PRIMAHAM

# Disclosing information in line with TCFD recommendations

**Released September 2025**




## Basic Approach

Climate change is one of the top global concerns today and one that has serious implications for our business operations, performance, strategies, and financial health of Prima Meat Packers Group. We disclose climate-related risks and opportunities, along with the measures we take to address them, in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which was created by the Financial Stability Board at the behest of the G20.

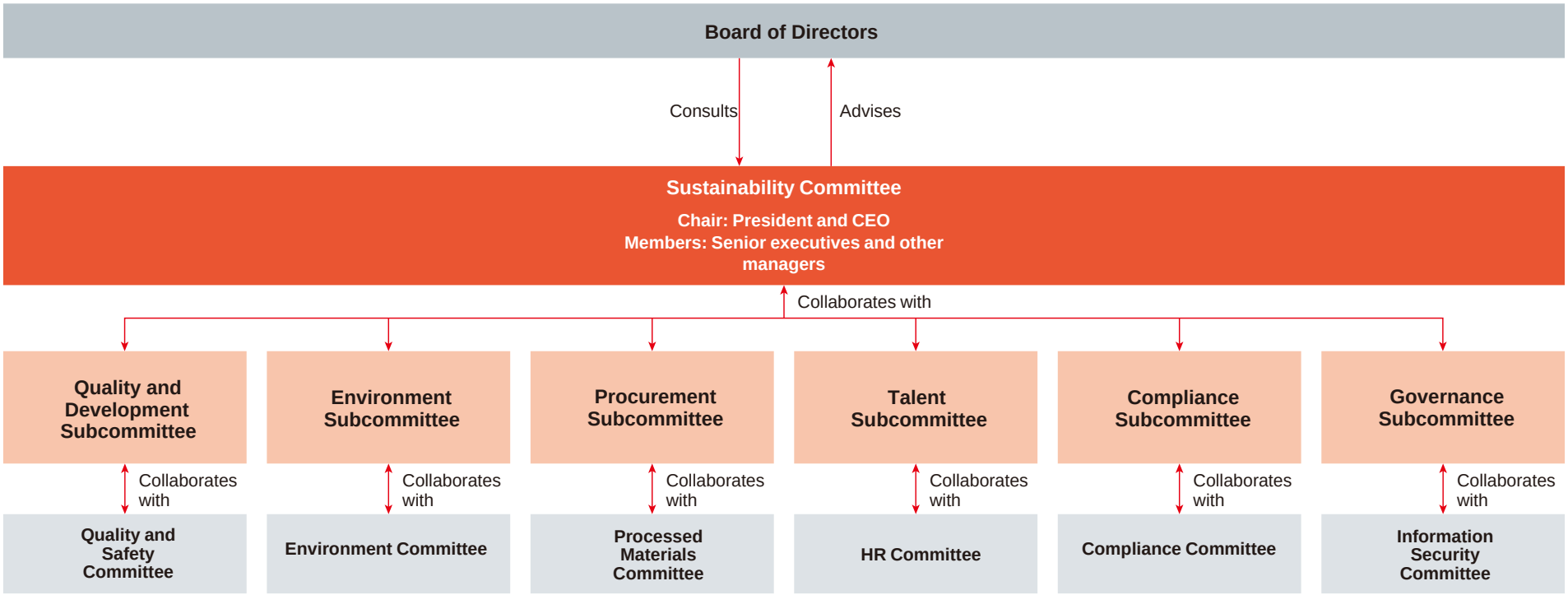
# 1. Governance

To guide action in climate-related issues and other matters that we have identified as material issues, Prima Meat Packers has the Sustainability Committee, an advisory body to the Board of Directors. For these issues, the Sustainability Committee sets goals and action plans, monitors progress, and updates the materiality matrix when necessary. The committee met three times during fiscal 2024.

The Sustainability Committee is chaired by the person serving as president and representative director, and it has six subcommittees. These subcommittees collaborate with other committees in the company. Among the subcommittees, the Environment. Subcommittee is dedicated to addressing climate-related risks and opportunities.

The Board of Directors deliberates matters reported by the Sustainability Committee and reviews progress in the material issues. A critical part of combating climate change is to reduce greenhouse gas (GHG) emissions across our corporate group. Emission reductions is therefore a central topic in meetings of the Sustainability Committee and Environment Subcommittee. The committee and subcommittee use a PDCA cycle to monitor the progress in action plans aligned with metrics and targets for reducing emissions.

**Sustainability management structure**



# 2. Strategy

Our medium-term business plan includes a commitment to taking action related to the carbon transition and circular economy. The Sustainability Committee and the committee's subcommittees lead organization-wide efforts to address this issue and other climate-related issues. In fiscal 2022, we identified key climate-related risks and opportunities relevant to our organization. We recently updated the set of risks and opportunities in view of changes in the external business environment, expert opinions, and the results of our scenario analysis to date. (you can view the pre-update set of risks and opportunities at TCFD-Compliant Disclosures, December 2022).

| Risk categories | | | Climate-related risks | Potential financial impacts | Timing*1 | Financial impact*2 | Scenario analysis findings | Description |
|---|---|---|---|---|---|---|---|---|
| Major category | Subcategory | Sub-subcategory | | | | | | |
| Transition risks | Policy and legislation | Carbon pricing mechanisms (tax hikes) | ・Higher expenditures on energy-efficient technologies and renewable energy technology<br>・Higher tax burden if GHG emissions cut is too small<br>・Higher costs of raw materials and packaging<br>・Higher costs of feed and livestock medicines | Expenditure | Medium term | High | Extra ¥0.2 billion to ¥3 billion in expenses | See Scenario 1 (p. 5) |
| | | Tighter mandates on GHG emissions and plastic waste<br>Rising electricity costs due to changes in energy mix | ・Higher manufacturing costs (for purchasing and recycling plastic packaging) following passage of Plastic Recycling Law<br>・Higher energy-related costs (costs of renewable shift) following revision to Law on Rational Use of Energy<br>・Requirement to upgrade manufacturing assets following tightening of energy legislation | Expenditure | Medium term | Medium | — | |
| | Technology | Technological innovations that support a carbon transition (transition to lower-carbon or zero-carbon economy) | ・More capital investments in technology due to rollout of energy-efficient technology<br>・Impairment of existing assets due to accelerated technological innovation<br>・Reduced time between technology upgrades | Expenditure<br>Assets | Medium term | High | High qualitative impact | See Scenario 2 (p. 6) |
| | Market | Shifts in consumer behavior | ・If consumers perceive we are not doing enough to tackle climate change and plastic waste:<br>Poorer brand perception<br>Poorer ESG ratings and reduced capital availability<br>Poorer perceptions among jobseekers and local residents<br>Diminished employee loyalty<br>・Poorer sales due to increase in ethical consumerism in Japan | Revenue | Medium term | Low | — | |
| | | Higher raw material costs | ・Higher animal feed prices<br>・Higher costs of packaging and additives | Expenditure | Short term | High | Animal feed prices: Extra ¥0.1 billion to ¥1 billion in expenses<br>Packaging: Extra ¥0.5 billion to ¥0.7 billion in expenses | See Scenario 3 (p. 6)<br>See Scenario 4 (p. 7) |
| | Reputation | Negative perceptions of business sector | ・Poorer perceptions of meat industry<br>・Poorer brand perceptions due to plastic packaging | Revenue<br>Expenditure | Long term | Low | — | |

*1 Timing: Short-term (0–5 years), medium-term (5–10 years), long-term (10–30 years)

*2 Financial impact: Small (0.5 billion yen or less), medium (0.5 to 1 billion yen), large (over 1 billion yen)

| Risk categories | | | Climate-related risks | Potential financial impacts | Timing*1 | Financial impact*2 | Scenario analysis findings | Description |
|---|---|---|---|---|---|---|---|---|
| Major category | Subcategory | Sub-subcategory | | | | | | |
| Physical risks | Acute | Increased severity of extreme weather events (typhoons, torrential rain, blizzards, severe thunderstorms) | • Damage to traffic infrastructure<br>• Stoppages following damage to production assets<br>• Transport difficulties due to supply chain disruption or damage to warehouse | Expenditure<br>Assets | Long term | High | Equipment and inventory:<br>Extra ¥1.1 billion in expenses<br>Lost opportunities:<br>¥1.5 billion less in sales | See Scenario 5 (p. 7) |
| | | Epidemics and pandemics | • Stoppages due to infections in workforce<br>• Supply disruption due to outbreak of animal disease<br>• Shortage of raw materials for processed food products | Revenue | Short term | High | High qualitative impact | See Scenario 6 (p. 8) |
| | Chronic | Water withdrawal and drought risks in water-stressed areas | • Restrictions on our plant and farm operations due to water withdrawal and water supply restrictions | Revenue | Long term | High | Lost opportunities:<br>¥4.7 billion less in sales | See Scenario 7 (p. 9) |
| | | Rising mean temperatures, changes in precipitation patterns, rising sea levels | • Water ingress in assets in coastal areas<br>• Less revenue due to poorer animal feed harvests and adverse livestock conditions<br>• Areas that rely on groundwater for irrigation and industrial water use: inadequate water supply due to groundwater salinization<br>• Higher costs of managing employee health<br>• Harder to attract labor for outdoor jobs due to normalization of heat extremes<br>• Higher supply costs<br>• Adverse conditions for livestock and poultry, and poorer meat quality, due to increased seasonal heat stress<br>• Rising cost of temperature and humidity control in piggery | Revenue<br>Expenditure | Long term | Medium | — | |

| Risk categories | | | Climate-related risks | Potential financial impacts | Timing*1 | Financial impact*2 | Scenario analysis findings | Description |
|---|---|---|---|---|---|---|---|---|
| Major category | Subcategory | Sub-subcategory | | | | | | |
| Opportunities | Resource efficiency | Use of more efficient modes of transport, use of more efficient production and distribution processes | • Joint distribution, modal shift<br>• Better efficiency through segmenting processes and automating packaging<br>• Lower transportation costs with rise in domestic pork (to reduce food miles)<br>• Shift to low-carbon production methods | Expenditure | Short term | Medium | — | |
| | | Use of recycling | • Lower packaging supply costs with higher rates of packaging recycling | Expenditure | Medium term | Low | — | |
| | Energy source | Use of renewable energy (shift from thermal power generation) | • Lower energy costs with increased use of renewable energy<br>• Higher ESG ratings and increased capital availability (as more investors favor use of renewable energy) | Expenditure | Medium term | Low | Extra ¥0.2 billion to 0.3 billion in expenses | See Scenario 8 (p. 9) |
| | Products and services | Development and expansion of low-emission goods and services | • Longer shelf lives due to better packaging<br>• Expansion of products packaged sustainably (minimal, recycled, or biomass packaging)<br>• More vegetables sourced from Japanese GAP-certified farms<br>• Higher demand for animal manure due to reduced use of petrochemical fertilizers<br>• Development of feed formulae that reduce animal methane emissions<br>• Higher demand for low-carbon beef (beef produced with less GHG emissions)<br>• Chance to reposition organization as purveyor of protein-rich foods in general (including plant and insect sources)<br>• Growing demand for products that contribute to food loss reduction<br>• Business expansion opportunities driven by new protein source utilization and growing demand for food waste reduction | Revenue | Medium term | High | Extra ¥1.7 billion in sales | See Scenario 9 (p. 10) |
| | Resilience | Resource substitutes/diversification (to mitigate procurement risk) | • Increased reliability of supply chain (globally dispersed, more diverse) | Revenue<br>Expenditure | Medium term | Low | — | |

# Scenario 1 Risk Carbon pricing mechanisms

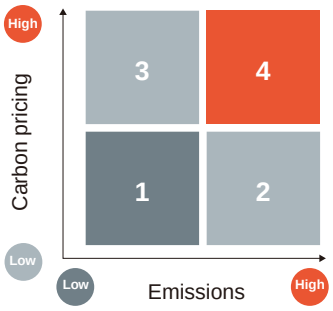
We estimated the financial impacts in that case the carbon pricing mechanisms, which are increasingly being implemented around the world, are imposed, or the rates of such are increased, in areas where we operate.

## Potential financial impacts of carbon pricing mechanisms

**Formulae**

| Future emissions (2030) | × | Future carbon pricing (2030) | = | Estimate |
|---|---|---|---|---|
| **Best emissions**: Emissions when 2030 emissions target met: **130,794 t-$CO_2$** | × | **GX-ETS pricing**: **Latest credit price: 1,600 JPY / t-$CO_2$** (if we are in GX League) — Case 1 | | **Impact as of 2030** **Ô0.2 billion to Ô3 billion** |
| **Base emissions**: Emissions when no reduction-actions taken: **149,360 t-$CO_2$** | × | **NZE pricing**: Carbon pricing in IEA NZE scenario **140 USD (= 20,229 JPY) / t-$CO_2$** — Case 4 | | |

**Estimation matrix**




**Tabulating emissions case by carbon pricing case**

**Formulae**

| | | |
|---|---|---|
| Case 1 | Best emissions, GX-ETS pricing | 130,794 t-$CO_2$ Ĩ 1,600 JPY = **209 million JPY** |
| Case 2 | Base emissions, GX-ETS pricing | 149,360 t-$CO_2$ Ĩ 1,600 JPY = **239 million JPY** |
| Case 3 | Best emissions, NZE pricing | 130,794 t-$CO_2$ Ĩ 20,229 JPY (140 USD Ĩ 144.49) = **2,646 million JPY** |
| Case 4 | Base emissions, NZE pricing | 149,360 t-$CO_2$ Ĩ 20,229 JPY (140 USD Ĩ 144.49) = **3,021 million JPY** |

**Calculation method**

We multiplied our scope 1 and 2 emissions by carbon prices to calculate the extra costs we would bear in 2030 with the imposition of low or high carbon pricing.

**Assumptions/ parameters for emissions**

- Best emissions case: We reach our 2030 emissions-reduction target (by shifting to renewable energy). In this case, we emit 130,794 t-$CO_2$ in 2030.
- Base emissions case: We take no action to reduce emissions. For this scenario, we assume that emission intensity remains as it was in fiscal 2021 and factor in the effects of business growth and a limited reduction effect on the emissions coefficient. In this case, we emit 149,360 t-$CO_2$ in 2030.

**Assumptions/ parameters for carbon pricing**

- GX-ETS pricing: As of 2030, Prima Meat Packers is subject to carbon tax under Japan's Green Transformation Emission Trading Scheme (GX-ETS),* which includes a mechanism for trading excess-reduction-amounts allowances and general carbon credits. Under GX-ETS, carbon pricing stands at 1,600 JPY / t-$CO_2$, which is the latest average price / t-$CO_2$ in J-Credit's energy saving category (the GX League cites this as an example of pricing in the carbon credit market).

*The GX-ETS involves companies voluntarily participating in emission trading within the GX League.

- NZE pricing: As of 2030, Prima Meat Packers is subject to carbon pricing and carbon tax under the International Energy Agency (IEA)'s Net Zero Emissions by 2050 (NZE) scenario (as described in the IEA's World Energy Outlook 2023). In this scenario, carbon pricing stands at 140 USD (or 20,229 JPY with the fiscal 2023 exchange rate, where 1 USD is worth 144.49 JPY).

## Scenario 2 Risk Technological innovations that support a carbon transition (transition to lower-carbon or zero-carbon economy)

Businesses across the world are expected to contribute to global efforts to cut GHG emissions. The Paris Agreement, adopted at the 2015 UN Climate Change Conference (COP21), commits countries to holding the increase in the global average temperature to well below 2°C above pre-industrial levels (the 2°C goal) and to pursuing efforts to limit the temperature increase to within1.5°C above pre-industrial levels. Reflecting this agreement, the Government of Japan has announced its 2050 Carbon Neutral Goal, committing to achieve carbon neutrality (net-zero greenhouse gas emissions) by 2050.

Our organization has committed to a reduction target for fiscal 2030: 24.3% down from the fiscal 2021 level. To achieve this target and contribute to the carbon transition, we invest in innovating and upgrading our production facilities and processes along with other measures for reducing our GHG emissions.

When deciding on capital expenditures for upgrading production facilities with a high carbon footprint, we compare each project's projected financial costs and potential carbon benefits, and then prioritize those projects with better cost-effectiveness. Along with immediately feasible projects, we consider projects that are currently unfeasible but that might be worth implementing in the medium term or the long term. We rank projects in four levels of feasibility (A to D).

As well as analyzing potential investment opportunities, we keep monitoring green innovations (emerging technologies for developing low-carbon materials and aiding the carbon transition). We also consider the possibility of switching to production lines that emit lower levels of GHG.

### Process for investing in green innovations


### Four ranks of feasibility

| Feasibility ranking | Description |
|---|---|
| A | Feasibility is proven, or company already has solid plan in place |
| B | Will be feasible in 3–5 years |
| C | There are physical, technological, or financial obstacles |
| D | Just an idea for now |

## Scenario 3 Risk Higher raw material (animal feed) costs

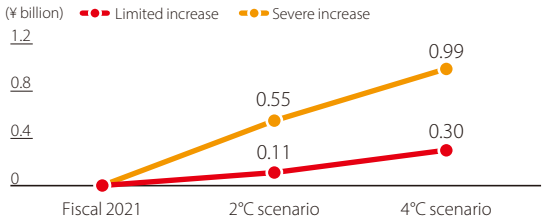
A risk in this scenario is that climate change may affect soybean and corn crops used for animal feed and hog farming operations.

We analyzed two future scenarios in which climate change increases the cost of purchasing our main animal feeds (soybean and corn): 2°C scenario and 4°C scenario (see graph). Both scenarios assume that global warming leads to a decline in yields of crop-based feedstocks as predicted in the Intergovernmental Panel on Climate Change's (IPCC's) 2019 Special Report on Climate Change and Land. In both scenarios, our pork shipments remain stable at the fiscal 2021 level. The results indicate that, in the 4°C scenario ("severe increase", indicated by the orange line), costs of purchasing soybean and corn rise to as high as ¥1 billion by 2050.

The fact that we import pork from overseas is another reason to be concerned about the impact of climate change on the livestock industry. As well as affecting yields of the soybean and corn used for swine feed, climate change could affect feed intake. The US government's Fourth National Climate Assessment (published in 2018) suggests that higher global temperatures could reduce feed intake among swine, leading to longer swine production cycles. Longer swine production cycles would increase the cost burden on hog farmers, in turn pushing up the prices we pay to purchase the pork. However, further monitoring is required given that the Fourth National Climate Assessment also reports the opinion that global warming might lead to higher soybean and corn yields in the Northern United States.

We will continue analyzing available data and exploring measures to maintain stable prices for procuring raw materials.

### Estimated increase in costs of procuring soybean and corn between 2021 and 2050




Estimates based on IPCC's 2019 Special Report on Climate Change and Land

## Scenario 4 Risk Higher raw material costs (packaging)

We have estimated how the costs of purchasing packaging materials as of fiscal 2030 would be impacted by the introduction of a carbon tax.

We ran estimates for two cases: 1) we continue to purchase packaging materials at the same level as in fiscal 2021 level, and 2) the amount we purchase rises in tandem with projected business growth between now and fiscal 2030. For each case, we assumed a carbon tax of 140 USD / t-$CO_2$. This is the Net Zero Emissions by 2050 Scenario (NZE Scenario), which involves the highest degree of regulation (IEA World Energy Outlook 2022).

We are pursuing efforts to reduce the amount of packaging materials we use, including using smaller and thinner packaging and switching to biomass materials.

### Impact of carbon pricing on costs of procuring packaging materials

| Carbon tax | Assumption | Increase in purchasing costs |
|---|---|---|
| 140 USD/ t-$CO_2$ | Between now and fiscal 2030, the amount of packaging material we purchase remains stable at the level of fiscal 2021. | ¥0.5 billion |
| | The amount of packaging material we purchase increases 3% a year between now and 2030. | ¥0.7 billion |

* The figures in the table above indicate the estimated price equivalents in the case that a carbon tax is levied on the GHG emitted in the process from the purchasing of raw materials for packaging to the production of the finished products.
* The estimates convert dollars to yen at a rate of 135 yen to the dollar (the hypothetical rate adopted in the scenario analysis conducted in December 2023).

## Scenario 5 Risk Riverine and coastal floods

Experts suggest that climate change will lead to more intense and more frequent weather events, such as severe tropical storms and torrential rain, increasing the exposure of all our business locations to risks of natural disaster.

We have therefore assessed the potential flood risks affecting all our main business locations and the potential financial impacts of flood events. In this analysis, we used the World Resources Institute's Aqueduct Floods tool and assumed a temperature scenario in which global warming reaches 4°C above preindustrial levels. In this scenario, a once-in-a-century riverine or coastal flood event would occur between now and 2050. We determined that 21 of our 136 business locations are exposed to the risk of riverine or coastal floods. For each of these 21 locations, we reviewed the hazard map provided by the local government. Based on this review, we included 11 business locations to our sample for evaluating the potential financial impacts of flood risk.

We estimated the costs we would incur as a result of floodwater destroying each affected business location's fixed assets and inventory and as a result of opportunities lost during the period of suspended business activities. A riverine flood would result in losses of ¥2.4 billion, while a coastal flood would result in losses of ¥0.2 billion.

Actual losses may be smaller given that the analysis did not consider the possibility that insurance covers some of the losses or that a business continuity plan mitigates the effects of the disaster.

### Potential financial impacts of flooding

* A location can be counted in both flood categories

| Risk | No. of business locations affected* | Potential financial impacts | Financial loss |
|---|---|---|---|
| Riverine flood | 11(8.1%) | • Inventory loss * Fixed asset loss • Opportunity loss | ¥2.4 billion |
| Coastal flood | 3 (2.0%) | • Inventory loss * Fixed asset loss • Opportunity loss | ¥0.2 billion |

* Loss breakdown: ¥1.1 billion in fixed asset and inventory loss, ¥1.5 billion in opportunity loss

loss
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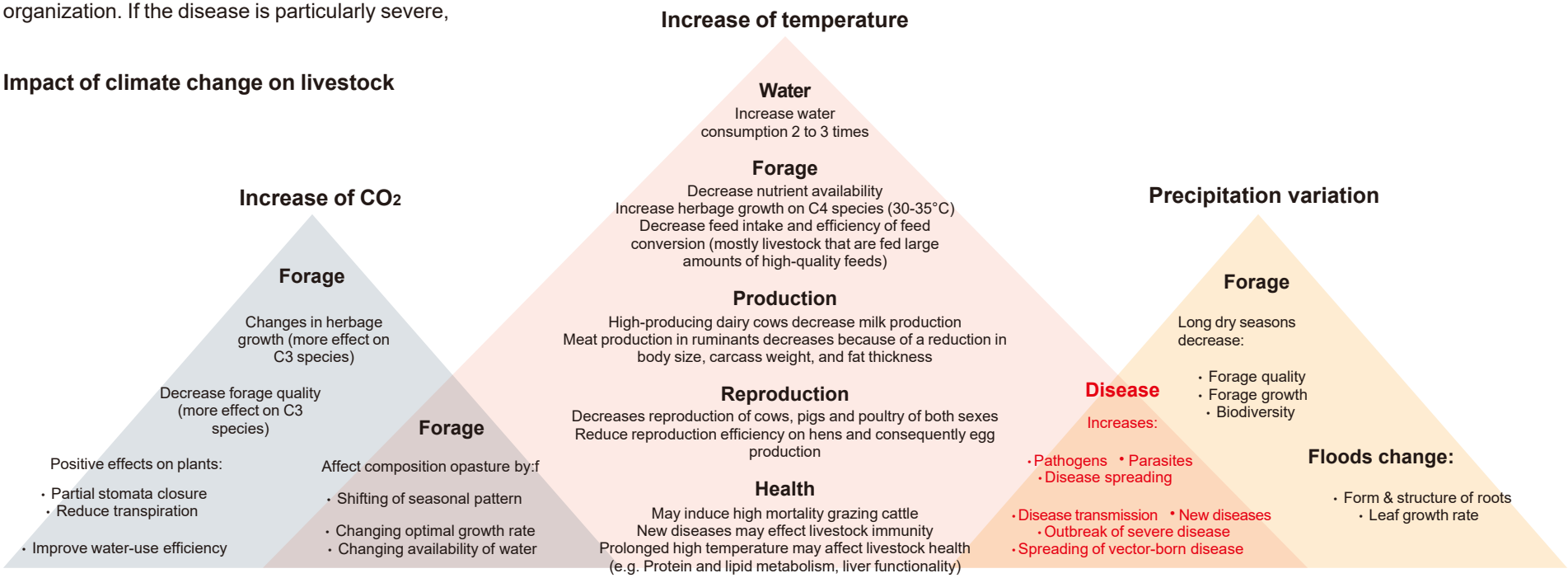
# Scenario 6 Risk Epidemics and pandemics

Climate change can potentially affect the livestock industry in a number of ways. It may affect the quantity and quality of crops used for animal feed. It may also lead to shortages of the water required in rearing and fattening, reduce the livestock's growth and reproduction, and increase the risk of disease outbreaks. These outcomes can occur because of any of, or a combination of, the following climate-related factors: 1) global warming, 2) higher atmospheric concentration of $CO_2$, and 3) changes in precipitation patterns. Of these, global warming affects nearly all the key elements of the livestock industry: production of animal feed, reproductive capacity, and rearing. Higher global temperatures and changes in precipitation patterns encourage growth in pathogens and parasites, raising the risk of new disease outbreaks.

If one of our meat suppliers were to experience a disease outbreak in their livestock, they may incur increased costs associated with vaccinating the livestock. They may also face a longer production cycle as a result of diminished health and productivity. These outcomes would push up procurement costs for our organization. If the disease is particularly severe, the farm may have to cull an entire herd and suspend meat shipments. This outcome would have severe ramifications for our business operations. While we have a general grasp of the climate-related risk of disease outbreaks and their potential impacts, precise analysis is difficult because of the myriad of variables involved, including those related to the local community and the level of biosecurity in the rearing and fattening facilities. Amid this uncertainty, we continue to monitor research on the role of climate change in increasing the risk of livestock disease. We also continue our efforts to ensure robust biosecurity on farms controlled by our organization.

One such farm is the new Miyagi farm, which made its first shipments in the summer of 2023. The farm uses strict biosecurity measures to protect the swine herd from infection. It uses a two-site approach, segregating breeding and fattening facilities. It also has a distribution center with a space for storing goods and a fogging chamber for disinfecting all inbound objects.

## Impact of climate change on livestock




Climate risk management, 16, Rojas-Downing, M. M., Nejadhashemi, A. P., Harrigan, T., & Woznicki, S. A., "Climate change and livestock: Impacts, adaptation, and mitigation", 145-163, Copyright Elsevier (2017)

# Scenario 7 Risk Water depletion risks in water-stressed locations

We used the Aqueduct Water Risk Atlas to assess our exposure to water risk across all 136 business locations. The assessment revealed that two Thai locations are exposed to high water stress. We then estimated how we would be financially impacted if climate-related water restrictions are imposed, forcing these business locations to suspend all or part of their activities.

### Financial impact of climate-related water shortages

| Location | Financial impact |
|---|---|
| **Thailand Primaham (Thailand) Primaham Foods (Thailand)** | ¥4.7 billion less sales revenue |

**Calculation method**
To determine how much sales revenue would be lost following water restrictions, we multiplied the two Thai locations' daily sales volume (derived from results in 2023) by the time during which operations are fully or partly suspended and the percentage of capacity utilization during that time.

**Assumptions for duration of suspension, assumptions for limited capacity utilization**
A yardstick we used in the analysis was the amount of water stored in Pa Sak Cholasit Dam, situated near the two Thai locations. When the amount of water is critically low, at 30% or less of the dam's full storage capacity, the Thai locations would face water restrictions. According to a publication of Japan's Ministry of Land, Infrastructure, Transport and Tourism about climate-related risks, water restrictions of less than 30% would incur partial suspension of business operations while water restrictions of 30% or higher would incur complete suspension. When the amount of water in Pa Sak Cholasit Dam stands at 30% to 22% of the full storage capacity, the business locations would face water restrictions of less than 30% and would therefore have to suspend some operations. When the amount is less than 22% of the full storage capacity, the business locations would face water restrictions of 30% or higher and would therefore have to suspend all operations.

Referring to water levels in Pa Sak Cholasit Dam during a drought that Thailand experienced in 2015, we estimated how long operations would be fully or partially suspended if a similarly severe drought were to occur.

**Assumptions for percentage of capacity utilization**
If operations are partly suspended, actual output will be 50% of potential output. If operations are completely suspended, actual output will be 0% of potential output. Therefore, percentage of capacity utilization is 50% in the first case and 100% in the second case.

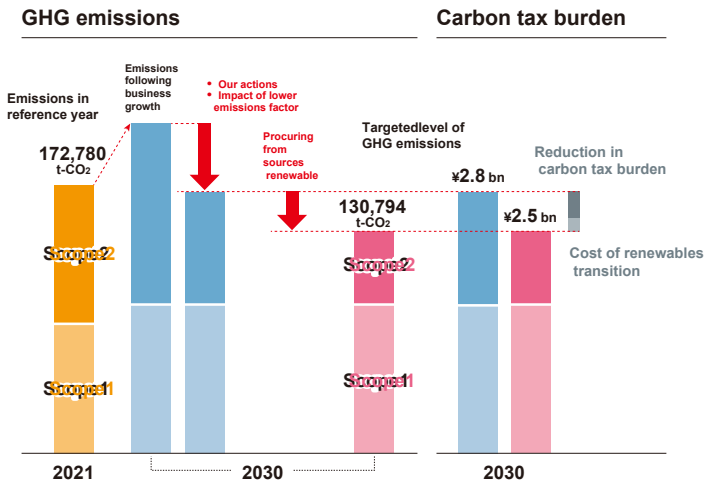
# Scenario 8 Opportunity Use of renewable energy (shift from thermal power generation)

Amid the transition to a lower- or zero-carbon economy, climate-related regulation is likely to be toughened. In particular, carbon taxing is likely to be introduced. In fiscal 2022, our Board of Directors set a GHG emissions reduction target for fiscal 2030: 24.3% down from the fiscal 2021 level. This goal entails an active commitment to energy efficiency and a transition to renewables. These actions, as well as creating climate benefits (helping to mitigate climate change), will create business benefits such as cost savings.

We therefore estimated the cost savings we could generate by shifting to renewables. On the assumption that GHG emissions from energy will be taxed by fiscal 2030, we estimated the carbon tax we would pay in that year if we took no action and the carbon tax we would pay then if we achieved the target. We calculated the difference between these two sums and compared this difference with the cost of procuring the renewable energy necessary for achieving the reduction target. This comparison revealed that investing in the renewable energy would reduce our carbon tax burden by ¥0.2 billion to ¥0.3 billion, ultimately saving us money.

In view of this finding, we have stepped up efforts to shift to renewable or low-carbon energy sources and reduce our energy consumption (by improving productivity and upgrading our fixed assets) so that we can achieve our 2030 reduction target. We are taking an assortment of measures to shift to renewables, mindful of how such measures are cost-effective and contribute to a renewables shift across society.

### Savings generated by a renewables transition




**Calculation method/assumptions**

- When calculating the carbon tax burden in fiscal 2030, we assumed the Net Zero Emissions by 2050 Scenario (NZE Scenario), which involves the highest degree of regulation (IEA World Energy Outlook 2022). We also assumed the carbon tax amount for developed countries: 140 USD / t-$CO_2$.
- Having assumed that from-energy GHG emissions will increase in tandem with our business growth, we envisaged two scenarios for fiscal 2030. The first is a scenario in which take no action to shift to renewables. This scenario considers the effects of a reduction in the emissions factor. The other scenario assumes we shift to renewables and achieve our reduction target for fiscal 2030.
- The estimated cost of the renewables shift assumes that we pursue multiple approaches to procuring renewable energy.

## Scenario 9 Opportunity

# Potential for developing and expanding sustainable products and services
## (products and services that have a low or zero carbon footprint or that help reduce food loss)

World population growth has led to rising meat demand. However, demand for alternative proteins is rising too amid concerns about the environmental effects upon livestock, threats to meat supply continuity, and food security challenges. Although the alternative protein market faces a number of obstacles, it has strong growth prospects. Having already launched alt-protein brands (Try Veggie, Field Good), we estimated the opportunity for sales growth in this market.

**Projected sales in alt-protein market**

**¥2.24 trillion** (Size of market in 2030 (our projection)) × **0.08%** (Our share of the global processed food market) = **¥1.7 billion**

**Calculation method**

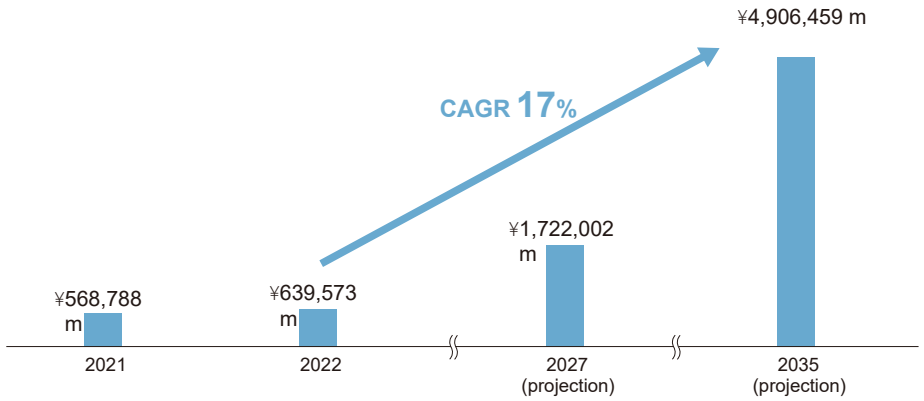
We multiplied the projected size of the alt-protein market in 2030 by our share of the global processed food market to derive the sales revenue we will obtain in alt-protein market in 2030.

**Assumptions/parameters**

- Our share of the global processed food market is the quotient of dividing the net sales posted by the processed food segment in fiscal 2023 by the size of the global packaged food market.
- Size of the global alt-protein market in 2030 is our projection.
- We used the fiscal 2023 average exchange rate, where 1 USD is worth 144.49 JPY.

**Growth prospects of global alt-protein market**

- The Yano Research Institute projects that market will grow with a compound annual growth rate (CAGR) of 17%, reaching ¥5 trillion in 2035.
- Adopting this 17% CAGR, we assumed that the market would reach ¥2.24 trillion in 2030.




Source: Yano Research Institute, *(Global Alternative Proteins Market: Key Research Findings 2023)*, (Aug 30, 2023).
Note: The market size is based on manufacturers' sales volumes. "Alt-protein" combines the following categories of alternetive proteins:plant-based meat/ seafood,and insect proteins. The figures for 2027 and 2035 are projections.

**Key drivers of market growth, challenges**

- Growth drivers: Supplying consumers' dietary demands, tackling restrictions related to health, environment, and animal welfare.
- Challenges: See table below.

| Challenge | Plant-based meat | Cultured meat | Edible arthropods |
|---|---|---|---|
| Avoiding animal-based protein | ○ High feasibility | △ Medium feasibility Produced from animal cells | × Low feasibility Consumer disgust poses big obstacle |
| Health issues | ○ High feasibility | × Low feasibility Safety regulation required | × Low feasibility Safety regulation required |
| Sustainability issues (environment, animal welfare) | △ Medium feasibility Concerns about environmental impact of vegetable production | △ Medium feasibility Cells must be harvested from livestock | ○ High feasibility |
| Technical issues (cost) | △ Medium feasibility More expensive than meat | △ Medium feasibility Culture medium (containing growth factors) is expensive | × Low feasibility Production expensive |

## 3. Risk management

The Sustainability Committee discusses the climate-related risks and opportunities relevant to our corporate group and reports its findings to the Board of Directors.

Based on the committee's reports, the Board of Directors reviews risk factors of concern and then sets a group-wide strategy and action plans for addressing environmental issues. It also promotes the awareness that risk factors of concern are organization-wide concerns in that they could affect the business operations and performance of the organization as a whole. The Sustainability Committee and its subcommittees develop their own action plans incorporating the strategy and action plans set out by the Board of Directors.

## 4. Metrics and targets

### （1）FY2024 results

Reducing GHG emissions is one of our material issues, and as such the Board of Directors, in fiscal 2022, set an emissions reduction target for fiscal 2030:*1 By that year, we aim to reduce Scope 1 and Scope 2 emissions by 24.3% from the fiscal 2021 level.*2 By working toward this goal, we are fighting climate change.

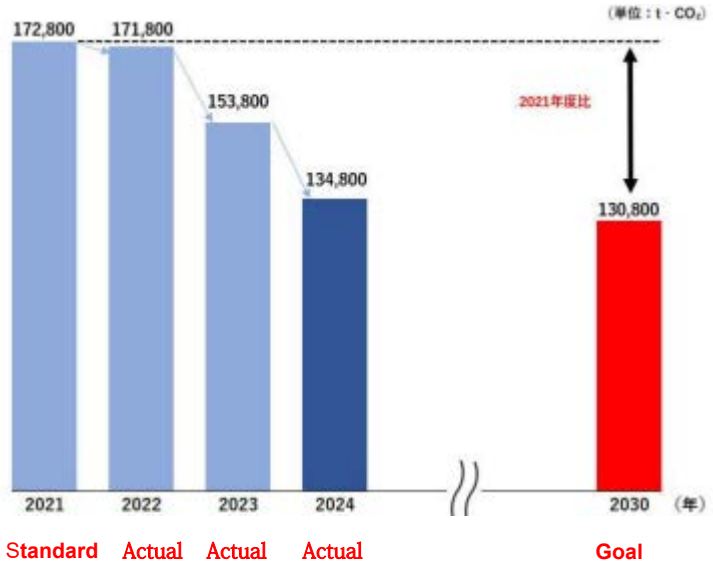
In fiscal 2024, we reduced GHG emissions by 12.4% from the previous year by rolling out renewable energy and investing in a program to phase out fluorinated refrigerants.

This year, on a consolidated basis, we calculated and disclosed our Scope 3 (supply chain) emissions. In September 2025, we will disclose our fiscal 2024 Scope 3.

*1 Excludes emissions from overseas sources and from livestock.

*2 The 24.3% reduction (compared to the fiscal 2021 level) was determined by annualizing the Japanese government's 2030 emissions on a consolidated basis. We will continue efforts to reduce emissions across our supply chain.

**Reduction target for Scope 1 and 2 GHG emissions (the target excludes emissions from overseas sources and from livestock)**



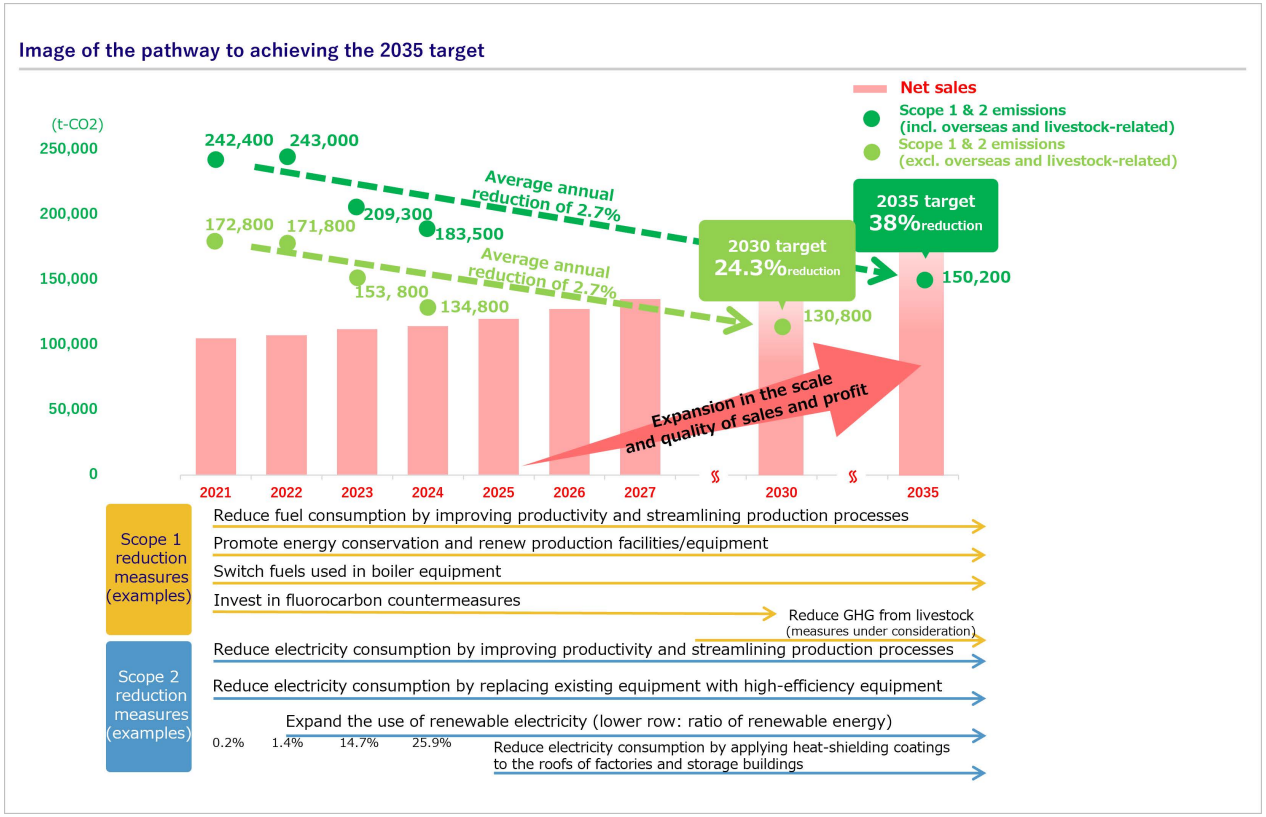
# (2) Addition of FY2035 Target and Roadmap to Achievement

In addition to the previous target of a 24.3% reduction in Scope 1 and 2 GHG emissions by FY2030 compared to FY2021 (excluding overseas sites and livestock), the Prima Meat Packers Group has set a new target of a 38.0% reduction by FY2035 compared to FY2021.
Furthermore, the scope of this new target covers the entire Group, including overseas sites and livestock.

This new target aligns with the Japanese government's "Plan for Global Warming Countermeasures," which sets a national FY2035 target. Prima Meat Packers Group had already set a FY2030 target of a 24.3% reduction (annualized 2.7%) by converting the government's FY2030 target (46% reduction compared to FY2013) to an FY2021 base. In response to the government's updated plan, the Group has added a FY2035 GHG reduction target.
Currently, thanks to the effects of expanded renewable energy procurement and investment in fluorocarbon countermeasures, progress toward both the FY2030 and FY2035 targets is ahead of schedule.

To achieve these targets, the Group will further advance its material issue of "contributing to global environmental conservation" and strengthen efforts to address climate change as a social and environmental challenge.
Along with this, a roadmap has been developed for achieving the FY2035 target, assuming future technological progress and strengthened climate regulations. Scope 3 emissions have also been calculated and disclosed on a consolidated basis, and the Group will consider setting Scope 3 reduction targets.
As a basic policy of the Medium-Term Management Plan, the Group promotes both "expansion of scale and quality of sales and profits" and "management with an emphasis on sustainability." Developing this roadmap is one of the concrete measures for achieving these policies.
The Group recognizes that if future technological advances, market changes, or regulatory trends change significantly, the roadmap will need to be reviewed.

Prima Meat Packers Group will steadily pursue initiatives to realize a decarbonized society, while aiming for business growth and enhanced corporate value.



# Initiatives to Reduce GHG Emissions to Achieve Targets

## Scope 1 and 2 Reduction Initiatives

### Introduction of Renewable Energy

Prima Meat Packers Group is proactively introducing renewable energy.Specific measures include installing solar power generation systems at plants and offices to use self-generated electricity, and switching to electricity derived from renewable energy.These initiatives aim to curb GHG emissions and improve energy efficiency while also reducing energy costs. The Group will continue to expand the introduction of renewable energy and pursue efficient energy use to reduce GHG emissions.

PrimaFineFoods Co., Ltd. Solar power generation facilities

### Initiatives at the New Kagoshima Plant

**The new Kagoshima plant, which began full-scale operation in April 2023, aims for carbon neutrality by implementing more environmentally friendly measures than ever before.**
**One such measure is a Power Purchase Agreement (PPA), under which solar panels owned by a power company are installed on-site and the electricity generated is purchased by the plant. The electricity corresponds to approximately 10% of the power used by four of our plants (Hokkaido, Ibaraki, Mie, and the former Kagoshima), reducing GHG emissions by over 5,000 tons per year.**
**In addition, the plant has switched boiler fuel from heavy oil to LNG (liquefied natural gas) and adopted on-site cogeneration, which utilizes waste heat generated during fuel-to-thermal energy conversion for hot-water production and other uses.**

Kagoshima Plant LNG（Liquefied Natural Gas）Tank

### Investment in Fluorocarbon Measures

Fluorocarbons have been widely used in refrigeration and air-conditioning equipment but contribute to global warming as GHGs; proper management and replacement are required.
The Group ensures legally mandated leak inspections and proper recovery of fluorocarbons. When introducing new equipment, we are shifting to refrigerants with lower global warming potential and improving energy efficiency of refrigeration and freezing facilities.

Through these efforts, we reduce GHG emissions attributable to fluorocarbons and curb energy consumption, thereby strengthening our contribution to decarbonization. We will continue to reduce GHG emissions through ongoing fluorocarbon management and equipment renewal.

**Mie Plant Natural refrigerant refrigerator**

### Investments in Temperature Control for Plants and Materials Warehouses

We are applying radiative cooling coatings to the roofs of plants and food materials warehouses. These coatings suppress roof surface temperature increases and reduce cooling loads inside buildings.
As a result, energy use is reduced and GHG emissions are lowered. This investment was implemented using our “environmental investment quota.”

**Environmental investment framework**
This system supports the realization of investment plans by incorporating greenhouse gas reduction effects into investment decisions by each division and department when considering investment plans that have a significant effect on greenhouse gas emissions but are difficult to adopt under conventional investment criteria.

# Scope 3 Emissions Reduction Initiatives — Environmentally Conscious Products

## ◆Environmentally friendly products

### ・Reducing plastic use to cut Scope 3 Categories 1 and 12.

In part of efforts to reduce Scope 3 Categories 1 and 12 emissions, the Group is revising packaging—specifically, reducing plastic used in product packaging.This initiative promotes efficient use of resources and waste reduction, while contributing to lower Scope 3 Category 1 and 12 emissions.For example, the package for Koukun® Sausage was changed from a drawstring package to an Eco Package in April 2022, followed by further downsizing in March 2023 and September 2024.As a result, plastic used per product was reduced by approximately 38.5% vs. March 2022, and annual GHG emissions were reduced by about 2,200 t.We are also enhancing environmental considerations by adopting materials that are easier to recycle and improving package design.

### ・Reducing Food Loss to Cut Scope 3 Category 12

We are promoting product development aimed at extending shelf life and enabling long-term storage at room temperature to reduce food loss (Scope 3 Category 12).
By improving product storability, we extend best-before dates and focus on reducing disposal by consumers and in distribution.Through these measures, we aim to use food resources efficiently and reduce the volume of food loss, thereby curbing GHG emissions associated with disposal.
We will continue product development and quality management aligned with product characteristics and market needs to further reduce Scope 3 Category 12.

### ・Joint Delivery, Review of Delivery Conditions, and Modal Shift to Cut Scope 3 Categories 4 and 9

We are implementing joint delivery by four ham and sausage manufacturers and reviewing delivery conditions.Joint delivery improves truck loading efficiency and reduces the number of delivery trips by consolidating shipments across multiple companies. Delivery lead times are also being extended to improve logistics efficiency.

In addition, the new Kagoshima plant uses marine transport for raw meat used in ham and sausages, shifting transport to Osaka onto ferries to reduce GHG emissions.
These efforts are expected to reduce Scope 3 Categories 4 and 9 and contribute to building a sustainable logistics system. We will continue working with logistics stakeholders to further reduce Categories 4 and 9 and environmental impact.


Using less plastic


**Koukun® Sausage**

We replaced the drawstring design with an eco-package that uses 30.6% less plastic and no drawstring tape.


**Steamed chicken strips from Kyushu-reared poultry**

By reducing the length and width of the packaging, we cut the amount of plastic used in the packaging by 24%.


**Gran Tokachi–Salami for the grown-up palate**

We switched to paper for the outer packaging and used biomass ink for some of the text, reducing carbon footprint.


**“Perfect for salads”® series**

The packaging uses a resealable lidding film called Futapita®. This design helps cut waste because it allows you to reseal the package without resorting to cling film.

**Reducing food waste Takumi no Zen® giftpack**

By neutralizing microorganisms with high-pressure processing, we extend shelf lives from 35 days to 60 days.


**Stock Dish®**
The product remains fresh at room temperature for as long as 180 days,making it an ideal complement to a household’s regularly

## Non-consolidated Scope 3 emissions

(t-CO2e)

| Category | | Fiscal 2021 | Fiscal 2022 | Fiscal 2023 | Fiscal 2024 (IDEA Ver.2.3) | Fiscal 2024 (IDEA Ver.3.5.1) | Percentage of total emissions | Numerical change from fiscal 2023 | Percentage change from fiscal 2023 |
|---|---|---|---|---|---|---|---|---|---|
| **Category 1** | Purchased goods and services | 2,736,181 | 2,601,164 | 2,607,582 | 2,384,226 | 1,870,337 | 79.74% | (737,246) | (28.3%) |
| **Category 2** | Capital goods | 20,321 | 36,782 | 18,260 | 15,482 | 15,482 | 0.66% | (2,778) | (15.2%) |
| **Category 3** | Fuel- and energy-related activities not included in Scope 1 or Scope 2 | 9,151 | 9,816 | 10,123 | 10,904 | 11,631 | 0.50% | 1,509 | 14.9% |
| **Category 4** | Upstream transportation and distribution | 38,291 | 36,568 | 45,535 | 44,048 | 119,160 | 5.08% | 73,624 | 161.7% |
| **Category 5** | Waste generated in operations | 6,488 | 8,155 | 4,623 | 4,679 | 4,147 | 0.18% | (475) | (10.3%) |
| **Category 6** | Business travel | 259 | 542 | 833 | 1,000 | 910 | 0.04% | 77 | 9.2% |
| **Category 7** | Employee commuting | 987 | 1,014 | 606 | 1,096 | 1,096 | 0.05% | 490 | 81.0% |
| **Category 8** | Upstream leased assets | — | — | — | — | — | — | — | — |
| **Category 9** | Downstream transportation and distribution | 77,167 | 72,290 | 65,180 | 68,283 | 79,311 | 3.38% | 14,131 | 21.7% |
| **Category 10** | Processing of sold products | 149,725 | 151,776 | 139,393 | 144,208 | 144,208 | 6.15% | 4,815 | 3.5% |
| **Category 11** | Use of sold products | 83,720 | 79,318 | 79,969 | 79,895 | 79,895 | 3.41% | (75) | (0.1%) |
| **Category 12** | End-of-life treatment of sold products | 21,019 | 20,056 | 20,176 | 21,528 | 19,248 | 0.82% | (928) | (4.6%) |
| **Category 13** | Downstream leased assets | — | — | — | — | — | — | — | — |
| **Category 14** | Franchises | — | — | — | — | — | — | — | — |
| **Category 15** | Investments | — | — | — | — | — | — | — | — |
| Total | | **3,143,308** | **3,017,482** | **2,992,281** | **2,775,350** | **2,345,426** | **100%** | **(646,855)** | **(21.6%)** |

In calculating our Scope 3 emissions, we followed the Ministry of the Environment's guidelines for calculating supply-chain emissions. For each category, we ran a scenario analysis.

* We did not include categories 8, 13, 14, and 15 in our Scope 3 disclosures.

* We mainly used the emissions numerators included in the following:
  1. Ministry of the Environment, Basic Guideline for Calculating Greenhouse Gas Emissions Throughout the Supply Chain (ver. 3.5)
  2. AIST-IDEA Ver. 3.5.1 Standard Edition (2025/05/30)
     IDEA Lab, Research Institute of Science for Safety and Sustainability,National Institute of Advanced Industrial Science and Technology (AIST)
  3.From fiscal 2021 through fiscal 2023, we calculated emissions using IDEA Ver. 2.3, while in fiscal 2024 we calculated them using both IDEA Ver. 2.3 and AIST-IDEA Ver. 3.5.1.

## Consolidated Scope 3 emissions

IDEA Ver.2.3　IDEA Ver.3.5.1　(t-CO2e)

| Category | | Fiscal 2023 | Fiscal 2024 | Fiscal 2024 | Percentage of total emissions | Numerical change from fiscal 2023 | Percentage change from fiscal 2023 |
|---|---|---|---|---|---|---|---|
| Category 1 | Purchased goods and services | 3,156,397 | 3,107,154 | 2,557,225 | 79.70% | (599,171) | (19.0%) |
| Category 2 | Capital goods | 47,843 | 39,040 | 39,040 | 1.22% | (8,803) | (18.4%) |
| Category 3 | Fuel- and energy-related activities not included in Scope 1 or Scope 2 | 34,307 | 37,039 | 38,998 | 1.22% | 4,691 | 13.7% |
| Category 4 | Upstream transportation and distribution | 95,649 | 92,649 | 170,174 | 5.30% | 74,525 | 77.9% |
| Category 5 | Waste generated in operations | 13,280 | 13,047 | 12,958 | 0.40% | (323) | (2.4%) |
| Category 6 | Business travel | 1,469 | 1,721 | 1,631 | 0.05% | 162 | 11.0% |
| Category 7 | Employee commuting | 9,675 | 10,562 | 10,569 | 0.33% | 894 | 9.2% |
| Category 8 | Upstream leased assets | — | — | — | — | — | — |
| Category 9 | Downstream transportation and distribution | 91,975 | 93,262 | 109,264 | 3.41% | 17,288 | 18.8% |
| Category 10 | Processing of sold products | 139,393 | 144,208 | 144,208 | 4.49% | 4,815 | 3.5% |
| Category 11 | Use of sold products | 84,977 | 86,088 | 85,901 | 2.68% | 923 | 1.1% |
| Category 12 | End-of-life treatment of sold products | 39,813 | 41,830 | 38,468 | 1.20% | (1,346) | (3.4%) |
| Category 13 | Downstream leased assets | — | — | — | — | — | — |
| Category 14 | Franchises | — | — | — | — | — | — |
| Category 15 | Investments | — | — | — | — | — | — |
| Total | | **3,714,779** | **3,666,602** | **3,208,436** | **100%** | **(506,343)** | **(13.6%)** |

In calculating our Scope 3 emissions, we followed the Ministry of the Environment's guidelines for calculating supply-chain emissions. For each category, we ran a scenario analysis.

* We did not include categories 8, 13, 14, and 15 in our Scope 3 disclosures.

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