

Assessment of financial impacts related to climate change
(Evaluation of risks and opportunities based on TCFD*)

The UCC Group regards addressing climate change as an important management issue and conducts risk and opportunity assessments based on the guidelines of the TCFD.

Assumptions and scenarios for evaluation

Evaluation timeline

The timeline for climate change-related risks and opportunities is set as follows: 2030 for the medium-term horizon, focusing on the near future, and 2050 for the long-term horizon, addressing the more distant future.

Scenario planning

We plan two scenarios: a ‘1.5 °C scenario’ representing a pathway toward accelerated decarbonization and a ‘4 °C scenario’ representing a pathway where decarbonization is delayed.

Scenario	Overview and reference scenarios from major external organizations
1.5°C scenario	Overview This scenario assumes that early and steady global efforts to strengthen regulations and policies will allow us to achieve carbon neutrality by 2050. It also anticipates that transition risks – arising from changes in regulations, technology, and market conditions associated with the transition to carbon neutrality – will become apparent. Reference scenarios from major external organizations ● IEA: Net Zero Emissions by 2050 Scenario (NZE) ● NGFS: Net Zero 2050 ● IPCC: SSP1-2.6 ● PRI Inevitable Policy Response: 1.5°C Required Policy Scenario (RPS)
4°C scenario	Overview This scenario assumes that only current policies will be maintained, with insufficient additional climate change measures, leading to increased physical risks such as more severe natural disasters caused by extreme weather events. Policies and regulations to reduce greenhouse gas emissions have made little progress, and the transition risk is assumed to be smaller than the 1.5 °C scenario. Reference scenarios from major external organizations ● IEA: Stated Policies Scenario (STEPS) ● NGFS: Current Policies ● IPCC: SSP5-8.5

* Taskforce on Climate-related Financial Disclosures

Transition risk

Category	Contents	Priority	Financial impact	Financial implications		
				Scenario	2030	2050
Policy and regulations	Introducing and enhancing carbon pricing will lead to increased costs for carbon emissions and higher carbon taxes (additional cost for Scope 1 and 2 emissions).	High	Carbon tax burden incurred	4°C	Small	Small
				1.5°C	Medium	Small
	The introduction and intensification of carbon pricing will raise the price of chemical fertilizers, increasing coffee production costs for farmers and, consequently, UCC Group's coffee sourcing costs.	High	Increase in raw material procurement costs (increase in coffee procurement prices due to carbon pricing for chemical fertilizers used during coffee production)	4°C	Small	Small
				1.5°C	Medium	Medium
	GHG emission regulations will be tightened, and the cost of investment in low-carbon technologies and equipment to meet these regulations will increase.	High	Increased cost of investment in low-carbon technologies and equipment (Scope 1 and 2 emission reduction)	4°C	Medium	Medium
				1.5°C	Large	Large
	Deforestation is increasingly recognized as a significant factor in GHG emissions, leading to the introduction of regulations on the sale of coffee produced in deforested areas. Coffee producers unable to prove that their coffee was not produced in deforested areas may lose sales opportunities.	High	An increase in coffee procurement costs (due to the added expense of proving that the coffee is sourced from non-deforested areas)	4°C	Small	Small
				1.5°C	Medium	Medium
	Increased concern over plastic use will require introducing a tax on the use of one-way plastics (disposable plastics) and switching to alternative materials, resulting in corresponding costs in packaging materials.	High	Increased cost of complying with plastic use regulations	4°C	Medium	Medium
				1.5°C	Medium	Medium
Market	As decarbonization progresses, energy prices (natural gas prices) will rise, increasing product production costs.	High	Increase in natural gas procurement costs	4°C	Small	Small
				1.5°C	Small	Small
	As decarbonization progresses, energy prices (electricity prices) will rise, increasing product production costs.	High	Increase in electricity procurement costs	4°C	Medium	Small
				1.5°C	Medium	Small
Reputation	If a company's climate change efforts are insufficient, its brand reputation will suffer, resulting in fewer opportunities to do business with customers and difficulties recruiting human resources.	High	Decrease in operating income	4°C	Small	Small
				1.5°C	Large	Large

Physical risk

Chronic	Rising temperatures and changes in precipitation associated with climate change will reduce coffee yields and increase coffee sourcing costs.	High	Rise in coffee procurement costs	4°C	Large	Large
				1.5°C	Medium	Large
Acute	Floods and other weather-related disasters damage a product's production site, resulting in a shutdown of operations and a loss of sales opportunities.	High	Sales opportunity losses due to shutdowns caused by the disaster	4°C	Small	Small
				1.5°C	Small	Small

Opportunity

Energy source	Using alternative energy sources such as hydrogen roasting technology, electric roasting, and alternative fuels for coffee roasting will reduce carbon emission costs.	High	Decrease (or increase) in roasting costs due to conversion from natural gas to hydrogen roasting and a reduction in carbon tax	4°C	Medium (Risk)	Low (Risk)
				1.5°C	Small (Opportunity)	Medium (Opportunity)
Products and Services	As climate-related disclosures and regulations are introduced, more client companies will declare their climate-related goals, and opportunities will increase to sell products that contribute to their clients’ climate-related goals.	High	Expand sales opportunities for products that contribute to customers’ climate-related goals	4°C	Small (Opportunity)	Small (Opportunity)
				1.5°C	Small (Opportunity)	Small (Opportunity)

Note: Criteria for determining the magnitude of financial impact are based on the following assumptions
For the impact on sales revenue → Large: 10 billion yen or more, Medium: 1 to 10 billion yen, Small: Less than 1 billion yen
For the impact on operating income → (%) Large: 3.3% or more, Medium: 0.3% to less than 3.3%, Small: Less than 0.3%
For the capital investment to sales ratio → (%) Large: 3 % or more, Medium: 1.5 to less than 3%, Small: Less than 1.5%