Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Japan: 17 Group companies comprising NPHD (headquarters) and its consolidated subsidiaries with a total of 3,249 employees
Asia: 126 consolidated subsidiaries with a total of 18,253 employees
Oceania: 37 consolidated subsidiaries with a total of 3,927 employees
Americas: 8 consolidated subsidiaries with a total of 2,576 employees
Other regions: 6 consolidated subsidiaries with a total of 1,793 employees (operations in the U.K., Germany, Türkiye, and other areas)

[Our Businesses] We are a comprehensive paints and coatings manufacturer providing a broad range of products and services, including automotive coatings, decorative paints (for buildings and bridges and other large structures), industrial coatings (for construction machinery, farming machinery, exterior building materials, office equipment, household electrical appliances, etc.), and paints for marine coatings, auto refinish, DIY, and roads, as well as surface treatments and systems for enhancing painting efficiency.

[Net Sales by Region]
Japan: 164,635 million yen
Asia (excluding Japan): 530.216 billion yen
Oceania: 176,237 million yen
Americas: 76,408 million yen
Other regions: 50,778 million yen

[Net Sales by Business Segment]
Automotive Coatings: 132,744 million yen
Decorative Paints: 607.115 billion yen
Industrial Coatings: 84,798 million yen
Fine Chemicals: 16,399 million yen
Other Paints: 58.259 billion yen
Paint Related Business: 98.959 billion yen

Company Name: Nippon Paint Holdings Co., Ltd. (NPHD)

Founded: March 14, 1881
Capital: 671,432 million yen
Number of Employees: 404 (NPHD); 30,247 (Consolidated) (as of December 31, 2021)
Representatives: Director, Representative Executive Officer & Co-President Yuichiro Wakatsuki,
Director, Representative Executive Officer & Co-President Wee Siew Kim

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	

C0.3

(C0.3) Select the countries/areas in which you operate.

Japan

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

JPY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Other, please specify
Financial management in Japan

C-CH0.7

(C-CH0.7) Which part of the chemicals value chain does your organization operate in?

Row 1

Bulk organic chemicals

Polymers

Bulk inorganic chemicals

Other chemicals

Specialty chemicals
Specialty organic chemicals

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	JP3749400002

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
President	In our corporate governance policy, we recognize the issues surrounding sustainability, including climate-related issues, as important management issues, and we will examine the issues to be addressed for the growth of a sustainable society from a global perspective, and based on such examination, we will promote measures in the areas of environment, society, and governance. The policy stipulates that we will take action in the areas of environment, society, and governance based on these considerations. Environmental, social, and governance goals drafted by the President (Representative Executive Officers & Co-Presidents) will be proposed to and approved by the Board of Directors and set as the goals of the Group. In regard to sustainability, a priority issue we must respond to as a business, four materiality-based Global Teams have been formed directly under the Directors, Representative Executive Officers & Co-Presidents for carrying out sustainability strategies on a Group-wide basis. By having team leaders directly report progress and proposals to the Co-Presidents, and the Co-Presidents, who further submit reports to the Board of Directors whenever necessary (usually twice a year,) sustainability activities are overseen by the Board of Directors. Additionally, the Board of Directors receives reports around four times a year from the Audit Committee and others to monitor group activities.

	One example of a climate-related decision made by the ESG Committee chaired by the President (at the time, Representative Executive Officer & CEO) is that six items of Materiality were identified, and the utmost priority was placed on climate change in July 2020. Furthermore, the Global Teams have taken over the role of the ESG Committee since January 2022.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Board of Directors overseas strategies, policies, and issues on climate-related and other environmental challenges, as well as relevant targets and progress, by receiving reports from the Co-Presidents, who are briefed on these matters from Global Teams, and through the Audit Committee and other committees, approximately four times a year.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	They must have extensive experience in long-term corporate value creation from an ESG perspective, for example as the head of a consulting firm.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
President	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

・As detailed below, the Directors, Representative Executive Officers & Co-Presidents handle many responsibilities, including our responses to climate change.

・Under our corporate governance structure, the Executive Officers make decisions on the execution of business of the Company that they have been delegated by resolution of the Board of Directors, and execute such business. The Company has established a Co-President structure with the aim to further accelerate global business growth to pursue "Maximization of Shareholder Value (MSV)" on April 28, 2021. Under the Co-President structure, the Company has simplified the rules of authority and standardized them among domestic partner companies, as well as established a system to collaborate with necessary parties to resolve specific issues related to the following: management, human resources, risk management, compliance, governance, ESG including climate change issues, and responsible care. Final decision-making is realized through the Co-Presidents.

・MSV is the sole mission of the Nippon Paint Group. The concept of MSV is different from a “shareholder primacy” approach in that we seek to create wealth with the aim of maximizing the remaining residual shareholder value after fulfilling our obligations to customers, employees, suppliers, society, and other stakeholders. MSV is predicated on first fulfilling our duties to each stakeholder group. These obligations encompass legal contracts and social and ethical responsibilities as well as the concept of sustainability.

・Under our internal control system, the Board of Directors delegate the authority to make decisions on business execution to the Representative Executive Officers & Co-Presidents, except for matters stipulated by laws and regulations, the Articles of Incorporation, matters delegated by the General Meeting of Shareholders, and important strategic matters concerning the management of the Group. The main division of duties and areas of responsibility among the Representative Executive Officers and Co-Presidents shall be determined by the Board of Directors, and the detailed design and operation shall be left to the discretion of the Representative Executive Officers and Co-Presidents to ensure the efficiency of execution. The Representative Executive Officers and Co-Presidents entrust heads of Partner Company Groups (Nippon Paint Group companies grouped by region or business) the authorities to decide and execute their businesses and make them accountable for operation of their internal control system, in order to allow them to concentrate on their own business management. The Board of Directors develops a medium-term management plan covering the entire Group, and the Representative Executive Officers and Co-Presidents closely communicate with the heads of the Partner Company Groups and report to the Board of Directors on the achievement of the goals of the plan and the use of the budget.

・In our corporate governance policy, the Company, recognizing that dealing with sustainability issues are one of the important management issues, examine issues to be

addressed for sustainable growth of society from a global perspective and, based on the results of the examination, will proceed with actions in the areas of environment, society, and governance. The Company will set the targets relating to environment, society, and governance proposed by the Representative Executive Officers & Co-President as the targets of the Group upon proposal to and resolution by the Board of Directors.

・In regard to sustainability, which is a priority issue we must respond to as a business, four materiality-based Global Teams have been established directly under the Directors, Representative Executive Officers & Co-Presidents for carrying out sustainability strategies on a Group-wide basis. By having team leaders directly report progress and proposals to the Co-Presidents, and the Co-Presidents, who further submit reports to the Board of Directors whenever necessary (around twice a year,) sustainability activities are overseen by the Board of Directors. Additionally, the Board of Directors receives reports around four times a year from the Audit Committee and others to monitor group activities.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other C-Suite Officer	Monetary reward	Company performance against a climate-related sustainability index	

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	10	
Long-term	10	30	

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

[Definition of significant financial or strategic impact]
(1) Damages exceeding 3% of the amount of net assets (on a consolidated basis) within the Nippon Paint Group's scope of reporting
(2) A 10% or more change in consolidated net sales within the Nippon Paint Group's scope of reporting from the start-of-year net sales forecast for the relevant fiscal year
(3) A 30% or more change in consolidated ordinary profit within the Nippon Paint Group's scope of reporting from the start-of-year ordinary profit forecast for the relevant fiscal year
[Explanation of quantitative indicators used in the definition of financial or strategic impact]
The Nippon Paint Group Risk Management Committee has been established (chaired by the Representative Executive Officer) to deliberate on continual review and improvement of the management of safety, climate change, environment, compliance and other material risks for the Group, as well as an internal control system. By taking comprehensively into consideration the frequency, impact, and seriousness of risk occurrence, significant financial/strategic impact that such risks might have on the Group's business are classified into (1) - (3) above. This classification and the standards are subject to periodical review.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

[Current Process]
The ESG Committee, commissioned by the Board of Directors, develops the Group's strategy, policies, and action plans on ESG and sustainability, including climate change issues. They also have the role of evaluating and promoting said actions implementation. The ESG Committees subordinate body, the Environmental Subcommittee, identifies and assesses climate-related risks and opportunities that could have significant financial or strategic impacts, after which a plan of action is considered by the ESG Committee. The ESG Committee meets at least twice a year, and the Environmental Subcommittee meets every few months.
The Environmental Subcommittee includes the heads of the Corporate Planning, Safety & Environment, R&D, and ESG Promotion Departments of the holding companies, as well as the Responsible Care (*) managers of the Group's operating companies, to identify and assess a wide range of company-wide risks and opportunities related to the environment, including climate change. Each operating company is examined on different time horizons (short, medium, and long term) by direct operations and value chains.
Risks and opportunities identified and assessed by the Environmental Subcommittee and action plans for them are proposed to the ESG Committee, who then deliberate the identified material. Subsequently, they determine relevant company-wide targets and action plans, and then report them to the Board of Directors.
The Group's operating companies formulate business plans in line with the above company-wide goals and action plans.
Regarding the identification of risks, based on the rationale, scope, business opportunities, and time frame, the Environmental Subcommittee determines the level of importance based on the following criteria: the area most directly related to our operations (raw material usage, energy, water, and CO2 in manufacturing processes) and external factors ("user needs during use" and "needs for product functions").

(*) Responsible Care: The global chemical industry's voluntary initiative to implement and improve measures for the safety of the environment, with key topics being environmental conservation, security and disaster prevention, industrial safety and health, safety for chemical substances and products, safety for logistics, and communication.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The NPHD Group considers risks associated with current regulations in its risk assessments. One example risk type is an anti-global warming tax. At the manufacturing process, we need a large amount of energy: At the synthetic reaction process of resins and other high polymeric

		substances, we need heat exceeding 100°C, and at a process for dispersion stabilization of pigments and other raw materials, we need energy to cool chiller water. In Japan, an anti-global warming tax was introduced in 2012 in the form of a carbon tax (anti-global warming tax), which levies a tax on fossil fuels according to CO2 emissions. At the time of its introduction, our manufacturing cost increased significantly. Because the tax rate is 289 yen per ton of CO2, which is far below that of other countries (from several thousand to over ten thousand yen), it is almost certain that the rate will be increased in stages in response to the Japanese government's goal of net-zero target by 2050. If this is the case, we are running the risk of manufacturing costs increasing as a result of a greater burden of fuel costs. Furthermore, the Act on Promotion of Global Warming Countermeasures (the "Anti-Global Warming Act") requires businesses to calculate, report, and announce their GHG emissions. As such, the NPHD Group calculates and reports its GHG emissions, sets its own reduction targets, and is working to achieve them. The Anti-Global Warming Act imposes administrative penalties of 200,000 yen or less in the event of a failure to report the emissions amount or falsification of reports, and compliance with the Act incurs costs. There is a risk of compliance costs increasing should these obligations to report be tightened or implemented more strictly.
Emerging regulation	Relevant, always included	The Nippon Paint Group considers risks associated with emerging regulations in its risk assessments. For example, an increasing number of countries around the world oblige businesses to disclose information on climate change via TCFD reporting and otherwise. There is a risk of incurring expenses for compliance should such disclosure be made mandatory in Japan. As of now, this type of disclosure in Japan is only being promoted through cooperation between the public and private sectors (TCFD Consortium). If disclosure on financial reports ("Annual Securities Reports" in the case of Japan) is made mandatory in the future, however, false statements will be subject to penalties. This being the case, an increase in associated compliance expenses for checking the accuracy of statements and preventing false statements can pose a risk for us. Fuel efficiency and CO2 emission regulations are very important to automobile-related companies, which are our primary customers and account for the largest portion of our sales revenue, and new regulations may change the purchasing behavior of these customers. Specifically, as the weight of electrical components and other on-board parts increase to achieve electrification of automobiles and automatic driving, etc., and the weight of the car body increases, it is necessary to reduce the weight of the car body in order to meet fuel efficiency requirements, and there is a risk that changes in purchasing behavior, such as a shift to paints that match lighter materials such as lighter paints themselves and resins, may affect our business performance

		and strategies. Due to that risk of an impact on our strategies, we always include emerging regulations in our evaluations.
Technology	Relevant, always included	As efforts to create a low-carbon society and reduce GHG emissions are being strengthened in all industries, if our Group is unable to provide technologies and products that contribute to GHG reductions or respond to such technological innovations, demand for our existing products will decline, resulting in loss of business. corporate value and reduced sales revenues. Therefore, technology-related risks are included in our assessments. For example, water-based paints that do not use organic solvents are healthier for workers and the surrounding environment, albeit they require long drying times. Since drying consumes a great deal of energy, it is desirable to develop coating methods and suitable paints that reduce baking energy during the coating process, for instance by shortening the drying time. There is also an urgent need to develop coating technologies that can handle the use of different materials (e.g., aluminum and resin instead of steel sheets) as automobiles become lighter. Furthermore, there is a risk that our market share and profits will decrease due to entry from other industries, such as films and material-borne resins, which do not require energy-intensive drying and baking processes as they are non-paint materials, and thus, technological risks are included in the evaluation.
Legal	Not relevant, included	Our main business is paints and coatings production. Unlike automobiles and electronics, which consume energy while in use, we do not deal in products that directly affect climate change. Therefore, we believe that our legal risk is small and consider legal risks to be irrelevant. However, there is a risk of impairing corporate value if our existing operational/administrative systems are found to be insufficient and deemed to violate applicable laws after we have changed our operational systems by, for example, renovating or establishing factories in order to ensure compliance with revised laws/regulations in response to climate change. Because of this, we consider legal compliance in business activities in our risk assessments. Pursuant to the Anti-Global Warming Act, we calculate and report GHG emissions periodically and monitor the updates on relevant laws once a year.
Market	Relevant, always included	Market risks are highly relevant to our business, and thus we make it a rule to consider such risks in our risk assessments. Users of our products deem reduction in GHG emissions to be a major issue, and many of them, be they in the auto, housing, shipbuilding, or maritime shipping industries, are asking us to use low-carbon technologies that help to reduce CO2 emissions. Failure to respond to such requests could lower our products' competitive edge, and run the risk of market share loss. Regarding the risks associated with our products'

		competitiveness, we are constantly assessing them to make improvements. For example, the auto industry wants a shorter drying time during the automobile coating process, as it requires a large volume of thermal energy and emits a large amount of CO2. Meanwhile, powder paints are preferable in terms of VOC reductions but may not be so in terms of CO2 reductions, as they have to be cured at a high temperature during the production process. How we can go about lowering the curing temperature will be the key to technological development in this field. In the housing sector, demand for heat shielding paints, which reflect sunlight to lessen the thermal impact on buildings, is rising. Key differentiating points here include the maintenance of the heat shielding function and the diversification of the product line. Since there is no end to development competition, we need to consider market changes, such as spikes in sales of newly developed products and a decline in demand for existing paints and coatings, in our risk assessments.
Reputation	Relevant, always included	One type of reputational risk is a decline in reputation among stakeholders due to reduced external evaluation of the Nippon Paint Group. Failure to properly addressing climate change by, for example, reducing GHG emissions and developing/disseminating low-carbon technologies, and disclose relevant policies and efforts could result in reduced external evaluation, and our customers, investors, and other stakeholders losing trust in us. This would result in us not being chosen by customers or our shareholder value being damaged. Other risks include that of financing costs increasing as our reputation among investors lowers due to a delay in responding to climate change, and sales decreases as our reputation among stakeholders deteriorates overall. We monitor the external evaluation of our ESG, including climate-related issues, given by rating agencies and report findings to the ESG Committee as part of risks of climate change.
Acute physical	Relevant, always included	There is a risk of disruptions of product supply should any of our plants be affected, logistics be halted, or supply of materials be suspended by the intensification of natural disasters resulting from climate change, such as floods and tornados. We consider such risk factor to be an acute physical risk and make it a rule to include it in our risk assessments. Types of risks include urgent physical risks, such as the detrimental impact on local residents and the natural environment associated with outflow, leakage, etc. of chemical substances in paints and coatings and raw materials due to abnormal weather, such as heavy rains and typhoons. To prepare for these risks, we drew up and implemented a business continuity plan (BCP) by using hazard maps of floods and other natural disasters compiled by local governments, etc. to conduct simulations. We also have the Supply Chain Planning Department identify and assess potential risks to report to the Board of Directors.

Chronic physical	Relevant, sometimes included	There is a possibility of the Nippon Paint Group being affected by chronic physical risks, so we occasionally evaluate such risks. Among such chronic physical risks are the shortages of raw materials for fatty acids due to a poor harvest of rapeseeds, soybeans, etc., which are essential raw materials for paints and coatings. Other possible risks in this regard include a closedown of plants due to a rise in sea levels and an increase in air-conditioning and cooling costs as the temperature rises. In addition, as the climate continues to slowly change, we expect the importance of testing water and heat resistance of weather-resistant paint (paints and coatings resistant to external factors such as outdoor weather) to increase. For paints for outer walls of buildings, in particular, how they protect buildings from ultraviolet rays and rain will be important, which means that we have to check to see if outer walls do not deteriorate when exposed to ultraviolet rays and rain for a long time. At present, weather-resistant paints and coatings are those that endure for two to three thousand hours in weather resistance tests. There may be, however, a growing demand/need for those that resist even longer. There is also a risk of product development expenses increasing as the number of test items for deterioration tests, etc. increases. Also, our product sales may be affected by quality abnormalities that could occur during transportation due to insufficient storage/management systems at factories (those stored outdoors, in particular) and those occurring due to insufficient temperature management of raw materials, semifinished and finished products. As such, we consider them to be chronic physical risks in the framework of risks of climate change.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation
Carbon pricing mechanisms

Primary potential financial impact

Increased direct costs

Company-specific description

At present, the anti-global warming tax in Japan costs JPY289 for every ton of GHG emissions. In 2020, our Scopes 1 and 2 emissions approximated 43,000 tons in Japan, which has already triggered an increase in manufacturing expenses due to a hike in carbon prices. Given the recent rise in awareness of anti-climate change measures, however, this tax is likely to increase. Should this happen, the energy costs of our operations will further increase, and additional costs will be incurred for developing new infrastructure and technology in order to achieve carbon-free operations, which in turn will push up our cost of goods sold (COGS). According to IEA, if the world becomes further decarbonized (the 2-degree scenario achieved), carbon prices in developed countries, including Japan, will rise to USD100/tCO2 by 2030. If we consider the possibility of our emissions increasing as our business continues to expand, the impact that carbon prices
may have on our operational costs is concerningly large. If, on the other hand, we base our assumptions on the "business as usual" scenario (4-degree scenario), where the current global decarbonization policies remain the same, the present level of expenses will continue to be incurred if we do not further reduce our Scopes 1 and 2 emissions in Japan.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

12,000,000

Potential financial impact figure – maximum (currency)

450,000,000

Explanation of financial impact figure

The IEA estimates that even if the world does not achieve decarbonization consistent with the 2-degrees Celsius scenario, carbon prices will increase from present values due to policies currently announced around the world. The IEA estimates the carbon

price in 2030 under the 2-degrees Celsius Scenario to be 100 USD per ton of CO2 for developed countries. Under the 4 degrees Celsius scenario, the carbon price is assumed to remain at its present level (in Japan, the current global warming tax will remain in place).
(Breakdown of calculation: 43,000 tons CO2 x 289 yen/tCO2 = approx. 12 million yen
43,000 tons CO2 x 100USD/tCO2 x 105 yen/USD = approx. 450 million yen)

Cost of response to risk

255,000,000

Description of response and explanation of cost calculation

Situation: While considering the impact of a carbon tax on the Nippon Paint Group, as a method of risk management, it is necessary to take measures to reduce emissions at our sites. Additionally, our primary customers are requesting a drastic and thorough reduction of CO2 emissions in the manufacturing process.
Task: As we aim to achieve net zero emissions for the entire Nippon Paint Group by 2050 or 2060, plans for reducing each scope's emissions are in place. For Scope 1 and 2, thorough energy conservation, conversion to fuels with low CO2 emissions, and procurement of renewable energy is being planned. As for Scope 3, we will take measures to reduce supply chain emissions through engagement.
Action: Internal initiatives to reduce the carbon tax include extensive energy conservation at existing facilities, conversion to fuels with low CO2 emissions, and introduction of renewable energy to domestic bases. With regard to existing facilities, efforts were made to improve the energy efficiency of buildings and production processes. On the use of renewable energy, dividing methods into short, medium, and long term, we first began procuring renewable energy through the use of certificates. In the future, we are considering long-term contracts for procuring power generators (or electricity retailers) and have now begun planning other long-term initiatives.
Result: NPAC's Okayama Plant, which manufactures automotive coatings, is currently under construction. As the plant is being built on the concept of ESG-consciousness, the plant will be fitted with the latest equipment to achieve energy conservation and low-carbon emissions in the production process. The plant is scheduled to start operation in July 2022 and is expected to achieve energy and CO2 emission reductions through higher efficiency.
Response: During the period in question, as a thorough energy-saving measure for existing facilities, air conditioners, lighting equipment, and other equipment were upgraded, and results were achieved in improving the energy efficiency of the building. The investment in these facility upgrades amounted to 108 million yen and resulted in a reduction of 118 tons-CO2. In addition, the replacement of machinery and equipment improved energy efficiency in the production process, leading to a reduction of 500 tons-CO2, with an investment in these facilities of 144 million yen. Therefore, the total corresponding cost was 108 + 144 = 252 million yen. In 2021 we started considering the procurement of renewable energy using certificates, and in 2022 started procurement. Based on the pre-COVID-19 power consumption levels in 2019, if we were to purchase 6.9% worth of consumption in non-fossil certificates, the cost is expected to be 3 million yen per year. Furthermore, the plan is to expand renewable energy procurement to

13.8% in 2023 and 20.7% in 2024, and so on every year until 2030.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

In the event phenomenon related to abnormal weather conditions were to increase not only in frequency, but also in severity, due to damage in our facilities and suppliers' facilities that lead to a stop in production, there is a risk in overall profit decreasing. There is also an existing risk of flooding, high tides and tsunamis for factories located near rivers or coasts. Specifically, in recent years, there are many cases of water levels crossing the dangerous flood thresholds in Japan and, according to the Ministry of Land, Infrastructure, Transport, and Tourism, there were approximately 470 cases in 2018, with the number of cases increasing more than fivefold in the past four years. For that reason, for both us and suppliers with facilities located near seashores and rivers, the possibility of being affected by floods, inundation, and high tides is likely to increase. If we were to sustain damage, the resulting impact would be substantial, which is why this risk is acknowledged throughout the Company and it is essential that we consider the rating and response measures towards it.

For example, a factory of a primary raw material for paint is located along the Arakawa River, and according to expert analysis, in the worst-case scenario of Typhoon No. 19 in 2019, even the "Arakawa River" could have breached its banks. The frequency and severity of record-breaking rainstorms increase every year, and if a suppliers' plant were to be flooded or submerged due to bursting of riverbanks, those suppliers would be unable to receive raw materials, which could affect our manufacturing, leading to a shutdown or impact on business partners, therefore impacting our earnings due to losses.

Time horizon

Medium-term

Likelihood

Unlikely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

117,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

A factory of the primary raw materials for paint is located along the Arakawa River, and according to expert analysis, in the worst-case scenario of Typhoon No. 19 in 2019, even the "Arakawa River" could have caused bursting of banks. The frequency and severity of record-breaking rainstorms are increasing every year, and if our suppliers' factories were to be inundated or submerged due to a river collapse, they would not be able to receive raw materials, which could affect our manufacturing, leading to a shutdown or another effect on business partners that cause a loss in earnings. The potential impact was calculated by dividing the current annual product delivery volumes of raw materials for the relevant paint by 12 months and assuming a one-month stoppage: 1.4 billion yen ÷ 12 months × 1 month = 117 million yen.

Cost of response to risk

140,000,000

Description of response and explanation of cost calculation

Situation: We have identified the Arakawa River and other rivers as watersheds for our locations that could have a significant financial and strategic impact on our business. Sites located near these rivers or in coastal areas are expected to suffer impacts such as suspension or delay of product shipments in the event of flooding.
Task: It is essential that we take actions to minimize the impact of flood risks through engagement.
Action: We have continuously asked our customers when necessary to increase inventory levels prior to FY2021 and will continue to do so in FY2021. Specifically, we have asked our distributors and customers to build up inventory to prepare for floods. This minimizes the impact on customers in the unlikely event of a flood that affects our plants or those of our suppliers, resulting in the suspension of shipments. In the event that we switch to other suppliers outside the Arakawa River basin that are not affected by the flooding and procure raw materials from them, it is expected that raw materials will be in short supply, resulting in price hikes and the cost of finding new suppliers. We estimated an amount equivalent to 10% of current procurement spending towards raw materials for the relevant paint is to be expected.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

With the shift to decarbonized society progresses in recent years, there has been a noticeable change in the behavior and awareness of our business partners, and we believe it is necessary to understand the business impact of this change on our company. In particular, we believe that our customers, who are mainly in the automotive, construction, and other emissions-intensive sectors, will be increasingly implementing policies and business strategies related to decarbonization. In fact, these high-emission sectors are our main customers in terms of our sales. In the midst of this trend, we believe that there is a risk of losing business opportunities if we are unable to meet the demands of our customers, and it is very important for us to estimate the extent of the impact of this risk. We have already received dozens of requests from our business partners to respond to climate changes, including CDP responses and more. If we are unable to respond to these requests, we may lose business opportunities, resulting in an enormous impact on sales.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

16,463,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

According to the TCFD's Chemical Sector Guidance, one of the most important business risks to many companies in the chemical industry is a decrease in demand (i.e., loss of business opportunities) due to changes in customer behavior, and they recognize that this is a common risk across industries. The calculation is based on the assumption that 10% of the company's sales of 16,463.5 million yen in 2021 could possibly decrease.

Cost of response to risk

5,842,000,000

Description of response and explanation of cost calculation

Task: As our suppliers are increasingly demanding climate change-related initiatives, there is a growing demand for the development of products that contribute to decarbonization. We believe that we can prevent the risk of business opportunity losses by firmly responding to these climate change-related needs, including the need for decarbonized products. We have started various internal initiatives, such as calculating supply chain emissions, introducing renewable energy, and developing products with low environmental impact (eco-friendly products).

Action: For example, we define "eco-friendly products" as those with the following features, and we are focusing on research and development of these products to meet customer requests. 5,842 million yen of R&D expenses in the scope of reporting in 2021 were calculated assuming that 100% of R&D expenses would be applicable.

(1) Products that contribute to the effective use of resources by significantly extending the service life of paints and coating films and the service life of coated materials compared to standard products and reducing waste generation.

(2) Products that can significantly improve energy efficiency in the use of coated materials and reduce the impact of climate change compared to the use of standard products due to the function of painted or coated films.

(3) Products that can reduce the impact of climate change by significantly reducing the energy used in the coating and surface treatment process compared to standard products.

(4) Products that minimize environmental destruction and health hazards to people who work with paints by significantly reducing the release of chemical substances into the environment during the coating and surface treatment processes, compared to standard products.

(5) Products that significantly improve the efficiency of resource use and enable the application of environmentally friendly technologies and industrial processes compared to standard products.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

While global warming is a concern for society as a whole, including our primary customers, and entails physical and regulatory risks, we recognize that strategic responses to this issue can be linked to business expansion opportunities. We define "eco-friendly products" as "products that, due to the function of the paint or coating films, significantly improve the energy efficiency of the use of the coated material and reduce the impact of climate change compared to the use of ordinary products". One of these products is fuel-efficient ship-bottom paints. The LF-Sea and A-LF-Sea products currently in the market can improve the fuel efficiency by 4-10% by reducing the frictional resistance of the vessel to which they are applied. In addition to the fuel efficiency improvement, the company has developed a new product, FASTAR, with low elution and low VOC performance, which will be introduced in 2021. In the future, we aim to expand sales of products that improve fuel efficiency of vessels, as the marine transportation business is expected to be increasingly regulated as a measure for reducing CO2 emissions and other environmental impacts. In estimating the financial impact, we have assumed that 10% of the 164,635 million yen in total sales of the answer boundary in 2021, not limited to products for the shipping sector, will be applicable.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

16,463,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The International Maritime Organization (IMO) has developed a roadmap for reducing CO2 emissions from the shipping sector. According to the roadmap, CO2 emissions from international shipping are to be reduced by 50% from the 2008 levels by 2050, and by 40% from the 2008 levels by 2030. This goal is expected to be achieved through two major initiatives: "emissions reductions due to energy-saving technologies" and "emissions reductions due to operational efficiency." We expect sales to increase in the future as our energy-saving technologies associated with our fuel-efficient ship bottom paints become more effective.

As described above, demand for the development of products that contribute to decarbonization is increasing, not only from the shipping sector, but also from clients in other sectors, as they are progressively being asked to take action related to climate change. We believe that we can gain business opportunities by responding to these climate change-related requests, including those for decarbonized products, and we have begun various company initiatives, such as calculating supply chain emissions, introducing renewable energy, and developing products with low environmental impact (eco-friendly products). Furthermore, even in the aforementioned product development for the shipping sector, we are continuously working to share our know-how within the Nippon Paint Group, for example, by improving the quality of product development by sharing our knowledge of the automobile sector. In other words, since we believe that opportunities for products for the shipping sector overlap with opportunities for products for other sectors, we have assumed that 10% of the 164,635 million yen in total sales of the 2021 reporting boundary, not limited to products for the shipping sector, will be applicable in estimating the financial impact. The financial impact of the project was estimated based on the assumption that 10% of the 164,635 million yen in sales results of the entire respondent boundary in 2021, not just products for the shipping sector, would be applicable.

Cost to realize opportunity

365,000,000

Strategy to realize opportunity and explanation of cost calculation

We have set KPIs for "eco-friendly products" including fuel-efficient ship-bottom paints, with the aim of expanding sales.
Situation: Shipping companies have been concerned about soaring fuel costs due to the demand to reduce CO2 and SOx emissions, which are causes of global warming, the rise in heavy oil prices since the second half of 2005, and the demand to switch from C fuel oil to A fuel oil with low sulfur content due to stricter SOx emission regulations. Shipping companies were concerned about soaring fuel costs. Under these circumstances, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) issued a guideline for reducing CO2 in international shipping, and the development of fuel-efficient A/F began.
Task: LF-Sea was confirmed to reduce fuel consumption by 4%, and customers requested a further reduction in fuel consumption. The development of A-LF-Sea was initiated in response to customer requests for further reducing fuel consumption. LF-Sea was introduced as a viscous and smooth biomimetics product inspired by the surface of marine organisms (tuna), which are covered with a mucous membrane.
Action: The development of A-LF-Sea, an improved version of LF-Sea, was conducted as a joint national project of three companies, Nippon Paint Co., Ltd. (currently Nippon Paint Holdings Co., Ltd.), Nippon Paint Marine Coatings Co., Ltd., and Mitsui O.S.K. Lines, Ltd., sponsored by the MLIT as a joint research theme of ClassNK's "Research and Development of Greenhouse Gas Reduction Technologies in International Shipping.
Result: As the cost of realizing the opportunity, as mentioned above, we are continuously planning generation of synergies within our group, such as improving the quality of product development by sharing our know-how in applications for the automotive industry, even in the development of products for the shipping sector, for example, so that we will not be limited to the research and development of products for the shipping. Therefore, we have assumed that the R&D cost of 5,842 million yen (the figure stated in the Annual Securities Report) for the entire 2021 reporting boundary, not limited to R&D of products for the shipping sector, will be allocated to the relevant operating companies on a pro-rata basis. As a result, we confirmed a 10% reduction in fuel consumption by combining LF-Sea's hydrogel technology, which has been further improved to reduce frictional resistance, and viscosity control technology for primer coatings. In addition, since the introduction of 2LF-Sea in 2008, the company has adopted more than 3,500 LF-Sea products as of December 2020, including A-LF-Sea.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

While global warming is of concern to society as a whole, including our primary customers, and involves physical and regulatory risks, we recognize that a strategic response to these issues can be linked to business expansion opportunities. Our definition of "eco-friendly products" includes "products that, due to the function of the paint or coating films, can significantly improve the energy efficiency of the use of the coated material and reduce climate change impacts compared to the use of standard products". One of these products is a paint/coating system that can dry at lower temperatures and in shorter time than with the existing system, allowing for reduction of the environmental impact of the automotive painting process. 3-wet coating systems can reduce CO2 emissions during processing. Our major customers have identified CO2 emissions reduction at their automobile manufacturing plants as a long-term strategy, and sales of such products are expected to increase in the future. Sales of this segment in Japan totaled 35,308 million yen in FY2021, and we recognize that the scale and impact of this business is significant.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

16,463,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The automotive industry is expanding its efforts to decarbonize. More and more of our primary customers are actively communicating their climate change countermeasures externally, and we believe that our eco-friendly automotive coatings can meet the decarbonization needs of these customers. Additionally, from a long-term perspective

that takes into account global trends, the growth rate of new vehicle sales is expected to expand at an annual rate of 2% until 2030, despite a drop in the growth rate compared to the past due to car sharing and other factors, and the production of new vehicles is expected to continue on an upward trend. (McKinsey: Automotive revolution-perspective toward 2030)

As a result, demand for the development of products that contribute to decarbonization is increasing, not only from the automotive sector, but also from customers in other sectors, as they are increasingly required to take actions on climate change. We believe that we can obtain business opportunities by responding to these climate change-related needs, including those for decarbonized products, and have started various internal initiatives, such as calculating supply chain emissions, introducing renewable energy, and developing products with a smaller environmental impact (environmentally friendly products). Furthermore, even in the aforementioned product development for the automotive sector, we are continuously working to share our know-how within the Nippon Paint Group, for example, by improving the quality of product development by sharing knowledge of other sectors. In other words, since opportunities for products for the automotive sector are considered to overlap with opportunities for products for other sectors, in estimating the financial impact, we assumed that 10% of the 164,635 million yen in total sales of the reporting boundary in 2021, not limited to products for the automotive sector, would be applicable to the total sales of the 2021 reporting boundary.

Cost to realize opportunity

1,335,000,000

Strategy to realize opportunity and explanation of cost calculation

Situation: In recent years, our primary suppliers have accelerated their efforts to become carbon neutral and reduce CO2 emissions throughout the life cycle of automobiles and launched specialized environment initiatives and plans. Since painting is a process with high CO2 emissions during the automobile manufacturing stage, the demand for reduced CO2 emissions during the painting process is increasing yearly.

Task: Paints and electrodeposition paints used in the automobile manufacturing process consume a lot of energy due to their high baking temperatures, so paints that can be applied in a shorter time than conventional paints are growing in demand.

Action: The "Wet-on-Wet" coating process, which we started developing before FY2021, shortens the baking process of the middle coating layer, thereby reducing CO2 emissions during the entire coating process. An example of a product using wet-on-wet technology would be the nax E-CUBE WB.

Result: As for the cost of realizing the opportunity, as mentioned above, we are continuously working to create synergy effects within our group, such as improving the quality of product development by sharing know-how of other sectors, even in the development of products for the automotive sector, so that we will be able to reduce the cost of R&D for products for the automotive sector. Therefore, we have assumed that the R&D expenses of 5,842 million yen (the figure stated in our annual securities report) for the entire 2021 reporting boundary, not limited to R&D of products for the automotive sector, will be allocated to the relevant operating companies on a pro-rata basis. As a result, our domestic sales in this segment in FY 2021 were affected by semiconductor

supply shortages and other factors, and although automobile production volume was lower than in the previous year, sales revenue was higher than in the previous year.

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

While global warming is of concern to society as a whole, including our primary customers, and involves physical and regulatory risks, we recognize that a strategic response to these issues can be linked to business expansion opportunities. One of our defined “eco-friendly products" is ATTSU-9 ROAD(R), a thermal barrier pavement coating. Applying ATTSU-9(R) to road surfaces reflects the infrared rays of solar energy and suppresses the rise in surface temperature of the road surface, thereby reducing the rise in temperature in urban areas (the heat island phenomenon) and contributing to energy conservation for air-conditioning and more in urban areas. Applying ATTSU-9 ROAD(R) to road surfaces can be expected to reduce the rise in road surface temperature by 11 to 14°C (this is assuming a summer day). The domestic sales of this segment in FY2021 totaled 38,132 million yen, and we recognize that the scale and impact of this business are significant.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

750,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In Japan, it has been confirmed that the recent global warming has caused a significant rise in urban temperatures brought about by the heat island effect. It has been reported that the temperature rises in August in Tokyo, over the 100 years since 1901 when the government started collecting the temperature statistics, was above 2.4°C. As a countermeasure to the heat island phenomenon in large cities, including Tokyo, the government has formulated a guideline for urban development of mitigating the heat island phenomenon, which serves as a guideline for municipalities to create "planning for low-carbon cities" based on the law concerning the promotion of low-carbon cities. The guideline lists three major causes of the heat island effect, one of which is artificial ground surface cover, i.e., heat stored in pavement surfaces such as asphalt and concrete, which causes temperatures to rise in urban areas. Highly reflective pavement is said to be effective as a countermeasure, and the CO2 reduction effect associated with the suppression of the heat island phenomenon is also mentioned. As a result, sales of ATTSU-9 ROAD(R), which realizes highly reflective pavement, are expected to expand not only to local governments but also to companies that support the product as a means of reducing environmental impact. The potential impact was calculated by multiplying the current sales of ATTSU-9 ROAD(R) of approximately 100 million yen by the expected growth rate of the road pavement coating market of 7.5 times in 10 years by 2030.

Cost to realize opportunity

1,484,000,000

Strategy to realize opportunity and explanation of cost calculation

We have set KPIs for "eco-friendly products" including thermal barrier road surface paints for expanding sales.
Situation: Since around 2006, the company-wide "Thermal Barrier Project" has been developing applications for thermal barrier paints for roofs. While maintaining the thermal barrier performance of roofing paint was one project, it was also necessary to improve the adhesion to asphalt and the durability of the paint film under the load of vehicles in order to expand the application to roads. The Tokyo Metropolitan Government requested a 10°C reduction in road surface temperature in summer as a heat island countermeasure.
Task: Since around 2021, the Tokyo Metropolitan Government has been using Methyl Methacrylate (MMA)-based paints for thermal barrier pavement for roads as an urban heat island countermeasure, but around 2014, problems with peeling of the coating film (our urethane urea-based products do not peel) have become apparent. In addition, the MMA-based paint system has a strong odor, which has also become a problem.
Action: In contrast, ATTSU-9 ROAD(R), a urethane urea-based paint developed by our company, is slip-resistant, abrasion-resistant, odorless, has low VOC, and can suppress peeling.

Result: The results of the Tokyo Metropolitan Government's survey revealed that our "urea-based" paint hardly peels off, and to solve the peeling problem, the Tokyo Metropolitan Government revised its performance requirements to mainly urethane urea-based paint (the same material as our ATTSU-9 ROAD (R)), which has accelerated our products introduction. In 2015, the policy to use this product on the official marathon course was decided and has since been implemented for the targeted area.
As for the cost of realizing the opportunity, we are continuing to work on the development of thermal barrier paint products and to seek synergies within our group, such as improving the quality of product development by sharing knowledge of applications in other sectors. Therefore R&D expenses of 5,842 million yen for the entire reporting boundary (the figure stated in the Annual Securities Report) are assumed to be allocated proportionally to the sales of the relevant operating companies.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

No

Mechanism by which feedback is collected from shareholders on your transition plan

We do not have a feedback mechanism in place, but we plan to introduce one within the next two years

Attach any relevant documents which detail your transition plan (optional)

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario	Primary reason why your organization does not use climate-related	Explain why your organization does not use climate-related scenario analysis to

	analysis to inform strategy	scenario analysis to inform its strategy	inform its strategy and any plans to use it in the future
Row 1	No, but we anticipate using qualitative and/or quantitative analysis in the next two years	No instruction from management	Until now, we have not conducted scenario analysis due to insufficient understanding of the risks posed by climate change. However, in 2021, we announced our TCFD endorsement, and we plan to conduct a scenario analysis as part of our TCFD disclosure.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Evidence of influence: According to the data by the World Coating Council, the decorative paints (for construction work) business is expected to grow by 0.7% per annum between 2019 and 2024. By application, demand for newly-constructed buildings and steel structures should record negative growth, while repaint demand is expected to remain stable. The World Coating Council also estimates the automotive coatings market to grow by 3.1% per annum during the same period, indicating that major changes in the auto industry will bring about more business opportunities. Customers in the auto industry and otherwise began preferentially procuring low-carbon components and materials from the early 2000s. As these data show, both the construction and auto industries recognize responses to climate change as one of their material issues. Should they perceive us as a company with little regard for climate change control, we might not be chosen as their supplier, resulting in loss of business over the medium- and long-term. How was the strategy influenced: As we began taking an interest in anti-climate change measures, we reviewed our capital expenditure plan so that we can develop products capable of contributing to customers' efforts to combat climate change as they try to decarbonize their entire value

		chain, as well as products that help us to decarbonize our own production processes. Timeline: 3-5 years Case study: Situation: Customers in the auto and other industries, who are promoting decarbonization of their value chains from product development, production, to distribution, have begun choosing raw materials and components with minimal GHG emissions (low-carbon products). Task: To promote the decarbonization of our products while enhancing our competitive edge and productivity, we have reviewed the basic policy for capital expenditures and reset systems and targets in this regard in the new Medium-Term Management Plan (FY2021-2023) in order to maintain business opportunities over the medium- and long-term. Action: For the medium-term management plan, we have set aside funds to maintain equipment and get rid of obsolete equipment, procure new equipment, establish new sites, ramp up production capacity, and develop distribution networks. Response: Specifically, the Company has set aside 40 billion yen for investment in the renewal of existing facilities and 65 billion yen for the establishment of new bases, expansion of production capacity, and development of distribution networks over the next three years. Of this amount, 5.8 billion yen was secured for 2021 as capital investment in Japan. This includes the construction of a new Okayama Plant for automotive coatings. The Company also plans to introduce state-of-the-art facilities to address energy conservation and low-carbonization in the production process, which is expected to significantly reduce the CO2 emissions per product. Specific CO2 emission reductions are currently being evaluated. We have been reporting the CO2 emissions of our products to our primary customers every year through the CDP, and we expect to be able to report reductions from 2021 onward, which will allow us to demonstrate the low-carbon nature of our products. Furthermore, the Company has been working to improve its production facilities and reorganize its supply chain for existing facilities, as well as launching the Okayama Plant and the color mixing plant for decorative paints in Kanagawa.
Supply chain and/or value chain	Yes	Basis of Impact: We manufacture and sell paints using large quantities of petrochemical products. As the petrochemical industry has large greenhouse gas emissions due to the

		nature of its business, the impact on climate change from purchased raw materials in the value chain itself and from CO2 emissions during processing is significant. Effect of Impact: The automotive, construction, and marine industries, who are our core customers, are rushing to respond to climate change, and if we are perceived as a company that has little regard for acting on climate change, there is a risk that we will lose business in the medium- and long-term due to fewer number of customers who will choose us as their supplier. Time horizon: 0-3 years (short and medium term) Case Study Situation: Customers' needs include improvements in fuel efficiency in automobiles and ships, improved energy efficiency in homes, and conservations of energy in the painting process. The Nippon Paint Group has already released eco-friendly products, but they have yet to gain broad recognition among end-users through promotions at retailers. Task: To increase sales and market shares across our entire value chain, it is important that we raise awareness of our products that contribute to managing climate change. Action: For the products already on the market, we have been reviewing PR and advertising strategies, such as increased promotions that show the benefits of products that have fewer CO2. Examples include automotive coatings (AQUAREX: low-carbon baking process such as 3-wetting), automotive refinish paints (nax Series, reduced drying process, improved drying performance), industrial paints (ATTS-9: thermal barrier pavement), decorative paints (Thermo Eye: roof thermal barrier paint), marine coatings (A-LF-Sea: fuel efficient ship's bottom paint), and more. Response: In order to increase the awareness of products that can contribute to reducing CO2 emissions among our customers and end-users, we increased product exposure through the following: receiving external awards, registering with external certified products, and releasing introductory videos. Specifically, in interviews with plate coating services that have adopted and introduced our "nax E-CUBE WB", a next-generation water-based paint for automotive refinishes, we asked them the following questions and released the interviews on YouTube: "Why did you introduce water-based paints?", “What were the difficulties in introducing it?”, “What do you think about Nippon Paint's water-based paint?" The YouTube interviews began in 2019 and has continued since then, with vol. 4 released in 2021. The automotive refinish

		paint naxE3 series (E-Cube) helps customers to reduce their energy consumption through products that have a reduced drying process as they can be used "wet-on-wet" and products with improved drying properties. The above efforts were successful and led to the addition of a new lineup in 2020, the E3 PLUS, and the launch of a new product, nax E-CUBE WB water-based system, where the fourth E stands for not only the employee's liking of the Company, but also the bond between plate coating services, its customers and surrounding community. The Company is positioning itself to achieve more sustainable business management by strengthening such engagement. For the vessel division, our undertakings to "reduce fuel consumption and CO2 emissions by spreading low-friction antifouling paint on ship bottoms" was awarded in the Countermeasure Technology Introduction and Dissemination Category of the "Minister of the Environment's 2019 Commendation for Global Warming Prevention Activity" on December 2, 2019. The series of low-friction antifouling paints for ship bottoms (LF-Sea and A-LFSea) have been adopted by a total of more than 2,900 vessels. Our antifouling agent-free antifouling paint for ship bottoms, AQUATERRASS, was nominated for the GREEN4SEA TECHNOLOGY AWARD hosted by a Europe-based non-profit organization SAFETY4SEA and won the award in 2021. SAFETY4SEA is a nonprofit organization that fosters understanding and increased use of environmentally friendly practical maritime methods and technologies, while nurturing, enlightening, and promoting maritime environmental awareness. The receipt of this highly esteemed award is effective in increasing recognition of our products among various stakeholders. We received the "KCS Award in Environmental Technology" for the development of technology for "highly durable heat shielding paints for roads." This award-winning heat shielding paint absorbs the sunlight energy and curb a rise in the temperature of road surfaces, thus controlling the heat island effect and preventing global warming. Another product that enjoys a high reputation is heat shielding paint for roads ATTSU-9, which offers high durability against the vehicle load and flexibility of coatings that can accommodate to asphalt's characteristics. Its heat-shielding effect can lower the surface temperature of asphalt roads by 10-15°C, thus mitigating the heat island effect in urban areas. The product was certified under the Heat Island Protection Technology Certification System. In addition, the product has been adopted for use on metropolitan and national

		roads, mainly by the Ministry of Land, Infrastructure, Transport and Tourism.
Investment in R&D	Yes	Basis for impact: Customer requirements include improved fuel efficiency in automobiles and ships, improved energy efficiency in housing, and energy conservation during the coating process. If we fail to meet these requirements, we may lose business in the medium- and long-term as a result of being chosen by fewer clients. Effect of Impact: In order to reflect customer requirements regarding materiality, we re-identified Materiality of the Group. Time horizon: 3 to 5 years Case Study: Situation: Customer requirements include improved fuel efficiency in automobiles and ships, improved energy efficiency in housing, and energy conservation during the coating process. If we fail to meet these requirements, we may lose business in the medium and long term as a result of being chosen by fewer clients. Task: We considered it necessary to reflect customer requirements in the Nippon Paint Group Materiality. Action: In the Materiality identified in 2020, we identified "climate change" and "innovation for a sustainable future" among others. Accordingly, we plan on focusing on creative innovations as a means of solving social issues, including climate change, that are difficult to solve using the conventional approaches. Response: Based on the identified Materiality, we are conducting R&D of products that will have the effect of reducing environmental impact in the automotive coatings, industrial coatings, decorative paints, and marine coatings sectors. The Company is continuing research and development to provide products that contribute to climate change countermeasures, including next-generation technologies such as infrared-reflective transparent thermal barrier paints (which reflect infrared rays simply by applying them, maintaining indoor comfort and contributing to reduced air conditioner power consumption) and coating technologies that contribute to heat reuse technology using chemical heat storage materials (materials that store heat without equipment and are efficient at generating heat energy). The Company has already commercialized high-performance hydrophilic treatment and hydrophilic planning treatment technology that improves air conditioning efficiency in homes and automobiles, and self-polishing

		antifouling paints that contribute to improved fuel efficiency in vessels. From 2020, we started drafting a new Medium-Term Plan (FY2021-2023), which includes a basic global policy for capital investment. This policy positions the present period as a time to build a foundation for sustainable growth by enhancing competitive advantage and productivity while looking five to ten years into the future, while executing "aggressive" investments to capture growth and "defensive" investments to strengthen risk tolerance, including climate change risk. The policy includes a plan of 10 billion yen for R&D, environmental protection, and more (of which about 5.5 billion yen is planned for Japan in 2021).
Operations	Evaluation in progress	Basis of Impact: In line with the Japanese government's GHG reduction policy, "climate change" was set as one of our top priorities among the Materiality identified in 2020. Net-zero CO2 emissions has also been set as a key issue in the new Medium-Term Plan (FY2021-2023). Under these circumstances, we have already begun to identify specific issues and consider countermeasures based on the understanding that some steps need to be taken to reduce CO2 emissions from our operations, as we have various facilities related to Scope 1 and 2 emissions in our manufacturing processes. Explanation of the Evaluation Process: For example, the Nippon Paint Group as a whole is studying the financial impact of renewable energy procurement and carbon pricing, as well as investments in adopting energy-saving equipment and operating renewable energy facilities; recognizing the need to address both CO2 countermeasures and improving profitability. Additionally, in order to promote the optimal use of various existing energy-using equipment and devices, the Company is reviewing appropriate operating conditions for compressors, boilers, and other equipment. In other offices, the Company is estimating energy reductions through steady activities in daily operations, such as efforts to turn off air conditioners and office equipment. Expected Assessment Completion Date: Our mid-term target is a 37% reduction of the total of Scope 1 and 2 by 2030, and the single-year target is a 6.9% reduction of Scope 2 (approximately 4.2% of the total of Scope 1 and 2). As for the completion date of the evaluation, the mid-term evaluation is scheduled to be completed in 2031, and the evaluation of the single-year reduction target for 2022 is

		scheduled to be completed in the first half of 2023.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital expenditures	In our financial plan, an increase in capital expenditures has had a significant impact on capital spending planning. In order to respond to the provision of low-carbon products, we are planning for capital expenditures/ R&D investment in our factories and have secured capital expenditures and investment line for a low-carbon perspective in our new Medium-Term Plan (FY2021-2023) — the resulting increase in capital expenditures causing a significant impact on our financial plans. In our explanation to investors several years ago, we stated that we would need to invest about 100 billion yen in the long term of around 10 years with focus on our eight main plants in Japan, but in light of the growing interest in climate change and low-carbon emissions in recent years, we decided that our current plan would be too slow to respond to market, technology, and reputational risks. Therefore, we divided the project into phases and decided to take the short- and medium-term approach and make short to medium term capital expenditures in our factories in Japan. (Case Study of Capital Expenditure/Capital Allocation) Situation: In 2015, the United Nations adopted the Sustainable Development Goals (SDGs) that aim for "sustainable development," and private companies are expected to contribute in some form. Value creation through environmental responses, including climate change, is the key to expanding our business and earnings, and our Group is working on "mitigating the environmental impact of our products" as one of our CSR goals. In March 2019, we determined the definition of "eco-friendly products" for the Nippon Paint Group. Based on the following "ideal state of society in 2030," the Nippon Paint Group discussed what we can do as a paint manufacturer to achieve this goal from a future perspective. [A sustainable society as perceived by NPHD = The ideal society in 2030 (environmental aspects)] (1) A society in which social capital can be used for a long time, and in which fewer resources are consumed. (2) A society where CO2 emissions are reduced through energy conservation and global warming is curbed.

		(3) A society in which environmentally hazardous substances are not released into the environment and clean water and air are maintained. (4) A society where pollution of water resources and oceans is prevented, and ecosystems are maintained. The realization of the above society requires the creation and diffusion of eco-friendly products, especially low-carbon products, but our production facilities in Japan are aging and becoming obsolete, and our environmental management system must be reinforced. We have not yet developed the ability to provide eco-friendly products, Task: Our definition of low-carbon products includes products that have low environmental impact, products that consume less energy directly, i.e., less energy in the manufacturing process, and products that reduce energy used by end-users after the product is sold, i.e., products that contribute to energy conservation through shorter drying times or lower baking temperatures during the painting process. To reduce energy consumption in our manufacturing process, the former poses an issue of improving productivity by investing in production facilities in Japan and replacing them with the latest equipment. Action: We secured investment quotas as part of the production expansion investment plan included in the financial plan (investment to expand production at Nippon Paint Industrial Coatings Co., Ltd. Chiba Plant (NPIU) for powder paint production, and in the new Medium-Term Plan (FY2021-2023)), and secured capital expenditure budget for the construction (consolidation) of new plants (Nippon Paint Automotive Coatings Co., Ltd., Okayama Plant (NPAC)) (investment: 4.1 billion yen; production items: automotive coatings (overcoat, water-based middle coat for plastics); total building area: 4,700 m2). Response: NPIU has begun to introduce innovative production processes in conjunction with investment in power coatings production expansion, at a cost of approximately 900 million yen (total floor area: 3,000 m2). Specifically, construction of the first phase began at the Chiba Plant in November 2018, with operations starting in October 2019, and the second phase began in April 2020, with operations starting in January 2021. These new production processes have led to reduced energy during the production phase, resulting in low-carbon products. Construction of NPAC's Okayama Plant began in May 2021, with completion in May 2022 and start of operations in July 2022. The new plant will be designed as a state-of-the-art smart factory, and the latest equipment will be installed to enable energy conservation and low-carbon emissions. The CO2 reduction rate for each product will be evaluated after the plant goes into operation.

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?

No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Year target was set

2019

Target coverage

Country/region

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per metric ton of product

Base year

2019

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

0.054

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.093

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.15

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2021

Targeted reduction from base year (%)

1

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

0.1485

% change anticipated in absolute Scope 1+2 emissions

0.94

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.057

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

0.106

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.16

% of target achieved relative to base year [auto-calculated]

-666.6666666667

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

Reduction activities will be promoted with the target base year of FY 2019 (the year before the pandemic)

Plan for achieving target, and progress made to the end of the reporting year

Compared to the base year of FY 2019, FY 2021, as in the previous year, was not able to achieve the intensity target due to a 15% decrease in production volume because of the pandemic.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

No other climate-related targets

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	3	
To be implemented*	7	1,889

Implementation commenced*	30	571
Implemented*	5	744
Not to be implemented	0	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes

Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)

679

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Mandatory

Annual monetary savings (unit currency – as specified in C0.4)

8,480,000

Investment required (unit currency – as specified in C0.4)

65,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

Ongoing

Comment

Initiative category & Initiative type

Energy efficiency in buildings

Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

30.5

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

793,034

Investment required (unit currency – as specified in C0.4)

3,000,000

Payback period

4-10 years

Estimated lifetime of the initiative

Ongoing

Comment

Initiative category & Initiative type

Energy efficiency in production processes

Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)

14.3

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

500,000

Investment required (unit currency – as specified in C0.4)

15,679,200

Payback period

>25 years

Estimated lifetime of the initiative

Ongoing

Comment

Initiative category & Initiative type

Energy efficiency in production processes
Machine/equipment replacement

Estimated annual CO2e savings (metric tonnes CO2e)
13.2

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
774,364

Investment required (unit currency – as specified in C0.4)
400,000

Payback period
<1 year

Estimated lifetime of the initiative
Ongoing

Comment

Initiative category & Initiative type
Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
7

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
154,470

Investment required (unit currency – as specified in C0.4)
2,400,000

Payback period
21-25 years

Estimated lifetime of the initiative

Ongoing

Comment

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	In response to the Minamata Convention on Mercury, we have replaced mercury-containing lighting with LED lighting with higher energy-efficiency.
Dedicated budget for energy efficiency	Introduction of the latest energy-saving equipment during facility renewal
Employee engagement	· Improvement and maintenance of manufacturing processes and operating efficiency · Other activities such as turning off lights frequently, adjusting air conditioning temperatures, Cool Biz activities, etc.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Chemicals and plastics

Chemical absorption of CO2

Description of product(s) or service(s)

Our company has several product groups divided by customer.

First, products that can contribute to reducing GHG emissions in the automotive coatings sector include products that reduce coating energy by shortening the coating

process, mainly in mid- and top-coat paint products, and products that reduce the amount of paint used by achieving ultra-high coating efficiency with electrodeposition paints. Many of these products are water-based paints, and electrodeposition paints are tin-free. As these products achieve both the reduction of environmental impacts related to climate change and unrelated to climate change, these products are increasingly introduced into the market.
In the industrial coatings field, eco-friendly products are represented by powder coatings, water-based and solvent borne high-solid paints, and thermal barrier paints. Powder coatings have a high paint usage rate (60-80% as a film, vs. 30-50% for liquids) and minimize VOC emissions in the coating process. Solvent-based high-solids are effective in reducing the number of spray applications for the same film thickness, while thermal barrier paints are applied to roofs and roads to reduce the air conditioning load, and the shift to these products is progressing steadily.
In the decorative paints field, we are promoting coatings with high weather resistance using inorganic resins, further sales expansion of thermal barrier coatings, and rust-preventive coatings that respond to the need for shorter processes.
In the marine coatings field, we are promoting products that contribute to the reduction of GHG emissions from marine vessels, including the launch of upgraded products that provide high antifouling performance while reducing the elution of antifouling agents contained in paints, and reducing the fuel consumption of marine vessels as usual.
In the fine chemicals field, the Company is expanding its zircon chemical conversion system, which further reduces the amount of metal used and waste generated while maintaining the same performance as before, and products that reduce air conditioning operating load by applying antifouling coatings to air conditioning aluminum fins.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

16.3

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?
Row 1	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

15,044

Comment

We used the same calculation method as the last year. CO2 emissions (Scope 1) and production volume per unit of production increased slightly due to a slight increase in overall production volume.

Scope 2 (location-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

27,972

Comment

Location standards are calculated using the factors specified in the "Carbon Neutral Action Plan" established by the Ministry of Economy, Trade and Industry/Japan Chemical Industry Association.

Scope 2 (market-based)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

28,071

Comment

Market standards are calculated using factors based on the laws concerning energy and global warming measures (the "residual" emission factor after adjustment by each electric utility)

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,058,342

Comment

Activity data of items procured as raw materials and items procured for business were calculated as follows.

・The purchased weight of semi-finished products and raw materials was multiplied by the value described in "IDEA ver3.1" as activity data.
・For procurement items other than semi-finished products and raw materials, the purchase price was multiplied by the value described in "Emission Unit Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains" as the intensity. Since the intensity includes emissions from the transportation of procured goods, the upstream transportation emissions in Category 4 are included in the emissions calculated for this category.
In the previous year, this category was also calculated on a purchase value basis for semi-finished products and raw materials, so the calculation method used is different from the one used last year for some items.

Scope 3 category 2: Capital goods

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

112,239

Comment

The quantity of fixed assets acquired (annual acquisition amount around the world), which is disclosed in the annual securities report as activity data, was multiplied by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, the value for organic chemical industrial products (excluding basic petrochemical products). Fixed assets include both tangible and intangible assets.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

7,936

Comment

Energy consumption data by fuel at all production bases of our consolidated subsidiaries in Japan that are subject to calculation and reporting as activity data were multiplied by emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, the value per fuel.

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

37,450

Comment

Based on the emissions reported by the NPTU under the Energy Conservation Law in Japan, we estimated the emissions of other applicable group partner companies in Japan by comparing their transportation volumes to calculate the total emissions from shipments of our products. In addition to emissions in Japan, emissions from shipments to overseas destinations were also calculated. The total volume (weight) of overseas transportation was used as activity data, and then multiplied by the emissions factor for shipments from the Ministry of the Environment's publicly available DB Ver. 3.0. Emissions are calculated based on the total amount of transportation in Japan and overseas.

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

15,609

Comment

Emissions were calculated by multiplying the activity data (annual amount of waste disposed by waste type) by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 (the value of the basic unit for each waste type).

Scope 3 category 6: Business travel

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

428

Comment

Emissions were calculated by multiplying activity data, which is the consolidated total number of employees (in Japan), by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 based on the number of employees.

Scope 3 category 7: Employee commuting

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,455

Comment

Emissions were calculated by multiplying the activity data, which is the consolidated number of employees (in Japan), by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, number of employees per site. To avoid underestimating emissions, the largest values were used as factors.

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

All the properties leased by the Company are covered by Scope 1 and 2, so they are not included in Scope 3 as zero emissions. （Scope 1 (using fuel purchased by the Company): Leased vehicles, forklifts Scope 2 (using electricity purchased by the Company): Printers, PCs, measuring instruments, forklifts (rechargeable type)

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Downstream transportation emissions are dependent on a wide variety of customer products and therefore contain highly uncertain information.

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Based on the WBCSD Guidance for the Chemical Sector, this category has zero emissions and is therefore excluded.

Scope 3 category 11: Use of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Based on the WBCSD Guidance for the Chemical Sector, this category has zero emissions and is therefore excluded.

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

57,395

Comment

Of the total annual delivery volume (based on weight) in Japan, the delivery volume excluding transportation between our production bases was calculated as the annual product shipment weight. Based on the WBCSD Guidance for the Chemical Sector, 80% of the annual product shipment is assumed to be landfilled and 20% incinerated. The activity data was calculated by multiplying the relevant annual product shipment weight by the emission factor for each disposal process listed in the LCA DB (IDEA Ver. 2.3).

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

Since there are no leased assets for rental purposes, the emissions are assumed to be zero and are not included in the calculation.

Scope 3 category 14: Franchises

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

As we have no franchise agreements, and emissions are therefore zero, this category is excluded from calculation.

Scope 3 category 15: Investments

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

As we have no commercial investment activities, and emissions are therefore zero, this category is excluded from calculation.

Scope 3: Other (upstream)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

As this category is not applicable, emissions are zero and therefore is it not included in calculations.

Scope 3: Other (downstream)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

As this category is not applicable, emissions are zero and therefore is it not included in calculations.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Japan Ministry of the Environment, Law Concerning the Promotion of the Measures to Cope with Global Warming, Superseded by Revision of the Act on Promotion of Global Warming Countermeasures (2005 Amendment)
Other, please specify
CO2 conversion factors from Keidanren/Japan Chemical Industry Association

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

15,044

Comment

CO2 emissions (Scope 1) and production volume per unit of production increased slightly in line with a minor increase in total production volume.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

The CO2 conversion factor in the “Carbon Neutral Action Plan” established by Keidanren/JCIA is used for reporting to JCIA. This will be used as the location standard.

For reports based on the Law Concerning the Rational Use of Energy and the Law Concerning the Promotion of the Measures to Cope with Global Warming, the factors specified by each law (crude oil conversion factor: Energy Conservation Law, CO2 emission factor: Global Warming Law) are used as the market standard. However, since the CO2 emission factor adopted by each electric power company can be selected among the factors specified by the Global Warming Law, the conversion factor of the electric power company with which each location contracts may be used for the Global Warming Law reporting.

C6.3

(C6.3) What were your organization’s gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

27,972

Scope 2, market-based (if applicable)

28,071

Comment

The location-based figure is calculated using factors based on the Carbon Neutral Action Plan drawn up by the Ministry of Economy, Trade and Industry and Japan Chemical Industry Association.
The market-based figure is calculated using factors based on the Energy Saving Act and Anti-Global Warming Act. (“Residual Mix” emission factor, which is an adjusted emission factor for each electricity utility).

C6.4

(C6.4) Are there any sources (e.g., facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization’s gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,052,051

Emissions calculation methodology

Hybrid method

Spend-based method

Other, please specify

Activity data of items procured as raw materials and items procured for business were calculated as follows.

・The purchased weight of semi-finished products and raw materials was multiplied by the value described in "IDEA ver3.1" as the activity data.

・For procurement items other than semi-finished products and raw materials, the purchase price was multiplied by the value described in "Emission Unit Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains" as the emission factor. Since the emissions intensity includes emissions from the transportation of procured goods, the upstream transportation emissions in Category 4 are included in the emissions calculated for this category.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Activity data of items procured as raw materials and items procured for business were calculated as follows.

・The purchased weight of semi-finished products and raw materials was multiplied by the value described in "IDEA ver3.1" as activity data.

・For procurement items other than semi-finished products and raw materials, the purchase price was multiplied by the value described in "Emission Unit Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains" as the intensity. Since the intensity includes emissions from the transportation of procured goods, the upstream transportation emissions in Category 4 are included in the emissions calculated for this category.

In the previous year, this category was also calculated on a purchase value basis for semi-finished products and raw materials, so the calculation method used for this year is different from the one used last year for some items.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

112,239

Emissions calculation methodology

Spend-based method

Other, please specify

The quantity of fixed assets acquired (worldwide annual acquisition amount), which is disclosed in the annual securities report as activity data, was multiplied by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 for the value for organic chemical industrial products (excluding basic petrochemical products). Fixed assets include both tangible and intangible assets.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

The quantity of fixed assets acquired (worldwide annual acquisition amount), which is disclosed in the annual securities report as activity data, was multiplied by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 for the value for organic chemical industrial products (excluding basic petrochemical products). Fixed assets include both tangible and intangible assets.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

7,936

Emissions calculation methodology

Fuel-based method

Other, please specify

Energy consumption data by fuel at all production bases of our consolidated subsidiaries in Japan that are subject to calculation and reporting as activity data were multiplied by emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 for the value per fuel.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Energy consumption data by fuel at all production bases of our consolidated subsidiaries in Japan that are subject to calculation and reporting as activity data were

multiplied by emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, for the value per fuel.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

37,450

Emissions calculation methodology

Hybrid method

Distance-based method

Other, please specify

Emissions in this category are included in the emissions reported in Category 1 (purchased goods and services).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Based on the emissions reported by the NPTU under the Energy Conservation Law in Japan, we estimated the emissions of other applicable group partner companies in Japan by comparing their transportation volumes to calculate the total emissions from shipments of our products. In addition to emissions in Japan, emissions from shipments to overseas destinations were also calculated. The total volume (weight) of overseas transportation was used as activity data, and then multiplied by the emissions factor for shipments from the Ministry of the Environment's publicly available DB Ver. 3.0. Emissions are calculated based on the total amount of transportation around the world.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

15,609

Emissions calculation methodology

Waste-type-specific method

Other, please specify

Emissions were calculated by multiplying the activity data (annual amount of waste disposed by waste type) by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 (the value of the basic unit for each waste type).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions were calculated by multiplying the activity data (annual amount of waste disposed by waste type) by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0 (the value of the basic unit for each waste type).

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

428

Emissions calculation methodology

Average data method

Site-specific method

Other, please specify

Emissions were calculated by multiplying activity data, the consolidated total number of employees (in Japan), by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, for the number of employees.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions were calculated by multiplying activity data, the consolidated total number of employees (in Japan), by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, for the number of employees.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,455

Emissions calculation methodology

Average data method

Site-specific method

Other, please specify

Emissions were calculated by multiplying the activity data, consolidated number of employees (in Japan), by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, for the number of employees per site. To avoid underestimating emissions, the largest values were used as factors.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions were calculated by multiplying the activity data, consolidated number of employees (in Japan), by the emissions factor listed in the Ministry of the Environment's public DB Ver. 3.0, for the number of employees per site. To avoid underestimating emissions, the largest values were used as factors.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

All the properties leased by the company are covered by Scope 1 and 2, so they are not included in Scope 3 as zero emissions. （Scope 1 (using fuel purchased by the company): Leased vehicles, forklifts Scope 2 (using electricity purchased by the company): Printers, PCs, measuring instruments, forklifts (rechargeable type)

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Downstream transportation emissions are dependent on a wide variety of customer products and therefore contain highly uncertain information.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Based on the WBCSD Guidance for the Chemical Sector, this category has zero emissions and is therefore excluded.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Based on the WBCSD Guidance for the Chemical Sector, this category has zero emissions and is therefore excluded.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

57,395

Emissions calculation methodology

Hybrid method

Average data method

Distance-based method

Other, please specify

Of the total annual delivery volume (based on weight) in Japan, the delivery volume excluding transportation between our own bases was calculated as the annual product shipment weight. Based on the WBCSD Guidance for the Chemical Sector, 80% of the annual product shipment is assumed to be landfilled and 20% incinerated. The activity data was calculated by multiplying the relevant annual product shipment weight by the emission factor for each disposal process listed in the LCA DB (IDEA Ver. 2.3).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Of the total annual delivery volume (based on weight) in Japan, the delivery volume excluding transportation between our own bases was calculated as the annual product shipment weight. Based on the WBCSD Guidance for the Chemical Sector, 80% of the annual product shipment is assumed to be landfilled and 20% incinerated. The activity data was calculated by multiplying the relevant annual product shipment weight by the emission factor for each disposal process listed in the LCA DB (IDEA Ver. 2.3).

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Since there are no leased assets for rental purposes, the emissions are assumed to be zero and are not included in the calculation.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

As we have no franchise agreements, and emissions are therefore zero, this category is not included in calculation.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

As we have no commercial investment activities, and emissions are therefore zero, this category is not included in calculation.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

As this category is not applicable, emissions are zero and therefore is it not included in calculation.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

As this category is not applicable, emissions are zero and therefore is it not included in calculation.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0000002353

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

43,015

Metric denominator

unit total revenue

Metric denominator: Unit total

182,773,000,000

Scope 2 figure used

Location-based

% change from previous year

0.1

Direction of change

Increased

Reason for change

Increased to 0.0000002353 tCO2/yen from 0.0000002108 tCO2/yen last year. This is mainly due to a decrease in sales in Japan.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

No

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Japan	15,044

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Automotive Coatings Business	7,031
General Industrial Coatings business	3,186
Decorative Paints Business (for construction and heavy-duty corrosion-resistant structures, etc.)	4,578
Surface Treatment Business	186
Marine Coatings Business (almost all production is outsourced)	12
Export/import of raw materials and finished products	30

Group Supervisory Function	21

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Chemicals production activities	14,198	CO2 emissions are calculated by adding up the total fuel consumed at production sites in Japan. Therefore, Scope 1 total emissions are reported excluding technical research sites, head office, and other sales offices. Emissions Factor: location standard

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Japan	27,972	28,071

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Automotive Coatings Business	10,469	10,059
General Industrial Coatings business	7,567	7,688
Decorative Paints Business (for construction and heavy-duty corrosion-resistant structures, etc.)	8,125	8,451
Surface Treatment Business	804	874

Marine Coatings Business (almost all production is outsourced)	416	438
Export/import of raw materials and finished products	83	72
Group Supervisory Function	507	489

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Chemicals production activities	23,026	23,198	The market standard is calculated using factors based on the Law Concerning the Rational Use of Energy and the Law Concerning the Promotion of the Measures to Cope with Global Warming (the "residual" emissions factor after adjustment by each electric utility). The location standard is calculated using the factor specified in the "Carbon Neutral Action Plan" established by Keidanren/JCIA. CO2 emissions were calculated by adding up the total amount of electricity consumed at production sites in Japan. Therefore, the total Scope 2 emissions are reported excluding technical research bases, the head office, and other sales offices.

C-CH7.8

(C-CH7.8) Disclose the percentage of your organization's Scope 3, Category 1 emissions by purchased chemical feedstock.

Purchased feedstock	Percentage of Scope 3, Category 1 tCO2e from purchased feedstock	Explain calculation methodology
Aromatics extraction	4	The weight of the relevant items (toluene and aromatic mixed solvents) of purchased raw materials in 2021 was multiplied

		by the emissions factor value described in "IDEA ver3.1". The calculated value of 38,683 tons was divided by the total C6.5 emissions of 1,052,051 tons.
Polymers	37	The weight of the relevant items (alkyd resins, epoxy resins, etc.) of purchased raw materials in 2021 was multiplied by the value specified in "IDEA ver3.1" as the basic unit. The calculated value of 388,625 tons was divided by the total C6.5 emissions of 1,052,051 tons.
Specialty chemicals	17	The weight of the relevant items (additives, special monomers, pigments, etc.) of purchased raw materials in 2021 was multiplied by the emissions factor value described in "IDEA ver3.1". The calculated value of 173,867 tons was divided by the total C6.5 emissions of 1,052,051 tons.
Other base chemicals	7	The weight of the relevant items (synthetic solvents, general monomers, soda industry products, etc.) of purchased raw materials in 2021 was multiplied by the emissions factor value described in "IDEA ver3.1". The calculated value of 77,156 tons was divided by the total C6.5 emissions of 1,052,051 tons.

C-CH7.8a

(C-CH7.8a) Disclose sales of products that are greenhouse gases.

	Sales, metric tons	Comment
Carbon dioxide (CO2)	0	
Methane (CH4)	0	
Nitrous oxide (N2O)	0	
Hydrofluorocarbons (HFC)	0	
Perfluorocarbons (PFC)	0	
Sulphur hexafluoride (SF6)	0	
Nitrogen trifluoride (NF3)	0	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change	0	No change
Other emissions reduction activities	754	Decreased	1.78	40 tons of CO2 emissions reduction due to energy efficiency in buildings. 701 tons of CO2 emissions reduction due to energy efficiency improvements in production processes. CO2 emissions reduction by 13 tons due to waste reduction. Total emissions reduction of 754 tons, divided by the 2020 Scope 1 and Scope 2 (location-based) total of 42374 tons- CO2. CO2, the rate of change was calculated to be 1.78% reduction: 754 ÷ 42374 (total 2020 Scope 1 and 2 emissions) × 100 = 1.78%.
Divestment	0	No change	0	No change
Acquisitions	0	No change	0	No change
Mergers	0	No change	0	No change
Change in output	1,395	Increased	3.29	The use of operating energy for factory equipment increased as production recovered. The 3.29% increase in the rate of change was calculated by dividing the total of 2020 Scope 1 and Scope 2 (location-based) emissions of 42374 t-CO 1395 ÷ 42374 (total of Scope 1 and 2 emissions in 2020) × 100 = 3.29%.
Change in methodology	0	No change	0	No change
Change in boundary	0	No change	0	No change
Change in physical operating conditions	0	No change	0	No change
Unidentified	0	No change	0	No change

Other	0	No change	0	No change

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh

Consumption of fuel (excluding feedstock)	Unable to confirm heating value	0	73,480	73,480
Consumption of purchased or acquired electricity		0	174,208	174,208
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		0	247,688	247,688

C-CH8.2a

(C-CH8.2a) Report your organization's energy consumption totals (excluding feedstocks) for chemical production activities in MWh.

Consumption of fuel (excluding feedstocks)

Heating value

Unable to confirm heating value

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

69,045

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

69,045

Consumption of purchased or acquired electricity

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

143,403

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

143,403

Consumption of self-generated non-fuel renewable energy

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

0

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

0

Total energy consumption

MWh consumed from renewable sources inside chemical sector boundary

0

MWh consumed from non-renewable sources inside chemical sector boundary (excluding recovered waste heat/gases)

212,448

MWh consumed from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary

0

Total MWh (renewable + non-renewable + MWh from recovered waste heat/gases) consumed inside chemical sector boundary

212,448

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes

Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	Yes
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Zero consumption of sustainable biomass

Other biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Zero consumption of other biomass

Other renewable fuels (e.g., renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Zero consumption of other renewable fuels (e.g., renewable hydrogen)

Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Zero consumption of coal

Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Zero consumption of oil

Gas

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0.2

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other non-renewable fuels (e.g., non-renewable hydrogen)

Heating value

Total fuel MWh consumed by the organization

73,479.8

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

0

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Total fuel

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

73,480

MWh fuel consumed for self-generation of heat

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-generation of cooling

MWh fuel consumed for self- cogeneration or self-trigeneration

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	2,706	2,706	0	0
Heat	19,453	19,453	0	0

Steam	112,168	112,168	0	0
Cooling	48,140	48,140	0	0

C-CH8.2d

(C-CH8.2d) Provide details on electricity, heat, steam, and cooling your organization has generated and consumed for chemical production activities.

Electricity

Total gross generation inside chemicals sector boundary (MWh)

2,706

Generation that is consumed inside chemicals sector boundary (MWh)

2,706

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Heat

Total gross generation inside chemicals sector boundary (MWh)

19,015

Generation that is consumed inside chemicals sector boundary (MWh)

19,015

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Steam

Total gross generation inside chemicals sector boundary (MWh)

105,925

Generation that is consumed inside chemicals sector boundary (MWh)

105,925

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

Cooling

Total gross generation inside chemicals sector boundary (MWh)

41,724

Generation that is consumed inside chemicals sector boundary (MWh)

41,724

Generation from renewable sources inside chemical sector boundary (MWh)

0

Generation from waste heat/gases recovered from processes using fuel feedstocks inside chemical sector boundary (MWh)

0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method

Unbundled energy attribute certificates (EACs) purchase

Energy carrier

Electricity

Low-carbon technology type

Solar

Country/area of low-carbon energy consumption

Japan

Tracking instrument used

J-Credit

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

380

Country/area of origin (generation) of the low-carbon energy or energy attribute

Japan

Commissioning year of the energy generation facility (e.g., date of first commercial operation or repowering)

2,018

Comment

As a result of the application for nullification based on J-Credit System Implementation Guideline 3.2, 196 t-CO2 has been offset. Project name: Installation of photovoltaic power generation equipment in residences, emission factor: 0.51501 t-CO2/MWh, thus recognized as equivalent to 380MWh in terms of electricity use.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Japan

Consumption of electricity (MWh)

0

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

0

C-CH8.3

(C-CH8.3) Does your organization consume fuels as feedstocks for chemical production activities?

No

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-CH9.3a

(C-CH9.3a) Provide details on your organization's chemical products.

Output product

Other, please specify

Paints and coatings

Production (metric tons)

242,793

Capacity (metric tons)

306,677

Direct emissions intensity (metric tons CO2e per metric ton of product)

0.17

Electricity intensity (MWh per metric ton of product)

0.97

Steam intensity (MWh per metric ton of product)

0

Steam/ heat recovered (MWh per metric ton of product)

0

Comment

Direct emissions per unit of production were calculated using the location-based CO2 conversion factor (factor presented in the "Carbon Neutrality Action Plan" established by Keidanren/Japan Chemical Industry Association). The scope of calculation includes paint products (for automobiles, general industrial use, and construction and heavy-duty corrosion-resistant structures, etc.). Paints for marine use were excluded from the scope of calculation because production is outsourced.

Output product

Specialty chemicals

Production (metric tons)

20,145

Capacity (metric tons)

22,819

Direct emissions intensity (metric tons CO2e per metric ton of product)

0.05

Electricity intensity (MWh per metric ton of product)

0.29

Steam intensity (MWh per metric ton of product)

0

Steam/ heat recovered (MWh per metric ton of product)

0

Comment

Direct emissions per unit of production were calculated using the location-based CO2 conversion factor (factor provided in the "Carbon Neutrality Action Plan" established by

Keidanren/Japan Chemical Industry Association). Scope of calculation is limited to the surface treatment business.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Research development investments (technological development) made differed from sector to sector.

C-CH9.6a

(C-CH9.6a) Provide details of your organization's investments in low-carbon R&D for chemical production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Product redesign	Large scale commercial deployment	≤20%		
Other, please specify Heat-shielding paints (roads, construction materials)	Large scale commercial deployment	≤20%		
Other, please specify Powder paints	Large scale commercial deployment	≤20%		
Other, please specify Electrodeposition paints	Large scale commercial deployment	≤20%		
Other, please specify Marine coatings	Applied research and development	≤20%		
Other, please specify	Large scale commercial deployment	≤20%		

Surface treatment agents				

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, but we anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

24

% total procurement spend (direct and indirect)

90

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

The scope of engagement includes 55 suppliers covering 90% of all raw material purchases. These top 55 suppliers (out of 230 companies) represent 24% of our total number of suppliers.

Impact of engagement, including measures of success

In the 2020 and 2021 surveys, we used the number of suppliers scored over 70 as a measure of success. Until 2019, if a supplier's score rank was less than 60, we would review their activities and discuss improvements; however, as overall scores are increasing, in the 2020 and 2021 surveys, we expanded the scope of suppliers to collaborate with for score improvement to those with scores under 70.
In the 2020 survey, we discussed improvement measures with nine companies that scored low in the initiative evaluation (equivalent to 7% of our purchase volumes). The number of companies with no problems in the initiative evaluation was 47 (equivalent to 83% of purchase value).
In the 2021 survey, we plan to discuss improvement measures with three companies with low scores in the initiative evaluation (equivalent to 2% of purchase value). The number of companies with no problems in the initiative evaluation was 52 (equivalent to 88% of the purchase amount).

The survey was conducted by the UNGC Japan SAQ (a self-assessment of the initiatives and corrective mechanisms for corporate governance, human rights, labor, environment, fair corporate practices, quality and safety, information security, supply chain, and social contribution related to CSR; for the environment, an understanding of international norms, domestic laws and regulations, and overseas chemical substance control laws; the status of initiatives for sustainable use of resources including water and

reduction of wastewater; and corrective mechanisms as needed). The evaluation is based on a total score of 100 points, with weights assigned to each category for score adjustment.

Comment

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Partner Name: The Assessing low-Carbon Transition (ACT) initiative

Partner Summary: ACT is an initiative co-founded by CDP, an international environmental NGO, and ADEME, the French Agency for Environment and Energy Management, to develop an ACT methodology to assess the strategic alignment of low-carbon corporate ambitions.

Summary of Collaboration: Our members have participated in the Assessment of the Transition to a low-carbon Economy (ACT) Initiative's Chemical Technical Working Group and subsequent road testing, contributing over multiple years to the development of the ACT methodology to assess the strategic alignment of companies' low-carbon transition. The Technical Working Group has an advisory role and final decisions on the methodology will be made by the current ACT Board members, CDP and ADEME. The methodology developed in this project will be made available free of charge to all stakeholders with the aim of supporting alignment with the goals of the Paris Agreement.

Situation: As an example of our climate-related decisions, in July 2020, the ESG Committee, chaired by the President (then President and CEO), identified six materiality and decided to set climate change as an issue of top priority. The committee decided to participate in this initiative in order to acquire the knowledge necessary to formulate climate-related strategies.
Task: We have participated in a CDP webinar and, after confirming with the ACT Secretariat, we contributed to the establishment of a methodology for the ACT chemical sector.
Action: We attended a 3-hour meeting of the ACT Chemical Technical Working Group monthly from February to July 2021, and participated in discussions on the ACT methodology under development from the perspective of a company in the chemical sector.
We also participated in the road test from October 2021 to April 2022, contributing to the establishment of the ACT sector methodology.
Result: The information gained from the ACT chemical sector methodology is being used in our emissions reduction targets as of FY2022. Additionally, we have contributed to the climate transition of society as a whole by giving a lecture on the ACT methodology at an event hosted by Codo Advisory K.K., the first ACT consulting firm in Japan.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization’s purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Complying with regulatory requirements

Description of this climate related requirement

Compliance with relevant environmental laws and regulations is included in the category of self-assessment tool.

% suppliers by procurement spend that have to comply with this climate-related requirement

24

% suppliers by procurement spend in compliance with this climate-related requirement

24

Mechanisms for monitoring compliance with this climate-related requirement

Supplier self-assessment

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

In September 2021, the Group expressed its support for the recommendations (final report) made by the TCFD. As we pursue Maximization of Shareholder Value (MSV), the Nippon Paint Group is striving to enhance its climate change-related measures and information disclosure. To accelerate our response to climate change, we will engage in emissions reduction activities in line with the net-zero targets and carbon neutrality declarations set by national governments and contribute to net-zero emissions in each region around the world. Specifically, we will focus on reducing emissions per unit of production in emerging countries where markets are expanding by introducing renewable energy, replacing equipment with energy-saving equipment and electrified equipment, and other measures. We will also consider targets for the introduction of renewable energy (power generation targets). We currently calculate Scope 3 in Japan, and we have started on global calculations as well.

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Japan Chemical Industry Association

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

We support the goals and initiatives of the industry group and work together with them as a leading company in the paint industry to drive the progress of initiatives.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

11,582,000

Describe the aim of your organization's funding

The Company is a co-sponsor of the Japan Chemical Industry Association's initiative to develop a mechanism for sharing information related to risk assessment of chemical substances in the supply chain, and has judged that the industry group's efforts, such as providing information based on customer requests, are beneficial. The Company also aims to cooperate with the industry group's efforts.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Underway – previous year attached

Attach the document

Page/Section reference

Establishment of an Autonomous Sustainability Structure(P19-20)

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

We identified the Materiality in 2020, identified risks and opportunities for each item of Materiality in the Integrated Report in 2021, and conducted various mitigation measures based on our Materiality. With regard to climate change, in 2021 we began disclosing information based on the TCFD final report and agreed to establish targets for each partner company to achieve net-zero CO2 emissions. Specifically, we have also begun to utilize renewable energy sources. In "Diversity and Inclusion," while sharing the situation in each country and region, we recognized the need to formulate a human rights policy and conduct human rights risk assessments, etc. After 2022, we will be in the implementation phase of this initiative. In addition, human capital, for which discussion is in progress for making it a mandatory requirement item, will be the focus of

related data collection and other initiatives. In "Growth with Communities," we quantified and disclosed our social contribution activities with a view to clarifying the link with business. As an example of "creating innovations to solve social issues," we have been developing and marketing anti-viral paints on the Group. We will strengthen our efforts in areas of growing social concern, such as enhanced chemical substance management and life cycle assessment (LCA). Details of the Group's sustainability strategy are available on the company's website below. Sustainability https://www.nipponpaint-holdings.com/sustainability/

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1	

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1		

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	General Manager, Sustainability	Environment/Sustainability manager