

# Wholesale and retail

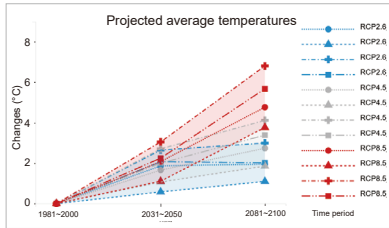
## Major Factors of Impacts

Rising temperatures, increased heavy rains and large typhoons

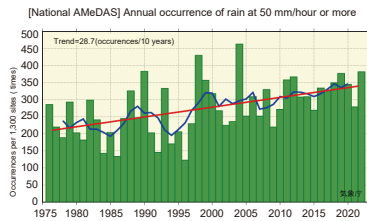


## Current Situation and Future Projections

Average temperature in Japan is rising at a rate of 1.24°C /100 years, and the annual number of heavy rainfall events of 50 mm or more per hour is also on the rise. Further increased temperature and heavy rainfall are projected for the future.



Projected average temperatures (annual average temperature projections based on emission scenarios and climate models (difference from standard period))Source: A-PLAT



Changes in the annual occurrence of precipitation of 50 mm/hour or more in Japan Source: Japan Meteorological Agency website (translated by NIES)

Consequently, following risks are anticipated.

- Deterioration in business performance due to declining sales of seasonal products, and procurement risks due to extreme weather conditions
- Risks that damage to infrastructure and lifelines, which are foundation of business activities, will have extremely large and serious impacts
- Possibility that the extent of these risks and impacts will be greater for small and medium-sized enterprises

## Adaptation

It is necessary to deepen understanding of impacts on business activities and supply chain as a whole along with its response, and to consider comprehensive adaptation measures in line with details of business activities.

		Rising temperatures, increased heavy rains and large typhoons						
		Core business		Adaptation business				
Factors								
Management resources								
Impacts	Buildings and facilities	<ul style="list-style-type: none"> <li>• Flooding in stores, factories, warehouses, and other facilities due to water-related disasters</li> <li>• Increased operating costs due to increased power consumption of air conditioning equipment</li> </ul>	Product procurement and business activities	<ul style="list-style-type: none"> <li>• Increased procurement risk and higher procurement prices due to crop failures and poor catch</li> <li>• Supply chain disruption</li> <li>• Rising prices of raw material procurement due to growing consumer demand for products that respond to climate change and environmental concerns, etc.</li> </ul>	Merchandise sales	<ul style="list-style-type: none"> <li>• Impediments to demand forecast for seasonal products</li> <li>• Temporary closure or suspension of physical stores</li> <li>• Changes in consumer behavior</li> <li>• Changes in product demand due to changes in frequency, timing, and geographical location of infectious disease outbreaks</li> </ul>	Promote and enhance product sales	<ul style="list-style-type: none"> <li>• Increased demand for products that respond to temperature changes</li> <li>• Increased demand for products related to weather-related disasters</li> </ul>
	Adaptation measures	Formulate and implement BCP						
Strengthen resilience of buildings and infrastructure								
Develop and implement adaptation strategies based on scenario analysis								
Review and improve supply chains								
	Utilize weather data							
	Promote and enhance product sales during temperature rise							
	Establish sales channels other than physical stores							
	Promote and strengthen sales of disaster prevention/mitigation products							



# Wholesale and retail

Wholesale and retail trade are businesses that purchase and sell tangible products.

Wholesale business refers primarily to the business of selling products in large quantities or amount of money to industrial users (e.g., construction, manufacturing, transportation, restaurants, lodging, schools, government offices, etc.) who sell the products to retailers or other wholesalers. Retail trade refers to the business of selling products primarily for personal or household consumption.

Back

Factors	Rising temperatures, increased heavy rains and large typhoons			
Management resources	Core business		Adaptation business	
Impacts	Buildings and facilities	Product procurement and business activities	Merchandise sales	Promote and enhance product sales
	<ul style="list-style-type: none"> <li>Flooding in stores, factories, warehouses, and other facilities due to water-related disasters</li> <li>Increased repair costs for facilities and equipment</li> <li>Interruption of business activities due to power outages</li> <li>Increased operating costs due to increased power consumption of air conditioning equipment</li> <li>Increased mold growth and resulting increase in health risks</li> </ul>	<ul style="list-style-type: none"> <li>Increased procurement risk and higher procurement prices due to crop failures caused by extreme weather events in domestic or global supply chain</li> <li>Increased procurement risk due to decreased production of livestock products and losses due to heat</li> <li>Poor catches and higher procurement prices of marine products due to rising sea water temperatures</li> <li>Interruption of business activities due to supply chain disruptions, such as damage to suppliers in Japan or around the world</li> <li>Interruption of business activities due to logistics disruptions (by land, air, or sea)</li> </ul>	<ul style="list-style-type: none"> <li>Impediments to demand forecast for seasonal products due to rapid temperature changes, increased heavy rainfall, etc.</li> <li>Temporary closure or suspension of physical stores due to weather disasters</li> <li>Decreased opportunities for consumers to go out due to rapid temperature changes, increased heavy rainfall, etc.</li> <li>Changes in product demand due to changes in frequency, timing, or geographical location of infectious disease outbreaks</li> </ul>	<p><b>Promote and enhance product sales during temperature rise</b></p> <ul style="list-style-type: none"> <li>Cold beverage and products using cold fruit</li> <li>Home appliances (air conditioners, dehumidifiers, fans, etc.)</li> <li>Heat stroke prevention products using contact-cooling materials</li> <li>Insect repellent and other infection control products</li> </ul> <p><b>Expand business opportunities as the climate changes</b></p> <ul style="list-style-type: none"> <li>Products used for outdoor recreation including golf, camping, badminton, skateboarding, etc.</li> <li>Sports apparel products</li> </ul> <p><b>Expand sales of hay fever prevention products in response to the prolonged pollen dispersal period due to the warm winter</b></p> <ul style="list-style-type: none"> <li>Hay fever prevention/measure products including masks, goggles, allergic rhinitis medications, etc.</li> </ul> <p><b>Promote and strengthen sales of disaster prevention and mitigation products</b></p> <ul style="list-style-type: none"> <li>Disaster prevention and mitigation products for facilities, such as sandbags and watertight panels</li> <li>High-function umbrellas, raincoats, and other products for outings during heavy rain</li> <li>Stock foods, drinking water, and other supplies to prepare for disasters</li> </ul>
<b>Adaptation measures</b>	<ol style="list-style-type: none"> <li>Formulate and implement BCPs</li> <li>Enhance resilience of buildings and infrastructure</li> <li>Improve disaster prevention functions by raising height of buildings and installing watertight panels, etc.</li> <li>Assess the amount of electricity required for business operations and impact of power outages at each of the company's sites, and prepare emergency generators as necessary</li> <li>Heat shielding measures by greening rooftops of facilities and installing water sprinklers on roofs, etc.</li> <li>Mold prevention measures through coatings, etc.</li> <li>Take out damage insurance</li> </ol>	<ol style="list-style-type: none"> <li>Develop and implement adaptation strategies based on scenario analysis</li> <li>Review and improve supply chains</li> <li>Develop procurement facilities that do not require transportation</li> <li>Secure procurement volume through imports</li> <li>Diversify product origins to cope with unfavorable weather conditions, etc.</li> <li>Develop private brands</li> <li>Optimize productivity by investing in facilities in production areas and reviewing cultivation methods</li> </ol>	<ol style="list-style-type: none"> <li>Utilize weather data (identify changes in consumer behavior)</li> <li>Formulate annual sales promotion plans using weather forecasts</li> <li>Establish sales channels other than physical stores (open mobile stores, expand online sales and delivery services)</li> <li>Measures to ensure business continuity, including scenario analysis</li> <li>Expansion of online sales and delivery services</li> </ol>	
<b>Effect</b>	1) 4) Low 2) 7) Medium ~ High 3) 5) ~ 6) Medium	1) High 2) Medium ~ High	3) Medium 1) 2) 4) 5) High	—
<b>Cost</b>	1) 7) Low 2) Medium ~ High 3) Medium 4) ~ 6) High	1) Low 2) Medium ~ High	4) Low 1) 2) Medium 3) High	—
<b>Time span</b>	1) 7) Short 2) Short ~ Long 3) ~ 4) Short 5) ~ 6) Medium ~ Long	1) Short 2) Medium ~ Long	1) 2) 5) Short 3) 4) Medium ~ Long	—

### How to proceed with adaptation measures

**[Current approach]** Existing disaster prevention initiatives, supply chain management, etc. are included as part of adaptation measures.

**[Climate change-aware approach]** After collecting and organizing information on climate change impacts experienced in the past, such as disaster countermeasures and confirmation of facilities affected by windstorms and floods, measures should be taken using future forecast information. It is also necessary to consider the impact of the effects on the raw materials of the products handled in each company's business activities. In the supply chain, there is a need to increase sustainability, taking into account the expansion of already existing impacts as well as the occurrence of new impacts. The industry needs to view adaptation as a business opportunity and develop sales plans that use weather forecast and sell products that reflect the needs of the market.

[References] Ministry of the Environment (2020) "Assessment Report on Climate Change Impacts in Japan (Detailed)" <https://www.env.go.jp/press/files/jp/115262.pdf>, Ministry of the Environment (2021) "Climate Change Adaptation Plan" <http://www.env.go.jp/earth/tekiou/1tekioukeikakuR3.pdf>, Japan Meteorological Agency "([National AMeDAS] Annual occurrence of rain at 50 mm/hour or more" [https://www.data.jma.go.jp/cpdinfo/extreme/extreme\\_p.html](https://www.data.jma.go.jp/cpdinfo/extreme/extreme_p.html), Ministry of the Environment (2019) "Climate Change Adaptation Guide for Private Sector (Reference Materials)" [https://adaptation-platform.nies.go.jp/private\\_sector/guide/pdf/minkan\\_tekiou\\_guide\\_sankoshiryou.pdf](https://adaptation-platform.nies.go.jp/private_sector/guide/pdf/minkan_tekiou_guide_sankoshiryou.pdf), Ministry of the Environment (2021) "Annual Report on the Environment in Japan 2021" <https://www.env.go.jp/en/wp/2021/index.html>, Ministry of the Environment (2021) "Recommendations for business strategy planning using TCFD - Practical guide for scenario analysis incorporating climate-related risks and opportunities" [https://www.env.go.jp/policy/policy/tcfd/TCFDguide\\_ver3\\_0\\_J\\_2.pdf](https://www.env.go.jp/policy/policy/tcfd/TCFDguide_ver3_0_J_2.pdf), Meteorological Subcommittee, Council for Transport Policy, the Ministry of Land, Infrastructure, Transport and Tourism (2012) "Information on climate and its utilization to cope with climate change and extreme weather events" <https://www.mlit.go.jp/common/000192957.pdf>, Ministry of Economy, Trade and Industry (2016) "Survey on risk management and credit enhancement for Small and Medium-sized Enterprises" [https://dl.ndl.go.jp/view/download/digidepo\\_11279352\\_po\\_000521.pdf?contentNo=1&alternativeNo=](https://dl.ndl.go.jp/view/download/digidepo_11279352_po_000521.pdf?contentNo=1&alternativeNo=), the Small and Medium Enterprise Agency "SME Guideline for BCP Formulation and Operation" <https://www.chusho.meti.go.jp/bcp/index.html>, Japan Meteorological Agency "Why not utilize weather information to reduce the impacts of climate change?" [https://www.data.jma.go.jp/gmd/risk/hyoka\\_jituei.html](https://www.data.jma.go.jp/gmd/risk/hyoka_jituei.html), Ministry of the Environment (2007) "Global Warming and Infectious Diseases" [https://www.env.go.jp/earth/ondanka/pamph\\_infection/full.pdf](https://www.env.go.jp/earth/ondanka/pamph_infection/full.pdf)