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# Response to TCFD and TNFD

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## SOMPO's approach to TCFD and TNFD

The Sompo Group is currently implementing initiatives aimed at tackling climate change — an important issue that poses a threat to people's safety, health and wellbeing. Based on SOMPO Climate Action, our policy on implementing these initiatives, we are strategically advancing efforts across the entire Group, while also working on disclosing climate-related financial information based on the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD).

Furthermore, given that the loss of biodiversity has been recognized as an important social issue in recent years, we are accelerating the biodiversity conservation efforts carried out thus far, and working on disclosing nature-related financial information based on the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD).

[SOMPO Climate Action](#)

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## 1. Governance

### (1) Role of Board of Directors

The Board of Directors is responsible for setting Group-wide strategies and policies, as well as supervising the execution of operations by senior vice presidents and executive officers in order to fulfill SOMPO's Purpose.

### (2) Role of senior vice presidents and executive officers

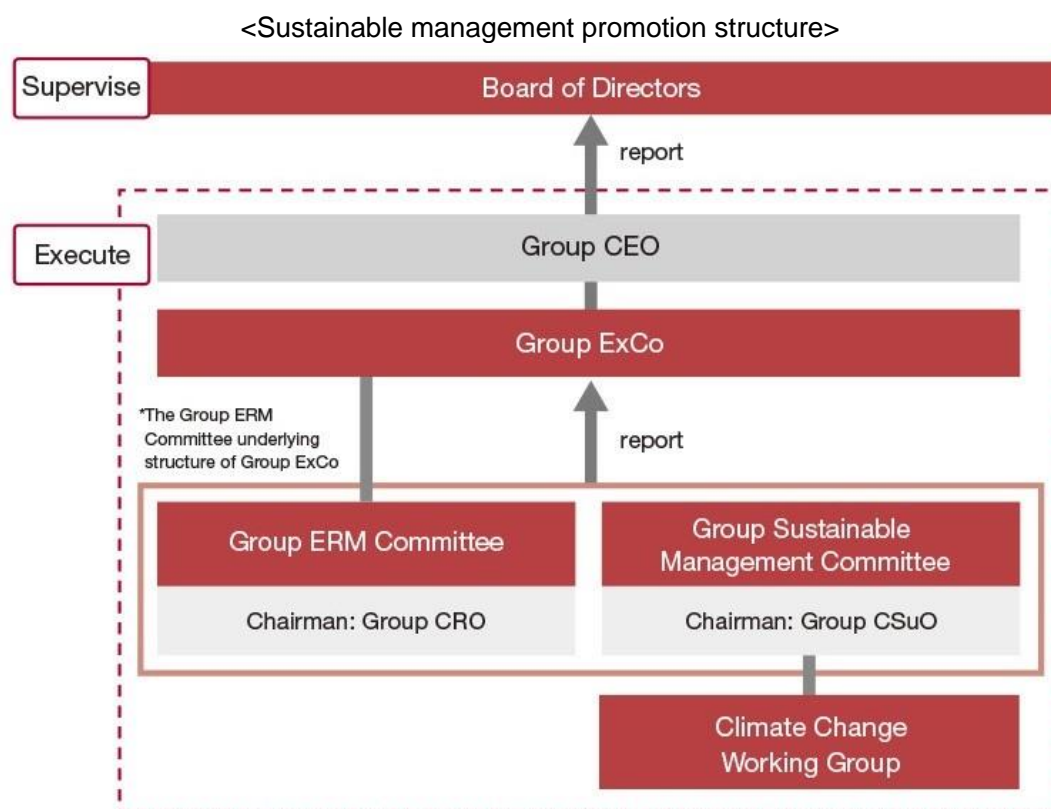
The Group Chief Sustainability Officer (CSuO) is responsible for formulating and implementing strategies related to the Group's sustainable management, including climate change and biodiversity, and overseeing the Group's overall sustainability function.

We have established a Group-wide sustainability promotion framework by establishing a Group Sustainable Management Committee, chaired by the Group CSuO and consisting of Executive Officers in charge of sustainability and CSOs(Chief Strategy Officer) at group companies, to discuss how to respond to related risks and opportunities, and to support the Group CSuO's decision-making process. In addition, we established the Sustainable Management Office to support the execution of the Group CSuO's responsibilities.

Climate change and biodiversity strategies and their implementation status are discussed and reported at the Group Executive Committee and discussions are reported to the Board of Directors on a quarterly basis.

We have established a Climate Change Working Group under the Group Sustainable Management Committee, which holds working-level discussions on issues related to climate change in insurance underwriting and asset management, as well as on how to improve corporate value. Biodiversity contributes to improving corporate value, and is discussed within this working group.

In addition, the Group has established a risk control system to manage risks based on the Sompo Group Basic Policy on ERM established by the Board of Directors. The Group Chief Risk Officer (CRO) comprehensively identifies and evaluates the risks to each business, designates risks that may have a significant impact on the Group as material risks, and the Group ERM Committee, a subordinate body of the "Group Executive Committee", which is an advisory body to the Group CEO, reviews and discusses the status of management and control, and then regularly reports to the Board of Directors, Group Executive Committee and Executive Subcommittee.



### (3) Oversight of stakeholder engagement

We have established the Group Environmental Policy based on which, through forward-looking dialogue, we proactively engage with stakeholders, respect international standards of conduct with a strong sense of ethics, and actively incorporate environmental issues such as climate change and biodiversity, as well as human rights, diversity, equity & inclusion (DE&I), and consideration for local communities, into our business processes. With this policy, we are also committed to proactively and fairly disclosing highly transparent information to society.

In addition, owing to the fact that our business activities, through insurance underwriting and asset management, could potentially infringe on the rights of local residents, Indigenous peoples and future generations, we perform human rights risk assessments targeting a wide variety of stakeholders, and have accordingly established the Group Policy for Human Rights. In these human rights risk assessments, we identify risks in the regions where the companies to whom we extend our insurance underwriting services and investments and loans are undertaking projects. For the human rights risks of the highest priority, we employ measures designed to mitigate such risks through engagement with these companies.

For stakeholder engagements, the Group Sustainable Management Committee deliberates on what actions to take. The progress thereof is then discussed and reported at the Group Executive Committee, before being reported to the Board of Directors on a quarterly basis. The Board of Directors oversees the entire process.

[Group Environmental Policy & Group Policy for Human Rights](#)

## 2. Strategy

### (1) Climate-related strategy

The Sompo Group established “SOMPO Climate Action” in FY2021, which include climate change adaptation and mitigation along with contributing to social transformation as our commitment to implement a comprehensive approach to climate change risks and opportunities, under which we will promote strategic initiatives throughout the Group.

## **( 1 ) 1. Climate-related risks and opportunities**

In addition to physical risks such as the increased severity and frequency of natural disasters, droughts, and chronically rising sea levels due to climate change, transition risks may arise as a result of changes in industrial structures and markets brought about by strengthening of laws and regulations and development of new technologies for the transition to a carbon-free society that could affect corporate finances and reputations. These risks are accompanied by an increasing number of climate change lawsuits globally, particularly in the US, that seek to hold companies legally liable for the impact of climate change resulting from their business activities, investments in highly carbon-intensive businesses, and improper disclosure. Such lawsuits risk may increase liability insurance payouts in our P&C insurance business. On the other hand, the growing societal awareness of natural disaster risks and changes in social structure may bring business opportunities such as the creation of new service demands and technological innovations.

We have identified the risks and opportunities coverage of the entire value chain of insurance-related business activities (upstream: product/service development, mid-stream: sales/marketing and asset management, downstream: accident response and payment of claims) that climate change poses to our business based on the results of studies conducted by external organizations such as the Intergovernmental Panel on Climate Change (IPCC) and the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), and we are assessing, analyzing, and responding to such risks and opportunities on a short- (within 2-3 years), medium- (5-10 years: around 2030), and long-term (10-30 years: around 2050) time horizon. The main environmental changes associated with physical and transition risks due to climate change, as well as risks and opportunities that are expected to have a significant impact on the Group, are shown in the table below and are continuously reviewed in light of changes in the internal and external environment.

Environmental change			Impact on the Company	Risk	Opportunities	Time-frame
Physical	Acute	<ul style="list-style-type: none"> <li>• Heat waves, extreme humidity</li> <li>• Change in frequency and intensity of floods, typhoons and hurricanes</li> <li>• Increased drought and wildfires</li> </ul>	Increased insurance payments due to weather disasters	●	-	
			Deterioration in the agricultural insurance balance	●	●	
	Chronic	<ul style="list-style-type: none"> <li>• Sea level rise</li> <li>• Average temperature increase</li> <li>• Ocean acidification</li> <li>• Desertification</li> <li>• Deforestation, impacts on biodiversity</li> <li>• Increased immigration, market instability, and populism; collapse of a nation</li> </ul>	Increased insurance payments by rising sea levels	●	-	
			Decline in the real estate market (a decline in asset prices)	●	-	
			Political instability and conflict	●	-	
			New pandemic	●	-	
Transition	Policy	<ul style="list-style-type: none"> <li>• Renewable energy and energy conservation Promotion of association</li> <li>• Subsidies (EV purchases, energy efficiency improvement etc.)</li> </ul>	Price fluctuations of stocks and bonds due to policy transitions	●	●	See 3, (1) Climate Change Risk Map
			Higher energy prices	●	-	
	Legal	<ul style="list-style-type: none"> <li>• Revision of damage compensation system and laws; new legal interpretations</li> </ul>	Legal risks such as climate litigation	●	●	
	Technology	<ul style="list-style-type: none"> <li>• Advances in storage technology and infrastructure</li> <li>• Development of new technologies like Renewable energy and energy conservation</li> </ul>	Decarbonization through the spread of new technologies	●	●	
	Market preference	<ul style="list-style-type: none"> <li>• Investors and consumers preferring environmentally responsible companies</li> </ul>	Reputation	●	●	
			Changes in consumer behavior	●	●	

## (1) 2. Scenario analysis

### A. Physical risks

The Group's P&C insurance business could be financially affected by higher-than-expected insurance payouts due to the increased severity and frequency of natural disasters, including typhoons, floods, and storm surges. From 2018, we started working with universities and other research institutions to quantitatively grasp risks based on scientific findings. Based on large-scale analysis using weather and climate big data, such as the Database for Policy Decision-making for Future Climate Change (d4PDF)\*1, we are working to understand the long-term impacts of a climate with higher average temperatures with respect to changes in the average trends for storm surges affected by typhoons, floods and sea level changes and trends in the occurrence of extreme weather events. We are also analyzing and evaluating the medium-term impact over the next five to ten years and incorporating this information into our business strategies.

The Group is a member of the TCFD insurance working group of the United Nations Environment Programme Finance Initiative (UNEP FI) and estimates the impact related to typhoons using a quantitative model\*2 based on the guidance issued by the working group in January 2021. We will continue our analysis using the scenario analysis framework being developed by the Network for Greening the Financial System (NGFS), which works on financial regulatory responses to climate change risks.

### Estimate results

Frequency of typhoons	approx. -30% to +30%
Amount of damage per typhoon	approx. +10% to +50%

We are also analyzing the impact of climate change on natural disasters outside Japan, including US hurricanes and EU floods, through partnerships with external risk modeling companies and research institutions. We have developed our own scenarios and are working to apply them to our risk model for natural disasters outside Japan.

- \* 1 Database of climate simulations developed by Japan's Ministry of Education, Culture, Sports, Science and Technology's Program for Risk Information on Climate Change. By using a number of ensemble simulations, future changes in extreme events such as typhoons and heavy rains can be evaluated stochastically and with greater accuracy. The results will enable more reliable assessments of the impact on society of natural catastrophes caused by climate change.
- \* 2 Model that captures changes in the frequency and wind speed of typhoons between now and 2050 based on the RCP8.5 scenario used in the IPCC Fifth Assessment Report (AR5), and calculates changes in the amount of damage caused.

## B. Transition risks

To understand the short-, medium- to long-term impact of the transition to a decarbonized society on our company, we analyzed the impact on our Group's assets using the Climate Value-at-Risk (CVaR)\*3 provided by MSCI for policy risks arising from tighter laws and regulations and global economic changes that will affect companies in the transition to a decarbonized society and technology opportunity arising from climate change mitigation and adaptation initiatives, based on the NGFS scenarios\*4 in the table below.

In addition, since it is important to encourage companies that have not yet made progress in decarbonization efforts to reduce transition risk, we use the Implied Temperature Rise (ITR)\*5 provided by MSCI to quantitatively analyze whether our portfolio companies have set GHG emission reduction targets consistent with the goal of limiting global warming to 1.5°C by FY2100.

### \*3 Climate Value-at-Risk (CVaR)

- A method to measure the impact on corporate value associated with climate change-related policy changes and disasters.
- The future costs and profits arising from climate change-related risks and opportunities are discounted to their present value, and the impact is calculated as of March 31, 2023, taking into account the market value weighting of each security in the Group's asset management portfolio.
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### \*4 NGFS (Network for Greening the Financial System) scenarios

Analyzed three climate change scenarios published by the NGFS in November 2023 as Phase 4: Delayed transition, Net Zero 2050, and NDCs.

Category	Scenario	Summary
(1)Disorderly	Delayed transition	Assumes annual emissions do not decrease until 2030. Strong policies are needed to limit warming to below 2°C. Negative emissions are limited.
(2)Orderly	Net Zero 2050	Limits global warming to 1.5°C through stringent climate policies and innovation, reaching global Net Zero CO2

		emissions around 2050. Some jurisdictions such as the US, EU, Japan and etc. reach net zero for all GHGs.
(3) Hot House World	Nationally Determined Contributions (NDCs)	Assumes that all policies that countries have committed to are implemented. (It includes all pledged policies, even if they are not yet implemented, but is insufficient to stop global warming.)

#### \*5 Implied Temperature Rise (ITR)

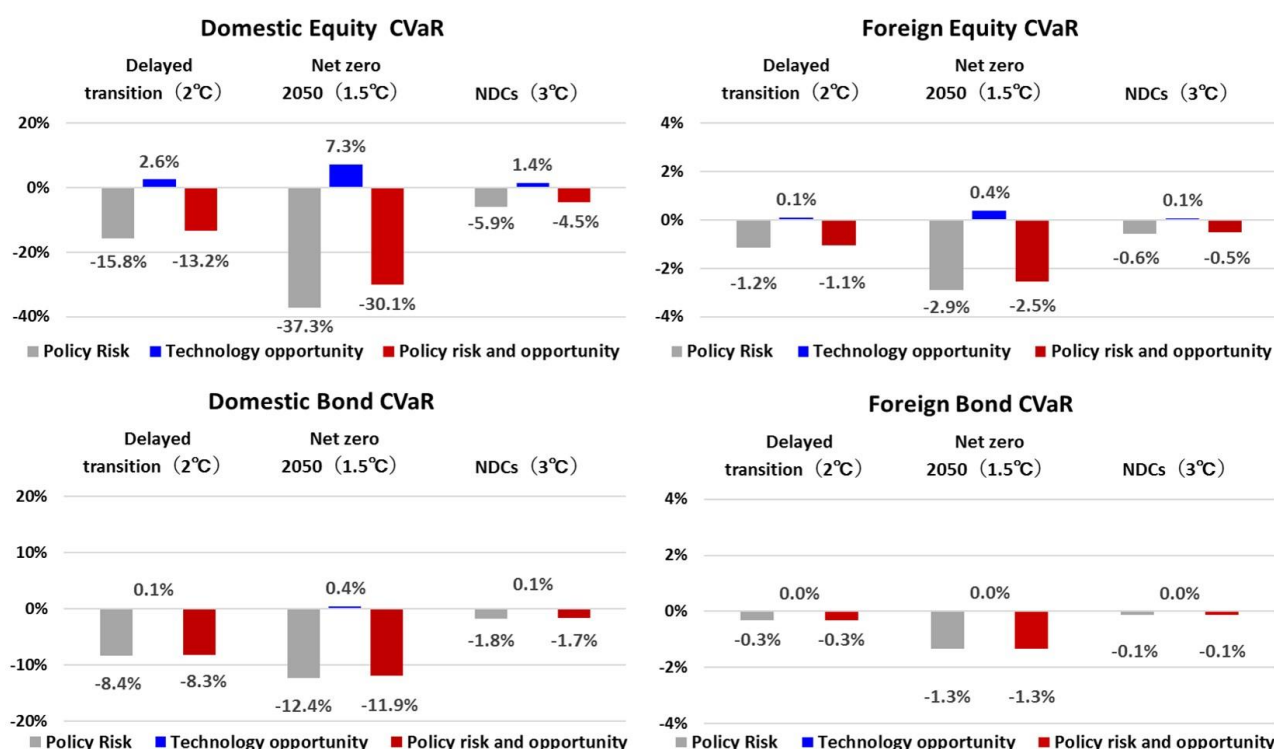
- One of the forward-looking assessment methods that evaluates the degree of likelihood of 1.5°C and 2°C of global warming by 2100.
- The contribution to temperature rise is based on the difference between the projected GHG emissions of portfolio companies (calculated based on current emissions and reduction targets set by the companies) and the carbon budget, and is calculated as of March 31, 2023, taking into account the market value weight of each stock in the Group's asset management portfolio.

#### a. Climate Value-at-Risk (CVaR)

##### (NGFS scenarios - comparison by asset type)

For all assets, the impact is greatest in the Net Zero 2050 (1.5°C) scenario, which shows that even in an orderly transition, policy risks are significant in order to achieve the 1.5°C target. In the comparison by asset type, the impact of policy risk and technology opportunity is the largest for domestic equity, at -37.3% and 7.3% under the Net Zero 2050, respectively. Comparing stocks and bonds, we see that stocks have a larger impact because bonds never redeem above par value and the impact of policy risk and opportunity is limited.

#### <SOMPO Group CVaR analysis of policy risk and technology opportunity by asset and NGFS scenario>



- Policy Risk: Figures calculated for each level of Scope 1, 2, and 3 for the cost required to achieve the GHG reduction targets.



- Technology opportunity: Figures calculated for the potential business opportunities created by environment-related technologies owned by companies against the backdrop of the transition to a low-carbon economy.

### (NGFS scenarios - comparison by short-term, medium-term, and long-term time horizon)

Comparing short-term, medium-term, and long-term time horizons, we can see that in our portfolio, the majority of the current costs will become apparent in the long term (between 2030 and 2050). In particular, the Delayed transition (2°C) (Disorderly: rapid transition to decarbonization) scenario assumes a rapid policy transition after 2030, so the long-term impact is particularly pronounced. In addition, the policy risk is the highest in the Net Zero 2050 (1.5°C) scenario at -18.52%, which shows that even in an orderly transition, policy risks are large in the long term to achieve the 1.5°C target.

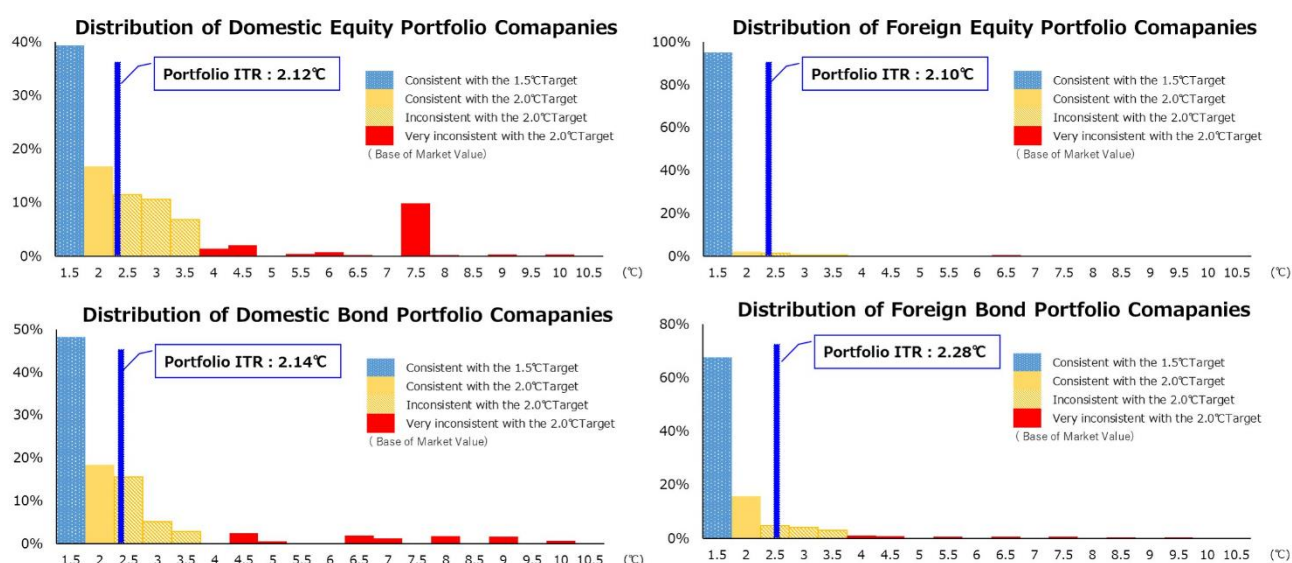
### <SOMPO Group CVaR analysis results of policy risks and technological opportunities by time horizon>

Horizon Year	Delayed transition (2°C)		Net zero 2050 (1.5°C)		NDCs (3°C)	
	Policy risk	Technology opportunity	Policy risk	Technology opportunity	Policy risk	Technology opportunity
Short-term (Cumulative from 2023 to 2025)	-0.03%	0.00%	-0.36%	0.02%	-0.13%	0.01%
Mid-term (Cumulative from 2023 to 2030)	-0.11%	0.01%	-2.15%	0.10%	-0.66%	0.03%
Long-term (Cumulative from 2023 to 2050)	-8.69%	0.13%	-18.52%	0.33%	-3.14%	0.08%

### b. Implied Temperature Rise (ITR)

The percentages of companies with ITRs below 2°C are 56% for domestic equity, 97% for foreign equity, 67% for domestic corporate bond, and 83% for foreign corporate bond portfolios on a market value basis. The percentages of companies with ITRs below 1.5°C are 39% for domestic equity, 95% for foreign equity, 48% for domestic corporate bond, and 68% for foreign corporate bond portfolios. With the exception of domestic equity, the half of companies have set GHG emission reduction targets that are consistent with the 1.5°C target set by the Paris Agreement. On the other hand, for the portfolio as a whole, the ITRs for domestic equity, foreign equity, domestic bond, and foreign bond are 2.12°C, 2.10°C, 2.14°C, and 2.28°C, respectively, exceeding 1.5°C for all. We will use the results of our analysis to reduce transition risk by promoting engagement with companies that have high transition risk or have no GHG emissions targets.

### < SOMPO Group ITR analysis by asset >



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### **( 1 ) 3. Resilience improvement initiatives**

#### **A. Responding to risks**

##### **<Physical Risk>**

Our P&C insurance and reinsurance contracts are primarily short-term contracts, and by reviewing our insurance underwriting conditions and reinsurance policies in light of the increasingly severe trends in meteorological disasters, we can reduce the risk of insurance payments exceeding our expectations. We also aim to ensure resilience against physical risks through a multifaceted approach that includes global geographic diversification, quantification based on short- and medium-term climate forecasts, and identification and evaluation of significant risks through long-term scenario analysis.

##### **<Transition Risk>**

As for our own GHG emissions, we have set a target of a 60% reduction (compared to 2017)\* in Scope 1, 2, and 3 (excluding insurance underwriting, investments and loans) by 2030 and a net zero emissions by 2050. To achieve this goal, we have set a target of “70% introduction of renewable energy by 2030,” in addition to energy conservation efforts such as the use of LEDs for electricity, which accounts for a particularly large portion of GHG emissions. We are working on the roadmap to achieve this goal, including switching to renewable energy sources for power generation in our buildings.

\* Science-based targets consistent with the Paris Agreement's 1.5°C target (a reduction of at least 4.2% each year)

As for the GHG emissions of our investees, we are promoting a switch from high GHG emitting sectors to low GHG emitting sectors at the time of maturity redemption of bonds, and engagement with the top 20 high GHG emitting companies among our equity holdings.

#### **B. Responding to opportunities**

In addition to developing and providing climate risk consulting services and working to improve natural disaster resilience through insurance products and services, the Sompo Group is developing and providing insurance products and services that contribute to carbon neutrality by promoting renewable energy and collaborating with business partners.

We have set a "Transition Insurance Target" for insurance products that contributes to decarbonization in both domestic and overseas market. In addition, we calculated GHG emissions associated to insurance underwriting (Insurance-Associated Emissions) using data from companies that disclose GHG emissions (Scope 1, 2) by utilizing a method for measuring GHG emissions in the commercial insurance sector developed by Partnership for Carbon Accounting Financials(PCAF) in November 2022.

In accordance with the principles of the Japanese Stewardship Code, Sompo Japan conducts an ESG survey ("Survey on ESG/Sustainability Initiatives") every year to confirm the policies and status of the companies in which it holds shares regarding the enhancement of their corporate value and sustainable growth. In fiscal 2023, the survey was sent to 1,446 companies in which it holds shares, and 318 companies responded. The survey is used to understand the needs of each company and create opportunities for collaboration, supporting sustainability efforts, including decarbonization.

Various organizations and groups around the world are actively discussing the formulation of regulations



and guidance to realize a net zero society. By proactively participating in and leading these rule-making efforts, the Group will not only contribute to societal transformation but also seek to create and expand business opportunities for the Group, such as attracting partners by accumulating knowledge and enhancing our reputation through these efforts.

#### Climate Change-related initiatives

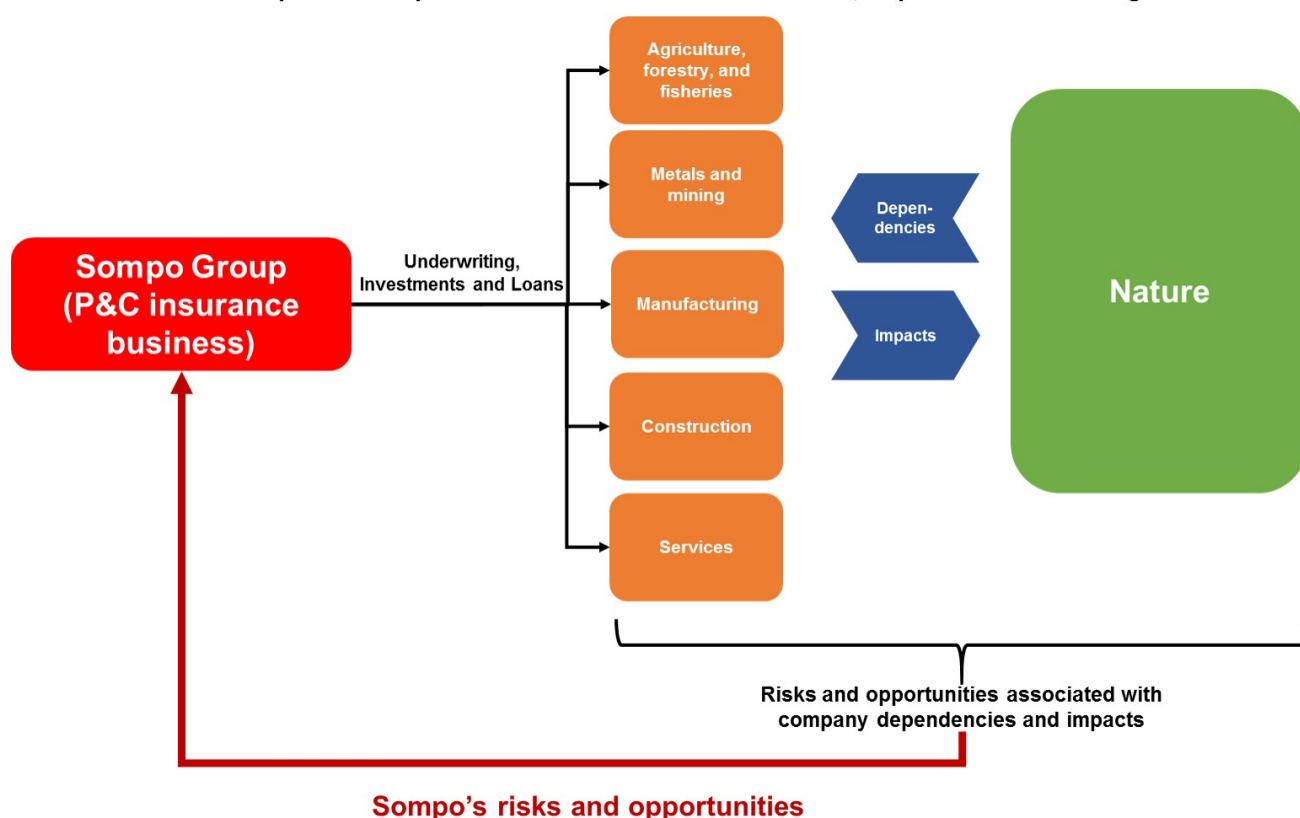
## (2) Nature-related strategy

Alongside climate change, nature-related environmental issues such as biodiversity loss, ecosystem collapse, and natural resource shortages are increasingly being recognized as global risks. The companies that we invest in and loan, or for whom we underwrite insurance policies, face the risks of future instability in raw material procurement and operations, cost increases associated with compliance, and decreased sales due to their dependencies on, and the impacts from, nature. As a result, there is a possibility that these risks could be transferred to the Group's P&C insurance business, mainly in the form of decreased insurance underwriting and higher claim payments.

On the other hand, the transition to nature-positive economy, as advocated by the Kunming-Montreal Global Biodiversity Framework, is expected to create business opportunities in Japan worth approximately 47 trillion yen by 2030 (estimated by Japan's Ministry of the Environment). Such a situation could lead to improved earnings at our investees and the companies for whom we underwrite insurance policies, and provides us opportunities to offer products and services that benefit the natural world.

To identify and assess these nature-related risks and opportunities, we are assessing, analyzing, and taking action based on the LEAP approach\* recommended by the TNFD with a focus on our domestic P&C insurance business (Sompo Japan Insurance Inc.) and consulting business (Sompo Risk Management Inc.).

Examples of companies to whom we invest in and loan, or provide underwriting services to



\* An integrated assessment process for nature-related risk and opportunity management. LEAP stands for the four phases of Locate, Evaluate, Assess, and Prepare.

### (2) 1. Identification of priority locations

In order to identify priority locations, we used the World Wildlife Fund (WWF)'s Biodiversity Risk Filter\* and other tools to check whether the Group's business sites are in ecologically sensitive locations from the

perspectives of ecosystem integrity, biodiversity importance, water physical risk, and ecosystem service delivery importance.

The office locations of Sompo Japan Insurance and Sompo Risk Management are mainly in Japan, with other sites in Canada (Toronto), Russia (Moscow), Australia (Sydney), Guam, Vietnam (Ho Chi Minh and Hanoi), Myanmar (Yangon), Cambodia (Phnom Penh), India (Mumbai), UAE (Dubai) and South Africa (Johannesburg).

None of these locations are ecologically sensitive, and our business activities (domestic P&C insurance business and consulting business) have little dependence on, or have little impact on nature. Based on these assessment, we believe there to be no priority locations for Sompo Japan Insurance and Sompo Risk Management.

\* A tool developed by the World Wide Fund for Nature to help companies assess and respond to risks to biodiversity in their business, supply chains, etc.

## (2) 2. Identification and assessment of dependencies and impacts

We identified high-risk sectors for Sompo Japan Insurance by identifying and assessing dependencies and impacts in the sectors we invest in and loan, or provide insurance underwriting services to, taking into account transaction amounts.

More specifically, we implemented the following steps.

1) Using ENCORE\*, we plotted the categories and magnitude of dependencies and impacts in each sector on a heatmap.

2) We reflected insurance underwriting, investments and loans amounts at Sompo Japan Insurance into 1) above.

3) We created heatmaps of the dependencies and impacts at Sompo Japan Insurance for both insurance underwriting, investments and loans.

\* ENCORE is a nature-related risk assessment tool jointly developed by the Natural Capital Finance Alliance (NCFA) and the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC).

### <Insurance underwriting>

For insurance underwriting, we have identified the following high-risk sectors that are highly dependent and impactful, and consider them as risk sources for the Group.

#### ■ Dependencies

We have assessed there to be the following high dependencies:

“Climate regulation” in transportation services; “Groundwater” and “Surface water” in other services.

Classification of services		Ecosystem services provided directly/physically					Ecosystem services that enhance production processes					Ecosystem services that mitigate direct impacts					Ecosystem services that provide protection from disturbances					
Sector	Category	Animal based energy	Fibers and other materials	Genetic materials	Ground-water	Surface water	Maintain nursery habitats	Pollination	Soil quality	Ventilation	Water flow marine/range	Water quality	Bio remediation	Dilution by atmosphere and ecosystems	Filtration	Mediation of sensory impacts	Buffering and attenuation of mass flows	Climate regulation	Disease control	Flood and storm protection	Mass stabilization and erosion control	Pest control
Oil, gas, metals and mining					2	2				1	2	2	1	1	1	1		2		2	2	
Chemicals and other materials production					3	3					1	2	2	2	2	2	2		2		2	2
Paper and pulp					2	2									1							
Land development and construction					2	2			2		2			2		2	2	3		3	2	1
Transportation services					3	3				1	2	2		2	1	2		4		3	3	1
Automotive, electrical equipment and machinery production					3	3					2	2	2	2	2	2	2			2	2	
Appliances and general goods manufacturing		1			2	2				1	1	1	1	1	1	1		3			1	1
Textiles		1			2	2					1	1	1	1	1	1					1	1
Food and beverage production					2	2					1			1	1	1	1				1	1
Agriculture, forestry and fisheries		2	2	3	2	2	2	2	2	3	2	2	1	1	1	1	1	2	2	2	2	2
Retail and wholesale																						
Pharmaceuticals						2								1	1	1	1					1
Electricity and energy production		2			2	2					2	1	1	1		1		2		2	2	
Telecommunication services (including wireless)									1				1				2	3			2	1
Finance																						2
Real estate					2	3							2		1	2				3	2	
Other services		1	3	3	4	4					1	2	1	2	2	2		3		3	2	

Key: 5 = very high, 4 = high, 3 = moderate, 2 = low, 1 = very low

#### ■ Impacts

We have assessed there to be the following high impacts:

“Water use” in chemicals and other materials production; “Terrestrial ecosystem use” and “Marine ecosystem use” in land development and construction and “Terrestrial ecosystem use” in real estate;

“Freshwater ecosystem use” and “Marine ecosystem use” in transportation services; “Water use”, “GHG emissions”, “Water pollutants”, “Soil pollutants” and “Solid waste” in other services.

Sector \ Category	Water use	Terrestrial ecosystem use	Freshwater ecosystem use	Marine ecosystem use	Other resource use	GHG emissions	Non-GHG air pollutants	Water pollutants	Soil pollutants	Solid waste	Disturbances
Oil, gas, metals and mining	2	2	2	2		2	2	2	2	2	2
Chemicals and other materials production	4	3				3	3	3	3	3	3
Paper and pulp	2						1	2	2		
Land development and construction	3	4	3	4		3	3	2	3	3	3
Transportation services	3	3	4	4		3	3	3	3	3	3
Automotive, electrical equipment and machinery production	3					3	2	3	3	3	3
Appliances and general goods manufacturing	2	2				2	2	2	2	2	1
Textiles	2	2					2	1	1	2	
Food and beverage production	2				1	2		2	2	2	
Agriculture, forestry and fisheries	2	2	2	2	2	2		2	2		
Retail and wholesale	3						2	3	3	2	
Pharmaceuticals	2						1	2	2	2	
Electricity and energy production	2	2	2	2		2	2	2	2	2	2
Telecommunication services (including wireless)		2	2	2				2	1	1	2
Finance											2
Real estate		4				3	2	2	2	3	
Other services	4			3		4	3	4	4	4	4

Key: 5 = very high, 4 = high, 3 = moderate, 2 = low, 1 = very low

### <Investments and loans>

For investments and loans, we have identified the following high-risk sectors that are highly dependent and impactful, and consider them as risk sources for the Group.

#### ■ Dependencies

We have assessed there to be the following high dependencies:

“Groundwater” in oil, gas, metals and mining; “Climate regulation” in transportation services;

“Groundwater” and “Surface water” in food and beverage production.

Classification of services		Ecosystem services provided directly/physically					Ecosystem services that enhance production processes					Ecosystem services that mitigate direct impacts					Ecosystem services that provide protection from disturbances				
Sector \ Category	Animal-based energy	Fibers and other materials	Genetic materials	Ground water	Surface water	Maintain nursery habitats	Pollination	Soil quality	Ventilation	Water flow maintenance	Water quality	Bio-remediation	Dilution by atmosphere and ecosystems	Filtration	Mediation of sensory impacts	Buffering and attenuation of mass flows	Climate regulation	Disease control	Flood and storm protection	Mass stabilization and erosion control	Pest control
Oil, gas, metals and mining				4	3					3	3	3	2	2	2		3		3	3	
Chemicals and other materials production			1	1						2	2	2	2	2	2		2		2	2	
Paper and pulp			2	2									1								
Land development and construction			2	2					1	1	1						2		2	1	1
Transportation services			3	3					1	2	2		2	1	2		4		3	3	1
Automotive, electrical equipment and machinery production			3	3					1	2	2		3	2	2				2	3	
Appliances and general goods manufacturing			2	2						1	2		1	1	1				1	1	
Textiles			2	2	2					1	1		1	1	1				1	1	
Food and beverage production			4	4	4					2	2	2	3	3	3				4	2	2
Agriculture, forestry and fisheries	2	2	2	2	2	2	2	2	2	1	2	2	3	1	1	1	2	2	2	2	2
Retail and wholesale					2						1		1							2	
Pharmaceuticals			2	2	2						1		1				2		2	2	
Electricity and energy production											1									2	
Telecommunication services (including wireless)								1			1					2	1		2	1	
Finance																					2
Real estate				2	3							3		1	2				1	2	
Other services		2	2	3	3					1	2	1	1	2			2		2	2	2

Key: 5 = very high, 4 = high, 3 = moderate, 2 = low, 1 = very low

#### ■ Impacts

We have assessed there to be the following high impacts:

“Water use”, “Terrestrial ecosystem use”, “Freshwater ecosystem use” and “Marine ecosystem use” in oil, gas, metals and mining; “Water use” in chemicals and other materials production; “Freshwater ecosystem use” and “Marine ecosystem use” in transportation services; “Terrestrial ecosystem use” in real estate.

Sector \ Category	Water use	Terrestrial ecosystem use	Freshwater ecosystem use	Marine ecosystem use	Other resource use	GHG emissions	Non-GHG air pollutants	Water pollutants	Soil pollutants	Solid waste	Disturbances
Oil, gas, metals and mining	4	4	4	4		3	3	3	3	3	3
Chemicals and other materials production	4	3				3	3	3	3	3	3
Paper and pulp	2						1	2	2		
Land development and construction	2	2	2	2		2	2	1	2	2	2
Transportation services	3	3	4	4		3	3	3	3	3	3
Automotive, electrical equipment and machinery production	3					3	3	3	3	3	3
Appliances and general goods manufacturing	2	2				2	2	2	2	2	1
Textiles	2	2					2	1	1	2	
Food and beverage production	3				2	3		1	3	3	
Agriculture, forestry and fisheries	2	2	2	2	2	2		2	2		
Retail and wholesale	3						2	3	3	2	
Pharmaceuticals	2						1	2	2	2	
Electricity and energy production	2	2	2	2		2	2	2	2	2	2
Telecommunication services (including wireless)		2	2	2				2	1	1	2
Finance											3
Real estate		4				3	2	2	2	3	
Other services	3			2		3	2	3	3	3	

Key: 5 = very high, 4 = high, 3 = moderate, 2 = low, 1 = very low

## (2) 3. Identification and assessment of risks and opportunities

With our main focus on the insurance business, we continue to assess, analyze and take action in response to the physical risks and opportunities associated with degraded ecosystem services, as well as transition risks and opportunities associated with the strengthening of nature-positive policies and regulations, technological advancements and changes in market preference. Our assessment and

analysis covers the entire value chain (upstream: product and service development; midstream: sales/marketing, investment; downstream: claims service and claim payments). The assessment timeframes are short-term (within 2-3 years), medium-term (5-10 years: around 2030) and long-term (10-30 years: around 2050). The main environmental changes related to nature and the risks and opportunities we assume, which will have a significant impact on our operations are outlined in the table below. We will continuously undertake reviews of these factors in light of changes in internal and external environments.

Environmental change			Impact on the Company	Risk	Opportunities	Time-frame
Physical	Acute	• Heat waves, extreme humidity • Change in frequency and intensity of floods, typhoons and hurricanes • Increased drought and wildfires	Increased insurance payments due to weather disasters	●	-	Short Medium Long
		• Sea level rise • Average temperature increase • Ocean acidification • Desertification • Deforestation, impacts on biodiversity • Increased immigration, market instability, and populism; collapse of a nation	Earnings deterioration owing to degradation of ecosystem services	●	-	Medium Long
	Chronic		Social instability due to degradation of ecosystem services	●	-	Medium Long
Transition	Policy	• Promotion of a nature-positive economy • Subsidies (resource efficiency improvements, etc.)	Fluctuations in revenue owing to changes in the operating environment	●	●	Medium Long
		• Revision of damage compensation system and laws; new legal interpretations	Nature-related lawsuits and other legal risks:	●	-	Medium Long
	Legal		Products and services that address changes in the operating environment	●	●	Short Medium Long
		• Nature-based Solutions • Investors and consumers preferring environmentally responsible companies	Reputation	●	●	Short Medium Long

## Nature-related Initiatives

### 3. Risk Management

In order to realize the Group's Purpose, we have established a risk appetite framework by clarifying “risks to be taken” and “risks to be avoided”, so as to increase the certainty of achieving them. For natural catastrophe risk, we clarify risk appetites and quantitatively assess the insurance claim payments expected in the event of a natural catastrophe based on scientific knowledge such as meteorology and the characteristics of our products. We then formulate and manage reinsurance policies and Group-wide risk retention strategies based on the impact on financial soundness, profitability and profit stability, as well as trends in the reinsurance market.

Climate change related risks are controlled through a multifaceted approach within the risk control system framework of our Enterprise Risk Management (ERM) that involves material risk management, capital adequacy management, stress testing, risk limit management, and liquidity risk management.

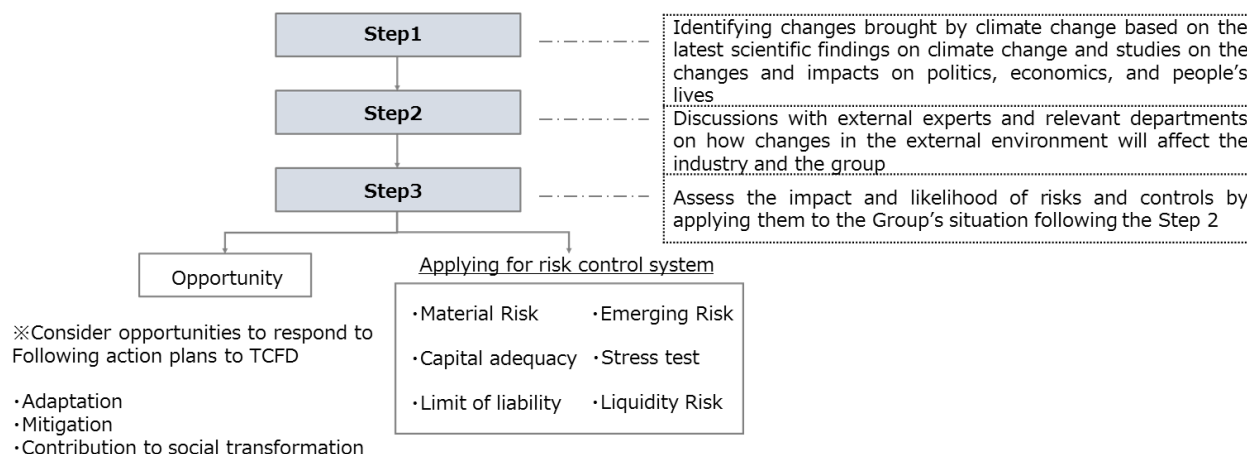
We are implementing SOMPO Climate Action to assess short-term, medium-term and long-term climate-related risks and opportunities through the Climate Change Risk Framework, conducting scenario analysis (physical risks and transition risks) based on the Framework, as well as various initiatives to improve our resilience to these risks and opportunities.

## (1) Climate change risk framework (risk identification, assessment and management)

Climate change can impact various aspects of the Group's business, including our P&C insurance business, and the impacts are long-term and highly uncertain. To manage climate change risks, including the risks associated with natural disasters, we have developed a climate change risk framework to complement our existing risk control system and to identify, assess, and manage risks by taking an in-depth look at scenarios in which the Group is affected through various pathways in the long-term.

In order to capture the complex impacts of climate change, the climate change risk framework uses the following three steps to assess and organize the risks and opportunities described in section 2. Strategy (1) Climate-related strategy (1)1. Climate-related risks and opportunities.

### Climate Change Risk Framework



In assessing risk, we have assumed low, medium, and high environmental change scenarios, which are a combination of IPCC scenarios showing changes in average temperature and NGFS scenarios showing possible policy transition patterns (see "Scenarios of Risk Spillover and Impacts (Example)" below), and have assessed risks for each pattern.

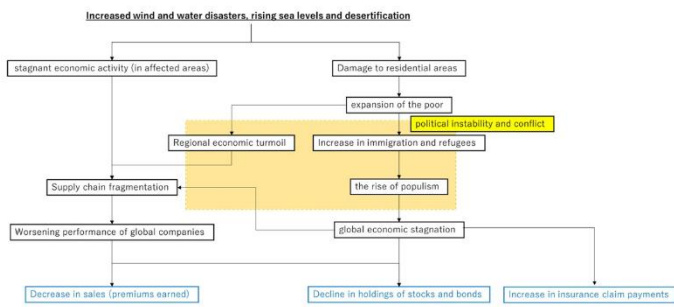
< Table: Patterns of environmental change (low, medium, high) >

	I P C C	N G F S
Low	SSP1-1.9	Orderly / Net Zero 2050
Medium	SSP2-4.5	Disorderly / Delayed Transition
High	SSP5-8.5	Hot House World / Current Policy、Nationally Determined Contributions (NDCs)

### < Scenarios of Risk Spillover and Impacts (Example) >

Reference

Spillover path (Image of path leading to influence in our company)



Expected impacts (Impacts related to the spillover pathways shown at left)

#### [1. Current situation]

• As of its Fifth Assessment Report in 2014, the IPCC found that "in recent decades, climate change has affected natural and human systems across all continents and oceans," and that "climate change can indirectly increase the risk of violent conflict in the form of civil war and ethnic conflict by amplifying well-founded conflict drivers such as poverty and economic hardship."

• Global awareness of these risks was triggered by the United Nations' view that climate change was partly responsible for the conflict in Darfur, western Sudan, where more than 400,000 people were massacred in 2003, and by economist Jeffrey Sachs' view that climate change was partly responsible for the conflict in Darfur.

• However, the views of Vally Koubi of the Swiss Federal Institute of Engineering, in a paper published in 2019 that extensively reviews existing quantitative studies on the relationship between climate change and conflict, concludes that no direct link between the two can be found.

• Dependence on agriculture, combined with or interacting with socioeconomic and political factors such as low economic growth and political marginalization, climate conditions can make conflict more likely.

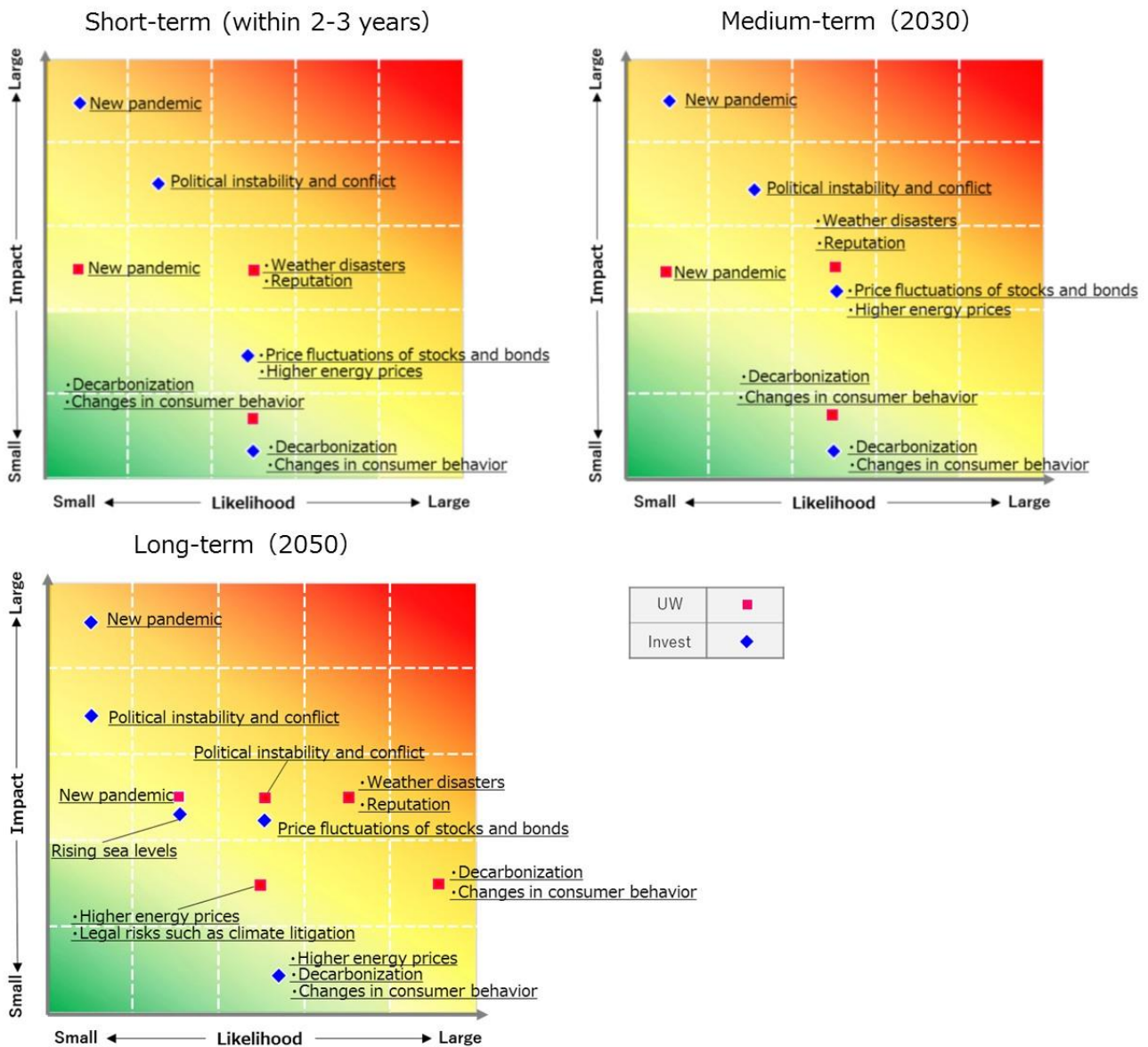
#### [2. Future impact]

• The World Bank estimates that by 2050, there will be at least 143 million "climate migrants," including climate refugees, forced to leave their homes due to the effects of climate change (World Bank 2018 "Groundswell: Preparing for Internal Climate Migration").

Based on the assessment results, risks that require continuous monitoring are visualized as a climate change risk map, which provides a bird's-eye view of the impact, likelihood, timing of occurrence, and trends of risks that primarily affect insurance underwriting and asset management, thereby stimulating discussion of climate change at the Board of Directors and other executive bodies.

### < Risk map based on assessment results >





## (2) Other risks

The scenarios used in the assessment were conducted for insurance underwriting and asset management, but we believe that the legal impact of lawsuits has the potential to affect our business activities other than insurance underwriting and asset management. We believe that the impact and likelihood of each scenario in the risk assessment are moderate, and will continue to collect and analyze information to understand the risks.

	Cause	Impact
Risk of lawsuits	Delays in climate change initiatives and inadequate information disclosure	Lawsuits for compensation filed against the company

Table: Risks to our business excluding insurance underwriting and asset management. Note that we conducted an assessment of the impact on insurance underwriting and asset management.

## (3) Integration with existing risk management frameworks

The risk perception captured by the climate change risk framework is reflected in the main assumed scenarios relating to material risks for management, while “Loss of Biodiversity”, an event that interacts with climate change, is investigated and studied as an emerging risk. (See table below).

#### Climate-related material risks and their main scenarios

Material risk Emerging risk	Main scenarios related to climate change
Climate change (physical risks)	Increased payments in fire and other insurance lines and reinsurance costs due to more severe and more frequent typhoons and hurricanes.
Climate change (transition risks)	Tighter policies, laws and regulations for decarbonization, and price volatility of equity and bonds due to technological innovations
Business interruption	Prolonged interruption of critical operations, loss of human life, etc. due to large-scale natural disasters and other events that exceed the assumed scenarios
Pandemics	Increased occurrence of serious new infectious disease pandemics due to deforestation and thawing of permafrost
Loss of Biodiversity	Destruction of ecosystems due to climate change and other factors will damage biodiversity and adversely affect the growth of agricultural crops. It has a negative impact on mitigation measures, accelerate the intensification and frequency of meteorological disasters, and weaken disaster mitigation capabilities.

We will also incorporate the knowledge gained through the climate change risk framework into our existing risk control system framework that involves capital management, stress testing, risk limit management, and liquidity risk management, thereby enhancing the overall sophistication of our risk management.

## 4. Metrics and Targets

### (1) Metrics for assessing risks and opportunities

We are evaluating our climate actions based on the recognition that implementing them will reduce risks and capture new business opportunities for our group. We will also refer to the global core disclosure indicators in the TNFD framework for nature-related indicators and include them in the following indicators for our evaluation.

Item *1	Unit	FY2023*2	Core Global Metrics (TNFD)	
			Driver of nature change	Indicator
GHG emissions (Scope 1-3 excluding insurance underwriting, investments and loans)	t-CO <sub>2</sub> e	306,876	Climate change	GHG emissions
GHG emissions (Scope3 Category15 Investments and loans)*3*4	Equities	867,087		
	Bonds	776,074		
	Total	1,643,161		

Weighted Average Carbon Intensity (WACI) (Scope3 Category15 Investments and loans)* <sup>5</sup>	Equities	t-CO <sub>2</sub> e/ Million USD	115.25	—	—
	Bonds	t-CO <sub>2</sub> e/ Million USD	128.13	—	—
Renewable energy introduction rate		%	9.0	—	—
Electricity consumption		kWh	315,184,001	—	—
Paper consumption		t	10,863	Resource use/ replenishment	Quantity of high-risk natural commodities sourced from land/ocean/fresh water
No. of participants in biodiversity conservation activities and environmental education programs		persons	9,617	—	—
Total surface area controlled/ managed		m2	1,381,037	Land/freshwater/ ocean-use change	Total spatial footprint
Wastewater discharge		kℓ	4,155,566	Pollution/ pollution removal	Wastewater discharged
Total amount of waste generated		t	19,504	Pollution/ pollution removal	Waste generation and disposal
Breakdown by disposal method	landfill	t	11		
	Incineration	t	13,891		
	Other Dispositions	t	304		
	Disposal method unknown	t	0		
Amount of waste recycled		t	5,298		
Clean water usage * <sup>6</sup>		kℓ	4,175,391	Resource use/ replenishment	Water withdrawal and consumption from areas of water scarcity

\*1 The scope of the indicators covers domestic consolidated companies and overseas consolidated companies.

\*2 "GHG emissions (Scope 3 Category 15 investments and loans)" and "Weighted Average Carbon Intensity (WACI) (Scope 3 Category 15 investments and loans)" are the results for FY2022.

\*3 Calculated for Scope 1 and 2 of listed equities and corporate bonds in Japan and overseas using data provided by MSCI ESG Research. (Coverage: 84 % of listed equities and 81% of corporate bonds in FY2022 on a market value basis.)

\*4 GHG emissions are our company's share of the investee's EVIC (Enterprise Value Including Cash) base.

\*5 WACI is the weighted average of GHG emissions per unit of sales for each investee's portfolio holdings. The WACI calculation method has changed from the 2021 figures.

\*6 It shows the amount of water used by our Group. We will continue to check whether this applies to areas with water scarcity.

## (2) Targets for managing risks and opportunities

The Sompo Group has set the following targets and is managing its progress.

Item	Target
SOMPO GHG emissions reduction rate	2030 60% reduction (compared to 2017) 2050 Net zero emissions  *Scope 1, 2, 3 (excluding investments and loans) *The total emissions in 2017, the target base year, was 412,771 t-CO <sub>2</sub> e
Investments and loans GHG emissions reduction rate	2025 25% reduction (compared to 2019) 2050 Net zero emissions  *Scope 3 category 15 is covered (target assets are listed equities and corporate bonds) *The emissions in 2019, the target base year, is as follows: Equities: 1,013,157 t-CO <sub>2</sub> e Bonds: 1,059,379 t-CO <sub>2</sub> e Total: 2,072,536 t-CO <sub>2</sub> e
Switch to renewable energy for electricity usage	2030 adoption rate 70% 2050 adoption rate 100%
Transition Insurance Target	2026 25 billion yen  *We have set a target for the direct insurance premiums of insurance products that contribute to decarbonization