

# Disclosure information on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

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## **Responding to Challenges Related to Climate Change**

In recent years, the effects of climate change have become increasingly severe, with frequent extreme weather events and natural disasters threatening the safety of people around the world.

Meanwhile, since the 2015 Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC), which adopted the Paris Agreement, momentum for climate change mitigation and adaptation has been growing worldwide and companies are expected to proactively address climate change, including decarbonization.

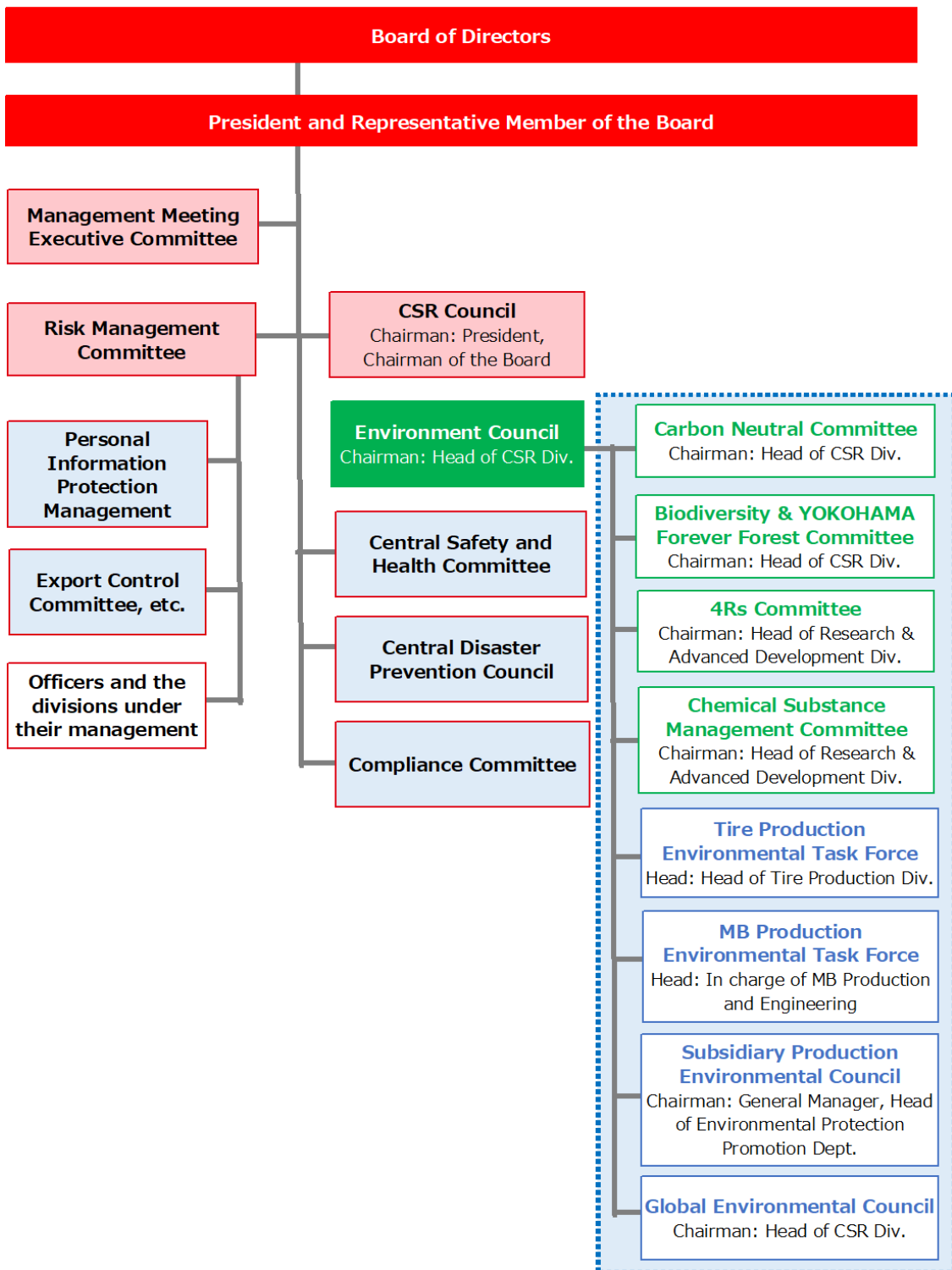
The Yokohama Rubber Group has positioned "climate change mitigation and adaptation" as one of the key management issues for contributing to a sustainable society and sustainable corporate growth, and expressed its support for the TCFD recommendations in January 2022.

We will continue to actively disclose information on our efforts to address climate change in line with the TCFD recommendations.

## **Governance**

The CSR Council, which is chaired by the President, Chairman of the Board, convenes twice a year (in May and November), and is positioned to draft and consider challenges related to climate change mitigation and adaptation, as well as other CSR challenges to be tackled by the Yokohama Group. Regarding climate change mitigation and adaptation, an Environment Council has been established. Environmental activities are pursued with the establishment of two task forces, two councils and four committees as subordinate bodies to the Environment Council. With an officer in charge (head of the CSR Div.) as its chairperson, the Environment Council deliberates and makes decisions regarding various issues such as carbon neutrality and oversees the environmental activities of the Yokohama Group.

# Climate Change-Related Governance Support System



## Strategy Planning

We have classified climate-related risks into two categories, specifically risks associated with the transition to a low-carbon economy (transition risks) and risks associated with the physical impacts of climate change (physical risks). We have also assessed the magnitude of the financial impacts to be affected and summarized the risks and opportunities for our business. In addition, we conducted scenario analysis using the scenarios presented by the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) regarding temperature increase, and examined adaptation measures and financial impacts based on the risks and opportunities of the 1.5°C and 4°C scenarios, respectively. We will continue to examine risks and opportunities and refine our scenario analysis.

### Major Risks and Opportunities Related to Climate Change

		Material Factors	Category	Potential Financial Impact	Impact
Risks	transition risks	Transition to a decarbonized society	Policy and Regulations	Introduction and rise of carbon pricing	Large
			Markets	Resource (raw material) price hikes and supply instability	Large
				Increase in renewable energy and fuel prices (crude oil, natural gas)	Large
			Technology	Capital investment to improve manufacturing process efficiency	Medium
			Reputation	Impact on customer evaluation of emission reduction efforts and stance, and on stock price	Small
				Response to the global movement to promote the use of renewable energy (reputation among stakeholders)	Small
			Change in demand for products and services	Markets	Product selection based on evaluation of CO2 emissions during manufacturing (competition within the same product)
	Response to changes in the automotive industry	Markets	Decline in car sales due to MaaS	Large	
	physical risks	Intense weather disasters due to rising temperatures	Acute	Raw material procurement difficulties and higher procurement costs due to supply chain disruptions	Large
				Equipment damage or shutdown due to extreme weather	Large
		Intense climate change	Chronic	Depletion of natural rubber (natural resources) due to climate change, making procurement difficult	Large
				Decline in demand for winter tires due to reduced snowfall, etc.	Large
Increased R&D investment required to improve product performance				Medium	

<b>opportunities</b>	Transition to a decarbonized society	Energy Sources	Reduce energy costs by improving manufacturing process efficiency	Medium
		Products and Services	Increase market share by responding quickly to changes in demand (carbon neutral compliance and performance requirements for electric vehicle (EV) installation) and stricter regulations.	Large
	Change in demand for products and services	Products and Services	Improve competitiveness and profitability by offering environmentally friendly products using renewable/recycled raw materials and fuel-efficient, low-carbon products	Large
	Response to changes in the automotive industry	Products and Services	Increased demand for products and services that support next-generation mobility (CASE and MaaS compliance, new business opportunities through hydrogen utilization)	Large
	Climate change	Products and Services	Increased demand for products and services that contribute to disaster prevention, recovery, temperature change, food, and nature (e.g., tires, oil fenders, etc. that contribute to crop/forest growth)	Large

## Summary of Scenario Analysis Results

Scenario Conditions		1.5°C scenario	4°C scenario
Scenario Overview		Limit the increase in the global average temperature to 1.5°C above pre-industrial levels by 2100 through stringent climate policies and technological innovation for sustainable development.	Failure of strict climate policies and technological innovation, and rapid intensification of the physical effects of climate change, resulting in a 4°C increase in average temperature by 2100 relative to pre-industrial levels.
Reference Scenario	Transition risk	IEA Net Zero Emissions by 2050 Scenario (NZE)	IEA World Energy Outlook 2021 (WEO2021)
	Physical Risk	IPCC 6th Report SSP1-1.9	IPCC 6th Report SSP5-8.5
Analysis Results		<p>Mainly transition risks/opportunities are manifested.</p> <p>[Risks] Increased energy cost burden and capital investment to improve manufacturing process efficiency due to the need to comply with strict climate change regulations, procurement of renewable energy, and introduction of carbon pricing. Increased R&amp;D and procurement cost burdens for renewable/recycled raw materials due to the increase in the number of products with reduced environmental impact.</p> <p>[Opportunities] Competitiveness and profitability will be enhanced through carbon neutral compliance, early response to EV-mounted performance requirements, and provision of environmentally friendly, fuel-efficient, and low-carbon products.</p>	<p>Mainly physical risks/opportunities manifested.</p> <p>[Risks] Increased occurrence of serious natural disasters at bases and in the supply chain. In addition, extreme weather conditions will deplete natural resources, making raw material supplies unstable. Product demand changes due to chronic climate change, such as lower demand for winter tires due to reduced snowfall, etc.</p> <p>[Opportunities] Increased demand for products and services for disaster prevention, recovery, and temperature fluctuations.</p>

## Risk Management

Regarding risks related to climate change, subordinate organizations to the Environment Council, including the Carbon Neutrality Promotion Committee and other task forces, councils and committees identify and assess each risk and engage in activities to mitigate them. For the material risks identified by each task force, council or committee, the Environment Council deliberates and decides on countermeasures. For physical risks such as natural disasters, the Central Disaster Prevention Council is working on disaster prevention and BCP and promoting risk reduction. Matters of great seriousness and urgency are deliberated by the Risk Management Committee (chaired by the head of the Corporate Administration Div.), which was established to strengthen our defensive posture against the various risks that surround Yokohama and are appropriately evaluated and handled.

The activities of the Risk Management Committee are regularly reported to the Board of Directors.

The activities of other committees are reported to the Executive Committee as appropriate, and those deemed necessary are reported to the Board of Directors.

## Metrics and Targets

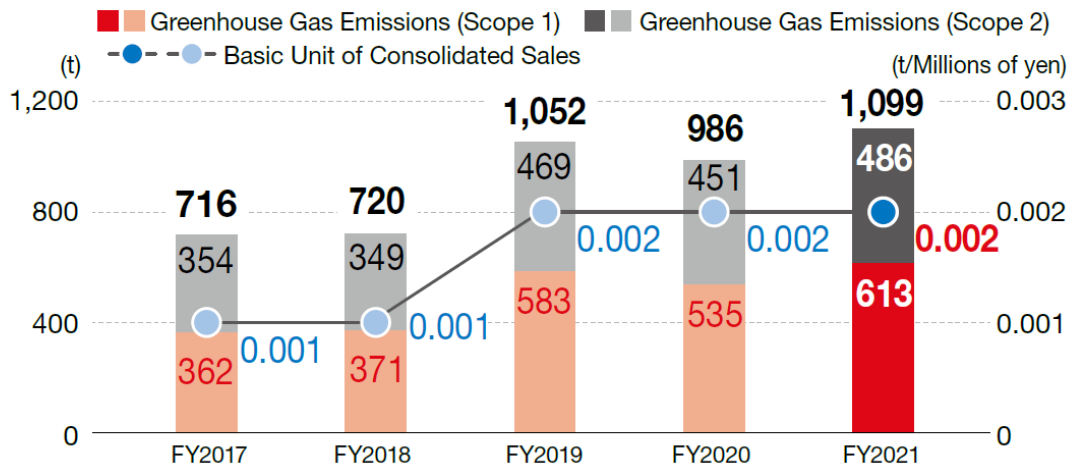
In order to minimize risks related to climate change, we have set the following mid to long-term targets for our environmental activities.

Item	Mid to Long-Term Targets
<b>Carbon Neutral</b>	<ul style="list-style-type: none"><li>• Reduce CO2 emissions from company activities by 38% by 2030 compared to fiscal 2013</li><li>• Achieve net zero CO2 emissions (carbon neutrality) in our activities by 2050</li></ul>
<b>Circular Economy</b>	<ul style="list-style-type: none"><li>• At least 30% renewable/recycled raw material usage by 2030</li><li>• 100% sustainable raw materials usage by 2050</li></ul>
<b>Coexistence with Nature</b>	<ul style="list-style-type: none"><li>• Cumulative 1.3 million trees planted and saplings provided by 2030 as part of Forever Forest activities</li></ul>

Greenhouse gas emissions (Scope 1-2) and Scope 3 are shown below.

Greenhouse Gas Emissions (Scope 1-2) (Consolidated)

# 1,099 tons

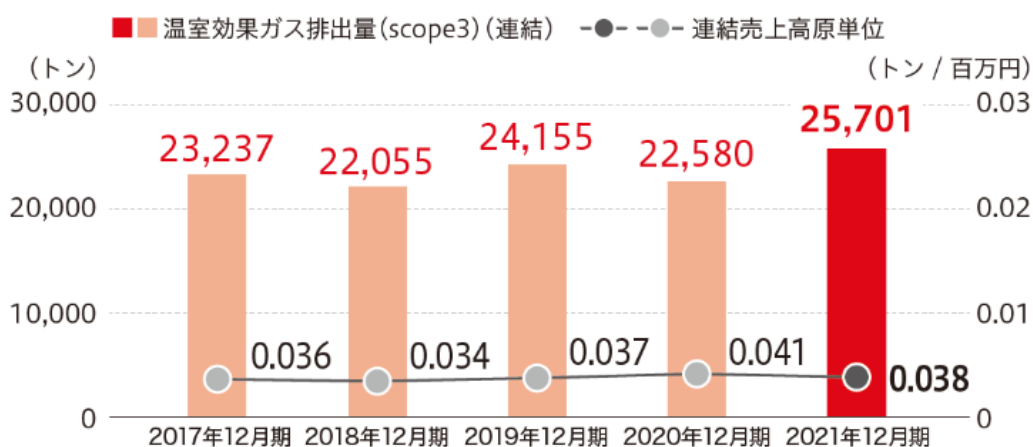


Greenhouse gas emissions (Scope 1 and Scope 2) increased year on year, with Scope 1 emissions rising 15% and Scope 2 emissions rising 8% due to growth in production and sales overseas in particular. Emissions per unit of sales improved 8% year on year for Scope 1 + Scope 2.

## Scope 3 estimation

Greenhouse Gas Emissions (Scope 3) (Consolidated)

# 25,701 トン



Greenhouse gas emissions (Scope 3) increased 14% year on year due to growth in production and sales overseas in particular. Emissions per unit of sales improved 6% year on year.

The breakdown of Scope 3 is as follows.

Cat	Scope 3 category	FY2019	FY2020	FY2021
1	Purchased products and services	3,173	2,924	4,031
2	Capital goods	58	52	152
3	Fuel and energy	106	135	147
4	Transportation and distribution (upstream)	141	167	154
5	Waste	2	16	50
6	Business travel	11	3	5
7	Commuting employees	25	20	21
8	Upstream lease assets	NA	NA	NA
9	Downstream transportation and distribution	54	59	72
10	Processing of sold products	11	11	10
11	Use of products	19,515	18,259	19,940
12	Disposal of products	923	822	875
13	Downstream lease assets	NA	NA	NA
14	Franchise	NA	NA	NA
15	Investment	135	114	246
<b>SUM</b>		<b>24,155</b>	<b>22,580</b>	<b>25,701</b>

※1 Scope 1: Direct emissions of greenhouse gases by the company (examples: fossil fuel, natural gas, etc.)



※2 Scope 2: Indirect emissions of greenhouse gases by the company (electric power use, etc.)

※3 Scope 3: Greenhouse gases emitted indirectly by the Company through the supply chain (examples: manufacturing, transportation, business travel, commuting, etc.)

※4 The calculation was conducted in accordance with the criteria of Scope 3 issued by the GHG PROTOCOL.

## Verification of greenhouse gas (GHG) emissions

Verification by a third party was obtained in order to verify the reliability of GHG emission calculation information.

- Third-party greenhouse gas verification report
  -  Japanese version (4,147KB)
  -  English version (5,520KB)

### Emissions

On our Sustainability website, we disclose the results of each indicator such as GHG emissions, water, waste, and Forever Forest and biodiversity conservation activities. We will continue to update this information on a regular basis.

Please refer to the following link for further details.

### Non-Financial Highlights