

# The Meiji Group TCFD Initiatives

The business of the Meiji Group is based on the abundant gifts of nature. We therefore believe that it is our responsibility to live in harmony with the global environment and nature. However, the sustainability of the global environment is in danger in recent years. We recognize that climate change has a significant long-term impact (risks and opportunities) on our business activities and that it is an important management issue for the Group. At the same time, international frameworks such as the Paris Agreement and the Sustainable Development Goals (SDGs) are calling for increased efforts to address climate change. To contribute to these international efforts, we are implementing climate change initiatives to help realize a decarbonized society.

## ■ Outline of TCFD Initiatives

### □ Achievements

The Meiji Group agreed to join the Task Force on Climate-Related Financial Disclosures (TCFD), which was established by the Financial Stability Board\*<sup>1</sup> in 2019. We also joined the TCFD Consortium, which was established by the Ministry of Economy, Trade and Industry, the Ministry of the Environment, and the Financial Services Agency as a place for collaboration between supporting companies, financial institutions and others.

We also established the Group TCFD Committee, which comprises relevant divisions from Meiji Holdings and its Group companies Meiji, Meiji Seika Pharma and KM Biologics, and started implementing TCFD initiatives from FY2019. The purpose of this committee is to reflect climate change-related long-term risks and opportunities in our business activities.

#### <Achievements>

2019: Participated in the support program of the Ministry of the Environment to conduct scenario analysis.

2020: Conducted scenario analysis in the areas of dairy ingredients and infectious diseases.

2021: In addition to scenario analysis in the areas of dairy ingredients, cocoa, antimicrobials (five domestic Key Drugs\*2), and vaccines, calculated the financial impact in the Group as a whole.

\*1 An international organization of representatives of central banks, financial supervisory

agencies, and finance ministries in the world's major countries and regions.

\*2 Five of the antimicrobials designated as Key Drugs by associations (the Japanese Society of Chemotherapy, Japanese Association for Infectious Diseases, etc.) are manufactured by Meiji Seika Pharma.

## □ Governance System

Important sustainability activities of the Meiji Group as a whole are discussed by the Executive Committee, supervised by the Board of Directors, and then reflected in management. We have also established the position of Chief Sustainability Officer (CSO) as the senior manager responsible for driving the sustainability activities of the Group as a whole to further strengthen those activities.

The Group Sustainability Committee, which is chaired by the President and Representative Director of Meiji Holdings, meets twice a year, and the Group Sustainability Secretariat Committee, which comprises sustainability-related divisions of Meiji Holdings and its Group companies Meiji, Meiji Seika Pharma and KM Biologics, meets monthly. At the meetings, they discuss a range of topics, including initiatives toward addressing social issues and overall progress of sustainability activities. We analyze climate change-related risks and opportunities, as well as responses to them. The Group TCFD Committee (which met five times in FY2020) examines those matters. The results are discussed in the Executive Committee and reported to the Board of Directors, which is responsible for supervision. Since the participation of the Risk Management Department in FY2021, which was newly established in Meiji Holdings, we have established a system to recognize and respond to the impact of climate change as a serious risk for the Group as a whole.

### Climate Change-related Group Sustainability Promotion System



## □ Strategy

We recognize that climate change-related risks and opportunities constitute a significant management issue for the Meiji Group. On a medium-term basis, we have established materiality and KPIs including "Reduce CO<sub>2</sub> emission volume" and "Secure water resources" based on our Meiji Group Sustainability 2026 Vision. On a long-term basis, we are promoting initiatives for living in harmony with nature for the future based on the Meiji Green Engagement for 2050, which reflects the Meiji Group's long-term environmental vision.

### <FY2020 Achievements>

- In addition to the analysis in the areas of dairy ingredients, cocoa, antimicrobials (five domestic Key Drugs), and vaccines for the entire supplier chain, calculated the financial impact in the Meiji Group as a whole.
- Established two scenarios (2-degree scenario and 4-degree scenario) based on the information of the IPCC\*3, IEA\*4, etc. to examine climate change related risks and countermeasures on a medium- to long-term basis with the base years of 2030 and 2050.
- The Board of Directors and the Executive Committee examined the results of analysis to confirm and review the countermeasures for achieving the Meiji Group Sustainability 2026 Vision and the Meiji Green Engagement for 2050.

### [Overview of Analysis Results]

- Major impacts expected from climate change have many common features regardless of the business areas.
- Major impacts will occur in each process of the supply chain (sourcing, manufacturing, logistics, and sales).
- Assume the risks with high priority based on the degree and probability of each impact.
  - 4-degree scenario: opportunity loss from flood damage, impact on the sourcing cost of raw materials
  - 2-degree scenario: increase in carbon pricing borne by the company, increase in the amount of electricity purchased by the company, increase in carbon pricing borne by dairy farmers and dairy ingredients suppliers
- Expected opportunities
  - 4-degree scenario: due to global warming, increase in demand for thirst quenching and heat stroke prevention, and for avoidance and prevention of the risk of infectious diseases
  - 2-degree scenario: increase in demand for eco-friendly merchandise due to expansion of ethical consumption

\*3 Intergovernmental Panel on Climate Change (IPCC): Shared Socioeconomic Pathways (RCP 6, RCP 8.5), etc.

\*4 International Energy Agency (IEA): Sustainable Development Scenario, Stated Policies Scenario, etc.

## □ Risk Management

The Meiji Group is promoting group-wide risk management to ensure it can accurately respond to risks that could severely impact our business activities by treating climate change as a priority risk for management.

The Board of Directors supervises climate change-related risks based on our governance system. Since the newly established Risk Management Department participated in the Group TCFD Committee in FY2021, we have established a system that can be integrated with the risk management for the whole Group.

Recognizing that climate change-related risks and opportunities will change with the times, we conduct quantitative analysis and evaluation with the scenario analysis in line with the recommendations of the TCFD. Based on the results of this analysis, we identify major impacts with high priority and examine countermeasures. We discuss the results in the Executive Committee, supervised by the Board of Directors, and properly reflect the results of the discussions in management to promote risk management.

<Meiji Group Business Risks>

<https://www.meiji.com/global/investors/governance/business-risks/>

## □ Indicators and Targets

As indicators related to climate change, we have established KPIs in the Meiji Group Sustainability 2026 Vision and the Meiji Green Engagement for 2050 and are promoting initiatives for achieving them.

Specifically, as countermeasures for the physical risks in the 4-degree scenario, we are working to reduce water consumption volume, promote raw materials sourcing with consideration for human rights and the environment, and improve productivity by supporting farmers.

As countermeasures for the transition risk in the 2-degree scenario, we established a goal of realizing carbon neutrality by 2050 and are reducing CO<sub>2</sub> emission volume in manufacturing processes by measures such as energy saving and energy creation, and in sourcing by reduced use of plastics and other measures.

## ■ Results in Scenario Analysis

### □ Outline of Analysis

In FY2020, we established two scenarios (2-degree scenario and 4-degree scenario) based on the information of IPCC, IEA, etc. to examine the impact of climate change on a medium- to long-term basis by setting 2030 and 2050 as the base years. We calculated the financial impact in the Meiji Group as a whole and examined countermeasures, in addition to the analysis in the areas of dairy ingredients, cocoa, antimicrobials (five domestic Key Drugs), and vaccines.

Business Segment	Food	Pharmaceutical
Company	Meiji Co., Ltd.	Meiji Seika Pharma Co., Ltd. KM Biologics Co., Ltd.
Target area of analysis	Dairy ingredients and cocoa	Antimicrobials (5 Key Drugs) Vaccines
Scope of financial impact calculation	Meiji Group as a whole	
Analysis Base Year	2030 (medium term) 2050 (long term)	

□ Effect and Major Impact on the Meiji Group in Each Scenario

**Major impact in the 4-degree scenario**

	Change related to climate change	Major impacts	Impact on Meiji Group	
			Supply chain	Specific impact
Physical risks	Change in growth environment of biological resources due to changes in temperature, precipitation, etc.	Decrease in yield of raw materials	Sourcing	Impact on raw materials sourcing cost
	Increase in severity and frequency of typhoons, torrential rains, etc.	Opportunity loss from flood damage	Sourcing Manufacturing and logistics	Opportunity loss due to site shutdowns, etc.
Opportunities	Change in lifestyle due to rising atmospheric temperatures	Change in demand due to global warming	Sales	Increase in demand for products for thirst quenching, heat stroke prevention, etc.
	Change in lifestyle due to new infectious diseases or increased risk of infectious diseases	Change in demand due to avoidance of infectious disease risk	Sales	Increase in demand for vaccines and immune-activation products

\* Physical risk: Damage from disasters, etc. caused by climate change

**Major impact in the 2-degree scenario**

	Change related to climate change	Major impacts	Impact on Meiji Group	
			Supply chain	Specific impact
Transition risks	Reinforcement of the government's environmental regulations	Introduction of carbon pricing	Manufacturing	Increase in carbon pricing cost to be borne by the company
			Sourcing and logistics	Increase in cost of carbon pricing compliance to be borne by farmers and suppliers
	Expansion of investment in power facilities due to increase in renewable energy	Increase in amount of electricity purchased	Manufacturing	Increase in cost of purchasing renewable energy derived electricity
			Manufacturing	Increase in normal electricity purchase cost
Opportunities	Change in lifestyle due to improvement of environmental awareness	Expansion of ethical consumption	Sales	Increase in demand for environmentally friendly products

\* Transition risk: Risk arising in transition to a decarbonized society for mitigating climate change

Identify the major impacts with high priority based on the risk impact and probability

<Major impacts with high priority>

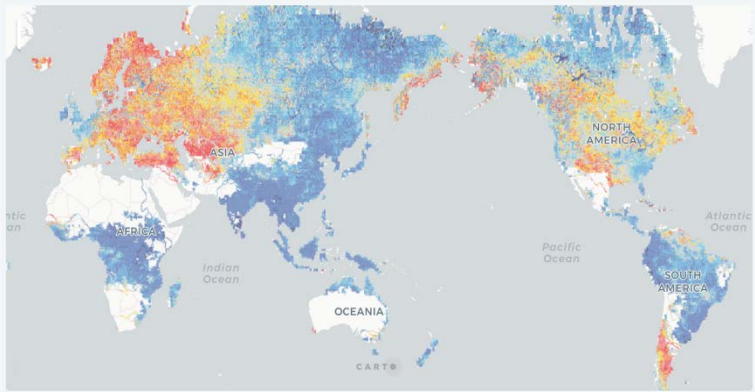

4-degree scenario: opportunity loss from flood damage, impact on the sourcing cost of raw materials

2-degree scenario: increase in carbon pricing borne by the company, increase in the amount of electricity purchased by the company, increase in carbon pricing borne by dairy farmers and dairy ingredients suppliers

□Response to Major Impacts with High Priority

[Major Impacts in the Areas where Meiji Group can Respond Proactively]

[4-degree scenario]

Risks	<p>Confirm the predictions of flood frequency in the future and <b>identify areas with high flood risk</b> by evaluating water risk at the in-house production bases of Meiji Group in FY2020.</p> <p>&lt;Flood frequency prediction map *5&gt;</p> 
Responses	<p>(Non-structural measures)</p> <ul style="list-style-type: none"> <li>- Prepare an emergency action manual with top priority on saving lives.</li> <li>- Conduct evacuation drills in ordinary times.</li> </ul> <p>(Structural measures)</p> <ul style="list-style-type: none"> <li>- Risk reduction by decentralizing production bases.</li> <li>- Mitigate flood damage by reinforcing waterproofing equipment, such as waterstops and waterproof walls. *6</li> </ul> <p>&lt;Waterstop installed in Oda Plant, Meiji Seika Pharma&gt;</p> 

\*5 Source: MS&AD InterRisk Research & Consulting, Inc. "Map of projected changes in flood frequency due to climate change"

Hirabayashi, Y., Tanoue, M., Sasaki, O. et al. Global exposure to flooding from the new CMIP6 climate model projections. Sci Rep 11, 3740 (2021).

<https://doi.org/10.1038/s41598-021-83279-w>

\*6 Please access the website below for the measures for responding to water resources.



[https://www.meiji.com/global/sustainability/caring\\_for\\_the\\_earth/water/](https://www.meiji.com/global/sustainability/caring_for_the_earth/water/)

[2-degree scenario]

Risks	<ul style="list-style-type: none"><li>- Predict full-scale introduction of carbon pricing in Japan in the future.</li><li>- <b>Assume the application of carbon pricing</b> to in-house direct emissions (Scope 1) and indirect emissions due to purchase of electricity, etc. (Scope 2) in CO<sub>2</sub> emission volume resulting from the business activities of Meiji Group.</li></ul>																									
Responses*7	<ul style="list-style-type: none"><li>- Establish a long-term target of realizing carbon neutrality by 2050.</li><li>- Promote reduction of CO<sub>2</sub> emission volume through energy saving activities, energy creation activity by solar power generation, purchase of renewable energy derived electricity, etc.</li><li>- Consider acquisition of SBT certification and introduction of internal carbon pricing.</li><li>- Proactively consider introduction of new technologies, next-generation energy, etc.</li></ul> <div><p><b>Effect of introducing carbon pricing</b></p><p>(Unit: hundred million yen)</p><table><tr><th></th><th colspan="2">4-degree scenario</th><th colspan="2">2-degree scenario</th></tr><tr><th></th><th>2030</th><th>2050</th><th>2030</th><th>2050</th></tr><tr><td>When taking no measures to reduce CO<sub>2</sub> emission volume</td><td>7</td><td>11</td><td>33</td><td>46</td></tr><tr><td>When implementing countermeasures to reduce CO<sub>2</sub> emission volume</td><td>4</td><td>5</td><td>24</td><td>32</td></tr><tr><td>Effect of countermeasures to reduce impact</td><td>3</td><td>6</td><td>9</td><td>14</td></tr></table></div>		4-degree scenario		2-degree scenario			2030	2050	2030	2050	When taking no measures to reduce CO <sub>2</sub> emission volume	7	11	33	46	When implementing countermeasures to reduce CO <sub>2</sub> emission volume	4	5	24	32	Effect of countermeasures to reduce impact	3	6	9	14
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\*7 Please access the website below for the initiatives to reduce CO<sub>2</sub> emission volume.

[https://www.meiji.com/global/sustainability/caring\\_for\\_the\\_earth/climate\\_change/](https://www.meiji.com/global/sustainability/caring_for_the_earth/climate_change/)

Risks	- <b>Assume increases in the amount of electricity purchased</b> due to the purchasing of renewable energy derived electricity.
Responses	<ul style="list-style-type: none"> <li>- Reduce amount of electricity purchased by expanding energy saving and energy creation.</li> </ul> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>&lt;Tokai Meiji&gt;</p> </div> <div style="text-align: center;">  <p>&lt;Meiji America Santa Ana Plant&gt;</p> </div> </div>



□Impacts of Concern in Raw Material Sourcing

Risks	<b>Impact</b> of climate change <b>on agricultural and livestock products is assumed</b> in both 4-degree and 2-degree scenarios.	
	4-degree scenario	- Yield decrease in raw materials, such as fresh milk, dairy ingredients, and cocoa beans, due to changes in air temperature, precipitation, etc., implementation of summer heat countermeasures, etc. might affect sourcing cost.
	2-degree scenario	- Assume introduction of carbon pricing for raw materials.
Responses	Product-related response	- Promote added value enhancement to improve the competitive edge in the market. - Optimize product portfolio.
	Response to maintain stable sourcing	- Strengthen our relationship with farmers for stable procurement through Meiji Group's unique initiatives (Meiji Cocoa Support (MCS) and Meiji Dairy Advisory (MDA)).*8  <MCS activity>  <MDS activity>
	Response to reduce CO2 emission volume	- Study of low carbon dairy farming - Cooperation with dairy farmers for realizing low carbon dairy farming

\*8 Please access the following websites for initiatives for sustainable sourcing, such as support to farmers.

[https://www.meiji.com/global/sustainability/sustainable\\_procurement/](https://www.meiji.com/global/sustainability/sustainable_procurement/)

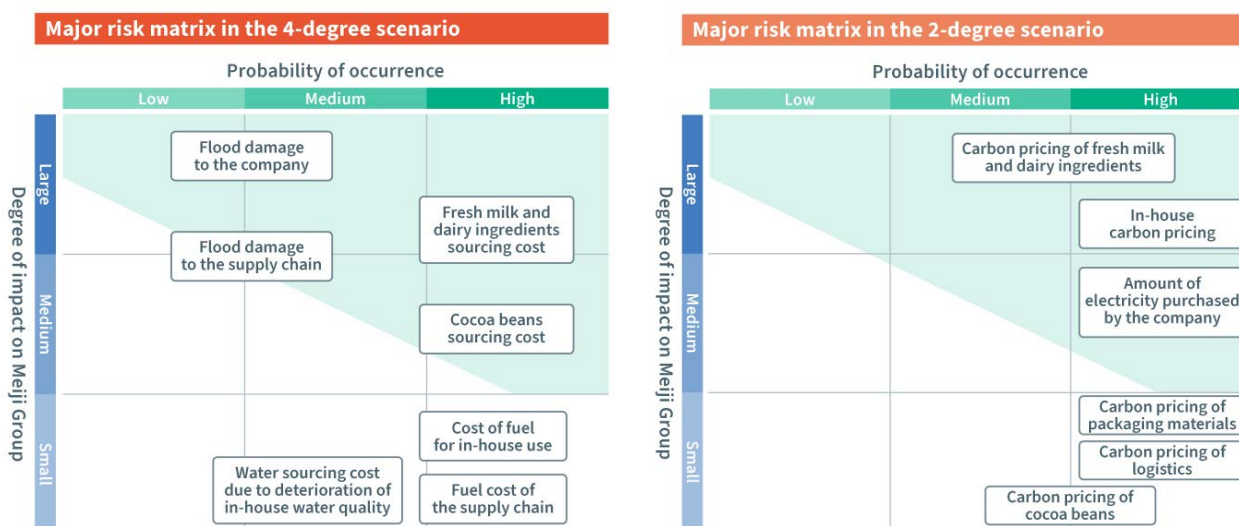
## ■ Reinforcement of Risk Management Initiatives

For identification and evaluation of risks, we create a risk matrix based on the results of scenario analysis considering the degree and probability of risks. We then identify major impacts with high priority, manage them properly in accordance with the risk management flow, and promote their reflection in management.

Major impacts with high priority

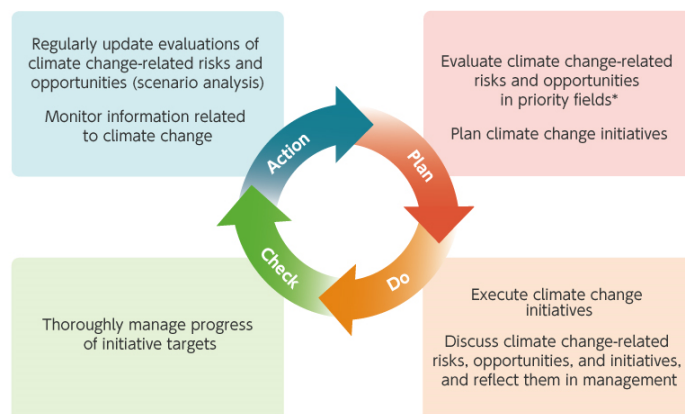
4-degree scenario: opportunity loss from flood damage, impact on the sourcing cost of raw materials

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Clarify the prioritization of major impacts based on the degree and probability of impacts on the Meiji Group

<Risk Management Flow>



\* Key areas of focus are those related to the "Major impacts with high priority" mentioned above, as well as "new important major impacts" that will arise in the course of scenario analysis.

## ■ Specific Initiatives in Indicators and Targets

The Meiji Group has developed the Meiji Group Sustainability 2026 Vision and Meiji Green Engagement for 2050, which reflects the Meiji Group's long-term environmental vision, and has established materiality and KPIs for them. There are various measures for risks and opportunities related to climate change, including activities to reduce environmental impacts, raw material sourcing, and provision of commercial value. We regularly check our progress in each KPI and take a systematic approach to achieve the targets. We evaluate check results as part of the Meiji ROESG® \*9 indicators and reflect them in executive remuneration.

When new risks and opportunities arise, we investigate appropriate responses, discuss them in the Executive Committee, supervised by the Board of Directors, and reflect the results of the discussions in management.

<KPIs associated with climate change related risks and opportunities>

Major impacts Countermeasures	Category	KPIs	
		Sustainability 2026 Vision	Long-term environmental vision
Introduction of carbon pricing	CO <sub>2</sub> emission volume	Reduce company-wide CO <sub>2</sub> emissions (Scope 1, 2) by at least 40% by FYE 3/2031 (compared to FYE 3/2016)	Reduce company-wide CO <sub>2</sub> and other greenhouse gas emissions to nearly zero in the whole supply chain by 2050
	Renewable energy usage	Expand renewable energy usage to make up at least 50% of total company-wide usage by FYE 3/2031	Achieve 100% share of renewable energy in total power usage at each site by 2050
	Plastic usage	Reduce domestic plastic usage, (packaging, etc.) by at least 25% by FYE 3/2031	Minimize use of new natural capital for packaging
		Increase use of biomass plastics and recycled plastics	
Water Sourcing cost	Water consumption volume	Reduce company-wide water consumption volume per unit of sales by at least 20% by FYE 3/2031, compared with FYE 3/2018	Reduce company-wide water consumption volume per unit of sales by 50% by 2050, compared with FYE 3/2018
Product-related response in the impact on product sourcing	Development of products that contribute to healthy dietary	Increase the sales growth of products that contribute to healthy diets, value-added nutrition products, and products that	

	habits	contribute to a super-aged society by at least 10% compared with FYE 3/2021 baseline by FYE 3/2024	
Response to stable sourcing in the impact on product sourcing	Procure raw materials with consideration for human rights and the environment (cocoa)	Increase procurement ratio of sustainable cocoa beans to 100% by FYE 3/2027	
	Procure raw materials with consideration for human rights and the environment (fresh milk)	Conduct MDA activities to provide management-related support to dairy farmers at least 400 times a year and at least 2,150 times in cumulative total by FYE 3/2024	

\*9 The ROESG performance indicator was created and registered as a trademark by Professor Kunio Ito of Hitotsubashi University.

#### <Progress of various indicators for climate change and initiatives>

##### ☐ Indicators for carbon pricing introduction

###### •CO<sub>2</sub> emission volume

[https://www.meiji.com/global/sustainability/caring\\_for\\_the\\_earth/climate\\_change](https://www.meiji.com/global/sustainability/caring_for_the_earth/climate_change)

###### •Renewable energy usage

[https://www.meiji.com/global/sustainability/caring\\_for\\_the\\_earth/climate\\_change/](https://www.meiji.com/global/sustainability/caring_for_the_earth/climate_change/)

###### •Plastic usage

[https://www.meiji.com/global/sustainability/caring\\_for\\_the\\_earth/recycling\\_society/](https://www.meiji.com/global/sustainability/caring_for_the_earth/recycling_society/)

##### ☐ Indicators for water procurement cost

###### •Water consumption volume

[https://www.meiji.com/global/sustainability/caring\\_for\\_the\\_earth/water/](https://www.meiji.com/global/sustainability/caring_for_the_earth/water/)

##### ☐ Indicators for product-related response in the impact on product procurement

###### •Development of products that contribute to healthy dietary habits

[https://www.meiji.com/global/sustainability/healthier\\_lives/health\\_nutrition/](https://www.meiji.com/global/sustainability/healthier_lives/health_nutrition/)

□ Indicators for response to stable sourcing in the impact on product sourcing

• Procure Raw Materials With Consideration Toward Human Rights and the Environment (cocoa)

[https://www.meiji.com/global/sustainability/sustainable\\_procurement/](https://www.meiji.com/global/sustainability/sustainable_procurement/)

• Procure Raw Materials With Consideration Toward Human Rights and the Environment (dairy ingredients)

[https://www.meiji.com/global/sustainability/sustainable\\_procurement/](https://www.meiji.com/global/sustainability/sustainable_procurement/)