

Risk Management

We are promoting risk management in accordance with the following action guidelines, with the aim of recognizing the various risks involved in the Nissan Chemical Group, preventing the occurrence of loss risk and minimizing the impact of their occurrence.

Risk Management Basic Policy

1. We place top priority on the safety of the lives of officers and employees of the Nissan Chemical Group.
2. We consider risk management as an important management issue, and engage in the activities from a company-wide perspective.
3. All officers and employees of the Group shall be sufficiently aware of risk management, strive to improve their abilities, and endeavor to prevent the occurrence of loss risk.
4. We promptly share the information on risk throughout the Group.
5. We make efforts to respond promptly and accurately to the occurrence of loss risk and to minimize losses.

In addition, the Risk Management & Compliance Committee, which is held twice a year, has been established as an organization to enhance the effectiveness of risk management, and to maintain and promote compliance.

The committee is chaired by the Chief Risk Management Officer (CRO), who is appointed at the Board of Directors meeting, and is composed of the Risk & Compliance Managers of each division/department, plant/laboratory, and domestic consolidated subsidiary appointed by the CRO.

The Risk & Compliance Managers periodically conduct risk identification and assessment, formulate countermeasure plans, conduct self-assessment for status of implementation of the countermeasure plan and subject, formulate improvement plan, and regularly perform education and training at each division/department, plant/laboratory and domestic consolidated subsidiary.

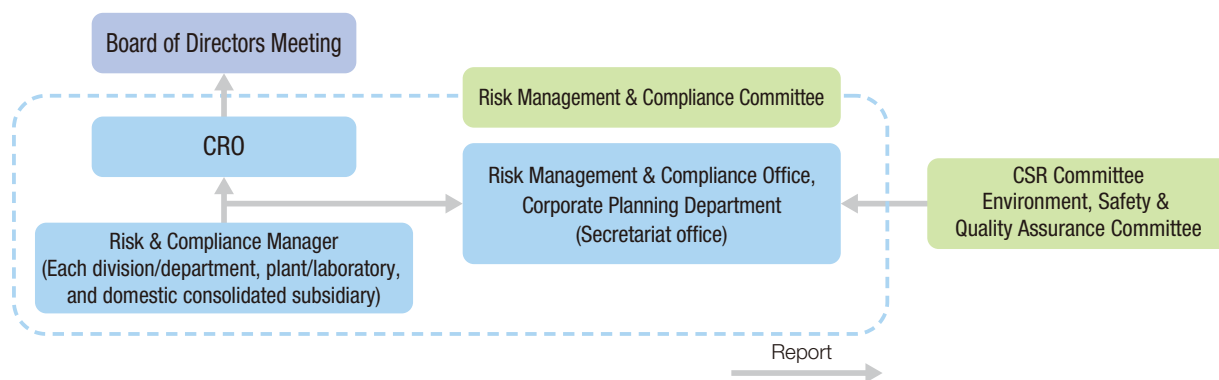
The important matters related to risk management and countermeasure plans, etc. are approved at the Board of Directors meeting after discussion at the committee.

Process for Identifying Group Major Risks

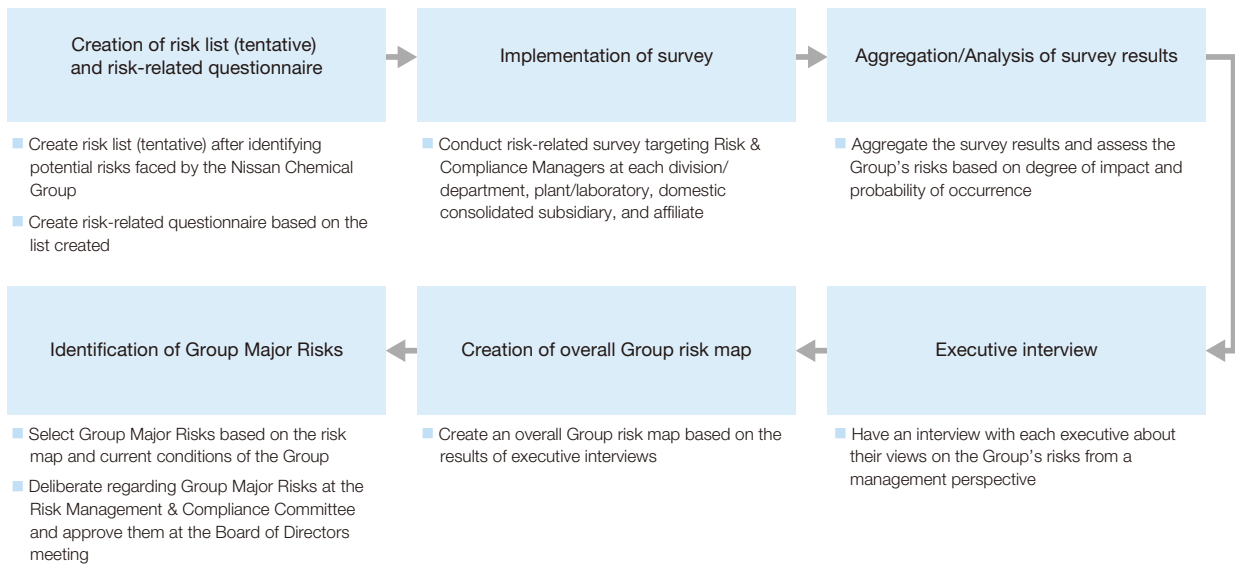
We clarified risks taking into account the business characteristics of each division and the surrounding businesses, including global political, economic and social conditions. Subsequently, risk assessment was conducted from the viewpoint of probability and impact on the business. By following the assessment, a risk map was created and Group Major Risks were identified. The contents of major risks were deliberated by the Risk Management & Compliance committee and approved at the Board of Directors meeting.

System

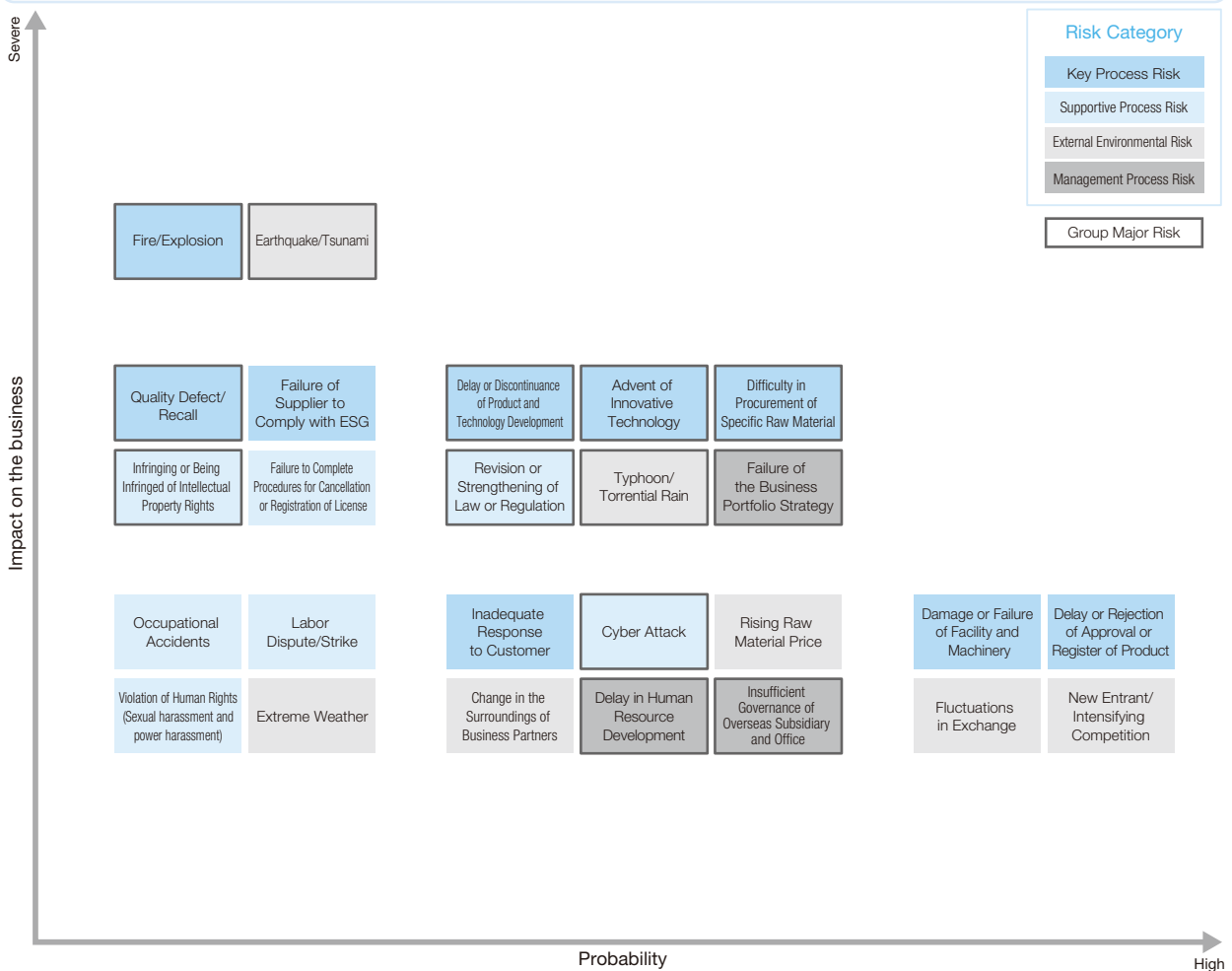
The Risk Management & Compliance Office under the Corporate Planning Department has been established as a specialized organization to promote continuous improvement in all of our risk management activities.



Risk Assessment Implementation (risk identification and evaluation) Overview



Group Major Risks and Countermeasures Overview



Group Major Risks and Countermeasures Overview

Group Major Risk	Summary of Risk	Countermeasures against Risk
Delay or Discontinuance of Product and Technology Development	Risk of the failure of payback of invested capital to R&D due to being unable to launch the product under development	Manage go/stop about research targets based on periodic evaluation
Advent of Innovative Technology	Risk of the losing competitive power due to advent of innovative technology with low cost	Set research targets based on the latest technology information
Failure of the Business Portfolio Strategy	Risk of decline in business performance due to the failure of the business portfolio strategy	Minimize risk by improving risk assumptions when formulating strategies
Difficulty in Procurement of Specific Raw Material	Risk of being unable to supply the product to customer due to the discontinuance of specific raw material	Confirm procurement situation, discover issues and implement countermeasure for stable procurement
Revision or Strengthening of Law or Regulation	Risk of unwilling discontinuance of sales of product, or unwilling change in business or capital investment plan due to revision/strengthening of law or regulation	Enumerate related laws and regulations and establish an infrastructure for obtaining law revision information
Typhoon/Torrential Rain	Risk of increasing expenses to plant restoration and decreasing production volume due to direct onslaught on main plant by large-scale typhoon	Revise/improve the countermeasures that make early recovery and business continuity possible
Earthquake/Tsunami	Risk of suspension of business activities and the death or injury of many employees due to catastrophic earthquake occurring at the location of business site	
Fire/Explosion	Risk of suspension of business activities and the death or injury of many employees, and being sued by neighborhood resident for the damage by fire/explosion at plant	Revise "No Fires, Explosions, or Chemical spills" measure
Quality Defect/Recall	Risk of reimbursement for large expenses by customer and discontinuance of transactions when a product liability related accident occurs involving a product containing materials provided by our company	Continue to implement "no recalls and no falsification cases" measure
Infringing or Being Infringed of Intellectual Property Rights	Risk of being subjected to a large amount of damages and product injunction claims from other company due to infringement on other company's patent	Create an IP verification process to reduce the risk of infringing of other company's patent
Cyber Attack	Risk of shut-down of operations for a long period of time, and losing credibility of customer and society because of leak of customer's or the Company's confidential information by cyber attack	Examine and implement countermeasures from the perspectives of prevention, damage minimization, and education
Delay in Human Resource Development	Risk of personnel shortage which occurs in each division due to delay in the human resource development	Establish an ideal model of manager as well as a training system
Insufficient Governance of Overseas Subsidiary and Office	Risk of losing credibility due to detection of fraud at overseas subsidiary and office caused by inadequate control	Formulate Group policy on company regulations and share Group philosophy and policies

Group Major Risks and Countermeasures Overview ▶ https://www.nissanchem.co.jp/eng/csr_info/risk_management/policy.html

Adaptation to Climate Change Risk

As climate change becomes more serious, investors and other stakeholders are becoming more interested in the impact of climate change on business activities. Following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board, we conducted scenario analysis based on 2°C and 4°C scenarios.

Scenario Analysis Results (climate change risks/opportunities)

As a result of scenario analysis, we identified the introduction of carbon pricing as a significant risk in the 2°C scenario. So we plan to introduce internal carbon pricing to further promote investment that takes into account the reduction of greenhouse gas emissions (low-carbon investment). In addition, in response to market change due to increasing demand for environmental consideration, we assume that we are

able to expand business opportunities in the Environment & Energy field, which is one of the main business domains of the long-term business plan Progress2030 launched in 2016. We believe more benefit from increasing demand for initiatives to address climate change from investors and other stakeholders because our low-carbon investment and product characteristics have made us more carbon-efficient compared to whole chemical industry.

Meanwhile, we will respond to the risks of impacts on plant operations and supply chains due to increase in abnormal weather, which was identified in the 4°C scenario, by formulating and revising BCP (Business Continuity Plan) for our main products and by multiple sourcing of several key raw materials, etc. In regards to market changes caused by rising temperature and abnormal weather, we see opportunities in such as agrochemicals and disinfectants for drinking water due to water shortages and infection diseases.

Scenario Analysis Results (climate change risks/opportunities)

Scenario	Factors	Social Change	Relevant Division*		Impact on Business	Degree of Impact
2°C Scenario	● Strengthening regulations on GHG emissions	● Introduction of carbon pricing	All	Risk	● Increase in operating costs due to introduction of carbon pricing, such as carbon taxes (If the same conditions meet worldwide, maintaining competitiveness is possible.)	(Large)
	● Changes in energy policy ● Changes in energy demand and supply	● Price change in fuel and feedstock ● Change in transportation costs	All	Risk	● Increase in costs due to higher fuel and feedstock prices ● Increase in transportation costs	(Moderate)
	● Market changes due to increasing demand for environmental consideration	● Increased need for low-carbon products	Planning	Opportunity	● Increase in demands for products related to electric energy such as battery materials and photoelectric conversion materials due to changes in energy policies	(Moderate)
	● Increased demand from investors for addressing climate change	● Expansion of ESG investment	All	Risk Opportunity	● Deterioration of ESG evaluation and reputation due to increasing criticism of bulk use of fossil fuels ● Improvement of ESG evaluation and reputation through advanced initiatives and information disclosure	(Moderate)
4°C Scenario	● Increase in abnormal weather	● Increase in frequency and enhanced intensity of heavy rain/flooding	All	Risk	● Increase in risk of impacts on plant operations and supply chains due to escalation of natural disasters	(Moderate)
		● Enhancement of intensity and frequency of typhoons				(Moderate)
		● Heavy snowfall				(Moderate)
	● Market changes caused by rising temperature and abnormal weather	● Decline in the available water (freshwater) resources	Chem	Opportunity	● Increase in sales of disinfectants due to increase in global demand for drinking water	(Moderate)
		● Reduction of planted area	Agri	Risk	● Reduction of planted area due to increase in frequency and enhanced intensity of heavy rain/flooding ● Reduction of planted area due to difficulties in securing irrigation water	(Moderate)
		● Increase in pests, weeds, and pathogens		Opportunity	● Increase in opportunity to develop new agrochemicals ● Influence on sales of existing agrochemicals due to resistance expression	(Moderate)
		● Increase in mass infection and diseases	Planning	Opportunity	● Increase in demand for related products and services due to growing medical needs for tropical infections and diseases	(Moderate)

* All: All divisions (Chemicals, Performance Materials, Agricultural Chemicals, Pharmaceuticals, and Planning and Development Division)
 Planning: Planning and Development Division Chem: Chemicals Division Agri: Agricultural Chemicals Division