

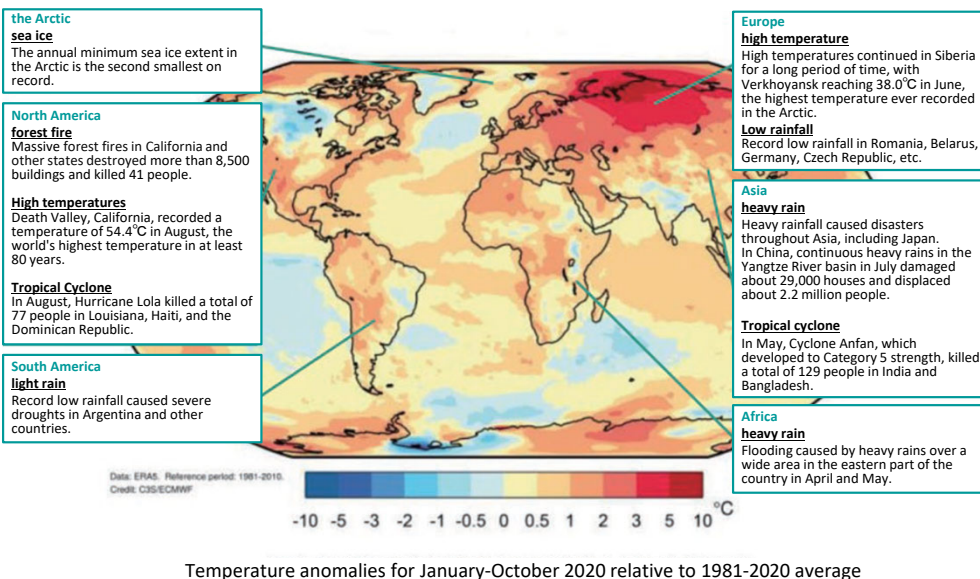
Outline of the Ministry of Agriculture, Forestry and Fisheries Climate Change Adaptation Plan [Food Supply and Demand]



<Current status>

- The impacts of climate change on yields and other factors has been reported in many parts of the world, especially for major grains (wheat, soybeans, corn, and rice).

Extreme weather around the world in 2020

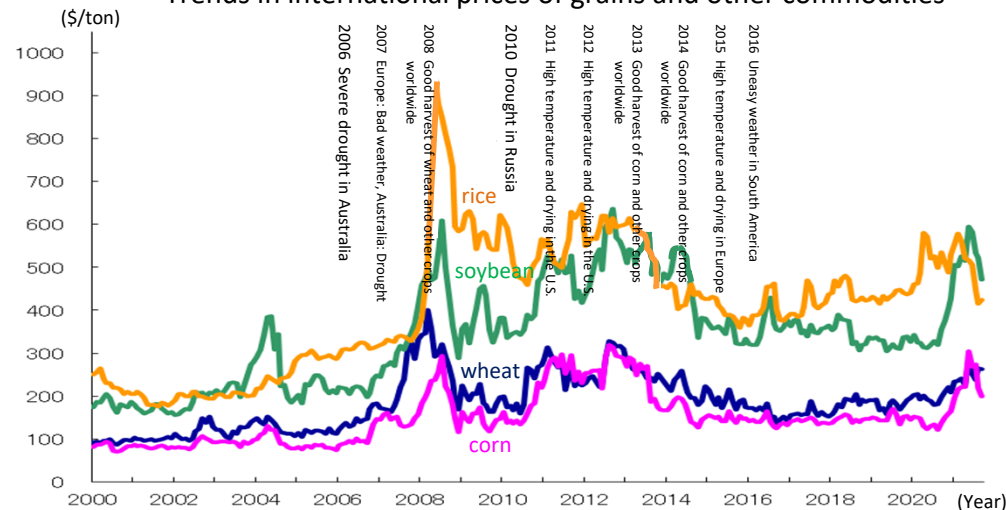


Source: 2021 White Paper on the Environment, Sound Material-Cycle Society and Biodiversity (MOE)

<Future prediction>

- Globally, numerous literature review studies have confirmed that projected future temperature increases will reduce yields of rice, wheat, soybeans, and corn.

Trends in international prices of grains and other commodities



Note 1: For wheat, corn and soybeans, the settlement price is the closing price on the Chicago Board of Trade on the first Friday of each month. The price of rice is the FOB price of 100% Thai milled leach rice (2nd class) on the first Wednesday of each month as published by the National Board of Trade of Thailand.

Note 2: For the highest historical price, the highest price published by the National Board of Trade of Thailand for rice, and the highest closing price of the period for all trading days on the Chicago Board of Trade for all prices other than rice.

Countermeasures

In order to prepare for unforeseen circumstances, we will analyze and assess the impact of climate change, conduct research and analysis on Japan's future food supply and demand, and study and review countermeasures to establish comprehensive food security.

- Collection and analysis of information on domestic and international food supply and demand trends and analysis of their impact on the stable supply of food in Japan, and provision of a wide range of information
- The agro-meteorological information satellite monitoring system developed in cooperation with JAXA was opened to the public and utilized to monitor food supply trends overseas.
- Based on the results of the IPCC's climate change assessment and the world's ultra-long-term food supply and demand predictions based on economic growth predictions, etc., we will consider appropriate responses to risks with a view to future food supply and demand in Japan.
- Continuously conduct medium- to long-term forecasts of global food supply and demand based on trends in each country's economic growth and policies.

Outline of the Ministry of Agriculture, Forestry and Fisheries Climate Change Adaptation Plan [Food Manufacturing]



Impact

<Current status>

- The food manufacturing industry is considered to be particularly vulnerable to the impacts of climate change on raw material procurement and quality, and there are reports of cases where these impacts have already begun to occur.

<Future prediction>

- Historically, companies have perceived climate change as a risk and an opportunity.

- Promote efforts by food-related businesses to disclose climate-related information based on the guidance in the TCFD recommendations (the final report on a framework for disclosing information on climate change risks and opportunities) and examples of initiatives.
- The food manufacturing industry is considered to be particularly vulnerable to the impact of raw material procurement and quality through, for example, deterioration in the quality of agricultural crops, reduced yields, and the impact of disasters on the supply chain.
- In view of the expected tightening of imported raw materials due to climate change and increased global demand for raw materials, it is necessary to consider the reduction of losses in the supply chain and diversification and backup of suppliers for sustainable and stable procurement of raw materials.

Countermeasures

What is TCFD?

The TCFD is a private sector-led task force that encourages companies and others to disclose climate-related financial information efficiently.

- The TCFD is positioned as a working group of the Financial Stability Board (FSB), which consists of the central bank governors and finance ministers of each country.
- In June 2017, the TCFD published its recommendations on voluntary disclosure (TCFD Recommendations).

TCFD Recommendations (Final Report)
 ✓ Three types of reports are available: the final report, an appendix document, and a technical supplement for scenario analysis.



*Guidance for four financial sectors (banks, insurance companies, asset owners, and asset managers) and four non-financial sectors (energy, transportation, raw materials and buildings, and agriculture, food, and forest products)

Japanese translation available for download on the Sustainability Japan Forum website

source: Prepared from Ministry of the Environment data, Climate-related Financial Information Disclosure Task Force Final Report Prepared from the recommendations of the Climate-related Financial Information Disclosure Task Force.

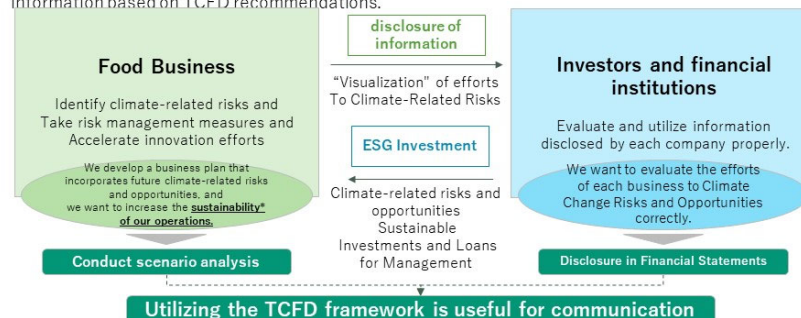
Environmental Policy Office, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries

1

Why TCFD?

The comparability of disclosures about climate-related risks and opportunities is important. Therefore, investors and financial institutions require disclosures based on the TCFD framework

- The TCFD has put in place a common and globally comparable framework for climate-related disclosure.
- In order for investors and financial institutions to assess a company's resilience to climate-related risks and opportunities when making investment and financing decisions, companies are required to disclose information based on TCFD recommendations.



*The impact on companies due to non-compliance with the TCFD recommendations is that it may hinder sustainable management of companies in the short to medium term. For details, please refer to the Ministry of the Environment's "Recommendations for Management Strategy Planning Utilizing TCFD: A Practical Guide for Scenario Analysis Incorporating Climate-Related Risks and Opportunities".

source: TCFD Consortium, Sumitomo Mitsui Financial Group Website

Environmental Policy Office, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries

2

Source: Introduction to the Disclosure of Information on Climate Change Risks and Opportunities in the Food, Agriculture, Forestry and Fisheries Industries (TCFD Guide), published by MAFF in June 2021)
<http://www.maff.go.jp/j/kanbo/kankyo/seisaku/climate/attach/pdf/visual-60.pdf>

<Paris Agreement (Adaptation: Article 7)>

- Recognizing the importance of support and international cooperation in adaptation efforts and the importance of taking into account the needs of developing countries and countries particularly vulnerable to the adverse impacts of climate change
- Strengthen cooperation to enhance action on adaptation (e.g., information sharing, strengthening organizations, enhancing scientific knowledge)
- Provide ongoing international support to developing countries for the implementation of this article.



<International Agriculture, Forestry and Fisheries Research Strategy>

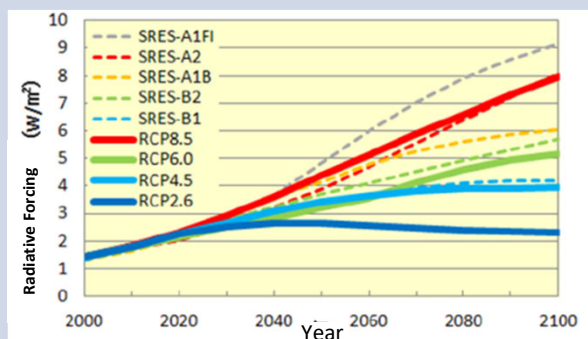
- Promotion of technological development in developing regions
To contribute to global efforts to ensure global food security and to solve various problems in emerging and developing countries by conducting joint research in developing regions, and to disseminate the results widely.
- Promotion of international agriculture, forestry and fisheries research leading to increased international contributions on a global scale



As the chair of the Global Research Alliance (GRA) on Greenhouse Gases in Agriculture, we held a side event at COP23 to introduce the GRA's initiatives (November 2017).

Cooperation through the provision of scientific knowledge, etc.

- Provision of scientific findings to the IPCC Sixth Assessment Report, etc.



International cooperation through contributions to international organizations

- Promote the technology development towards building a new food system with improved productivity, sustainability and resilience.
- Promote the spread of measures to strengthen community resilience in mountain watersheds by utilizing the disaster prevention and mitigation functions of forests.



Technical cooperation

- Support initiatives for sustainable forest management and forest conservation in developing countries, and promote the development of technologies that contribute to enhancing the forest functions of disaster prevention and mitigation.



