

Information Disclosure based on TCFD Recommendations

■ Climate Change Response - Endorsement of the TCFD Recommendations -

The Company Group announced its endorsement of the “Task Force on Climate-related Financial Disclosures (TCFD)” in January of 2023 in recognition of “Climate Change” as an important business challenge.



The Company Group is promoting sustainable management through corporate activities in order to achieve both sustainable growth and the possibility of a sustainable society. Based on our management philosophy of being “A Company Centered on Technology Development that Contributes to Society” we have identified IKO Group Materialities (important issues) from among various social issues and have implemented various initiatives for these. As one of these Materialities, we are focusing on “implementing corporate activities to realize a prosperous global environment” in response to climate change, and are disclosing the following important information related to climate change based on the TCFD recommendations.

■ About TCFD

The TCFD refers to the Task Force on Climate-related Financial Disclosures, established by the Financial Stability Board at the request of G20 with Michael Bloomberg as its chairman, to examine how climate-related information should be disclosed, and how should financial institutions respond.

The TCFD published its final report in June 2017, and recommends companies to disclose items related to climate change-related risks and opportunities.

- **Governance:** What systems are used to assess climate change, and how is this reflected to business management?
- **Strategy:** What impact will short, medium, and long term climate change have on business management?
How will you respond?
- **Risk Management:** How are climate change risks being identified, assessed, and mitigated?
- **Metrics and Targets:** What metrics are used to assess risks and opportunities, and to evaluate progress toward targets.

Governance

In January 2022, the Company Group established a “Sustainability Committee” that is comprised of Company Directors with the President and CEO as the Chairperson. This committee holds meetings at least once every half period with the Corporate Planning Department and Personnel and General Affairs Department as the Secretariat Office, formulates basic policies on sustainability including climate-related issues, establishes promotion systems, identifies medium- and long-term risks and opportunities, formulates and reviews materiality and issues, and conducts regular reviews of implementation progress. These contents are then reported to the Board of Directors at least once every half period, and the Board of Directors oversees and gives guidance on the implementation progress of medium- and long-term targets as well as on risks and opportunities related to ESG issues for the whole Group. The Company Group has positioned initiatives for the environment such as measures for climate change as important issues for sustainable management, and are working under this promotion system to strengthen initiatives by each department.

Governance System Diagram on Climate-Related Issues



Strategy

Risks and opportunities where climate change issues impact Company Group business were assessed according to the following steps by referencing each risk/opportunity item indicated in the TCFD recommendations.

Analysis of policy and market trend transitions (transition risks/opportunities), and analysis of physical changes caused by disasters, etc. (physical risks/opportunities) were also conducted using the 1.5°C to 2°C scenario and 4°C scenario.

Analysis Process



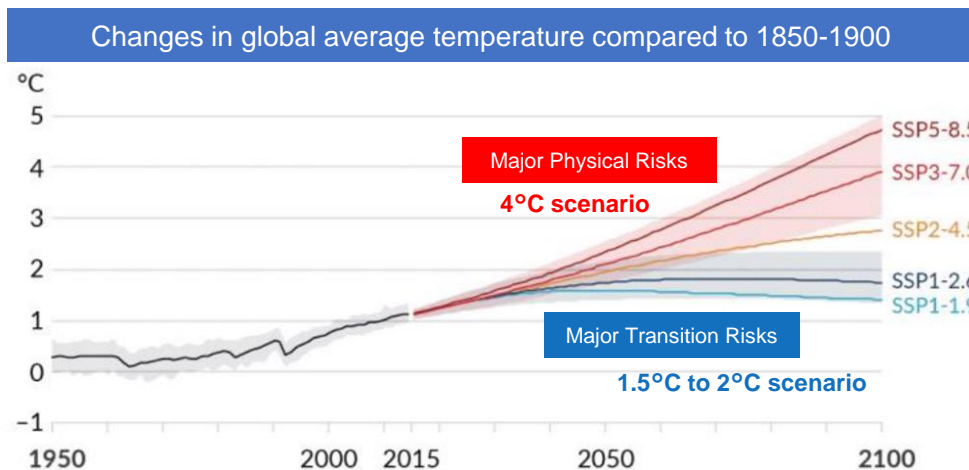
About Climate Change Scenarios

- 1.5°C to 2°C scenario

Scenario that targets suppressing the rise in global average temperature to between 1.5°C and 2°C compared to before the industrial revolution as initiatives for realizing carbon neutrality are becoming active in order to reduce the impact of climate change. The impact from policies and legal regulation risks in the transition risks for the 1.5°C scenario are expected to be larger than those of the 2°C scenario.

- 4°C scenario

Scenario where the global average temperature increases by about 4°C by end of this century compared to before the industrial revolution if climate change measures do not progress from now. The impact from intensifying extreme weather and rising sea levels among the physical risks is expected to be larger.



Source: Figure SPM.8 was transcribed from the tentative translation of the IPCC Sixth Assessment Report, Working Group I, Summary for Policymakers (Ministry of Education, Culture, Sports, Science and Technology and Japan Meteorological Agency)

Impact and Measures for Risks and Opportunities

	Risk	Factor	Impact on Business	Time Axis	Financial Impact	Measures
Transition Risk	Policies and Regulations	Carbon tax implementation / Increase in carbon tax rate	Increased burden from carbon tax	Long term	Medium	- Implementing renewable energy - Implementing energy-saving equipment
			Rising costs for raw materials due to carbon tax implementation	Medium to long term	Medium	- Purchasing low carbon materials and parts - Developing new low-carbon materials through collaboration with suppliers
	Technology	Implementation of low-carbon equipment	Increased investment in latest equipment	Medium term	Medium	- Considering investment through implementing ICP (Internal Carbon Pricing)
		Popularization of renewable energy	Increased costs for electricity due to rising short-term power generation costs	Short to medium term	Medium	- Construction of solar power stations at internal/external sites, and formulating/implementing introduction plans - Realizing 100% renewable energy use at each business site through various means based on "Additionality"
	Market	Changes in customer demand	Decreased demand for carbon negative business	Medium term	Major	- Shifting to products that contribute to low carbon emissions - Working to achieve longer product life - Improving the response level to meet diversifying demands
Reputation	Slow response to climate change	Reduced sales in the European and US markets due to insufficient climate change measures and information disclosure	Short to medium term	Major	- Implementing proper climate change measures and enhancing information disclosure	
Physical risk	Chronic	Average temperature rise	Lower employee productivity due to worsening work environment	Long term	Major	- Adding break rooms and installing spot air conditioner
			Higher electricity costs due to increased use of air conditioning in heat treatment / surface treatment processes	Medium to long term	Medium	- Implementing energy-saving air conditioners
		Rising sea levels	Lower production capacity resulting from disaster impact at company manufacturing bases (Production bases in Vietnam and China)	Medium to long term	Major	- Formulating and continuous review of BCP at factories
			Lower capacity utilization resulting from disaster impact to major suppliers	Medium to long term	Major	- Expanding suppliers - Formulating and continuous review of BCP at each supplier
	Acute	Intensification of extreme weather	Increased costs for factory transfer (Production bases in Vietnam and China)	Medium to long term	Major	- Promoting investment in disaster mitigation
			Lowered production capacity caused by damage to company production bases due to flooding, and higher costs for handling damaged equipment (Production bases in Japan)	Medium to long term	Major	- Regularly confirming hazard maps and reviewing the BCP - Promoting investment in disaster mitigation
Opportunities	Resource efficiency	Valuation of unused resources	Reduction of slow moving inventory and costs for handling waste by reuse of rail mill ends	Short to medium term	Medium	- Improving the accuracy of demand forecasting - Reviewing operations for improving reuse rate
		Reduced CO ₂ emissions	Reduced burden from carbon tax	Medium to long term	Major	- Implementing renewable energy - Implementing energy-saving equipment
	Energy source	Popularization of renewable energy	Reduced costs for purchasing electricity by reducing power generation costs from a long-term perspective	Long term	Medium	- Procuring renewable energy through various methods
	Products and services	Contribution toward transitioning to a decarbonized society	- Increasing demand for low-friction, durable bearings - Increasing demand for "the oil-minimum" products	Medium term	Major	- Improving accuracy of demand predictions for efficient production, and shortening delivery dates by improving production lead time - Developing "the oil-minimum" products
	Market	Promotion of electrification	- Developing new Mechatronics series and increasing demand - Increasing demand for bearings due to increased drive components	Short to medium term	Major	- Strengthening production capabilities by collaborating with partner companies - Strengthening global production system including construction of new factories
		Expansion of the EV and storage battery markets	Increased demand for linear motion rolling guides and liquid crystal lubricants	Short to medium term	Major	- Enhancing production capacity to meet future demand growth - Establishing organization system allowing for further production innovation
	Resilience	Expansion of products compatible with the BCP	Increase in demand for company products as disaster mitigation devices	Medium to long term	Major	- Pursuing high-rigidity and quality

* Assumed period Short term: Up to 1 year / Medium term: 1 to 7 years / Long term: 7 to 27 years

* Financial impact assessments of risks and opportunities were conducted according to qualitative and quantitative impact on sales or profit based on published reports and advice from experts etc., and then categorized as either Major, Medium, or Minor.

Calculation of financial impact

All items extracted as risks and opportunities were assessed as having a major impact on the company, and the financial impact of risks we consider to be particularly important were calculated.

(1) Transition Risk: Carbon tax implementation / Increase in carbon tax rate

■ Risk Contents

Regarding transition risks and opportunities, for achieving 1.5°C targets, we examined the carbon tax, which is expected to have the largest impact, by referencing the “IEA WEO2022 Net Zero Emissions by 2050 Scenario.”

We calculated financial impact using two patterns; (1) When Company standalone emissions for FY2031 are assumed to be the same as FY2023, and (2) When Company standalone emissions for FY2031 are reduced 50% compared to FY2019. Calculation results for (1) indicated an expected cost burden of about 339 million yen for FY2031 and about 197 million yen for (2). Moreover, no carbon tax burden is expected if initiatives for achieving FY2051 carbon neutral targets are implemented.

* According to EA NZE, Carbon tax unit price: \$140/t-CO₂ in 2030, \$250/t-CO₂ in 2050

* 1 dollar = 130 yen

	FY2031		FY2051	
	CO ₂ emissions	Financial impact	CO ₂ emissions	Financial impact
No measures for reducing CO ₂	18,632 t-CO ₂	Approx. 339 million yen	18,632 t-CO ₂	Approx. 605 million yen
When CO ₂ reduction targets are met	10,852 t-CO ₂	Approx. 197 million yen	0 t-CO ₂	0 million yen
Reduction amount	-	△ 142 million yen	-	△ 605 million yen

■ Risk Response: Implementing renewable energy through on-site PPA model

We implemented on-site PPA model solar power generation on the roofs of our production bases in Japan at the Gifu Factory complex Factory 2 in the Gokurakuji area (began operating in November 2021) and Mugegawa area (began operating in April 2023). The power generated at both sites were used inhouse, and we expect a reduction of the Company’s Scope 2 greenhouse gas emissions of 2.3% for FY2023.

In the future, the Company believes that “Additionality” is a key for procuring renewable energy, and we are currently discussing implementation of solar power generation at other areas.



Solar power panels installed at the Gifu Factory complex (Left) Gokurakuji area Factory 2, (Right) Mugegawa area

(2) Physical Risk: Decrease in production capacity due to flooding at production bases

■ Risk Contents

Regarding physical risks and opportunities, we assessed the possibility of flooding caused by acute risk of extreme weather, which is expected to have the most major impact, using the “IPCC RCP8.5 Scenario,” and “overlapping hazard map” by the Geospatial Information Authority of Japan. It was found that the Mugegawa area of the Gifu Factory complex has a flooding risk of up to 3 meters. If a disaster occurs at this site without taking any measures, according to the “Flood Control Economic Survey Manual (Draft)” by MLIT, production is expected to be suspended for 56.1 days, and production is expected to be slowed for 83.2 days. Regarding the impact of the risk, the assumed maximum decrease in sales is calculated by converting the production value to the selling price at relevant sites and using the estimated number of days for suspended and slow production.

We also considered flooding risks at other sites in Japan, but there were none.

Estimated maximum decrease in sales	3,439 million yen
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■ Risk Response: Thorough risk management using hazard maps

For physical risks related to climate change, the Company Group conducted flooding risk surveys using hazard maps and calculated the expected damage. From now, the latest information on disaster prevention and mitigation measures will be collected by the Risk Management Committee to review and strengthen the BCP, and prevention measures for reducing damage and quickly recovering business when flooding occurs will be considered for facilities located in high-risk areas.

Risk Management

Process for identifying and assessing climate-related risks

The Sustainability Committee holds discussions to identify risks and their impact on sustainable corporate activities for the Company Group in regards to climate change, which are included in the specified “IKO Group Materiality,” and gives a report on this to the Board of Directors at least once every half period. Also, in order to establish a management system for prevention, discovery, correction, and recurrence prevention for any risks that can occur related to business management including climate change risks, and to determine policies for responding to risks that occur, we established a “Risk Management Committee” comprised of Executive Directors including the President and CEO and full-time auditors, and built a risk management system.

Process for managing climate-related risks

The “Risk Management Committee” clarifies the orientation for controlling risks based on the risk assessment results conducted every year according to the “Risk Management Regulations,” and determines which departments or organization (committee, meeting body, etc.) need to respond for each identified risk item including climate change risks for implementing risk responses.

Major revisions are carried out every three years via risk assessment. Risks that need to be monitored and newly recognized risks are clarified based on the current status of risk measures. The probability of risk occurrence, impact of the risk on corporate value, and the response status to the risks are assessed using four levels, and we then identify the priority risks that need to be addressed.

Process for integrating climate-related risks into corporate risk management

Principally, the “Risk Management Committee” holds meetings every half period, report contents on the response status for each risk item are assessed, important decisions are made on organization-wide risk management including climate change risks, and discussion contents are reported to the Board of Directors.

For more information on the whole Company Group’s comprehensive risk management, see [here](#).

Metrics and Targets

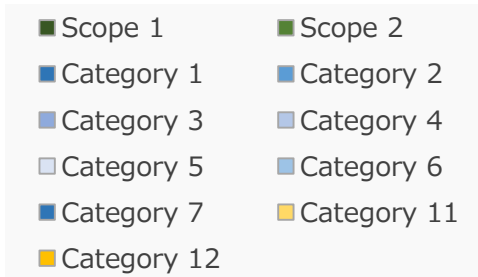
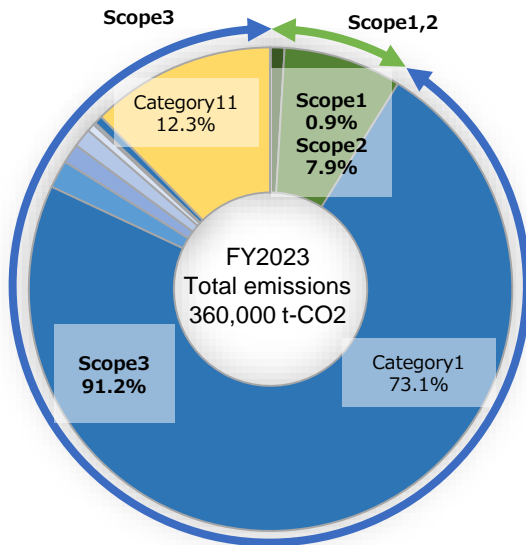
The Company Group calculates greenhouse gas emissions based on GHG Protocol standards for assessing and controlling the impact of climate-related issues on management. Currently, targets for reducing greenhouse gas are for NIPPON THOMPSON alone, and the goal is to achieve at least a 50% reduction by FY2031 compared to the standard emissions in FY2019 (Scope 1, 2) of 21,704 t-CO₂, and we are working to achieve this.

Additionally, since FY2022, the “Environmental Committee” has taken the lead in calculating greenhouse gas emissions for the whole supply chain, which includes the whole Company Group. Emissions of CO₂ are calculated using the “Asuzero” emissions visualization cloud by Asuene Inc. During FY2023, calculations were made for overseas offices for which calculations had not been made during the previous fiscal year, and regarding Scope 3 emissions, calculations were made for all target categories except for Category 9, which we are currently preparing. From now, in addition to improving calculation accuracy, we will strengthen our efforts to reduce emissions throughout the supply chain for achieving carbon neutrality by FY2051.

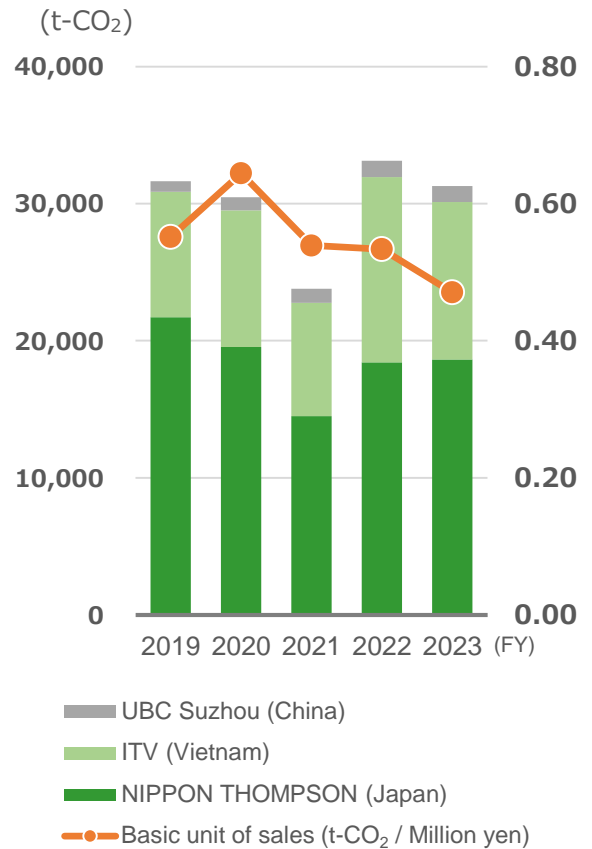
Company Group Greenhouse Gas Emissions in FY2023 (Scope 1, 2, 3)

			Emissions (t-CO ₂)	
			FY2022	FY2023
Scope 1+2			33,243	32,130
	Scope 1	Total	2,729	3,377
		Japan	2,722	3,045
		Outside Japan	7	332
	Scope 2	Total	30,514	28,753
		Japan	15,797	15,984
		Outside Japan	14,717	12,769
Scope 3			269,776	331,521
		1 Purchased goods and services	220,950	265,958
		2 Capital goods	6,880	6,755
		3 Fuel and energy-related activities not included in Scope 1, 2	4,915	4,783
	Upstream	4 Transportation and distribution (Upstream)	1,448	4,576
		5 Waste generated in operations	1,730	1,889
		6 Business travel	210	595
		7 Employee commuting	1,602	2,027
		8 Lease assets (Upstream)	—	—
		9 Transportation and distribution (Downstream)	—	—
		10 Processing of sold products	—	—
		11 Use of sold products	31,956	44,851
	Downstream	12 End-of-life treatment of sold products	85	87
		13 Lease assets (Downstream)	—	—
		14 Franchises	—	—
		15 Investments	—	—
Total			303,019	363,651

Greenhouse gas emissions (Scope 1, 2, and 3)



Scope 1 and 2 emission trends (Individual, production departments outside Japan)



FY2031 (Medium-term targets)

Reducing NIPPON THOMPSON's individual Scope 1 and 2 emissions by at least 50% (Compared to FY2019)

FY2051 (Long-term targets)

Achieving carbon neutrality

- Calculations are made according to the "Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the Supply Chain" by the Ministry of the Environment and METI. For categories not described above, there is either no emission source or the calculation is included in Scope 1, 2.
- Scope 2 emissions are calculated using market standards.
- Scope 3 emissions are calculated using the Database on Emission Intensities for Calculating Organizational Greenhouse Gas Emissions, etc. through a Supply Chain Version 3.2.