

3

Environmental

Environmental

Executive Summary

Advancing Our Environmental Vision and Long-Term Environmental Targets

Environmental Governance

Achieving a Decarbonized Society

Achieving a Resource Efficient Society

Achieving a Harmonized Society with Nature

Environmental Data

/ Achieving a Harmonized Society with Nature

Efforts to Achieve a Harmonized Society with Nature Approach

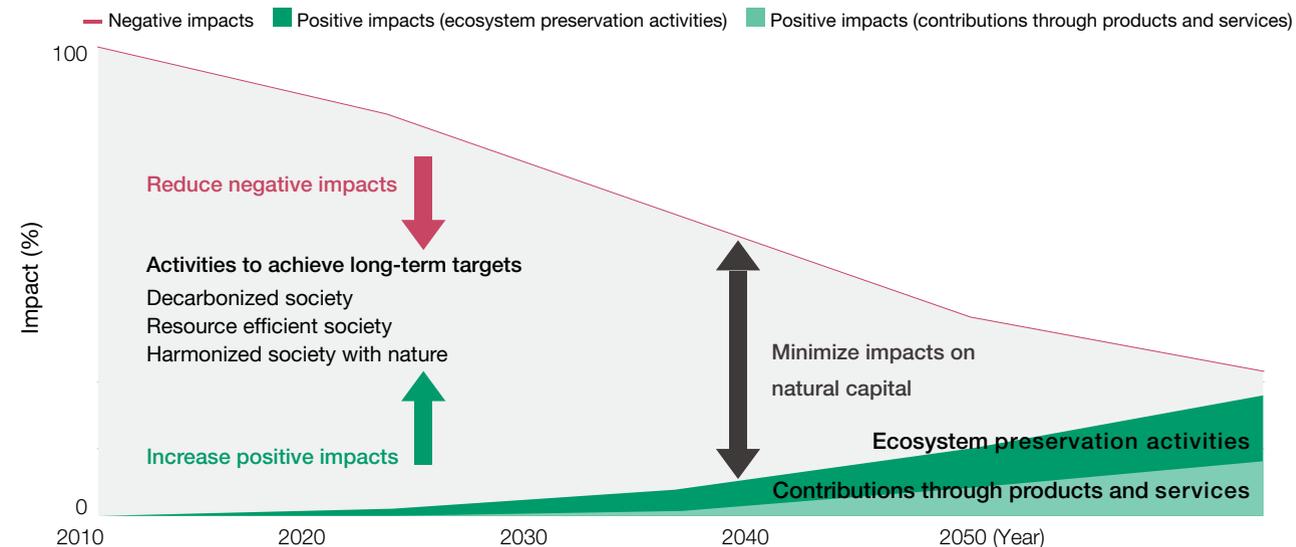
To adequately preserve the ecosystem and achieve a harmonized society with nature so that we may continue to enjoy nature's benefits, we have established targets to minimize our impact on natural capital as part of our long-term environmental targets.

We classify the emission of greenhouse gases and chemical substances into the atmosphere and the generation of waste materials as negative impact activities. Providing products and services that contribute to ecosystem preservation and undertaking social contribution

activities to protect the environment through the preservation of biodiversity and ecosystems are categorized as positive impact activities. We will strive to minimize the gap between them by 2050.

By quantifying Hitachi's positive and negative impact activities across the value chain, we are advancing initiatives to reduce our negative impact and maximize our positive impact.

A Timetable for Minimizing Impacts



Initiatives to Minimize Impacts on Natural Capital

Activities

Hitachi has identified and quantified the negative impacts our business activities have on natural capital with the aim of reducing such impacts. In fiscal 2020, we evaluated the impacts using the latest version of an inventory database (IDEA v2^{*1}) that is needed for calculating negative impacts. According to our estimates, approximately 30% of our negative impacts in fiscal 2020 were related to climate change, and 20%, respectively, to ecotoxicity (air), urban air pollution, and resource consumption. With regard to climate change, we will accelerate the pace of our efforts to realize a decarbonized society and a resource efficient society as the impact of our raw materials procurement is becoming apparent in impact assessments regarding ecotoxicity (air), urban air pollution, and resource consumption. Also, we found negative impacts were reduced by 8% in fiscal 2020 from fiscal 2019. To further reduce our environmental load to minimize our impact on natural capital, we will enhance a wide range of activities such as increasing the energy efficiency of our products and services, advancing factory efficiency, using resources more effectively, and properly managing chemical substances.

As for our positive impact activities, we have been advancing social contribution activities like forest conservation and business activities that directly contribute to ecosystem preservation such as building water treatment

^{*1} IDEA v2: One of Japan's leading inventory databases which is needed to implement LCAs for calculating negative impacts.

3

Environmental

Environmental

Executive Summary

Advancing Our Environmental Vision and Long-Term Environmental Targets

Environmental Governance

Achieving a Decarbonized Society

Achieving a Resource Efficient Society

➤ Achieving a Harmonized Society with Nature

Environmental Data

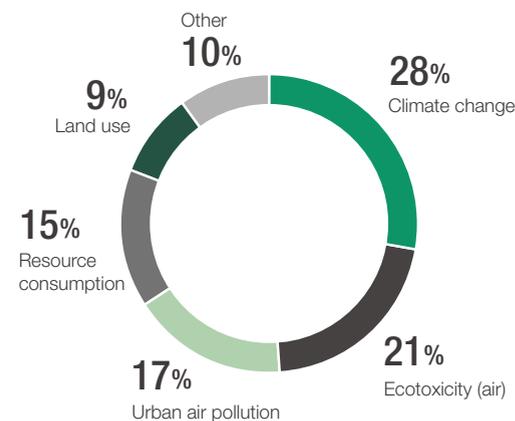
plants. We are also looking to quantify the impact of these activities.

We estimate the benefits gained through our forest conservation activities (flood prevention, water impoundment, water purification, soil loss prevention, and carbon fixation) on an ongoing basis using evaluation methods commonly used in forestry-related public works projects.

Achievements in Fiscal 2020

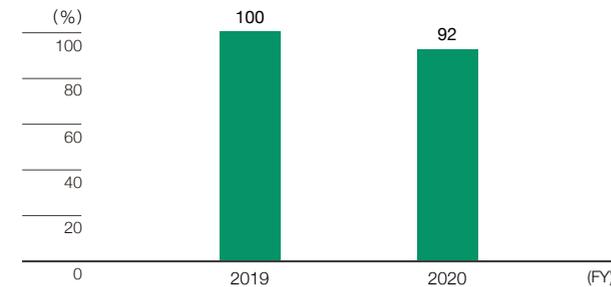
In fiscal 2020, we started collecting data on forested areas targeted for conservation activities using the Environmental Data Collection System (Eco-DS). These data are needed to evaluate forest conservation efforts.

▶ Negative Impact on Natural Capital (FY 2020)



Note: Calculated from version 2 of the Life-cycle Impact Assessment Method based on Endpoint Modeling (LIME2) by using IDEAv2

▶ Negative Impacts on Natural Capital



[Scope of Negative Impact Calculations](#)

Signing the Call to Action Statement, Initiated by Business for Nature

In June 2020, the global Business for Nature coalition issued a Call to Action statement. The aim is to encourage policy makers around the world to adopt policies to “to reverse nature loss in this decade.” Hitachi agrees with this goal and has signed the statement.

The Call to Action states that healthy societies, resilient economies and thriving businesses rely on nature. It urges governments to adopt policies to reverse the loss of nature, and calls for the protection, restoration, and sustainable use of natural resources.

[Business for Nature's Call to Action](#)

3

Environmental

Environmental

Executive Summary

Advancing Our Environmental Vision and Long-Term Environmental Targets

Environmental Governance

Achieving a Decarbonized Society

Achieving a Resource Efficient Society

➤ **Achieving a Harmonized Society with Nature**

Environmental Data

Hitachi
Sustainability
Report
2021

Managing and Reducing Chemical Substances

Managing Chemical Substances

Approach

Hitachi believes that the control and reduction of chemical substances like volatile organic compounds (VOCs), one of the causes of urban air pollution, are important to minimizing our impact on natural capital.

Based on this belief, Hitachi formulated the Regulations for Environmental CSR-Compliant Monozukuri to manage chemical substances at all stages of its operations—from design and development, procurement, and production to quality assurance and shipping. Chemical substances in our products are divided into two categories, prohibited substances and controlled substances, for separate management to respond to legal and regulatory frameworks at shipping destinations. With regard to chemical substances used in our business operations, we reduce risk by assigning three ranks to the use of such substances: prohibited, reduced, and controlled, as well as by educating chemical substance handlers and managers on laws and regulations and on proper risk assessment.

Managing Chemical Substances in Our Products

System Activities

Hitachi designates the chemical substances in our products requiring management as Voluntarily Controlled Chemical Substances. With the basic principle of taking as our model the standards of the EU, where regulations are stringent, we determine and manage controlled chemical substances extensively, regardless of export destination, type of industry,

or purpose of use. Specifically, we distinguish between prohibited substances (Level 1), which are basically illegal to use inside and outside Japan in products (including packaging) but which might be found in products from suppliers, and controlled substances (Level 2), which includes substances we are required to track and manage the use of and substances requiring attention to recycling or appropriate disposal methods. The list of managed substances and levels is revised when necessary based on updates to the EU's REACH*¹ and other regulations, with the aim of adding substances to the list of Voluntarily Controlled Chemical Substances six months before they are officially regulated.

[Hitachi's Voluntarily Controlled Chemical Substances](#)

Achievements in Fiscal 2020

Because five substances including phenol isopropylated phosphate (PIP [3:1]) were to be added to the list of restricted substances under the United States' Toxic Substances Control Act (TSCA*²) in March 2021, we in April 2021 revised them as prohibited substances and controlled substances. As a result, the list of Voluntarily Controlled Chemical Substances now contains 23 prohibited substance groups and 25 controlled substance groups.

*1 REACH: The European Union regulation of Registration, Evaluation, Authorization, and Restriction of Chemicals.

*2 The act comes under the authority of the United States Environmental Protection Agency.

Managing Chemical Substances in Our Business Operations

System Activities

GRI 305-7

Hitachi has been cutting emissions of chemical substances from its factories and other sites through stricter management, such as by expanding the number and scope of controlled chemical substances.

Information on our efforts has been translated into English and Chinese and shared globally with Hitachi Group members. We also follow legally prescribed procedures in measuring and managing emissions*¹ of sulfur oxides (SOx) and nitrogen oxides (NOx), whose measurement is required under the laws and regulations of our business site locations, and are advancing efforts to further restrict emissions.

We comply with Japan's Pollutant Release and Transfer Register (PRTR) Law*² through Groupwide monitoring of chemical substances released into the atmosphere or into public waters, removed outside our plants as waste, or discharged into sewage systems, reporting the results to local governments for each office or plant. Although some substances are exempt from reporting due to their small quantities, our policy is to aggregate and manage data on the handling, emission, and transfer of all PRTR substances totaling 10 kilograms or more per year.

*1 Emissions of SOx and NOx: Calculated from data by business site (measured values, exhaust volume, content rate, etc.).

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

3

Environmental

Environmental

Executive Summary

Advancing Our Environmental Vision and Long-Term Environmental Targets

Environmental Governance

Achieving a Decarbonized Society

Achieving a Resource Efficient Society

Achieving a Harmonized Society with Nature

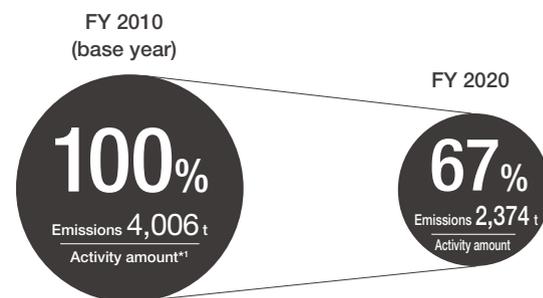
Environmental Data

Achievements in Fiscal 2020

In fiscal 2020, toward the target of reducing atmospheric emissions of chemical substances per unit by 17% from the base year 2010, we were able to achieve a reduction rate of 33%. To reduce the emissions, we are switching from paints containing VOCs to water-soluble and powder paints as well as expanding their use and altering the painting and washing processes.

Environmental Action Plan for 2021 Management Values

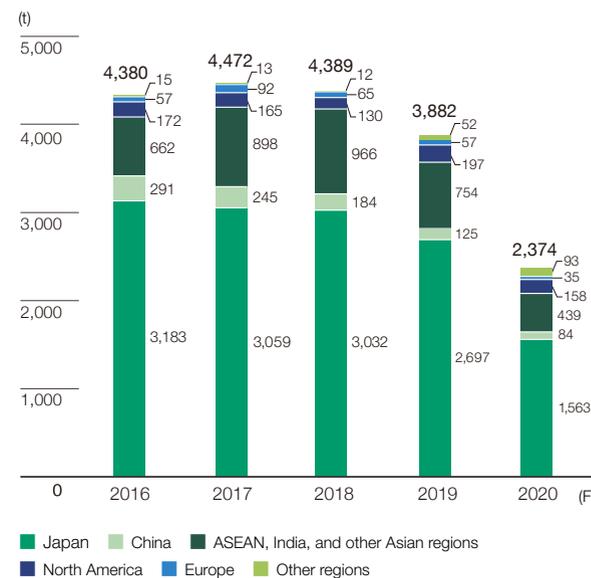
Reduction in Atmospheric Emissions of Chemical Substances per Unit (Hitachi Group)



Reduction in Atmospheric Emissions of Chemical Substances per Unit **33% reduction**
 FY 2020 reduction target rate: 17%

*1 A value closely related to atmospheric emissions of chemical substances at each business site (for example, substances handled, sales, and output)

Reducing Atmospheric Emissions of Chemical Substances (Hitachi Group)



Notes: • Atmospheric emissions of VOCs and other chemical substances are calculated from the content rate included in the ingredients
 • Regional classifications were changed in fiscal 2020, and the past data was recalculated based on this.

[Case studies of Reducing Chemical Substances in Our Business Activities](#)

3

Environmental

Environmental

Executive Summary

Advancing Our Environmental Vision and Long-Term Environmental Targets

Environmental Governance

Achieving a Decarbonized Society

Achieving a Resource Efficient Society

➤ Achieving a Harmonized Society with Nature

Environmental Data

Preserving Ecosystems

Initiatives to Preserve Ecosystems

Approach **Activities** GRI 304-3

At Hitachi, we seek to reduce negative impacts on natural capital caused by business activities and to promote positive impacts, such as by undertaking social contribution activities to protect nature and providing products and services that help preserve the ecosystem, thereby minimizing our impact on natural capital by fiscal 2050 and realizing a society in harmony with nature.

Hitachi created an Ecosystem Preservation Activities Menu citing the specific activities to be undertaken to promote the preservation of the ecosystem, including not only CO₂ emission reductions, resource recycling, and chemical substances management but also activities that are difficult to quantify but are nonetheless important, such as the protection of rare species and efforts to make biodiversity a criterion when making investment decisions. Each business site sets its goals and promotes initiatives based on the Ecosystem Preservation Activities Menu.

➤ Ecosystem Preservation Activities Menu

	Category	Activities taken	No. of menu items
Business sites	Production	Reducing use of resources that cannot be reused	4
	Transportation	Using packaging that takes ecosystem into consideration	7
	Collection, disposal, and recycling	Reducing hazardous materials in products	2
	Product planning, development, and design	During R&D, estimating impact on biodiversity during a product's life cycle and implementing, if needed, mitigation measures	3
	Site management	Using native species, setting up biotopes	17
	Water use	Using rainwater	1
Value chain	Investment and acquisition	Confirming impacts on biodiversity when investing in or acquiring a business, and implementing measures to minimize such impacts	1
	Market entry and expansion	Including biodiversity as an investment criterion	1
	Business development	Developing products and services to purify water, air, and soil and expanding such businesses	1
	Procurement	Preferentially procuring paper and other office supplies that take biodiversity into consideration	17
	Transportation	Implementing ballast water measures during marine transportation	2
	Sales	Implementing sales expansion of products that take biodiversity into consideration	9
	Collection, disposal, and recycling	Reusing and recycling components	7
	Entire value chain	Promoting the use of renewable energy	1
Community	Engagement	Promoting employee activities outside the company	3
	Social contribution	Implementing desert greening and afforestation activities	12
Water use that takes watershed ecosystems into consideration	Water intake	Observing and collecting biota information (impact on ecosystem depending on intake volume)	14
	Water discharge	Setting up biota management indicators and making observations (species and numbers of inhabiting organisms)	14

[Case studies of Promoting Ecosystem Preservation](#)