

# Climate Change Initiatives

## Supporting TCFD Recommendations



The effects of climate change are becoming increasingly serious and being blamed for frequent abnormal weather patterns and natural disasters. Together, these factors are impacting the food supply chain, on which is based the value provided by the Nichirei Group.

We recognize the importance of appropriately responding to risks posed by shifts in the external environment caused by climate change. On top of that, we are considering and preparing multiple scenarios in order to turn climate change into a business opportunity.

To this end, we are assessing climate change scenarios put forward by the Task Force on Climate-related Financial Disclosures (TCFD), created by the Financial Stability Board (FSB), an international body that monitors and makes recommendations about the global financial system.

As a result, the measures we introduce are based on four aspects of the recommended framework: governance, strategy, risk management, and metrics and targets. By conducting appropriate disclosures of associated information, we hope to continue building a constructive dialogue with our stakeholders.

It is in line with these ideas and because we support its recommendations that, in June 2020, we announced our participation in the TCFD Consortium.

## Governance

In October 2019, we began analyzing climate change scenarios as an interdepartmental Group project, headed by the Representative Director, President. Since Director, Executive Officer is responsible for implementing climate change strategy, he leads the project and teams up with environmental personnel and joint project members from the Strategic Planning department of both the holding company and Group companies to discuss and evaluate risks and opportunities with reference to the United Nations Intergovernmental Panel on Climate Change's (IPCC's) *Fifth Assessment Report (AR5)*, the climate change scenario currently in effect) and the *Special Report on Global Warming of 1.5°C*.

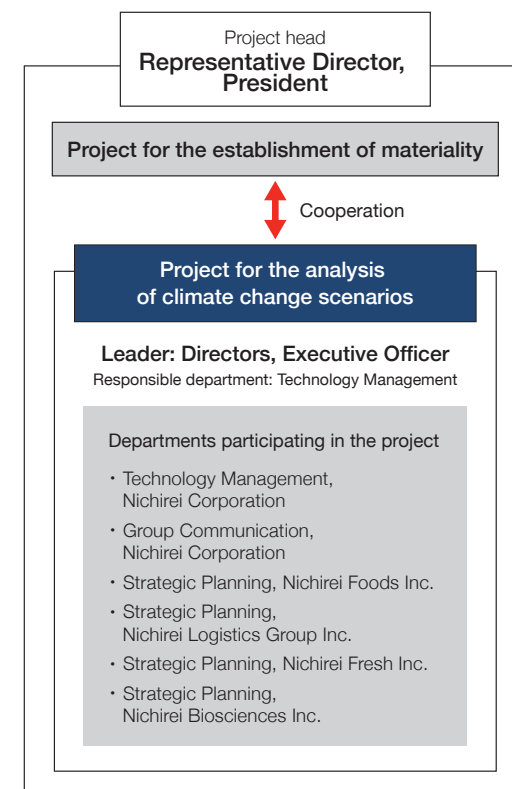
Through these activities, we identified the most important associated risks and opportunities based primarily on advice from outside experts.

In May this year, the Group Environmental Protection Committee, which reviews environmental policies and action plans, made proposals and conducted discussions concerning risks and corresponding countermeasures.

The committee's decisions were subsequently approved by the Board of Directors in June and are reflected in our current management strategy. The Group views climate change initiatives as one of the material matters in the achievement of its vision for long-term management goals toward 2030.

In future, the director-cum-executive officer in charge will report at least once a year on the progress of the initiatives at Board of Directors' meetings. Relevant strategies, goals, and plans will be revised as appropriate on the basis of the reports.

### Project Organization



## Strategy

Worldwide, the Nichirei Group is developing a range of food-centered businesses that it expects will be impacted by climate change. Based on recent baseline scenario analyses of how climate change might affect our business activities, we hope to achieve a greater understanding of the risks and opportunities that lie ahead and thus to incorporate appropriate responses into our management strategy based on the following activities.

### 1 Selecting Scenarios for Analysis; Developing a World View

This involves assessing the impact of climate-related risks and opportunities under the baseline (3–4°C)<sup>1</sup> and the 1.5°C scenarios.<sup>2</sup>

Baseline Scenario (Key Risks)	1.5°C Scenario (Socioeconomic Transition)
Storm surges; coastal flooding and rising sea levels; flashfloods; abnormal weather patterns; extreme heat; torrential rainfall; drought; water shortages; and deterioration in marine and terrestrial ecosystems	Decarbonization of energy; reduction of CO <sub>2</sub> emissions in demand sectors; spreading electrification of technologies; achievement of zero real emissions by 2050; particular focus on CO <sub>2</sub> as a greenhouse gas; increase in renewable energy-related investment; proper balance between sustainable development and the environment; and the implementation of decarbonizing technologies

Notes: 1. IPCC AR5: Physical risks 2. IPCC Special Report on Global Warming of 1.5 °C: Transition risks

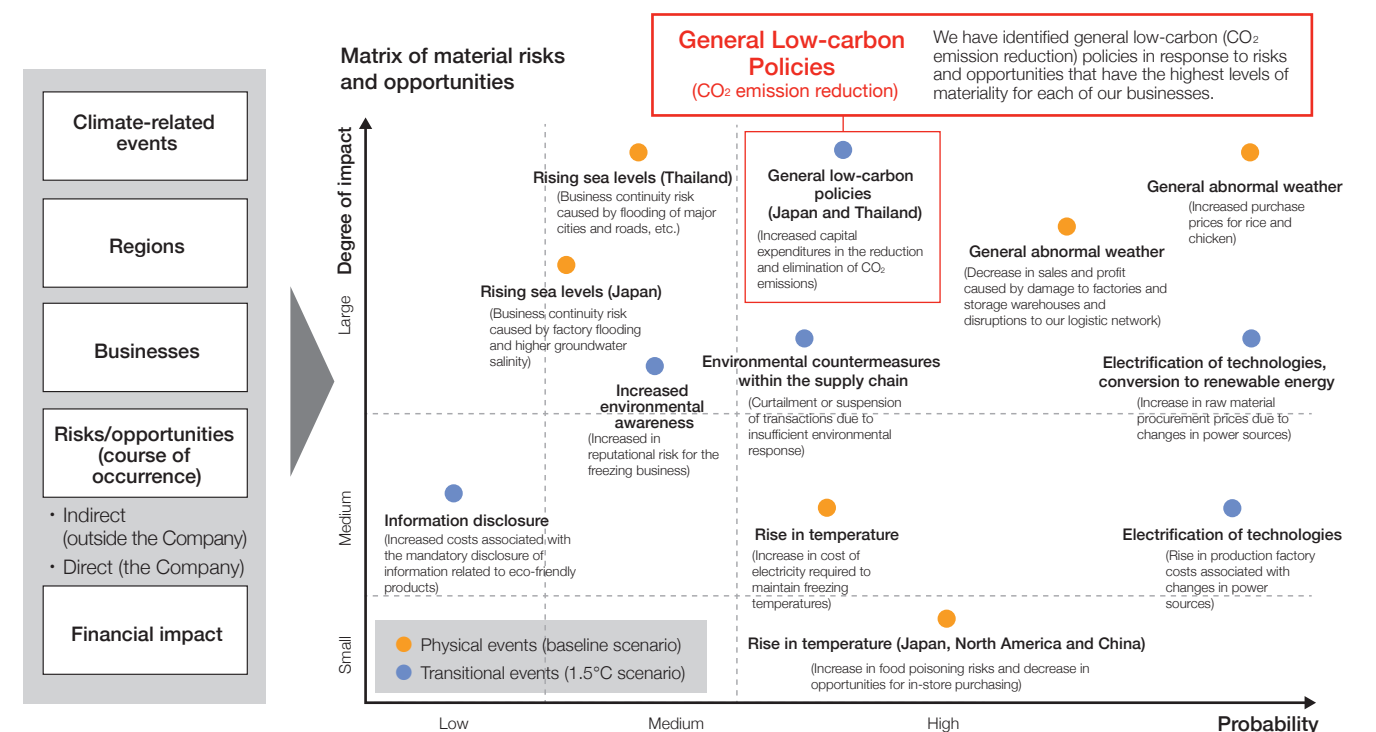
### 2 Assessment of Risk and Opportunity Materiality

The risks and opportunities associated with each scenario are identified and their materiality is evaluated based on their potential impact<sup>1</sup> (on sales in each business) and probability<sup>2</sup> (the likelihood that a risk-bearing, climate-related event will occur).

Notes: 1. Degree of impact: This metric assesses the financial impact of businesses that are expected to incur impact from climate-related events. 2. Probability: In cases of physical risks, such as natural disasters, this metric assesses frequency of occurrence. In cases of transition risk, it measures the anticipated degree of risk.

### 3 Identification of Material Risks and Opportunities

Based on assessments of materiality, material risks and opportunities associated with each business are selected, and from among them those with a particularly large financial impact are identified as risks and opportunities facing the entire Nichirei Group.



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## 4 Material Risks and Opportunities by Business

Business		Risks		
Foods Business	Chicken	Baseline scenario	General abnormal weather	<ul style="list-style-type: none"> <li>Reduction of agricultural and dairy production, and steep rise in purchase prices due to deterioration in quality</li> <li>Difficulty in obtaining raw materials and production delays due to logistic network disruptions</li> </ul>
	Rice		Flooding, rising sea levels	<ul style="list-style-type: none"> <li>Reductions in production efficiency and volume and submerged aquafarms</li> <li>Submerged agriculture farms, aquafarms and processing factories</li> <li>Difficulty in obtaining raw materials and production delays due to supply chain disruptions</li> </ul>
	Shrimp	1.5°C scenario		Low-carbon policies
	Vegetables, marine products, and meat and poultry products		Environmental countermeasures within the supply chain	<ul style="list-style-type: none"> <li>Curtailment of transactions; higher cost of measures such as the maintenance of global certifications</li> </ul>
Logistics	Common	Baseline scenario	General abnormal weather	<ul style="list-style-type: none"> <li>Damage to refrigerated warehouses and logistics centers</li> <li>Difficulty securing human resources in disaster risk areas</li> </ul>
		1.5°C scenario	Low-carbon policies	<ul style="list-style-type: none"> <li>Opportunity loss caused by the slow increase of investment in natural refrigerants and the slow adoption of technological platforms such as electrical and low-carbon vehicles</li> </ul>

Business		Opportunity	
Foods Business	Baseline scenario	Changes in weather patterns	<ul style="list-style-type: none"> <li>Increased demand for frozen and processed foods</li> </ul>
	1.5°C scenario	Strengthening of environmental countermeasures within our supply chain	<ul style="list-style-type: none"> <li>Increase demand for ethical products that are compliant with the SEDEX platform and are created using globally certified raw materials</li> <li>Increase demand for the curtailment of food loss within the supply chain through the development of eco-friendly products and technological development</li> </ul>
		Increased environmental awareness	<ul style="list-style-type: none"> <li>Develop and expand demand for products created using sustainable raw materials</li> </ul>
Logistics	Baseline scenario	General abnormal weather	<ul style="list-style-type: none"> <li>Increase in sales thanks to customer base expansion achieved through strengthened disaster countermeasures and resilience</li> </ul>
	1.5°C scenario	Modal shift	<ul style="list-style-type: none"> <li>Cost reduction achieved through a modal shift that improves transportation efficiency</li> </ul>
		Increased environmental awareness	<ul style="list-style-type: none"> <li>Increase in number of business partners due to higher evaluations as a company that actively discloses information related to environmental countermeasures</li> </ul>

Bioscience business is characteristically resistant to impact from climate change-related events. Accordingly, we have not currently identified any material factors in our bioscience business.

## 5 Impact of a Future Carbon Tax

We estimate that, through 2030, baseline emissions will present an approximate total carbon tax burden of between ¥10.5 billion and ¥13.0 billion, for an annual average of between some ¥1.7 billion and ¥2.2 billion.

We expect that, by achieving our Group CO<sub>2</sub> emission reduction targets (decrease of 30 % from FY2016 levels by 2030), we can reduce this burden to between about ¥6.7 billion and ¥8.3 billion, down approximately ¥3.7–4.7 billion from the baseline level.

Estimated Group Carbon Tax Burden and Amount of Reduction (average during 2025–2030 and cumulative total) (Billions of yen)

	Burden (baseline)	Burden (upon achievement of emission reduction targets)	Reduction of burden achieved upon fulfillment of emission reduction targets
Cumulative total	Approximately 10.5–13.0	Approximately 6.7–8.3	Approximately 3.7–4.7
Average (2025–2030)	Approximately 1.7–2.2	Approximately 1.1–1.4	Approximately 0.6–0.8

Note: Carbon tax assumption: Estimated as 100 yen / dollar, assuming \$ 30 / t-CO<sub>2</sub> in 2025, \$ 75-100 / t-CO<sub>2</sub> in 2030, and assuming a fixed amount increase each year from 2026 to 2029.

## Risk Management

Nichirei is a global operator of food-related businesses. Accordingly, we ensure that appropriate divisions manage the impact of a variety of risks (including climate change-related risks encountered through business activities) on business management, while adopting a holistic perspective and employing both rational and optimal methods.

The risks are also discussed and reviewed by the Group Risk Management Committee, which is chaired by the Representative Director, President.

We believe that risks associated with climate change scenarios are major and impact the entire Company. Thus, the Group Environmental Protection Committee, chaired by the Representative Director, President, reviews both physical and transition risks twice a year, based on information gleaned from relevant reports and experts' advice.

In addition, at least once a year the committee will review the Board of Directors' report produced by directors responsible for environmental management.

## Indicators and Targets

We implement the following three measures to reflect our low-carbon policies, which constitute one of the Group's long-term environmental targets associated with the most significant risks identified by climate change scenarios.

Related press release

[https://www.nichirei.co.jp/sites/default/files/inline-images/english/ir/pdf\\_file/news/20200624\\_1e.pdf](https://www.nichirei.co.jp/sites/default/files/inline-images/english/ir/pdf_file/news/20200624_1e.pdf)

### Nichirei Group Low-carbon Policies

Having endorsed TCFD recommendations, the Nichirei Group is promoting the following low-carbon policies.

Pillar of Low-carbon Policy	Overview	Target Scope
<b>The establishment of long-term CO<sub>2</sub> reduction goals</b>	<ul style="list-style-type: none"> <li>30% reduction in CO<sub>2</sub> emissions (compared to fiscal 2016) in Japan, Scope 1 and 2 in 2030</li> </ul>	Japan Scope 1 and 2
<b>The promotion of CO<sub>2</sub> reduction countermeasures overseas</b>	<ul style="list-style-type: none"> <li>Promote data collection and other efforts at overseas worksites</li> <li>Review and promote CO<sub>2</sub> reduction countermeasures at overseas worksites</li> </ul>	Overseas Scope 1 and 2
<b>The promotion of CO<sub>2</sub> reduction countermeasures within Scope 3</b>	<ul style="list-style-type: none"> <li>Promote data collection and other efforts within Scope 3</li> <li>Review and promote CO<sub>2</sub> reduction countermeasures within Scope 3</li> </ul>	Scope 3

Effective period: FY2022–2031 (10 years)