

Initiatives for the Environment

The Group's business is built on the sustainable production of livestock products, and the conservation of the natural environment is indispensable for this purpose. The entire Starzen Group engages in initiatives for the environment from various perspectives.

Conserving Energy and Transitioning to Renewable Energy

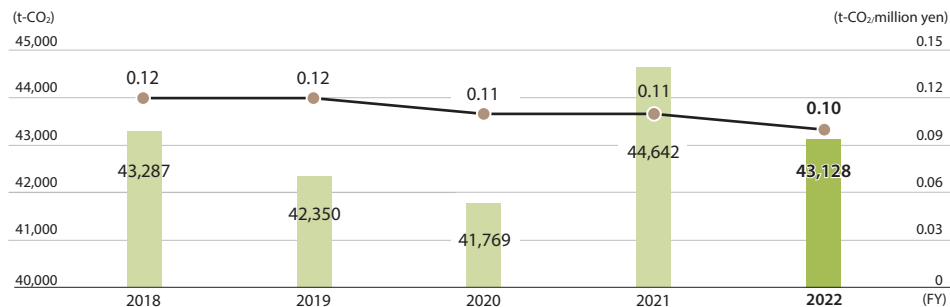
Most of the Group's greenhouse gases are emitted at its plants, each of which is actively introducing high-efficiency equipment when making capital investments. In order to promote the introduction of renewable energy, we are adopting solar power generation systems and switching to green electricity.

With regard to greenhouse gases emitted by the Logistics Division, in anticipation of the "2024 problem" of logistics facing Japan, we have promoted various reduction measures such as modal shifts and have begun to explore the purchase of EV trucks.

Additionally, we are taking urgent measures to reduce greenhouse gas emissions from livestock (such as cow belching) at affiliated farms domestically and overseas, which includes examining feed solutions for cattle to reduce methane gas emissions.

GHG Reduction Committee

In order to address the challenges of climate change, we announced our support for the TCFD recommendations in December 2021 and set a target of reducing our greenhouse gas (GHG) emissions by 46% by the end of the fiscal 2030 compared to fiscal 2020. We established the GHG



■ GHG emissions (left scale) ● GHG emissions per unit of sales (right scale)

Note: Total for meat processing business (seven plants) and food processing business (seven plants)

Reduction Committee, which is comprised of the plant managers, which is working to create energy-saving initiatives.

First, we have gradually introduced an energy management system that can visualize the status of energy consumption in real time to gain a thorough understanding of the current situation and use this data in creating countermeasures.

Initiatives for Food Loss and Waste

As a group of food companies, we are also working to resolve the important social issue of food loss and waste, and as our main countermeasure, we are promoting the development of products with extended shelf life. At the Group's meat processing plants, we are able to greatly extend the best-before date compared to conventional sliced meat packaging by placing meat with fewer initial bacteria numbers into vacuum-seal packaging or gas exchange packaging under advanced hygiene controls.

Furthermore, we are also introducing and supporting the use of eco-friendly feed among farmers. This feed is made from food leftovers or residue generated from food factories and the food service industry. Specifically, we are working to build a circular model in which hogs are fed eco-friendly feed made from food residues generated from supermarkets and restaurants, with the pork sold again in stores.

Adoption of Eco-Friendly Packaging Materials

We are actively working to change our packaging materials in order to reduce our environmental impact. In the past, we used plastic as the primary packaging material for many products, but in consideration of environmental impact, we switched to eco-pillow packaging for sausages. Moreover, many of our products are provided in plastic food tray packaging, but we are gradually transitioning to recyclable eco-friendly plastic trays. From the development stage of new products, we consider packaging based on the premise of using eco-friendly plastic trays and aim to adopt these trays in more products.

Additionally, in order to convey our environmental efforts to our customers, we will expand our proprietary "Ecostar" logo denoting our environmentally friendly products based on our own standards.



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Endorsement of the TCFD Recommendations

The Starzen Group officially endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in December 2021. Climate change is directly linked to the growing environment of healthy livestock and is closely related to the Group's business. Going forward, we will accurately identify the impacts of our climate change countermeasures on the Group through efforts to address our materiality and proactively disclose information based on the TCFD recommendations.



Starzen's Response to the TCFD Recommendations


In February 2022, the Starzen Group identified issues of materiality that it must address over the medium to long term in order to realize a sustainable society. Among these, social and environmental issues caused by climate change are urgent issues, and in order to promote initiatives that address these issues, the new medium-term management plan includes an investment plan for the adoption of renewable energy and energy-saving equipment.

To disclose information based on the TCFD recommendations, we identified risks and opportunities for the Group by conducting scenario analysis and estimating the impacts on our business, domestic and overseas livestock industries, and consumers.

We organized these risks and opportunities into four categories: governance, strategy, risk management, and metrics and targets, with information disclosed based on actual figures for fiscal 2022.

Going forward, we will continue to work to raise the level of our scenario analysis and implement countermeasures.

Progress of Each TCFD Item and Future Response Policy

Governance	In order to promote sustainability management, the Group has established the Sustainability Committee as an advisory body to the Board of Directors. The committee meets quarterly to deliberate on the formulation of policies related to sustainability promotion and the progress of materiality, reporting and making recommendations to the Board of Directors. Based on the committee's reports and recommendations, the Board of Directors is able to fully understand the status of the Group's efforts to promote sustainability and utilizes the information in the formulation of various strategies.
Strategy	The Group has formulated a scenario detailing the impacts on its business if the global average temperature rises by 1.5/2°C or 4°C by 2100 compared to pre-industrial levels. Based on the scenario, we will estimate the financial impacts of risks and opportunities that will significantly affect the Group's business and reflect the findings in our future strategies.
Risk management	In accordance with the Risk Management Regulations, the Risk Management Committee, which meets quarterly, deliberates and discusses Group-wide risks, including sustainability, and reports and makes recommendations to the Board of Directors. In our risk management, we have formulated a matrix based on the frequency of occurrence and the scale of damage, and we have established a system for fixed-point observation of material risks by the committee.
Metrics and targets	The Starzen Group has established a target to reduce its GHG emissions by 46% by fiscal 2030 compared to the base year of fiscal 2020. Trends in the Group's GHG emissions are posted on our corporate website. Going forward, we will continue to work to reduce our GHG emissions toward carbon neutrality. See page 27 for detail about GHG emissions  P.27

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Overview of Scenario Analysis

After aggregating information on business risks and opportunities, as well as identifying the risks and opportunities of climate change that the company faces, we narrowed down the key points to those with a particularly high degree of impact.

Based on the published climate change scenarios, we objectively predicted the future and quantitatively analyzed the impact on our business in each scenario (1.5°C and 4°C) while assuming various risks and opportunities.

Identification of Risks and Opportunities

The results of identifying and assessing the importance of climate change risks and opportunities that may affect the Group's business are as follows.

Type	Risk/opportunity items		Impacts on business		Importance
	Category	Item	Risks/opportunities	Impacts due to risks/opportunities	
Transition risk/ possible opportunities	Policy/ regulations	Rising carbon prices	Risks	<ul style="list-style-type: none"> Increased carbon tax burden or rising purchasing costs in response to increased carbon tax burden of suppliers 	Large
		Regulations on feed, water, and land	Risks	<ul style="list-style-type: none"> Rising purchasing costs for beef and pork due to suppliers passing on regulatory compliance costs to product prices 	Medium
		Regulations to control livestock excrement	Risks	<ul style="list-style-type: none"> Increasing costs for investigations and countermeasures 	Small
		Stricter regulations on plastics	Risks	<ul style="list-style-type: none"> Increasing manufacturing costs due to the implementation of laws on plastics recycling (higher costs to purchase and recycle containers and packaging materials) 	Small
	Markets	Changes in consumer tastes	Risks	<ul style="list-style-type: none"> Declining demand for products with large environmental impacts 	Large
			Opportunities	<ul style="list-style-type: none"> Growing demand for development of products with low environmental impacts and for alternative sources of protein 	
		Rising fuel and electricity prices	Risks	<ul style="list-style-type: none"> Increasing transportation and storage costs due to rising fuel prices, etc. 	Medium
			Opportunities	<ul style="list-style-type: none"> Lower production costs from the utilization of solar, geothermal, or other forms of renewable energy 	
	Declining demand for fossil resources	Risks	<ul style="list-style-type: none"> Rising costs for packaging materials and additives, and rising costs of refrigerants due to changes in demand for fossil resources 	Small	
		Technologies	Development of new low-carbon production technologies	Risks	<ul style="list-style-type: none"> Growing capital investments to expand adoption of energy-efficient equipment and declining asset value of existing facilities due to the faster pace of technological innovation
Opportunities	<ul style="list-style-type: none"> Growing demand for compost made from livestock excrement due to reduced access to petroleum-derived fertilizer 				
Development of low-carbon products	Opportunities	<ul style="list-style-type: none"> Increasing sales from the marketing of certified-sustainable beef products 	Medium		
	Physical risk/ possible opportunities	Chronic	Increase in average temperature	Risks	<ul style="list-style-type: none"> Adverse impacts on livestock, rising electricity costs related to refrigeration, freezing, and HVAC
Impacts on crops used as feed caused by long-term changes in rainfall and weather patterns			Risks	<ul style="list-style-type: none"> Rising prices for feed commodities because of poor crop yields caused by water stress Rising cost to restructure supply chains following the shift in areas suited for production Difficulty sourcing ground water due to saline intrusion in areas where groundwater is used for irrigation or industrial purposes 	Medium
Acute	Increasing frequency and severity of extreme weather	Risks	<ul style="list-style-type: none"> Declining productivity and damage to farms or livestock caused by the increasing frequency and severity of storm and flood damage Suspension of operations due to plant collapse or production equipment damages Suspension of transportation due to disruptions in logistics networks or warehouse damages, etc. 	Medium	

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Definition of Scenarios

Referring to the climate change scenarios published by the International Energy Agency (IEA) and others, we selected scenarios in which the average global temperature is expected to rise by 1.5/2°C or by 4°C, respectively, by 2100 compared to pre-industrial levels. Recognizing that the effects of climate change are likely to materialize over a medium- to long-term time horizon, we are analyzing the impacts of climate change in 2050 as our timeline.

The assumptions used for each scenario are described below.

1.5/2°C: The impact of physical risks will remain limited, but responding to transition risks, such as various regulations and customer requests, will be necessary.

4°C: Governments' low-carbon policies are also limited, the transition to a low-carbon society is restricted to a limited extent, and physical risks will increase due to rising average temperature.

Trial Calculation of Impacts on Our Business and Response

We organized the main climate change risks and opportunities facing the Group's business based on external information and estimated the impact of material risks and opportunities on our business based on forward-looking data on each risk and opportunity. We examined how our responses affect these impacts based on the estimates. The results are as follows. (The arrows indicate the degree to which risks and opportunities are expected to have a financial impact. ND=No Data)

Type	Risk/opportunity items		Impacts on business	Financial impacts		Timing of impact occurrence	Response
	Category	Subcategory		Risks/opportunities			
Transition risk/ possible opportunities	Policy/ regulations	Rising carbon prices	Increased carbon tax burden or rising purchasing costs in response to increased carbon tax burden of suppliers	↓	ND	Short term	<ul style="list-style-type: none"> Adoption of renewable energy and energy-saving measures Extension of product shelf life using skin-packing with gas barrier and vacuum-seal packaging Measures to reduce GHG Emissions
	Markets	Changes in consumer tastes	Risks: Declining demand for products with large environmental impacts Opportunities: Growing demand for development of products with low environmental impacts and for alternative sources of protein	↗	ND	Medium term	<ul style="list-style-type: none"> Development of low-carbon products such as certified sustainable beef, etc. Establishment of production system and sales channels in preparation for rising demand Sales of Zero Meat brand
Physical risk/ possible opportunities	Chronic	Increase in average temperature	Adverse impacts on livestock	ND	↓	Long term	<ul style="list-style-type: none"> Efforts to ensure animal welfare Introduction of cooling systems in cattle sheds Cooperation with financing assistance for improving the breeding and fattening environment of suppliers
			Adverse impacts on feed or raw materials procurement	ND	↓	Long term	<ul style="list-style-type: none"> Support for suppliers to mitigate flood damage Diversification of procurement methods
			Rising electricity costs related to refrigeration, freezing, and HVAC	ND	↓	Long term	<ul style="list-style-type: none"> Adoption and transition to the latest energy-saving, high-efficiency industrial and business equipment