

**DNP**



## DNP Group Environmental Report 2021

# DNP Group Environmental Report 2021

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### Editorial Policy

- The *DNP Group Environmental Report 2021* was created to announce all of the environmental activities of the DNP Group, and is based on the Environmental Reporting Guidelines (2018 Edition) issued by Japan's Ministry of the Environment.
- The *DNP Group Environmental Report 2021* is published in a page format designed to be easy to read on the Web.
- The information in this report was subjected to a third-party review conducted by Lloyd's Register Quality Assurance Ltd. (LRQA). A check mark ☒ indicates indices that have undergone third-party audits.

### Period covered by this report

This report focuses on activities carried out in the period of April 1, 2020 to March 31, 2021. It may also include reporting on important items not occurring within this period. The report also covers activities carried out at some overseas business locations in the period of January 1, 2019 to December 31, 2019.

### Scope of environmental data

Environmental data was applied to Dai Nippon Printing Co., Ltd. and to all domestic companies in the Group that are subject to consolidated financial accounting. The 23 domestic manufacturing companies plus one distribution company (see pages 34–35), the non-manufacturing sites (three development centers, office buildings, sales offices, etc.) of all domestic Group companies and our overseas manufacturing companies (see page 36) were included in the scope. However, the scope of tabulation for the reduction of environmental pollutants, reduction of environmental impact incurred during transport and activities at offices covers operations in Japan.

### Standards for Calculating Environmental Performance Indices

The standards used for calculating environmental performance indices are published separately on the Web.

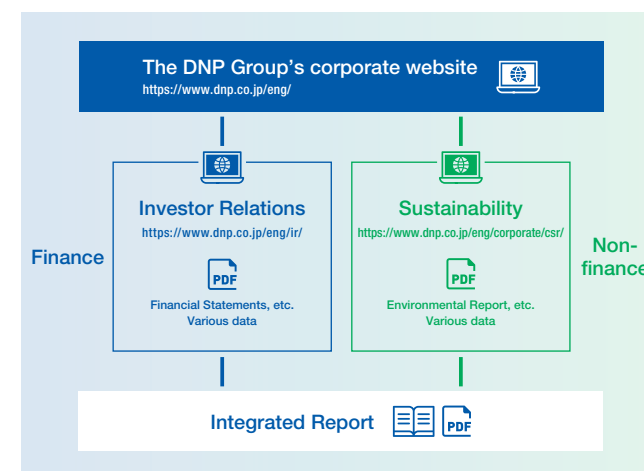
<https://www.dnp.co.jp/eng/corporate/csr/report/>

In this report "DNP" indicates the DNP Group and is differentiated from Dai Nippon Printing Co., Ltd.

### Issued

August 2020 (Next scheduled issue: August 2022)

### DNP Group's Information Disclosure



### About the cover design

DNP is currently conducting the redevelopment of the Ichigaya district of Shinjuku-ku, Tokyo where our head office is located. As part of this effort, we are creating a green belt, "Ichigaya no Mori (Ichigaya Forest)", as a new form of urban "forest." The photo shows Japanese helwingia growing at our forest.

# Corporate Profile (As of March 31, 2021)

**Company Name:** Dai Nippon Printing Co., Ltd.

**Head Office:** 1-1, Ichigaya Kagacho 1-chome,  
Shinjuku-ku, Tokyo 162-8001, Japan  
Tel: +81-3-3266-2111

**Website:** <https://www.dnp.co.jp/eng/>

**Established:** October 1876

**Incorporated:** January 1894

**Paid-in Capital:** ¥114,464 million

**Number of Employees:** 37,062 (Consolidated); 10,328 (Non-consolidated)

**Financial Data:**  
(FY ended March 2021)

Consolidated Net Sales ¥1,335.4 billion (down 4.7% year-on-year)





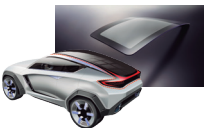


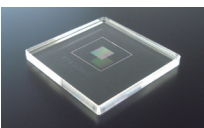


Consolidated Operating Income ¥49.5 billion (down 12.0% year-on-year)

Consolidated Ordinary Income ¥59.9 billion (down 6.1% year-on-year)

Net income attributable to shareholders of the parent ¥25.0 billion

## Business segments:

## Percentage of total sales

Printing	<b>Information Communication</b> Books and magazines, commercial printing, smart cards, network businesses, imaging communication, etc.	53.9 %	 Hybrid bookstore network "honto"	 Smart cards	 Ki-Re-i ID photo kiosk
	<b>Lifestyle and Industrial Supplies</b> Packaging, housing and non-housing interior/exterior materials, industrial high-performance materials, etc.	27.5 %	 Environmentally conscious packaging	 Curved resin glazing	 Exterior materials for buildings
	<b>Electronics</b> Display components, electronic devices, optical films, etc.	14.7 %	 Semiconductor photomask	 Master template for nanoimprinting	 Optical films used for displays
Beverages	<b>Beverages</b> Manufacturing and sales of beverages by Hokkaido Coca-Cola Bottling Co., Ltd., etc.	3.9 %	 Beverages		



## Message from the Chairperson of the Sustainability Committee Going Beyond Society's Expectations

Sustainability Committee Chairman  
Managing Director

**Satoru Inoue**



### Responding to Climate Change and Realizing a Recycling-Oriented Society

The impact of climate change is becoming more serious year by year while the frequent occurrence of storms and flooding has recently had a significant influence on the environment, society, and the economy. In this context, domestic and overseas initiatives to achieve carbon neutrality are being accelerated. Since last year, the COVID-19 pandemic has been affecting the world tremendously. People want a Green recovery from the pandemic, to return to economic prosperity while conserving the ecological system.

DNP has formulated the DNP Group Environmental Vision 2050 to present what DNP ought to be in 2050 to realize a sustainable society. We are accelerating specific activities for the realization of a decarbonized society, a recycling-oriented society, and a society in harmony with nature.

- To establish a decarbonized society, we are trying to reduce greenhouse gas (GHG) emissions from the business activities of our sites by 2050, conserve energy, introduce and update high-efficiency equipment, and use renewable energy. Additionally, we will contribute to the establishment

of a decarbonized society by preparing a strong business portfolio, providing products and services with low environmental impact and high added value and developing low-carbon materials.

- To build a recycling-oriented society, we are promoting the more sustainable use of plastic products and developing and introducing alternative materials such as bioplastics and recycled materials to ensure the efficient use of resources throughout the entire value chain. We are cooperating with our corporate partners, including our participation in the Clean Ocean Material Alliance (CLOMA) established to solve the marine plastic waste issue and develop recycling technology.
- To build a society in harmony with nature, we are focusing on the important themes of the procurement of raw materials in consideration of biodiversity and the conservation of biodiversity in our activities.

Establishing environment-related business as one of the businesses DNP will focus on its Medium-Term Management Plan, DNP is developing products and services with low environmental impact and high added value while effectively using its strengths and diverse partnerships for Printing & Information (P&I).

DNP provides battery pouches for lithium-ion batteries and solar cell component products for which DNP enjoys the largest market share. These packages are partly based on plant-derived materials instead of petroleum-derived materials. In addition, DNP will increase traceability, commence information services for resource recycling and thorough temperature control during transportation, and further reduce environmental impact throughout the value chain.

### Major Activities for FY2020 and Future Initiatives

DNP is reducing environmental impact, with goals established for eight items including the reduction of GHG emissions and resource recycling. Regarding the reduction of GHG emissions, a point we are focused on, we reviewed the FY2030 target approved by SBT in July 2018 as a milestone for the achievement of net-zero GHG emissions in 2050. We increased the reduction percentage in comparison with FY2015 from 25% to 40%. In April 2021, the Science Based Targets (SBT) Initiative approved this target as the one well below two degrees Celsius.

Additionally, we are concentrating on increasing the resource recycling rate, the ratio of material/chemical recycling to waste discharged by factories and proactively developing products and services that help achieve carbon neutrality.

DNP includes “environmental conservation and the realization of a sustainable society” as part of its Code of Conduct, and takes into account the impact of its business activities throughout the supply chain as it works to reduce environmental impact. The environment around businesses is radically changing, and an array of social issues are becoming clear. DNP will continue to create the value that people and society want while considering the harmony of its business activities and the global environment as a requirement for moving forward.

# DNP Group Environmental Policy

DNP has prescribed “environmental conservation and the realization of a sustainable society” as one tenet of our DNP Group Code of Conduct and has formulated the DNP Group Environmental Policy to link this Code to specific activities. We consider relationships with the environment in all our business activities and aim to reduce environmental impact and realize a sustainable society.

**The DNP Group seeks to minimize the impact our businesses have on the environment and supports biodiversity, first by complying with environmental laws and regulations and also by recognizing the relationship that each of our business activities has with the environment. In this way we hope to create a sustainable society in a world with limited resources.**

1. Each member of the DNP Group establishes and periodically reviews its own environmental policies and environmental targets, and puts into effect continuous improvement of its activities and the prevention of environmental pollution.
2. For all construction projects, and before designing and commissioning new facilities, we carry out a full and detailed environmental survey to assess the impact that the project will have on the environment to make proper efforts to protect the environment. We shall also make aggressive efforts to use renewable energy.
3. When carrying out research, development, design, manufacture and sales of a new product, we consider the impact of the product on the environment throughout its lifecycle, including materials procurement, production, distribution, use and disposal, especially in terms of energy conservation, resource conservation and reducing the use of harmful chemicals.
4. When purchasing raw materials, stationery and equipment, we choose items that are ecologically-friendly and easy to recycle.
5. In manufacturing a product, we aim to comply with environmental laws and regulations, and moreover we set up more stringent standards to reduce the emissions of pollutants into the air, watershed and soil, and to prevent unpleasant odors, noise, vibration and land subsidence. We are constantly improving facilities, techniques and manufacturing processes to promote the targets of energy conservation, resource conservation and the reduction of industrial waste.
6. When generating waste from business operations, we strive to achieve zero emissions by separating and recycling waste as much as possible.

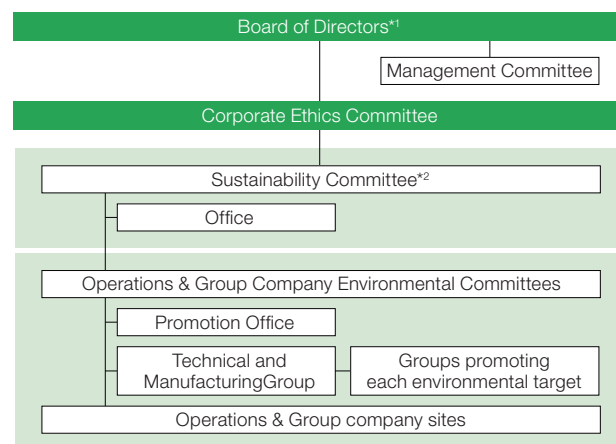
Sustainability Committee (March 21, 2000, revised March 16, 2010)

**The DNP Group is a signatory of the United Nations Global Compact and a “promotion partner” of the Nippon Keidanren’s 2009 Declaration on Biodiversity.**

## Efforts Related to Climate Change

### • Governance Structure → Related pages: 9–10

The Corporate Ethics Committee and the Sustainability Committee coordinate DNP's responses to climate change under the control and supervision of the Board of Directors. The Corporate Ethics Committee is responsible for internal control while the Sustainability Committee is focused on sustainability.



#### Roles of each organization

\*1 Deliberate and decide on important matters related to our response to climate change

\*2 Assess climate change-related risks and opportunities, deliberate and decide on basic policies, targets and plans and oversee the progress

### • Risk Management

The Sustainability Committee identifies, assesses, and manages risks related to climate change in light of business plans from viewpoints of stakeholders' interests, degree of impact, and possibility of influence at least once a year. The Board of Directors reviews the risks and opportunities that are regarded as particularly important as a result of the discussions and assessment of the the Sustainability Committee. The review meeting prioritizes activities and sets targets, and the results of reviews are reflected in management.

### • Strategy

Risks and opportunities related to climate change are divided into two categories: risks associated with transition such as tighter regulations for the creation of a decarbonized society, demand for low carbon technology, and more requests from markets; and risks associated with the physical impact of the rise of the global temperature. DNP has used scenario analysis to assess the financial impact and the period of impact of risks to identify the risks presented by climate change and consider strategies to address long-term risks before the promotion of businesses.

#### Scenarios referenced

- Net-zero emissions by 2050, the sustainable development scenario by International Energy Agency (IEA)'s World Energy Outlook (WEO)
- Representative Concentration Pathway scenario (RCP8.5) in the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)

After analyzing scenarios, we predict that operational costs will rise because it is very likely that regulations on GHG emissions will be tightened and a carbon-emission tax will be introduced for the creation of a decarbonized society. Therefore, we are reinforcing the management base by visualizing environmental impact and modifying the business portfolio in consideration of environmental impact and added value. To achieve net-zero GHG emissions from our business activities at our sites by 2050, we are increasing energy conservation and increasing the use of renewable energy while setting targets to be achieved by 2030. We also expect that the expansion of demand and the market for low-carbon products and services will accelerate, and businesses will need to accelerate their development of technology and increase their M&A activities. To respond to these changes, DNP combines the strengths of Printing & Information (P&I) and closely cooperates with outside partners to create value.

Establishing "Environment and Energy" as one of the growth areas in our Medium-Term Management Plan, we focus on the environment and mobility businesses from the perspectives of profitability and market growth potential. We project that our businesses will grow in fields such as as renewable energy, low-carbon products including battery pouches for lithium-ion batteries, and security solutions for the sharing economy. We are also using more green packaging, whose materials that are both environmentally considerate and convenient. Further, we are constructing a recycling scheme based on cooperation throughout the supply chain and developing new recycling technologies. We are promoting the use of management resources and strategic investment for the creation of value in the businesses that are our focus.

Regarding the impact of short-term physical risks, we are arranging the management system to ensure business continuity and enhance our responses to the disasters caused by climate change and managing the supply chain.

\*For details of analysis using the TCFD framework:  
DNP Group Integrated Report 2020 (pages 46–49)

## Efforts Related to Climate Change

# Main Risks, Initiatives and Opportunities in Response to Risks Associated with Climate Change

### 1) Scenario where migration to a decarbonized society advances (scenario where rise in average temperature is limited to less than 2°C or 1.5°C)

	Migration scenario	Affected period	Risks to DNP	DNP's initiatives and opportunities
Policies, laws and regulations	Regulations related to carbon pricing	Medium to long term	<ul style="list-style-type: none"> <li>Enforcement of a carbon tax or an emissions trading system</li> <li>Increase in operational costs due to the introduction of renewable energy, etc.</li> <li>Increased investment in energy-saving facilities</li> </ul>	<ul style="list-style-type: none"> <li>Transformation of business portfolio (selection and concentration of businesses)</li> <li>Upgrade to highly efficient equipment and optimization of production bases</li> <li>Promotion of product and service designs that consider the life cycle assessment</li> <li>Promotion of the use of decarbonized and low-carbon energy</li> </ul>
	Regulations on plastics	Medium term	<ul style="list-style-type: none"> <li>Tax on products that use fossil-based materials</li> <li>Rise in costs to switch to alternative materials</li> </ul>	<ul style="list-style-type: none"> <li>Expansion of sales of DNP plant-based packaging materials</li> <li>Development and expansion of sales of highly recyclable products (shift to single materials, paper, etc.)</li> <li>Creation of recycling schemes</li> </ul>
	Introduction of water intake restrictions	Medium term	<ul style="list-style-type: none"> <li>Shutdown of operations at manufacturing bases</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in loss through visualization and review of process, as well as reduction in amount used and recycling</li> <li>Implementing a water risk survey for all bases, including those abroad</li> </ul>
Market	Changes in market values and consumer behavior	Medium to long term	<ul style="list-style-type: none"> <li>Reduction in products and services that are not low-carbon or environmentally conscious</li> </ul>	<ul style="list-style-type: none"> <li>Development and market expansion of products aimed at realizing a decarbonized society (battery pouches for lithium-ion batteries, DNP eco-friendly packaging, etc.)</li> <li>Development of products aimed at promoting the switch to recyclable resources (paper, etc.)</li> <li>Active use of certified materials (FSC®-certified paper, etc.)</li> </ul>
	Rise in energy costs	Medium term	<ul style="list-style-type: none"> <li>Increase in operating costs</li> <li>Decrease in competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of energy saving activities, such as saving power and using higher efficiency equipment</li> </ul>
	Rise in costs of raw materials	Medium term	<ul style="list-style-type: none"> <li>Increase in procurement costs for printing paper</li> <li>Increase in procurement costs for fossil-based materials</li> </ul>	<ul style="list-style-type: none"> <li>Promotion of zero emissions (reduction in materials used, effective use of resources through improvements in product specifications and the manufacturing process)</li> </ul>
Evaluation	Evaluation of working on climate change issues	Medium term	<ul style="list-style-type: none"> <li>Effects if initiatives are deemed to be insufficient (worsening of corporate image, decline in stock price, reduction in capital due to being excluded from investments, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Expanded disclosure of information and engagement</li> <li>Monitoring of market trends</li> <li>Initiatives toward reducing GHG emissions to achieve long-term environmental vision</li> </ul>

### 2) Scenario where the physical effects of climate change become tangible (scenario where average temperature rises 4°C)

	Physical scenario	Affected period	Risks to DNP	DNP's initiatives and opportunities
Urgency	Increase in wind and flood damage from heavy rainfall, flooding, typhoons, etc.	Short term	<ul style="list-style-type: none"> <li>Shutdown of operations or disruption of supply chain due to natural disasters</li> </ul>	<ul style="list-style-type: none"> <li>Natural disaster risk measures at production bases</li> <li>Enhancement of production backup systems with multiple production bases</li> <li>Diversification of suppliers</li> <li>Enhancement of compensation and support systems for employees</li> </ul>
Chronic	Rise in temperature	Medium term	<ul style="list-style-type: none"> <li>Hindrance to operations through increased occurrence of heat stroke</li> <li>Increase in air conditioning costs</li> </ul>	<ul style="list-style-type: none"> <li>Visualization and reminders about the risks of heat stroke in production bases</li> <li>Energy saving measures through the introduction of highly efficient equipment</li> </ul>
	Changes in water demand and supply	Medium term	<ul style="list-style-type: none"> <li>Increase in the cost of water usage and materials</li> </ul>	<ul style="list-style-type: none"> <li>Reduction in loss through visualization and review of process, as well as reduction in amount of water used and recycling</li> </ul>
	Water-related risks in coastal areas	Medium term	<ul style="list-style-type: none"> <li>Shutdown of operations at coastal bases</li> </ul>	<ul style="list-style-type: none"> <li>Implementing a water risk survey for all bases, including those abroad</li> <li>Flooding measures in locations with high flood risk</li> </ul>

#### • Targets and Indicators → See related pages: 7, 16, 18, 21-23

DNP has defined the following targets for maximizing opportunities and minimizing risks resulting from climate change.

<b>Maximizing opportunities: Value creation</b>	Under the Medium-Term Management Plan, we will work to expand our focus businesses and contribute to the creation of a decarbonized society through our products and services.
<b>Minimizing risks: Foundation of business activities</b>	<p>We will reduce GHG emissions from business activities at our own sites.</p> <p>Medium-term reduction target: To achieve a reduction of 25% from FY2015 levels by 2030</p> <p>Long-term environmental vision: To achieve effective net-zero emissions by 2050</p>

Efforts Related to Climate Change

# Formulation of a Long-Term Environmental Vision and Medium- and Long-Term Targets

DNP aims to realize a decarbonized, recycling-oriented society in harmony with nature by 2050. (The DNP Group Environmental Vision 2050)

To realize the vision, we used backcasting to set the 2025 Targets below.

Since the 2030 GHG reduction target (SBT approval) expected to be achieved as early as during FY2020, we set the bar higher so that it could be a milestone on the path toward the realization of zero emissions in 2050. The SBT renewed its approval of the revised target in April 2021, recognizing it as well below the 2°C scenario (WB 2°C).

The previous GHG reduction target: **25% reduction from FY2015 by 2030 (SBT)**

The new GHG reduction target: **40% reduction from FY2015 by 2030 (SBT)**

Action

Milestone

Our aspiration

Backcasting

Item	2025 Target	2030 Target	2050
Reduction of GHG emissions <ul style="list-style-type: none"> <li>Shift to high-efficiency equipment</li> <li>Expansion of the renewable energy business</li> </ul>		Reduce GHG emissions by 40% compared to FY2015 level.	Decarbonized society
Reduction of environmental impact incurred during transport <ul style="list-style-type: none"> <li>Introduction of low-carbon-emission vehicles</li> <li>Expansion of mixed loading and the modal shift</li> </ul>	Reduce fuel use for transport per amount of sales by 15% compared to FY2015 level.		
Increase of sales of environmentally conscious products and services <ul style="list-style-type: none"> <li>Accelerate the development of products that contribute to the environment.</li> <li>Promotion of the development of easy-to-recycle products</li> </ul>	Increase the percentage of super-eco products sales to 10 %.		Recycling-oriented society
Resource recycling <ul style="list-style-type: none"> <li>Minimization of undesired materials</li> <li>Promotion of recycling</li> <li>Minimization of the landfill waste rate</li> </ul>	Improve the resource recycling rate by 5% compared to FY2015 level.*1 Maintain zero emissions.		
Reduction of water usage <ul style="list-style-type: none"> <li>Efficient water use</li> </ul>	Reduce water use per amount of sales by 35% compared to FY2015 level.		Society in symbiosis with nature
Reduction of VOC emissions <ul style="list-style-type: none"> <li>Maintenance and management of odor reduction equipment</li> </ul>	Maintain the FY2015 level.		
Environmental conservation*2 <ul style="list-style-type: none"> <li>Thorough adherence to baselines through trend management</li> </ul>	Maintain the level at 70% of the required standard or less.		

**DNP Group Environment Vision 2050**  
DNP targets the realization of a decarbonized society, a recycling-oriented society and a society in harmony with nature by creating new value through Printing and Information (P&I) innovation designed to achieve the emergence of a sustainable society.  
**[A Decarbonized Society through Climate Change Mitigation and Adaptation]**

- We aim to achieve effective net-zero greenhouse gas (GHG) emissions from business activities at our own sites.
- We will contribute to create a decarbonized society through our products and services.

**[A Recycling-Oriented Society through the Efficient use of Resources]**

- We will provide maximum value through the efficient use and recycling of resources throughout the value chain.

**[A Society in Harmony with Nature via the Conservation of Biodiversity]**

- We aim to minimize the impact on biodiversity throughout the entire value chain and achieve harmony with regional ecosystems.

\*1 Resource recycling rate: The ratio of material/chemical recycling to waste (waste + valuable waste) excluding paper valuable waste, which is 100%-recycled.  
Resource recycling rate: Recycling into solid fuels and cement fuels as well as thermal recycling, etc. are treated as thermal recovery and excluded from recycling.

\*2 Environmental conservation items: Air emissions subject to emissions regulations, water emissions subject to wastewater, as well as the maximum concentration of odors, maximum level of noise, and maximum level of vibration at our site perimeters.

### GHG Emissions Reduction Target of the DNP Group Recognized by the Science Based Targets (SBT) Initiative

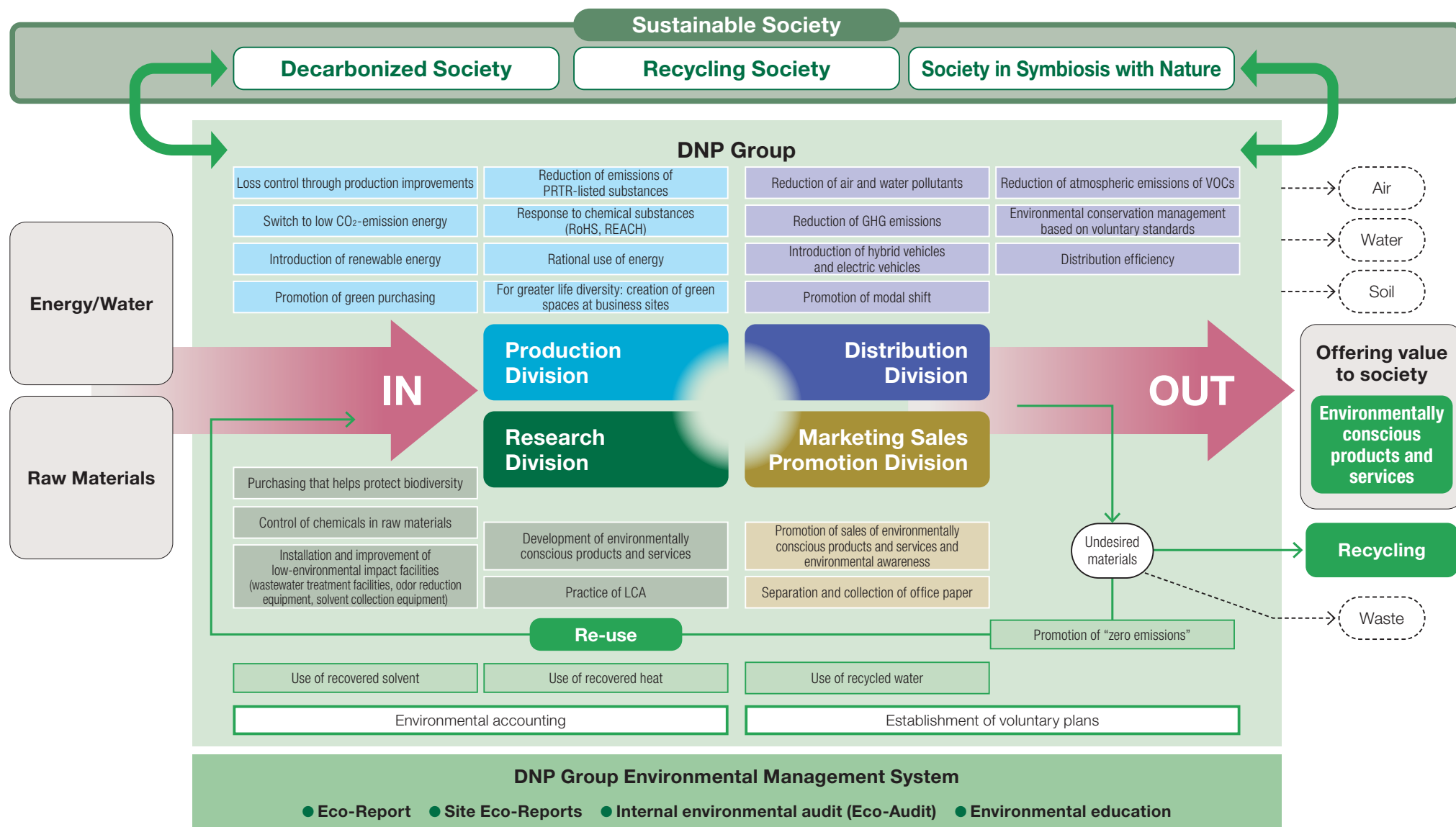
DNP obtained the approval of the international organization Science Based Targets (SBT) Initiative in July 2018. In April 2021, the revised GHG emissions target was approved to get into alignment with well below the 2°C scenario (WB2°C) of the Paris Agreement. DNP will continue to reduce GHG emissions through the conservation of energy, including the introduction of energy-saving equipment.





## Environment Management Structure

## Business and Environmental Activities



## Environmental Management Structure

## Environmental Management Structure

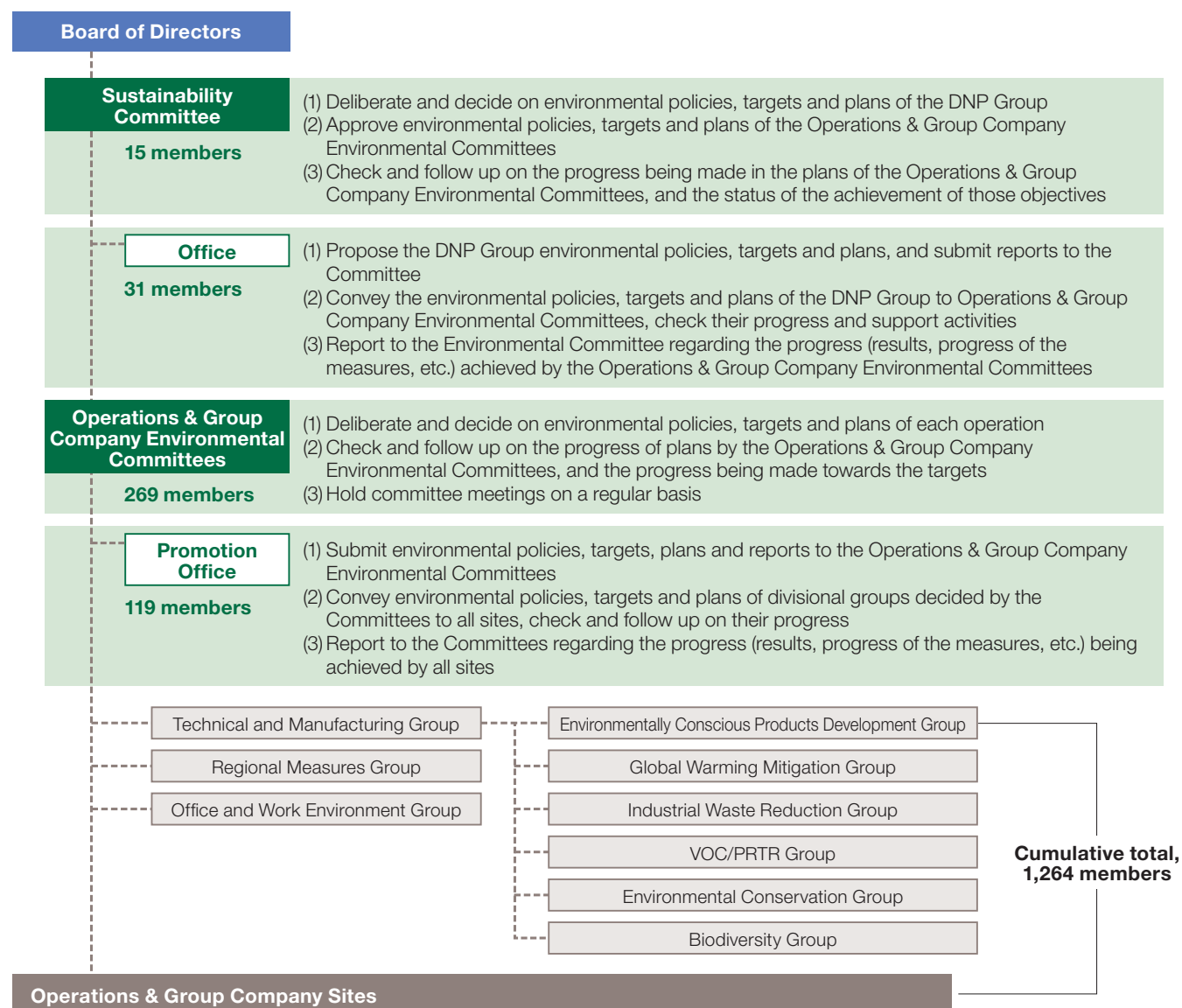
The DNP Group has established the Sustainability Committee to coordinate Group-wide environmental activities and the Operations & Group Company Environmental Committees as a body to promote activities within each business segment. Each committee has its own office or promotion office.

### • Sustainability Committee

This is made up of the directors of the basic organizations at company headquarters, who are responsible for the environment. The Committee deliberates and makes decisions concerning the environmental policies, objectives and plans of the entire Group, and monitors the progress of the plans and the status of the achievement of those objectives.

### • Operations & Group Company Environmental Committees

We carry out such activities based on decisions made by the Sustainability Committee and the characteristics of different business areas, including activities at our locations outside of Japan.



## Environmental Management Structure

# Environmental Management System

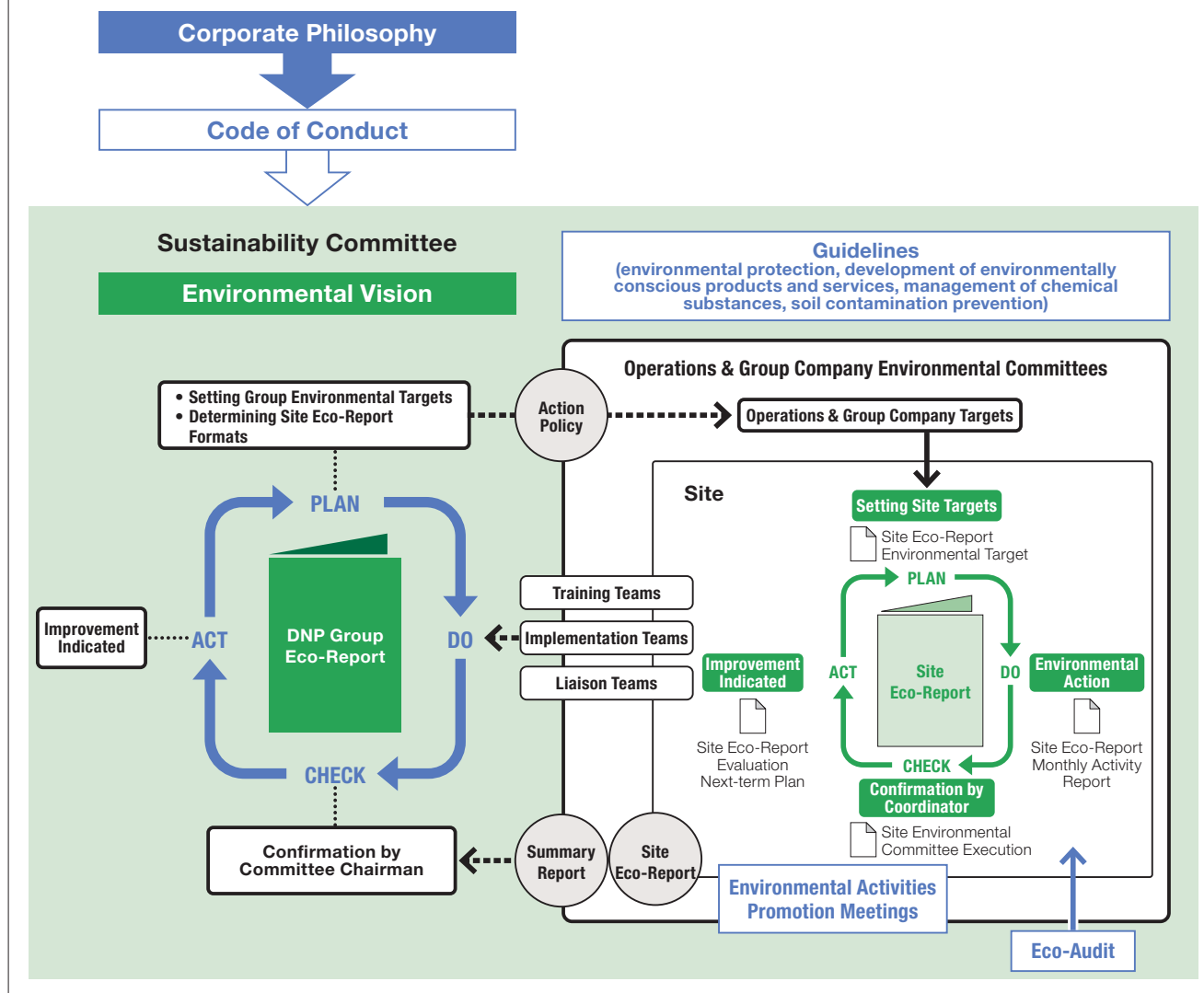
The DNP Group created its own environmental management system (EMS) in 1993, prior to the publication of ISO 14001. Our EMS uses the twin tools of Eco-Reports and Site Eco-Reports set up by the Sustainability Committee Office as a framework. We also execute the “Plan-Do-Check-Act” cycle every six months.

The Eco-Reports cover trends in environmental issues and changes in applicable laws, our courses of action and how well the DNP Group overall has achieved its targets. The Eco-Reports are distributed to the Operations & Group Company Environmental Committees and to every business site. The Site Eco-Reports document each site’s targets, plans and status of activities. The Operations & Group Company Environmental Committees use the Site Eco-Reports to gain an understanding of the situation at each site and submit a summary report to the Sustainability Committee.

The Sustainability Committee and the Operations & Group Company Environmental Committees carry out continuous improvement activities through training teams, implementation teams, liaison teams, etc. Progress is checked through periodic environmental activities promotion meetings.

The committees are also reinforcing management by instantly sharing important information via IT.

### Outline of the DNP Group Environmental Management System



## Environmental Management Structure

# Eco-Audit Content and Flow

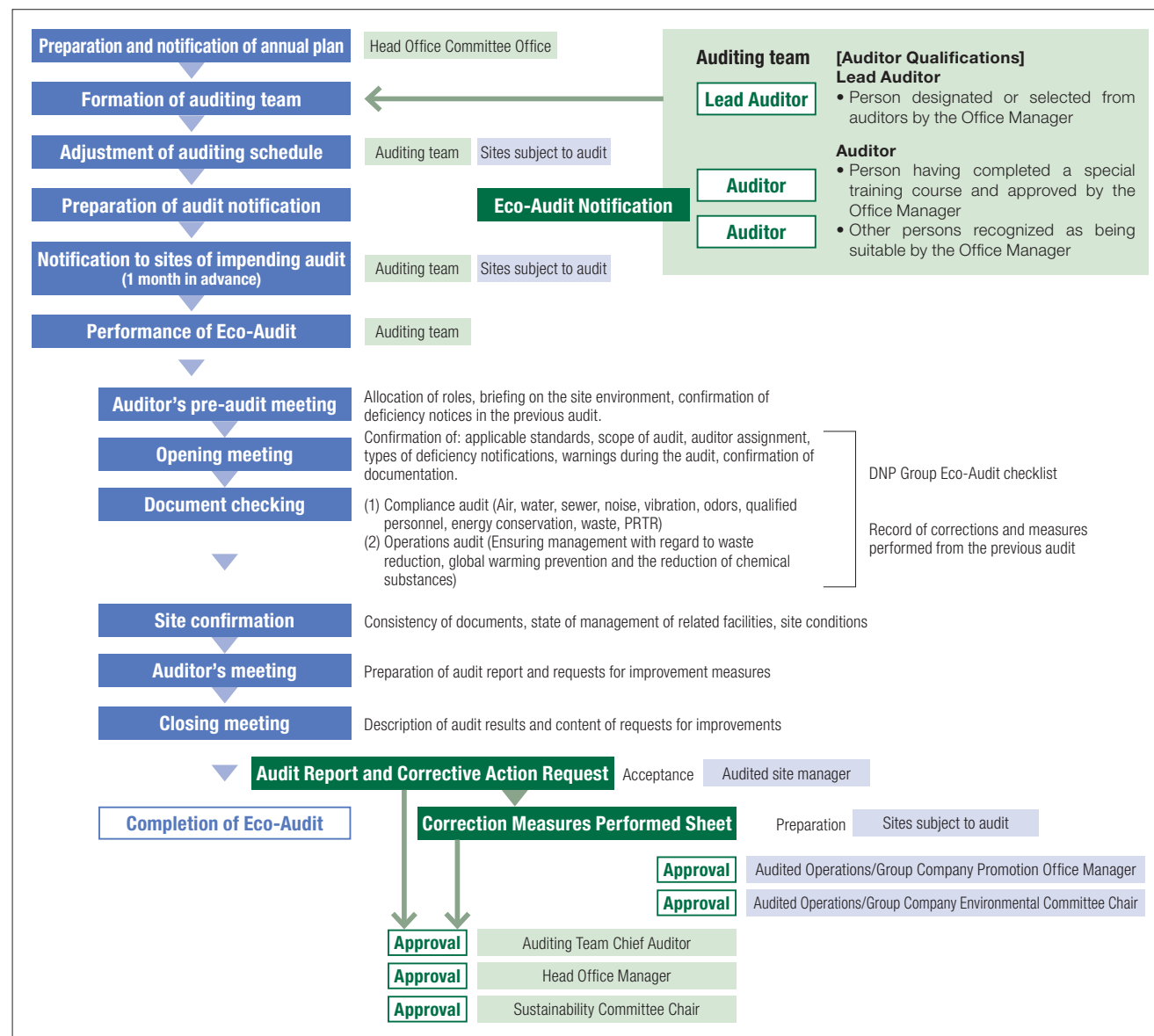
We began implementing “Eco-Audits” in 1996, so as to make our Environmental Management System (EMS) more effective.

Eco-Audits have the following features.

- (1) Auditors are DNP employees with no conflict of interest with the sites being audited and who possess specialized knowledge about products and processes, which produces meaningful and objective results maintaining an independent perspective.
- (2) In the Eco-Audit we place importance on on-site confirmation of actual items. In addition, we point out factors for which danger is projected and request preventive action when needed.
- (3) In addition to confirmation of compliance, we confirm the status of continuous improvements and corrections being made towards the achievement of the environmental targets. When necessary, we require audited sites to review plans.

Under this system, when an audit reveals that corrective measures are needed at a site, a “Corrective Action Request” is issued in writing and such actions as necessary are managed by the Sustainability Committee.

\*We will endeavor to prevent the spread of COVID-19, examining the optimal work flow, including remote working, and conduct eco-audits as necessary.





## Environmental Management Structure

## Eco-Audit Performance

<b>Number of sites audited</b>	<b>63 sites</b>
<b>Number of attendees at sites</b>	<b>473 persons</b>
<b>Cumulative auditor numbers</b>	<b>116 persons</b>
<b>Cumulative auditing hours</b>	<b>147 hours</b>

### • Notification Level and Improvements Required

<b>Improvement required</b>	➡	<b>Submission of a written description of correction measures performed or improvement plans</b>
<b>Improvement consideration &amp; examination</b>	➡	<b>Submission as necessary of a written description of results of consideration/examination or improvement plans</b>

Indications of “improvement required” included items such as insufficient reporting by qualified personnel and at specific sites, but we confirmed that the necessary improvement measures were being taken in each case.

The areas indicated as requiring improvement are analyzed and follow-up Eco-Audits will be carried out in FY2021.

## Eco-Audit Content

### Compliance Audit

#### (1) Document Audit

- Site location
- Type and number of legally designated facilities
- Types of waste
- Energy consumption
- Exhaust and wastewater channels
- Changes in facilities, production processes since the last audit
- Applicable laws and their range
- State of improvement of notifications of deficiencies in previous audit
- State of submission of and changes to legal notifications and reports
- Frequency of measurement, validity and traceability of measured data
- Changes in management personnel due to internal transfers

#### (2) On-Site Inspections

- Site location and relationship with surrounding sites
- Conformity to statutory facility document audit (type, number, scale, etc.)
- State of management of individual facilities and equipment, existence of abnormalities
- Emergency containment in case of abnormality or emergency
- Site picture taking
- Appropriateness of actual work performed

### Operations Audit

#### PLAN

##### Validity of policy, targets and action plans

- Consistency with DNP Group policies and targets
- Consistency with action plans and targets
- Implementation system and schedule
- Awareness level of employees

#### DO

##### Confirm status of plan implementation and target achievement

- Implementation status of plan
- Achievement of targets

#### CHECK

##### Status of progress management of plan

- Holding of environment-related meetings
- Content of environment-related meetings

#### ACT

##### Status of reviews by term

- Review of previous term results and reflection in plan

## Environmental Management Structure

# Environmental Risk Management

The DNP Group publishes regular Eco-Reports, which cover trends in environmental regulations and also conducts Eco-Audits to ensure full compliance with all laws and regulations. Our compliance efforts also include the establishment of and strict adherence to our own voluntary standards (air, water, noise, vibration, odor) and voluntary guidelines (chemical substance management, soil contamination measures), which are even stricter than what is legally required.

The DNP Group handles many chemicals in its production processes. We have drawn up a Chemical Substance Management Guide for chemical substance handling, and have set up levees and emergency shutoff systems to prevent liquids from overflowing and installed two-tier holding tanks for the prevention of accidents at plants handling chemicals. We also stock up on materials that can be used during emergencies, such as oil absorbing sheets, and hold emergency response drills to ensure the proper response in the event of an occurrence.

### • Soil and Groundwater Contamination

The DNP Group conducts soil inspections based upon our voluntary management guidelines. When soil contamination is discovered, we file a report with the office of the governor or mayor in charge of that prefecture or city, and upon receiving instructions from the local authorities, we implement appropriate measures for removing the contamination.

In addition to continuing the purification of pump water at one site in FY2020, we also inspected tanks, waste storage sites and areas for storing equipment that handles waste PCBs to prevent soil contamination.

### • PCB Storage

PCBs are currently in storage at 7 sites, with 14 condensers and 15 transformers for a total of 29 units. The PCBs are contained in electrical equipment formerly used in substation facilities at our plants. Fluorescent lighting ballasts and other equipment containing PCBs have also been placed in storage. Storage consists of special containers in designated storage rooms at each site, managed under the strictest conditions in accordance with applicable regulations to ensure there is no leakage or loss. The PCBs in storage will gradually be disposed of as required by law according to the disposal plans for each region.

### • Management of Chemical Substances in Products and Raw Materials

Companies like DNP are being called on to properly ascertain and control the chemical substances contained in raw materials and products in use throughout the supply chain.

DNP has put into operation a management system in accordance with standards issued by JIS and the JAMP Guidelines for the Management of Chemical Substances in Products.

#### JAMP (Joint Article Management Promotion-consortium)

This organization promotes cross-industry action aimed at creating and spreading the use of a framework for properly managing information on chemicals contained in products and for easily disclosing and transmitting that information through supply chains.

### • Status of Legal Compliance

We have not received administrative guidance because of the exceeding the standards etc. during these three years. There are no ongoing legal disputes involving environmental issues. We have unfortunately had some complaints from areas neighboring our plants concerning noise and odors. Whenever we receive such complaints, we respond promptly by launching a thorough investigation into the cause of the problem and by working to make improvements and prevent recurrence.

## Environmental Management Structure

# Certification Acquisition Status

The DNP Group has established an independent environmental management system and is pursuing the acquisition of ISO 14001 certification at specific sites, depending on the type of work performed at those sites. (DNP organization names are as of June 30, 2021)

### ISO 14001 Certification

Site	Date Registered*1	Registration Organization
Okayama Plant, Imaging Communications Operations	Nov. 1997	JIA-QA
Mihara East Plant, Fine Optronics Operations	Jul. 1998	DNV
Okayama Plant, Living Space Operations	Jul. 2000	JIA-QA
D.T. Fine Electronics*2	Feb. 1996	JACO
Sayama Plant No. 1, DNP Technopack	Dec. 2001	SGS
Tokyo Plant, DNP Fine Chemicals	Jan. 2002	JCQA
Ushiku Plant, DNP Data Techno	Mar. 2002	JIA-QA
Tokai Plant, DNP Technopack	Mar. 2002	SGS
Chikugo Plant, DNP Technopack	Jun. 2002	SGS
Sayama Plant, Imaging Communications Operations	Oct. 2002	JIA-QA
Tokyo Plant, Living Space Operations	Jan. 2004	JIA-QA
Kamifukuoka Plant, Fine Optronics Operations	Mar. 2004	AJA
Itabashi Area, Sales Division 1, DNP Logistics	Oct. 2004	AJA
Tokyo Plant, DNP Ellio	Jan. 2005	LRQA
Osaka Plant, DNP Ellio	Jan. 2005	LRQA
Warabi Plant, DNP Data Techno	Mar. 2005	JIA-QA
Nara Plant, DNP Data Techno	Jun. 2005	JIA-QA
Kashiwa Plant (incl. Utsunomiya Site), DNP Technopack	Mar. 2006	JACO
Neyagawa Plant (incl. Tanabe Site), DNP Technopack	Mar. 2006	JACO
DNP Photomask Europe S.p.A.	Apr. 2006	CISQ

Site	Date Registered*1	Registration Organization
DNP Fine Chemicals Utsunomiya	Mar. 1997	JCQA
Izumizaki Plant, DNP Technopack	Aug. 2008	SGS
Kasaoka Plant, DNP Fine Chemicals	Jan. 2009	JCQA
DNP Imagingcomm Europe B.V.	Mar. 2009	LRQA
Mihara West Plant, Fine Optronics Operations	May 2009	DNV
Okayama Plant, Fine Optronics Operations	May 2009	DNV
PT DNP Indonesia (Pulogadung/Karawang)	Aug. 2009	AJA
Hokkaido Coca-Cola Bottling	Feb. 2010	JACO
DNP Imagingcomm America Corporation	Jun. 2013	NSF ISR
Kyoto-Minami Plant, DNP Data Techno	Dec. 2013	JIA-QA
Hagiwara Plant, DNP Tamura Plastic	Aug. 2000	JAER
Iwata Plant, DNP Tamura Plastic	Aug. 2000	JAER
DNP VIETNAM	Apr. 2015	Intertek

### Eco Action 21 Certification

Site	Date Registered*1	Registration Organization
Tokyo Head Office, DNP Trading	Jan. 2006	IGES

#### Registration Organization

##### AJA

Anglo Japanese American Registrars Ltd.

##### CISQ

Federazione Certificazione Italiana dei Sistemi Qualità Aziendali (Italy)

##### DNV

Det Norske Veritas AS (Norway)

##### IGES

The Institute for Global Environmental Strategies

##### Intertek

Intertek Certification Ltd.

##### JACO

Japan Audit and Certification Organization for Environment and Quality

##### JAER

Japan Automobile Research Institute

##### JCQA

Japan Chemical Quality Assurance Ltd.

##### JIA-QA

Japan Gas Appliances Inspection Association, QA Center

##### LRQA

Lloyd's Register Quality Assurance Ltd.

##### NSF-ISR

NSF International Strategic Registrations

##### SGS

SGS Japan

\*1 Indicates the first registration date.

\*2 Kitakami Plant of D.T. Fine Electronics are registered as a part of Toshiba Electronic Devices & Storage Corporation.

## Environmental Management Structure

## Environmental Education

The DNP Group conducts environmental education programs according to level, working group and function concerning the DNP Group's environmental conservation efforts, environmental knowledge, environmental laws and domestic and overseas trends concerning environmental issues. Our goal is for employees to gain the knowledge and management know-how necessary to improving employee environmental conservation consciousness and achieving our environmental goals.

- **Awards System Instituted**

In FY2012 we introduced an internal awards system. The awards are presented once a year and are reserved for plants that have made a special contribution through their environmental activities. Such contributions include notable improvements in environmental performance, biodiversity protection activities and renewable energy utilization. Winners are selected not only for specific accomplishments, but also in light of their results in internal environmental audits by meeting voluntary standards for environmental conservation (additional to legal requirements for air and water quality).

Type of Training	Course Name/Description	First Held	Eligibility		Time of Year
<b>Education for New Recruits</b>	<b>Environmental Activity Overall (required)</b> Basic environmental knowledge and conservation efforts of the DNP Group	1994	All new recruits	Total Attendance 9,188 persons	When joining the company
<b>Technical Seminar</b>	<b>Environment/Chemicals (optional)</b> <b>Environmental Laws and Regulations</b> <b>Waste Treatment</b>	1999	Technicians	Total Attendance 1,613 persons	Once yearly
<b>Eco-Report Training</b>	<b>Environmental Issues of the Group (required)</b> Domestic and international trends in environmental issues, revisions in environmental laws, degree of achievement of environmental targets, new targets, issues concerning specific sites	1993	Environmental Committee Promotion Office members and site members		Twice yearly on issue of Eco-Report
<b>In-company seminars</b>	<b>Information of global risks and SDGs, etc.</b>	2015	All DNP Group members		As needed



## Environmental Management Activities

# Environmental Activity Targets and Results

DNP has prescribed targets with the following categories as priority issues and is undertaking activities in these areas.

**Evaluation criteria** Target exceeded by a wide margin Target achieved or making steady progress toward target Making active efforts but target not achieved Efforts insufficient

Topic	Reference page	Targets by FY2020 <small>*GHG emissions reduction target set for mid-and long-term basis</small>	FY2020 results		Evaluation	Targets by FY2025 (GHG emissions reduction target set for FY2030)
Reduction of GHG emissions	P 21	<ul style="list-style-type: none"> <li>To reduce GHG emissions by 25% from the FY2015 levels by FY2030 (SBT)</li> <li>Aiming to achieve effective net-zero greenhouse gas (GHG) emissions by 2050</li> </ul>	Emissions in FY2015: 1.201 million tons	30.3% decrease from that in FY2015		<ul style="list-style-type: none"> <li>To reduce GHG emissions by 40% from the FY2015 levels by FY2030 (SBT)*</li> <li>Aiming to achieve net-zero GHG emissions by 2050</li> </ul>
Reduction of environmental impact incurred during transport	P 22	To reduce fuel use for transport per amount of sales by 1% per annum and 10% compared to FY2010	Per unit in FY2010: 16.1 kl/billion yen Per unit in FY2020: 12.2 kl/billion yen	24.2% decrease from that in FY2010		To reduce fuel use for transport per amount of sales by 1% per annum and 15% compared to FY2015
Reduction of VOC emissions	P 27	To reduce emissions of VOCs (except for methane) by 35% compared to FY2010  Overseas, based on local laws and regulations, we plan to reduce atmospheric emissions of VOCs to the greatest extent possible through the introduction of technologies and other measures	Emissions in FY2010: 6,729 tons Emissions in FY2020: 3,474 tons	48.4% decrease from that in FY2010		To maintain the FY2015 level of emissions of VOCs (except for methane)
Reduction of industrial waste	P 24	To reduce waste emissions per amount of sales by 20% compared to FY2010. (Includes overseas locations)  To maintain zero emissions for the entire DNP Group	Per unit in FY2010: 42.4 tons/billion yen Per unit in FY2020: 38.5 tons/billion yen  Landfill waste rate in FY2015: 0.06% Landfill waste rate in FY2020: 0.07%	9.2% decrease from that in FY2010  Maintained zero emissions	  	Improve the resource recycling rate* by 5% compared to FY2015 level.  To maintain zero emissions for the entire DNP Group
Reduction of water usage	P 25	To reduce water use per amount of sales by 25% compared to FY2010 (Includes overseas locations)	Per unit in FY2010: 10.8 m³/million yen Per unit in FY2020: 6.17 m³/million yen	42.6% decrease from that in FY2010		To reduce water use per amount of sales by 35% compared to FY2015
Development and sales of environmentally conscious products and services	P 19	Development and sales of environmentally conscious products and services to totaling 600 billion yen	Sales of 570.8 billion yen in FY2015 Sales of 578.1 billion yen in FY2020	1.3% increase from that in FY2015		Increase the percentage of super-eco products sales to 10%
Environmental conservation	P 13	To keep the maximum concentration of air emissions subject to emissions regulations at 70% of the required standard or less To keep the maximum concentration of water emissions subject to wastewater regulations at 70% of the required standard or less To keep the maximum concentration of odors at our site perimeters at 70% of the required standard or less To keep the maximum level of noise at our site perimeters at 70% of the required standard or less To keep the maximum level of vibration at our site perimeters at 70% of the required standard or less	97% achievement rate of targets for FY2020 (voluntary target) 99% achievement rate of targets for FY2020 (voluntary target) 98% achievement rate of targets for FY2020 (voluntary target) 100% achievement rate of targets for FY2020 (voluntary target) 100% achievement rate of targets for FY2020 (voluntary target)		    	To keep the maximum concentration at 70% of the required standard To keep the maximum concentration at 70% of the required standard To keep the maximum concentration of odors at 70% of the required standard To keep the maximum level of noise at 70% of the required standard To keep the maximum level of vibration at 70% of the required standard
Office environment	P 24	To increase the rate of the fractional recovery of waste paper to 70% of that for general waste	83.8% recovery of waste paper in FY2020			To increase the rate of the fractional recovery of waste paper to 70% of that for general waste

\*Refer to Formulation of a Long-Term Environmental Vision and Medium- and Long-Term Targets on Page 7.

## Environmental Management Activities

# Current Status of Environmental Impact

### Main raw materials (Unit: 1,000 tons)

	2019	2020	
Paper	898.9	751.6	(16.4% decrease)
Film	158.9	173.9	(9.4% increase)
Plastic	126.7	121.8	(3.9% decrease)
Metal	49.1	52.5	(6.9% increase)
Ink	102.9	100.4	(2.4% decrease)
Others	78.2	79.7	(1.9% increase)

### Main secondary materials (Unit: 1,000 tons)★

	2019	2020	
Solvent	26.3	26.7	(1.5% increase)
Acid and alkaline	7.6	7.6	(—)

### Utilities (Energy consumption)

	2019	2020	
Electricity (million kWh)	1,300	1,230	(5.4% decrease)
City gas (million Nm <sup>3</sup> )	64.9	61.9	(4.6% decrease)
LNG (million kg)	18.3	16.7	(9.0% decrease)
LPG (million kg)	5.9	5.7	(3.6% decrease)
Fuel oil (kl)	548	691	(26.1% increase)
Steam (TJ)	32	30	(6.3% decrease)
Kerosene (kl)	1,210	1,320	(9.1% increase)
Water (million m <sup>3</sup> )	8.5	8.2	(3.0% decrease)

### Product Manufacturing Process

#### Information Communication

Books and magazines, commercial printing, business forms, etc.

#### Lifestyle and Industrial Supplies

Packaging, decorative materials, industrial supplies, etc.

#### Electronics

Displays, electronic devices, etc.

#### Other

Ink, beverages, etc.

### Current Status of Recycling in the DNP Group★

	2019	2020
Recycled solvent (1,000 tons)	5.9	4.2
Usage ratio <sup>*1</sup>	1.2	1.1
Recycled acid and alkaline (1,000 tons)	7.8	9.4
Usage ratio	2.0	2.2
Recycled water (million m <sup>3</sup> )	249.88	231.63
Usage ratio	32.5	31.1
Vapor generated from waste heat recovery (tons)	128,000	128,000

<sup>\*1</sup> **Usage Ratio:** This is a calculation of (input+recovery and recycling)/input. It does not include vapor or solvent in ink.

<sup>\*2</sup> **GHG:** Greenhouse Gases  
Emissions from the use of electricity were recalculated to include past years using the coefficients for the fiscal years prior to the tabulated fiscal years. (Details are listed on page 21.)

<sup>\*3</sup> Water discharge channels to which the Water Pollution Control Act applies

★ Scope limited to within Japan only

### Emissions into the air

	2019	2020	
GHG <sup>*2</sup> emissions (1,000 tons-CO <sub>2</sub> )	916	837	(8.6% decrease)
NOx emissions (tons)★	506	479	(5.4% decrease)
SOx emissions (tons)★	6.5	5.9	(9.2% decrease)
Atmospheric emissions of VOCs (tons)	14,326	14,415	(0.6% increase)

### Emissions into bodies of water

	2019	2020	
Water discharged (million m <sup>3</sup> )	6.6	6.3	(4.7% decrease)
COD emissions (tons)★	26.8	16.8	(37.3% decrease)
Nitrogen emissions (tons)★	4.6	5.3	(15.2% increase)
Phosphoric emissions (tons)★	0.2	0.2	(—)

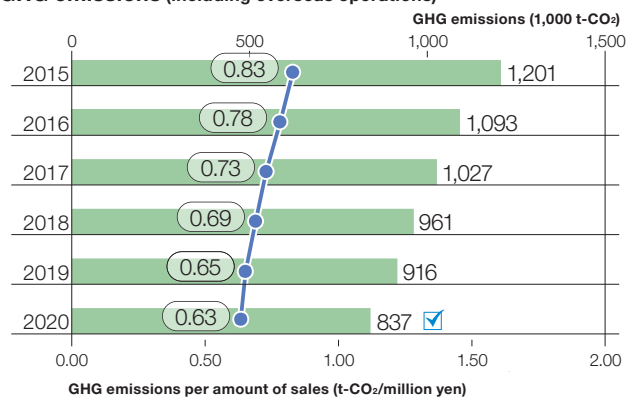
### Undesired materials generated (Unit: 1,000 tons)

	2019	2020	
Total amount of undesired materials	281	268	(4.6% decrease)
Waste emissions	50.9	51.5	(1.2% increase)
Landfill waste amount	5.5	4.8	(12.7% decrease)

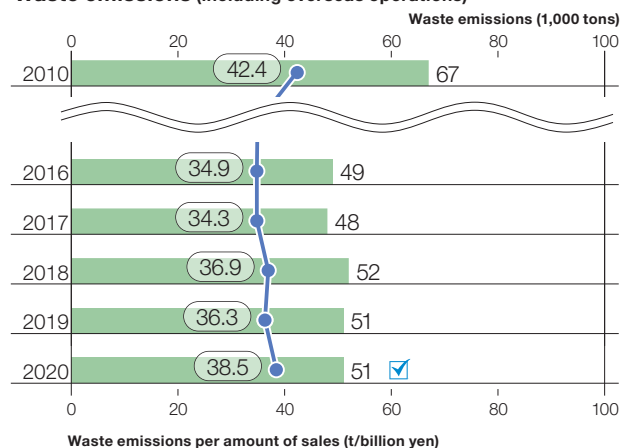
## Environmental Management Activities

## Environmental Impact and Environmental Efficiency

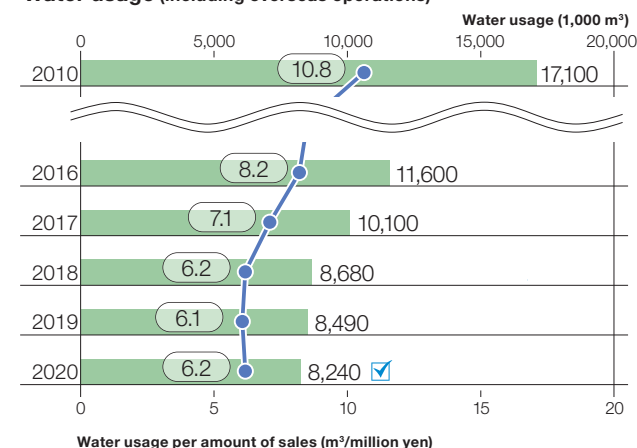
GHG emissions (including overseas operations)



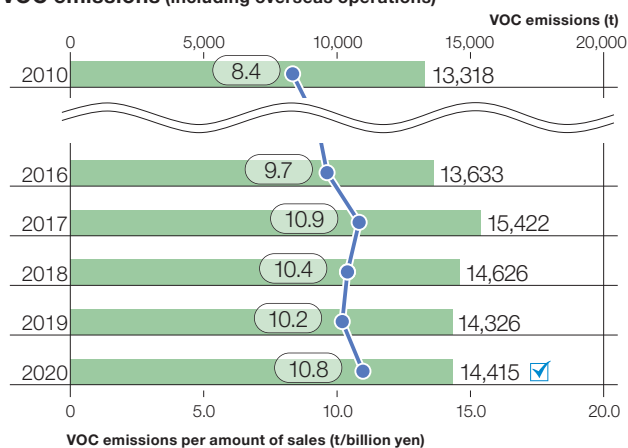
Waste emissions (including overseas operations)



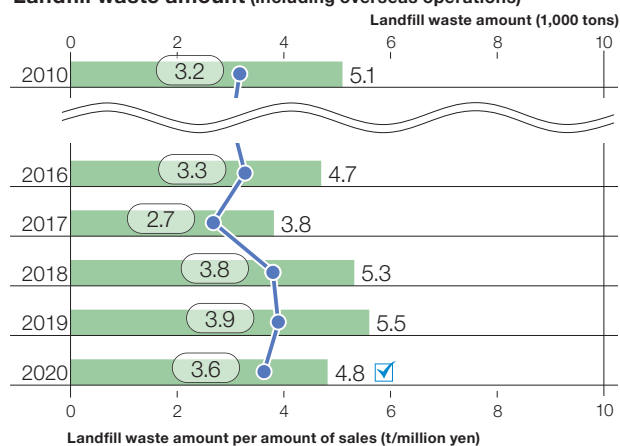
Water usage (including overseas operations)



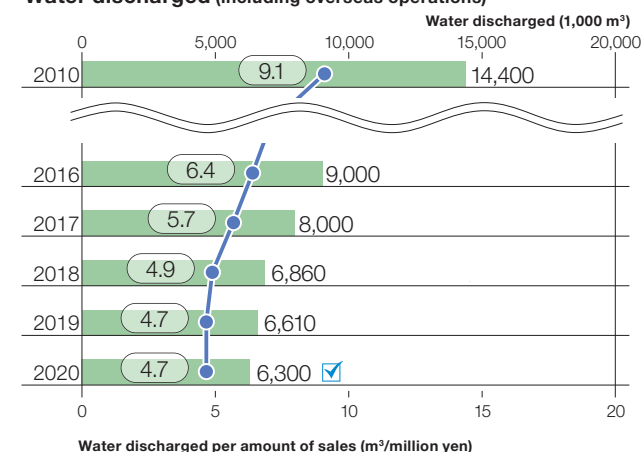
VOC emissions (including overseas operations)



Landfill waste amount (including overseas operations)



Water discharged (including overseas operations)



## Environmental Management Activities

## Environmentally Conscious Products and Services Development

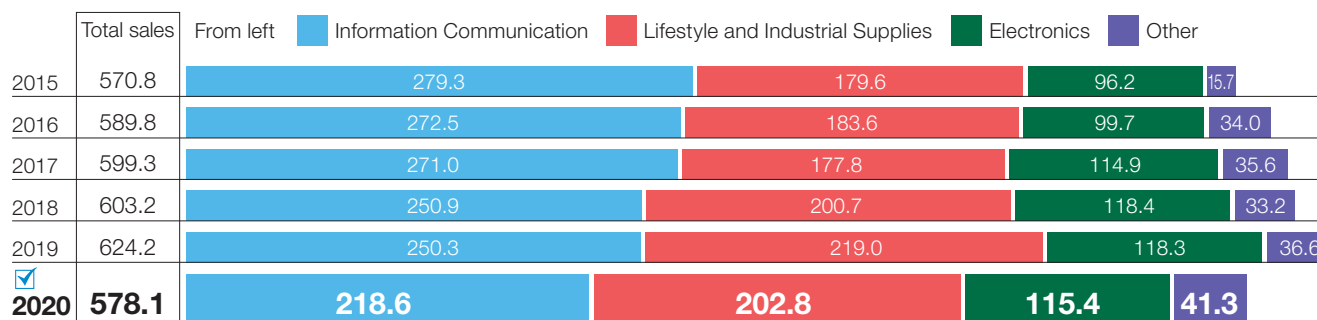
At DNP, we have created the Environmentally Conscious Products and Services Development Guidelines in order to create environmentally conscious products and services from the design stage, so as to reduce the environmental impact of our products and services throughout their lifecycle.

### • Sales of Environmentally Conscious Products and Services

FY2020 results: ¥578.1 billion

The target for FY2020 was not achieved due to decreased sales during the COVID-19 pandemic while targets were achieved in and after 2018.

**Transition of sales of environmentally conscious products and services (Unit: billion yen)**



### Guidelines for developing environmentally conscious products and services

#### 1 Reduction of environmental pollutants

Elimination of ozone layer-damaging substances, heavy metals and volatile organic compounds, and prevention of release into the environment of nitrous oxides and other substances.

#### 2 Resource and energy conservation, reduction of GHG emissions

Reduce the use of metals and fossil fuels. Promote energy-conserving products and systems.

#### 3 Sustainable use of resources

Utilize natural resources in a sustainable way.

#### 4 Long-term usability

Consider the ease of repair and parts replacement, length of maintenance and repair service, and the expandability of functions.

#### 5 Reusability

In the case of sites and parts, considerations regarding disassembly, cleaning, and refilling; establishment of a collection and reuse system that is easy for the purchaser to use.

#### 6 Recyclability

Are the materials used in the product easy to recycle? Does the design allow for easy breakdown, disassembly and separation of materials? Is there a collection and recycling system that is easy for the purchaser to use?

#### 7 Use of recycled materials, etc.

Use as many collected and recycled materials and parts as possible.

#### 8 Ease of treatment and disposal

Attempt to place as little burden as possible on incinerator facilities and landfill sites.

#### 9 Making environmental burden visible and taking into consideration biodiversity

Making visible any burden that should be reduced, and aiming to protect biodiversity

#### 10 Supporting and promoting environmental education and awareness

Helping to create a sustainable society.



Environmental Management Activities

Environmental Label Certification

We have earned environmental labeling certifications such as CoC (Chain of Custody) certification and the Japan Environment Association's Eco Mark. We are working to expand the sale of products and services with these certifications, so that their packaging and advertising can serve as a means to educate consumers properly about the environmental aspects of our goods and services.

• Main Certification Acquisition Results

Eco Mark (Type 1 Environmental Label)	
This environmental label is attached to products recognized as having low environmental impact throughout their lifecycle, from production through disposal, and as being useful to environmental conservation.	Acquired for DNP's biomass plastic packaging material, Biomatech®, a blend with plant-based materials
CoC Certification	
CoC (Chain of Custody) This is a certificate of control throughout each stage of processing and distribution	Acquired for FSC® and PEFC

**Environmental Labeling**  
Environmental Labeling: This is broadly divided into three types: Type 1, such as the Eco Mark (third party certification); Type 2, in which a company itself makes the declaration (self-declaration); and Type 3, in which environmental information is provided on the label, such as the EcoLeaf (environmental information labeling), with each having specifications under ISO or JIS. Reference information: "Environmental Labeling Database" of the Central Environment Council of the Ministry of the Environment

CoC Certification

Certification Type	Acquired by*	Acquisition Date	Registration Organization
CoC: FSC®	Information Innovations Operations	Aug. 08	SGSHK-COC-001466
	DNP Trading	Dec. 03	SGSHK-COC-001584
	Packaging Operations	Dec. 05	SGSHK-COC-002411
	Publishing Innovation Operations	Mar. 06	SGSHK-COC-002546
	Living Space Operations	Aug. 09	SGSHK-COC-006636
	DNP America, LLC	Oct. 09	SCS-COC-002804
	DNP Europa GmbH	Aug. 10	SGSCH-COC-007979
	PT. DNP Indonesia	Sep. 12	NC-COC-006063
CoC: PEFC	DNP SP Solutions	May 14	JIA-COC-200006
	Packaging Operations	Jan. 04	SGSJP-PCOC-2000
	DNP Trading	Jan. 08	SGSJP-PCOC-0313
	Publishing Innovation Operations	Mar. 11	SGSJP-PCOC-1268
	Living Space Operations	Nov. 11	SGSJP-PCOC-1414

- [FSC®] Forest Stewardship Council®
- [PEFC] Programme for the Endorsement of Forest Certification Schemes

\*The company and divisions names are as of June 2021.

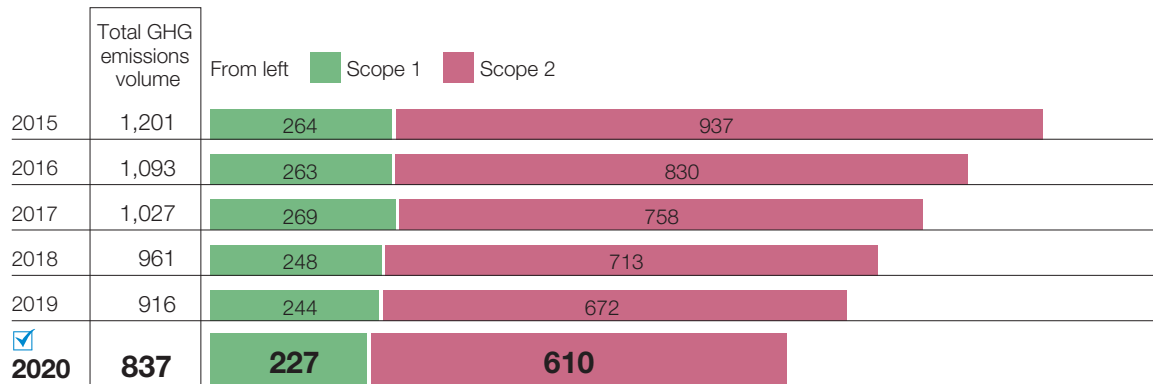
## Environmental Management Activities—Achieving a Low-Carbon Society

# Reduction of GHG emissions

Important steps that the DNP Group has taken leading to a Decarbonized society include reducing the consumption of forms of energy that generate CO<sub>2</sub> (energy conservation), switching to low CO<sub>2</sub>-emission fuels and introducing renewable energy sources.

### • GHG emissions

#### Scope 1 and Scope 2 GHG emissions FY2020 results: 837 [thousand tons-CO<sub>2</sub>]



**GHG emissions volume** (unit: thousand tons-CO<sub>2</sub>) GHG emissions in Japan due to electricity use, fuel use/combustion, burning of waste and atmospheric emissions of HFCs/PFCs/SF<sub>6</sub>/NF<sub>3</sub> are calculated based on the Manual for Calculating and Reporting Greenhouse Gas Emissions, Ver.4.3.2 (June 2018). For electricity emission factors in FY2020, the emission factor for each electric power company is used at manufacturing sites based on the emission factor for each electric power utility (FY2018 results) (announced on January 7, 2020) and a common emission factor is used for offices and the Bookstore Group. Overseas, the emission factor for each country is used based on the GHG Protocol (Ver1.0 of Compilation of emission factors used in the cross-sector tools) of 2006. (For FY2015–FY2019 as well, the domestic portion uses the same emission factor used in the fiscal years prior to the tabulated fiscal years.)

\*Scope 1 emissions attributable to transportation and distribution carried out by group companies are tabulated as Scope 3 emissions.

### • Introduction of renewable energy

#### Installation of solar power generation systems

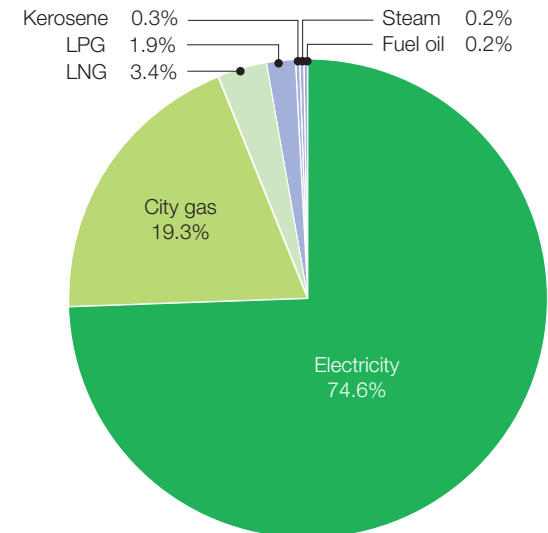
Year of installation	Place of installation	System capacity
2020	Kashiwa Research Institutes	600kW
2009	Izumizaki Plant, DNP High-performance Materials	30kW
2011	DNP Ichigaya-Kagacho Building No. 2	30kW
	Tanabe Plant, DNP Technopack	30kW
	DNP Ichigaya-Tamachi Building	10kW
2015	DNP Ichigaya-Kagacho Building	36kW
	DNP Ichigaya-Takajocho Building	24kW
	Sayama Plant	6kW

The Research and Development Center in Kashiwa, Chiba installed solar power panels in 2020, employing the PPA model. The total amount of power generated by these systems or purchased in FY2020 was 1,175 thousand kWh. We also currently purchase 1.15 million kWh of Renewable Energy Certificates annually to cover part of the power consumption used by manufacturing processes within the Group (for printing, bookbinding and processing) and other facilities.

### • Domestic GHG emissions volume by category

Unit: tons-CO <sub>2</sub>	
Total GHG emissions volume	732,600
Energy source	710,600
Non-energy source	21,100
Methane	80
N <sub>2</sub> O	460
HFC	180
PFC	20
SF <sub>6</sub>	110
NF <sub>3</sub>	0

### • Domestic fuel composition ☒



\*Gasoline and diesel fuel for automobile use are also used (less than 0.1%) in addition to these fuels above.

## Environmental Management Activities—Achieving a Low-Carbon Society

## Reduction of GHG emissions

• **Transport volume**

We will continue to implement distribution-related environmental impact reduction measures such as the optimization of vehicle distribution and transport routes, improved efficiency through the installation of digital tachometers, an idling-stop campaign, a modal shift to rail transport and the introduction of hybrid vehicles.

**Domestic manufacturing sites FY2020 results**

**Cargo transport volume: 2.6 million ton-kilometers**

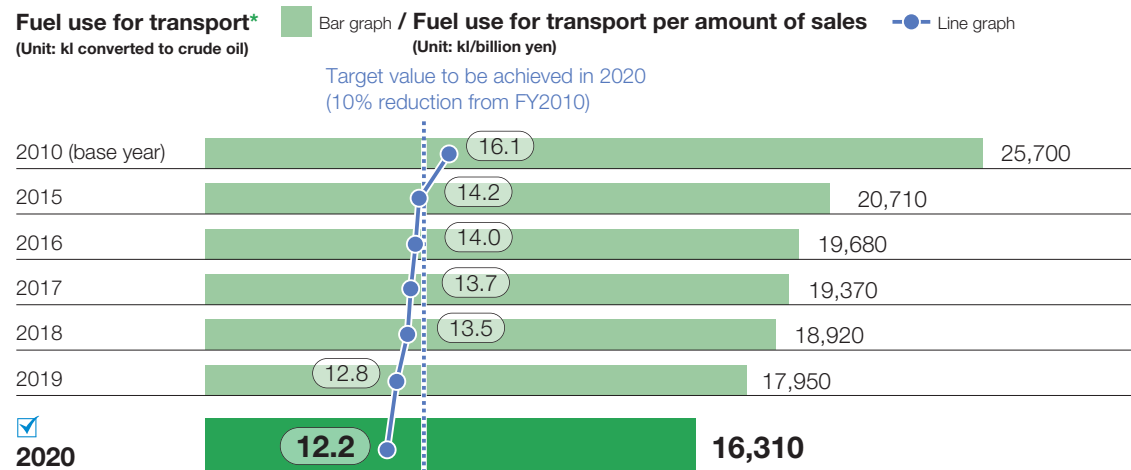
**Amount of fuel used for transport: 16,310 kl**  
(converted to crude oil)

**CO<sub>2</sub> emissions: 43,130 tons**

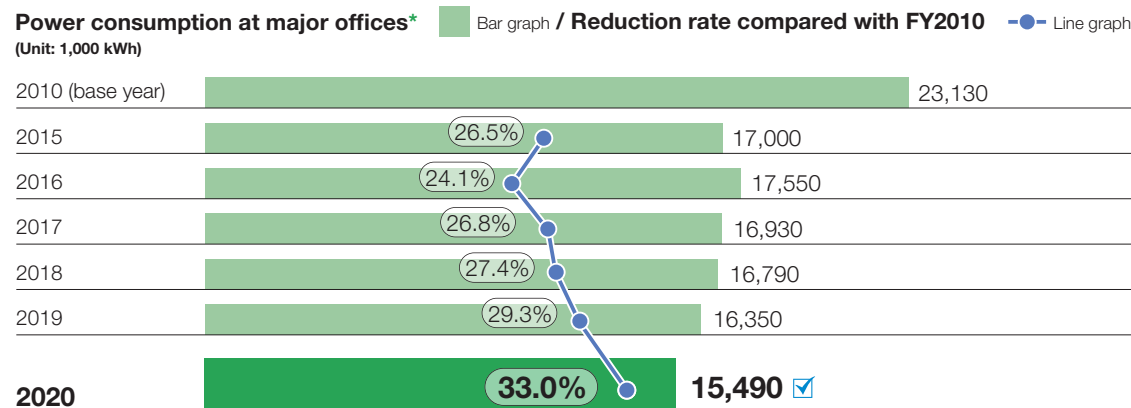
**Per-unit fuel use for transport**  
(amount of fuel used/sales): **12.2 kl/billion yen**  
**24.2% reduction compared with FY2010**

• **Global warming measures for offices**

The DNP Group has been engaged in efforts to reduce CO<sub>2</sub> emissions for offices since FY2005. We established a target of a 20% reduction in power consumed at our offices throughout Japan compared with FY2010. Specific actions that we are implementing, include completely revising the number of lighting fixtures and level of illumination needed, extending the “cool biz” dress code period (May–October), reviewing how air conditioning is run and expanding the use of LED lighting.



\*Fuel use during domestic cargo transport

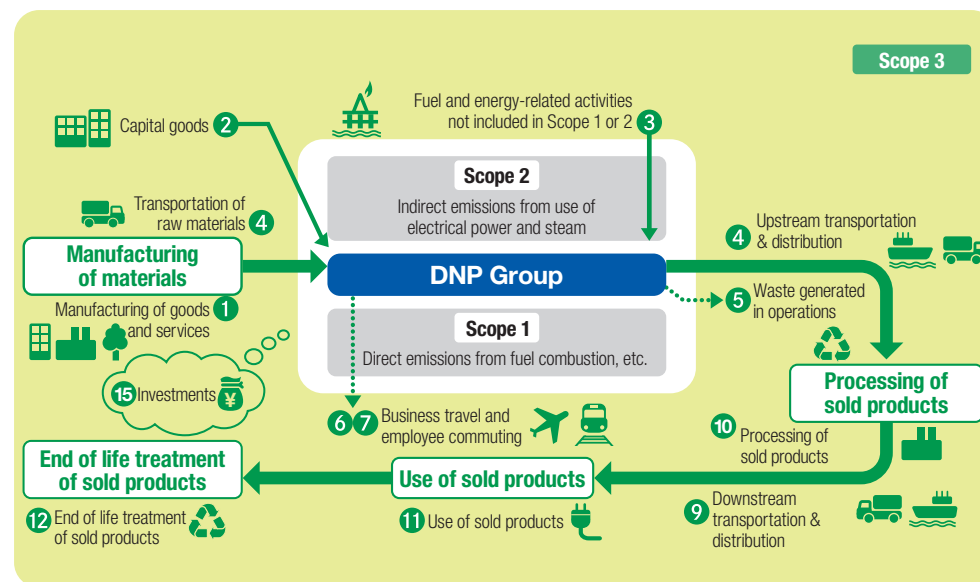
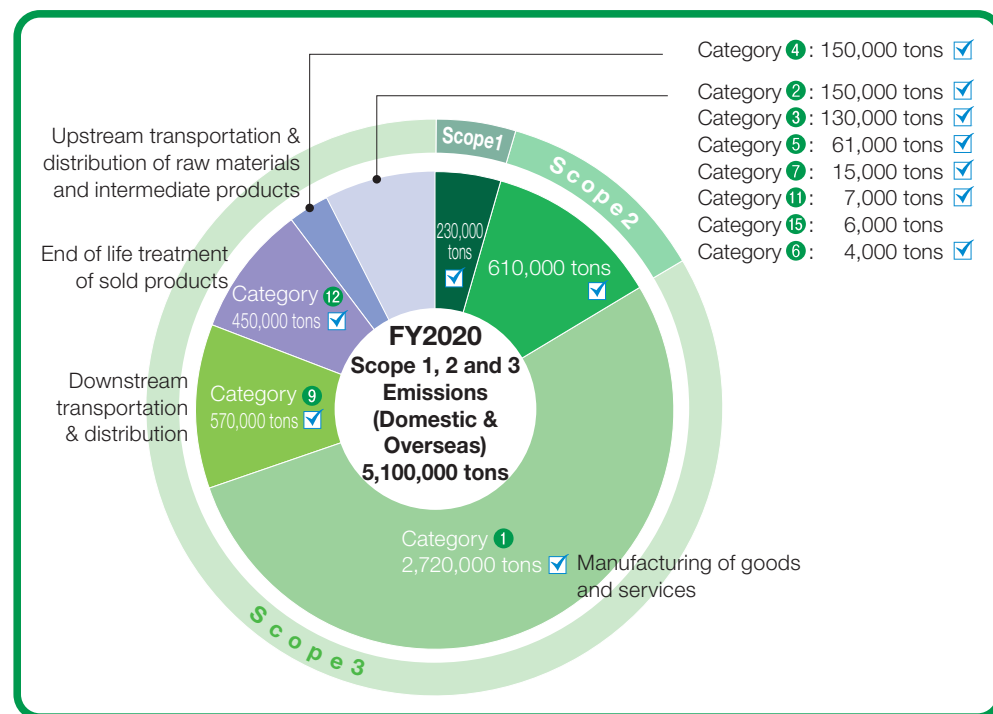


\*34 major offices in Japan under continuous operation during the period FY2010–FY2020

## Environmental Management Activities—Achieving a Low-Carbon Society

# GHG emissions Across the Entire Supply Chain

### • Scope 3 GHG emissions



### Calculation method

The Ministry of Economy, Trade and Industry (METI) and the Ministry of the Environment (MOE) formulated and released the “General Guidelines on Supply Chain GHG Emission Accounting, Ver 2.3” the standards of which our calculations are based upon.

- Of the 15 Scope 3 categories, Categories 8, 10, 13 and 14 were not applicable.
- Scope 1 emissions attributable to transportation and distribution carried out by group companies were included under Category 4.

The unit values database used for our calculations can be viewed on the MOE’s Green Value Chain Platform.

[http://www.env.go.jp/earth/ondanka/supply\\_chain/gvc/estimate\\_tool.html#no00](http://www.env.go.jp/earth/ondanka/supply_chain/gvc/estimate_tool.html#no00) (in Japanese)

### Scope of calculations

Main DNP business sites in Japan (excluding Hokkaido Coca-Cola Products and the Bookstore Group among others), and key overseas sites (PT DNP Indonesia, DNP Imagingcomm America Corporation, DNP Imagingcomm Asia Sdn. Bhd. and Tien Wah Press (Pte.) Ltd.).



Environmental Management Activities—Building a Recycling Society

Resource Recycling

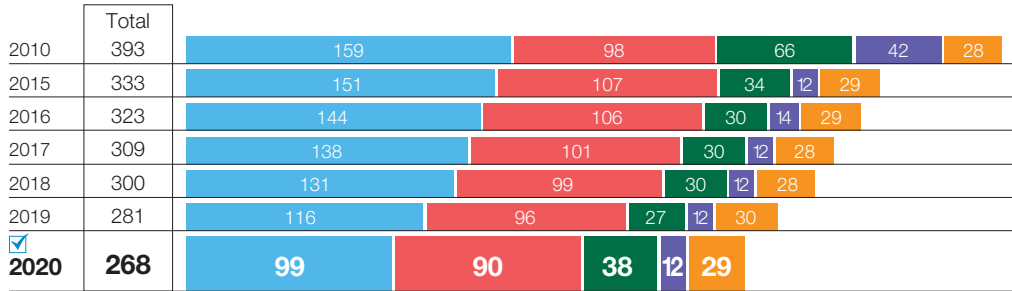
To build recycling into society, we are engaged in efforts to improve resource productivity and increase the recycling of undesired materials. These efforts are premised on the waste-free use of raw materials that go into manufacturing processes. Undesired materials are recycled as much as possible to utilize limited resources efficiently.

• Resource productivity

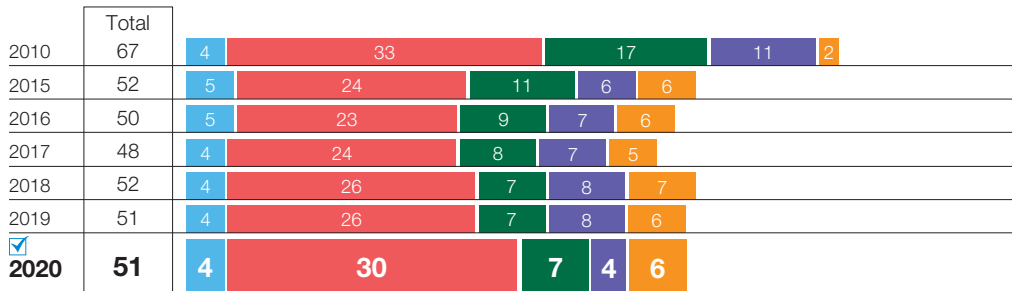
We use waste per unit of production as a productivity indicator and implement activities which set out to create a resilient production system in terms of quality, cost, delivery and other factors. In addition, we intend to reduce waste volume through the extraction of valuable materials such as waste plastic and waste oil.

**Waste per unit of production (Waste emissions: production volume)**  
**FY2020 results: 38.5 [tons/billion] (See the waste emission chart for 5-years on page18)**

Undesired material generation (Unit: 1,000 tons)



Waste emissions (Unit: 1,000 tons)



From left

Information Communication

Lifestyle and Industrial Supplies

Electronics

Other

Overseas

• Recycling undesired materials (Domestic)

We use “zero emissions” as the indicator for the promotion of recycling undesired materials. Zero emissions represents an effort to reduce the landfill waste amount (J + K [in the right chart])/undesired materials production volume A [in the right chart] to 0.5% or less.

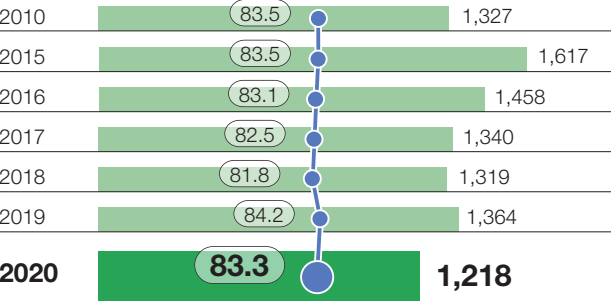
**Zero emissions**    **FY2020 results: 0.07%**

• Office paper recycling

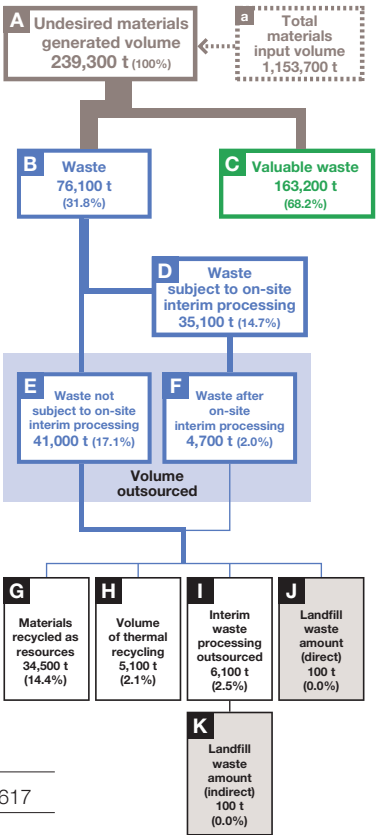
The business of the DNP Group is closely connected to paper, and we have been separating and collecting paper at our domestic offices for some time. In FY2020, waste paper was collected at 47 offices, primarily large-scale offices, for a recycling rate of 83.3%, exceeding our target of 70%.

Amount of waste paper collected (Unit: tons)

Used paper collection rate (Unit: %)



**Waste paper collection:** Waste paper collection/{waste paper collection + general waste amount (excluding cans, bottles and garbage)} × 100



## Environmental Management Activities—Building a Recycling Society

# Effective Use of Water Resources

The levels of risk and access to water resources differ by country and region. Therefore, DNP carries out surveys of water risk at its manufacturing sites, including its overseas manufacturing sites. Based on the results of these surveys, we take measures that include water saving and water recycling in manufacturing processes as well as wastewater management. Also, we implement flooding counter-measures in regions with a high risk of flood damage.

### • Reducing volume of water used

The DNP Group strives to reduce its water consumption by conserving water, reducing the amount of water supplied to utility systems and increasing the use of recycled water. In the Electronics and Other segments that require a large amount of water, we are making particular efforts to reduce consumption, such as optimizing the amount of water used in manufacturing processes, refining each process, installing water meters to eliminate loss as well as increasing the recovery and reuse of water.

**Water used FY2020 results: 8,240 [1,000 m³]**

### • Use of recycled water

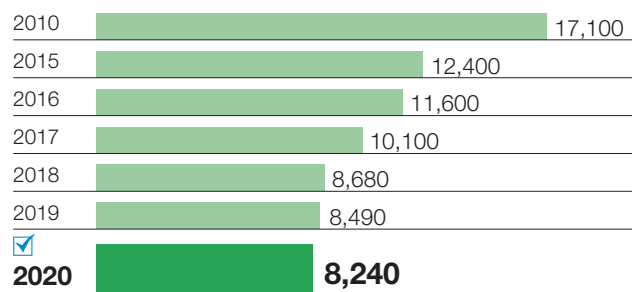
We are working hard to conserve water resources by promoting a closed-loop system in which water is recycled and reused instead of released. In this way we have been able to cut down on the high volume of water required for cleaning our products, air conditioning, and heating and cooling production machinery.

We are also making effective use of rainwater in our office buildings and other sites.

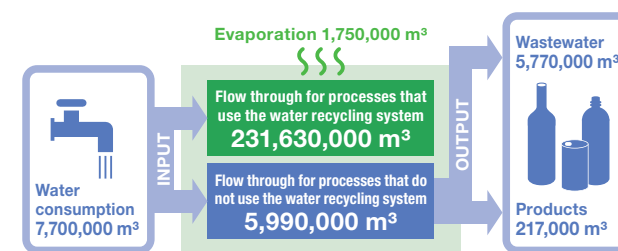
**Water use by intake source (Unit: 1,000 m³)**

	River	Groundwater	Clean water, industrial water	Rainwater	Seawater
<b>Domestic</b>	0	3,364	4,338	23.3	0
<b>Overseas</b>	0	0	537	0	0

**Water use (Unit: 1,000 m³)**



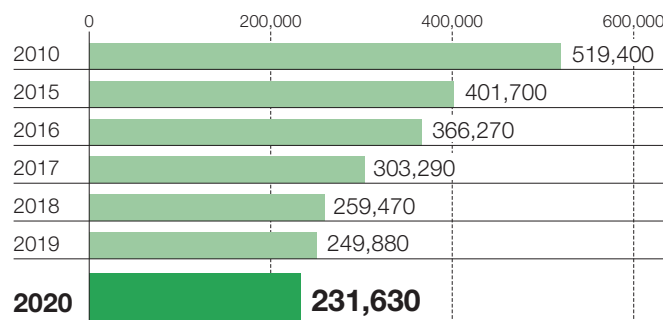
**Water input-output in domestic sites**



Note: Hokkaido Coca-Cola Bottling and DNP Fine Chemicals use water in products.

**Recycled water use in domestic manufacturing sites**

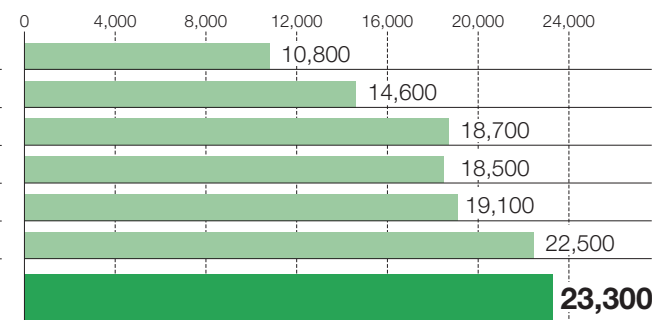
(Unit: 1,000 m³)



**Recycled water:** Total volume of water that flows through the heat exchange or cleaning equipment in our closed-cycle system in one year

**Use of rainwater in domestic office buildings, etc.**

(Unit: 1,000 m³)

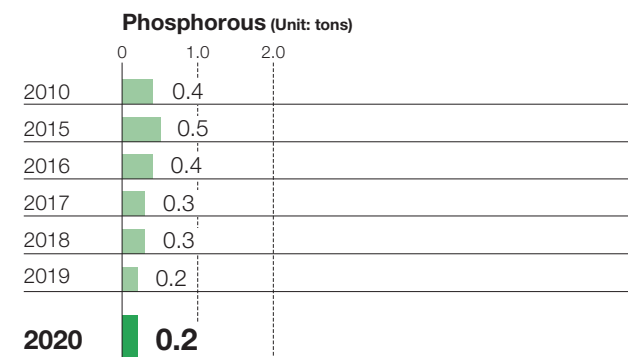
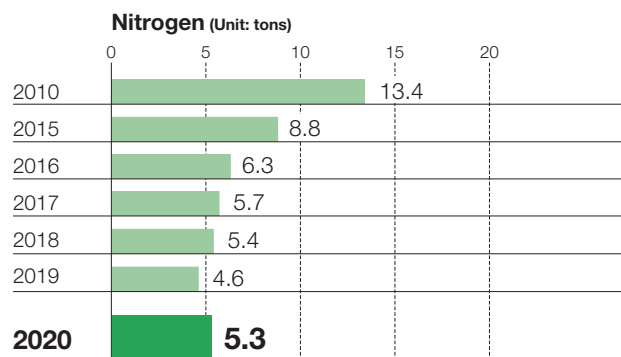
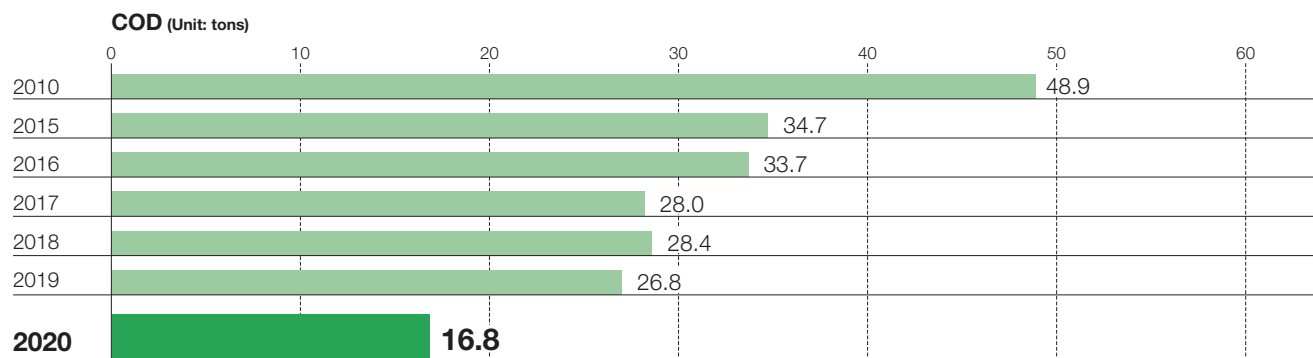


## Environmental Management Activities—For the Reduction of Environmental Pollutants

## Reducing Water Pollutants

We detoxify and reduce the pollution load of the wastewater from our industrial processes and dining halls by using purification tanks and wastewater treatment equipment. We continue to conduct measures, such as changing out the filtration membranes and absorbent materials in wastewater processing equipment, improving wastewater treatment in our kitchens.

## Water pollutant emissions



## Environmental Management Activities—For the Reduction of Environmental Pollutants

## Reducing Air Pollutants

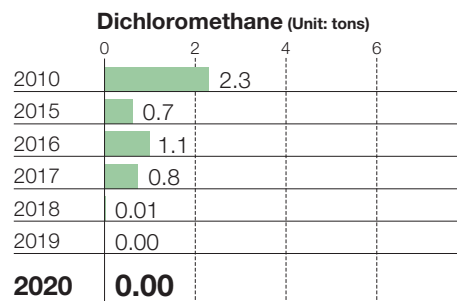
The Air Pollution Control Act regulates substances such as toxic air pollutants and ozone depleting substances, including sulfur oxides (SOx) and nitrogen oxides (NOx), as well as volatile organic compounds (VOCs). These substances have an impact on health and the global environment, causing problems such as photochemical smog and ozone layer depletion. We at the DNP Group are working hard to monitor and reduce emissions of such substances.

### • Reducing VOC emissions

Inks, solvents, adhesives and cleaning solutions used in the printing process contain toluene and other VOCs. The DNP Group's anti-VOC measures not only seek to regulate concentrations as required under the Air Pollution Control Act, but also to reduce emissions overall. We have been switching to substitute products with a lower environmental impact and installing equipment for VOC treatment and collection.

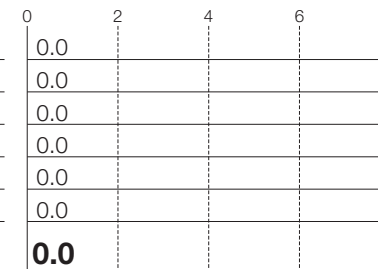
### Atmospheric emissions of VOCs (domestic) FY2020 results: 3,474 (tons)

### Air pollutant emissions



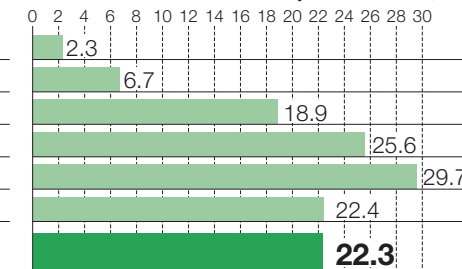
Although dichloromethane was mainly used for washing in the printing process, we have pursued a switchover to substitutes and terminated using dichloromethane for washing. At present, dichloromethane is used at some sites including our laboratory; however, the discharge concentration is extremely low.

**Chlorofluorocarbons (Unit: tons)**

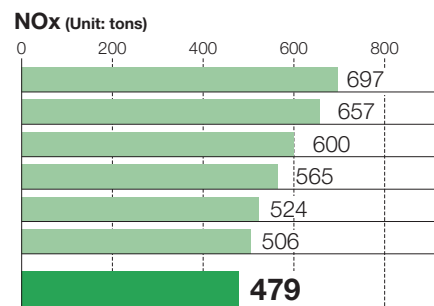
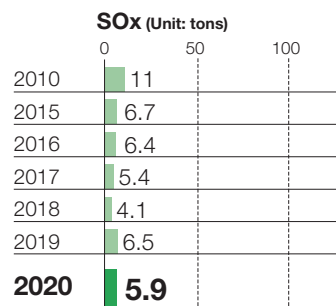


The ozone-depleting chemical HCFC-141b (1,1-dichloro-1-fluoroethane) is used as a cleaner, but our switch to substitutes in FY2010 caused emissions to drop to zero.

**Dioxins and dioxin-like compounds (Unit: mg-TEQ)**



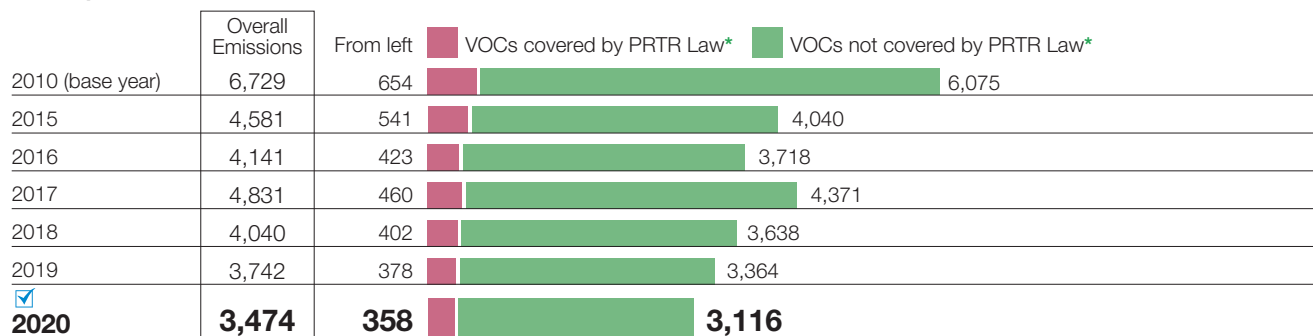
We totally eliminated small furnaces, for which burning control is difficult, and currently have five large-scale furnaces in operation, which are compliant with 2002 regulations. Atmospheric emissions in FY2017 amounted to 25.6 mg-TEQ.



Sulfur oxide is emitted through burning high-sulfur fuel oil and kerosene.

Nitrogen oxide is emitted when fuel is burned in production processes or when electric power is consumed.

### Atmospheric emissions of VOCs (Unit: tons)



\*PRTR Law: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

## Environmental Management Activities—For the Reduction of Environmental Pollutants

# Chemical Substances Subject to the PRTR Law

(Unit: kg, Dioxin and dioxin-like compounds only: mg-TEQ)

Annual amounts of chemical substances handled at each plant above the defined reporting levels set by the PRTR Law are tallied here (amounts listed to 2 significant figures, or to the nearest 0.1 for figures under 1).

Substance	Handled	Consumed	Removed/ consumed	Recycled	To atmo- sphere	Public waterways	Soil	Sewer	Waste
2-Hydroxyethyl acrylate	7,200	3,600	2,800	430	190	—	—	—	210
2-aminoethanol	21,000	—	—	—	—	—	—	—	21,000
Antimony and other compounds	1,400	1,100	—	170	—	—	—	—	62
Ethylbenzene	170,000	—	110,000	52,000	2,000	—	—	—	3,100
Ethylenediamine	1,000	520	—	—	—	—	—	—	520
Ferric chloride	3,500,000	980,000	600,000	1,900,000	—	—	—	—	—
Epsilon-caprolactam	3,400	1,200	1,800	—	69	—	—	—	370
Xylene	160,000	—	100,000	39,000	3,400	—	—	—	18,000
Chromium and chromium (III) compounds	23,000	7,700	—	6,300	—	—	—	1.0	9,100
Hexavalent chromium compounds	9,600	5,200	4,300	—	—	—	—	—	78
Inorganic cyanide compounds (except complex salts and cyanate)	4,400	—	440	—	460	—	—	—	3,500
N,N-dimethylformamide	130,000	—	8,200	—	660	—	—	—	120,000
Bromine	3,700	700	—	—	—	—	—	—	3,000
Dioxins and dioxin-like compounds	—	—	—	—	22	—	—	—	150
Water soluble copper salts (except complex salts)	240,000	39,000	18,000	190,000	—	—	—	—	460
Triethylamine	3,300	—	—	—	—	—	—	—	3,300
1,2,4-trimethylbenzene	25,000	—	13,000	11,000	290	—	—	—	—
1,3,5-trimethylbenzene	5,600	—	3,800	1,600	80	—	—	—	130
Toluene	7,700,000	1,200,000	4,600,000	370,000	350,000	—	—	—	1,200,000
Naphthalene	16,000	—	14,000	1,900	82	—	—	—	200
Hexamethylene diacrylate	1,300	1,100	—	150	—	—	—	—	73
Nickel	31,000	20,000	—	10,000	—	—	—	—	—
Nickel compounds	11,000	1,500	—	3,800	—	—	—	—	5,500
Biphenyl	1,400	1,100	—	—	—	—	—	—	350
Hydrogen fluoride and its water soluble salt	1,100	—	1,000	—	52	—	—	—	64
N-hexane	60,000	—	3,600	—	600	—	—	—	56,000
1,2,4-benzenetricarboxylic acid 1,2-anhydride	1,800	1,600	—	41	—	—	—	—	230
Formaldehyde	830	—	—	—	830	—	—	—	—
Manganese and its compounds	2,900	660	—	330	—	—	—	240	1,600
Methacrylic acid	28,000	28,000	—	—	2.4	—	—	—	44
2,3-Epoxypropyl methacrylate	1,200	1,100	—	—	2.2	—	—	—	31
Methyl methacrylate	20,000	20,000	—	—	—	—	—	—	—
Morpholine	60,000	5,900	1,500	—	310	—	—	—	53,000
<input checked="" type="checkbox"/> PRTR-listed substances	12,230,000	2,279,000	5,510,000	2,617,000	358,300	0	—	250	1,466,800

\*Limited to alkyls of carbon 12 through 15 or their compounds



## Environmental Management Activities—Realizing a Society in Symbiosis with Nature

## Biodiversity Conservation

At DNP we understand that we gain many benefits from ecosystems that are supported by abundant biodiversity, and we believe that working to coexist harmoniously and protect the environment is essential for the Company to maintain sustainable growth. Based on this way of thinking, we formulated the DNP Group Declaration on Biodiversity in March 2010. To realize a society in harmony with nature, we minimize our impact on biodiversity throughout the value chain and work to ensure harmony with regional ecosystems.

We examine our relationship with biodiversity in our business activities, including in product development, the procurement of raw materials, manufacturing, sales, use, and disposal. Our specific initiatives are based on the following important themes: The procurement of raw materials and the creation of greenery areas, both of which depend on ecosystem services and greatly impact biodiversity.

## Raw Material Procurement

• **Guidelines for Procurement of Paper for Printing and Converting**

In August 2021, DNP developed Guidelines for Procurement of Paper for Printing and Covering to maintain sustainable forest resources because in DNP's business activities, the procurement of paper relies heavily on and greatly affects the ecosystem. The guidelines stipulate selection criteria for suppliers and paper. We try to use FSC®-certified paper and ensure the traceability of paper to achieve full conformity with the procurement guidelines.

## Creation of greenery areas at business sites

DNP is promoting creation of greenery areas at business sites to establish a connection with the surrounding environment and its creatures. We can prevent the theft of animals and plants, overhunting, and overharvesting in the greenery areas of business sites because entry into them is managed. The greenery areas can contribute significantly to the

preservation of biodiversity with a low risk of supporting the damage caused by invasive species and natural predators. DNP is carrying out community-based biodiversity conservation activities on the premises of our sites, including the preservation of endangered species and the creation of greenery areas in light of regional ecosystems.

**Ichigaya no Mori (Ichigaya Forest) renewed the certifications of SEGES and ABINC**

Currently, DNP is promoting the creation of “new value,” which solves social issues and meets people's expectations by combining its own P&I (Printing and Innovation) strengths and deepening cooperation with outside partners. DNP is pushing ahead with the redevelopment of Tokyo's Ichigaya District, which is home to its head office, as a central site for promoting such initiatives. As part of this urban plan, DNP is creating the “Ichigaya no Mori (Ichigaya Forest)” as a new urban forest, developing a diverse forest that primarily consists of deciduous broad-leaved trees interspersed with evergreen trees in the image of Musashino's thicket.

In FY2020, DNP renewed the certifications granted by the Organization for Landscape and Urban Green Infrastructure and the Association for Business Innovation in harmony with Nature and Community (ABINC) for Ichigaya no Mori (Ichigaya Forest). The former certification is called SEGES Urban Oasis, and the latter is the ABINC Certification®. DNP was praised for the following initiatives during the renewal process.

- High-quality large greenery areas were created at the center of the city.
- Spontaneous initiatives for planting and managing plants and trees can be observed: The staff are keeping a journal and have accumulated information about damage from plant diseases and harmful insects.
- Projects are steadily being promoted for greening and maintenance.

We will continue to construct an ecosystem network with the surrounding greenery areas, and care for business sites while contributing to environment.



Environmental Activities Data

# Environmental Accounting

As an environmental management tool and as a tool for communicating with society, the DNP Group calculates and publicizes its environment-related costs in accordance with the Ministry of the Environment’s *Environmental Accounting Guidelines* (2005 Edition). The scope of calculation covers DNP and its consolidated subsidiaries (more specifically, manufacturing sites, development centers, office buildings and sales offices of manufacturing companies and a distribution company in Japan).

Category	Investment (million yen)		Expense (million yen)		Details of major efforts	Page(s) on which data is listed
	FY2019	FY2020	FY2019	FY2020		
<b>(1) Business area costs</b>						
<b>1) Pollution prevention costs</b>	741	<b>1,059</b>	1,149	<b>1,116</b>	VOC collection and disposal equipment, wastewater treatment facility	17, 26-28
<b>2) Global environmental conservation costs</b>	620	<b>463</b>	265	<b>308</b>	Conversion to inverters, waste heat recovery, switching to energy-saving lighting	17-18, 21-23
<b>3) Resource circulation costs</b>	104	<b>164</b>	1,547	<b>1,709</b>	Furnace improvements, separation recycling, zero emissions (conversion to RPF/cement ingredients), resource recycling	17-18, 24
<b>(Total business area costs)</b>	1,464	<b>1,687</b>	2,961	<b>3,133</b>		
<b>(2) Up/downstream costs</b>	0	<b>0</b>	135	<b>127</b>	Container and packaging recycling expense burden, recycling system development	19, 20
<b>(3) Administration costs</b>	1	<b>0</b>	2,466	<b>2,527</b>	ISO 14001 inspection and registration costs, environmental education costs, environmental report composition costs	9-12, 14-15, 20
<b>(4) R&amp;D costs</b>	0	<b>0</b>	3,328	<b>3,464</b>	Research and development into environmentally conscious products and services and production methods	16, 19
<b>(5) Social activities costs</b>	0	<b>0</b>	15	<b>13</b>	Environmental conservation of areas outside plant compounds, biodiversity conservation, support for activities of environmental conservation groups	29
<b>(6) Environmental remediation</b>	0	<b>0</b>	719	<b>409</b>		13
<b>Total</b>	1,465	<b>1,687</b>	9,624	<b>9,672</b>		

● **Environmental conservation costs to total costs ratio**

Category	Consolidated total costs (million yen)	Costs (million yen)	Ratio
<b>Investment of current period (FY2020)</b>	71,600	1,687	2.36%
<b>R&amp;D cost of current period (FY2020)</b>	32,623	3,464	10.60%

## Environmental Activities Data

# Environmental Accounting

### (1) Environmental conservation benefit related to resources input into business activities

Category of environmental conservation benefit	Category of indicator showing benefit	Indicator values			Remarks	Page(s) on which data is listed
		FY2019	FY2020	Difference		

#### 1) Benefit arising from supplied resources

<b>Total energy input volume</b>	Energy consumption (TJ)	16,998	<b>16,100</b>	-898		16-18, 21-23
	Unit consumption per sales for the above (TJ/billion yen)	12.1	<b>12.1</b>	0.0	Energy consumed per billion yen of domestic production	16-18, 21-23
<b>Input volume of water</b>	Water usage (1,000 m³)	8,490	<b>8,240</b>	-250		17-18, 25
	Unit consumption per sales for the above (1,000 m³/billion yen)	6.1	<b>6.2</b>	0.1	Water usage per billion yen of domestic production	17-18, 25
<b>Input volume of main raw materials</b>	Supplied amount (1,000 tons)	1,551	<b>1,280</b>	-271		17, 24
	Amount of undesired materials generated/supplied (%)	18.1	<b>20.9</b>	2.8	Ratio of undesired materials to main raw materials	17, 24

#### 2) Environmental conservation benefit related to waste or environmental impact originating from business activities

<b>Emissions to the air</b>	SOx emissions (tons)	6.5	<b>5.9</b>	-0.6		17, 27
	NOx emissions (tons)	506	<b>479</b>	-27		17, 27
	Environmental pollutant emissions volume (tons)	14,326	<b>14,415</b>	89		16-18, 27
<b>Water quality</b>	COD discharge (tons)	26.8	<b>16.8</b>	-10.0		17, 26
	Emissions of environmental pollutants (PRTR-listed substances) (tons)	0.0	<b>0.0</b>	0.0		28
<b>Waste emission volume</b>	Generated undesired materials (1,000 tons)	281	<b>268</b>	-13	Including undesired materials other than main raw materials	17, 24
	Discharged waste (1,000 tons)	50.9	<b>51.5</b>	0.6		17-18, 24
	Unit consumption per sales for the above (tons/billion yen)	36.3	<b>38.6</b>	2.3	Discharged waste per billion yen of sales	17-18, 24
	Recycle rate (%)	99.0	<b>98.3</b>	-0.7	By category: paper (100%), waste plastics (93.4%), metals (95.8%)	24
	Emissions of environmental pollutants (PRTR-listed substances) (tons)	1,238	<b>1,457</b>	219	Total for 28 substances reported	28
<b>Volume of GHG emission</b>	GHG emissions (1,000 t-CO₂)	916	<b>837</b>	-79		16-18, 21
	Unit consumption per sales for the above (tons/billion yen)	650	<b>630</b>	-20	CO₂ emissions per billion yen of sales	16-18, 21

## Environmental Activities Data

# Environmental Accounting

## (2) Environmental conservation benefit related to goods and services produced by business activities

Category of environmental conservation benefit	Category of indicator showing benefit	Indicator values			Remarks	Page(s) on which data is listed
		FY2019	FY2020	Difference		
Benefit related to goods produced by business activities						
CO <sub>2</sub> emissions after product shipment	CO <sub>2</sub> emissions (1,000 t-CO <sub>2</sub> )	1,202	1,069	−133	Total of part of Category 4, Categories 9, 10, 11 and 12 of Scope 3	19, 23
	CO <sub>2</sub> emissions / domestic sales (1,000 t-CO <sub>2</sub> /billion yen)	0.86	0.80	−0.06	CO <sub>2</sub> emissions per billion yen of domestic sales	19, 23

## (3) Other environmental conservation benefit

Category of indicator showing benefit	FY2019	FY2020	Difference	Remarks	Page(s) on which data is listed
<b>Benefit related to the environmental impact of transportation</b>					
Energy usage amount during shipment of goods (kl)	17,950	<b>16,310</b>	-1,640	Energy consumption converted to crude oil during transport as a cargo owner	22
Energy usage amount during transport / gross sales (kl/billion yen)	12.8	<b>12.2</b>	-0.6	Emissions per billion yen of sales	22

Economic benefits of environmental conservation activities	Amount (million yen)			Remarks	Page(s) on which data is listed
	FY2019	FY2020	Difference		
(1) Increased sales      1) Economic benefit of R&D costs					
Sales of environmentally conscious products and services	624,200	578,100	−46,100		16, 19
(2) Increased income      2) Benefit of resource recycling costs					
Income from recycling undesired materials	2,703	2,088	−615	Sale price of waste plastics and waste oil	24

## Environmental Activities Data

# Results of Efforts

<b>FY1972</b>	Establishes the Environment Department within the head office to promote pollution prevention measures and communication with local residents
<b>FY1990</b>	Makes new efforts to deal with global environmental issues by establishing the Eco-Plan Promotion Office within the Environment Department
<b>FY1992</b>	Establishes the DNP Group Corporate Pledge and Code of Conduct for DNP Group Employees Establishes the Eco-Plan Promotion Targets, the elaborated voluntary plan based on the Environmental Declaration of the Code of Conduct, and starts activities by 4 sub-committees
<b>FY1993</b>	Starts the Eco-Report System, which is part of the DNP Group's environmental management system
<b>FY1994</b>	Remodels and expands the Environment Department into the Environment & Product Liability Department to strengthen our efforts towards comprehensive environmental issues, including product liability
<b>FY1995</b>	DNP wins the International Trade and Industry Minister's Prize in the 4th Grand Prize for the Global Environment Award. (The award was established in 1991 by the Japan Industrial Journal and the Fuji Sankei Communications Group, with special support by WWF Japan and sponsorship by the Environmental Agency, the Ministry of Economy, Trade and Industry and the Japan Federation of Economic Organizations)
<b>FY1996</b>	Begins performing Eco-Audits, the internal environmental audit performed by the Eco-Plan Promotion Office to upgrade the Eco-Report System
<b>FY1997</b>	Okayama Plant, Information Media Supplies Operations becomes the first in the printing industry to acquire ISO 14001 certification
<b>FY1998</b>	Mihara Plant, Display Components Operations acquires ISO 14001 certification Publishes the DNP Group Environmental Activity Report
<b>FY2000</b>	The Eco-Plan Promotion Office is dismantled and replaced with the DNP Environmental Committee to strengthen the system for promoting environmental activities DNP Facility Services becomes the first in the world to be certified for its comprehensive system with quality, environment, office safety, and HACCP
<b>FY2001</b>	DNP Tokai and Sayama Plant, DNP Technopack acquire ISO 14001 certification
<b>FY2002</b>	DNP Tokai acquires FSC®-COC certification
<b>FY2003</b>	Environmental Report Division receives the 6th Environmental Report Grand Prize for superior reporting Two types of fused thermal transfer materials of the Information Media Supplies Operations receive EPD "Type III" environmental labeling certification and registration
<b>FY2004</b>	DNP wins the Minister for the Environment's Prize in the 14th Grand Prize for the Global Environment Award 7th Environmental Report Prize awarded for excellence Eco-Report System implemented at overseas sites
<b>FY2005</b>	8th Environmental Report Prize / Sustainability Report Prize awarded for excellence
<b>FY2007</b>	PRTR 2007 Awards PRTR Honorable Mention (Tsuruse Plant) DNP Gotanda Building wins the Green Grand Prize in the Shinagawa-ku Green Award System
<b>FY2009</b>	Kanto Bureau of Economy, Trade and Industry Energy Management In Business Superiority Award (received by Akabane Plant, Commercial Printing Operations)
<b>FY2010</b>	DNP IMS Odawara receives the Kanagawa Prefecture Environmental Conservation (Air, Water, Soil) Award Revision of DNP Group Environmental Targets The DNP Emergent Evolution Forest Hakone Training Center 2 acquires Green Key certification

Note: Organizations and the names used for them as of that time

<b>FY2011</b>	DNP's independently developed Energy-Saving Total Management System is implemented at 36 Tokyo Electric Power locations New, leading-edge environmentally conscious plant for manufacturing flexible packaging is built in Kyotanabe Reductions in power consumption in the processes of manufacturing photomasks earns DNP the Energy Conservation Grand Prize for excellent energy conservation equipment, Jury's Special Prize awarded by the Energy Conservation Center, Japan (ECCJ)
<b>FY2012</b>	Guidelines for Procurement of Paper for Printing and Converting are established to protect biodiversity in our business operations, and projects to create green spaces are launched at Okayama Plant and DNP Chubu business sites Volume of GHG emissions are announced according to Scope 3 standards
<b>FY2013</b>	Targets for reduction of water usage are set Green Procurement Guidelines for Chemical Substances are set and management of chemical substances in products is strengthened
<b>FY2014</b>	Climate change prevention targets for FY2030 are set DNP is selected by CDP's Forest Program as sector leader in the Industrials & Autos sector DNP wins a Prize of Excellence (Judge's Prize) at the 18th Environmental Communication Awards
<b>FY2015</b>	DNP Group environmental targets are revised CDP places DNP on its "A List" DNP wins a Prize of Excellence (Judge's Prize) at the 19th Environmental Communication Awards
<b>FY2016</b>	DNP wins 26th Grand Prize for the Global Environment Award, Japan Business Federation Chairman's Prize DNP wins a Prize of Excellence (Judge's Prize) at the 20th Environmental Communication Awards DNP wins Biodiversity Action Award Japan 2016
<b>FY2017</b>	Hokkaido Coca-Cola Bottling wins a Special Review Panel Award in the 19th Japan Water Awards Ichigaya-Forest certified by the ABINC
<b>FY2018</b>	DNP's GHG reduction targets approved by the SBT (Science Based Targets) Initiative Ichigaya-Forest certified by the SEGES DNP wins a Prize of Excellence (Judge's Prize) at the 22nd Environmental Communication Awards DNP wins 28th Grand Prize for the Global Environment Award, Grand Prize
<b>FY2019</b>	DNP endorses recommendations of Task Force on Climate related Financial Disclosures (TCFD). DNP is included in CDP's CDP Supplier Engagement leaderboard. Ichigaya Forest wins Award of Excellence in 2nd ABINC Awards. DNP formulates DNP Group Environmental Vision 2050.
<b>FY2020</b>	DNP is included in CDP's CDP Supplier Engagement leaderboard. DNP wins a Prize of Excellence (Judge's Prize) at the 24nd Environmental Communication Awards Ichigaya no Mori (Ichigaya Forest) renewed the certifications of SEGES and ABINC



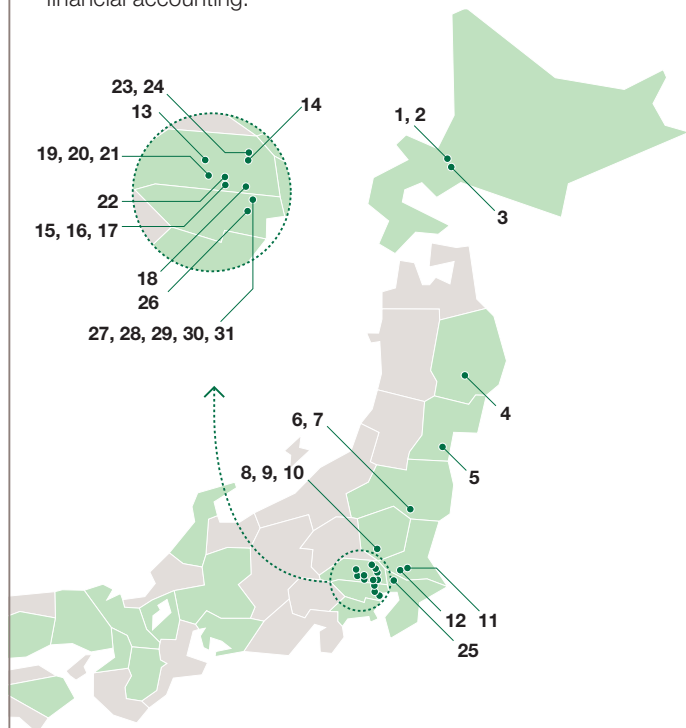
## Environmental Activities Data

# Manufacturing Sites with Required Business Performance Data Disclosure

### Domestic Manufacturing Sites with Required Business Performance Data Disclosure (1)

Organizations and the names used for them are current as of March 31, 2021.

Applies to DNP and non-manufacturing sites of all domestic companies in the group that are subject to consolidated financial accounting.



### Business segments

●	Information Communication	“Other” refers to products that do not fall under the three segments or Group companies manufacturing products that span multiple segments.
▲	Lifestyle and Industrial Supplies	
■	Electronics	
□	Other	

Location	No.	Business segment	Site	Work content
Hokkaido	1	●	Sapporo Plant, DNP Graphica Sapporo Plant, DNP Data Techno	Printing / bookbinding
	2	▲	Sapporo Plant, DNP Technopack	Manufacturing of packaging
	3	□	Sapporo Plant, Hokkaido Coca-Cola Products	Manufacturing of beverages
Iwate	4	■	Kitakami Plant, D.T. Fine Electronics	Manufacturing of electronic precision parts
Miyagi	5	●	Sendai Plant, DNP Graphica	Plate-making / printing / bookbinding
Fukushima	6	▲	Izumizaki Plant, DNP Technopack	Manufacturing of packaging
	7	▲	Izumizaki Plant, DNP High-performance Materials	Manufacturing of solar cell filler
Tochigi	8	●	Utsunomiya Plant, DNP Graphica	Printing / bookbinding
	9	▲	Utsunomiya Plant, DNP Technopack	Manufacturing of packaging
	10	□	DNP Fine Chemicals Utsunomiya	Manufacturing of photographic materials and pharmaceuticals
Ibaraki	11	●	Ushiku Plant, DNP Data Techno	Manufacturing of various types of smart cards
	12	□	Tsukuba Techno Center, DNP Engineering	Manufacturing of printing machines and machine tools
Saitama	13	●	Higashimatsuyama Plant, Oguchi Book Binding & Printing	Bookbinding
	14	●	Shiraoka Plant, DNP Book Factory	Printing / bookbinding
	15	●	Tsuruse Plant, Publication Printing Operations	Plate-making / printing plate / printing / bookbinding
	16	▲	Tokyo Plant, DNP Living Space	Plate-making / printing plate / printing / processing
	17	●	Miyoshi Plant, Oguchi Book Binding & Printing	Bookbinding
	18	●	Warabi Plant, DNP Data Techno	Plate-making / printing / processing
	19	▲	Sayama Plant No. 1, DNP Technopack	Manufacturing of packaging
	20	▲	Sayama Plant No. 2, DNP Technopack	Manufacturing of packaging
	21	●	Sayama Plant, DNP Imagingcomm	Manufacturing of thermal transfer carbon ribbons and dye-sublimation transfer materials
	22	■	Kamifukuoka Plant, DNP Fine Optronics	Manufacturing of electronic precision parts
	23	●	Kuki Plant, Publication Printing Operations	Printing plate / printing / bookbinding
	24	▲	Kuki Plant, DNP High-performance Materials	Manufacturing of solar cell filler
Chiba	25	▲	Kashiwa Plant, DNP Technopack	Manufacturing of packaging
Tokyo	26	●	Enoki-cho Plant, DNP Graphica	Plate-making / printing / bookbinding
	27	●	Kamiya Plant, DNP SP Solutions	Manufacturing of all types of advertising items
	28	●	Kamiya Plant, DNP Book Factory	Bookbinding
	29	□	DNP Logistics	Packaging / shipping
	30	▲	DNP Hoso	Processing filling and packaging
	31	●	Kamiya Plant, DNP Data Techno	Printing / bookbinding / processing

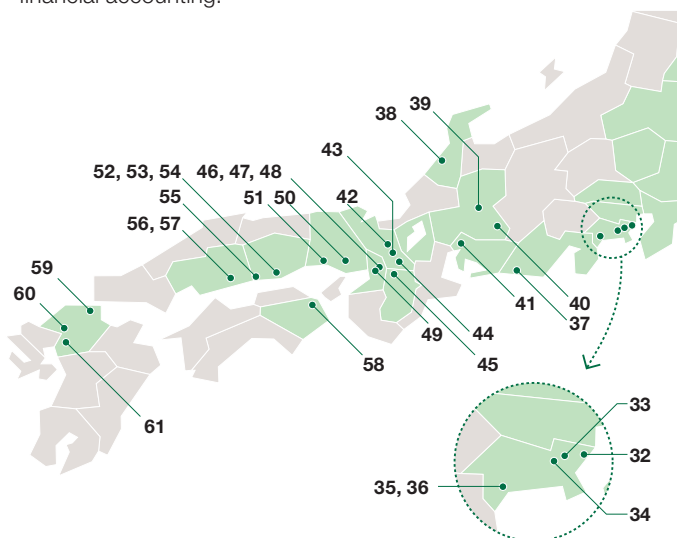
## Environmental Activities Data

## Manufacturing Sites with Required Business Performance Data Disclosure





### Domestic Manufacturing Sites with Required Business Performance Data Disclosure (2)

Organizations and the names used for them are current as of March 31, 2021.

Applies to DNP and non-manufacturing sites of all domestic companies in the group that are subject to consolidated financial accounting.



## Business segments

	<b>Information Communication</b>	<p>“Other” refers to products that do not fall under the three segments or Group companies manufacturing products that span multiple segments.</p>
	<b>Lifestyle and Industrial Supplies</b>	
	<b>Electronics</b>	
	<b>Other</b>	

Location		No.	Business segment	Site	Work content
Kanagawa	Kawasaki	32	■	Kawasaki Plant, D.T. Fine Electronics	Manufacturing of electronic precision parts
	Tsuzuki-ku, Yokohama	33	▲	Yokohama Plant, DNP Technopack	Manufacturing of packaging
	Midori-ku, Yokohama	34	□	Tokyo Plant, DNP Fine Chemicals	Manufacturing of chemicals, etc.
	Odawara	35	▲	Sagami Yoki	Manufacturing of laminated tubes
	Aikawa, Aiko	36	▲	Tokyo Plant, DNP Ellio	Printing and processing metal sheets
Shizuoka	Iwata	37	▲	Iwata Plant, DNP Tamura Plastic	Manufacturing of car supplies and various types of plastic products
Ishikawa	Hakusan	38	□	Hokuriku Techno Center, DNP Engineering	Manufacturing of printing machines and machine tools
Gifu	Gero	39	▲	Hagiwara Plant, DNP Tamura Plastic	Manufacturing of car supplies and various types of plastic products
	Nakatsugawa	40	▲	Tokai Plant, DNP Technopack	Manufacturing of packaging
Aichi	Moriyama-ku, Nagoya	41	●	Nagoya Plant, DNP Graphica	Plate-making / printing / bookbinding
Kyoto	Ukyo-ku, Kyoto	42	▲	Kyoto Plant, DNP Technopack	Manufacturing of packaging
	Minami-ku, Kyoto	43	●	Kyoto Plant, DNP Data Techno	Manufacturing of various types of smart cards
	Kyotanabe	44	▲	Tanabe Plant, DNP Technopack	Manufacturing of packaging
Nara	Kawanishi, Shiki	45	●	Nara Plant, DNP Data Techno	Manufacturing of various types of smart cards
Osaka	Neyagawa	46	▲	Neyagawa Plant, DNP Technopack	Manufacturing of packaging
		47	▲	Osaka Plant, DNP Ellio	Printing and processing metal sheets
		48	●	Neyagawa Plant, DNP SP Solutions	Manufacturing of all types of advertising items
	Kadoma	49	●	DNP Media Support	Manufacturing of magnetic cards
Hyogo	Ono	50	●	Ono Plant, DNP Graphica	Printing plate / printing / bookbinding
	Himeji	51	■	DNP Precision Devices Himeji	Manufacturing of electronic precision parts
Okayama	Okayama	52	●	Okayama Plant, DNP Imagingcomm	Manufacturing of dye-sublimation transfer materials
		53	▲	Okayama Plant, DNP Living Space	Plate-making / printing plate / printing / processing
		54	■	Okayama Plant, DNP Fine Optronics	Manufacturing of electronic parts
	Kasaoka	55	□	Kasaoka Plant, DNP Fine Chemicals	Manufacturing of chemicals, etc.
Hiroshima	Mihara	56	■	Mihara East Plant, DNP Fine Optronics	Manufacturing of electronic precision parts
		57	■	Mihara West Plant, DNP Fine Optronics	Manufacturing of electronic parts
Tokushima	Tokushima	58	□	DNP Shikoku	Plate-making / printing / manufacturing of packaging
Fukuoka	Tobata-ku, Kitakyushu	59	▲	Tobata Plant, DNP High-performance Materials	Manufacturing of solar cell filler
	Minami-ku, Fukuoka	60	●	Fukuoka Plant, DNP Graphica Fukuoka Plant, DNP Data Techno	Plate-making / printing / bookbinding
	Chikugo	61	▲	Chikugo Plant, DNP Technopack	Manufacturing of packaging

## Environmental Activities Data

## Manufacturing Sites with Required Business Performance Data Disclosure

**Overseas Manufacturing Sites with Required Business Performance Data Disclosure****Business segments**

●	Information Communication
▲	Lifestyle and Industrial Supplies
■	Electronics

Country	City	No	Business segment	Site	Work content
Italy	Agrate Brianza	①	■	DNP Photomask Europe S.p.A.	Manufacturing of photomasks
Denmark	Karlsunde	②	■	DNP Denmark A/S	Manufacturing of projection television screens
Netherlands	Amsterdam	③	●	DNP Imagingcomm Europe B.V.	Manufacturing of information media supplies
USA	Concord, NC	④	●	DNP Imagingcomm America Corporation	Manufacturing of information media supplies
	Pittsburgh, PA	⑤	●	DNP Imagingcomm America Corporation	Manufacturing of information media supplies
Malaysia	Johor Bahru	⑥	●	DNP Imagingcomm Asia Sdn. Bhd.	Manufacturing of information media supplies
		⑦	●	Tien Wah Press (Pte.) Ltd.	Offset printing and binding
Indonesia	Pulo Gadung	⑧	▲	PT DNP Indonesia	Manufacturing of packaging
	Karawang	⑨	▲	PT DNP Indonesia	Manufacturing of packaging
Vietnam	Binh Duong Province	⑩	▲	DNP Vietnam Co., Ltd.	Manufacturing of packaging

①, ②, ④–⑥ April 2020–March 2021 totals ③, ⑦–⑩ January 2020–December 2020 totals

# Independent Review Report Comments by an Independent Institution



## LR Independent Assurance Statement Relating to DNP Group's Environmental Data within DNP Group Environmental Report 2021 for the fiscal year 2020

This Assurance Statement has been prepared for Dai Nippon Printing Co., Ltd.'s in accordance with our contract but is intended for the readers of this report.

### Terms of engagement

Lloyd's Register Quality Assurance Limited (LR) was commissioned by Dai Nippon Printing Co., Ltd. ("the Company") to provide independent assurance on DNP Group's environmental data and information ("the report") within DNP Group Environmental Report 2021 for the fiscal year 2020, that is, 1 April 2020 to 31 March 2021, against the assurance criteria below to a limited level of assurance and professional judgement of the verifier using ISAE3000 (Revised) Assurance Engagements Other than Audits or Reviews of Historical Financial Information and ISO14064-3:2006 Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions for GHG data.

Our assurance engagement covered the operations and activities relating to the Company and its consolidated subsidiary in Japan and overseas<sup>1,2,3</sup> and specifically the following requirements:

- Verifying conformance with the Company's reporting methodologies;
- Evaluating the accuracy and reliability of data for the selected environmental indicators listed Appendix 1;<sup>4,5</sup>

Our assurance engagement excluded the data and information of the Company's suppliers, contractors and any third-parties mentioned in the report.

LR's responsibility is only to the Company. LR disclaims any liability or responsibility to others as explained in the end footnote. The Company's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of the Company.

### LR's Opinion

Based on LR's approach nothing has come to our attention that would cause us to believe that the Company has not, in all material respects:

- Complied with the Company's reporting methodologies
- Disclosed accurate and reliable environmental data

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

**Note:** The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### LR's approach

LR's assurance engagements are carried out in accordance with ISAE3000 and ISO14064-3 for GHG emissions. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

<sup>1</sup> The scope is covered Dai Nippon Printing Co., Ltd. and its 23 Manufacturing companies and 1 logistics company.

<sup>2</sup> The scope is covered non-manufacturing sites of Dai Nippon Printing Co., Ltd. and domestic subsidiaries (including 3 Development base, office building, and business offices etc.)

<sup>3</sup> Overseas 10 manufacturing subsidiaries (DNP Photomask Europe S.p.A., DNP Denmark A/S, DNP Imagingcomm Europe B.V., DNP Imagingcomm America Corporation (Concord), DNP Imagingcomm America Corporation (Pittsburgh), DNP Imagingcomm Asia Sdn. Bhd., Tien Wah Press (Pte.) Ltd., PT DNP Indonesia (Karawang), PT DNP Indonesia (Pulogadung), DNP Vietnam Co., Ltd.)

<sup>4</sup> LR undertook a limited assurance engagement of the environmental data marked with "✓" within DNP Group Environmental Report 2021. And see Appendix 1 for detailed information on the data covered by this Independent Assurance Statement.

<sup>5</sup> When breakdown data for each department is listed in DNP Group Environmental Report 2021, the data is also assured.



- Auditing the Company's data management systems to confirm that there were no significant errors, omissions or misstatements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification.
- Interviewing with those key people responsible for compiling the data and drafting the report.
- Sampling datasets and traced activity data back to aggregated levels;
- Verifying the historical environmental data and records for the fiscal year 2020; and
- By implementing the Company's "No Visitor" Policy due to the global infection spread of COVID-19, conducting the remote verification to Okayama Plant of DNP Imagingcomm Corporation and Kuki Plant of Dai Nippon Printing Co., Ltd. for confirming the effectiveness of its data management systems via emails and Microsoft Teams.

### Observations

It is recommended the Company will continue to maintain the high-level data management systems and discover further improvement opportunities proactively to ensure accurate aggregation and calculation of environmental data.

### LR's standards, competence and independence

LR implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 Greenhouse gases - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition and ISO/IEC 17021-1 Conformity assessment - Requirements for bodies providing audit and certification of management systems - Part 1: Requirements that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants.

LR ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LR is the certification body of ISO9001 and ISO14001 for the DNP Elio Co., Ltd. which is the consolidated subsidiary of the Company and as such does not compromise our independence or impartiality.

Signed

Dated: 5 July 2021

  
Norihiko Kinoshita

LR Lead Verifier

On behalf of Lloyd's Register Quality Assurance Limited

10th Floor, Queen's Tower A, 2-3-1 Minatomirai, Nishi-ku, Yokohama, JAPAN

LR reference: YKA00000845

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## Appendix 1: The Scope of Work

LR undertook a limited assurance engagement of the environmental data listed below within the Environmental Report 2021. (The number of pages on the left side of this table below is the page published in the Environmental Report 2021.)

P16	GHG emissions <sup>4</sup>
	Fuel use for transport per amount of sales
	Emissions of VOCs (except for methane)
	Waste emissions per amount of sales
	Landfill waste rate
	Water use per amount of sales (includes overseas location)
	Sales of environmentally conscious products and services
P.17-18	Main raw materials consumption (Paper, Film, Plastic, Metal, Ink, and Others)
	Solvent use
	Acid and alkaline use
	Energy consumption (Electricity, City gas, LNG, LPG, Fuel oil, Steam, and Kerosene)
	Water use
	GHG emissions <sup>4</sup>
	Atmospheric emissions of VOCs
	Water discharged
	Total amount of undesired materials
	Waste emissions
	Landfill waste amount
P.19	Transition of sales of environmentally conscious products and services (including the breakdown of the sales amount of the department)
P.21	Scope 1 and Scope 2 GHG emissions <sup>4</sup> (including the breakdown of Scope 1 and Scope 2 [Market-based])
	Domestic fuel composition
P.22	Fuel use for transport
	Fuel use for transport per amount of sales
	Power consumption at major offices
P.23	Scope 3 GHG emissions <sup>4,7</sup> (Categories 1,2,3,4,5,6,7,9,11, and 12)
P.24	Undesired material generation (including the breakdown of the department)
	Waste emissions (including the breakdown of the department)
P.25	Water use
P.27	Atmospheric emissions of VOCs (includes the breakdown of PRTR and non-PRTR VOCs)
P.28	Chemical Substances Subject to the PRTR Law (includes the breakdown of Release and Transfer amount)

### Verification period

- Fiscal year 2020 (1 April 2020 to 31 March 2021)
- Some overseas plants collect and aggregate the environmental data in the calendar year 2020 (1 January 2020 to 31 December 2020).

<sup>4</sup> GHG quantification is subject to inherent uncertainty.

<sup>7</sup> Regarding Scope 3 GHG emissions, the scope is covered major domestic sites (excluding Hokkaido Coca-Cola Products and the subsidiaries book stores etc.) and major overseas sites (PT DNP Indonesia, DNP Imagingcomm America Corporation, DNP Imagingcomm Asia Sdn. Bhd., and Tien Wah Press (Pte.) Ltd. GHG emissions from the company's own logistics transportation should be partially categorized as Scope 3, but due to difficulties in separating it out, all GHG emissions are calculated as Category 4 of Scope 3.

## **Dai Nippon Printing Co., Ltd.**

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The logo for Dai Nippon Printing Co., Ltd. (DNP) is displayed in a bold, blue, sans-serif font. The letters 'DNP' are closely spaced and occupy the bottom left corner of the page. The entire page is framed by a thick blue border, with a small L-shaped cutout on the left side.