

VI. Report on Environmental Aspects

1. Environmental management

(1) The Hitachi Metals Group's Environmental Vision

The Hitachi Metals Group promotes a "Decarbonized Society," "Resource Efficient Society," and "Harmonized Society with Nature" as the three key pillars of its Environmental Vision. We aim to achieve higher quality lifestyles and a sustainable society alike by resolving environmental issues in collaboration with our stakeholders. The Group will implement the FY2020 Environmental Action Plan by category, working together with Works, in order to reduce CO₂ emissions, use water and other resources efficiently, and minimize impacts on natural capital throughout its value chain. In addition, we have set long-term targets to achieve carbon neutrality—effectively zero carbon emissions—by 2050, an approach to realizing the vision of a decarbonized society by 2050.

Hitachi Metals Group Codes of Conduct (excerpt)

Toward a Sustainable Society

1. We will contribute to resolving social issues by promoting innovative solutions, accelerating collaborative creation with partners and stakeholders, and further integrating social and environmental responsibility into our business activities.
2. We will strive to develop technologies that contribute to social development and use them with due consideration of their impact on society.
3. We envision a low-carbon society, a resource efficient society, and a harmonized society with nature.
To this end, we will endeavor to reduce CO₂ emissions, use water and other resources efficiently, and minimize impacts on natural capital throughout our value chain.
4. As a corporate citizen, we will make efforts to build a rapport with communities and contribute to their development by working together to resolve social issues.

(2) Hitachi Metals Group Basic Environmental Protection Policies

Hitachi Metals Group Basic Environmental Protection Policies

Philosophy

Hitachi Metals' Corporate Creed is to "contribute to society by being the best enterprise." In line with this, we regard it as crucial to ensure that humanity's shared environmental resources can be passed down to future generations in the best possible condition. Accordingly, throughout our operations we treat environmental considerations as an issue of the highest importance and strive actively to promote environmental protection efforts on both the global and local community levels.

Slogan

- With a deep awareness that environmental protection is a major issue for all humanity, fulfill social responsibilities by striving to establish a sustainable society in harmony with the environment, regarding it as one of the essential aspects of corporate activity.
- Contribute to society by developing highly reliable technologies and products in response to needs for environmental protection and the limited nature of resources.

Business Conduct Guidelines

1. Compliance with environmental laws and regulations, and prevention of pollution

Comply with all applicable laws and regulations concerning environmental issues on all levels, from international laws to national, regional, and local pacts. Establish voluntary environmental standards as needed in order to assure compliance.

Identify potential environmental problems and take action to prevent pollution. In the event that environmental problems have happened, take appropriate countermeasures to minimize environmental impact.

2. Maintenance of environmental organizational structure and enhancement of environmental supervision

Maintain an organizational structure that includes leadership by an executive responsible for managing environmental issues, as well as an underlying administrative structure. Promote environmental protection activities by applying voluntary environmental standards and establishing clear environmental-related goals.

Additionally, strive to continually improve our environmental management through confirming that our environmental protection activities are being carried out in an adequate, effective, and proper manner.

3. Promotion of global manufacturing with consideration of LCA (Life Cycle Assessment)

Endeavor to reduce the environmental burden in the entire life cycle, including R&D, product design, manufacture, distribution, sale, use, and disposal. Promote the following as global manufacturing priorities:

1) Environment-conscious products, 2) prevention of climate change, 3) conservation and recycling of resources, 4) chemical management, and 5) conservation of biodiversity.

4. Environmental consideration at sites all over the world

Consider environmental impact in the areas around our manufacturing sites, and strive to carry out policies responsive to the requirements and needs of the local communities.

5. Education and training to increase environmental awareness

Educate and train employees about environmental protection and the importance of compliance with environmental laws and regulations to raise employees' awareness of environment with a broad perspective.

6. Information disclosure

Promote positive communication through the disclosure of information regarding environmental protection activities to stakeholders, and strengthen the mutual understanding and collaborative relationship.

Formulated: April 1, 2010

Revised: December 1, 2016

Environmental management within the Hitachi Metals Group hinges on the Environmental Strategy Department, Technology, Research and Development Division, which promotes environmental management activities in cooperation with business division environmental managers appointed in the business divisions. The executive officer in charge of environmental issues at Hitachi Metals heads the Environmental Committee.

Especially, to advance environmental management suited to a corporation that does business globally, we strive to ensure that the basic environmental protection policies are thoroughly shared within the Hitachi Metals Group, taking into account national and regional differences. Our efforts to reduce environmental burden and our response to environmental risk are based on these shared policies. Policies and targets related to environmental activities are reviewed and revised annually at the Hitachi Metals Group Environmental Committee. Reports on environmental activities are presented to a Board of Directors meeting and an Executive Committee meeting on an annual basis.

The organizational chart illustrates the hierarchy of environmental management within the Hitachi Metals Group. At the top is the President & CEO, who oversees the Executive Officer in Charge of Environmental Issues. This officer is supported by the Technology, Research & Development Division's Environmental Strategy Department and the Hitachi Metals Group Environmental Committee. The structure then branches into Corporate and Business Headquarters. The Business Headquarters oversees Business Division Environmental Managers, who in turn manage Each Business Unit. Each Business Unit is further divided into Each Works, Group Companies in Japan, and Group Companies Outside Japan. Each Works has General Managers of Works, who oversee the Environmental Committee, Internal Environmental Audit Team, Environmental Managers, Specialty Sectional Meeting, and Each Division. The Group Companies in Japan and Group Companies Outside Japan each have their own Executive Officer in Charge of Environmental Issues. The chart also indicates that the structure for Group Companies in Japan and Group Companies Outside Japan is the same as Figure 1.

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graph TD
    CEO[President & CEO] --> EOI[Executive Officer in Charge of Environmental Issues]
    EOI --> TRD[Technology, Research & Development Division; Environmental Strategy Department]
    EOI --> HMEC[Hitachi Metals Group Environmental Committee¹]
    EOI --> Corporate[Corporate]
    EOI --> BHQ[Business Headquarters]
    Corporate --> GM[General Managers]
    BHQ --> BDEM[Business Division Environmental Managers]
    BDEM --> EBU[Each Business Unit]
    EBU --> EW[Each Works]
    EBU --> GCPJ[Group Companies in Japan]
    EBU --> GCOJ[Group Companies: Outside Japan]
    EW --> GMW[General Managers of Works]
    GMW --> EC[Environmental Committee]
    GMW --> IEAT[Internal Environmental Audit Team]
    GMW --> EM[Environmental Managers]
    GMW --> SSM[Specialty Sectional Meeting]
    GMW --> ED[Each Division]
    GCPJ --> EOI_J[Executive Officer in Charge of Environmental Issues]
    GCOJ --> EOI_OJ[Executive Officer in Charge of Environmental Issues]
    EOI_J --> Same1[Same as Figure 1]
    EOI_OJ --> Same2[Same as Figure 1]
  
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Executive officer in charge of environmental issues, environmental managers at the business divisions, environmental managers at the offices, the general managers of corporate divisions, the executive officers in charge of environmental issues of Group companies, and the staff members of the Environmental Strategy Department of the Technology, Research & Development Division.

(4) Fiscal 2019–Fiscal 2021 Medium-Term Environmental Action Plan and Fiscal 2020 Results

The Hitachi Metals Group's Medium-Term Environmental Action Plan for fiscal 2019 to fiscal 2021, along with results and assessments for fiscal 2020, are summarized in the table below.

		Item	Action Target	2019			2020			2021
				Target	Actual	Rating	Target	Actual	Rating	Target
Governance		Adhere to environmental compliance practices and reduce risks	Internal audit implementation rate	100%	100%	○	100%	100%	○	100%
		Cultivate environmental literacy	Implement environmental auditor development training	At least once	Twice	○	At least once	Once	○	At least once
			e-learning Participation rate	100%	-*1	-*1	100%	92%	△	100%
		Improve environmental activity level	GREEN21-2021	140 GP	166 GP	○	210 GP	180 GP	×	280 GP
Low-carbon society	Products	Sales ratio of key environmentally conscious products		23%	20.2%	×	24%	21.2%	×	25%
		Conduct environmentally conscious design assessments (20 over three years)		7	11	○	9 (Two years)	9	○	9 (Two years)
	Factory	Reduce CO ₂ emissions from Works	Improvement ratio of CO ₂ emissions per production unit (vs. FY2010)	5%	1.4%	×	6%	-2.3%	×	7%
		Reduce CO ₂ emissions during transportation	Improvement ratio of energy consumption per transportation unit (vs. FY2010)	4%	-4.2%	×	5%	4.6%	△	6%
Resource efficient society	Resource circulation	Reduce and recycle waste	Improvement in the rate of waste and valuables generated per production unit (vs. FY2010)	12%	16.6%	○	13%	15.2%	○	14%
			Waste landfill rate ^{*2}	14%	13.7%	○	13%	10.9%	○	12%
	Water resources	Improve water-use efficiency	Improvement ratio of water use per production unit (vs. FY2010)	22%	22.2%	○	24%	12.2%	×	26%
Society in harmony with nature	Chemical Substances	Reduce output of chemical substances	Improvement ratio of per unit rate of chemical substances released into the atmosphere ^{*3}	26%	22.6%	×	27%	34.2%	○	25%
	Preservation of ecosystems	Impact on natural capital	Forest conservation activities (number of initiatives)	4	4	○	4	2	×	4
		Preservation of ecosystems	Activities for preservation of ecosystems (cumulative total number of initiatives)	4	17	○	8	9	○	12
Collaboration with stakeholders		Social contribution	Community cleanup activities, Lights Down campaigns, etc.	Continue activities and reduce environmental impact in aspects other than the protection of ecosystems		○	Continue activities and reduce environmental impact in aspects other than the protection of ecosystems		○	Continue activities and reduce environment al impact in aspects other than the protection of ecosystems

Achievement rating: ○: fully achieved; △: 90% achieved; ×: not achieved

*1. Environmental e-learning is implemented as new general environmental education starting from FY2020 after educational methods and contents (teaching materials) are reviewed. In FY2019, e-learning was not conducted as it was under preparation.

At each business site, general environmental education is conducted as usual.

*2. Excluding household waste, hazardous waste, and in-house landfills (landfills on the Company's sites)

*3. Excluding Kumagaya Light Alloy Plant from Actual values for fiscal 2020, due to its withdrawal from business

(5) Environmental Accounting

The Hitachi Metals Group has introduced environmental accounting to allocate corporate resources appropriately and continuously improve the efficiency of environmental investments and activities. The Group also aims to increase the understanding of its stakeholders by disclosing information about the effect and efficiency of its activities.

Environmental costs include things like environment-related capital investment, equipment maintenance and administration costs, and R&D costs.

Environmental effects include economic effects measured in monetary terms and categorized under waste processing and recycling, energy conservation, and others (R&D, recycling of products and packing materials, etc.).

The results for fiscal 2020 are as follows:

(a) Environmental Costs

Our environmental costs in fiscal 2020 were 7.80 billion yen in expenses and 0.58 billion yen in investment, for a total of 8.38 billion yen.

(b) Environmental Effects

The economic effects amounted to a total of 10.47 billion yen, primarily due to waste elimination, recycling, and energy conservation.

(c) Results of Environmental Accounting

■Environmental Costs

(100 million yen)

Cost classification			FY2019		FY2020	
			Expense	Investment	Expense	Investment
	Business area costs	Pollution prevention	14.2	4.1	14.3	1.5
		Global environmental preservation	19.3	24.1	19.0	3.9
		Resource recycling	25.6	5.6	23.8	0.5
		Subtotal	59.1	33.8	57.1	5.8
	Upstream and downstream costs		3.3	2.8	2.4	0.0
	Management activity costs		7.0	6.3	6.9	0.0
	Research and development costs		16.5	13.8	11.0	0.0
	Community activity costs		0.1	0.0	0.0	0.0
	Other		1.4	0.4	0.6	0.0
	Total		82.4	34.0	78.0	5.8

■Environmental Effects

(100 million yen)

Economic Effects	Item	FY2019	FY2020
	Waste processing and recycling	111.3	100.5
	Energy conservation	1.7	1.8
	Other	3.1	2.4
	116.0	62.8	104.7

- Scope of disclosure: The Hitachi Metals Group in Japan
- Calculation period: April 1, 2020, to March 31, 2021

(6) Integrated Environmental Management System (Integrated EMS*1)

The Hitachi Metals Group has introduced ISO 14001 as its environmental management system. We began acquiring certification for individual factories in 1997, and then built integrated Environmental Management Systems (integrated EMS*1) at each segment of the Business Headquarters (specialty steel as well as functional components and equipment of the Advanced Metals Division, and magnetic materials and applications as well as wires, cables, and related products of the Advanced Components and Materials Division). This action was prompted by the increasing necessity of close links with headquarters departments in areas such as engineering, planning, and sales, to comply with product environmental regulations and expand sales of eco-products.

ISO 14001:2015, revised in September 2015, requires that environmental management be in balance with the strategic direction of the business and integrated with business processes. We strove to transition to the 2015 requirements as we worked toward an integrated EMS for each segment of the Business Headquarters, and completed the transition during fiscal 2017.

Since April 2019, we have shifted to a two-division organization consisting of the Advanced Metals Division and the Advanced Components and Materials Division. However, the EMS of each segment (the former four internal companies) has been implemented within the new system of the Business Headquarters.

*1. Environmental Management System

(7) Environmental Auditing

The Environmental Strategy Department, Technology, Research and Development Division, conducts companywide environmental audits in an attempt to achieve thorough adherence and compliance with environment-related laws and regulations, appropriate EMS management regarding the environmental action plan, and comprehensively mitigate environmental risks.

In fiscal 2020, environmental affairs audits were conducted at eight sites (six in Japan and two outside Japan) in conjunction with internal audits. We confirmed that there were no major non-conformities requiring immediate administrative guidance. Although 23 minor non-conformities were revealed, actions to correct them are underway according to plan.

(8) Environmental Education and Awareness Promotion

The Hitachi Metals Group has set up training systems as part of our EMS, and has established clearly defined roles for companywide training and individual factory-level training for further improvement of the employees' environmental awareness as well as the enhancement of knowledge and skills relevant to each workplace.

Environmental Training Systems

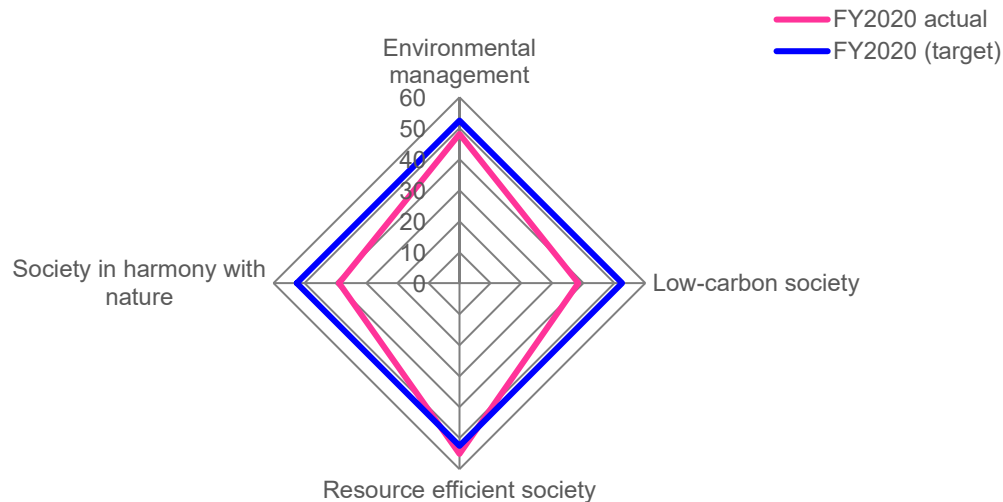
Target		Description	
General education	All employees	e-learning	Eco-mind training (Hitachi Group)
	On-site employees	On-site environmental education	General education on ISO14001 and environmental management performed by general employees
Professional education	New supervisor	Education for new supervisor	Environmental issues and workplace responsibilities
	Environmental Internal Auditors	Environmental Internal Auditor training	Environmental laws and regulations, EMS knowledge, and environmental skills
	Environmental officers	Environmental officer training	Education for staff responsible for environmental affairs, and comprehensive risk management
	Legally qualified personnel	Qualification-based training	Education to develop legally qualified personnel (including external training)

(9) Environmental Management Level “GREEN21-2021” Activities

The Hitachi Group promotes “GREEN21” as a system to assess point scores for ongoing improvement in environmental activities and for raising the level of activity. The Group revised GREEN21 for the fifth time in fiscal 2019, and pursues activities under GREEN21-2021 during the three years from fiscal 2019 to fiscal 2021.

In GREEN21-2021, activities are categorized under the four items in the table below, and are assessed and scored in accordance with the achievement status of the Environmental Action Plan. Additional points are provided for upward revision of targets, external awards, etc.

In fiscal 2020, the Hitachi Metals Group scored 180 Green Points (GPs) in the four categories, failing to achieve our target of 210 GPs. We will continue our efforts to achieve the targets of the Environmental Action Plan and make further progress under GREEN21.



No.	Category (Rating Form)	Main Rating Contents
1	Environmental management	Enhancement of global environmental management; enhancement of management at small and medium size sites; HR development for environmental management; legal compliance; decreasing complaints
2	Low-carbon society	CO ₂ emissions reduction amount/rate related to products and services Improvement of CO ₂ emissions per production unit Reduction of CO ₂ emissions attributable to transportation (shippers)
3	Resource efficient society	Improvement rate of water usage per production unit; reduction of water usage Response to water-related risks Reduction of waste valuable resources; improvement of such resources per unit; waste landfill rate; raw material usage status; product recycling implementation status
4	Society in harmony with nature	Improvement ratio of per unit rate of chemical substances released into the atmosphere Activities for preservation of ecosystems

GREEN21-2021 Targets and FY2020 Achievement

(FY)	FY2019	FY2020	FY2021
Target	140	210	280
Actual	166	180	—

(10) The State of External Communications about the Environment

(a) Participation in Exhibitions

The Hitachi Metals Group participates in various exhibitions and introduces its environmentally conscious lineup of technologies that help customers make their products more efficient, compact, and lightweight, and products that feature longer-life performance. The Group tries to show how its products contribute to the reducing of environmental burden.

Main Exhibitions in which the Hitachi Metals Group Participated (Fiscal 2020)

Date	Exhibition (location)	Exhibited by HitachiMetals
Sep. 8-19, Sep. 28-Oct. 2, 2020	TECHNO-FRONTTIER 2020 (Virtual Exhibition)	Products from five areas, including: core materials for motors: battery-related components; and aluminum lightweight housing, selected under the theme of "Collaboration for Innovation—Creating New Value through Combining Materials"
Sep. 16-19, 2020	22nd China International Industry Fair (Shanghai, China)	Heat-resistant, flame-retardant, and flex-resistant cables for industrial robots, etc.
Nov. 4-6, 2020	Gas & Heating China 2020 (China)	SOFLEX gas tubes, etc.

(b) External Awards

The Hitachi Metals Group's products and environmental activities won the following external awards in fiscal 2020 for their contribution to energy conservation and to reductions in size and weight.

Major External Environmental Awards (Fiscal 2020)

Company	Product/technology	Award	Offered by	Details
Waupaca Foundry, Inc. Plant5	Efficient utilization of industrial energy and water, etc.	2020 Better Project Award	US Department of Energy	Melting efficiency improvement and significant energy conservation through waste heat utilization for cupola (melting furnace)

(11) Consideration for the Preservation of Biodiversity

The Hitachi Metals Group's ecosystem preservation measures include tree planting and forest conservation activities, cleanup activities in areas surrounding plants, and environmental education.

(a) Examples of Major Ecosystem Preservation, Tree Planting, Forest Conservation, and Social Contribution Activities



Cleanup activities around rivers
(San Technology, Inc.)



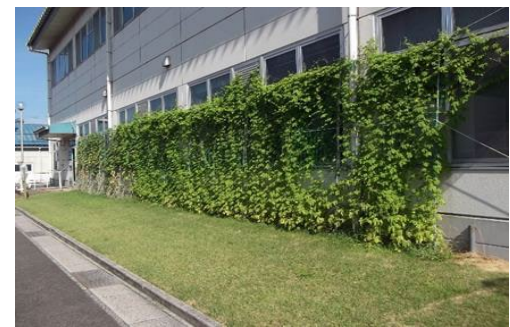
Tree planting activities
(Hitachi Cable Vietnam Co., Ltd.)



"Cleaning activities around the Works"
(Hitachi Ferrite Electronics, Ltd.)



"Cleaning activities around the Works"
(Hitachi Metals Neomaterial, Ltd.)



"Green Curtain campaign" (Hitachi Metals, Ltd.)