

# Disclosing information in line with TCFD recommendations

Released December 2023



## 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

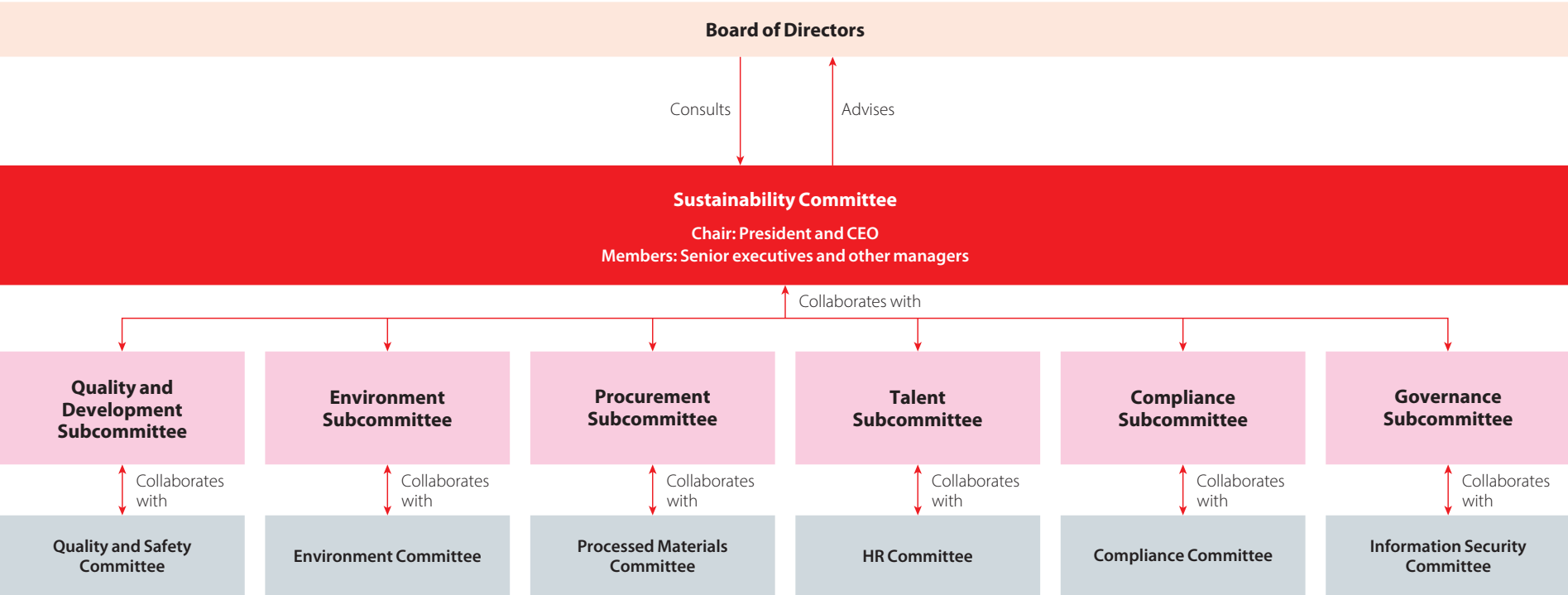
To guide action in climate-related issues and other matters that we have identified as material issues, Prima Meat Packers has the Sustainability Committee, an advisory body to the Board of Directors. For these issues, the Sustainability Committee sets goals and action plans, monitors progress, and updates the materiality matrix when necessary. The committee met twice during the first three quarters of fiscal 2023 (April–December 2023).

The Sustainability Committee is chaired by the president and CEO, 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

One of our medium-term goals (as set out in our current medium-term plan, running from fiscal 2022 to fiscal 2024) is to address material issues, one of which is to combat climate change. The Sustainability Committee leads efforts to address this issue.

In fiscal 2022, we identified climate-related risks and opportunities relevant to our

organization (see TCFD-Compliant Disclosures, December 2022). In fiscal 2023, we ran a scenario analysis to estimate the financial impacts of these risks and opportunities. To estimate the financial impacts of flood risk, we analyzed the flood risk for our 149 business locations using Aqueduct Floods, a tool developed by the World Resources Institute.

Risk categories		Climate-related risks	Potential financial impacts	Description
Transition risks	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	High	See Scenario 1 (p. 4)
		• Impairment of existing assets due to accelerated technological innovation		
• Reduced time between technology upgrades				
Higher raw material costs	Higher raw material costs	• Higher animal feed prices ▶ See the results of the scenario analysis here (TCFD-Compliant Disclosures, December 2022, p. 5).	Extra ¥0.1 billion to ¥1 billion	See Scenario 2 (p. 4)
		• Higher costs of packaging and additives	¥0.5 billion to ¥0.7 billion	
Physical risks	Epidemics and pandemics	• Stoppages due to infections in workforce	High	See Scenario 3 (p. 5)
		• Supply disruption due to outbreak of animal disease		
		• Shortage of raw materials for processed food products		
	Increased severity of extreme weather events	• Riverine and coastal flood risk to 149 business locations	Riverine flood: ¥2.4 billion*	See Scenario 4 (p. 6)
Rising sea levels	Coastal flood: ¥0.2 billion			
Opportunity categories		Climate-related opportunities	Potential financial impacts	Description
Opportunities	Use of renewable energy (shift from thermal power generation)	• Lower energy costs with increased use of renewable energy	¥0.2 billion to ¥0.3 billion	See Scenario 5 (p. 6)
		• Higher ESG ratings and increased capital availability (as more investors favor use of renewable energy)		

Cells indicate estimates made in fiscal 2023.

\* Financial impacts include lost opportunities quantified as production loss during stoppages and period until resumption of production.

## Example of Scenario Analysis

### Scenario 1 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 1.5°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 2 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<sub>2</sub>. 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 purchasing costs

Carbon tax	Assumption	Increase in purchasing costs
140USD/ t-CO <sub>2</sub>	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.

## Scenario 3 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<sub>2</sub>, and 3) changes in precipitation patterns.

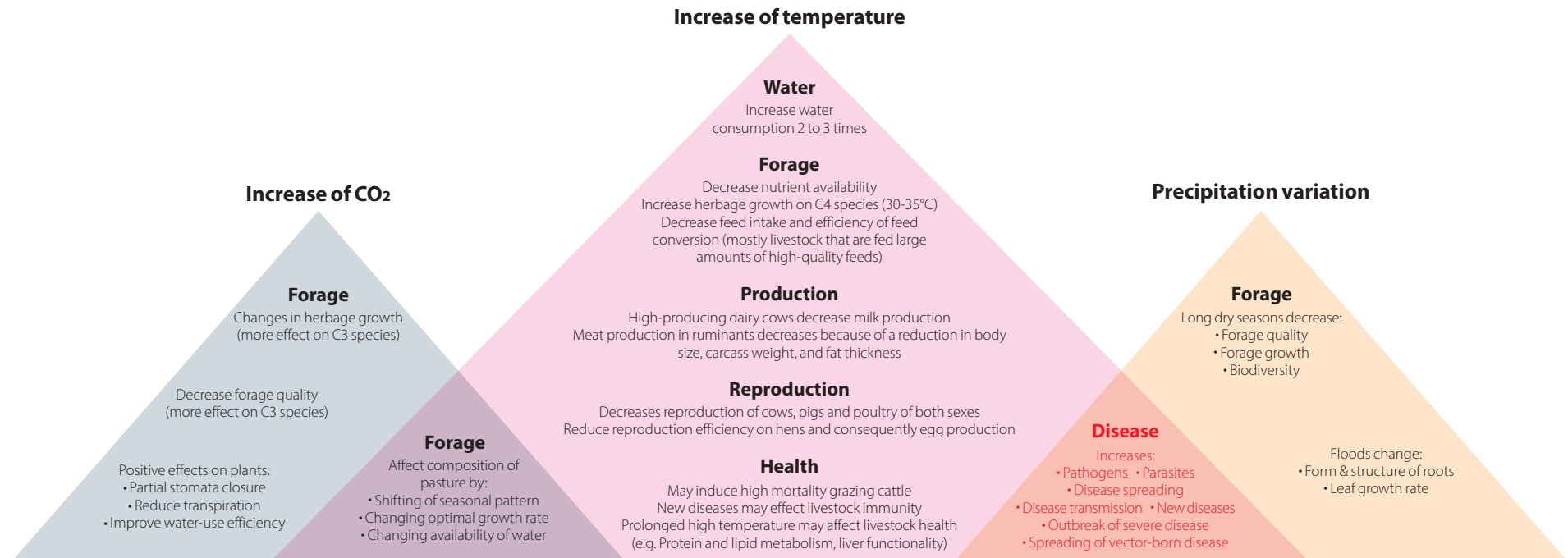
Of these, global warming affects nearly all the key elements of the livestock industry: production of animal feed, reproductive capacity, and rearing. Higher global temperatures and changes in precipitation patterns encourage growth in pathogens and parasites, raising the risk of new disease outbreaks.

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)

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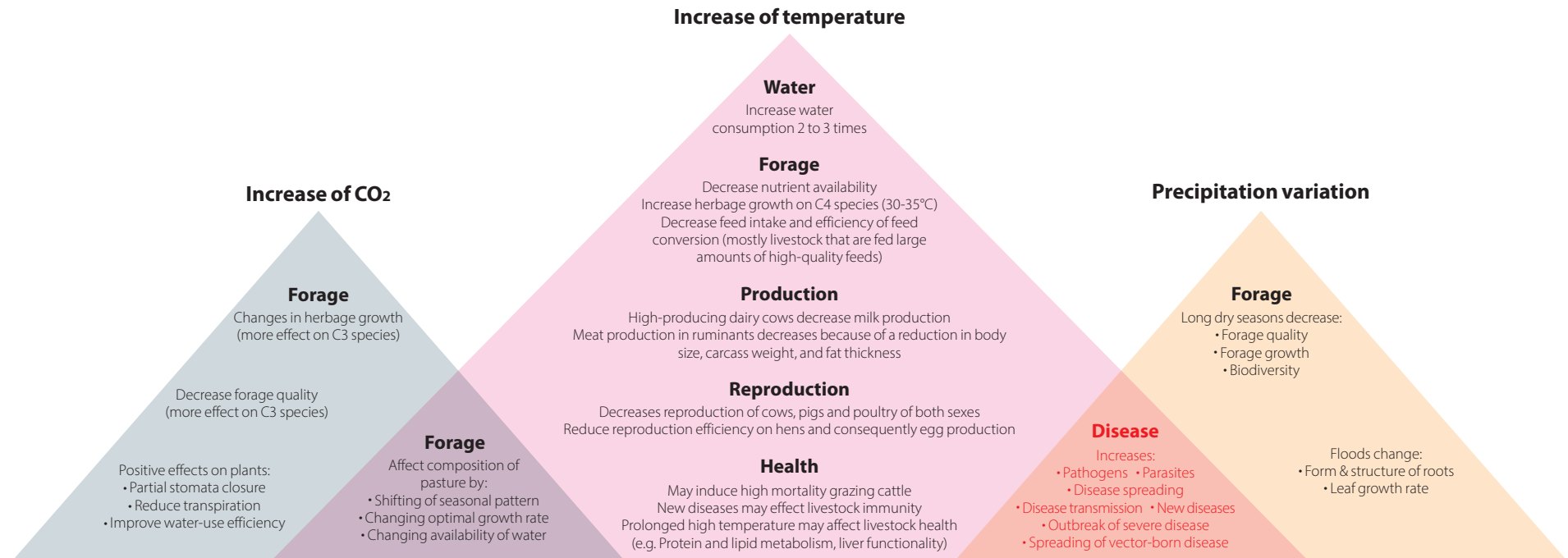
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## Scenario 4 Risk Riverine and coastal floods

Experts suggest that climate change will lead to more intense and more frequent weather events, such as severe tropical storms and torrential rain, resulting in worse natural disasters. We have therefore assessed the potential flood risks affecting our 149 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 22 of our 149 business locations are exposed to the risk of riverine or coastal floods. For each of these 22 locations, we reviewed the hazard map provided by the local government. Based on this review, we included 12 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

Risk	No. of business locations affected*	Potential financial impacts	Financial loss
Riverine flood	12 (8.1%)	• Inventory loss • Fixed asset loss • Opportunity loss	¥2.4 bn
Coastal flood	3 (2.0%)	• Inventory loss • Fixed asset loss • Opportunity loss	¥0.2 bn

\* A location can be counted in both flood categories.

## Scenario 5 Opportunity Use of renewable energy (shift from thermal power generation)

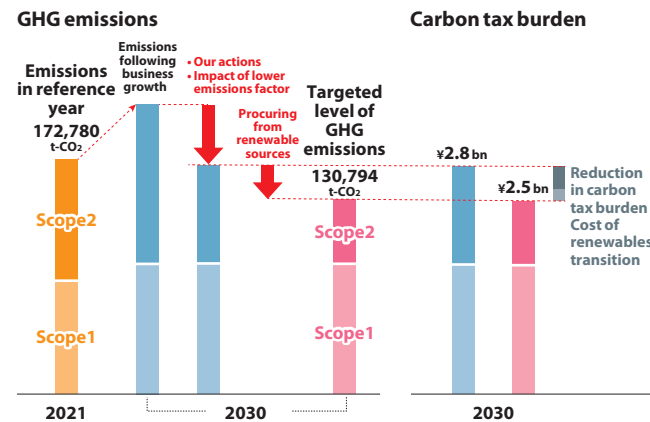
Amid the transition to a lower- or zero-carbon economy, climate-related regulation is likely to be toughened. In particular, carbon taxing is likely to be introduced. In fiscal 2022, our Board of Directors set a GHG emissions reduction target for fiscal 2030: 24.3% down from the fiscal 2021 level. This 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<sub>2</sub>.
- 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.

### 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

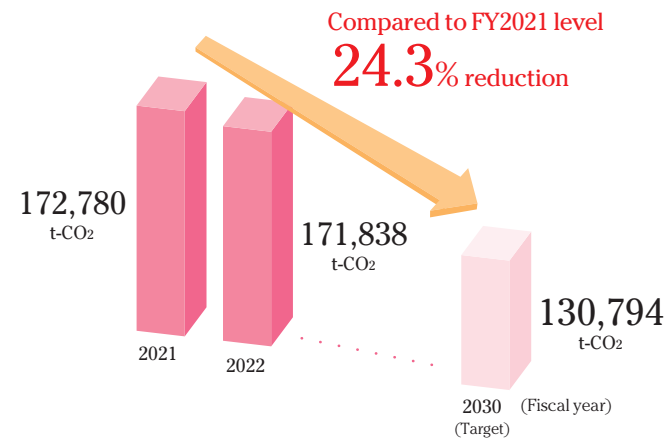
Reducing GHG emissions is one of our material issues, and as such the Board of Directors, in fiscal 2022, set an emissions reduction target for fiscal 2030:<sup>\*1</sup> By that year, we aim to reduce Scope 1 and Scope 2 emissions by 24.3% from the fiscal 2021 level.<sup>\*2</sup> By working toward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

In fiscal 2023, we calculated our non-consolidated Scope 3 emissions. In fiscal 2024, we may disclose our consolidated Scope 3 emissions. We will continue efforts to reduce emissions across our supply chain.

<sup>\*1</sup> Excludes emissions from overseas sources and from livestock.

<sup>\*2</sup> The 24.3% reduction (compared to the fiscal 2021 level) was determined by annualizing the Japanese government's 2030 target of 46% reduction from the fiscal 2013 level.

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





## Non-consolidated Scope 3 emissions

(t-CO<sub>2</sub>e)

Category		Fiscal 2021	Fiscal 2022	Percentage of total emissions	Numerical change from fiscal 2021	Percentage change from fiscal 2021
Category 1	Purchased goods and services	2,736,181	<b>2,601,164</b>	86%	<b>(135,017)</b>	(5%)
Category 2	Capital goods	20,321	<b>36,782</b>	1%	<b>+16,461</b>	+81%
Category 3	Fuel- and energy-related activities not included in Scope 1 or Scope 2	9,151	<b>9,817</b>	0%	<b>+666</b>	+7%
Category 4	Upstream transportation and distribution	38,291	<b>36,568</b>	1%	<b>(1,723)</b>	(4%)
Category 5	Waste generated in operations	6,488	<b>8,155</b>	0%	<b>+1,667</b>	+26%
Category 6	Business travel	259	<b>542</b>	0%	<b>+283</b>	+109%
Category 7	Employee commuting	987	<b>1,014</b>	0%	<b>+28</b>	+3%
Category 8	Upstream leased assets	—	—	—	—	—
Category 9	Downstream transportation and distribution	77,167	<b>72,291</b>	2%	<b>(4,877)</b>	(6%)
Category 10	Processing of sold products	149,725	<b>151,776</b>	5%	<b>+2,051</b>	+1%
Category 11	Use of sold products	83,720	<b>79,318</b>	3%	<b>(4,402)</b>	(5%)
Category 12	End-of-life treatment of sold products	21,019	<b>20,056</b>	1%	<b>(962)</b>	(5%)
Category 13	Downstream leased assets	—	—	—	—	—
Category 14	Franchises	—	—	—	—	—
Category 15	Investments	—	—	—	—	—
Total		<b>3,143,308</b>	<b>3,017,482</b>	<b>100%</b>	<b>(125,826)</b>	<b>(4%)</b>

\* 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. 3.3)*
2. *IDEA v2.3* (the content for calculating supply chain emissions)  
AIST Research Institute of Science for Safety and Sustainability, Advanced LCA Research Group  
SuMPO