

Disclosure Based on the TCFD

According to the IPCC 6th Assessment Report in August 2021, the global median surface temperature has risen by about 1 degree Celsius (1°C) since the preindustrial period due to the increase in greenhouse gases (GHGs) caused by human activities, and that it is unequivocal that human activities have warmed the atmosphere, the ocean and the land.



Climate changes, including global warming, are already having a major impact on the global economy, society, and the environment.

The Tomoku Group also recognizes that reducing GHG emissions, a major factor in global warming, is an urgent challenge for sustainable development, and believes that improving the information based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) is essential for building trusting relationships with our stakeholders.

In May 2022, we expressed our support for the TCFD recommendations, and will actively disclose our initiatives and work to improve corporate value going forward.

1. Governance

The Tomoku Group, considering the response to climate change to be one of our key corporate issues, manages these initiatives within the Sustainability Committee chaired by the President & CEO.

The Committee meets four times a year, with the participation of directors and officers. Under the umbrella of the Committee, the TCFD Disclosure Project Team (PT) has been established as a subordinate organization to address climate change issues.

The TCFD Disclosure PT consists of the directors, officers, and managers of the corrugated container and display carton operations, the housing operations, and the transportation and logistics operations of the Group's major companies.

The Committee deliberates on and approves TCFD Disclosure PT proposals and reports, as well as provides instructions and advice to each division or company in the Group, when it is required.

The Committee reports to the Board of Directors at least once a year on the state of broader sustainability initiatives, including those related to climate change, and the Board of Directors deliberates on and makes resolutions on the progress (Figure 1).



Figure 1 Governance

2. Risk Management

The Tomoku Group has established, developed and operates a comprehensive risk management system overseen by the Financial Risk Committee, the Compliance Committee, and the Sustainability Committee chaired by the President&CEO (Figure 2).

We regularly assess risk across the Group and separately identify high-priority risks within each committee while determining serious risks across the Group, then deliberating on and presenting resolutions to the Board of Directors.

Every Committee manages serious risks, meeting twice a year, even though each of the Group's companies plans and implements countermeasures based on the type of risk.



Figure 2 Risk Management

— Materiality

The Group has selected twelve materiality issues by classifying important issues from the perspective of their impact on all stakeholders and on the Group. We also carry out relative risk assessments, and we will work to resolve these materiality issues through business operations to contribute to a sustainable society (Figure 3).

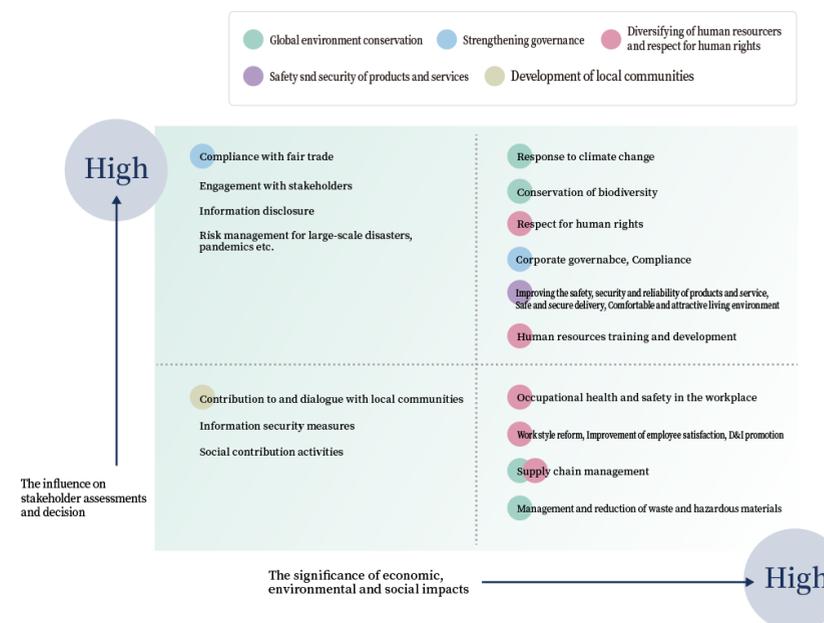


Figure 3 Materiality Issues

3. Strategy

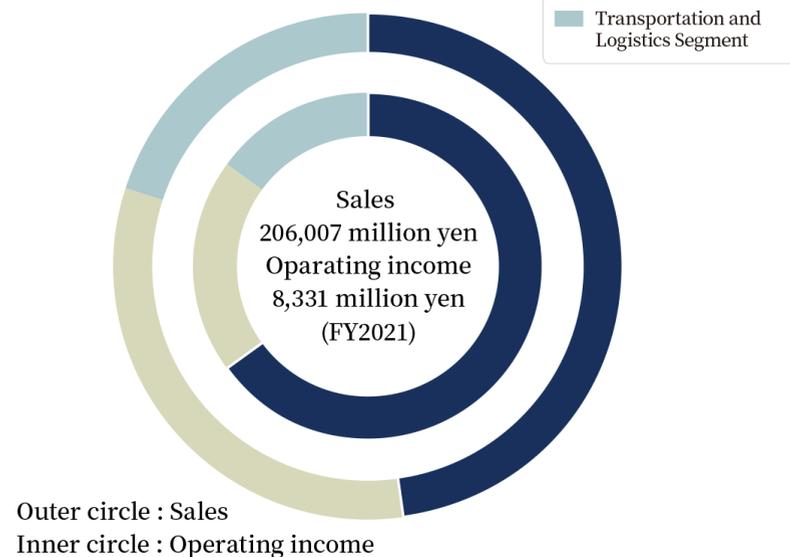
3-1 Selecting Businesses and Scenarios

Using a scenario analysis, the Group identifies the main risks and opportunities related to climate change, then within the Committee assesses their financial impact. For a scenario analysis, we selected the domestic corrugated container and display carton segment (domestic nonconsolidated basis), which has the highest sales and operating income in the Group. Then to measure their impact by 2030 we assess two climate change scenarios: 4°C and the combined 2°C and 1.5°C. We plan to continually improve the accuracy of scenario analyses to expand the range of assessments, such as the housing and transportation and logistics segments. We will also strengthen the resilience of our business for an uncertain future by integrating the results of our analyses into our management strategy.

Business and Reason

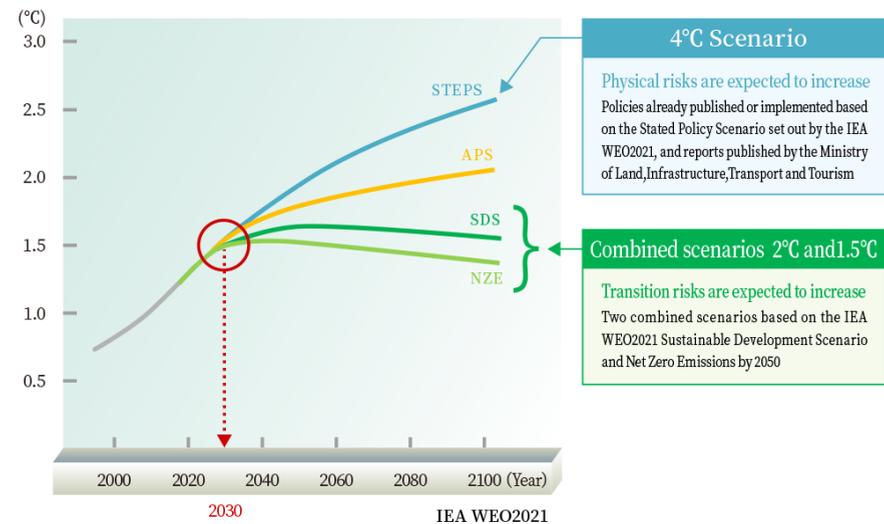
Business	Corrugated container and display carton (domestic nonconsolidated basis)
Reason	Main business of the Group

Sales and Operating Income by Business Segment



Two Future Scenarios

Global median surface temperature rise over time in the WEO-2021 scenarios



STEPS	Stated Policies Scenario (2.4°C ~ 2.8°C)
APS	Announced Pledges Scenario (1.9°C ~ 2.3°C)
SDS	Sustainable Development Scenario (1.4°C ~ 1.7°C)
NZE	Net Zero Emissions by 2050 (1.3°C ~ 1.5°C)

3-2 Risks, Opportunities, and Initiatives

We started by identifying the expected risks and opportunities. We then summarized the most significant risks and opportunities by ranking them into three levels: low, medium and high.

We selected the 1.5°C scenario (partially combined with the 2°C scenario) that is expected to have a significant impact on transition risks, and the 4°C scenario for physical risks. We are committed to continue our current initiatives to minimize environmental impact, as shown in Table 1.

Table 1 Risks, Opportunities, and Initiatives

Expected Risks				Expected Financial Impact		Assessment		Initiatives
Classification Large	Classification Medium	Classification Small	Timeline	Risks	Opportunities	Risks	Opportunities	
Transition	Policy regulation	Carbon taxes	Medium to long term	Spending(carbon emission costs) increase due to the introduction of carbon taxes	—	High	—	Promotion of the following initiatives: *Shift to renewable energy sources for all electricity used in operations *Convert boiler fuel from heavy oil to gas *Increased use of the battery powered forklifts *Shift to LED lighting
		Restrictions on using fossil fuels	Medium to long term	Cost of production or additional equipment increases due to higher fossil fuel prices, such as heavy fuel oil for boilers	—	High	Medium	
		Restriction on using plastics	Medium to long term	—	Increased demand for corrugated containers or display cartons as an alternative due to restrictions on plastic packaging	—	High	
	Market	Technological changes	Short to long term	Increased investment in manufacturing processes	Innovations in manufacturing processes and equipment lead to competitive advantages	Medium	High	Promote innovation with original development
		Changes in demand for our key products	Medium to long term	—	*Demand for our key products increases due to the carbon-neutral and renewable corrugated board's environmental aspects *Share of sales rises due to manufacturing process technology for lightweight corrugated container that can contribute to the reduction of GHG emissions while transporting our clients' products	—	High	Focus on aggressive sales of lightweight corrugated containers
Physical	Acute	Intensification of extreme weather	Short to long term	Damage from natural disasters goes up or supply chain disrupted	Demand for corrugated cardboard goes up due to more opportunities for corrugated cardboard beds and partitions in evacuation centers or for beverages and instant noodles.	Medium	Medium	*Rewrite the BCP and improve training *Key equipment, such as substations, switchboards, and control panels, is located on the second floor in the new factory building
		Drought	Medium to long term	The supply of raw materials is limited in case of water shortage necessary for the manufacture of cardboard in the supply chain.	—	Medium	—	*Enhance BCP response and strengthen trust relationships with overseas suppliers
	Chronic	Mean temperature increase	Medium to long term	Air conditioning spending rises to prevent heatstroke in factories and offices	Demand for corrugated containers increases due to the growth of home delivery services and a higher volume of ice confectioneries, beverages, etc. is caused by reduced outdoor activities following the rise in temperature.	Medium	High	*Reinforce the air conditioning with evaporative heating or standard system *Install spot air conditioning device or air conditioned clothing *Consecutive filling of salinity with moisture

3-3 Assessing the Financial Impact

Risk Assessment Items and Preconditions with Financial Impact

Carbon taxes	Combined carbon taxes caused by an increase in carbon dioxide(CO2) emissions based on IEA WEO 2021* and the existing Cap-and-Trade Program in Tokyo and Saitama Prefecture
Fossil fuels	Calculated prices of natural gas, light oil, heavy oil and LPG based on the IEA WEO 2021* data
Electricity prices	Calculated prices based on the IEA WEO 2019** data (exchange rate 105 yen/USD)
Flood damage***	Calculated amount of damages based on depreciable and inventory assets per person in Tomoku's domestic nonconsolidated financial results in FY2020 as well as: the Hazard Map, the Flood Control Economic Survey Manual published by MLIT****, and the Proposal for Flood Control Plans based on Climate Change reported by Technical Review Committee on Flood Control based on Climate Change
Business suspension***	Calculated amount of suspension based on value added per person in Tomoku's domestic nonconsolidated financial results in FY2020 as well as: the Flood Control Economic Survey Manual and the Fundamentals of Flood Protection Plan published by MLIT****
Storm surge damage	No calculation target

* International Energy Agency World Energy Outlook2021

** International Energy Agency World Energy Outlook2019

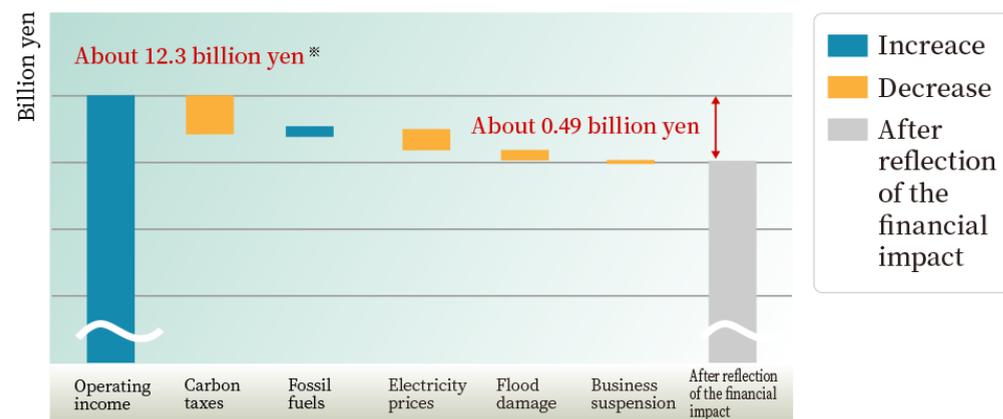
*** Calculation of 1 year average damage

****The Ministry of Land,Infrastructure,Transport and Tourism

Results of the Financial Impact Analysis for Each Scenario

In this scenario, the financial impact on expected operating income in 2030 is significant due to strict government regulations, such as carbon taxes and electricity price increases included in the Feed-in Tariff (FIT) policy. It is even more important for us to reduce our consumption of fossil fuels.

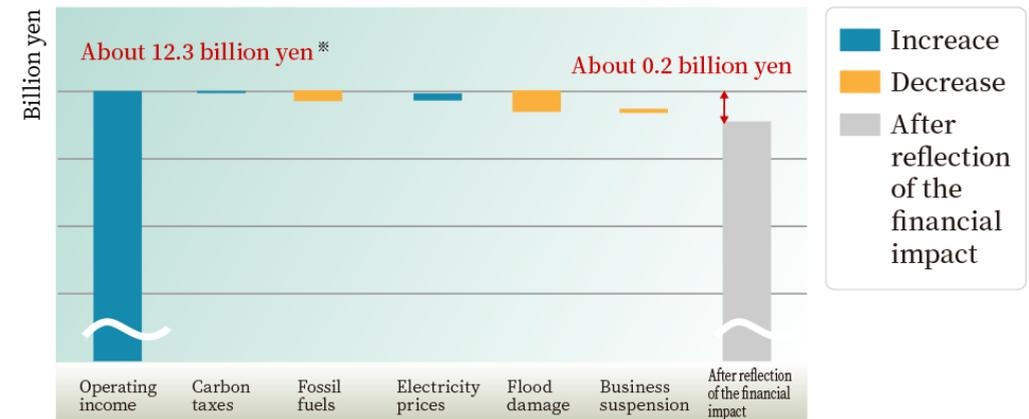
Quantitative Analysis of the Combined Scenarios 2°C and 1.5°C



* Operating income for the year 2030 is estimated by the exponential smoothing method based on past growth, the three-year plan starting in 2022 excluding factors such as M&As, investment, changes in paperboard prices, and switching to renewable energy sources for all electricity in 2030.

In this scenario, the financial impact on expected operating income in 2030 is mainly due to flood damage, so it is even more important for us to strengthen our BCP response.

Quantitative Analysis of the 4°C scenario



* Operating income for the year 2030 is estimated by the exponential smoothing method based on past growth, the three-year plan starting in 2022 excluding factors such as M&As, investment, changes in paperboard prices, and switching to renewable energy sources for all electricity in 2030.

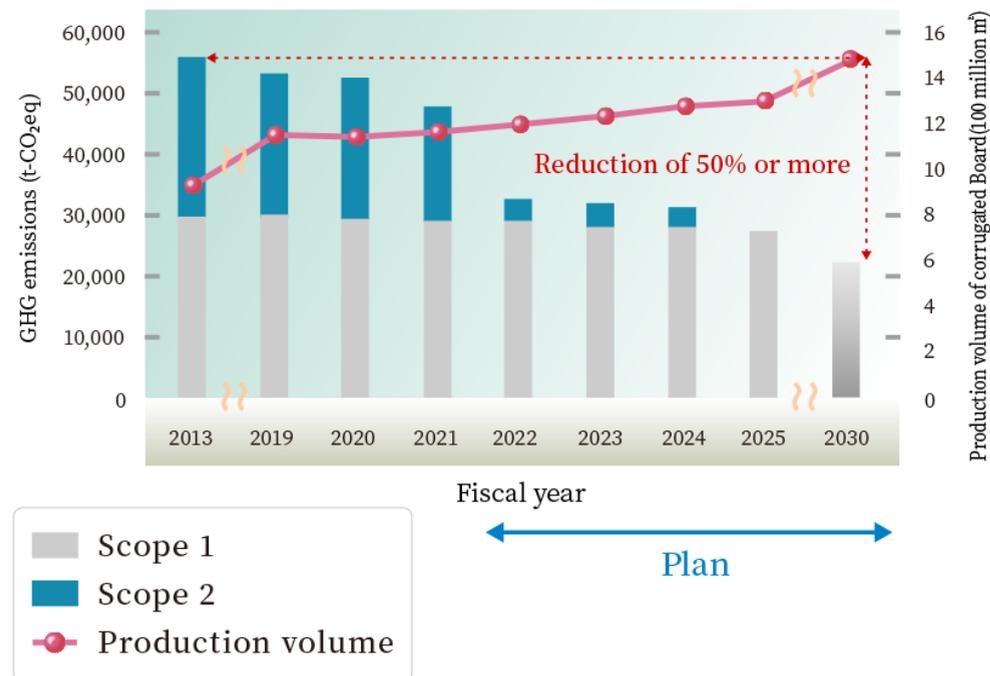
4. Metrics and Targets

The Tomoku Group has set numerical targets for addressing climate change as a significant management issue.

To meet our targets, we will move to renewable energy sources for electricity, convert to other fuel, and introduce energy-saving equipment.

Reduction of GHG Emissions	A 50% reduction compared with 2013 by 2030 (Scope 1 and 2)
Ratio of renewable energy-sourced electricity	100% by 2030

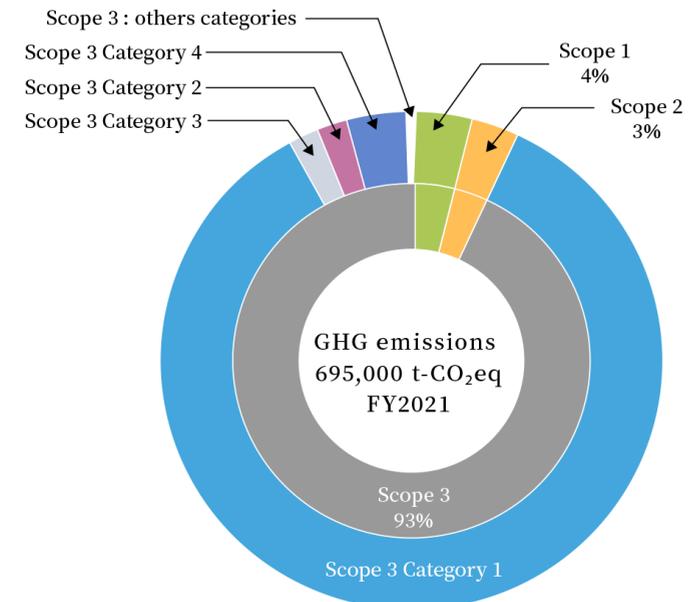
Reduction Plan for GHG Emissions(Scope 1 and 2) (domestic nonconsolidated basis)



GHG emissions(Scope 3) in FY2021(domestic nonconsolidated basis) are estimated at approximately 650,000 t-CO₂eq, excluding non-aggregated data such as equipment purchases.

We will continue to work with containerboard manufacturers to reduce GHG emissions (Scope 3 Category 1), a large portion of Scope3.

GHG Emissions(Scope 1,2 and 3) (domestic nonconsolidated basis)



Inner circle : Ratio of Each Scope (%)
 Outer circle : Volume of GHG Emissions by Scope