



Climate Stress Test (CST) at the Financial Supervisory Service (FSS)

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Previous CSTs at the FSS

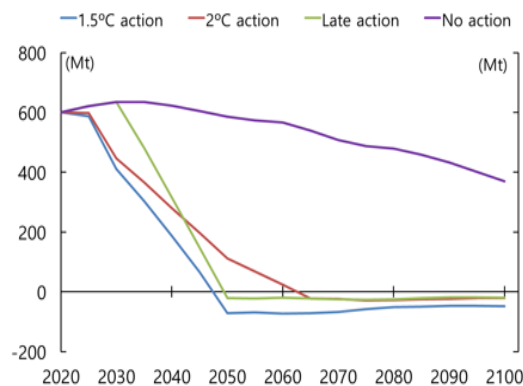
	Scenario	Horizon	Coverage	Approach
2020	Transition risk	to 2030	Banks	Top-down
2021	Physical risk	Event-based (no fixed horizon)	Banks	Top-down
2022–23	NGFS scenarios (Phase 3)	to 2050	Banks & Insurers	Top-down & Bottom-up
2024	NGFS & Korea's standard scenarios	to 2100	Banks & Insurers	Top-down & Bottom-up



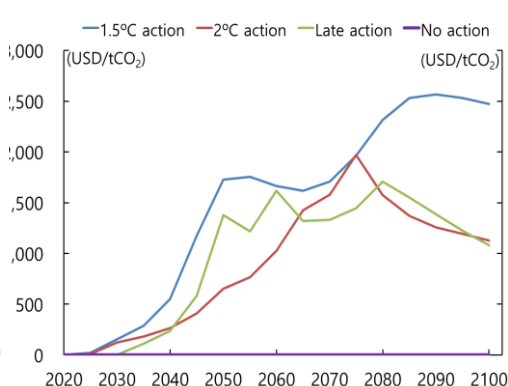
2024 | Joint CST with the Bank of Korea (BOK)

- Why Joint CST?
 - Integrating each institution's expertise and enhancing comparability
- Scenarios
 - 1.5°C action : limit the increase in average global temperature to below 1.5°C
 - 2°C action : limit the increase in temperature to below 2°C
 - Delayed action : no action until 2030, then sudden mitigation to meet the 2°C target
 - No action : no climate action in any country

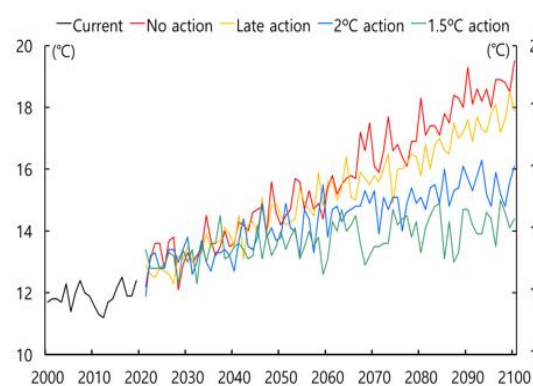
Emission pathway



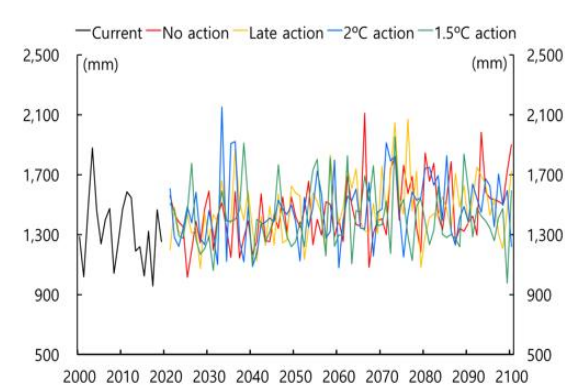
Carbon price



Temperature (annual average)

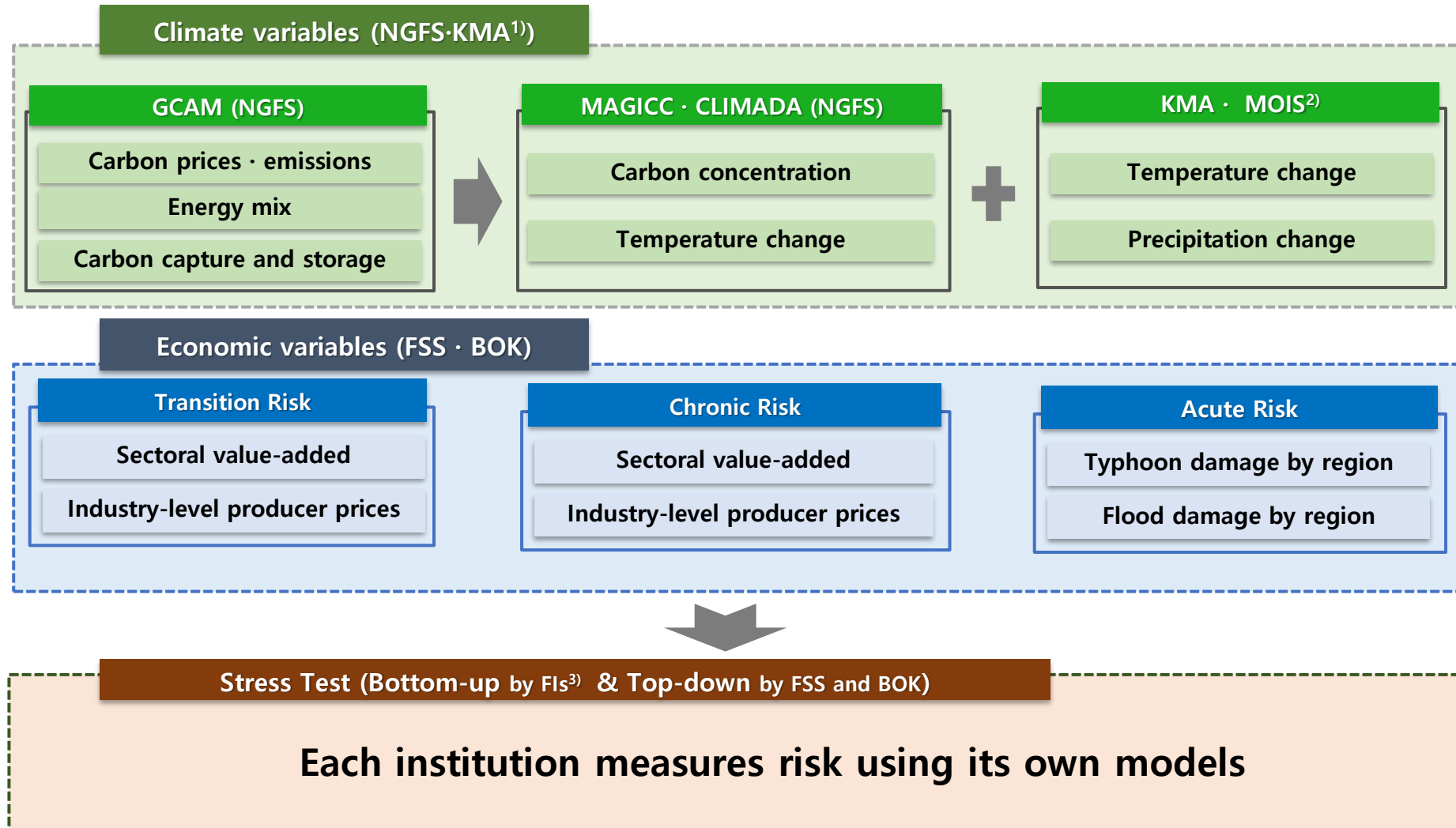


Precipitation (annual average)





2024 | Outline of CST



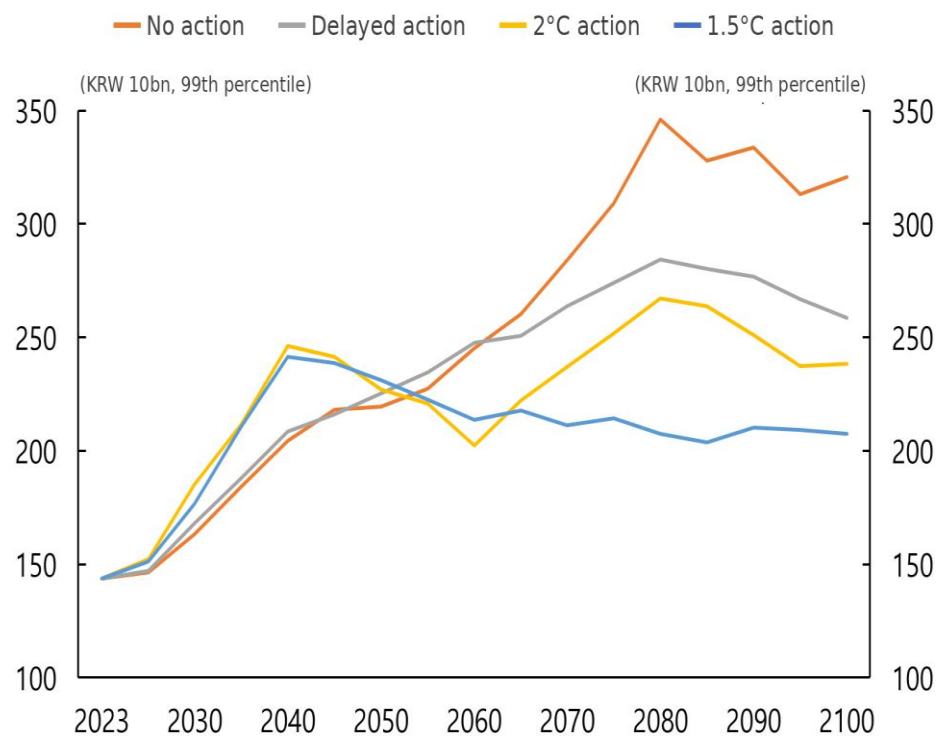
Note : 1) Korea Meteorological Administration; 2) Ministry of the Interior and Safety; 3) Financial Institutions



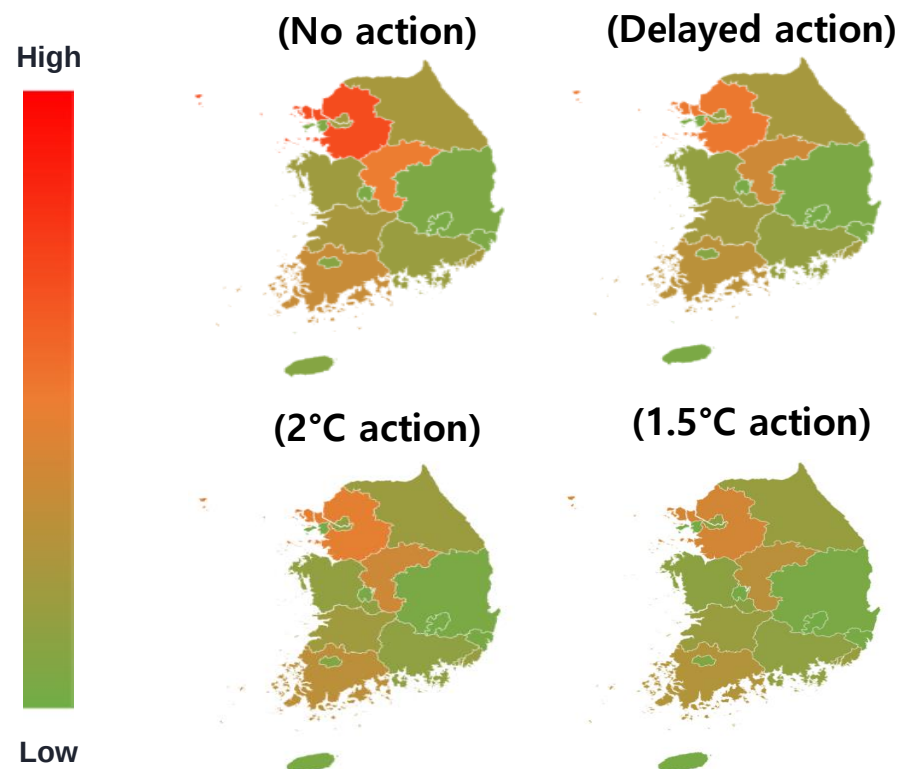
2024 | Projected Flood Damage

- ✓ Under the '1.5°C action' scenario, flood damage initially rises but gradually declines, whereas the 'No action' scenario exhibits a steady increase

Flood damage in Korea



Flood damage (99th percentile) by region in 2100



Source : Impact of Climate Change Risk on the Real Economy : Climate Action Scenario Analysis, BOK Issue Note 2024-30



2024 | Projected GDP Path

- ✓ Medium term (~2050) : Initial GDP losses occur due to transition costs from decarbonization
- ✓ Long term (2080~) : Reduced chronic physical risks offset transition costs, resulting in the highest GDP

Baseline (no climate impact)

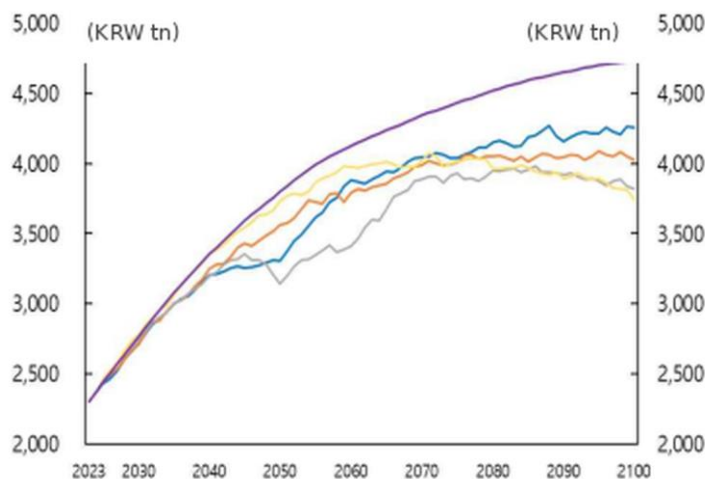
No Action

Delayed Action

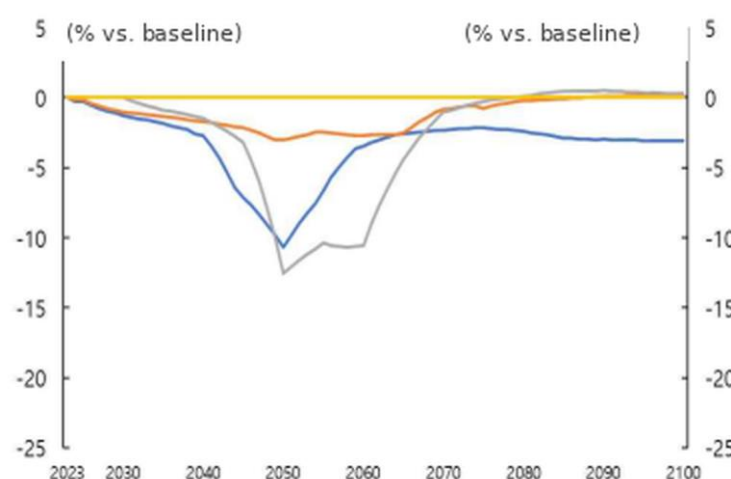
2°C Action

1.5°C Action

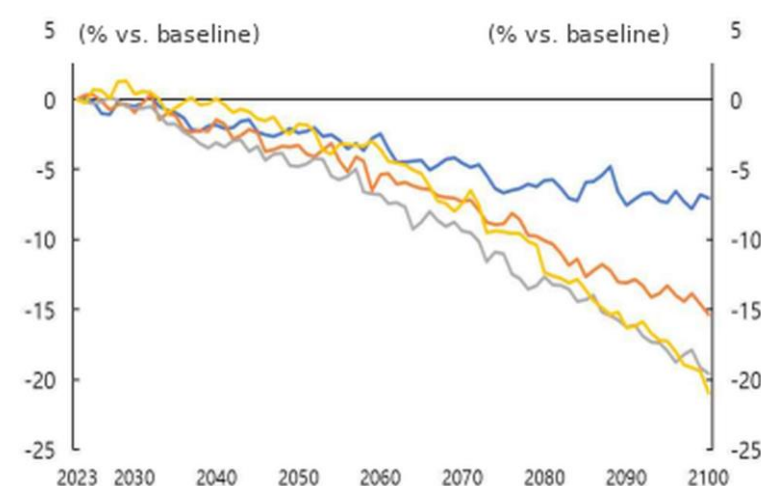
GDP level



Transition risk channel*

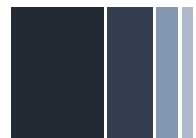


Chronic risk channel



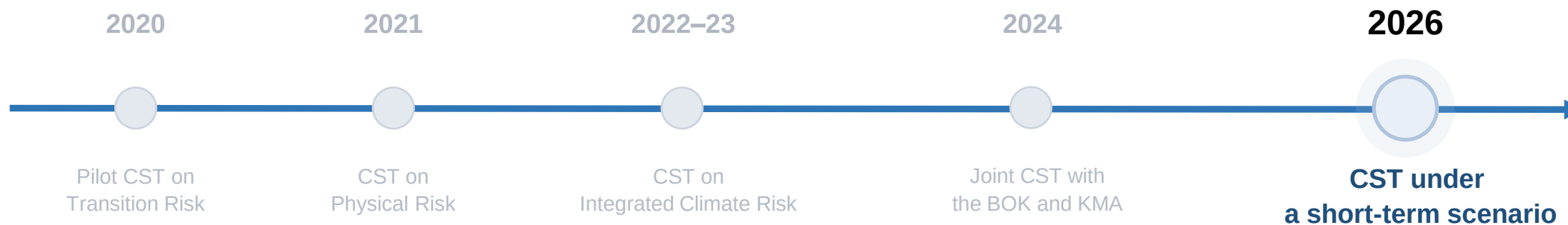
Source : Impact of Climate Change Risk on the Real Economy : Climate Action Scenario Analysis, BOK Issue Note 2024-30

* To quantify transition risks, we used NGFS scenarios : Current Policies, Delayed Transition, Below 2°C, Net Zero 2050.



2026 CST : Key Changes

- ✓ Short-term scenario (5-year horizon), additional physical risks (e.g., drought and heatwaves), and industry-specific physical risk quantification



		2024		2026	
Scenario	Horizon	to 2100		to 2030	
	Physical risk	Typhoon and Flood		Typhoon, Flood, Drought and Extreme weather such as heatwaves	
	Granularity	Physical risk	By region	Physical risk	By region and industry
		Transition risk	By industry	Transition risk	By industry
Approach		Top-down & Bottom-up		Top-down & Bottom-up	



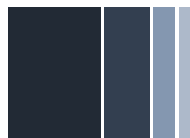
Why Short-Term Scenario?

- ✓ Severe natural disasters or extreme weather events in the recent 5 years (2022 – 2026)

Year	Hazard	Event	Impact
2022	Flood	Seoul : Daily maximum rainfall of 381.5 mm, most severe in 109 years ¹⁾	Highest vehicle flood claims (18,267) from 2021 to 2025 ²⁾
2022	Typhoon	One of 10 severe typhoons affecting Korea (1951–2024) based on central pressure ³⁾	POSCO revenue loss : KRW 2.04tn (MOTIE est.) ⁴⁾
2025	Wildfire	A once-in-300-year event in terms of HDWI (the Hot-Dry-Windy Index) ⁵⁾	Standing timber damage : KRW 6.72tn ⁶⁾
2025	Drought	Gangwon Yeongdong : most severe in 108 years ⁵⁾	Obong Reservoir storage at 11.5%; phased water rationing ⁵⁾
2026	Rainfall	Geoje 956.1 mm over four days, the heaviest since records began ⁷⁾	Special disaster zone declared with the president approval ⁷⁾

* To the best of our knowledge, statistics on vehicle flood claims prior to 2021 are unavailable

Sources: 1) KRIHS Issue Report No. 67 (2022); 2) Korea Insurance Development Institute (KIDI) (Jul 2026); 3) KMA, Typhoon White Book (2025); 4) Ministry of Trade, Industry and Resources (Nov 2022); 5) Report on Abnormal Climate (2025); 6) Korea Forest Service, Forest Fire Statistic; 7) Ministry of the Interior and Safety (MOIS) (2026)



Status and Next Steps

Scenario development (ongoing)

Joint work by a TF consisting of staff from FSS, BOK, KMA, and other institutions

Risk assessment (planned)

Estimation by each institution

FSS
Top-down

BOK
Top-down

FIs
Bottom-up

Joint publication with the BOK (planned)

The published document will include scenario narratives, test results, findings and some technical details

Thank you