and regulations in each country and region. In particular, FSG is installing equipment for water-based printing technology to reduce the use of organic solvents, which are the main source of CO2 emissions, as well as to reduce the risk of fires. In several regions we have invested more than 2 billion yen in equipment over the past three years. The breakdown of the capital investment is as follows: UK'17: 560 million, Japan'19: 780 million, Japan'20: 680 million, and the U.S.'20: 570 million. In Japan, we invested about 103 million yen in 2021 to reduce our environmental impact, and as an example in 2021, at our Tsukuba Plant, we modified the VOC gas supply header of the VOC combustion system, which improved combustion efficiency and reduced the amount of city gas used to raise the temperature in the furnice, thereby reducing CO2 emissions by 259 tons. We are currently considering initiatives to reduce Scope 3 CO2 emissions by procuring renewable energy and non-fossil certificates as well as by collaborating with our supply chain.

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Reputation	Increased stakeholder concern or negative stakeholder feedback

Primary potential financial impact
Decreased access to capital

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Risks of poor reputation and reputational damage related to environmental issues such as climate change are one of the risks identified in the risk map approved by Board of Directors.
As institutional investors and shareholders around the world are increasingly interested in ESG investments, there is a risk that delays in addressing climate change could lead to a decline in corporate value as well as in share price.
For example, foreign corporations and other financial institutions hold approximately 54.48% (March 2022) of the Company's shares, and if the Company's disclosure of risks and opportunities related to climate change and its business strategy is inadequate, there is a risk that these institutional investors could sell their shares and have a significant impact on its market capitalization.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
5500000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial impact is calculated based on the Company's share price. If we are unable to meet the environmental requirements of our stakeholders and are excluded from investments, there is a risk that our corporate value will decline and our share price will decline.
If institutional investors were to sell their shares and the share price declined by 10%, the total market value as of March 2022 would be approximately 5.5 billion yen.
Share price JPY1,683 x 10% x number of shares issued 60,161,956×54.48％ = 5.5 billion yen (as of March 2022)

Cost of response to risk
44000000

Description of response and explanation of cost calculation
To avoid this risk, we will focus on demonstrating our commitment to climate change to institutional investors, and since 2019, we have conducted a third-party verification (at a cost of 1.1 million yen) on CO2 emissions to understand the GHG emissions of the entire group and verify the energy consumption of 29 sites (13 overseas and 16 domestic sites). Before constructing a new plant in the U.S., an environmental assessment (10 million yen) was conducted as part of the environmental due diligence for a new model plant that embodies the vision of "human- and environment-friendly company". In addition, a global environmental data collection platform was built in a cloud-based system (8 million yen), and supplier questionnaires were digitized (10 million yen) so that our business partners can enter the data at our website.
In addition, an external consultant (at a cost of approximately 15 million yen) was used to further enhance the content of the integrated report.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
In recent years, climate change has led to an increase in typhoons, torrential rains, and other extreme weather events.
In Japan, which is particularly vulnerable to heavy rainfall, FSG has six plants in Nabari, Tsukuba, Yuki, Yamagata, Ube, and Hyogo, and has a variety of customers and partner companies. There is a risk of damage to buildings, products and employees in these areas due to extreme weather events caused by climate change and other factors.
We use Global Diagnostic Reports from insurance brokerage firms to assess the risk of such natural disasters and physical risks (e.g., infectious diseases) at each site. This risk information is then evaluated under the direction of CEO and reviewed by Board of Directors.
Specifically, as a result of the heavy rainfall disaster in Hiroshima in June 2018, our manufacturing machinery located at our customer's plant and at a subcontractor located near our customer's plant was also damaged by flooding.
As a result, the machines were scrapped and we were forced to suspend production.
The damage caused by the flooding amounted to 246 million yen, but all of the damage was covered by insurance and the financial impact was essentially zero. The damage amount was incorrectly stated in the 2021 response and has now been corrected.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
300000000

Potential financial impact figure – maximum (currency)
700000000

Explanation of financial impact figure
Regarding the financial impact of the torrential rains that occurred in Hiroshima in June 2018, our manufacturing equipment installed at a customer's plant and at a subcontractor located near the customer's plant was also damaged by flooding, amounting to 246 million yen. The "Global Diagnostic Report" indicated that production sites in Thailand and Mexico are at risk of river flooding, and if similar damage were to occur at our factories, we believe the damage would be more severe due to the size of the factories, so we have set compensation limits by multiplying theoretical damage rates for assets including buildings, equipment, and inventory at each location.

Cost of response to risk
290000000

Description of response and explanation of cost calculation
The insurance structure is designed to provide adequate coverage for our business conditions by adding a master policy as a supplement or rider to the local policies tailored to the risks of each location. Property and profit insurance covers losses due to damage or business interruption to plants and machinery caused by natural disasters or fire, and liability insurance covers damages caused to third parties as a result of our business operations. We also have several plants with similar production systems, and have a business continuity plan in place to ensure that in the event of an emergency, we can supply all types of products globally, not only to the affected country, but also to all other regions. Premiums and brokerage fees in 2021: JPY290 million (Japan: JPY48 million, Global: EUR1.9k=JPY240 million)

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Primary potential financial impact
Increased revenues resulting from increased production capacity

Company-specific description
We have decided to build a new production facility in North Carolina, USA, in order to realize our vision "Delivering value friendly to people and the environment" and to transform our strength, total packaging services, into something with even higher added value. The new plant will enhance production of environmentally friendly products and introduce more people- and environment-friendly production equipment (new printing methods with higher productivity). Specifically, the introduction of printing methods that do not use organic solvents will reduce GHG emissions and create a more comfortable work environment. In addition, the plant is expected to achieve operating income profitability in the first year of operation through cost reductions achieved by productivity improvements through automation. Part of the plant construction was financed by an environmental rating loan provided by Development Bank of Japan, Inc. During the screening process, the company received a rating of "advanced in its commitment to environmental considerations". In the Americas, we continue to grow by taking advantage of social and market changes as business opportunities, and we expect the new plant to generate $110 million in sales annually.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
13000000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Sales forecast of $110M is listed as the potential impact. This is an excerpt from the business plan in the supplemental material of the financial results briefing for FY2021. In the Americas, we continue to grow by taking advantage of business opportunities presented by changes in society and markets. In the Corona Pandemic, we have played an important role as an essential business, and demand for our products is still growing. By building a new plant in the U.S., we will continue to fulfill our responsibility to supply essential packages to society and deliver value that is friendly to people and the environment.

Cost to realize opportunity
9600000000

Strategy to realize opportunity and explanation of cost calculation
The plant will enhance production of environmentally friendly products and introduce more people- and environment-friendly production equipment (new printing methods with higher productivity). Specifically, the introduction of printing methods that do not use organic solvents will reduce GHG emissions and create a more comfortable work environment. In addition, we plan to achieve profitability in operating income from the first year of operation through cost reductions achieved by productivity improvements through automation. We selected the location that covers a wide range of customer and supplier sites for efficient logistics, and conducted environmental due diligence prior to construction. The cost to realize the opportunity is 9.6 billion yen, of which 3.8 billion yen is for land and construction and 5.8 billion yen is for capital investment.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
We are committed to developing eco-friendly packaging to reduce our environmental impact. We are constantly developing low CO2-emission products for shrink labels, tack labels and pouches used in beverage and food packaging, including thin-walled labels, labels made from biomass materials, and packaging with recycled plastics and renewable functions. We see the increased demand for products that can reduce the environmental impact of these products as an opportunity.
Specifically, we have developed and are offering the industry's thinnest shrink labels and a machine (TLS) that rapidly places labels in the container for thermal shrinking. As the thickness is less than half that of conventional labels, the amount of plastic used can be reduced by about 50%. The reduction in the amount of plastic used by this label in fiscal 2021, both in Japan and overseas, was 4403 tons. By offering products with such a low impact on climate change, we aim to capture the intentions of our customers and consumers to increase sales.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
11200000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As the demand for sustainable products increases, so do our business opportunities. Sales of thin-walled labels, biomass labels and other products related to environmental issues account for more than 20% of sales turnover in shrink label business in Japan. In particular, in Japan, a synergetic combination of thinner shrink labels and their dedicated application machines has contributed positively to the increase in sales of both packaging labels and machinery; therefore, the increase in sales turnover of shrink labels and application machines in Japan is shown as a financial impact.
Increase in sales of shrink labels in Japan 45,759-36,568 = 9,191 million yen
Increase in sales of machinery in Japan 6,053-4,081 = 1,972 million yen
Increase in sales of shrink labels and machinery 9,191 + 1,972 = 11,163 million yen

Cost to realize opportunity
360000000

Strategy to realize opportunity and explanation of cost calculation
We are making environmentally friendly actions for all R&D actions for all of our products (shrink labels, pressure sensitive labels, pouch containers and packaging application machinery) to reduce costs and environmental impact. We are also focusing on increasing the speed of development in each region, both domestically and internationally, through joint research with outside companies and industry-academic partnerships with several universities.
To ensure that we do not miss any of these opportunities, we hold an annual global development meeting at the beginning of each fiscal year to assess the impact on our business and the feasibility of our technical challenges. The total project development cost to realize the opportunity is 360 million yen, including 90 million yen for materials and 270 million yen for machinery.
Specifically, we have simultaneously developed and are providing our system with the industry's thinnest shrink labels and a specialized machine (product name: TLS) that allows labels to be applied to containers at high speed and heat-shrunk. As the thickness is less than half that of conventional labels, the amount of plastic used can be reduced by about 50%. The reduction in the amount of plastic used by thinner labels in fiscal 2021, both in Japan and overseas, was 4,403 tons.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Markets

Primary climate-related opportunity driver
Access to new markets

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description

Our basic management vision is "to understand our customers' needs for packaging and provide differentiated products (development, proposal, and supply), and to be the first choice partner for our customers". We are strengthening cooperation within the Group, and through the exchange of technology and market information, we are striving to improve quality and productivity, develop new products and explore new markets. In recent years, many of our customers have begun to consider the sustainability of their products in relation to climate change. Against this backdrop, in September 2019, our U.S. subsidiary American Fuji Seal Inc. successfully developed a shrink label that can be recycled into plastic bottles (RecShrink™). The RecShrink™ label and washable ink system has been evaluated according to the APR (American Plastics Recycling Association) protocol, "Critical Guidance Protocol for Clear PET Articles with Labels and Closures" ("PET-CG-02"). Approved by the standard recycling protocol, the special shrink label has been adopted by many customers, including global dairy and beverage manufacturers, as a new material that allows for recycling of PET bottles and of itself.
These efforts have been featured in the Packaging Digest and have attracted a great deal of attention, and we regard the product as an important part of our marketing strategy. In addition, we have strengthened our promotion of the product in our environmental report and other publications on our website, which has led to an increase in sales.The adoption of RecShrink has expanded to 25 products from 8 companies, including products from major beverage manufacturers, with the goal of 20% of products for beverage PET in the Americas, 10% in Europe, and 5% in ASEAN.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
8500000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
As the demand for sustainable products increases, so do our business opportunities. Our U.S. subsidiary, American Fuji Seal Inc.'s successful RecShrink™ label and washable ink system has been a significant contributor to our shrink business sales in the Americas. The impact was calculated based on the fact that the company has begun to launch the products in Europe and ASEAN countries and is aiming for a 20% share in the Americas, 10% in Europe, and 5% in ASEAN countries as a product for beverage PET.
(U.S.)34,060*20% + (Europe)12,918*10% + (Asean)7,464*5% = 8,477 million yen.

Cost to realize opportunity
100000000

Strategy to realize opportunity and explanation of cost calculation
We are strengthening our intra-group cooperation and are working to improve quality and productivity, develop new products and explore new markets through the exchange of technology and market information. In recent years, many of our customers have begun to consider the sustainability of their products in relation to climate change. The development of these new markets and others is one of the opportunities we have identified in relation to climate change. To ensure that we do not miss these opportunities, we hold an annual global development meeting at the beginning of each year to assess the business impact and feasibility of our technology challenges. The cost of realizing the opportunities is 2.4 billion yen in fiscal 2020, and we are using these development costs to explore new markets and develop new products.
As a specific example, in September 2019, our U.S. subsidiary, American Fuji Seal Inc. successfully developed a new product, a shrink label that can be recycled into plastic bottles (RecShrink™). RecShrink™ is a new material that can be recycled at the same time as recycling PET bottles and is being used by many customers, including global dairy and beverage companies. The cost to develop this product and realize the opportunity is 100 million yen in R&D expenses in FY2021, primarily for materials. These development expenses are used to explore new markets and develop new products.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan
No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Publicly available transition plan
<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan
<Not Applicable>

Description of feedback mechanism
<Not Applicable>

Frequency of feedback collection
<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)
<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future
Until last year, we have been conducting studies to qualitatively achieve a 2°C world, but we have not yet completed to a level where we can publish until we have a concrete climate transition plan that is consistent with a 1.5°C world. A new environmental subcommittee has been established within the Sustainability Committee, and the goal is to study and prepare a company-wide climate transition plan within two years, with the final plan to be made public.

Explain why climate-related risks and opportunities have not influenced your strategy
<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA NZE 2050	Company-wide	<Not Applicable>	How the selected scenarios were identified, with reference to the inputs, assumptions, and analytical methods used: in accordance with the Ministry of Environment guidelines, the new 1.5°C scenario parameters were used to replace the 2°C scenario. Assuming that manifestations would occur, the impact on the business was analyzed with the involvement of relevant departments such as corporate planning and finance. A description of the time horizons considered and why they are relevant to your company: we have established a long-term time horizon over which the risk factors in each scenario are likely to materialise and identified risks and opportunities to the Group's overall business activities over that period. A description of the areas of your organization that have been considered as part of the scenario analysis: Our business is located in the packaging industry, as we manufacture and sell packaging materials and their attaching machines. The entities that affect our business include upstream energy suppliers and raw material manufacturers, and downstream buyers - customers and consumers - as well as other competitors and new entrants who supply substitute products, end-processing recyclers, and relevant government and industry organizations. A case study of how the results of the scenario analysis have directly influenced your business objectives and strategy: Reducing group-wide GHG emissions is becoming a strategic imperative as additional annual expenditures of between 2.8 and 5.1 billion yen for the 1.5oC scenario are expected to be made due to carbon taxes being considered for introduction in many countries in the future. In addition to existing energy reductions, we are also looking at renewable energy-related investments such as solar power generation equipment and offset credits, and the introduction of carbon pricing to promote green investments within the company. In addition to existing energy reduction practices, we have begun discussions on future emission reduction action plans, with an eye to renewable energy-related investments such as solar power generation equipment and offset credits, as well as the introduction of carbon pricing to promote internal green investments.
Physical climate scenarios: RCP 8.5	Company-wide	<Not Applicable>	How the selected scenarios were identified, with reference to the inputs, assumptions, and analytical methods used: in accordance with the Ministry of Environment guidelines, 4°C scenarios was assumed; for the 4°C scenario, the physical risk from RCP 8.5 and other sources. Assuming that manifestations would occur, the impact on the business was analyzed with the involvement of relevant departments such as corporate planning and finance. A description of the time horizons considered and why they are relevant to your company: we have established a long-term time horizon over which the risk factors in each scenario are likely to materialise and identified risks and opportunities to the Group's overall business activities over that period. A description of the areas of your organization that have been considered as part of the scenario analysis: Our business is located in the packaging industry, as we manufacture and sell packaging materials and their attaching machines. The entities that affect our business include upstream energy suppliers and raw material manufacturers, and downstream buyers - customers and consumers - as well as other competitors and new entrants who supply substitute products, end-processing recyclers, and relevant government and industry organizations. A description of how the results of the scenario analysis have informed your business objectives and strategies: By estimating the potential financial impact on your specific business, you were able to provide management with a basis for prioritizing response measures and calculating an appropriate amount to spend. The results of these analyses can be reflected in the next and subsequent mid-term management plans. A case study of how the results of the scenario analysis have directly influenced your business objectives and strategy: In a 4°C world, physical risks from climate change, including extreme weather events, are found to increase. Physical risks will become apparent at our own sites, customer factories, and resource suppliers. Continued dependence on oil will be destabilized by geopolitical risks, and procurement costs are expected to rise. Development of recycling will be delayed, waste issues will not be adequately addressed, and stakeholders may lose confidence in the company.
Transition scenarios: IEA 2DS	Company-wide	<Not Applicable>	How the selected scenarios were identified, with reference to the inputs, assumptions, and analytical methods used: in accordance with the Ministry of Environment guidelines, 2°C scenarios was assumed; for the 2°C scenario, the transition risk manifested from the 2DS. Assuming that manifestations would occur, the impact on the business was analyzed with the involvement of relevant departments such as corporate planning and finance. A description of the time horizons considered and why they are relevant to your company: we have established a long-term time horizon over which the risk factors in each scenario are likely to materialise and identified risks and opportunities to the Group's overall business activities over that period. A description of the areas of your organization that have been considered as part of the scenario analysis: Our business is located in the packaging industry, as we manufacture and sell packaging materials and their attaching machines. The entities that affect our business include upstream energy suppliers and raw material manufacturers, and downstream buyers - customers and consumers - as well as other competitors and new entrants who supply substitute products, end-processing recyclers, and relevant government and industry organizations. A case study of how the results of the scenario analysis have directly influenced your business objectives and strategy: Reducing group-wide GHG emissions is becoming a strategic imperative as additional annual expenditures of between 0.7 and 1. 8 billion yen are expected to be made due to carbon taxes being considered for introduction in many countries in the future. In addition to existing energy reductions, we are also looking at renewable energy-related investments such as solar power generation equipment and offset credits, and the introduction of carbon pricing to promote green investments within the company. In addition to existing energy reduction practices, we have begun discussions on future emission reduction action plans, with an eye to renewable energy-related investments such as solar power generation equipment and offset credits, as well as the introduction of carbon pricing to promote internal green investments.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

As a leading company in the packaging industry, we are committed to the development of people-friendly packaging, environmentally friendly products, sustainable growth, and stable supply as our materiality in order to realize a sustainable society. The current business model uses a large amount of petroleum-derived raw materials and energy, and the challenge is to determine what mitigation measures should be implemented, at what scale, and at what timing, in order to achieve the net zero emissions by 2050.

Results of the climate-related scenario analysis with respect to the focal questions

As a result of the scenario analysis conducted, it was predicted that not only impact factors common to each industry, but also the plastic waste problem and label-less packaging, which are deeply related to the packaging industry, will become more apparent in the future. In particular, it was found that in order to reduce GHG emissions, it is necessary not only to accumulate energy-saving measures, but also to facilitate the reduction of environmental impact by replacing the use of organic solvents with that of aqueous solutions.

Therefore, as a mechanism to promote capital investment to reduce GHG emissions and the introduction of renewable energy, Fuji Seal Japan actually used the internal carbon price as a payback plan in the selection of investment projects for new factories to lower the investment threshold. In the U.S., a procurement price limit (10$/MWh) was set based on the internal carbon price and emission factor to determine the amount of renewable energy to be procured.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	The risks and opportunities associated with "development and/or expansion of low-emission products and services" have a significant impact on the medium- to long-term business strategy to provide systematic solutions: for the purpose of reducing CO2 emissions, thinner shrink labels would reduce the materials used, but it would also weaken the rigidity of the labels, and it would be difficult to apply labels onto containers with conventional labeling machines. To address this issue, our Machinery Division has developed a new machine ("TLS" model) that enables high-speed application, and by combining our thinnest shrink labels with the TLS model, the customers have been able to reduce both CO2 emissions and to improve labeling efficiency at the same time. With a thickness of less than half of conventional labels, our shrink labels can reduce plastic use by about 50%. The reduction in the amount of plastic used by adopting this thinner label in FY2021, both in Japan and overseas, was 4,403 tons. Furthermore, our sales ratio targets for 2025 include 100% environmentally friendly products, 50% renewable design products, and 20% recycled materials.
Supply chain and/or value chain	Yes	The risks and opportunities associated with "development and/or expansion of low-emission products and services" have a significant impact on medium- and long-term business strategies in terms of our product, technology and business development policies. Up until now, FSG has grown by adopting its own in-house development policy in order to respond quickly to customer requests; however, as the impact of its products on society has increased, there have been cases where FSG has not always met all the demands from all the stakeholders. By changing the way we think and actively working in collaboration with other companies, we have been able to develop products that we could not achieve before. For example, RecShrinkTM, developed by our US subsidiary American Fuji Seal, Inc. was commercialized in 2019 in collaboration with the customer Nestle, the supplier Eastman, and the recycler organization APR. The developed shrink labels are recognized as a new material that can be recycled along with plastic bottle containers, and have been adopted by many customers, including global dairy and beverage manufacturers. These efforts have not only been published in the company's environmental report, but have also been featured in the industry's Packaging Digest, which has attracted a great deal of attention and led to further sales increases.The adoption of Recshrink has expanded to 25 products from 8 companies, including products from major beverage manufacturers, and we are aiming for 20% in the Americas, 10% in Europe, and 5% in ASEAN as products for beverage PET. In addition, we have conducted a supplier survey and asked suppliers to comply with our action policy, which requires calculation of the three Scope 3 categories, respect for human rights, and continuation of environmental impact reduction activities. We are deepening our engagement with suppliers by holding dialogues with them based on the results of these surveys.
Investment in R&D	Yes	The risks and opportunities associated with "entering new markets" have a significant impact on medium- and long-term business strategies to invest in research and development of products that can reduce their environmental impact. Increasing concerns about climate change enlarge the demand for environmentally friendly products, not only for functions such as the display of legal information and eye-catching decorations for customers, but also for the use of recycled and biomass-derived raw materials as well as reduced raw materials for sustainable circular sourcing. In order to respond to these market demands in a timely manner, FSG now requires to incorporate the latest environmentally friendly technologies in all global development projects. As a result of this policy, the percentage of sales accounted for by environmentally friendly products has increased year after year, from 41% in FY2020 to over 65% in FY2021. In response, in 2020 the company set new 2025 targets for renewable design and the use of recycled materials, and is aggressively investing in research and development. The company has created 8 new global development projects that integrate packaging and machinery development, bringing the total to 13 projects for the three-year period 2020-2022, compared to a target of 20 projects.
Operations	Yes	The risks and opportunities related to the use of more efficient production and logistics processes have a significant impact on the Fuji Seal Group's medium-term business strategy of reducing the environmental impact of manufacturing. Conventional environmental protection policies such as pollution prevention are not enough; we must set and achieve specific targets for energy use, CO2 emissions, and waste emissions in order to reduce the impact of our manufacturing processes, materials, products, and waste on the earth. More specifically, in order to achieve the 2050 net-zero target, Fuji Seal Group is constructing a new plant that is friendly to people and the environment, and is making capital investments (10.5 billion yen in 2021) aimed at reducing environmental impact through the use of renewable energy such as solar power generation and REC certificates, as well as the introduction of water-based printing technology. The Group is also making capital investments (¥10.5 billion in 2021) to reduce its environmental impact by introducing water-based printing technology.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Indirect costs Access to capital	Access to capital:With more ESG-focused investments now than ever before, we have incorporated ESG investment into our financial plans in order to ensure that investors will hold our stock shares for longer periods of time from the medium to long term. From an ESG perspective our focus has mainly been on to products launch that meet customer needs, but now more on collaboration with our customers, suppliers, recyclers and other supply chain partners (e.g., Nestle/Eastman/APR for the development of RecShrinkTM). In order for our multi-stakeholders to understand such activities, we are actively disclosing non-financial information through integrated reports and environmental reports. Direct costs: we incorporate climate change-related risks and opportunities into our financial planning and report the results as part of our annual report. Opportunities to reduce operating costs related to sustainability have had a very positive impact on our financial planning. Increased awareness and consideration of our environmental impact has enabled us to reduce our operating costs by using energy-efficient technologies, processes and building materials to reduce our resource consumption. Indirect costs: We recognize that environmental issues are common to all humanity, and we continue to be creative and to challenge ourselves to manufacture products with environmental aspects in mind. In addition to reducing our environmental impact, we aim to develop and produce environmentally friendly products and solve environmental problems through our business activities. We also aim to contribute positively to society with people-friendly packaging, and to this end we faciitate investment in R&D and the development of human resources to encourage them to do so. In particular, we are focusing on strengthening research and development of low-carbon emission products and services and introducing equipment to reduce GHG emissions. In 2021, R&D expenditures will reach over 2.5 billion yen and energy-saving related capital investment over 2 billion yen, and we are increasing these expenditure plans every year. In addition, to achieve 100% environmentally friendly products by 2025, we plan to invest 47.5 billion yen from 2021 to 2023 in our mid-term management plan.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Year target was set
2019

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Market-based

Scope 3 category(ies)
<Not Applicable>

Intensity metric
Metric tons CO2e per unit revenue

Base year
2017

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
0.3067

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
0.6017

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
0.9084

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
<Not Applicable>

% of total base year emissions in all selected Scopes covered by this intensity figure
100

Target year
2023

Targeted reduction from base year (%)
6

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]
0.853896

% change anticipated in absolute Scope 1+2 emissions
24

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
0.3287

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
0.6091

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
0.9378

% of target achieved relative to base year [auto-calculated]
-53.9409951563188

Target status in reporting year
Underway

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions
We have set a target of reducing CO2 emissions per unit of production by 6% over 6 years at all of our sites without any exclusion, including our group companies, based

on the target of rationalization of energy use required by the Act on the Rational Use of Energy, etc., with fiscal 2017 as the base year. The unit of sales for the calculation of basic unit is million yen.

Plan for achieving target, and progress made to the end of the reporting year

In FY 2019, we were able to reduce CO2 emissions by a total of 8,294 tons in all regions compared to FY 2017, and we were also able to reduce CO2 emissions per unit of production by 5.7% compared to FY 2017. However, in FY2020-FY2021, unit CO2 emissions increased by 3.2% compared to FY17, partly due to the impact of Corona. Although each region individually reduced emissions by more than 10% per unit, the FY2020 boundary change increased the contribution of regions with higher intensity, resulting in the increase in total.

We have also set a new 2050 net-zero target and plan to raise the target step by step to achieve it, and we will continue to implement these and other reduction activities to achieve the 2050 target.

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Net-zero target(s)

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number
Oth 2

Year target was set
2020

Target coverage
Company-wide

Target type: absolute or intensity
Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management	metric tons of waste generated

Target denominator (intensity targets only)
unit revenue

Base year
2017

Figure or percentage in base year
33.29

Target year
2025

Figure or percentage in target year
29.96

Figure or percentage in reporting year
42.71

% of target achieved relative to base year [auto-calculated]
-282.882882882883

Target status in reporting year
Underway

Is this target part of an emissions target?
No, this target is not part of an emissions target

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions
The scope of the program covers all sites of Fuji Seal Group.
Four types of waste are designated as target: waste plastic, waste ink, waste solvent, and paper waste. A new target has been set for 2020, which is to reduce the amount of waste that is not used effectively by 10% per unit of sales by FY2025, compared to FY17.
The goal is to contribute to the realization of a sustainable society by reducing land-fill waste and other waste that is not used effectively.

Plan for achieving target, and progress made to the end of the reporting year
The company worked to improve the recycling rate by exploring the option to reuse current landfill waste and also by sorting it into many categories. The results for FY2021 were up 42% from FY17, failing to achieve the target.
The reason is that the increase in landfill waste increased more than the increase in sales in the U.S., resulting in a large increase in global intensity.

List the actions which contributed most to achieving this target
<Not Applicable>

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Int1

Target year for achieving net zero
2050

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions
The scope of the program covers all regions of Fuji Seal Group. We regard climate change as one of the most important environmental issues and have established mid-term targets (described in INT1) for the entire company. We are currently beginning to formulate a concrete low-carbon transition plan, with the ultimate goal of achieving virtually zero GHG emissions by 2050.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Unsure

Planned milestones and/or near-term investments for neutralization at target year
<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	19	168.8
Implementation commenced*	0	0
Implemented*	3	522.4
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
376.71

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
18422400

Investment required (unit currency – as specified in C0.4)
36800000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
The replacement of older equipment with newer models has improved energy efficiency and reduced usage, resulting in lower CO2 emissions. Specifically, two new magnetic-bearing chillers were installed at the Thailand plants. This has resulted in a significant reduction in electricity consumption, which in turn has reduced energy use.

Initiative category & Initiative type

Energy efficiency in production processes	Smart control system

Estimated annual CO2e savings (metric tonnes CO2e)
131.31

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
4785402

Investment required (unit currency – as specified in C0.4)
28691000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment
Modification of the VOC gas supply header of the VOC combustion equipment has improved combustion efficiency and reduced the amount of city gas used to raise the temperature, thereby reducing CO2 emissions. Until now, VOCs emitted from printing presses were incinerated by combustion equipment using a fixed supply route to each VOC combustion equipment. By combining the supply routes, it has become easier to control the concentration of VOCs, and combustion can be controlled more efficiently.

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
58.34

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2633935

Investment required (unit currency – as specified in C0.4)
46967385

Payback period
16-20 years

Estimated lifetime of the initiative
16-20 years

Comment
Through ingenuity in the design of the printing equipment, it was possible to lower the air volume required for drying, and by improving the insulation performance of the drying box, electricity consumption was reduced.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal incentives/recognition programs	Ideas specific on energy-saving have been awarded according to management evaluation results
Dedicated budget for low-carbon product R&D	Development of new markets by providing solutions to climate change-related issues is considered as one of our beneficial opportunities. In fiscal 2021, our R & D expenses reached 2.5 billion yen where environmental friendly products were researched and developed in all international projects.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other	Other, please specify (The industry's thinnest shrink label and a machine)

Description of product(s) or service(s)
We have simultaneously developed the industry's thinnest shrink label and a machine (product name: TLS) that attaches the label to the container at high speed and heat-shrinks it, and offer it as a system. The thickness of the label is less than half that of the average conventional label, which reduces the amount of plastic used by about 50%, thus making a significant contribution to the reduction of CO2 emissions when disposed of by the consumer.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
Yes

Methodology used to calculate avoided emissions
Guidelines for Assessing the Contribution of Products to Avoided Greenhouse Gas Emissions (ILCA)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
Cradle-to-gate

Functional unit used
Usage and disposal of film (resin)

Reference product/service or baseline scenario used
Shrink labels with the thickness that have been sold most

Life cycle stage(s) covered for the reference product/service or baseline scenario
Cradle-to-gate

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
3.52

Explain your calculation of avoided emissions, including any assumptions
Since the thickness of the film is reduced by 50% compared to normal film, the amount of resin used per unit area is also reduced by 50%. Based on this scenario, we have estimated the contribution to CO emission coefficients using publicly available secondary data for both scenarios. Emission factors are taken from the Chemical Economics Research Institute/Research Report on Energy Analysis of Basic Materials, September 1993. As additional energy due to film production, 0.5 kg-CO2eq/kg is added to the reference figure for PET resin for bottles.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
2.94

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
Yes, a divestment

Name of organization(s) acquired, divested from, or merged with
PAGO AG

Details of structural change(s), including completion dates
We have transferred the pressure sensitive label (PSL) business and real estate owned by our consolidated subsidiary, PAGO AG for the purpose of reviewing our business portfolio. The transactions were completed on 21st September for the business transfer and 1st October for the real estate transfer, respectively

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	There is a change regarding the scope of accounting: two of our plants in Indonesia and Switzerland were excluded from the scope of accounting in FY2021 due to their closure. In addition, the two sites in Tokyo were consolidated into one after the relocation.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the impact does not meet our significance threshold	The scope of calculation for FY2021 is excluded because we closed our two plants in Indonesia and Switzerland. The impact of the closure of our Indonesia plant in FY2017 was not included in the base year because it was outside the scope of the calculation, and the Swiss plant was not recalculated because its contribution to the company-wide emissions was 0.06%, which is very small and does not meet our materiality threshold. Therefore, the recalculation is not performed.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
45186

Comment
CO2 emission in fisical 2017

Scope 2 (location-based)

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
92993

Comment
CO2 emission in fisical 2017

Scope 2 (market-based)

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
87332

Comment
The data for Germany, France, Poland, the Netherlands and Vietnam use location-based emission factors.

Scope 3 category 1: Purchased goods and services

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
437656

Comment

Scope 3 category 2: Capital goods

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
21496

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
12171

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
We will set up a system to calculate this category in Scope3 from next year.

Scope 3 category 5: Waste generated in operations

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
1953

Comment

Scope 3 category 6: Business travel

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
584

Comment

Scope 3 category 7: Employee commuting

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
1953

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Upstream leased assets include office equipment (copiers and PCs) under lease agreements, but emissions from their electricity consumption are not included in this category because they are included in Scope 1 and 2.

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
We will set up a system to calculate this category in Scope3 from next year.

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
Shrink labels would require further processes at customer site; therefore, they can be regarded as intermediate products for this category, but they are not included because they are accounted for category 11.

Scope 3 category 11: Use of sold products

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
225750

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
81184

Comment

Scope 3 category 13: Downstream leased assets

Base year start
April 1 2017

Base year end
March 31 2018

Base year emissions (metric tons CO2e)
533

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
We do not have any form of franchise in our business.

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment
We do not conduct project financing or investment with stock or security.

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superceded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

89039

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

CO2 emission in fisical 2021

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

With regard to market-based emission calculations, location-based emission factors are used for the calculation in Germany, France, the Netherlands, Italy ,Vietnam, and Thailand as their market-based emission factors were not available on time.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
123112

Scope 2, market-based (if applicable)
108286

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
With regard to market-based emission calculations, location-based emission factors are used for the data in Germany, France, the Netherlands, Italy ,Vietnam, and Thailand as the market-based emission factors were not available on time.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source
Sales offices in US, Europe, ASEAN and India where independent from production factories.

Relevance of Scope 1 emissions from this source
Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source
Emissions are not relevant

Relevance of market-based Scope 2 emissions from this source (if applicable)
Emissions are not relevant

Explain why this source is excluded
We have excluded sales offices in US, Europe, ASEAN, and India (independent from production factories) because they employ fewer than 10 people in their offices with negligible CO2 emissions.

Estimated percentage of total Scope 1+2 emissions this excluded source represents
0

Explain how you estimated the percentage of emissions this excluded source represents
The average CO2 emissions per employee were calculated using the emissions from the offices accounted, and multiplied by the number of employees in the offices excluded. The total CO2 emissions excluded is 0.03% but "0" was entered because it was too small.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
537625

Emissions calculation methodology
Supplier-specific method
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
25

Please explain
CO2 emissions by products and servicies are calculated from the CO2 emissions from our major suppliers using our own supplier questionnaire, and the results are classified as Category 1.

Capital goods

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
22726

Emissions calculation methodology
Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
CO2 emissions are calculated by the amount of fixed assets obtained by each group company during the fiscal year from the fixed asset increase/decrease table at the beginning and end of each fiscal year, and by emission intensity provided in the database from The Ministry of the Environment ("Emissions intensity database for calculating the greenhouse gas emissions of an organization through its supply chain (Ver. 3.0)")

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
15821

Emissions calculation methodology
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We calculate Category 3 emissions based on the amount of fuel used by each Group company in Scope 1 and the amount of electricity used in Scope 2 for each fiscal year with emission intensity from the IDEA database.

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We will set up a system to calculate this category in Scope3 from next year.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
24985

Emissions calculation methodology
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
We have asked waste disposal companies to identify the final treatment method of waste discharged from each plant, and use emission factors to calculate the weight of each treatment method.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
768

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Since it is difficult to calculate based on the number of business trip days in the global standard, we use the estimated emission intensity based on the number of employees.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2435

Emissions calculation methodology
Average data method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Calculations are based on Basic Guidelines by The Ministry of the Environment, using the number of employees x emissions intensity by work type and city size.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Upstream leased assets include office equipment (copiers and PCs) under lease agreements, but emissions from their electricity consumption are not included in this category because they are included in Scope 1 and 2.

Downstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We will set up a system to calculate this category in Scope3 from next year.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Shrink labels would require further processes at customer site; therefore, they can be regarded as intermediate products for this category, but they are not included because they are accounted for category 11.

Use of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
206260

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Lifetime CO2 emissions are estimated for each model based on catalog data and expected service years from the machinery department.

End of life treatment of sold products

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
94989

Emissions calculation methodology
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0.2

Please explain
Calculation was made based on the amount of products shipped, subtracting the use of non-CO2 emitting products such as plant-derived materials. The emission intensity of incineration was used to avoid underestimation of CO2 emissions.

Downstream leased assets

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
829

Emissions calculation methodology
Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Please explain
Annual CO2 emissions for each model were estimated from catalog data and the number of labelers leased, as provided by the machinery department.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have any form of franchise in our business.

Investments

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not conduct project financing or investment with stock or security.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not consider any other forms of emissions in Scope 3.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not consider any other forms of emissions in Scope 3.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.00000111

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
197325

Metric denominator
unit total revenue

Metric denominator: Unit total
177783138398

Scope 2 figure used
Market-based

% change from previous year
1.53

Direction of change
Increased

Reason for change
In FY 2019, we were able to reduce CO2 emissions by a total of 8,294 tons in all regions compared to FY 2017, and we were also able to reduce CO2 emissions per unit of production by 5.7% compared to FY 2017. However, in FY2020 and FY2021, due in part to the impact of Corona pandemic, the basic unit increased by 3.4% compared to FY17. Although each region individually achieved a reduction of 10% or more per unit of production, the total increased.
We have also set a new target of net zero emissions by 2050 and plan to set the targets step wise so that each target will be met.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	83598	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	5441	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Japan	26537
US, Latin America and Caribbean (USLAC)	33798
Europe	18532
Other, please specify (ASEAN)	10172

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By facility

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Nabari factory	8648	34.649673	136.102592
Tukuba factory	15304	36.013611	140.245988
Yuki factory	2216	36.275294	139.86695
Yamagata factory	316	38.384513	140.255367
S×S Center (Technical Center)	46	34.736669	135.423824
Nara factory	2	34.546198	135.80233
Bardstown factory	22036	37.824895	-85.430142
UK factory	3046	51.36532	0.571919
Poland factory	12663	52.221972	19.428832
France factory	2307	47.875583	6.391704
Germany factory	300	48.630235	9.229911
Vietnam factory	768	11.107112	106.697588
Netherland office	187	51.451123	5.795653
Indiana factory	262	38.375989	-85.682223
Mexico factory	11501	20.786993	-101.335652
Sapporo office	4	43.05818	141.347658
Sinsakhon Factory	1480	13.550893	100.340123
Bangpoo Factory	7903	13.536454	100.623406
Samutprakarn Factory	22	13.564156	100.777379
Italy factory	29	45.170202	10.673188
Ube factory	0	34.044394	131.312628

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Japan	22633	19971
Europe	22291	16481
US, Latin America and Caribbean (USLAC)	52374	46021
Other, please specify (ASEAN)	25813	25813

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Nabari factory	5461	4206
Tukuba factory	9725	8828
Yuki factory	2342	2126
Nara factory	592	460
Yamagata factory	1167	921
Ube factory	2796	2985
S×S Center（Technical Center）	352	277
Osaka office	118	85
Tokyo office	45	35
DDC（Design Center）	29	26
Nagoya office	5	4
Kyushuu office	4	4
Sapporo office	2	2
Bardstown factory	39147	35340
UK factory	2380	1925
Poland factory	18419	13063
France factory	126	126
Germany factory	1029	1029
Vietnam factory	6512	6512
Netherland office	310	310
Indiana factory	3628	1638
Mexico factory	9599	9043
Sinsakhon Factory	6006	6006
Bangpoo Factory	13272	13272
Samutprakarn Factory	24	24
Italy factory	28	28
(New) Tokyo office	38	9
Matsudo office	0	0
Kakegawa office	3	2

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	9	Increased	0.005	We are using renewable energy from solar power generation at our plant in Germany. In addition, renewable energy has been increasing since FY2021 with the new use of building air conditioning using steam generated by hydroelectric power. The amount of energy used is 9 t-CO2eq, so the ratio of emissions is calculated as follows. 9 ÷ 197325 × 100 = 0.005 %.
Other emissions reduction activities	522.4	Decreased	0.26	The total reduction of the implemented and under implementation through emission reduction activities described in C4.3b was 522.4 t-CO2. In previous year, the GHG emission was 197325 t-CO2. 522.4 ÷ 197325 × 100 = 0.24 %
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary	478	Decreased	0.24	Emissions have decreased due to the closure of the Indonesia and Switzerland plants in 2021.
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 5% but less than or equal to 10%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	283787	283787
Consumption of purchased or acquired electricity	<Not Applicable>	81	194419	194500
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	0	42	42
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	81	478248	478329

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No sustainable biomass is used

Other biomass

Heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No biomass is used

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No other sustainable fuels are used

Coal

Heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
No coal is used

Oil

Heating value
HHV

Total fuel MWh consumed by the organization
2622

MWh fuel consumed for self-generation of electricity
15

MWh fuel consumed for self-generation of heat
1240

MWh fuel consumed for self-generation of steam
1367

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Gasoline, diesel, kerosene, and heavy oil are included.

Gas

Heating value
HHV

Total fuel MWh consumed by the organization
209734

MWh fuel consumed for self-generation of electricity
14841

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
194893

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Natural gas, LPG and city gas are included.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
71431

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
71431

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment
Volatile organic compounds (VOCs) from printing presses are included.

Total fuel

Heating value
HHV

Total fuel MWh consumed by the organization
283787

MWh fuel consumed for self-generation of electricity
14856

MWh fuel consumed for self-generation of heat
72671

MWh fuel consumed for self-generation of steam
196260

MWh fuel consumed for self-generation of cooling
0

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	14877	14856	21	21
Heat	72671	72671	0	0
Steam	196260	196260	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method
Default delivered electricity from the grid (e.g. standard product offering by an energy supplier), supported by energy attribute certificates

Energy carrier
Electricity

Low-carbon technology type
Hydropower (capacity unknown)

Country/area of low-carbon energy consumption
Japan

Tracking instrument used
Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
60

Country/area of origin (generation) of the low-carbon energy or energy attribute
Japan

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment
We purchase cold and hot water derived from hydroelectric power generation at our Tokyo office. This is used to regulate room temperatures in the building.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Japan

Consumption of electricity (MWh)
46404

Consumption of heat, steam, and cooling (MWh)
104226

Total non-fuel energy consumption (MWh) [Auto-calculated]
150630

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
United States of America

Consumption of electricity (MWh)
51543

Consumption of heat, steam, and cooling (MWh)
74738

Total non-fuel energy consumption (MWh) [Auto-calculated]
126281

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Mexico

Consumption of electricity (MWh)
21378

Consumption of heat, steam, and cooling (MWh)
16757

Total non-fuel energy consumption (MWh) [Auto-calculated]
38135

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Germany

Consumption of electricity (MWh)
2215

Consumption of heat, steam, and cooling (MWh)
1230

Total non-fuel energy consumption (MWh) [Auto-calculated]
3445

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Italy

Consumption of electricity (MWh)
85

Consumption of heat, steam, and cooling (MWh)
137

Total non-fuel energy consumption (MWh) [Auto-calculated]
222

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
France

Consumption of electricity (MWh)
2685

Consumption of heat, steam, and cooling (MWh)
6703

Total non-fuel energy consumption (MWh) [Auto-calculated]
9388

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)
8406

Consumption of heat, steam, and cooling (MWh)
8612

Total non-fuel energy consumption (MWh) [Auto-calculated]
17018

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Poland

Consumption of electricity (MWh)
21772

Consumption of heat, steam, and cooling (MWh)
44248

Total non-fuel energy consumption (MWh) [Auto-calculated]
66020

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Netherlands

Consumption of electricity (MWh)
678

Consumption of heat, steam, and cooling (MWh)
1017

Total non-fuel energy consumption (MWh) [Auto-calculated]
1695

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Viet Nam

Consumption of electricity (MWh)
7132

Consumption of heat, steam, and cooling (MWh)
3608

Total non-fuel energy consumption (MWh) [Auto-calculated]
10740

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

Country/area
Thailand

Consumption of electricity (MWh)
32244

Consumption of heat, steam, and cooling (MWh)
22511

Total non-fuel energy consumption (MWh) [Auto-calculated]
54755

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Verification Opinion.pdf

Page/ section reference
Page 1 to 2: A letter of opinion from SGS regarding emission verification is attached.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
66

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Verification Opinion.pdf

Page/ section reference
Page 1 to 2: A letter of opinion from SGS regarding emission verification is attached.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Verification Opinion.pdf

Page/ section reference
Page 1 to 2: A letter of opinion from SGS regarding emission verification is attached.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
Verification Opinion.pdf

Page/section reference
Page 1 to 2: A letter of opinion from SGS regarding emission verification is attached.

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISO14064-3	Energy consumption data in C8 were verified. The verification was conducted annually and the scope of verification was the same as for GHG emissions. Verification Opinion.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
Japan carbon tax

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Japan carbon tax

Period start date
April 1 2021

Period end date
March 31 2022

% of total Scope 1 emissions covered by tax
28

Total cost of tax paid
7239450

Comment
Global Warming Tax (formerly oil and coal tax) is JPY289/t-CO2e in 2021.Among Scope 1 emissions in Japan, the tax is levied on the energy-origin portion, 25,050 tons in 2021. Therefore, 25,050 x 289 = JPY7,239,450 was paid.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

We have set a goal of 6% reduction per unit of sales for GHG emissions Scope 1 + 2 by FY2023, and are promoting reduction activities with the ultimate goal of achieving net zero emissions by 2050. Specifically, in addition to the continuous introduction and renewal of energy-saving equipment, we are soliciting internal applications and implementing them while utilizing an award system in order to stimulate energy-saving activities at the employee level within the company. In addition, since an analysis of the breakdown of emissions within the Group shows that emissions in the U.S. are significant, we have begun procuring renewable energy certificates at the Bardstown plant in the U.S. from FY2022, which will reduce emissions by 10% per year.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price
Navigate GHG regulations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment

GHG Scope
Scope 1
Scope 2

Application
All consolidated subsidiaries of Fuji Seal Group are covered.

Actual price(s) used (Currency /metric ton)
14300

Variance of price(s) used
A uniform price will be set for all regions, and the price will be reviewed according to social conditions as well as company performance.

Type of internal carbon price
Shadow price
Implicit price

Impact & implication
In the U.S., electricity consumption is large and the emission coefficient is also large, so the introduction of renewable energy is expected to have a significant effect. We made a contract to purchase renewable energy certificates through an electric power company, in which the maximum procurement amount was set from the targeted CO2 reduction and the internal carbon price. In addition, in the case of Japan, the company has lowered the investment decision criteria based on the internal carbon price for equipment at a new model plant being built, thereby promoting energy-saving and cost-saving capital investment. In addition, existing plants in all regions have started planning the procurement of renewable electricity based on the internal carbon price and allocated CO2 reduction targets.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our suppliers
Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Innovation & collaboration (changing markets)

Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services

% of suppliers by number
100

% total procurement spend (direct and indirect)
100

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
In order to reduce CO2 emissions, we are working on the development of new materials and products in cooperation with suppliers who can reduce environmental impacts. Specifically, we are working more actively with film and ink manufacturers for shrink labels, pressure sensitive labels and spouted pouches to develop new environmentally friendly products. In addition, we are also working to reduce the environmental impact of secondary materials because the market is demanding that we should reduce the environmental impact of our products as a whole. This is why we are collaborating with all of our suppliers.

Impact of engagement, including measures of success
We expect synergetic collaborations with multi-stakeholders to result in CO2 emission reduction in Scope 3. We define a success of collaboration as a realization of specifications that meet target customer's requirements in a timely manner. For example, one of our target markets, beverage manufacturers, demanded a high-speed application machine for thinner flexible labels to achieve CO2 reduction as high as 50% in total. Such high expectations had not been met until we launched the product combination where the thinnest shrink labels in the packaging industry (co-developed with film suppliers) are applied onto beverage containers at higher speeds by our newly developed machines (product name: TLS). With less than half the thickness of conventional labels, both total plastic usage and CO2 emissions can be reduced by 50%, with satisfying customer production demands at the same time. Our combinatorial solution has reduced total plastic usage by 4,403 tons of CO2 in fiscal 2021 both domestically and internationally.
The shrink labels and application machines are being deployed mainly in Japan, where a large quantity of our labels are supplied to the beverage industry, and sales turnover of the labels and application machines increases each year in recognition of our contribution to CO2 reduction.

Comment

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
71

% total procurement spend (direct and indirect)
70

% of supplier-related Scope 3 emissions as reported in C6.5
59

Rationale for the coverage of your engagement
In order to reduce our CO2 emissions, we conduct an annual supplier survey on our collaboration with suppliers to determine their CO2 emissions and use of plant-based materials. The percentage of our Scope 3 emissions from products and services purchased from suppliers is 66%, which is the highest category in our Scope 3 emissions.

Impact of engagement, including measures of success
As a measure of success, we set a target of 80% or more as the response rate to the supplier questionnaire, which quantitatively indicates the level of engagement. We started with 10 main suppliers in FY2020 and expanded the scope to over 400 suppliers in FY2021. This resulted in a 71% response rate for the number of suppliers. Based on the response results, in cases where there are violations or potential problems regarding mandatory/important items such as ethics, legal obligations, compliance, and the use of conflict minerals, we initiate direct contact to confirm the current status and promote improvements through guidance. The ultimate goal is to reduce Scope 3 emissions and environmental impact by deepening this engagement.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
0

Please explain the rationale for selecting this group of customers and scope of engagement
22.8% of our Scope 3 emissions come from the use of our products at the customer's sites, with shrink tunnels using steam contributing the largest percentage. For this reason, we are developing energy-efficient production machinery, including shrink tunnels that can reduce the amount of steam needed to finish shrink labeling. Therefore, 100% of our customers are targeted for energy reductions under the scope of this collaboration.

Impact of engagement, including measures of success
Since these collaborations are expected to result in a reduction of CO2 emissions in Scope 3, the measure of success is the amount of CO2 reduction.
Specific target values are still under consideration, but the goal is to reduce Scope 3 emissions through design and operational innovations, such as reducing steam usage through improved insulation and efficient heat utilization while meeting customer requirements for even higher speeds and better overall performance.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement
Waste reduction and material circularity

Description of this climate related requirement
In order to continue to be "a company that contributes to the realization of a sustainable society," Fuji Seal Group has proposed a pledge (Group Supplier Conduct Policy) to its suppliers in conducting business activities based on the FSG Code of Ethics, and requests that all suppliers understand and agree with the purpose of this policy and comply with it.
Specifically, we require our suppliers to contribute to energy and resource conservation, compliance with laws and regulations, reduction of greenhouse gas emissions, and development of low-carbon materials.

% suppliers by procurement spend that have to comply with this climate-related requirement
80

% suppliers by procurement spend in compliance with this climate-related requirement
60

Mechanisms for monitoring compliance with this climate-related requirement
Certification
Supplier self-assessment
First-party verification

Response to supplier non-compliance with this climate-related requirement
Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate
Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?
No, but we plan to have one in the next two years

Attach commitment or position statement(s)
<Not Applicable>

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy
The Group Sustainability Committee has been established to promote and support sustainability management at FSG.
At its monthly meetings, the Group Sustainability Committee decides on its structure and action plans, deliberates on internal policies and regulations, and compiles disclosed information. The committee members work with the secretariat and the divisions in charge of corporate planning, human resources, legal affairs, environment, safety and disaster prevention, and procurement to promote and execute sustainability activities.
In addition, important sustainability-related matters, such as the approval of policies and regulations and the setting and disclosure of important targets, are reported and discussed at the Board of Directors meetings, and decisions are made after discussion.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Other, please specify (Plastic Packaging Recycling Council)

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
The Council for Promotion of Recycling of Plastic Containers and Packaging is a business association whose members are specified business associations and companies that promote the 3Rs of plastic containers and packaging. Fuji Seal is promoting various 3R and environmentally friendly designs such as refillable pouches and shrink mounts with brand owners, and is working together with the Council and other companies in the industry to build a rational recycling system for plastic packaging and to promote the 3Rs. The CIPP endorses the "COOL CHOICE" initiative sponsored by the Ministry of the Environment and disseminates it widely. "COOL CHOICE" is a new national movement that will continue until 2030, and is an effort to make "smart choices" that contribute to the fight against global warming, such as replacing products, using services, and choosing lifestyles that contribute to the creation of a decarbonized society.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding
<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports

Status
Complete

Attach the document
有価証券報告書.pdf

Page/Section reference
P11-14 : Management Policy, Operating Environment, Tasks and Targets to Address, Risks and Opportunities
P21 : Research and development and reduction of CO2 emissions related to the environment

Content elements
Governance
Strategy
Risks & opportunities
Emission targets

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	No, but we plan to have both within the next two years	<Not Applicable>	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments only	Other, please specify ("2. Protection of Biodiversity" within Basic Environmental Policy at Fuji Seal Group)	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years	<Not Applicable>

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Please select

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
No publications	<Not Applicable>	<Not Applicable>

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Director, Chairman and CEO	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	170321000000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member
KAO Corporation

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
4627.8

Uncertainty (±%)
20

Major sources of emissions
Combustion treatment of VOCs generated in production lines such as printing presses when manufacturing shrink labels, pressure-sensitive labels, and pouches.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
11425291993

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the production plants, and the total emission is certified through a third-party verification. The majority of Kao's sales are in Japan, and the largest Scope 1 emission source in Japan is the combustion treatment of VOCs generated in the printing process. Since this calculation is based on the ratio of sales turnover for Kao to the sales of the entire company, it does not take into account the specificity of the products themselves.

Requesting member
KAO Corporation

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
6932.6

Uncertainty (±%)
20

Major sources of emissions
Electricity consumption at production lines such as printing presses when manufacturing shrink labels, pressure-sensitive labels, and pouches.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
11425291993

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the production plants, and the total emission is certified through a third-party verification. The majority of Kao's sales are in Japan, and the largest Scope 2 emission source in Japan is electricity consumption at production lines. Since this calculation is based on the ratio of sales turnover for Kao to the sales of the entire company, it does not take into account the specificity of the products themselves.

Requesting member
Beiersdorf AG

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
297.5

Uncertainty (±%)
20

Major sources of emissions
Natural gas used for production lines such as printing presses in the manufacture of shrink labels, pressure-sensitive labels, and pouches.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
734406453

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the factories, and the total emission is certified a by third-party verification. Most BDF products are produced at our Polish factory, and the largest Scope 1 emission source at the Polish factory is natural gas used for production

lines such as the printing process. This calculation is based on the sales turnover for BDF as a percentage of the company's total sales and does not take into account the specificity of the products.

Requesting member
Beiersdorf AG

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
445.6

Uncertainty (±%)
20

Major sources of emissions
Electricity consumption at production lines such as printing presses when manufacturing pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
734406453

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the factories, and the total emission is certified a by third-party verification. Most BDF products are produced at our Polish factory, and the largest Scope 2 emission source at the Polish factory is electricity used for production lines such as the printing process. This calculation is based on the sales turnover for BDF as a percentage of the company's total sales and does not take into account the specificity of the products.

Requesting member
Clorox Company

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
512.1

Uncertainty (±%)
20

Major sources of emissions
Natural gas used for production lines such as printing presses in the manufacture of shrink labels and pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
1264179700

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the factories, and the total emission is certified a by third-party verification. All Clorox products are produced at our US factories, and the largest Scope 1 emission source at the US factories is natural gas used for production lines such as the printing process. This calculation is based on the sales turnover for Clorox as a percentage of the company's total sales and does not take into account the specificity of the products.

Requesting member
Clorox Company

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
767.1

Uncertainty (±%)
20

Major sources of emissions
Electricity consumption at production lines such as printing presses when manufacturing shrink labels and pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
1264179700

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the factories, and the total emission is certified a by third-party verification. All Clorox products are produced at our US factories, and the largest Scope 2 emission source at the US factories is electricity used for production lines such as the printing process. This calculation is based on the sales turnover for Clorox as a percentage of the company's total sales and does not take into account the specificity of the products.

Requesting member
The Coca-Cola Company

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
4028.6

Uncertainty (±%)
20

Major sources of emissions
Combustion treatment of VOCs generated in production lines such as printing presses when manufacturing shrink labels and pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
9945844043

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the production plants, and the total emission is certified through a third-party verification. The majority of sales turnover for The Coca-Cola Company are in Japan, and the largest Scope 1 emission source in Japan is the combustion treatment of VOCs generated in the printing process. Since this calculation is based on the ratio of sales turnover for The Coca-Cola Company to the sales of the entire company, it does not take into account the specificity of the products themselves.

Requesting member
The Coca-Cola Company

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
6034.9

Uncertainty (±%)
20

Major sources of emissions
Electricity consumption at production lines such as printing presses when manufacturing shrink labels and pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
9945844043

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the production plants, and the total emission is certified through a third-party verification. The majority of sales turnover for the Coca-Cola Company are in Japan, and the largest Scope 2 emission source in Japan is electricity consumption at production lines. Since this calculation is based on the ratio of sales turnover for the Coca-Cola Company to the sales of the entire company, it does not take into account the specificity of the products themselves.

Requesting member
Kobayashi Pharmaceutical Co., Ltd.

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
315

Uncertainty (±%)
20

Major sources of emissions
Combustion treatment of VOCs generated in production lines such as printing presses when manufacturing shrink labels and pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
777571563

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the production plants, and the total emission is certified through a third-party verification. The majority of sales turnover for Kobayashi Pharmaceutical Co., Ltd. are in Japan, and the largest Scope 1 emission source in Japan is the combustion treatment of VOCs generated in the printing process. Since this calculation is based on the ratio of sales turnover for Kobayashi Pharmaceutical Co., Ltd. to the sales of the entire company, it does not take into account the specificity of the products themselves.

Requesting member
Kobayashi Pharmaceutical Co., Ltd.

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
471.8

Uncertainty (±%)
20

Major sources of emissions
Electricity consumption at production lines such as printing presses when manufacturing shrink labels and pressure-sensitive labels.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
777571563

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the production plants, and the total emission is certified through a third-party verification. The majority of sales turnover for Kobayashi Pharmaceutical Co., Ltd. are in Japan, and the largest Scope 2 emission source in Japan is electricity consumption at production lines. Since this calculation is based on the ratio of sales turnover forKobayashi Pharmaceutical Co., Ltd. to the sales of the entire company, it does not take into account the specificity of the products themselves.

Requesting member
Sidel

Scope of emissions
Scope 1

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
22

Uncertainty (±%)
20

Major sources of emissions
Natural gas used for air conditioning in the building where the machines are manufactured.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
54257821

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the prouction factories and the total emission has been certified through a third-party verification. All the machines for Sidel are mainly assembled at the Netherlands factory, and the largest Scope 1 emission source at the Netherlands factory is natural gas used for air conditioning the building. This calculation is based on sales turnover for Sidel as a percentage of the company's total sales and does not take into account the specificity of the products themselves.

Requesting member
Sidel

Scope of emissions
Scope 2

Allocation level
Company wide

Allocation level detail
<Not Applicable>

Emissions in metric tonnes of CO2e
32.9

Uncertainty (±%)
20

Major sources of emissions
Electricity consumption at production lines and buildings when assembling machinery.

Verified
No

Allocation method
Allocation based on the market value of products purchased

Market value or quantity of goods/services supplied to the requesting member
54257821

Unit for market value or quantity of goods/services supplied
Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Our company-wide GHG emission calculation excludes the oversea sales offices only, which are independent of the prouction factories and the total emission has been certified through a third-party verification. All the machines for Sidel are mainly assembled at the Netherlands factory, and the largest Scope 2 emission source at the Netherlands factory is electricity used for production lines and buildings when assembling machinery. This calculation is based on sales turnover for Sidel as a percentage of the company's total sales and does not take into account the specificity of the products themselves.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

The emission data and total sales turnover to calculate Scope 1 and Scope 2 data are reported in our integrated report. Please note that we do not disclose sales by customer.

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	The GHG emissions associated with your products were calculated based on customer sales turnover with average CO2 emission intensity. Our total GHG emissions were derived from all disclosed sites that may not be related to your products. We strive to give the best possible answer in our operations, but the data accuracy may not be the best in theory. If greater accuracy is needed, additional resources and capital investment to monitor may be required.

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

Such additional resources and capital investment required for better accuracy may not be justified due to the limited amount of business and expected cost effectiveness.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member
KAO Corporation

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal
Shrink labels, spouted pouches and pressure sensitive labels that promote the 4Rs: reduce, reuse, recycle and renewable
For example
Environmentally friendly inks (e.g. biomass-based and water-based)
-Shrink labels containing recycled materials
-Recyclable shrink labels
-Thinner shrink labels
-Spouted pouches for reusable and replacable containers to reduce material
-New solutions for specific requests

Requesting member
Beiersdorf AG

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal
Shrink labels, spouted pouches and pressure sensitive labels that promote the 4Rs: reduce, reuse, recycle and renewable
For example
Environmentally friendly inks (e.g. biomass- and water-based)
-Shrink labels containing recycled materials
-Recyclable shrink labels
-Spouted pouches for reusable and replacable containers to reduce material usage
-New solutions for specific requests

Requesting member
The Coca-Cola Company

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal
Shrink labels, spouted pouches and pressure sensitive labels that promote the 4Rs: reduce, reuse, recycle and renewable
For example
Environmentally friendly inks (e.g. biomass- and water-based)
-Shrink labels containing recycled materials
-Recyclable shrink labels
-Spouted pouches for reusable and replacable containers to reduce material usage
-New solutions for specific requests

Requesting member
Kobayashi Pharmaceutical Co., Ltd.

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal
Shrink labels, spouted pouches and pressure sensitive labels that promote the 4Rs: reduce, reuse, recycle and renewable
For example
Environmentally friendly inks (e.g. biomass- and water-based)
-Shrink labels containing recycled materials
-Recyclable shrink labels
-Spouted pouches for reusable and replacable containers to reduce material usage
-New solutions for specific requests

Requesting member
Sidel

Group type of project
New product or service

Type of project
New product or service that reduces customers operational emissions

Emissions targeted
Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal
Steam tunnels to finish shrink labels on to containers tend to have higher CO2 emissions among the machines we offered. We have developed a new type of shrink tunnel that uses superheated steam. Since superheated steam has high thermal calories, it can supply the thermal calories required for label shrinking with a small amount of steam. This allows the number of zones to be reduced, resulting in a more compact overall length.
In addition, superheated steam is a high-temperature, dry steam heated to a temperature above the boiling point, which reduces water wetting of the product.

Requesting member
Clorox Company

Group type of project
New product or service

Type of project
New product or service that has a lower upstream emissions footprint

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
Cost/saving neutral

Details of proposal
Shrink labels, spouted pouches and pressure sensitive labels that promote the 4Rs: reduce, reuse, recycle and renewable
For example
Environmentally friendly inks (e.g. biomass- and water-based)
-Shrink labels containing recycled materials
-Recyclable shrink labels
-Spouted pouches for reusable and replacable containers to reduce material usage
-New solutions for specific requests

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
No, I am not providing data

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below
I have read and accept the applicable Terms