# Disclosure Based on the TCFD Framework



The Calbee Group recognizes the impact climate change has on sustainable business growth as an important issue. Therefore the Group conducts a scenario analysis in line with the recommendations put forth the by the Task Force on Climate-Related Financial Disclosures (TCFD) and is moving forward with initiatives according to the following framework.

#### Governance

We consider issues related to climate change as important to the sustainability of business activities, and have therefore conducted an investigation into climate change scenarios. This project was spearheaded by the President & CEO of the Company, with members from the Corporate Planning Department and the Sustainability Promotion Office, and other members related to the value chain. Based on this investigation, we have identified major risks and opportunities that have been reported to the Board of Directors after deliberation by the Management Council. Countermeasures of the resulting list of risks and opportunities are reflected in our medium- to long-term management strategies.

## Risk management

We conduct a thorough evaluation of risk levels, based on the impact of a potential risk on business and the frequency of occurrence, working from the understanding that climate change bears a major impact on business succession. When the evaluation identifies a major risk, the Ethics and Risk



Management Advisory Board confirms the validity of this assessment. After these procedures, the Ethics and Risk Management Committee, chaired by the President & CEO, prepares a description of the major risk to be reported to the Board of Directors, along with countermeasures.

## Indicators and targets

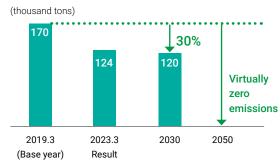
#### Indicators

To limit greenhouse gas emissions, we have set a goal to reduce emissions 30% by 2030 compared with levels in the fiscal year ended March 31, 2019. We have also set a goal to achieve virtually zero Scope 1 and Scope 2 emissions by 2050. As further measures to avoid and mitigate the damage caused by climate change, we will promote the development of new varieties of potatoes adapted to the changing climate, and we will expand the amount of contracted area for potato production in Tohoku and central Hokkaido.

## **Targets**

- Register new varieties of potatoes adapted for climate change (four varieties by 2030)
- Expand contracted area for potato production in Tohoku and central Hokkaido (area corresponding to 15,000 tons of potatoes, or 4.5% of potatoes procured domestically in fiscal year ended March 31, 2019, by 2030)

## **Targets for Greenhouse Gas Emissions**



Scope: Calbee manufacturing bases

### **Strategy and Scenario Analysis**

When identifying medium- to long-term risks and opportunities presented by climate change, we looked at two scenarios put forth by the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA)—the 4°C scenario, in which the earth's average temperature rises by 4°C or higher, and the 2°C scenario, in which the earth's rising temperature is kept within 2°C, in line with the Paris Agreement. Both of these scenarios were analyzed and organized in terms of the impact of regulations of greenhouse gas emissions, the effect on the procurement of potatoes, and production, which are key materials for the Company. The analysis concluded that in the 2°C scenario, there would be major impacts in the form of direct damage to factories and raw materials production areas due to intensifying natural disasters, and in terms of consumer behavior due to increasing environmental awareness.

Similarly, the analysis of the 4°C scenario predicted intensifying natural disasters would cause damage to factories and raw materials production areas, and also brought to light the major impact that insufficient hours of sunlight would have on potato yields. In response to these analyses, we are working to reduce our own greenhouse gas emissions, promote conversion and development of potato varieties, and decentralize our production areas. We also believe that addressing ethical consumption and developing products that utilize sustainable materials will create opportunities for the Company. We will continue to review these risks and opportunities, take concrete steps to implement measures, and reflect these risks and opportunities in our medium- to long-term management strategies. In doing so, we will strive to conduct business activities capable of social co-creation.

Risks and Opportunities Based on Climate Change Scenarios

Classification		Risk	Impact on Business	Degree of Impact*1	Period*2
Transition Risks		Increase in carbon pricing	The introduction of a carbon tax will increase the cost of factory operations and raw materials	Low	Medium Term
		Changes in customer behavior due to increasing environmental awareness	Climate change will increase consumption of environmentally friendly products	Medium	Medium Term
		Regulations on petroleum- derived plastics	Regulations on petroleum-derived plastics will lead to an increase in packaging material prices. Customers will increasingly opt for products that utilize biomass plastics as their environmental awareness grows	Medium	Medium Term
Physical Risks	Chronic	Impact of rising average temperatures on the cultivation of raw materials	Rising temperatures will reduce the relative weight of potatoes	Low	Medium Term
		Changing precipitation and weather patterns	Changing precipitation and weather patterns will reduce the number of hours of sunlight, resulting in poor potato growth and lower yields	High	Medium Term
	Acute	Increased frequency of abnormal weather (Heavy rains, typhoons, flooding, etc.)	Violent weather will cause damage to potato fields during harvest season, damage to factories, and halt distribution, which will result in lower procurement, production, and supply	High	Short term

Risk Countermeasures	Opportunities	
Utilize renewable energy Utilize methanation (the process of producing methane gas from hydrogen and carbon dioxide and converting it to fuel)	<ul> <li>Development of products to address ethical consumption</li> </ul>	
Make efforts to develop environmentally friendly products and acquire product certifications	<ul> <li>Conversion to packages that utilize environmen- tally friendly materials</li> </ul>	
▶ Promote recycling ▶ Switch to non-petroleum derived plastics	<ul> <li>Development of and conversion to potato varieties that can respond to climate change</li> </ul>	
<ul> <li>Develop and convert to new potato varieties</li> <li>Establish new cultivation techniques</li> <li>Decentralize production areas</li> <li>Secure import routes for potatoes produced overseas</li> </ul>	Utilization of agricultural labor-saving techniques to ensure and expand the procurement of raw materials  Discovery of sustainable raw materials and development of products that utilize them  Development of foods with a long shelf life	
Formulate BCP with protocols for abnormal weather Decentralize production sites for major products Utilize hazard maps as a basis for factory construction Establish supply system from overseas factories		

<sup>\*1 (</sup>Operating profit) High: ¥5.0 billion and higher; Medium: ¥2.0 billion to ¥5.0 billion; Low: ¥2.0 billion and lower \*2 Short term: 2024; Medium term: Approx. 2030

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