

6. Responding to Climate Change (Addressing the TCFD Recommendations)

Nissha Group publicly endorsed the recommendations made by the Task Force on Climate-related Financial Disclosures (TCFD) in January 2022. Since then, we have been analyzing the financial impact of risks and opportunities related to climate change on our Group's businesses using the framework of the TCFD recommendations, and disclosing the results.



6-1 Governance

The Nissha Group manages its response to climate change by distinguishing between materialities (risks and opportunities related to the realization of our Sustainability Vision), which are material issues for the Group, and general risks (risks related to smooth business operations).

The governance and promotion structure for materialities and general risks are as shown below.

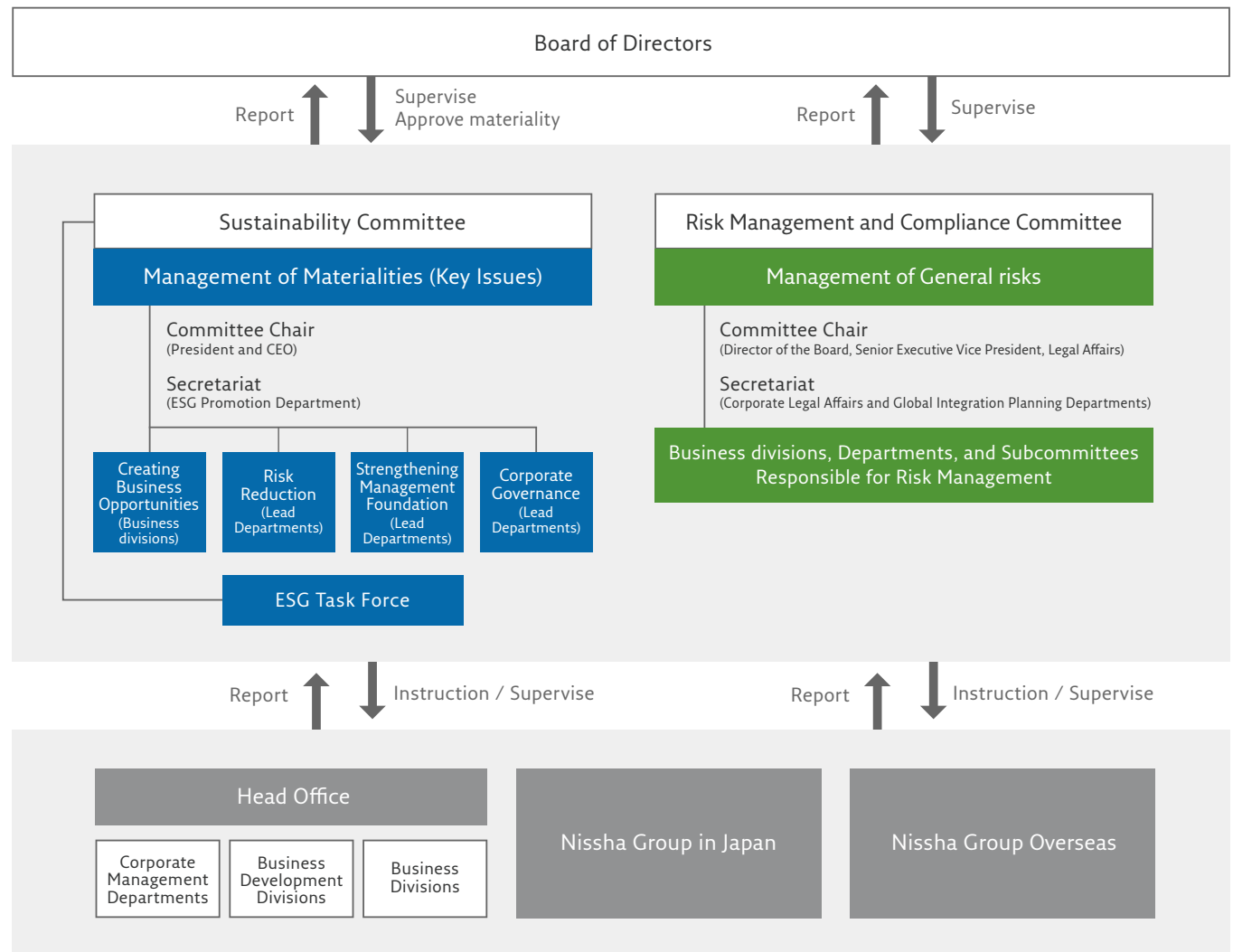
Materialities (Key Issues) Management	General Risks Management
<ul style="list-style-type: none"> Materialities (key issues) are identified through deliberation and resolution by the Board of Directors meeting and managed by the Sustainability Committee which is chaired by the Chairman of the Board, President and CEO. The Sustainability Committee manages the identified materialities. The ESG Task Force has been set up to promote the theme of "responding to climate change," which is considered particularly important from the ESG perspective. In addition to setting KPIs and action items and reporting progress to the Sustainability Committee, the ESG Task Force discusses the company's responses to climate change with the Board (excluding independent outside directors, but including the President and CEO). The Board of Directors supervises the activities of the Sustainability Committee. It deliberates on the contents of the Committee's report once a year, and gives instructions for improvements as necessary. The President and CEO makes important strategic and financial decisions concerning our responses to climate change within the scope of his authority. To help him make decisions appropriately, the President and CEO learns about climate change through study sessions and training by outside experts. Introduced stock-based compensation* as mid- to long-term performance-linked compensation for directors (excluding independent outside directors) and corporate officers. One of the indicators for the mid-term target is the degree of progress to the total CO₂ emissions reduction target. 	<ul style="list-style-type: none"> Risks that would hinder smooth business operations are centrally managed by the Risk Management and Compliance Committee, which is chaired by the Senior Executive Vice President (in charge of legal affairs). The Risk Management and Compliance Committee approves the "key risks" identified by the departments responsible for risk management and overseas Group companies after conducting a risk assessment. One of the key risks, Business Continuity (natural disasters such as earthquakes, typhoons, and floods) encompasses climate change-related risks, and the Business Continuity Management Subcommittee takes charge of moving ahead with this. The Business Continuity Management Subcommittee sets KPIs and action items, and promotes measures for reducing risks. It formulates and updates response plans for preparing for or dealing with emergency situations in the event of a natural disaster, and reports on progress to the Risk Management and Compliance Committee. The Board of Directors supervises the activities of the Risk Management and Compliance Committee, which manages key risks that include climate change-related risks. It deliberates on the contents of the Committee's report once a year, and gives instructions for improvements as necessary.

*About stock-based compensation

- Points are awarded based on the degree of achievement of mid-term targets and the consolidated performance target for each fiscal year over the three-year period of Nissha's medium-term business plans.
- On a set date in the final fiscal year of each medium-term business plan, points are confirmed, and Nissha shares and money equivalent to Nissha shares converted at the market price are granted.

In the Nissha Group, the departments responsible for promoting materialities in the Sustainability Committee (business divisions, lead departments, ESG Task Force) and the departments responsible for risk management in the Risk Management and Compliance Committee (business divisions, lead departments, subcommittees) work with the various departments (corporate management departments, business development divisions, business divisions) at the Head Office and with Group companies in Japan and overseas on formulating measures, thus working on reducing general risks and achieving the materialities, including climate change.

Management Structure



6-2 Strategy

We have conducted a scenario analysis of the impact of future climate change on our business operations, using a range of scenarios of projected environmental change, based on the framework recommended by the TCFD.

We analyzed the impact of future climate change on our three main businesses over different time horizons: 1 to 2 years for the short term, 3 to 5 years for the medium term, and 6 to 10 years for the long term, including the Sustainability Vision. Based on this analysis, we considered measures to respond to these impacts.

(1) Scenario analysis assumptions

- Scenario analysis target business^{*1}: Three main businesses of the Nissha Group (Industrial Materials, Devices, Medical Technologies)
- Scenario analysis time horizon: Study transition risks and physical risks and opportunities in the short term (1-2 years), medium term (3-5 years), and long term (6-10 years)
- Assumed scenario: See IEA's Net Zero Emissions by 2050 (NZE)^{*2}, Stated Policies Scenario (STEPS)^{*3}, IPCC's RCP4.5^{*4} and RCP8.5^{*5}, etc. scenarios

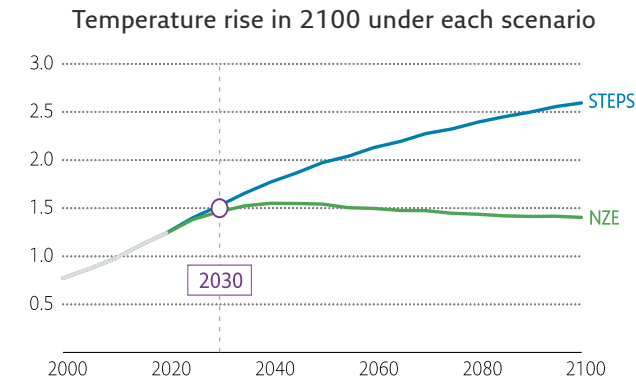
^{*1}.Target Businesses: Other businesses (Information and Communication, Pharmaceuticals and Cosmetics) are not included.

^{*2}.NZE: a scenario in which the world decarbonizes and achieves virtually zero CO₂ emissions in 2050. It is called the "1.5 °C scenario" because the average temperature increase as of 2100, compared to pre-industrial times, will be between 1.3 and 1.5°C.

^{*3}.STEPS: a scenario in which countries implement their stated current specific policies on decarbonization and no additional decarbonization-related policies are introduced. It is called the "3°C scenario" because the average temperature increase as of 2100, compared to pre-industrial times, will be between 2.4 and 2.8°C.

^{*4}.RCP4.5: a scenario in which CO₂ emissions peak in 2040 and stable economic development is achieved.

^{*5}. RCP8.5: a scenario in which CO₂ emissions continuously increase and uneven economic development is achieved.



Source: created internally based on the IEA World Energy Outlook, 2021

Under the two scenarios referenced from the IEA, we believe that we can visualize many climate change-related risks and opportunities by using the 1.5 °C scenario in which regulations are tightened and zero CO₂ emissions are achieved by 2050, and the 3° C scenario in which no additional policies are introduced and climate change measures do not progress.

(2) Scenario analysis process

Scenario analysis was conducted using the following process:

- Consider significant climate-related risks and opportunities for three main businesses
- Consider and create scenarios as preconditions for evaluation
- Assess risks and opportunities based on the scenarios(Risks and opportunities are assessed by calculating and evaluating the "financial impact" as of 2030 using the parameters in each scenario, and the results are described below as "magnitude of risk" and "magnitude of the opportunity.")

(iv) Consider countermeasures (adaptation, mitigation)

(3) Results of risk analysis

Our transition and physical risks related to climate change, and the magnitude of the risks in each scenario, as well as our response to these risks are analyzed and considered as shown in the table below for the set time horizon.

Results of risk analysis

Type	Changes in the external environment	Target business	Time horizon	Risks to Nissha	Risk magnitude ^{*1,2}		Adaption / Mitigation measures		
					3°C	1.5°C			
Transition risk	Policies/laws and regulations	Industrial Materials Devices Medical Technologies	Medium to long-term	Increase in production and countermeasure costs due to carbon taxation on CO ₂ emissions	Small	Medium	<div>Mitigation</div> Switch to renewable energy sources at production sites	<div>Mitigation</div> Introduce energy-saving production equipment	
				Increase in the cost of procuring raw materials needed to produce products due to the carbon taxes	-	Medium	<div>Mitigation</div> Review productivity and efficiency in the production processes		
		Industrial Materials Devices Medical Technologies	Medium to long-term	Increase in electricity procurement costs due to switch to renewable energy sources for electricity and soaring levies, etc.	Small	Small	<div>Mitigation</div> Introduce energy-saving production equipment	<div>Mitigation</div> Reduce electricity consumption	
				Cost of reducing CO ₂ emissions in logistics (procurement and shipping) increases	-	Small	<div>Mitigation</div> Consider the introduction of solar and wind power generation facilities		
		Industrial Materials	Medium to long-term	Increase in the cost of procuring raw materials needed to produce products due to the progression of plastics-related regulations	-	Small	<div>Mitigation</div> Study trends in the logistics industry and consider shifting to transportation methods that emit less CO ₂	<div>Mitigation</div> Study the use of biomass plastic and recycled plastic as low-carbon materials, research technological trends and develop products	
	Introduction of CFC regulations	Devices	Medium to long-term	Restrictions on use of specified CFCs and their substitutes used at production bases increase capital investment costs	Small	Medium	<div>Mitigation</div> Further promote the development of the ecosense molding brand of sustainable molded products oriented toward the elimination and reduction of plastic, and increase the sales ratio of sustainable materials		
	Industries and Markets	Industrial Materials	Medium to long-term	Increase in petrochemical material costs due to changes in crude oil demand	Medium	-	<div>Mitigation</div> Research technology trends to enable compliance with CFC regulations	<div>Mitigation</div> Study the use of biomass plastic and recycled plastic as low-carbon materials, research technological trends and develop products	
				Increase in raw material costs due to increased use of reprocessed plastic	-	Small	<div>Mitigation</div> Further promote the development of the ecosense molding brand of sustainable molded products oriented toward the elimination and reduction of plastic, and increase the sales ratio of sustainable materials		
		Industrial Materials	Short to long-term	Decrease in sales opportunities for EV-related products due to changes in market structure	Small	-	<div>Mitigation</div> Promote product development and enhance production facilities in response to market trends for next-generation vehicles other than Evs		
	Technologies	Devices	Short to medium-term	Net sales decline due to lost business opportunities caused by insufficient responses to customer requests	Small	Medium	<div>Mitigation</div> Conserve energy through improved productivity and reduce CO ₂ emissions through switch to renewable energy	<div>Mitigation</div> Investigate alternative materials that can reduce costs while maintaining the quality of packaging materials	
				Costs increase due to replacing product packaging materials	-	Small	<div>Mitigation</div> Develop low-carbon products with lower environmental impact		
				Net sales decline due to substituting our products for low-carbon products made by other companies	Medium	Medium	<div>Mitigation</div> Promote the development of low-carbon technologies		
	Reputation	Devices	Short to medium-term	Net sales decline due to lost business opportunities resulting from delays in the development of low-carbon technologies	Medium	Medium	<div>Mitigation</div> Enhance climate change initiatives and disclose information appropriately	<div>Mitigation</div> Improve and strengthen BCP, and establish a system to support affected sites	
				ESG assessment declines due to delays in addressing climate-related issues, and we are not chosen as a supplier resulting in a decline in net sales	-	Small	<div>Mitigation</div> Build a supply chain for stable procurement, including multi-company purchasing and outsourced production of raw materials at multiple factories and lines		
Physical risks ^{*3}	Acute	Industrial Materials Devices	Short to long-term	- Decline in net sales due to production delays or suspensions resulting from damage to production bases, and incidence of repair costs due to damage to company assets such as buildings, facilities, and inventory - Decline in the company's net sales due to the impact of the suspension of the supply of raw materials and parts due to disasters at suppliers	Small	Small	<div>Mitigation</div> Improve and strengthen BCP, and establish a system to support affected sites	<div>Mitigation</div> Build a supply chain for stable procurement, including multi-company purchasing and outsourced production of raw materials at multiple factories and lines	

*1. Risk magnitude evaluation horizon: Changes in net sales Large: 20 billion yen or more, medium: 5 to 20 billion yen, small: less than 5 billion yen / Operating profit/loss: Large: 3 billion yen or more, medium: 1 to 3 billion yen, small: less than 1 billion yen

*2. Scenarios in which no risks are incurred are indicated with a "-"

*3. For physical risks, hazard maps and AQUEDUCT were used to survey the key production bases of each business (30 locations). The financial impact on bases where risks had been identified was evaluated by considering the frequency of occurrence.

Based on the above analysis, no significant and hard-to-handle risks associated with climate change were identified at this stage in our three main businesses. The following risks associated with climate change are applicable to multiple businesses and will have a relatively large impact on our business.

[Transition risk]

- (i) Increase in production and countermeasure costs due to carbon taxation on CO₂ emissions (1.5° C scenario)
- (ii) Increase in the cost of procuring raw materials needed to produce products due to the carbon taxes (1.5° C scenario)

As a measure to address (i), we are promoting the switch to renewable energy at our production bases. Our main production bases in Japan, Nissha Industries, Inc. Koka Factory and Nissha Precision and Technologies, Inc. Himeji Factory and Kaga Factory, have completed the switch to 100% renewable electricity. At overseas bases, Nissha (Kunshan) Precision IMD Mold Co., Ltd. (China), a production base for the Industrial Materials business, has been generating solar power, and Nissha Metallizing Solutions (Belgium) replaced part of its electricity with solar and wind power. Moreover, Nissha Advanced Technologies Europe GmbH (Germany) has brought in solar power generation. In addition, we are switching to LED lighting and upgrading aging facilities with energy-efficient equipment to contain electricity consumption. We will continue to promote our responses as we verify

costs and effects.

As a measure to address (ii), in the Industrial Materials business, we are investigating technological trends, examining the use of biomass PET and other biomass plastics and recycled plastics, and developing products to reduce the use of virgin plastics.

[Physical risks]

No physical risks have been identified at this stage.

The Nissha Group has taken measures to address risks that we believe have a relatively large impact with respect to climate change in our three main businesses, and we consider ourselves to have climate resilience.

We will continue to monitor trends in the business environment under the 1.5° C and 3° C scenarios and develop our business strategically.

(4) Results of opportunity analysis

Based on our awareness that solving social issues related to climate change will create our business opportunities, we have analyzed and examined the magnitude of the opportunities in each scenario and our response to these opportunities in the time horizon we have set, as shown in the table below.

Results of opportunity analysis

Type	Changes into the external environment	Target business	Time horizon	Opportunities to Nissha	Opportunity magnitude ^{*1,2}		Countermeasures
					3°C	1.5°C	
Products and Services	Carbon price Changes in national carbon emission targets and policies	Industrial Materials Devices	Medium to long-term	Expansion of demand for products that contribute to GHG emission reductions	Medium	Medium	- Develop and expand sales of products that contribute to GHG emission reductions (highly recyclable decorative film moldings, gas sensor modules for refrigerant detection, etc.)
		Industrial Materials	Medium to long-term	Increase in sales opportunities for plant-derived sustainable molded products due to the progression of plastics-related regulations	-	Small	- Further promote the development of the ecosense molding brand of sustainable molded products oriented toward the elimination and reduction of plastic, and increase the sales ratio of sustainable materials
	Increase in EV sales	Industrial Materials Devices	Short to long-term	Increase in sales opportunities for EV-related products due to changes in market structure	Small	Small	- Develop and expand sales of new products for EVs (decorative film molded products and functional products for exteriors, touch sensors, etc.)
	Fluctuations in raw material prices	Industrial Materials	Medium to long-term	Increase in sales opportunities due to increased demand for sustainable molded products as a result of the lower costs of plant-derived plastics	-	Small	- Further promote the development of the ecosense molding brand of sustainable molded products oriented toward the elimination and reduction of plastic, and increase the sales ratio of sustainable materials
	Arrival of a hydrogen-based society	Devices	Medium-term	Demand for Fuel Cell Vehicles (FCVs) expands	Small	Small	- Develop and expand sales of products for the mobility market (such as hydrogen detectors) that contribute to reducing our environmental impact

^{*1}1. Opportunity magnitude evaluation horizon: Changes in net sales Large: 20 billion yen or more, medium: 5 to 20 billion yen, small: less than 5 billion yen / Operating profit/loss: Large: 3 billion yen or more, medium: 1 to 3 billion yen, small: less than 1 billion yen

^{*2}2. Scenarios in which no opportunities are incurred are indicated with a “-”

The following climate change opportunities are applicable to multiple businesses and have a relatively large impact on our business.

[Opportunities]

- (i) Expansion of demand for products that contribute to GHG emission reductions (1.5/3° C scenario)
- (ii) Increase in sales opportunities for EV-related products due to changes in market structure (1.5° C scenario)

As a measure to address (i), the Industrial Materials business aims to expand sales of existing decorative films and molded products for mobility and consumer electrical appliances. The Nissha Group's decorative films and molded products contribute to the reduction and control of GHG emissions by adding patterns and functions at the same time they are molded to eliminate the need for secondary decoration processes after molding, as well as by building an optimal supply chain for customers from seven molding bases located around the world. We also aim to create products with even lower environmental impact by undertaking recyclability studies and conducting Life Cycle Assessments (LCA) for each product to quantitatively evaluate the environmental impact.

In the Devices business, we are aiming to expand sales of gas sensor modules that can detect next-generation refrigerants produced by Nissha FIS, Inc. Although the next-generation refrigerants used in air conditioning and refrigeration units today have low ozone depletion potential, leak detection is necessary as they are mildly flammable and have an extremely high greenhouse effect. We believe that our Group's gas sensors can contribute to both safety and the prevention of global warming, and we aim to increase our net sales by expanding our sales region to include North America and other overseas markets.

As a measure to address (ii), we have identified the expansion of products targeting the mobility market as one of the priority markets for achieving our Sustainability Vision, and we are working to enhance EV-related products as a measure to address climate change.

The Industrial Materials business aims to expand sales of exterior decorative and functional products. For EVs that do not require engine cooling, there is a growing need to decorate the front as a vehicle face design to replace the front grille, as well as a need to add functions to ensure the proper operation of automatic driving radars in this area. In addition, there is a need for a heating function to melt snowing sticking on headlights and front grilles.

The Devices business aims to expand sales of touch sensors for curved surfaces and large displays. The Nissha Group's touch sensors use a film-based material which provides high visibility and a narrow frame while being thin, light, hard to break, and bendable. Next-generation automobiles, including electric vehicles, have a wide variety of needs that require high design levels.

We shall draw on the strengths of our products and aim to expand net sales by developing new products that meet these EV needs to expand our product lineup.

We reflect our scenario analysis results in our business strategy, such as the growing demand for products that contribute to reducing GHG emissions and the expanding EV market.

6-3 Risk Management

The Nissha Group manages its climate change risks by distinguishing between materialities (risks and opportunities related to the realization of our Sustainability Vision, which are material issues for the Group, and general risks (risks related to smooth business operations) and by the Sustainability Committee and the Risk Management and Compliance Committee assessing and managing each of these risks in accordance with the following process.

In particular, for the risks associated with climate change, we conduct scenario analysis for each business. We extract transition risks and physical risks, evaluate the timing of risk occurrence and the impact on finances for each scenario, and consider risk adaptation and mitigation measures.

Refer to 6-2 Strategy







■ Risk Management by the Sustainability Committee

The Group has set out where it wants to be in terms of management by 2030 in the form of our Sustainability Vision (long-term vision). We are aiming to create social value by providing products and services that contribute to solving social issues, and to achieve a 30% reduction in total CO₂ emissions in 2030 (compared to 2020)*1 with a view to carbon-neutral by 2050. And to realize the Sustainability Vision, we have identified items of particular importance as materialities.

The Nissha Group evaluates social issues from the perspectives of Creating Business Opportunities, Risk Reduction, Strengthening Management Foundation, and Corporate Governance using the two axes of "importance to society and stakeholders", and "importance to Nissha (i.e. importance for achieving our Sustainability Vision)". The identified social issues are prioritized by the Sustainability Committee, and materialities are identified through deliberations and resolutions by the Board of Directors.

We have identified the following material issues relating to climate change from the perspectives of Creating Business Opportunities and Risk Reduction.

*1. We plan to set a new CO₂ emissions reduction target in 2025, as we achieved our original target in 2024 (a 30% reduction by 2030 compared to 2020).

	Materiality	Related SDGs
Risk reduction	Responding to climate change	
Creating business opportunities	Contribute to the safety and comfort of transportation and logistics, and the reduction of environmental impact	 
	Promotion of circular economy	  

The ESG Task Force promotes activities related to risk reduction. The ESG Task Force works based on KPIs and action items approved by the Sustainability Committee. In addition, it reports on its progress quarterly to inside directors, including the President and CEO.

Activities related to creating business opportunities are handled by the business divisions. The business divisions report to the Chairman of the Board, President and CEO at monthly meetings (business reviews), at which the Chairman of the Board, President and CEO confirms the progress of business strategies based on KPIs and gives instructions on necessary action.

The Sustainability Committee reports its activities annually to the Board of Directors, and the Board of Directors utilizes the contents of the report to formulate the Medium-term Business Plan and Rolling Plan.

Refer to 3-3 Promotion Framework for Sustainability / 3-4 Materialities (Key Issues) and KPIs

■ Risk Management by the Risk Management and Compliance Committee

In accordance with our Basic Policy on Risk Management, the Nissha Group centrally manages general risks (risks related to smooth business operations) based on the categories of cross-Group risks, business risks and financial risks. Of these, the Risk Management and Compliance Committee selects important risks for the Headquarters and each Group company both in Japan and overseas after conducting an annual risk assessment of cross-Group risks. To further reduce the risks arising from business activities, it selects important risks following a process of the department or subcommittee

responsible for the risk, or the business organization, confirming the priority and appropriateness.

■ Risk Assessments and Risk Management Methods

(1) Evaluation targets

- All Group companies in Japan
- 55 Group companies overseas (Including when major overseas subsidiaries and their own subsidiaries have been evaluated)

(2) Target risks

- Cross-group risks (including compliance risks)
Refer to 28-4 Risk Assessment and Management

(3) Selection process for key risks

The following process is used by the Risk Management and Compliance Committee to select key risks.

- For the above cross-group risks, the high-value risks calculated using the "probability of occurrence" and "impact when it occurs" horizons are considered the "inherent risks".
- In addition, the "effectiveness of control activities" is evaluated, and risks with low "effectiveness of control activities" with respect to "inherent risks" are selected as key risks.

(4) Management method

- Key risks (low "effectiveness of control activities" with respect to "inherent risks"): The departments responsible for risk management or Group companies overseas set the Key Performance Indicators and action items to mitigate risks. The progress of these activities is monitored by the Risk Management and Compliance Committee.
- High "effectiveness of control activities" with respect to "inherent risks": Subject to monitoring, and the Risk Management and Compliance Committee confirms the status of maintenance and operation by the departments responsible for risk management or Group companies overseas.
- Cross-group risks other than "inherent risks": Managed by the business divisions, departments, and Group companies overseas and reported at the Monthly Business Review (MBR).

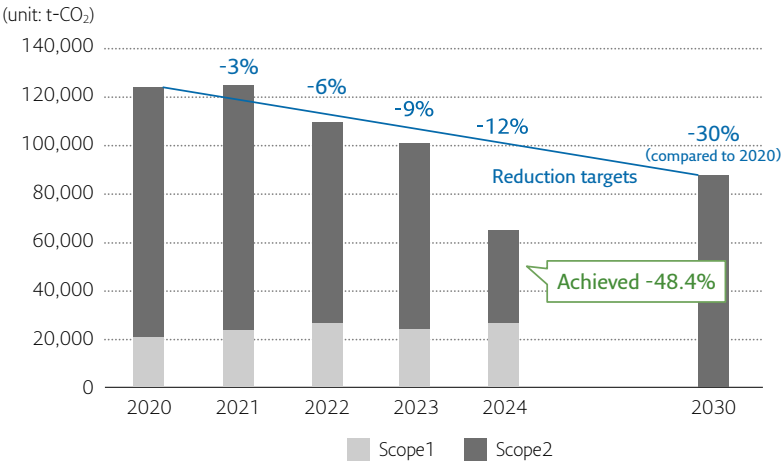
The company has selected Business Continuity (natural disasters such as earthquakes, typhoons, and floods) as one of our key risks and includes climate change risk in this category.

As a measure to address risks, a "Business Continuity Plan" has been formulated to prepare for and respond to natural disasters and emergencies should they occur, and the plan is promoted by the Business Continuity Management Subcommittee under the Risk Management and Compliance Committee. The Business Continuity Management Subcommittee, which manages such risks, works to mitigate risks based on KPIs and action items approved by the Risk Management and Compliance Committee, and reports the state of its activities to the Risk Management and Compliance Committee.

6-4 Indicators and Targets

The Nissha Group has defined total CO₂ emissions as an indicator for assessing and managing risks related to climate change. In our Sustainability Vision, we have set a target of a 30% reduction in total CO₂ emissions (compared to 2020) by 2030, with a view to carbon-neutral by 2050, and the Group as a whole is working on a range of initiatives towards this.

The Nissha Group's CO₂ Emissions Reduction Target and Results (Scope1 and 2)



Our target for the fiscal year ended December 2024 was a 12% reduction compared to 2020, but our CO₂ emissions were 64,086t-CO₂, a reduction rate of 48.4%, significantly exceeding the target. The use of 100% renewable energy year-round at our major production bases in Japan contributed significantly to this. We shall consider a new target for the fiscal year ending December 2025, and expect to announce it once it has been determined.

The Nissha Group views sustainability as an initiative toward the achievement of sustainable growth and development for both the company and society. In other words, we consider social issues to be business opportunities. We consider it important not only to leverage our strengths to provide products and services that help resolve these on an ongoing basis, but also to strengthen the management foundation underpinning our business activities, reduce risks that could hamper business continuance, and promote governance to ensure these are all carried out appropriately.

In the Sustainability Vision that presents our vision for ourselves in 2030, the Nissha Group defines Medical, Mobility, and Sustainable Materials as the key markets to solve social issues through business activities. In addition, we have expressed our aim to reach 150 billion yen in products related to the medical market, out of our consolidated sales of 300 billion, and are pressing ahead with reorganizing our business portfolio.

As a result of analyzing the three main businesses that our group develops, although the transition and physical risks associated with climate change within our group are important, we believe that their impact on our finances will be limited if sufficient measures are taken to address the risks we have identified through our analysis.

Additionally, we have confirmed that the risks associated with climate change and its financial impact will be small for the Medical Technologies business compared to other businesses. This means that our growth strategy of business expansion in the medical market, which the Nissha Group is engaging in with a view to our Sustainability Vision, is seen as something that can also contribute to reducing climate change risks for the Group.