# 6 Sustainability



## The following are the points we would like you to understand in this section

Nippon Steel recognizes that sustainability initiatives are one of the most important issues and form the base that supports the very existence and growth of the Company. Considering our shareholders' expectations and our Corporate Philosophy, Values, and growth strategies, we have identified the initiatives that should be focused on as materiality of sustainability issues (priority issues) to set targets and KPIs.

**[Identified materiality (priority issues)]**

1. Safety, environment, and disaster prevention
2. Quality
3. Research and development and intellectual property
4. Production
5. Human resources
6. Coexistence with Communities
7. Corporate value enhancement and profit distribution

Thorough implementation of compliance

# Materiality of Sustainability Issues

## Identification of materiality

In consideration of our stakeholders' expectations, we have defined the materiality based on the following principles.

We believe that tackling these materiality issues will contribute to the achievement of the United Nations' 2030 Agenda for Sustainable Development, featuring Sustainable Development Goals (SDGs).

**[Process to identify materiality]**


## Nippon Steel's Materiality

### Materiality with due consideration of the corporate philosophy and priorities in manufacturing

Our Corporate Philosophy (Our Values) states: "The Nippon Steel Corporation Group will pursue world-leading technologies and manufacturing capabilities, and contribute to society by providing excellent products and services."

Concerning "provision of excellent products and services," our critical mission as a responsible manufacturing company is to reliably produce and deliver quality products that satisfy customers. Needless to say, the prerequisites to enable this mission include "safety, environment, and disaster prevention" as well as thorough compliance with rules and regulations.

The "world-leading technologies and manufacturing capabilities" are realized by our human capital. To enhance on-site capabilities and technological advancement, thereby strengthening our manufacturing capabilities, securing and fostering outstanding personnel is a critical priority. We firmly believe that development of human resources and diversity & inclusion, as well as respect for human rights, are the basics for our employees to work vigorously.

With regard to the relationship with society, we must maintain a good relationship with the community where our steelworks or other facilities are located. This is indispensable for us to continue operating business in the future. We have pledged to operate in an environmentally friendly manner and maintain good communication with local communities, as a corporate citizen.

### Materiality with due consideration of the Company's value creating process and potential changes in business environment

A base of our value creation process is to use a diverse range of financial/non-financial assets and competitive advantages, and to provide products and solutions to customers. In order to reproduce such processes, stable production and continual profit generation are indispensable.

In addition, having positioned environmental matters as priority issues that underlie our corporate management, we have pledged to contribute to the creation of a society oriented toward environmental conservation and with low environmental burden. We have also been engaged in building a circular economy through reduction of $CO_2$ emissions by the three "Eco" initiatives and innovative technology development, and recycling of industrial waste (such as plastics).

Concerning the climate change problems that affect the survival of humanity, we are making efforts aimed at carbon neutrality by 2050 from two aspects: Provision of high-performance steel products and solutions to reduce $CO_2$ emission of society as a whole, and breakthrough technology development to decarbonize steelmaking processes.

### Corporate value enhancement and profit distribution

We are committed to continuing operations as a sustainably growing company by generating profit and raising corporate value from business activities, including sustainability initiatives. We will also contribute to society by providing excellent products and services, and distributing profit to employees, government, shareholders, and other stakeholders.

### Thorough implementation of compliance

As a responsible leading company, we thoroughly adhere to laws and regulations, which is fundamental to all of our activities. It should be achieved by our independent efforts, based on our corporate philosophy, value, code of conduct and alike.

## Materiality, KPIs and major initiatives in FY2024

# 1 Safety, environment, and disaster prevention

| Materiality | | Target and KPI | Main Initiatives and Achievements in FY2024 (including some results in 2024) | |
|---|---|---|---|---|
| 1 **Safety and health** P.105 | | • Lost time injury frequency rate: **0.10** or less<br>• Zero fatalities | • Fostered a shared crisis awareness and maintained vigilance to build a disciplined workplace<br>• Prevented accidents caused by rule violations and inadequate TBMs and developed personnel responsible for safety and health activities<br>• Continued equipment measures based on risk assessment.<br>• Established a safety and health management system, operated meetings with an emphasis on discussion and dialogue, and promoted the establishment and advancement of safety management through "selection and concentration" | • Lost time injury frequency rate: **0.18**<br>• Fatal accidents: **2** (2024) |
| 2 **Environment** | **1) Promotion of climate change measures** | [Carbon Neutral Vision 2050 Promotion of $CO_2$ reduction in total] P.36<br>• Target in 2030<br>**30**% reduction in $CO_2$ emissions (compared to 2013)<br>• Vision for 2050<br>**Carbon neutral** | • [High-grade steel production in large size EAF]<br>Decided conversion from blast furnace process to EAF process at the Yawata Area of the Kyushu Works, and investment in EAFs at the Hirohata Area of the Setouchi Works and the Yamaguchi Works (Shunan).<br>• [Hydrogen direct reduction of iron (DRI)] [High-grade steel production in large size EAFs]<br>In HyDreams™, integrated development base for large size EAF and DRI production at Hasaki R&D Center, completed the installation and initiation of trial operations of a test electric furnace and promoting the construction of test shaft furnace.<br>• [Hydrogen injection into BF]<br>Confirmed the world's highest level of **43**% $CO_2$ emissions reduction in the Super COURSE50 test furnace.<br>• [CCUS]<br>Participated in a survey and study of basic design of three advanced CCS projects for Japan Organization for Metals and Energy Security (JOGMEC).<br>• NSCarbolex Neutral<br>Inquiries and adoption expanded in various areas including the private sector (domestic/overseas construction, manufacturing) and the public sector (public civil engineering, etc.) | P.38-43 |
| | | [Implementation of "Eco Process"] P.96<br>• Maintained high-level effective use of energy | • Effective use of by-product gas (coke oven gas, blast furnace gas, etc.) and waste heat | • Utilization ratio of byproduct gas: **100**%<br>• Use of waste heat in steam generation: **74**%<br>• Rate of use of in-house generated energy in power generation: **68**% |
| | | • Promoted adoption of advanced energy-saving technology | • Adopted high-efficiency power generation equipment and oxygen plant: regeneration burner in reheating furnace | • Investment cost for energy-saving: ¥**6.9** bn |
| | | [Enhancement of Eco Products™] P.49, P156<br>• Contributed to emission reductions when using end products through the supply of high-performance steel products. | • Expanded the supply of NSCarbolex Solution applicable products/technology<br>• Expanded the acquisition of the SuMPO EPD (former Eco-Leaf) environmental label | • Acquired over 80 labels that cover almost all the products |
| | | [Contribute with Eco Solutions] P.89<br>• Transfer and dissemination of the world-leading energy-saving technology to help $CO_2$ emissions reduction globally | • Growing cumulative CDQ delivery record by Nippon Steel Engineering in the Group | • **147** CDQ cumulative units (FY2023) (contributing to **31.38** mn t-$CO_2$ reduction) |

# Materiality, KPIs and major initiatives in FY2024

## Safety, environment, and disaster prevention

| Materiality | | Target and KPI | Main Initiatives and Achievements in FY2024 (including some results in 2024) | |
|---|---|---|---|---|
| 2 Environment | 2) Contribution to creation of a circular economy | [Promote internal zero emissions] P.94<br>• Reduction in final disposal amount **263,000** tons (FY2025 target) | • Promotion of recycling of by-products (slag, dust, sludge, etc.) in and out of the Company | • Final waste disposal: **257,000** tons |
| | | [Realization of recycling of waste generated in society] P.95<br>• Establishment of a waste plastics recycling system to expand its collection volume | • Aggressive promotion of recycling treatment, according to the Chemical Recycling Act | • Amount of plastic waste from packaging/ container disposed: **140,000** tons |
| | 3) Biodiversity Conservation and Nature Positive P.98 | [Contribution to the conservation of biodiversity and nature positive] | • Continued consideration of obtaining certification for nature symbiosis sites<br>• Promoted activities of the Creation of Hometown Forests at steelworks<br>• Promoted activities of the Creation of Sea Forests | • Application in progress for H1 2025<br>• Greenery space: **849** ha<br>• Creation of Sea Forests at **70** spots in total |
| | 4) Promotion of environmental risk management P.82 | [Protection of the air environment]<br>• Maintaining low-level emissions of NOx and SOx | • Installment of equipment that reduces SOx and NOx emissions; shifting to low-sulfur fuel; adoption of low NOx regenerating burners | • SOx: **11** mn Nm³<br>• NOx: **22** mn Nm³ |
| | | • Maintaining of lower discharge levels than voluntary targets in chemical substances<br>• Emission of VOC (Volatile Organic Compounds): **1,106** tons/year (down 30% vs. FY2000)<br>• Benzene: **172** tons/year (voluntary target, along with the government target) | • Continuing efforts based on the voluntary reduction plan | • VOC: **521** tons/year<br>• Benzene: **73** tons/year |
| | | [Water environment preservation]<br>• Recycling of water; high-level stable use of recycled water | • Water treatment, recycling and reuse of freshwater used by the Company | • Use of recycled water: app. **90**% |
| 3 Disaster prevention P.107 | | [Reducing disaster risks to zero, and group-wide sharing of effective measures]<br>• Serious disaster-related accidents: **0** | • Promoted activities to prevent recurrence and prevention of disaster-related accidents based on risk assessment<br>• Promoted initial response training aimed at minimizing damage when a risk occurs<br>• Implemented various monitoring (audits) as a survey of disaster prevention activities Evaluation of disaster prevention activities through third-party monitoring, hearings from head office management, and self-monitoring by steelworks disaster prevention managers | • Serious disaster-related accidents: **0** (2024) |

## Materiality, KPIs and major initiatives in FY2024

# 2 Quality

| Materiality | Target and KPI | Main Initiatives and Achievements in FY2024 |
|---|---|---|
| **1 Quality control and guarantee** P.108 | • Systemization and automation aimed at more credibility in testing and inspection | • To reduce risks caused by human intervention in shipment decision items, promoting system-based automation including automatic data input and pass/fail judgments within the system<br>• Advancing the development and introduction of AI recognition models for automatic judgment of metallographic structure and reading of marks on products |

# 3 Research and development and intellectual property

| Materiality | Target and KPI | Main Initiatives and Achievements in FY2024 | |
|---|---|---|---|
| **1 Research and development and intellectual property investment/utilization** P.50 | • Promotion of strategic research and development aimed at sustainable business growth | • Actively promoted research and development related to priority issues such as product sophistication, process efficiency improvement, and the development of carbon-neutral-oriented innovative processes | • R&D expenses: ¥**80.7** bn (consolidated) |
| | • Respect and strategic protection of intellectual property and enhancement of its utilization | • Promoted strategic use of intellectual property by strengthening patent applications related to priority issues, response to infringement of patent rights, technical tie-ups, and other means | • The number of patents held: app. **35,000** (16,000 in Japan and 19,000 overseas) |
| **2 Solutions that result in customer satisfaction** Data Book P.51 | • Enhancing recognition from customers, government, and institutions | • Recipient of the 2025 (60th) Japan Society for Technology of Plasticity Award "JSTP Medal," the 2025 Commendation for Science and Technology by the Minister of MEXT (Development Category), and the 2025 Stainless Steel Industry Award, Gold Prize in the Sustainability Category and Silver Prize in the Marketing Development Category, among others | • Number of awards from customers, government, and institutions: **9** |

# 4 Production

| Materiality | Target and KPI | Main Initiatives and Achievements in FY2024 |
|---|---|---|
| **1 Stable production and supply** P.109 | • Initiatives for more stable production and supply (hardware and software) | • Enhancement of the stable supply system by promoting measures to expand the electrical steel sheet capacity and improve quality in Setouchi Works Hirohata Area and Kyushu Works Yawata Area<br>• Standardization of veterans' operational skills and extended use of experts<br>• Use of IoT and AI for operational support, improved efficiency of facility inspection and operation monitoring, and reinforcement of predictive monitoring |

## Materiality, KPIs and major initiatives in FY2024

# 5 Human resources

| Materiality | Target and KPI | Main Initiatives and Achievements in FY2024 | |
|---|---|---|---|
| **1 HR securing** P.112 | • Secured talent to realize the management strategy | • Recruitment initiatives: new graduates, postdoctoral researchers, and experienced professionals, including alumni hiring<br>• PR initiatives to enhance corporate recognition<br>• Initiatives to raise retention rate | • Turnover rate: **1.6**% |
| **2 Human capital development** P.112 | • Promotion of measures to develop human resources facilitating enhancement of on-site capabilities and technological advancement | • Promoted various measures to maximize human resources to enhance their productivity and technological advancement | • Hours of training and education: **940,000** hours/year (33 hours/person, year) |
| **3 Diversity & inclusion** P.114 | • The number of female employees in management positions: at least **2** times, (vs. 36 in FY2020), and **3** times as target in 2025; at least **4** times, and **7** times as target by 2030<br>• Achieving a **100**% combined utilization rate of childcare leave and childcare-related leave for male employees<br>• The ratio of paid holidays taken: **75**% or higher<br>• Wellness management aimed at maximizing people's ability up to the age of 65, and support to enhance mental and physical health | • Continued to actively recruit women, implement measures to improve the retention rate, support career development and work-life balance, and provide education for supervisors<br>• Continued to expand the system and improve the environment to realize flexible work styles and holidays<br>• Continued various initiatives to promote mental and physical health | • Number of women in managerial positions: **91** (as of April 2025)<br>• Male childcare leave utilization rate: **77**% (Combined utilization rate of male childcare leave and childcare-related leave: 100%)<br>• Ratio of paid holidays taken: **80.0**% |
| **4 Respect for human rights** P.117 | • Establishment of mechanisms of human rights due diligence and implementation of it to identify and prevent or mitigate negative impact on human rights<br>• Appropriate response for corrective actions or remedies, if it becomes clear that our business activities have caused or contributed to a negative impact on human rights | • Established the Nippon Steel Group Human Rights Policy on April 1, 2024<br>• Conducted human rights due diligence for suppliers in a specific sector (mining) in FY2024<br>• Established an inquiry form regarding correction or remedy<br>• Conduct business activities ethically while fully respecting human rights | |

# 6 Coexistence with Communities

| Materiality | Target and KPI | Main Initiatives and Achievements in FY2024 | |
|---|---|---|---|
| **1 Environmental preservation/ creation activities in communities** P.99 | • Development of green space to contribute to the local environment | • Funding for green space development and maintenance | • Expenses for green space development and maintenance: ¥**1.4** bn |
| **2 Activities mainly in the support of education, sports, and arts** P.119 | • Ongoing promotion of hosting plant visits | • Proactively accepting plant visits by shareholders, investors, and junior high/elementary school students | • Number of plant visitors: app. **90,000** |
| | • Continual support of corporate patronage of music via Nippon Steel Arts Foundation | • Support of music culture via presentation of Nippon Steel Music Awards and operation of the Kioi Hall | |

## Materiality, KPIs and major initiatives in FY2024

# 7 Corporate value enhancement and profit distribution

| Materiality | Target and KPI | Main Initiatives and Achievements in FY2024 | |
|---|---|---|---|
| 1 **Securing of profit and enhancement of corporate value** | • ROS of **10**%<br>(FY2025 medium- to long-term management plan target)<br>• ROE of **10**%<br>(FY2025 medium- to long-term management plan target) | | • ROS: **7.9**%<br>• ROE: **6.9**% |
| 2 **Profit distribution** | **1) Payment of wages to employees**<br>• Amount of bonus payment<br>• Revised amount of salary | | • Base amount of bonus: ¥**2.15** mn (FY2025)<br>• Revised amount of salary: **+**¥**12,000** (FY2025) |
| | **2) Fair tax payment**<br>• Tax payment (consol.) | | • Tax payment (consol.): ¥**180.9** bn |
| | **3) Dividend payment to shareholders**<br>• Dividend per share<br>* Target consolidated payout ratio: around 30% (FY2025 management plan) | | • Dividend per share: ¥**160** (FY2024) |

# Thorough implementation of compliance

| | |
|---|---|
| **Adhering to laws and regulations as a base of all activities** | |

# Environment

Nippon Steel has set the Basic Environmental Policy based on its belief that environmental management is an integral part of corporate mission. We are dedicated to managing the Company so as to reduce and minimize a burden on the environment at all stages, from technological development work to the purchase of raw materials and equipment, manufacturing processes, transportation of products, and onward to their use, recycling and disposal.

## Basic Environmental Policy

Under the principle of "Environmental Management," Nippon Steel is committed to contributing to the creation of a sustainable society through its operations. To this end, we will conduct our operations to actively contribute to creating sustainable communities through integrated solutions to the issues related to climate change measures, the creation of a circular economy, and the conservation of biodiversity and nature positive, including maintaining and improving a favorable living environment.

**1** Reducing environmental burdens at every stage of operations (Eco Process)

At every stage of business activities including production processes and transportation of products, Nippon Steel will, besides complying with environmental laws and regulations, promote activities to reduce environmental burdens primarily through voluntary efforts, in cooperation with customers and other industries, with the aim of further improving environmental preservation and the efficiency of resources and energy, and of promoting reduction and recycling of waste inside and outside the company.

**2** Offering of environment-oriented products (Eco Product™)

With the aim of reducing environmental burdens at every stage of the life cycle of our products offered to domestic and overseas markets, Nippon Steel will make efforts, making good use of its innovative technologies, to develop and offer products that contribute to environmental preservation, resource conservation and energy conservation.

**3** Proposing environmental preservation solutions from a global perspective (Eco Solution)

Nippon Steel will further improve its long-accumulated technologies and environmental management system that are related to environmental preservation, resource conservation, and energy conservation. We offer them in Japan and abroad to contribute to, in addition to the reduction of environmental burdens, the development of infrastructure for disaster prevention with due consideration given to nature and scenery as well as to solving environmental issues outside Japan through technology transfer.

**4** Development of innovative technologies

Nippon Steel will address on a medium- and long-term basis the development of innovative technologies focused on the future issues of resources and the environment with the aim of providing society with technologies and products that contribute to environmental preservation, resource conservation and energy conservation.

**5** Development of a rich natural environment

As a member of each community where we operate in Japan, Nippon Steel will contribute to the conservation of biodiversity and nature positive by promoting greening on land areas, environmental improvement in sea areas, and many other activities. In addition, when conducting business activities overseas, we will ensure the preservation of the natural environment of partner countries.

**6** Promotion of environmental relations activities

To gain social trust consistently, Nippon Steel will proactively promote relationship-building activities that contribute to environmental management, including environmental education for our employees, disclosure of environmental information on an adequate and timely basis, and close exchange with stakeholders.

## Initiatives for priority areas

In line with its Basic Environmental Policy, Nippon Steel aims to realize a sustainable society by identifying five priority areas: three key issues—"Climate Change Measures," "Creation of a Circular Economy," and "Conservation of Biodiversity and Nature Positive"—along with two foundational areas to promote these three issues—"Environmental Risk Management" and the "Environmental Management System." We are steadily advancing initiatives in each of these areas.

**Sustainable Development Goals (SDGs)**


# Environment Management and Governance System

We have established a comprehensive management and governance system to appropriately address key environmental issues, including climate change, creation of a circular economy, and biodiversity conservation and nature positive, as well as group-wide environmental risk management and the promotion of carbon neutrality initiatives.

## Development of Environmental Management and Governance System

Nippon Steel has two committees to respond to environmental issues including climate change: the Environment & Plant Safety Committee and the Green Transformation Development Committee.

The climate change and other environmental issues discussed in these committees are reported to and deliberated at the Corporate Policy Committee. The Board of Directors oversees the risk management by being regularly reported about important management risks which were initially reported and discussed at the Corporate Policy Committee. Environmental issues, including climate issues, are addressed at least four times a year. In this way, environmental management including climate change are integrated into our overall governance.

### Environment & Plant Safety Committee

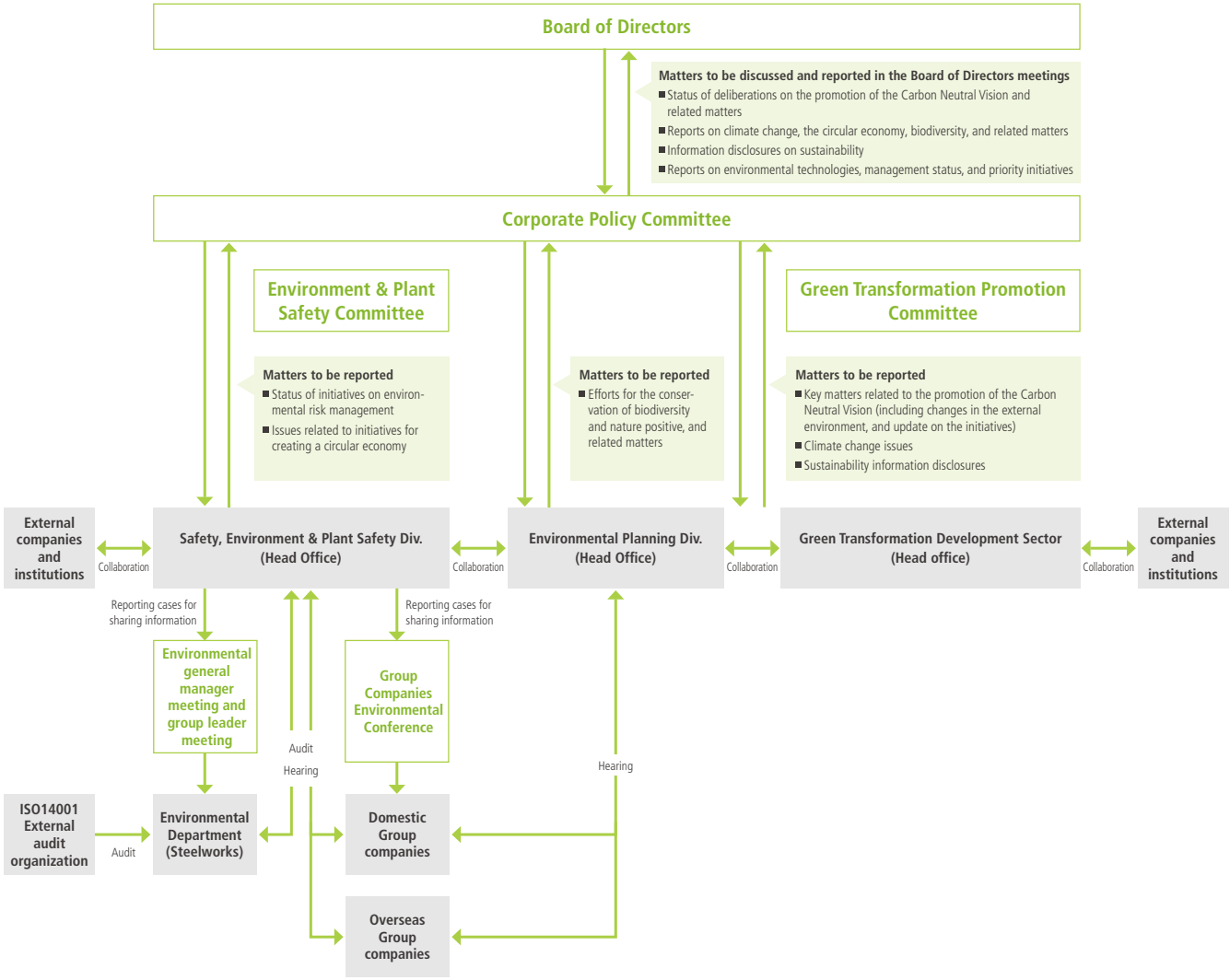
To manage environmental risks related to air, water, waste etc., as well as responses to the creation of a circular economy, the Environment & Plant Safety Committee is chaired by the Representative Director and Executive Vice President responsible for environment and plant safety, with other executive officers serving as members. The committee is held on a semiannual basis.

In addition to the Committee, risk reduction is further promoted through regular meetings by environmental directors and managers from all steelworks, as well as through specialized meetings led by experts in each field.

### Green Transformation Promotion Committee

The Green Transformation Promotion Committee, co-chaired by the Representative Director and Executive Vice President responsible for GX (policy issues) and the Representative Director and Executive Vice President responsible for GX (technical issues), addresses efforts such as promoting our Carbon Neutral Vision, responding to external developments related to climate change issues, and advancing sustainability information disclosure. Other Representative Directors and Executive Vice Presidents, Directors, and Executive Officers serve as members, and the committee is convened as necessary.

**[Management and Governance System]**



## Work at maintaining and improving the level of environmental management

We have established environmental management systems at all domestic steelworks in accordance with ISO 14001, headed by the manager responsible of each site, and undergo regular audits by ISO certification agency.

Internal audits and management reviews by the General Manager are conducted annually. Furthermore, the Safety, Environment & Plant Safety Div. (Head Office) audits each steelworks and plant, including cross-checks conducted by environmental personnel from other steelworks.

For group companies, including overseas operations (62 companies subject to environmental oversight), the Safety, Environment & Plant Safety Div. (Head Office) engages in direct hearings to promote improvements in management practices.

Internal audit (hearings)

Internal audit (on-site patrol)

## Group-wide Environmental Risk Management

In addressing environmental risks, we have positioned the theme of our group-wide initiatives as "Promoting a back-to-basics approach to strengthen group-wide environmental management." Based on annual plans approved by the Corporate Policy Committee and the Board of Directors, we oversee the execution of initiatives addressing issues, including "environmental risks related to air and water," "enhancing management practices through audits and hearings," and "strengthening environmental management capabilities and fostering human resource development."

Among the Group companies in Japan, Nippon Steel has identified 42 companies (as of April 2025) as those with significant environmental burden and holds environmental liaison meetings for them semiannually.

In addition, we utilize the internal portal site to share information on the latest trends in environmental regulations, case studies of environmental initiatives, and lessons learned from incidents with domestic and overseas group companies, thereby advancing the reduction of environmental risks.

## Costs associated with environmental conservation (Environmental accounting)

We have adopted environmental accounting as a guideline for corporate activities to grasp the costs associated with environmental conservation.

However, calculating the monetary value produced by environmental conservation effects is difficult because the calculation requires numerous assumptions. For this reason, we evaluate them in terms of environmental conservation performance and report the results in this document and on our website.

**[Environmental conservation costs]**

(¥bn)

| Item | | FY2024 performance | |
|---|---|---|---|
| | | Capex | Total expenses |
| Pollution Prevention Costs | Air pollution control (including measures against dust), etc. | 7.0 | 34.2 |
| | Water pollution prevention | 9.6 | 11.2 |
| | Soil pollution prevention, and noise and vibration control | 1.7 | 0.6 |
| Global Warming Prevention Costs | Energy saving measures | 1.9 | 5.0 |
| Costs of Recycling Resources | Recycling of resources and generated materials | — | 50.6 |
| | Industrial waste treatment (including PCB, coal ash, etc.) | — | 16.3 |
| | Business-related general waste treatment, etc. | — | 0.5 |
| Environmental Management Activities Cost | Construction of EMS and acquisition of ISO14001 certification | — | 0.02 |
| | Monitoring and measurement of environmental burdens | — | 1.2 |
| | Personnel expenditures related to environmental measures, etc. | — | 3.0 |
| Research and Development Costs | Development of Eco Products | — | 7.4 |
| | Development of products which have low environmental burden during manufacture, etc. | — | 19.2 |
| Social Activity Costs | Beautification and greening of offices | — | 1.4 |
| | Supporting environmental organizations, etc. | — | 0.1 |
| Other Environmental Costs | Environmental fines, etc. | — | 3.5 |
| **Total** | | 20.2 | 154.3 |

# Environmental Risk Management

Nippon Steel is promoting management of environmental risk with the aim of continually enhancing preservation of the environment in various regions, with due consideration of environmental risks, which differ by each steelworks and factory, and with due consideration to compliance with Japan's Air Pollution Control Act and other regulations.

## Protect the air environment

### Air pollution control

In order to reduce emissions of sulfur oxides (SOx) and nitrogen oxides (NOx), Nippon Steel is taking effective measures such as using low-sulfur fuel, adopting low NOx generating burners and installing equipment that reduces SOx and NOx emissions.

Emissions of SOx (sulfur oxides) in FY2024
**11** ($10^6$ $Nm^3$/year)

Emissions of NOx (nitrogen oxides) in FY2024
**22** ($10^6$ $Nm^3$/year)

Click here for historical data on SOx and NOx emissions
Data Book P.25

### Prevention of scattering of raw materials and dust

To curb emissions of soot and dust generated from factories and raw material yards, we try to enhance their function by installing dust collectors and prevent scattering of particles by installing windscreens, windbreak trees and sprinklers, based on air pollution risk analysis through scientific simulation. We also conduct constant monitoring and regular patrols to ensure no change in the implementation status of the environmental measures.

### Prevention of scattering of materials and dust and air pollution control measures in each works

#### Windbreak net at yards

A windbreak net is installed to reduce the strength of wind and restrain the scattering of raw materials.

#### Electric dust collectors

#### Dust collectors with bag filters

Dust generated in the burning process is collected by two types of dust collectors (electric or with bag filter), depending on the characteristics of the dust (i.e., particle size distribution, emission gas concentration.)

#### Wet-type desulfurization equipment

The wet desulfurization method enables SOx in emission gas to be eliminated.

#### Active coke dry-type desulfurization equipment

The dry desulfurization and denitrification methods, using active coke, enables SOx and NOx in emission gas to be eliminated.

#### Low NOx regenerative burners

Burners featuring reduced levels of NOx generation and outstanding fuel savings have been installed.

#### Spraying of water and chemical in coal yards

Water and chemical are sprayed on piles of iron ore and coal to restrain the scattering of raw materials.

#### Sprinkler trucks

#### Road cleaning trucks

These trucks spray water on the road and empty lots or clean the road within works to restrict the secondary scattering of dust.

Click here for details https://www.nipponsteel.com/en/sustainability/env/env_risk/air.html

## Protect the water environment

### Control of water intake and reduce water discharge in works

In addition to reducing water consumption in our business activities, we seek to make effective use of water resources and control wastewater by installing facilities such as water purification and cooling systems, while maintaining and improving their performance. As a result, approximately 90% of the industrial water used in all our steelworks is reused through recycling.

Although none of our domestic operational sites are classified as "high risk" under the WRI Aqueduct water stress assessment, some steelworks are equipped with dedicated reservoirs to prepare for potential water intake restrictions. When necessary, these reservoirs are also used to provide supplemental water for agricultural purposes, thereby helping to alleviate regional concerns about water.

Nippon Steel's industrial water usage (excluding power generation facilities) in FY2024

Recycled water: **5.3** billion tons/year) /

Water intake (excluding seawater): **0.6** billion tons/year

Click here for historical data on water usage and intake by source
Data Book P.24

### Addressing water quality risks

To comply with the Water Pollution Prevention Act and to preserve the quality of the marine and other receiving environments, we conduct monitoring and control of wastewater quality. In addition, to prevent abnormal wastewater from being released outside our steelworks in the event of operational problems, we have installed automatic wastewater monitoring systems, containment dikes, shut-off gates, and emergency storage tanks. Furthermore, to address localized heavy rainfall, we have implemented a variety of flood control and leakage prevention measures, including large-scale storage tanks, embankments, and water barriers and impermeable sheets.

We also actively pursue "unmaterial" measures to maintain the effectiveness of these facilities, such as inspections and repairs, the development of standard operating procedures for handling abnormal wastewater, and training to verify functionality and reinforce operational procedures.

### Measures for water purification and prevention of abnormal water discharge in each works

#### Measures for water purification

**Water discharge coagulating sedimentation treatment equipment**

Fine undissolved matter is coagulated into bigger masses by chemical treatment, permitted to settle, and is removed.

**Pressurized flotation system**

Floating oil is removed by tiny bubbles formed by released air.

**Activated sludge treatment equipment**

Organic matter is decomposed and eliminated by bacteria.

**Filtration equipment (secondary treatment)**

Undissolved residues in the treated water discharge are filtered by a sand layer and removed.

**Rainwater effluent treatment facility**

Undissolved residue from rainwater is coagulated and settled, and eliminated.

#### Measures for prevention of abnormal water discharge

**Water discharge automatic monitoring equipment**

The water quality of water discharge is automatically monitored.

**Water discharge closing gate**

Water discharge flow is shut in case of trouble.

**Repair of the damaged area of embankment**

Damaged areas found by inspection are promptly repaired to maintain and manage the embankment in a sound condition.

**Checking of embankments**

The embankments are regularly inspected from the sea side to find potential issues.

Click here for details https://www.nipponsteel.com/en/sustainability/env/env_risk/water.html

## Management of discharged chemical substances

Nippon Steel appropriately manages and tries to improve the production, handling, and discharge or disposal of chemical substances in accordance with PRTR Law*1, CSCL*2, and other laws concerning the management of chemical substances as well as the procedures employed.

According to PRTR Law, we thoroughly manage the material balance of subject chemical substances, which includes the amount handled, the amount discharged into the environment, the amount disposed, and the amount used as products. In complying with CSCL, we identify and provide notification of the amounts of production and sales of the targeted chemical substances.

Nippon Steel also takes the lead in promoting use of alternatives to using steelmaking materials and equipment that contain hazardous materials such as polychlorinated biphenyl (PCB) and mercury. According to safe handling standards, we systematically replace or dispose of possibly hazardous parts and materials, given the time limit for disposal or the expiration date, stipulated for each area.

### Management of discharge based on PRTR Law

In 1999, two years before the enforcement of PRTR Law, Nippon Steel began surveying chemical substances according to the voluntary control manual developed by the Japan Iron and Steel Federation (JISF). At present, in accordance with PRTR Law, we monitor the 515 chemical substances, which have revised by the law, and try to control their discharges and improve the way we manage it. We properly submitted reports in fiscal 2024 in accordance with the revised PRTR Law that came into effect on April 1, 2023.

**Reports in accordance with PRTR Law (FY2024)**

Reported substances: **59**

Emissions/discharges: **323** t/year (air),
**22** t/year (public water bodies)

Waste transferred off-site: total **19,953** t/year*

* The majority consists of metals such as manganese and chromium, as well as silicon carbide used in bricks and grinding wheels.

Click here for historical data on emissions/discharges by steelworks
Data Book P.25

We also manage and reduce volatile organic compounds (VOCs*3), which are considered the cause of photochemical oxidants and airborne particles. We achieved our target of a 30% reduction compared to FY2000 levels in FY2009 and have since maintained emissions at a low level.

**Emissions of VOC (volatile organic compound) in FY2024**

521 t/year | Target | 1,106 t/year or below

Click here for historical data on VOC emissions.
Data Book P.25

### Voluntary emissions management

#### Dioxin

Some of our facilities, such as sintering facilities and incineration facilities, are a source of emissions of dioxins into the atmosphere. All these facilities have conformed to the emission concentration standard and have achieved levels of emissions far below the voluntary reduction target, based on the JISF guidelines, relative to fiscal 1997.

#### Benzene, tetrachloroethylene, dichloromethane

We developed a voluntary reduction plan of hazardous air pollutants specified in the environmental standard, which we handle. As a result of our systematic undertaking, we have already reached the targets for all three pollutants and have been maintaining the target levels.

**Benzene emissions in FY2024**

73 t/year | Target | 172 t/year or below

Click here for historical data on benzene emissions
Data Book P.25

*1 PRTR Law: An abbreviation of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (Law concerning Pollutant Release and Transfer Register)
*2 CSCL: An abbreviation of the Act on the Regulation of Manufacture and Evaluation of Chemical Substances (Chemical Substances Control Law)
*3 VOC: Volatile organic compounds (VOC): Organic chemical compounds emitted into the atmosphere in the form of gases, which are considered to be the source of undesirable airborne particles and photochemical oxidants, which became subject to control under the Air Pollution Control Act of 2004, as amended.

## Appropriate treatment of industrial waste

In order to appropriately handle industrial waste generated in our business activities, we thoroughly carry out (1) management by sorting industrial waste depending on the status of its occurrence, (2) appropriate selection and continuous management of collectors, transporters, and disposal contractors, and (3) appropriate management of Manifests (industrial waste management documentation). In order to enhance compliance in waste treatment by appropriately managing the Manifests, all Nippon Steel steelworks and offices have adopted the e-Manifest system and fully utilize it for waste management.

We also evaluate outsourcing collectors, transporters, and disposal contractors based on our internal rules and conduct on-site inspections at predetermined frequency, so as to continuously and appropriately ensure proper management.

## Soil risk management

We are taking appropriate soil management in compliance with the "Soil Contamination Countermeasures Act," "guidelines for investigations and measures based on the Soil Contamination Countermeasures Act" issued by the Ministry of the Environment, and the regulations set forth by local government ordinances, and so on. We report to the local government when performing landform modification work such as excavation which is required to be reported. We conduct pollution surveys when needed.

Starting in fiscal 2018, the Revised Soil Contamination Countermeasures Act is being enforced in stages will be expanded. We will continue to comply with relevant ordinances.

# Response to Climate Change —TCFD information disclosure

The Nippon Steel Group recognizes that climate change is an important issue that affects the survival of humankind, and that it may have a serious impact on the business environment and business performance. In order to conduct business in a sustained manner, we are working to reduce the impact of climate change through initiatives to reduce $CO_2$ emissions throughout the supply chain.

## Information disclosure according to recommendations of the TCFD

Given the international community's commitment to achieve the long-term goals of the Paris Agreement, Nippon Steel recognizes climate change as one of the most critical global challenges. We support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and, in line with these recommendations, are advancing the disclosure of information on the impacts of climate change on our business activities.

| | TCFD's recommendations and supporting recommended disclosures | Reference page |
|---|---|---|
| Governance | Disclose the organization's governance related to climate-related risks and opportunities. | P.85 |
| Strategy | Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. | P.91-92 |
| Risk Management | Disclose how the organization identifies, assesses, and manages climate-related risks. | P.85 |
| Metrics and Targets | Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material. | P.86-87 |

## Governance concerning climate change

Nippon Steel recognizes climate change as one of its important managerial issues. As this issue may have a significant impact on our business environment and management, we have established the Green Transformation Promotion Committee, the level of which is equivalent to the Board of Directors. The Committee sets strategies, risk management policies, annual budgets, business plans, and performance targets related to climate-related issues, as well as deliberating and supervising the progress of them.

Among the matters discussed, decided, and reported by the Committees, significant matters are resolved and reported at the Board of Directors.

**[Examples of climate-related issues reported or resolved at the Board of Directors]**

- Formulation of the Nippon Steel Carbon Neutral Vision 2050
- Expressing support for the purpose of the TCFD Final Report and disclosing information in accordance with the TCFD recommendations
- Green Transformation R&D and issues concerning actual implementation
- Procurement issues concerning green transformation
- Issues concerning green steel
- Response to the Green Innovation Fund
- Support for the GX League basic concept, participation in the GX League, etc.

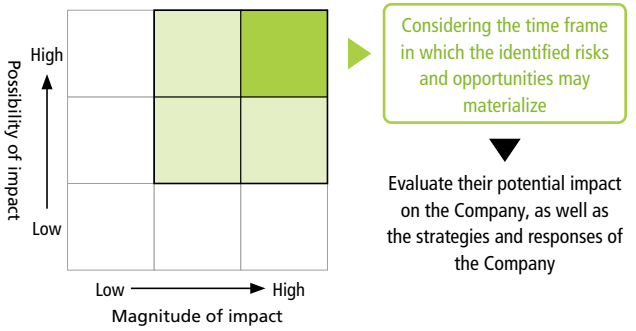
## Management of climate-related risks

Recognizing external climate-related risks and opportunities, we identify risks and opportunities that could have a significant impact on our business in terms of impact on upstream procurement, direct operations, and downstream provision of products and services for each transition factor and physical factor.

Specifically, from the perspectives of markets, policies, laws and regulations, technology, and reputation, we identify transition risks, physical risks, and opportunities that could affect upstream procurement, direct operations, and downstream provision of products and services. We then identify significant risks based on the likelihood of occurrence and magnitude of impact of those risks and opportunities.

The identified risks and opportunities are reported to the Board of Directors level committees as stated on the left, and significant risks are reported to the Board of Directors. These risks are thereby integrated into the Company's overall risk management.

**[Identification and analysis of significant climate-related risks and opportunities]**



## Nippon Steel Group's energy consumption and energy-derived $CO_2$ emissions

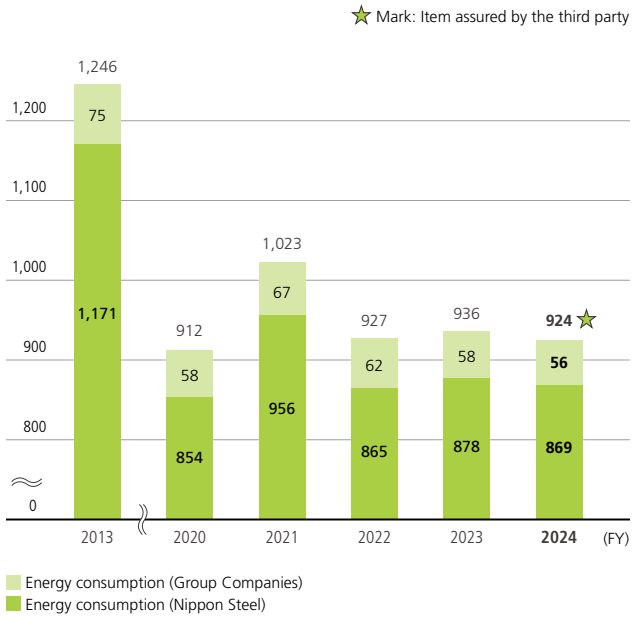
Nippon Steel has been working on energy conservation from diverse points: efficient using of energy generated in the steelmaking process (i.e., power generation from recovered by-product gas and waste heat); making operational improvements in each process; renovating older coke ovens and other equipment; introducing high-efficiency power generation facilities and oxygen plants; and employing reheating furnaces with the regenerative system.

In FY2024, despite a slight decline in production, we advanced energy-saving measures, resulting in a modest reduction in both energy consumption and energy-derived $CO_2$ emissions.

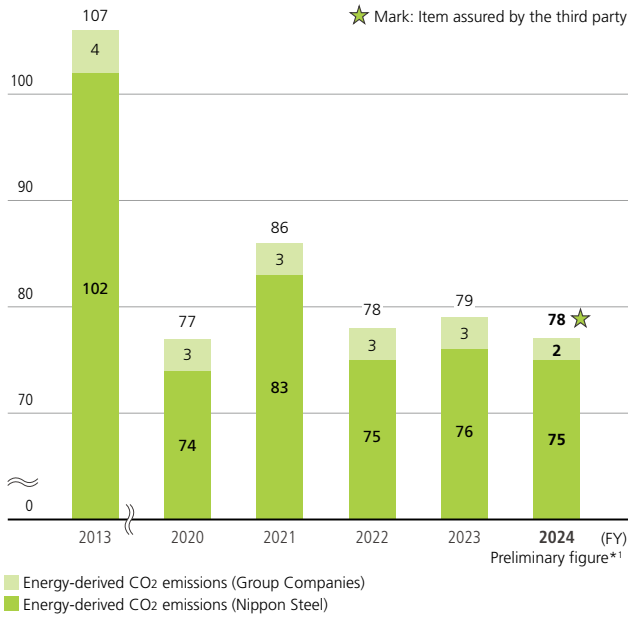
Our energy-derived $CO_2$ emissions accounted for 95% of our GHG emissions.

Breakdown of the Company's GHG Emissions
Data Book P.22

**[Energy consumption]**




**[Energy-derived $CO_2$ emissions]**




## The Group's $CO_2$ emissions reduction target

Nippon Steel has set its $CO_2$ emission reduction targets under the "Nippon Steel Carbon Neutral Vision 2050," aiming to reduce total $CO_2$ emissions by 30% from 2013 levels by 2030 and achieve carbon neutrality by 2050.

We have also established, as the Nippon Steel Group, medium- to long-term $CO_2$ reduction targets to address climate change at major steelmaking bases in Japan and overseas, where emissions are particularly high.

Furthermore, we will take timely and flexible measures to climate change while expanding our business both domestically and overseas, in light of, among others, international trends in climate change and trends in each country regarding laws, systems, and disclosure standards.

P.49 "$CO_2$ Emission Targets of Our Group"

[Boundary of data collection]
Nippon Steel*2, *3, EAF subsidiaries (Osaka Steel, Sanyo Special Steel, Nippon Steel Stainless Steel, Oji Steel, Tokai Special Steel, Nippon Steel Structural Shapes Corporation, Tokyo Kohtetsu, Ovako, Sanyo Special Steel Manufacturing India, and Standard Steel), and three Sanso Center companies*4
The data collection period used is each company's accounting period. As Ovako has changed its fiscal year-end, Ovako's fiscal 2021 results cover a period from January 1, 2021 to March 31, 2022 (15 months).

[Calculation method]
Calculation for the Company and its domestic subsidiaries is based on the methodology of the Carbon Neutrality Action Plan.
Overseas subsidiaries follow local regulations or guidelines for calculation.

[Conversion factor]
The Company and its domestic subsidiaries use the "Table of heat generation and carbon emission coefficient by energy source" (revised March 14, 2025) of the Agency for Natural Resources and Energy, METI.
Overseas subsidiaries use relevant emission factors according to local regulations or guidelines.

*1 Preliminary figure: The amount of $CO_2$ per unit of purchased electricity from each of the general power companies in Japan in fiscal 2024 is assumed to be the same amount as in fiscal 2023.
*2 Excluding energy consumption and $CO_2$ emissions associated with the IPP operation by the steelworks.
*3 The amounts of energy consumption required for and $CO_2$ emissions from production of coke purchased by Nippon Steel are included in the aggregate.
*4 Concerning the three Sanso Center companies, the amounts of energy used and $CO_2$ emitted for production of oxygen purchased by Nippon Steel Group are included in the aggregate.

## $CO_2$ emissions in the value chain

$CO_2$ emissions from energy source and generated in Nippon Steel's manufacturing process (Scope 1 and Scope 2) as well as $CO_2$ emissions in the value chain (Scope 3), which are calculated by using "Green Value Chain Platform of the Ministry of the Environment" and other methods are as follows.

**Scope1, 2**

★ Marks: Items assured by the third party

| (FY) | $CO_2$ emissions (thousand t-$CO_2$) 2013 | 2020 | 2021 | 2022 | 2023 | 2024 | Calculation method |
|---|---|---|---|---|---|---|---|
| Scope1 Direct emissions from owned sources associated with use of fuel | 89,578 | 63,170*3 | 71,311*3 | 63,403*3 | 64,020*3 | **63,672*1** ★ | Based on "Carbon Neutrality Action Plan." See the boundary of data collection stated on the right. |
| Scope2 Indirect emissions from the generation of purchased energy | 13,825 | 11,035 | 12,458*3 | 11,912*3 | 12,425*3 | **11,423*1** ★ | |
| Scope1+2 | 103,403 | 74,205*3 | 83,768*3 | 75,315*3 | 76,445*3 | **75,095*1** ★ | |
| ($CO_2$ emissions per ton of crude steel: t-$CO_2$/t) | 1.89 | 1.97 | 1.88 | 1.92 | 1.93 | **1.96** | |
| **Crude steel production*4 (consolidated-base, 10,000 tons)** | 5,474 | 3,766 | 4,445 | 3,913 | 3,913 | **3,864** | |

**Scope3** All indirect emissions that occur in the value chain of the reporting company

★ Mark: Item assured by the third party

| (FY) | $CO_2$ emissions (thousand t-$CO_2$) 2022 | 2023 | 2024 | Calculation method |
|---|---|---|---|---|
| ① Purchased goods and services | 12,939 | 11,995 | **11,413** ★ | Calculated using method*5 on the right for purchased iron ore, coking coal, coke, and oxygen |
| ② Capital goods | 1,503 | 1,571 | **2,005** | [Amount of capital expenditures] × [Emission factor] |
| ③ Fuel and energy-related activities not included in Scope 1 or 2 | 293 | 257 | **285** | [Amount of electric power procured and fuel used] × [Emission factor] |
| ④ Upstream transportation and distribution | 638 | 611 | **585** | [Transportation distance reported in the Energy Saving Law document] × [Emission factor] |
| ⑤ Waste generated in operations | 5 | 5 | **4** | [Amount of waste] × [Emission factor] |
| ⑥ Business travel | 4 | 4 | **4** | [Number of employees] × [Emission factor] |
| ⑦ Employee commuting | 13 | 13 | **13** | [Number of employees] × [Emission factor] |
| ⑮ Investments | 1,193 | 1,124 | **1,334** | [Emissions by subsidiaries and affiliates that emit GHG of over 10,000 tons] × [Equity stake of each company] |

**Scope1, 2**

[Boundary of data collection]
Nippon Steel*2 and EAF subsidiaries (Osaka Steel, Sanyo Special Steel, Nippon Steel Stainless Steel, Oji Steel, Tokai Special Steel, Tokyo Kohtetsu, Nippon Steel Structural Shapes Corporation, Ovako, Sanyo Special Steel Manufacturing India, and Standard Steel). The data collection period used is each company's accounting period. As Ovako has changed its fiscal year-end, Ovako's fiscal 2021 results cover a period from January 1, 2021 to March 31, 2022 (15 months).

*1 Preliminary figure: The amount of $CO_2$ per unit of purchased electricity from each of the general power companies in Japan in fiscal 2024 is assumed to be the same amount as in fiscal 2023.
*2 Excluding $CO_2$ emissions associated with the IPP operation by the steelworks.
*3 Due to a review of the summary values and changes in coefficients and other factors, the figure for this past year was revised retroactively.
*4 This does not include G/GJ steel.

[Conversion factor]
The Company and its domestic subsidiaries use the "Table of heat generation and carbon emission coefficient by energy source" (revised March 14, 2025) of the Agency for Natural Resources and Energy, METI. Overseas subsidiaries use relevant emission factors according to local regulations or guidelines.

**Scope3**

[Boundary of data collection] Nippon Steel

*5 Iron ore and coal: [Amount purchased of procured iron ore and coal] × [Emission factor]
Coke: [Amount purchased of procured coal at source] × [Emission factor] + [Amount of energy used in production of coke] × [Emission factor by energy source]
Oxygen: [Amount of energy used in production of oxygen] × [Emission factor by energy source]

[Source of emission factor]
"Emissions unit value database for accounting of greenhouse gas emissions throughout the supply chain (ver. 3.5)" (March 2025, Ministry of the Environment)
"Table of heat generation and carbon emission coefficient by energy source" (revised March 14, 2025) of METI, Agency for Natural Resources and Energy

[Note on figures covered by third-party assurance]
GHG emissions quantification is subject to uncertainty when measuring activity data, determining emission factors, and considering scientific uncertainty inherent in the Global Warming Potentials.

## Efforts to reduce Scope 3 emissions

### Dialogues with raw material suppliers

In order to steadily reduce emissions in Scope 3, Category 1 (products and services purchased), we are engaged in dialogue with major suppliers of iron ore and coking coal.

We interviewed major suppliers who account for more than 70% (based on our purchase volumes) of the raw materials purchased (iron ore and coking coal) about their actual Scope 1+2 emissions and their reduction plans. We confirmed through the dialogue that many suppliers are working to achieve net zero Scope 1+2 emissions by 2050.

We will continue to promote dialogues with our suppliers on climate change initiatives and other issues.

### Reduction of $CO_2$ emissions through logistics optimization

In fiscal 2024, Nippon Steel maintained a high modal shift rate of 98%. We are also working to reduce $CO_2$ emissions by raising efficiency in logistics including the use of larger vessels and by introducing hybrid cargo vessels equipped with lithium-ion batteries. As of June 2025, the number of our cargo vessels that have been rated the highest in the Coastal Ship Energy Conservation Rating of the Ministry of Land, Infrastructure, Transport and Tourism has reached 26.

We will continue to cooperate with relevant ministries, agencies, and organizations to promote the use of ships utilizing alternative fuels and other initiatives, to reduce greenhouse gas emissions in marine transportation.

**[Logistics sector's ton-kilometer achievements for FY2024]**

(Reference)

| | Transportation quantity: 10,000 tons/year | | Million ton-kilometers/year | | g-$CO_2$/ton-kilometer |
|---|---|---|---|---|---|
| Ship | 1,622 | (57%) | 10,756 | (91%) | 39 |
| Railway | 6 | (0%) | 36 | (0%) | 25 |
| Truck and trailer | 1,283 | (43%) | 1,072 | (9%) | 211 |
| Total | 2,911 | (100%) | 11,864 | (100%) | |

Hybrid Cargo Ship "Utashima" equipped with lithium-ion batteries (Received the Small Cargo Vessel Award of the Ship of the Year 2019)

## Efforts to adapt to climate change

In addition to taking actions to mitigate climate change, we are considering the potential impact of climate change to appropriately prepare for risks and capture business opportunities.

### Preparation for risks

To prevent the risk of operations and shipments being suspended due to abnormal weather and other reasons, our steelworks are implementing countermeasures against wind and flood damage, including measures to prevent cranes and other heavy machinery from overturning, building levees, and reinforcing embankments and gradients.

Furthermore, to prevent colored water tainted with iron ore powder from flowing directly into the ocean from the steelworks by localized heavy rain, we are strengthening our water pollution prevention facilities, including installing large water storage tanks and increasing wastewater treatment capacity.

Furthermore, we have established a system to prepare for floods and high tides, by installing piloti-structured offices and evacuation facilities to avoid the destructive force of a tsunami, for example.

### Capturing business opportunities

We have many products that have been used for a long time as construction materials for embankments and other public infrastructure. They contribute to providing solutions for "national resilience," such as protecting towns from flooding or high tides caused by heavy rains or typhoons. Adaptation to climate change also leads to business opportunities for Nippon Steel.

For example, we have developed and provided for actual use various types of products and product utilization technologies in the civil engineering field. They include hat-type sheet piles (contributing to national resilience in a wide range of ways, including measures against liquefaction of river levees, water leakage, and tsunamis reaching coastal levees), linear-type steel piles (having a high-tensile strength at the joints, being suitable to cell-type quays, erosion-control dams and water shut-off work, and contributing to measures for sand embankments and against landslides at the time of heavy rain or a typhoon), and a method of preventing subsidence by use of sheet piles.

# Transfer and diffuse decarbonization technologies overseas

With the understanding that the transfer of Japan's advanced energy-saving technologies to overseas can be effective ways to globally reduce $CO_2$ emissions, Nippon Steel is participating in many energy-saving and environmental initiatives in Japan and overseas. For example, we work with the World Steel Association and directly with countries such as China and India.

## Japan's steel industry's international cooperation in energy conservation

As a core member of the Japan Iron and Steel Federation (JISF), Nippon Steel is involved in multinational projects such as those for the Environment Committee of the World Steel Association to expand Japan's advanced environmental protection and energy-saving technologies to overseas.

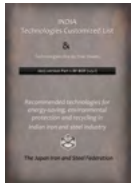
In addition, we are promoting 1) joint meetings of public and private steel-related parties, 2) preparation of a customized list of technologies, and 3) assessment of steelworks as to energy-saving status. These are the three pillars of collaboration for bilateral energy-saving and environmental cooperation with India, Southeast Asia, and other countries and regions.

### Joint meetings of public and private steel-related parties

In public-private steel-related joint meetings, we share the technologies customized list, the results of assessment of steel mills, and introduce detailed technical information and financing schemes, in order to realize the early transfer of energy-saving technologies to emerging countries. By fiscal 2024, joint meetings have been held 13 times in India and 17 times in six ASEAN countries. In 2024, we held the "FY2024 Public and Private Collaborative Meeting between Indian and Japanese Iron and Steel Industry" with India and co-hosted an AJSI seminar with the Economic Research Institute for ASEAN and East Asia (ERIA). This seminar was held as part of the Southeast Asia Iron and Steel Institute (SEAISI) event, the "2024 ASEAN Iron and Steel Forum: Sustainable Steel and Green Construction," where policies and private-sector initiatives toward carbon neutrality were shared.

### The technologies customized list

We identify the appropriate technologies for each country and region, and in addition to detailed technical information, we conduct the assessment of steel mills, and provide the technologies customized list, which complies with information such as on suppliers, for reference. For the ASEAN countries, the technologies customized lists of 4.1 version for blast furnace (BF) steelmaking and 4.0 version for electric arc furnace (EAF) steelmaking have been released before now. In FY2023, for India, the 5.1 version for BF steelmaking and the 5.0 version for EAF steelmaking were released.



The technologies customized list

### Assessment of steelworks

Experts from the Japanese steel industry visit the steel mills overseas to propose energy-saving technologies, provide operational improvement advice based on the operational conditions of the facilities, and conduct energy-saving assessments of steel mills using the international standard ISO14404. Up to fiscal 2024, we had carried out the assessment of 14 steel mills in India and 18 mills in six ASEAN countries.

### Activities as a Climate Action member

Nippon Steel participates in the Climate Action Program of the World Steel Association, which uses universal methods to calculate and report on the $CO_2$ emitted by steelworks. As a Climate Action member (data provider), our 18 years of contribution have been highly recognized.


Climate Action DATA PROVIDER certificate

## Contribution to reduction of $CO_2$ emission on a worldwide scale

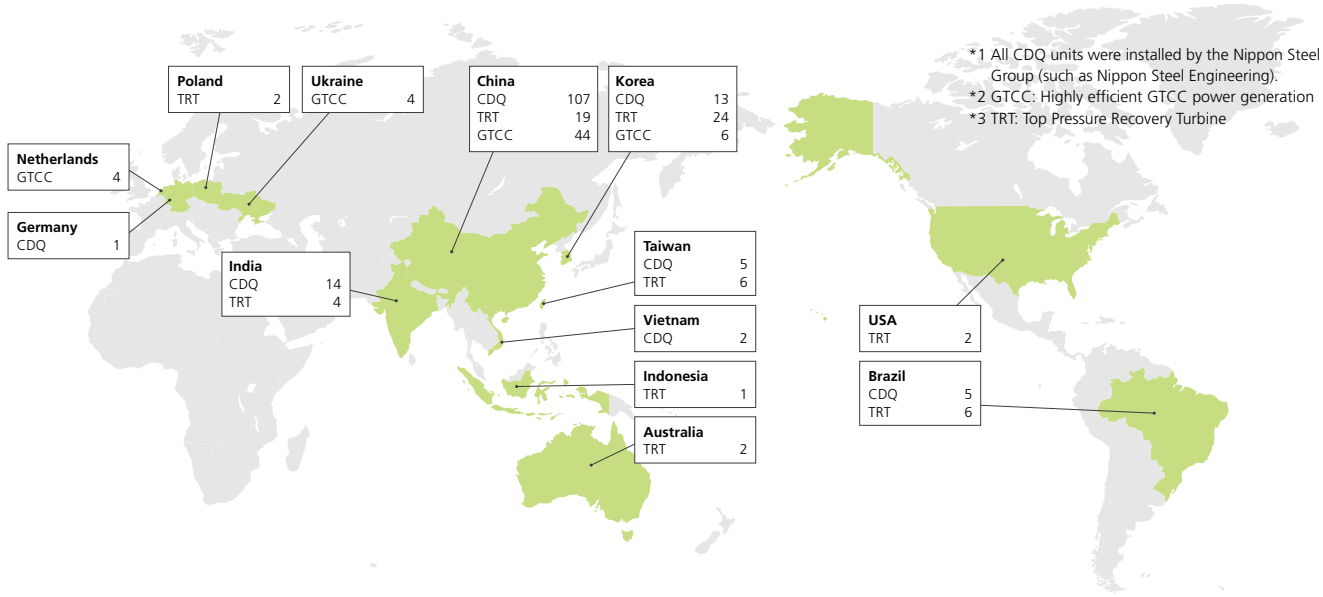
Japan's steel industry can contribute to the reduction of $CO_2$ emissions on a worldwide scale by transferring its advanced energy-saving technologies to emerging countries. The reduction effects of $CO_2$ emissions by transfer of Japanese steelmakers' energy-saving technologies to overseas have amounted to 77.67 million tons of reduction in $CO_2$ emissions per year in total.

(10,000 t-$CO_2$/year)

| | Number of units | $CO_2$ emissions reduction |
|---|---|---|
| CDQ*1 | 147 | 3,138 |
| GTCC*2 | 58 | 2,545 |
| TRT*3 | 66 | 1,195 |
| Oxygen Converter Gas collection | 22 | 821 |
| Sintering waste heat recovery | 7 | 98 |
| Oxygen Converter Gas waste heat collection | 8 | 90 |
| **Total** | **308** | **7,767** |

(FY2023)

**[Japanese steel industry's energy-saving technologies are spreading globally (units installed in numbers)]**




*1 All CDQ units were installed by the Nippon Steel Group (such as Nippon Steel Engineering).
*2 GTCC: Highly efficient GTCC power generation
*3 TRT: Top Pressure Recovery Turbine

TOPICS

# Climate change measures in the resource recycling and biodiversity fields

## Blue carbon

Nippon Steel has promoted scientific analysis on usefulness and safety of use of steel slag — a by-product from the steelmaking process. To improve this technology, we began a basic study on blue carbon ($CO_2$ absorption and fixation in the marine ecosystem), which is getting more attention as a measure against climate change.

In fiscal 2022, we calculated the $CO_2$ fixation effect in a seaweed bed development project, on which we have been working over the past nearly 20 years, applying for J-Blue Credit™ certification jointly with the Mashike Fishery Cooperative Association (Mashike, Hokkaido). J-Blue Credit™ was certified and issued for 49.5 t-$CO_2$ — the amount of $CO_2$ absorbed and fixed (blue carbon) over the five years (2018 – 2022).

J-Blue Credit™ Certificate

Further, in fiscal 2023, we submitted applications with joint applicants in Mashike-cho and Tomari-mura in Hokkaido, as well as in Kimitsu City, Chiba Prefecture, and J-Blue Credit™ for 33.3 t-$CO_2$ were certified and issued as the amount of $CO_2$ absorbed and fixed.

Also in fiscal 2024, we conducted demonstration tests of seaweed bed development in 32 sea areas nationwide, conducting continuous surveys of the changes in iron concentration in seawater before and after the test, as well as the growth status of seaweed. In addition to the acquisition of these basic data, we are working to advance seaweed bed development technology by providing theoretical support through scientific approaches, such as off-line testing using the "Sea Laboratory" (marine environment simulator) at the Research & Engineering Center of the R&D Laboratories (Futtsu City, Chiba Prefecture) and model analysis that reproduces actual sea conditions.

We will continue these initiatives utilizing our technologies, and expanding seaweed bed development activities nationwide so as to contribute to the reduction of $CO_2$ emissions through blue carbon.


Large water tank Sea Laboratory

**Blue carbon**
https://www.nipponsteel.com/en/sustainability/env/biodiversity/sea.html

Click here for other contributions in the field of resource recycling
Recycling of waste plastics P.95
Maximum use of steel scrap P.97
Blast furnace cement P.94

## Our strategy for climate-related risks and opportunities

For each transition factor and physical factor, we have identified risks and opportunities that may have a significant impact on our business in the areas of upstream procurement, direct operations, and downstream demand for products and services. We have then considered strategies for each scenario.

In conducting the scenario analysis, we have used the climate change scenarios of the International Energy Agency (IEA) as a base, and evaluated medium- to long-term risks and opportunities up to 2050, by referring to the IEA's 1.5°C scenario (NZE2050) and the below 2°C scenario (B2DS) in transitional aspects and the 4°C scenario (NPS) in the aspects of physical impacts.

**[Reference scenario]**

| | |
|---|---|
| 1.5°C/2°C scenario | IEA "Global Electric Vehicle Outlook 2025"<br>IEA WEO2022 NZE2050<br>IPCC Special Report on the impacts of global warming of 1.5°C<br>IEA WEO2018 SDS<br>IEA ETP 2017 B2DS |
| 4°C scenario | IEA WEO2018 NPS<br>IPCC AR5 RCP |

## TCFD scenario analysis

| Scenario | Factors (risks and opportunities) | Events (expectations and concerns of stakeholders) | Impact on Nippon Steel (opportunities in ■, risks in ■) | Nippon Steel's strategy (including future responses) |
|---|---|---|---|---|
| 1.5°C/2°C scenario | **Transition factor 1**<br>Advance in electric vehicles (EVs) | World annual EV sales: 40 million units, 42% market share in 2030 (vs. 6.6 million units, 9.0% market share in 2021)* | **Opportunities in demand growth for our steel products**<br>■ Increase in the global total number of cars and resultant increase in steel demand despite a decline in the share of steel demand for cars equipped with internal combustion engines due to the growth of EVs' share of the new car market<br>■ Increase in demand for high-performance steel products — our area of strengths, such as electrical steel sheets for EVs | ● Capture growing demand by strengthening the global supply of electrical steel sheets P.93 "TOPICS" |
| | **Transition factor 2**<br>Shift to other lightweight materials, prompted by tighter fuel efficiency regulations, etc. (multi materials) | Shift to other lightweight materials, prompted by tighter fuel efficiency regulations, etc. | **Opportunities in demand growth for high-strength steel and capturing of demand for other materials**<br>■ Some possibility of switching to other lightweight materials but little prospect for significant progress since steel excels in environmental evaluation from the LCA perspective, including the production stage and material recycling, and automakers increasingly emphasize the evaluation from the LCA perspective<br>■ Increase in demand for high-tensile steel, carbon fiber-reinforced plastic (CFRP), titanium, etc. | ● Strive to further popularize the LCA concept through activities to raise customers' understanding and lobby the government for regulatory change<br>● Further increase the high-tensile strength of steel and provide the lightweight steel structure technology by proposing a comprehensive automotive solution (NSafe™-AutoConcept) P.93 "TOPICS"<br>● Capture demand for CFRP and other products in cooperation with a Group company (Nippon Steel Chemical & Material Co.) |
| | **Transition factor 3**<br>Shift to low-carbon steel (steel that generates low $CO_2$ emissions in production) | Accelerating shift to low-carbon steel due to change in customers' demand | **Opportunities in demand growth for low-carbon steel**<br>■ Some shift from converter steel to EAF steel with low $CO_2$ emissions in production<br>■ Continued increase in demand for BF steel and converter steel due to insufficient increase in EAF steel to satisfy growing worldwide demand, caused by the limited supply of scrap | ● Acquire the SuMPO EPD (former EcoLeaf) environmental label for more products<br>● Accelerate the Carbon Neutral Vision (innovative technology development, including high-grade steel production in large-sized EAFs and hydrogen steelmaking) P.36<br>● Promote the use of direct reduced iron and other measures to reduce $CO_2$ emissions in existing processes<br>● Provide low-$CO_2$ steel NSCarbolex™ Neutral |
| | | Higher needs for decarbonization in steelmaking process | **Fundamental review of steelmaking process is necessary to achieve decarbonization**<br>■ Potential to gain a great competitiveness against global peers if we can advance technological development and investments for realization of the process<br>■ Increase in investment burden and operating cost for the introduction of super innovative technologies | ● Facilitate the development and implementation of innovative technologies by utilizing government support such as the Green Innovation Fund, the GX Economy Transition Bonds as part of "investment promotion measures," and the strategic materials and production base tax system. P.36-43<br>● Strengthening initiatives for the formation of the GX steel market (with costs shared across society) P.44-47 |

* For source for EV-related data, refer to the IEA Global Electric Vehicle Outlook 2025. EVs include battery electric vehicles (BEVs) and plug-in hybrid vehicles (PHVs).

| Scenario | Factors (risks and opportunities) | Events (expectations and concerns of stakeholders) | Impact on Nippon Steel (opportunities in ■, risks in ■) | Nippon Steel's strategy (including future responses) |
|---|---|---|---|---|
| 1.5°C/2°C scenario | **Transition factor 4**<br>Higher needs for energy-efficient products and technology | Eco-friendly technology solution to boost demand | **Opportunities in demand growth for eco-friendly technology**<br>■ Increased demand for products that realize energy savings in the processing by customers<br>■ Increased demand for products that contribute to energy savings in use of end products<br>■ Increase in profits through the provision of the Group's technology solutions that enable energy saving in steelmaking process | • Expansion of NSCarbolex Solution, a brand that offers products that realize energy conservation in customers' manufacturing processes, products that contribute to energy conservation in using their end products, and products that contribute to energy transformation in society P.48<br>• Government-private cooperation, technologies customized list, and steelworks diagnosis to provide energy-saving technologies to emerging countries (contribution to the global value chain)<br>e.g., dissemination of CDQ, all of which are handled by a group company (Nippon Steel Engineering), into emerging countries P.89 |
| | **Transition factor 5**<br>Higher needs for products and solutions associated with a society based on renewable energy and hydrogen | Ratio of renewable energy in world power generation:<br>88% in 2050 (vs. 28% in 2020)<br>World production of hydrogen: 490 mn tons in 2050<br>(vs. 90 mn tons in 2020)* | **Opportunities in demand growth for products of our Group**<br>■ Profit growth by provision of the Group's products and solutions that support a renewable-energy-oriented society<br>■ Profit growth by provision of the Group's products and solutions that support a hydrogen-oriented society | • Enhance the Group's product menu for the renewable-energy society and expand sales in Japan and overseas<br>e.g., high corrosion-resistant steel sheets for solar power generation mounts, steel plates and steel anchor chains for offshore wind power generation, and steel pipes for geothermal and biomass power generation<br>• Enhance the Group's product menu for the hydrogen society and expand sales in Japan and overseas<br>e.g., HYDREXEL™ stainless steel for high-pressure hydrogen environments |
| | **Transition factor 6**<br>Increase in cost caused by adoption of carbon pricing (CP) | Incremental introduction of carbon pricing (CP) measures | **Increasing burdens on our cost due to CP introduction**<br>■ The GX Promotion Act requires companies to introduce CP while securing time required to work on technology development and capital investment for decarbonization. Although the impact of CP is not expected to be so significant for the time being, our cost burden will increase depending on the design of the emissions trading system (GX-ETS) and the circumstance of shifting the burden of CP to purchasing electricity charges, etc. | • Reduce $CO_2$ emissions through the expanded usage of direct reduced iron, the production of high-grade steel using large EAFs, the advancement of reduction in $CO_2$ emissions in existing processes, and the advancement and implementation of innovative technologies such as hydrogen steelmaking<br>• Continue to request the government to take measures to support heavy emission-producing industries, which have few options for decarbonization, and measures to support narrowing product price increases due to the rise in energy costs<br>• Request the government to design the GX-ETS in a manner that takes into account the circumstances of the steel industry, including measures such as free allocations and responses to carbon leakage |
| 4°C scenario | **Physical factor 1**<br>Abnormal weather to suspend raw material suppliers' operation | Difficulty in procuring raw materials, caused by abnormal weather | **Limited impact by taking measures for risks**<br>■ Limited assumed risk in securing stable procurement of raw materials by taking the following measures:<br>• Material sourcing from multiple regions in the world<br>• Keeping raw material inventories in steelworks and ships | • Continue multiple sourcing<br>• Appropriately manage days of inventory and risks |
| | **Physical factor 2**<br>Abnormal weather to suspend operation and shipment | Difficulty in operation, caused by a natural disaster | **Limited impact by taking appropriate measures**<br>■ Systematic adoption of BCP measures. Limited risks in production disruption caused by natural disaster. Excessively abnormal weather may result in suspension of operation, etc. | • Continually adapt measures in consideration of long-term trends Measures against typhoons and heavy rain, measures to prevent crane overturns, measures against earthquakes and tsunamis (securing emergency evacuation places, embankment reinforcement, etc.) |
| | **Physical factor 3**<br>Heightened needs for solutions for "national resilience" against natural disasters | Natural disasters caused by abnormal weather | **Demand growth of steel for national land resilience**<br>■ Profit growth by providing Group's products and solutions for national resilience against earthquakes, tsunamis, heavy rain, typhoons, etc. | • Enhance the Group's product menu and expand sales in Japan and overseas, e.g., steel-slit dams and NS ECO-PILE™ method |

* For data on renewable energy and hydrogen, refer to the IEA World Energy Outlook 2025 NZE2050 Scenario.

## TOPICS High-efficiency electrical steel sheets that reduce energy loss in electric devices

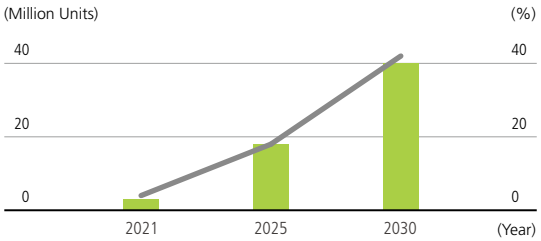
One of the most economically viable means to realize a carbon-neutral society is to upgrade high-efficiency non-oriented (NO) and grain-oriented (GO) electrical steel sheets. These products are used in motors for hybrid and electric vehicles as well as in transformers for power transmission and distribution, helping to reduce energy loss. The use of these products contributes to the reduction of $CO_2$ emissions when using hybrid cars, EVs, and home electric appliances and to efficient transmission of generated power.

### Expanding production capacity of high-efficiency electrical steel sheets

In response to the increasing demand and upgrade request for these electrical steel sheets used in EVs and other products, we decided to implement measures to improve manufacturing capacity of high-efficiency non-oriented (NO) electrical steel sheets in the Setouchi Works Hanshin Area (Sakai) and the Kyushu Works Yawata Area. We have also previously announced measures to improve manufacturing capacity and quality of the electrical steel sheet in the Kyushu Works Yawata Area and the Setouchi Works Hirohata Area.

The total amount of investment into these measures will be approximately 213 billion yen in cumulative total and the investment is expected to be fully effective in the first half of fiscal 2027. The manufacturing capacity of non-oriented (NO) electrical steel sheets for eco-friendly cars is also expected to increase by about five times from the current capacity.

**[World annual sales of EVs]**
**(Net Zero Emissions by 2050 Scenario)**




Prepared by Nippon Steel based on the IEA "Global Electric Vehicle Outlook 2025"

## TOPICS Response to meet needs for lightweight materials that reduce environmental burden (NSafe™-AutoConcept)

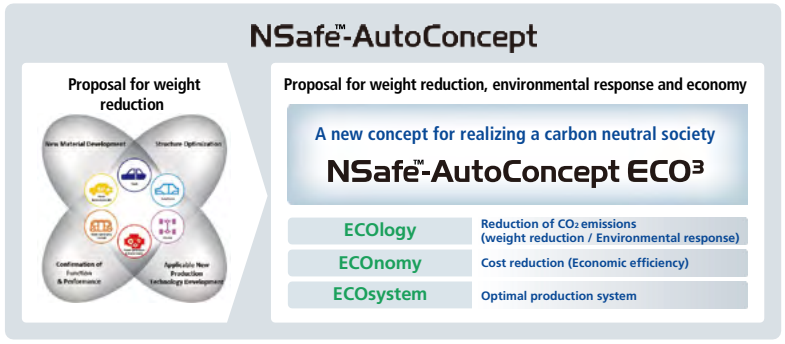
Nippon Steel has contributed to reduction in body weight and improvement in the safety performance of automobiles by developing advanced materials, as well as processing technologies and evaluation technologies to realize components and their structures that maximize material performance. In 2019, we started to make proposals on the NSafe™-AutoConcept (NSAC), a comprehensive solution for the development of next-generation steel vehicles to cope with the coming carbon neutral era. We are thus working with our customers to develop advanced vehicles.

Reductions in $CO_2$ emissions and enhanced collision safety are needed for automobiles and for that purpose, both bodyweight reduction and high strength are desired. Such needs can be satisfied by ultra-high-tensile steel sheets for vehicle bodies such as 2.0 GPa hot stamping materials, 1470 MPa cold high-tensile sheets, and 980 MPa hot-rolling high-strength steel plates for chassis.

We have made these high-tensile steel lineups practical and have reduced the body weight of steel cars by 30% with our proposals on structure and processing method as well as various evaluation technologies. This has enabled steel cars to have a similar weight to that of all-aluminum cars and the provision of higher collision safety performance.

Moreover, we began proposing NSafe™-AutoConcept ECO³ (NSAC Eco-cubic), a new concept that has deepened the NSAC's weight reduction technologies. This has enabled us to make optimal solution proposals adapted to customers' forward-looking automaking (e.g., proposal of parts integration, using steel) from the perspectives of $CO_2$ emissions reduction through weight reduction and LCA; cost reduction; and optimal production systems, to meet diverse customer needs in the midst of more innovative automaking, including rapidly advancing electrification of vehicles.

(Photograph: an example of component integration using steel; door ring structure and rear module integration)





Example of NSAC ECO³ proposals

# Creation of a Circular Economy (Recycling-based Society)

Steel is a flexible material that can be repeatedly recycled: it is a perfect example of a circular economy.
Nippon Steel strives for the greatest efficiency possible, including minimization or elimination of waste, in the use of our energy and limited resources, in every process of steelmaking. By utilizing this steelmaking process, we also work to recycle internally generated by-products so that we can realize zero emissions. We are also actively engaged in recycling of waste generated in society or by other industries.

## Efficient use of resources and energy

We use industrial water and energy resources such as electricity and fuel in producing steel products, which are mainly made of iron ore mined overseas, coal used as a raw material for reducing iron ore, and iron and steel scrap recycled by society.

Nippon Steel's steelworks use 100% of by-product gas generated in the steelmaking process, as fuel for heating of steel or as energy for an onsite power plant. Concerning water resources, 90% of water used in cooling and cleaning of products and manufacturing facilities are reprocessed and repeatedly used. These are examples of our efforts to make maximum use of limited resources and energy, without waste.

## Promote internal zero emissions

### By-products generated and final disposal

In the iron and steel-making process, over 600 kg of by-products, such as steel slag, dust*1, sludge*2, and used refractory bricks, are generated for each ton of crude steel produced. In fiscal 2024, Nippon Steel produced 34.30 million tons of crude steel and generated 20.42 million tons of by-products. We are committed to recycling these by-products both in and outside the Company, maintaining the high recycling rate of 99%.

For the final disposal amount, we will continue efforts to reduce generation of by-products toward achieving the fiscal 2025 target.

*1 Fine dust collected with a dust collector
*2 Semi-solid slurry recovered from industrial water discharge or sewage treatment

Nippon Steel's final disposal amounts

| 257 thousand tons/year | Target for 2025 | 263 thousand tons/year or less |
|---|---|---|

Click here for Nippon Steel's final disposal amounts in the past.
Data Book P.25

**[By-products and recycling (FY2024)]**

| By-product | Amount generated | Recycling application | Recycling rate |
|---|---|---|---|
| Blast furnace slag | 10.63 million tons | Blast furnace cement, fine aggregate, road base, etc. | 100% |
| Steelmaking slag | 4.41 million tons | Road base, civil engineering materials, fertilizer, etc. | 98% |
| Dust | 2.65 million tons | Raw materials for use in-house and also zinc refining | 99% |
| Sludge | 340 thousand tons | Raw materials for in-house use | 90% |
| Coal ash | 450 thousand tons | Cement raw materials, construction materials | 100% |
| Used refractory bricks | 190 thousand tons | Reuse, etc. | 51% |
| Others | 1.75 million tons | In-house use, others | 100% |
| Total | 20.42 million tons | Total recycling rate | 99% |

### Recycling of dust and sludge

To recycle the dust and sludge generated in the iron and steelmaking processes, for them to be used as raw materials, Nippon Steel operates a dust reduction kiln (RC: Resource circulating oven) at East Nippon Works Kashima Area and a rotary hearth reduction furnace (RHF) at East Nippon Works Kimitsu Area and Setouchi Works Hirohata Area. This enables us to recycle all internally generated dust.

### Effective use of steel slag

Almost all the amount of the steel slag is utilized as products such as cement and road materials. The use of steel slag helps reduce the amount of natural crushed stone excavated and leads to energy saving during cement manufacturing. As a result, it is a "designated procurement item" under the Act on Promoting Green Purchasing and has been certified as a recycled product by some local governments.

Moreover, as steel slag contains nutrition that helps plants grow, it is also widely used as fertilizer, contributing to improving farming productivity.

Approximately 80% of blast furnace slag is used for cement. Blast furnace cement is a mixture of pulverized blast furnace slag with ordinary Portland cement, contributes to a 40% reduction of $CO_2$ emissions during cement manufacturing by omitting the burning process. The blast furnace cement also excels in long-term strength and is registered as Eco Mark-certified product.

Among steelmaking slag products, Geo-Tizer™ is used to be mixed with soft soils on land (mud, such as surplus excavated soil from construction sites or farmland soil). This enhances compressibility of soils without solidifying excessively, thus improving soft soils into those that can be re-excavated. Compared to conventional soil-improvement materials such as cement and lime, it produces less dust, is more cost-effective, and can significantly reduce $CO_2$ emissions.

Nippon Steel's steelmaking slag products, KATAMA™ SP, has the property of solidifying on its own when it reacts with water. By utilizing this property, it is used for simple pavement such as forest roads and farm roads, as well as for weed preventive pavement for mega-solar panel installations and other purposes.

Calcia modified soil — a mixture of calcia modifier, which is made from steelmaking slag, and dredged soil — has been used to backfill deep-dug seabed areas and create shallow bottoms and tideland, contributing the improvement of marine environment.

In addition, Nippon Steel's Vivary™ Unit, which are composed of steel slag and humus made from waste wood, provides iron needed for seaweeds to flourish, promoting regeneration of an area of the sea bed that had lost much of its living organisms.

## Increase in recycling of waste generated in society (waste plastics)

We recycle 100% of waste plastics collected from ordinary households through chemical recycling by using a coke oven in accordance with the Containers and Packaging Recycling Law.

Specifically, waste plastics are used as hydrocarbon oil (40%), coke furnace gas (40%), and part of coke (20%). Our method of using a coke oven has an extremely high recycling efficiency and a great processing capacity, contributing to a circular economy in each region.

In recent years, synthetic fiber and food tray are also recycled in the same way. Furthermore, as the Plastic Resource Recycling Promotion Law enacted in fiscal 2022 calls for collection not only of container packaging plastics but also products made of plastics in bulk collection, we are also recycling plastics collected in bulk.

In addition, we are also working hard to develop technologies for expansion of treatment to meet the increasing plastics processing needs in the future. The total cumulative amount processed in fiscal 2000–2024 was approximately 4.23 million tons, equivalent to 13.74 million tons in terms of reduction in $CO_2$ emissions (the amount of annual $CO_2$ absorption* in artificial cedar forests in an area as large as 340,000 Tokyo Domes). This expanded use of waste plastics has been incorporated in our "Carbon Neutral Vision 2050" measures to combat climate change, and is presented as one of the examples of the efforts of Nippon Keidanren (Japan Business Federation) member companies' activity in its "Recycling Economic Partnership."

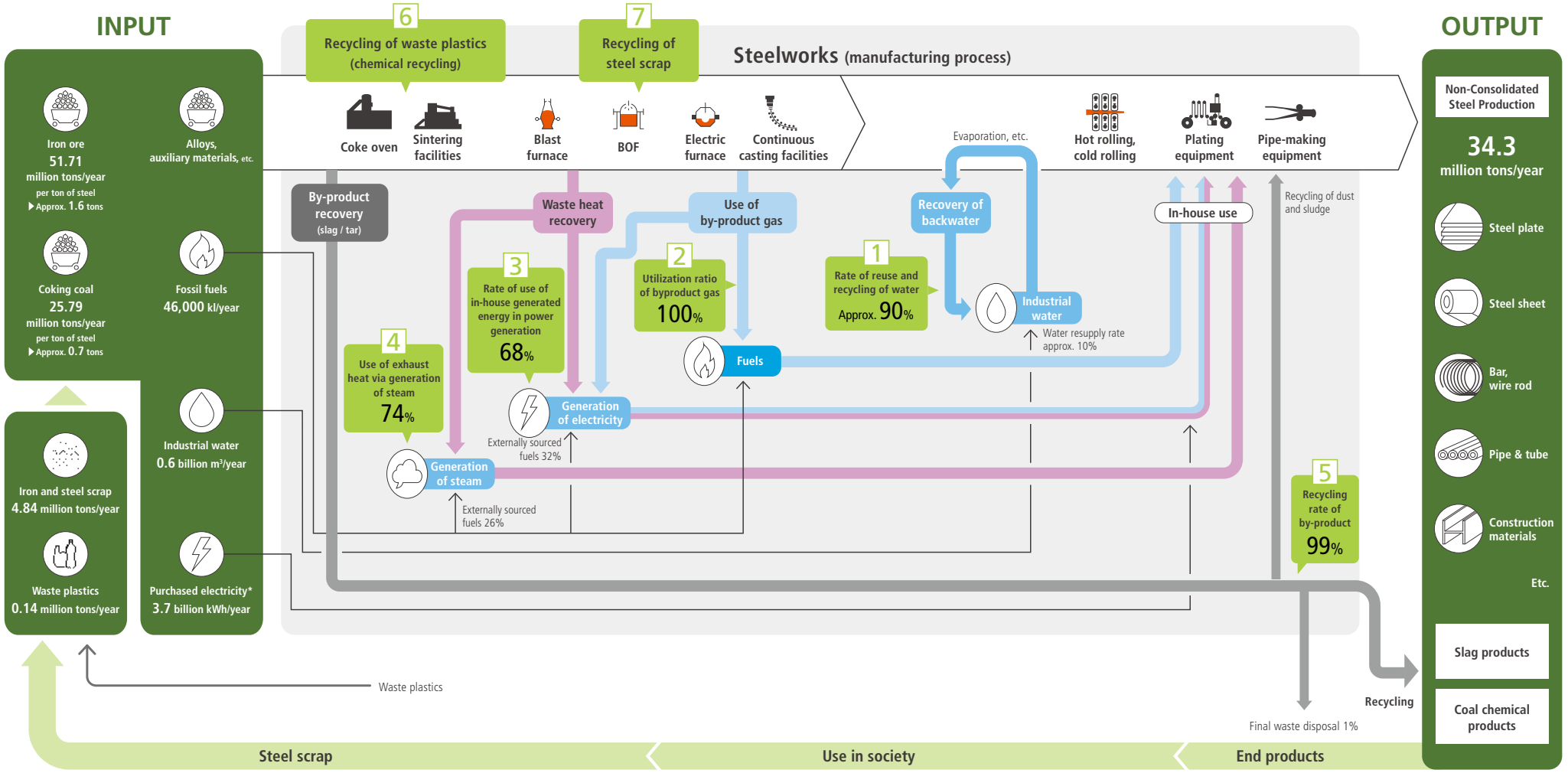
* One hectare of artificial cedar forest absorbs approximately 8.8 tons of $CO_2$ per year (source: the website of the Forestry Agency).

**[Chemical recycling of waste plastics]**

### Thermal decomposition enables 100% effective re-use of plastics

## Energy Material Balance

We are not only moving toward the achievement of zero emissions with minimal environmental burden and recycling internally generated materials, while utilizing the steel manufacturing process, but also actively recycling waste materials generated by society and other industries.




Numbers represent FY2024 performance * Purchased electricity (kWh) excludes electricity purchased from Cooperative Thermal Power Companies

## 1 Water Resources

Of water used in cooling and cleaning of products and manufacturing facilities, approximately 90% is reprocessed and repeatedly used, while the remaining approximately 10%, which disappears mainly due to evaporation, is replaced.

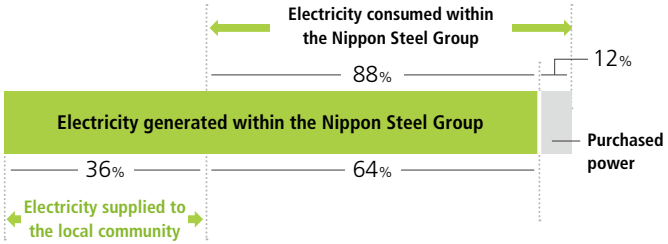
## 2 By-product gas

By-product gases, such as coke oven gas generated when coal is thermally cracked in an oxygen-free environment in the coke manufacturing process and blast furnace gas generated from blast furnaces, are fully utilized as fuel gas for steel heating furnaces or energy sources for power generation plants on the premises of steelworks.

## 3 Power

Nippon Steel itself generates 88% of the electricity it uses at steelworks, 68% of which is from internally generated energy sources such as exhaust heat and by-product gases. In the future, we will also consider making more efficient facilities and switching fuel in order to further lower carbon generation.

**[Nippon Steel Group's* Electricity Supply and Demand Balance (FY2024)]**




- **The Group internally generates 88% of the electricity it uses.**
- **The Group supplies 36% of internally generated electricity to the local community.**

* Including cooperative thermal power companies and affiliated electric arc furnaces

## 4 Use of exhaust heat

Exhaust heat, generated in the blast furnaces, sintering facilities, coke ovens, converters, and other facilities, is recovered and used in steam generation and power generation.

### Coke Dry Quenching (CDQ) for large-scale waste heat recovery

The CDQ equipment quenches red-hot coke made in the coke oven with inert gas, and the heat is used to generate steam for power generation. Compared to the conventional wet quenching, 40% energy saving has been achieved.

CDQ

## 5 By-product

By-products generated in steelmaking are recycled for reuse in the same process or for commercial use. We thus promote achieving zero emissions and contribute to conservation of resources and energy.

## 6 Waste plastics

Plastic containers and packaging collected from households nationwide, are fully recycled by a chemical processing method using coke furnaces.

## 7 Recycling of steel scrap

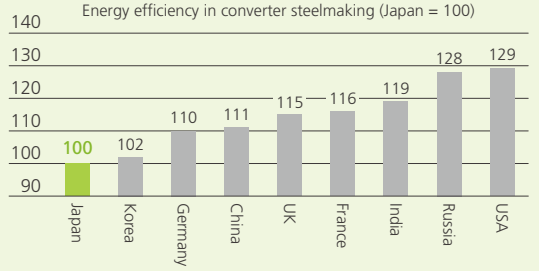
We recycle steel scrap generated in steelmaking and processing processes, as well as steel scrap recovered after use in society, as raw materials for producing new steel products.

In fiscal 2024, we used 4.84 million tons of steel scrap.

Recycling steel scrap is one of the important measures to achieve carbon neutrality. By maximizing the use of steel scrap resources generated in Japan, we aim to significantly reduce $CO_2$ emissions in the steelmaking process.

**[Energy efficiency in steelmaking by country (2019)]**

**Efforts for efficient use of various resources have resulted in Japan's steel industry achieving a world-leading level in energy efficiency.**




Source: International Comparisons of Energy Efficiency (Sectors of Electricity Generation, Iron and steel, Cement), RITE, 2019 (The Japanese translation and numerical values were provided by the Japan Iron and Steel Federation.)

# Biodiversity Conservation and Nature Positive

Nippon Steel participates in the activities of the Keidanren (Japan Business Federation) Nature Conservation Council and has affirmed the Keidanren Declaration for Biodiversity and Guidelines (revised in December 2023), and has accordingly been taking initiatives on biodiversity preservation. We also participate in the 30 by 30 Alliance for Biodiversity, contributing to the vitalization of nature-positive efforts through these activities.

## Efforts for conservation of biodiversity and nature positive

Which are closely aligned with measures to deal with climate change and the creation of a circular economy, under the following policy.

### Policy for the initiatives

As a member of Keidanren, we comply with the Keidanren Declaration for Biodiversity and Guidelines.

Recognizing both that our business activities greatly rely on nature's gifts, and that biodiversity is vital for realizing a sustainable society, we are well aware of the relationships of our business activities with biodiversity and are pledged to respond to challenges rooted in diverse local features, in order to build a society in harmony with nature.

As a member of the international community, we also recognize that initiatives aimed at building a society in harmony with nature are closely related to global issues of measures to deal with climate change and the creation of a circular economy. We aim to realize a sustainable society through integrated environmental corporate management which includes these initiatives in business activities.

## Contribution to activities aimed at achieving the 30 by 30 biodiversity target

In March 2023, we participated in the 30 by 30 Alliance for Biodiversity established by the Japanese government based on the rationale of the Kunming-Montreal Framework adopted at CBD COP15 held in 2022, and has since been contributing to its activities.

The alliance is a coalition of volunteers working in the public and private sectors to conserve and protect at least 30% of their own country's land and sea areas by 2030 (30 by 30), with the goal of halting and reversing biodiversity loss by 2030 (nature positive).

We aim to have our areas under conserved biodiversity registered as Other Effective area-based Conservation Measures (OECM), including the registration of the Creation of Hometown Forests at our steelworks and the Creation of Sea Forests.

## Responding to nature-related information disclosure

Today, the state of nature is said to be deteriorating at the fastest pace in human history, raising concerns about the possibility that many of nature's essential services benefitting society (ecosystem services) may deteriorate.

Scientists say that this natural degradation is attributable directly to the pressure on nature caused by human activities, such as changes in how nature is utilized, how resources are exploited, how climate changes and pollution affect the world's society, and the effects of invasive alien species in the land, freshwater, and oceanic areas.

We also recognize that our core business activities of steel production have impact on nature. Therefore, we have registered as a TNFD Adopter and are assessing and analyzing the relationship between steel production and nature, in line with the TNFD's recommended approach, and incorporating it's result into our business activities.

## Specific initiatives

### Creation of Hometown Forests

**Reproducing "the grove of a village shrine" and nurturing biodiversity at our steelworks**

We have carried out the "Creation of Hometown Forests" projects at our steelworks and factories in Japan under the guidance of the late Dr. Akira Miyawaki (professor emeritus of Yokohama National University), with the aim of facilitating harmonious coexistence between nature and humans. This project comprises research on the natural vegetation inherent to a certain area in a nearby grove associated with a historical shrine (Chinju-no-mori) and planting trees by local residents and our employees.

This was the first project by a private company in Japan to create a forest that harmonizes with the local landscape and is based on an ecological approach. At present, our forests in aggregate have grown to total around 850 ha (about the size of 180 Yankee Stadiums).

Wild birds and animals visit the forests at our steel works sites across Japan. Wild birds and animals inherent to the land return to the forests. Thus, the "Creation of Hometown Forests" helps conserve biodiversity, and sequester $CO_2$.

Kyushu Works (Oita Area)

### Creation of Sea Forests

**Implemented in 70 spots in Japan to improve sea desertification**

With the aim of solving the supply deficiency of iron, which is said to be one of the causes of sea desertification which loses seaweeds and makes the seabed barren, Nippon Steel has developed the Vivary™ Unit, iron fertilizer, via joint research with Tokyo University and uses it to promote the regeneration of seaweed beds.

Humic acid iron is the combination of iron ions and humic acid in the soil of a local natural forest. We have developed the technology to artificially generate humic acid iron by using steel slag and humic substance originating from waste wood. The Vivary Unit has received a safety certificate from the Safety Check and Certification System of the National Federation of Fisheries Cooperative Associations for our steel slag products.

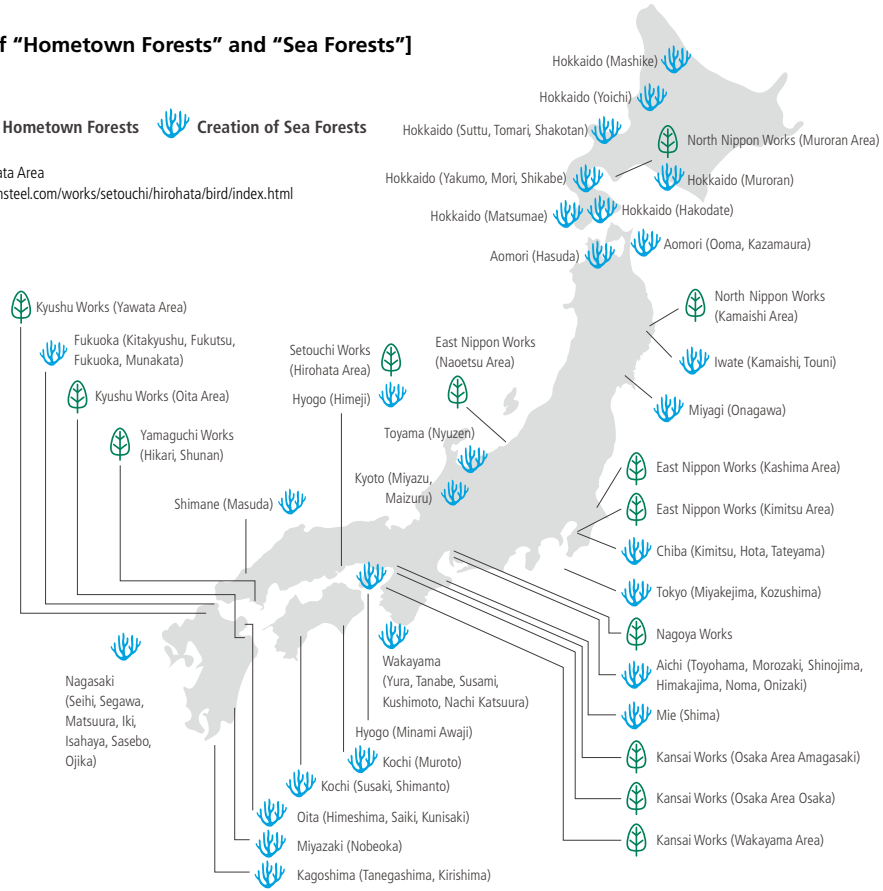
In Mashike Town, Hokkaido, starting from an experiment in 2004, we have developed a large-scale project (for a 300-meter-long coastal area) since 2014, confirming the expansion of seaweed beds and increase in the sea urchin population. This project is also expected to restore the once-atrophied seabed and steadily raise biodiversity.

Mashike Town, Hokkaido

**[Creation of "Hometown Forests" and "Sea Forests"]**

Creation of Hometown Forests　Creation of Sea Forests

Wild birds in Hirohata Area
https://www.nipponsteel.com/works/setouchi/hirohata/bird/index.html




**[Some animal inhabitants of the Hometown Forests]**

| | |
|---|---|
| Muroran | Ezo deer, Ezo red fox, Ezo squirrel, eagle, buzzard, magpie |
| Kamaishi | Moon bear, Japanese serow, deer, hare, black-tailed gull |
| Naoetsu | Japanese dace, carp |
| Kashima | Pheasant, shrike, duck |
| Kimitsu | Bulbul, pheasant, little tern, swallow, egret |
| Nagoya | Raccoon, pheasant, bulbul, shrike, swallow, great tit |
| Osaka | Weasel, starling, bulbul |

| | |
|---|---|
| Wakayama | Raccoon, marten, bulbul, tiger keelbuck |
| Sakai | Duck |
| Amagasaki | Heron, bulbul, lizard, killifish, white-tailed skimmer |
| Hirohata | Buzzard, shrike, oriental turtle dove, bulbul, starling, bunting |
| Yawata | Weasel, pheasant, gray heron, Japanese cormorant |
| Kokura | Gull, Japanese wagtail, graphium sarpedon |
| Oita | Whooper swan, kingfisher, killifish, mayfly, firefly |
| Hikari | 51 species of birds including black-tailed gull and herring gull |


Gray heron


Buzzard


Japanese dace


Bulbul


White-tailed skimmer

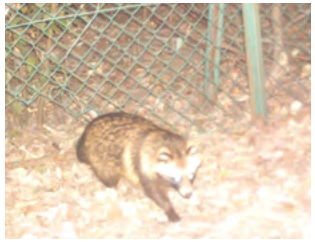

Little tern


Duck


Raccoon

## Participation in community projects

### Participation in ecological preservation activities in the community



Since 2012, the Nagoya Works of Nippon Steel has participated in the Inochi-wo-Tsunagu (Life Sustaining) Project, which has been organized by a local students' planning committee, 12 partner companies, the Eco-Asset Consortium and the Japan Ecologist Association of Support (NPO). This project seeks to develop an ecosystem network that connects green spaces of company sites. To thereby increase the potential of the connected areas, we engage in a variety of collaborative activities to promote biodiversity conservation. These initiatives include joint awareness-raising events and the development of animal pathways (corridors) that allow wildlife to move between habitats.

In October 2023, this project, a joint initiative involving 11 companies including the Nagoya Works of Nippon Steel, governments, students, experts, and NPOs, was certified as a "symbiosis with nature site" by the Ministry of the Environment. In fiscal 2024, the past activities were recognized and this project won the Prime Minister's Award under the Green City Award program.

## Contribution by use of by-products

### Steel slag repurposed for rice cultivation

Steel slag, a by-product of steelmaking, contains nutritional matter that helps plants grow. It is therefore used as a fertilizer for rice cultivation, dry-field farming, and pasture grass. Silica contained in steel slag promotes photosynthesis by keeping stems upright and improving their light receiving orientation, while iron is effective in preventing root rot and leaf blight. The steel slag also contains phosphoric acid, manganese, boron, and various other components of fertilizer. Nippon Steel donated converter slag fertilizers to cooperate with research by the Tokyo University of Agriculture for salt removal in farmland in the Soma area of Fukushima Prefecture, which was devastated by the earthquakes and tsunami of March 2011. The slag fertilizers have proved effective in rapid and efficient salt removal. The restoration of rice fields also works to restore habitats for birds, frogs, and various other living things.


**COLUMN**

## Hometown Forest of Nippon Steel Kyushu Works Oita Area More than 50 years of efforts and their significance

**Director Shinichi Suzuki**
**IGES-Japanese Center for International Study in Ecology**

The Chinju-no-Mori (local historical forest) in the Oita Area, the planting of which began in 1971, is an artificial forest similar to Tokyo's Meiji-Jingu Shrine forest planted in 1920. However, it is not just a man-made forest. The forest was devised by the late Dr. Akira Miyawaki based on the results of vegetation ecology research, and was created by meticulous planning and management. This has evolved into a Miyawaki-Method environmental conservation forest of evergreen broadleaf trees, and is highly praised globally.

More than 50 years after planting, trees of the local forest in the Oita Area have already reached a height of 20 meters and have flourished so as to become a forest reminiscent of the one at the Meiji Shrine. Going beyond the framework of forest greening, the forest project provides excellent scenery and vegetative landscape in the community. At the same time, it comprises a forest area with an impressive overall environmental conservation effect, accompanied by disaster prevention and dust resistance qualities. Unlike single planting of adult trees with props, which was the mainstream back in the 1970s, Nippon Steel's foresight in environmental conservation incorporating ecological methods is highly praised.

In fact, the site in the Oita Area used to be bare land formed by coastal reclamation before planting to create the current forest. What made it possible to establish the trees was the determination of potential natural vegetation based on field surveys, combined with use of ecological planting of carefully chosen techniques and species, soil improvement, and the creation of mound. Even 50 years after planting, the hometown forest in the Oita Area is still in the process of developing. As a living and continuously growing environmental preservation device, the forest is expected to bring high benefits and contribute to global environmental issues including global warming and biodiversity. The Oita Area hometown forest is precious natural capital.

**Dr. Shinichi Suzuki**

Vegetation Scholar, Director of IGES-Japanese Center for International Study in Ecology (IGESJISE), Ph.D. (Academic)

Born in Gunma Prefecture in 1958. After graduating from the Faculty of Agriculture, at Meiji University, he studied under Dr. Akira Miyawaki at the Vegetation Studies Laboratory of the Research Center for Environmental Sciences, Yokohama National University. He served as a biology teacher at Gunma Prefectural High School, a researcher at the IGES-JISE, and a professor at the Junior College of Tokyo University of Agriculture and the Faculty of Regional Environmental Sciences at the same university. In July 2024, he became Director of the IGES-JISE. He is also a member of the vegetation map legend review committee of the Ministry of the Environment, an advisor to the Environmental Review Board of the Ministry of Economy, Trade and Industry, a special adviser for the protection of Oze, Gunma Prefecture, and the Chairman of Chinju-no-Mori Project Engineering Department.

Co-authored "Nihon Shokuseishi Vol. 3-10" (Shibundo, 1983-1989), "Vegetation Landscape and its Management" (Tokyo University of Agriculture Press, 2014), "Study on Forests That Protect the Environment)" (Kaiseisha, 2018), etc.

## Information disclosure according to recommendations of the Task Force on Nature-related Financial Disclosures (TNFD)

Recognizing that the conservation of biodiversity and restoration of nature (nature-positive) are important environmental issues as well as carbon neutrality and a circular economy, we will strengthen our various measures and consider strategies to reduce nature-related risks and realize opportunities, incorporating them into our business activities.

TNFD Taskforce on Nature-related Financial Disclosures

### Disclosure approach in line with the TNFD Final Recommendations

We conduct an evaluation and analysis in line with the LEAP approach recommended by the TNFD and disclose nature-related information accordingly.

**[Evaluation and analysis process]**

**Scoping** Selection of projects to be evaluated

**Discovery of contact points with nature and identification of priority areas**

L **Locate** Location assessment and identification of vulnerable areas
- Assess vulnerable areas
- Identify high-risk areas

E **Evaluate** Evaluation of dependencies and impact relationship at sector-level
- Evaluation of the dependencies and impact relationship between business activities and nature
- Determine critical dependencies and impact relationship

**Identify and analyze risks and opportunities**

A **Assess** Assessment of critical risks and opportunities
- Analyze risks and opportunities
- Analyze critical risks and opportunities
- Consider management approach

**Set up strategies, targets, and KPIs**

P **Prepare** Strategy development and management by metrics and targets
- Plan strategies based on analysis results
- Consider target setting and progress management
- Review disclosure content

**[TNFD Disclosure Recommendations]**

**1 Governance**
Governance of nature-related dependencies and impacts, and risks and opportunities

**2 Management of risks and impacts**
A process used to identify, assess, prioritize, and monitor nature-related dependencies and impacts, and risks and opportunities

**3 Strategy**
Impacts of nature-related dependencies and impacts, and risks and opportunities on business models, strategies, and financial planning

**4 Metrics and Targets**
Metrics and targets used to assess and manage critical nature-related dependencies and impacts, and risks and opportunities

### 1 Governance

In the Company, issues related to nature-related dependencies and impacts, as well as risks and opportunities, are reported and discussed at the Corporate Policy Committee and the Board of Directors, together with other environmental policy issues such as climate change countermeasures and the creation of a circular economy and are supervised by the Board of Directors.

### 2 Management of risks and impacts

Concerning dependencies and impacts on nature, as well as our risks and opportunities, we have assessed our direct operation (steelworks) of the core steelmaking business and the mining of iron ore and coking coal in the upstream supply chain, according to the LEAP (Locate, Evaluate, Assess, and Prepare) approach advocated by TNFD. The processes for managing these natural-related risks and impacts are integrated into the company-wide risk management process as described in 1 Governance.

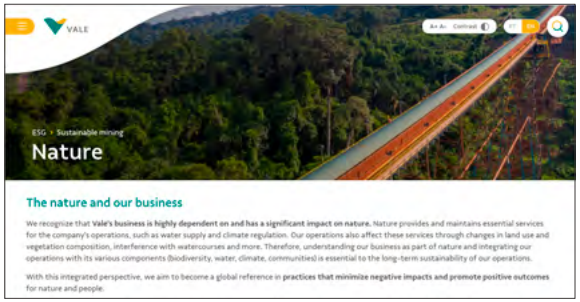
See the process of identifying, assessing, and prioritizing risks and opportunities (assessment and analysis using the LEAP approach)
https://www.nipponsteel.com/en/sustainability/env/biodiversity/pdf/tnfdassess.pdf

## 3 Strategy

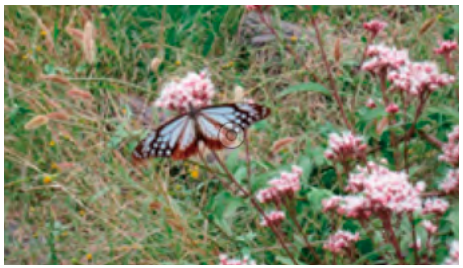
Using the ENCORE (Exploring Natural Capital Opportunities, Risks, and Exposure) and other tools, we assessed the dependencies and impact relationships of our direct steel operations (steelworks) and upstream supply chains (major raw material suppliers), and assessed and analyzed the nature-related risks and opportunities linked to critical dependencies and impacts from the perspective of their impact on our business models, strategies and financial plans.
The resulting items identified as critical risks and opportunities and our strategies to reduce risks or realize opportunities related to them are shown below.

TNFD Taskforce on Nature-related Financial Disclosures

**[Risk Analysis Results]**

| Detail | Critical dependencies/ impact | | Risk type | Factors and events | Impact on Nippon Steel | Nippon Steel's strategy |
|---|---|---|---|---|---|---|
| Direct operation<br>Production activities in steelworks | Water pollution (Impact) | | Physical (Acute) | Pollution of the surrounding water environment and water contamination accidents caused by wastewater or leakage of steelworks | ● Increased costs for additional wastewater treatment.<br>● Suspension of the production process if the existing processing facility cannot handle it<br>● Possibility of penalties or fines due to exceeding the baseline | [Target] No serious violations of environmental laws and regulations and no environmental accidents<br>● Consider water pollution caused by wastewater and leaks as a risk that can occur at all steelmaking sites, regardless of whether they are located in areas where there is a risk of impact on the ecosystem. Implement hardware/software measures assuming their occurrence across the company.<br><Hardware measures> Automatic wastewater monitoring equipment, wastewater shut-off gates, emergency water tanks, etc.<br><Software measures> Inspection and repair, drafting of work standards, operation confirmation, and training of procedures<br>(See the P.83 for details of measures for the water environment)<br>● Have a system in place to promptly report environmental events at each business site to the head office. Report the status of such events twice a year to the Environmental Technology and Management Committee chaired by the executive vice president in charge. Also, report to and be supervised by the Board of Directors. |
| Indirect operation (Upstream supply chain)<br><br>Mining activities of iron ore and coking coal | Utilization of the terrestrial ecosystem (Impact) | | Physical (Acute) | Temporary suspension of business activities caused by the destruction of land, including the operating area, by the mining activities of a supplier | ● Deterioration of corporate image and a decrease in product sales due to procurement of raw materials from the supplier in trouble<br>● Decrease in product production due to limited procurement of raw materials in case of a suspension of a supplier's business activities | ● Have a system in place that allows us to continue our business, with diversified material sourcing as a comprehensive risk countermeasure, by increasing the amount of procurement from other suppliers even in case of temporary suspension of procurement from one supplier<br>● Checking the status of suppliers' nature-related activities in future engagements with suppliers, recognizing that some of the activities of suppliers have an impact on nature<br><br>**Examples of activities of suppliers of raw material (Vale)**<br><Terrestrial ecosystems><br>● Enhanced measures to eliminate dangerous tailing dams by 2025<br><Water Resources><br>● Target to achieve 27% reduction in freshwater use by 2030 (2017 baseline), prioritizing regions with the highest water stress<br>● 83% use of recycled water (2024 FY result)<br><br>  <br>Vale ESG portal/Sustainable mining/Nature |
| | Utilization of the terrestrial ecosystem (Impact) | Utilization of water resources (Impact) | Transition (Market) | When a supplier causes problems such as land destruction or excessive use of water resources, or fails to properly disclose to investors, despite investors' increased ESG investment associated with higher awareness of the use of terrestrial ecosystems and water resource conservation:<br>● Decline in the supplier's brand value<br>● Supplier's withdrawal from the business due to their deteriorating financing | | |
| | | | Transition (Reputation) | When a supplier causes a water-related problem or fails to properly disclose it to local residents or environmental organizations, despite their increased interests in the use of terrestrial ecosystems or water resource conservation:<br>● Decline in the supplier's business continuity in the target regions due to criticism from local residents and environmental organizations<br>● Decline in the reputation of the supplier due to news and other information | | |

**[Opportunity Analysis result]**

| Detail | Critical dependencies/ impact | Opportunity type | Factors and events | Impact on Nippon Steel | Nippon Steel's strategy |
|---|---|---|---|---|---|
| Various nature-related activities operated directly by the Nippon Steel Group | Nature in general (Impact) | Transition (Products and services, reputation) | Increase in demand for eco-friendly products due to increasing social interest in and needs for the conservation of nature and biodiversity | ● Increase in production by expanding the lineup of eco-products and strengthening the steelmaking system, and increase in earnings from environmentally friendly products | **Natural restoration and expansion of supply of a variety of nature-positive and eco-friendly products**<br>● Improvement of marine environment and regeneration of seaweed beds using steel slag as raw material (marine fertilizer: Vivary™ Unit)<br>● High ductility steel plates for hulls that reduce the risk of environmental damage such as oil spills by improving marine safety<br>  <br>Application example of high ductility steel plates to VLCC<br>● Development and provision of steel materials that do not contain substances causing environmental burden such as lead and hexavalent chromium |
| | | | Increased impact of nature and biodiversity conservation activities on the corporate image due to increasing social interest in and needs for the conservation of nature and biodiversity | ● Improved corporate image and increase in product sales by effectively disseminating activities related to the preservation of nature and biodiversity | **Enhanced PR for the above products (sales activities, academic conferences, events, commercials, etc.)**<br>● Presentation on the Creation of Sea Forests at COP28<br>  <br><br>Chika Kosugi, Advanced Technology Research Laboratories, R&D Laboratories, Nippon Steel as a panelist at the Japan Pavilion<br>● Award from an external organization (Expansion of the use of wood biomass made from local thinned wood) |
| | | Transition (Reputation) | Increasing attention from stakeholders, including local residents, regarding the conservation of nature and biodiversity | ● Implementation of initiatives related to the preservation of nature and biodiversity and effective communication to build good relationships with local communities and improve preparedness for business continuity | ● Establishment of management standards based on ecological methods, under our Basic Environmental Policy, to promote the creation of Hometown Forests<br>● Contribute to the restoration of ecosystem services (fishery harvest) through the Creation of Sea Forests<br>● Promotion of environmental activities such as dialog and participation in local activities by steelworks, and participation in 30 by 30 activities<br>  <br>Parantica sita identified in our green areas |

## 4 Metrics and targets

We manage critical dependencies and impact, and risks and opportunities, based on the TNFD Core Global Indicators. Concerning water resources and water pollution risks that are assessed as having a critical impact on direct operations, we are implementing initiatives with the targets of "no serious violations of environmental laws and regulations and no environmental accidents" and "high-level stability of the water circulation rate," reflecting the risk analysts results in 3 ) Strategy.

Taskforce on Nature-related Financial Disclosures

**[Indicator: TNFD Core Global Indicators for Critical Dependencies and Impact]**

| No. | Driver of nature change | Indicator | Nippon Steel's disclosure (Direct operation: Steelworks) |
|---|---|---|---|
| C2.1 | Pollution/pollution removal | Wastewater discharged | Volume of water discharged by destination ($m^3$) Data Book P.24 |
| C3.0 | Resource use/replenishment | Water withdrawal and consumption from areas of water scarcity | No manufacturing base located in areas of water scarcity Data Book P.24<br>Volume of water withdrawal and consumption by source ($m^3$) |

**[Indicator: TNFD Core Global Indicators for Risks and Opportunities]**

| No. | Category | Metric | Nippon Steel's disclosure (Direct operation: Steelworks) |
|---|---|---|---|
| C7.2 | Risks | Description and value of significant fines/penalties received and litigation action in the year due to the negative nature-related impacts | None |
| C7.3 | Opportunities | Amount of capital expenditure, financing or investment deployed towards nature-related opportunities, by type of opportunity, with reference to a government or regulator green investment taxonomy or third-party industry or NGO taxonomy, where relevant | 1.4 billion yen<br>(costs for beautification and greening of steelworks)<br>P.81 |

**[Goals and Performance: Objectives and performance to manage critical dependency/impact items, and risks and opportunities]**

| Detail | Indicator | Target | Progress management method | Results for FY2024 |
|---|---|---|---|---|
| Water pollution | Serious violations of environmental laws and regulations and environmental accidents | Zero | Development of communication and reporting systems, internal audits, and interviews | Zero |
| Water Resources | Water circulation rate | Stable rates at high levels | Internal audits and hearings | The water re-use rate: Approx. 90% P.97 |

# Safety

In keeping with the basic philosophy that "safety and health of employees of the Nippon Steel Group is the Group's most important, top-priority value and the basis that supports business development," the Nippon Steel Group has firmly adhered to its manufacturing values, which include upholding the principles of prioritizing safety, protecting the environment, and preventing disasters. We are working on all the related activities to improve the level of our Occupational Safety and Health Management System (OSHMS) while creating safe and secure workplaces. The Basic Policy on Safety and Health is applied to Nippon Steel as well as to related or cooperative companies.

## Reducing disaster risks to zero, and group-wide sharing of effective measures

We promote a risk assessment when planning a new project and regularly conduct safety and risk evaluation for existing projects, to prevent accidents and reduce risks. We also seek for the intrinsic safety of equipment and take countermeasures against human error. We also actively promote the use of IT in safety measures, such as introducing safety surveillance cameras or helmet-mounted cameras, or determining worker location data via GPS. Moreover, we conduct an analysis of actual accidents for the prevention of similar accidents and make effective examples of accident-preventive measures spread promptly. As a result of continuing these efforts, our safety performance in 2024 shows that the number of accidents accompanied by lost work time was 14 for the company*1 (including fatal cases of one), 18 for our cooperating companies (including fatal cases of one), and the comprehensive lost time injury frequency rate was 0.18 (vs. Japan's steel industry average of 0.79). We will continue to strive for a safe work environment with the safety wellness targets for FY2025, which are zero fatalities/severe accidents and less than 0.10 as the comprehensive accident frequency rate.

**Lost time injury frequency rate in FY2024**

| 0.18 | Target | 0.10 or less |
|---|---|---|

*1 employees for the company: all people employed by Nippon Steel (including seconded employees as well as temporary and part-time workers), and those dispatched to Nippon Steel.

**[Lost time injury frequency rate in 2024]**

| | |
|---|---|
| Nippon Steel | 0.18 |
| All domestic industries*2 | 2.10 |
| Domestic manufacturing industries*2 | 1.30 |
| Domestic steel industries*2 | 0.79 |
| Domestic steel industries (JISF members)*2 | 0.36 |
| World steel industries (WSA members)*3 | 0.70 |

*2 JISF "Safety Management Overview, 2023"
*3 WSA "Safety and health 2022 metrics report"

$$\text{Lost time injury frequency rate} = \frac{\text{Number of lost-time work accidents}}{\text{Total number of hours worked by all employees}} \times 1{,}000{,}000$$

Details available here Data Book P.31

## Acquisition of third-party certification

Nippon Steel's all steelworks acquired ISO (JIS Q) 45001 Health and Safety certification (published in March 2018) as of March 2024.

**Acquisition of ISO (JIS Q) 45001 certification**

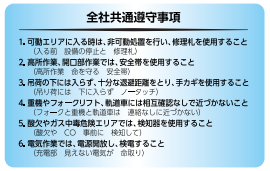
- FY2019 Kansai Works Wakayama Area
- FY2020 Amagasaki Area and Osaka Area of Kansai Works; Nagoya Works; Kyushu Works Oita Area; East Nippon Works Kashima Area
- FY2021 Naoetsu Area and Kimitsu Area of East Nippon Works, North Nippon Works Muroran Area, Setouchi Works Hirohata Area
- FY2022 North Nippon Works Kamaishi Area, Kyushu Works Yawata Area
- FY2023 Setouchi Works Hanshin Area


ISO (JIS Q) 45001 Health and Safety certification (Setouchi Works Hanshin Area)

## Safety initiatives

### Six Fundamental Safety Rules for Company-Wide Compliance

Nippon Steel has established the Six Fundamental Safety Rules for Company-Wide Compliance as our most important guidelines for ensuring safe operations. These Six Safety Rules are designed to address the most frequent causes of past accidents and to avoid risks that could lead to serious consequences in the event of an incident. We have prepared a guidebook that presents work situations of non-compliance with these rules, along with actual accident cases, to enhance understanding of the Six Safety Rules among both our employees and those of our cooperative companies.





### Ensuring safety through pre-work TBMs (toolbox meetings)

To ensure safe operations, it is essential to establish clear working procedures and assign roles to workers before commencing any task. While operation standards are defined for routine work, these standards are often not in place for infrequent or unexpected non-routine work. Before starting any non-routine work, a TBM is conducted in advance; however, implementation methods vary. To enhance work safety, we have developed the TBM Guidebook, which highlights key points for conducting TBMs and provides practical examples of both TBM and KY (Kiken Yochi – hazard prediction).

## Safety training

We are committed to enhancing training programs aimed at preventing accidents. These include safety and health training for newly appointed managers at manufacturing worksites (mandatory for all eligible personnel; 49 managers in FY2024) and hazard experience training, which enables workers to simulate workplace risks utilizing VR-based equipment. In addition, we conduct annual safety and health training for safety and health personnel from our Group companies and major cooperative companies (67 participants in FY2024). These programs are designed to improve knowledge about our safety and health initiatives, the procedures for implementing safety and health management methods such as internal audits, and the relevant occupational safety and health laws and regulations.

**COLUMN**

### Hazard prediction training using e-learning

To eradicate workplace accidents, it is essential not only to enhance organizational safety management standards, but also for each worker to maintain a strong awareness of potential hazards and continuously improve their behavior. To strengthen hazard recognition skills, we provide ongoing hazard prediction training via e-learning to all Nippon Steel employees and cooperative company workers engaged in manufacturing operations. This training can also be conducted via smartphones, enabling participation anytime and anywhere.

"You are about to transport parts stored on a rack using a crane. What potential hazards exist, and what preventive measures should be taken?"

**Safety and Health Management Structure, etc.**
https://www.nipponsteel.com/en/csr/sdq/safety.html

# Disaster prevention

Our manufacturing values place the highest priority on safety, environmental protection, and disaster prevention. In addition to advancing equipment measures for disaster prevention, we are committed to achieving zero serious accidents by taking proactive steps to mitigate potential risks and by ensuring swift and appropriate initial responses in the event of an emergency. Furthermore, through continuous enhancement of both equipment-based countermeasures and training for natural disaster preparedness across the entire Group, we aim to ensure safe, secure, and stable production activities.

## Disaster risk reduction activities

Our disaster prevention initiatives focus on:

1) Ensuring compliance with disaster prevention laws and regulations, and conducting risk assessment activities to prevent accidents.
2) Implementing measures to thoroughly prevent recurrence of incidents and ensuring appropriate on-site initial responses to mitigate damages when an incident occurs.
3) Regularly monitoring the execution of disaster prevention management activities.

Through these efforts, we remain committed to establishing autonomous disaster prevention activities, driven primarily by the manufacturing sites at each steelworks.

**[Specific initiatives]**

### 1 Compliance with disaster prevention laws and regulations

- Development of frameworks based on disaster prevention laws and regulations, and execution of appropriate fire protection measures
- Inspection and maintenance of equipment for disaster prevention to ensure effectiveness in the event of an emergency

### 2 Disaster prevention risk assessment (Measures to mitigate existing risks and preventive actions against potential risks)

- Identification and assessment of risks, management of residual risks, and formulation of permanent countermeasures at manufacturing sites, in line with company-wide guidelines, through risk assessment as a preventive approach

### 3 Recurrence prevention measures

- Equipment measures based on the three-tiered defense approach (recurrence prevention, predictive detection of precursors and tendency management, and mitigation measures in the event of occurrence)
- Preserving awareness of past incidents and accidents (panel presentations in training facilities, and sessions for employees to learn about past accidents during training and others)

### 4 Enhancement of initial response

- Verification of initial response procedures through practical training simulating disasters (Systematic implementation of practical training at each workplace across all plants: training simulating nighttime and holiday scenarios, training simulating work at heights, joint training including Group companies and others)
- Enhancement of firefighting skills of in-house fire defense function in cooperation with fire departments
  (Joint training with fire departments, leader education programs and others)

### 5 Preparedness measures for earthquakes and tsunami and measures for natural disaster mitigation

- Promotion of measures in preparation for earthquakes: 1) human injury prevention, 2) area damage prevention, and 3) production maintenance.
- Preparation of emergency measures and evacuation procedures, as well as training drills, to mitigate damage in the event of natural disasters.

(Example) Review of assumptions for the Nankai Trough Earthquake
Comprehensive inspection of initial response to Tsunami warnings and advisories (July 2025)

### 6 Auditing disaster prevention

- Factory monitoring by the disaster prevention organization at each steelworks for verification on the status of disaster prevention activities at the manufacturing work front.
- Check-up on the implementation status of disaster prevention management of all steelworks by the disaster prevention department at the head office.

### 7 Third-party monitoring toward enhancing safety competency in steelworks

- Assessment of steelworks by an NPO, Japan Industrial Safety Competency Center*2

### 8 Disaster prevention management for group companies

- Holding of regular information-sharing meetings to enhance coordination for disaster prevention management. Individual audits of Group companies that have risks related to disaster prevention.

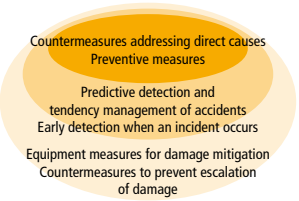
*2 Nonprofit Organization: Japan Industrial Safety Competency Center

Serious disaster-related accidents*1 (2024)

| 0 | Target | 0 |
|---|---|---|

*1 Fatalities or accidents that caused impacts on production monthly

**[Our approach to equipment measures for disaster prevention (three-tiered defense approach)]**




Actual number of serious disaster-related accidents available here
Data Book P.32

## Efforts to prevent the occurrence of accidents and damage mitigation measures

Compliance with disaster prevention laws and regulations (lectures delivered by fire department personnel)

Disaster prevention risk assessment (patrols conducted by managers)

Strengthening of initial response (firefighting drills under the guidance of fire department personnel)

# 2 Quality Management

Quality management is one of the most important aspects in obtaining the trust and satisfaction of customers in the provision of products and services.
All of our group employees involved in manufacturing and services are responsible for quality control and quality assurance to continuously improve quality.

## The basic policy of quality assurance of the Nippon Steel Group

As a basic policy in line with the Japan Iron and Steel Federation's guidelines, aimed at strengthening the quality assurance system, we are promoting 1) the enhancement of education on quality compliance (compliance with laws and regulations), 2) activities to reduce quality risks, and 3) the extraction of quality risks through quality audit in our Group. Quality management issues are shared by the Quality Management Committee, chaired by the Executive Vice President in charge of quality management. By having the Committee review actions to take to resolve the issues, we strive to maintain and improve our quality management system.

## Activities aimed at strengthening the quality assurance system

Nippon Steel's quality management system is based on autonomous quality management activities by each steelwork, business unit, and group company including overseas ones. The Quality Management Division, in cooperation with the steelworks and business units, promotes quality compliance education, behavioral risk reduction activities, and the extraction and correction of quality risks through quality audits. Information on quality-related events is promptly shared across the Group and at appropriate times measures are launched to resolve issues through standardization, systemization, and automatization. These measures are then implemented to enhance the identification management of actual products and to improve reliability of testing and inspection.

**[Specific activities]**

### 1. Education on quality compliance

Employees of the Company and the domestic and overseas Group companies receive quality compliance education. It covers such topics as the importance of compliance with laws and regulations, the impact that our products and work have on society, quality risk management, and internal rules and standards. In addition, we conduct group discussions with the participation of all employees, using quality non-compliance cases that occurred in and out of the Company in the past as learning material. We also conduct quality-related e-learning programs and on-site quality lectures to foster a strong awareness of quality compliance.

Number of e-learning participants in FY2024: **71,296**

**[Quality management education and quality lectures]**

Group discussion session

Quality lecture in Vietnam

**[Quality e-Learning]** * Distributed to overseas group companies in five languages



### 2. Activities to reduce behavioral risks

Based on the analysis of the cause of past quality issues, we have established the Five Basic Rules of Quality Behavior, which all employees involved in quality assurance are expected to follow. We are actively working to embed these rules across the organization to promote their consistent practice. To improve the reliability of testing and inspection, we also introduce the systems, including quality design systems, automated data retrieval, identification management systems, and finished product quality judgement systems, in each process from order to shipment, thereby eliminating risks caused by human intervention. At the same time, we are strengthening the management practices, including initiatives to ensure psychological safety on the frontlines of quality control, and will continue to intensify these activities going forward.

**[Five Basic Rules of Quality Behavior]**

1. Routine Operations (Compliance Requirements)
   **Confirm work procedures and perform tasks strictly in accordance with the procedure manual. Do not rely on verbal instructions.**
   "Wait! Check the procedure before starting work!"
2. Change Management (Compliance Requirements)
   **Review procedures for any changes, such as new tasks, modified processes, or infrequent operations.**
   "Stay alert—first time, modified, or infrequent tasks require extra care."
3. Test and Data Entry (Compliance Requirements)
   **Conduct tests and inspections properly and maintain accurate records. Do not advance processes using dummy entries.**
   "Record results accurately—no corrections should be needed later."
4. Response to Quality Abnormalities (Compliance Requirements)
   **Immediately stop work upon detecting any quality abnormality, then consult and report without delay.**
   "If you find an abnormality or deviation, stop and report immediately."
5. Product Verification (Compliance Requirements)
   **Verify each product individually, one by one. Do not check in bulk.**
   "Verification must be one-by-one, with absolute certainty."

### 3. Quality audits

The Quality Management Div. performs periodic quality audits in the Company and the Group to highly earn the trust of customers. In addition to the audits carried out directly by the Quality Management Div. of the Head Office, we are also working to establish a reinforced system of autonomous audits performed by certified auditors assigned to each steelworks. Furthermore, we are working to raise the credibility of our quality management system by earnestly addressing guidance from external audits such as ISO 9001 and JIS certifications to improve the quality of our products.

Quality audit results for FY2024

Steelworks and areas: **23** audits Group company sites: **61** audits


Certification of Quality Management Div. (armband and badge)


Autonomous audit by certified auditors

### 4. Quality management system and standardization activities

#### Quality management system

All steelworks of Nippon Steel are ISO 9001 certified. By implementing the quality management system, we ensure that the processes used to provide products and services to customers are appropriately managed. We will efficiently proceed with activities to clarify each steelworks' quality policy and to improve quality continuously.

#### Standardization activities

With regard to Japanese and international steel standards (JIS, ISO, and ASTM), we promote the revision of standards, the standardization of steel products through public-private cooperation by participating in the standardization activities led by the Japan Iron and Steel Federation.

# Production and Supply Chain Management

To realize the production and supply of steel products required for a sustainable society, Nippon Steel is making various initiatives and DX (digital transformation) for stable procurement, stable production, and shipping in all aspects of the supply chain, from the procurement of raw materials, fuel, equipment, and materials to the shipment to customers.

## Sustainable procurement efforts

Under the development of the global economy, strategic procurement activities are needed to consistently secure and sustain competitive manufacturing capabilities.

At the same time, it is becoming increasingly important for not merely our Company but also our entire supply chain to fulfill social responsibilities to realize a sustainable society. Against this background, we procure raw materials, fuels, equipment, and materials essential for steel production, with the aim of contributing to development of both customers and economy, and the realization of a more prosperous society through the stable supply of competitive steel products.

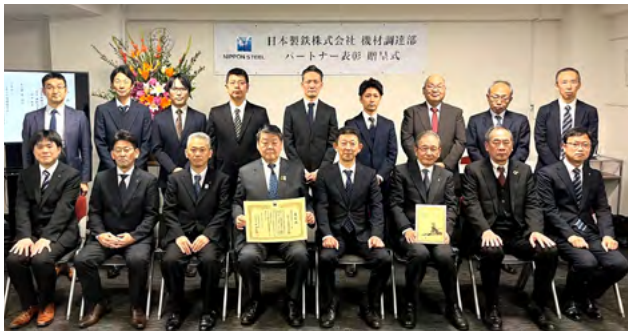
In terms of procurement of raw materials and fuels, we are sourcing from suppliers worldwide, including Australia, North America, South America, and South Africa, for a stable supply of more than 100 million tons of raw materials for the steelworks. The supply of materials is mainly iron ore and coal. In the procurement of equipment and materials, we purchase around one million product items — from gigantic facilities such as blast furnaces to office supplies — from thousands of suppliers. Through active dialogue with our suppliers, we build trustful relations with them while pursuing stable procurement strategies that anticipate future changes in social structures. In addition, we conduct the "Partner Awards" and "Partner Questionnaire" annually to further strengthen collaboration with our suppliers.

In July 2020, we made a declaration for the establishment of partnership relations with suppliers and other business partners to establish cooperative and co-existing relationships.

In addition, based on the Nippon Steel Group Human Rights Policy adopted on April 1, 2024, we continue to conduct procurement activities with high ethical standards while giving maximum consideration to respect for human rights.

The declaration for the establishment of partnership relations
https://www.nipponsteel.com/news/20200731_100.html

Nippon Steel Group Human Rights Policy
https://www.nipponsteel.com/common/secure/en/topics/pdf/20240401.pdf



Partner Awards Ceremony

**[Basic policy on equipment and materials procurement]**

1. Compliance with laws
2. Equal opportunities
3. Building of a partnership
4. Fair disclosure of information and quick transaction processing
5. Consideration to resource protection and environmental preservation
6. Preservation of confidentiality

## Consideration for reducing environmental impact in procurement activities

Based on the Life Cycle Assessment concept, Nippon Steel is taking initiatives in reducing environmental impact at various points along the supply chain. In keeping with rising demand for tighter management of chemical substances, we have created management standards for 16 toxic chemical substances, including cadmium, jointly with customers and suppliers. We then established a system to manage substances of concern contained in purchasing products, including packing materials.

In addition, as stipulated in related laws and regulations and the Charter of Corporate Behavior by Keidanren, we have set up internal rules, including an appropriate purchasing policy, which puts us on record as fully considering resource protection and environmental preservation. Jointly with businesses, governments, academia, local governments, and NGOs, we have taken the initiative in developing a framework to prioritize the purchasing of products and services that represent less environmental burden. Moreover, we have participated in the Green Purchasing Network (GPN) since 1996, when the network was founded, to promote green purchasing activities.

Toxic material management concerning quality assurance
https://www.nipponsteel.com/en/csr/customer/support.html

## Efforts to stabilize production

We are focusing on stabilizing production, including the operation of blast furnaces and coke ovens, which have a particularly significant impact. Currently, the tapping ratio of the blast furnaces remains at a low level, and we are also focusing on developing operational plans under these circumstances. In such efforts to stabilize production, we also frequently use solutions using DX.

For example, in the case of identifying abnormalities in machinery and equipment and preventing problems, regular inspections by manpower had been performed in the past, but now with the installation of a large number of wireless vibration sensors, it is possible to monitor them 24 hours a day, and thereby quickly identify and respond to abnormalities. Furthermore, by centrally managing the collected data and analyzing it with AI and machine learning, we can now obtain even higher value-added information.

Concerning blast furnaces, because it is difficult to grasp the situation inside the blast furnace, there have been cases where the intuition and experience of skilled operators have been relied on. Nowadays, it is by using technology that measures temperature, pressure, gas distribution, and other conditions every second with sensors installed inside the blast furnace body and reproduces conditions inside the furnace with three-dimensional images that we strive to stabilize blast furnace operations and improve production efficiency. Through this type of simulation, we are developing automatic control that predicts future operating conditions and optimizes operations.

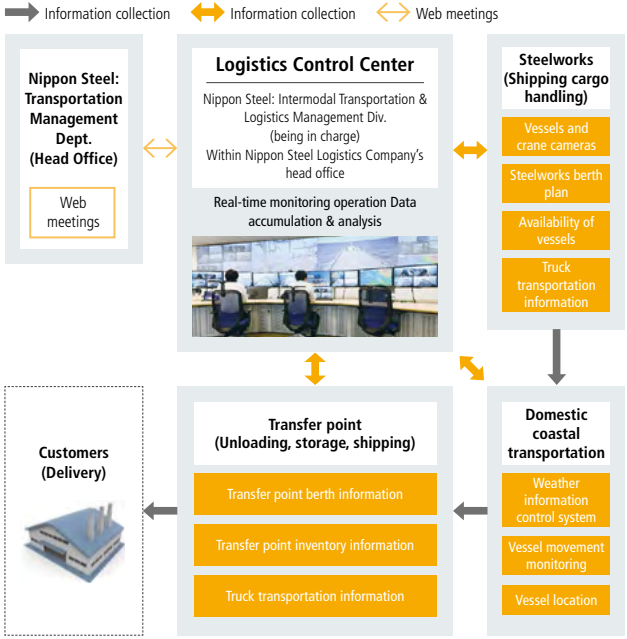
In addition, to deliver products that meet customer requirements on time, our head office unit in charge of overall management of sales and operations coordinates the relevant corporate-wide product manufacturing plans every day, while keeping track of sales and production. The process control units in each steelworks receive the plan and manage the progress of each single product while keeping in mind the productivity of each manufacturing base. These units work for optimal processing from manufacturing to shipment, and delivering products as scheduled.

## Integrated efficiency improvements of domestic logistics

As challenges such as the "2024 logistics issue" and the growing workforce shortage in domestic logistics become increasingly evident, the Nippon Steel Group has established a new division within Nippon Steel Logistics to consistently manage and supervise operations. This division is tasked with further improving efficiency by consolidating functions such as integrated logistics control and digital transformation (DX) planning.

Specifically, at the Logistics Control Center, we leverage the latest systems of domestic logistics control to consolidate the information needed for allocation and control of the domestic vessels, such as their location data, progress rate of quay cargo handling at the steelworks, and the status of inventory at transfer points. We then perform real-time monitoring and operation for the consolidated information. In addition, we are advancing company-wide management and supervision of truck transportation information, thereby improving efficiency across our integrated logistics network that includes domestic coastal vessels, transfer points, and transportation by truck—our primary transportation means.

**[Function overview of the Logistics Control Center]**




## Improve productivity in domestic logistics

The Nippon Steel Group has commenced operations of Soumei, a roll-on/roll-off vessel* (RO-RO vessel) dedicated to steel products (hereinafter referred to as "the Vessel"), on the Kitakyushu–Sakai route.

The Vessel employs the roll-on/roll-off cargo-handling method, which saves labour force requirements at quaysides, while optimally integrating new technologies into existing port infrastructure. As a result, both loading capacity and cargo-handling efficiency have been improved by approximately 30%. In addition, various systems and equipment have been introduced to better accommodate seafarers' working conditions, thereby contributing to alleviating the workforce shortage in domestic logistics.

Furthermore, the Vessel has been selected by the Agency for Natural Resources and Energy of the Ministry of Economy, Trade and Industry, together with the Maritime Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, to participate in the "Project for Promoting Innovative Coastal Shipping Operations and the Shift to Non-Fossil Energy." Specifically, it was adopted as a demonstration project for energy-saving small roll-on/roll-off vessels equipped with high-efficiency cargo-handling systems.

* Roll-on/roll-off vessels allow trailers to drive on and off the ship to load and unload cargo, enabling crane-free operations at quaysides and reducing labor requirements for cargo handling.

[High efficiency]
- Adoption of roll trailers (load capacity: 60 tons) enables the transportation of heavy cargo.
- A two-tier cargo structure has been introduced, equipped with a large elevator (210 tons per lift).

A roll trailer exiting via the rampway

Large elevator
(accommodates three roll trailers at once)

# Human capital

We regard our personnel as the source of creation of sustainable value and position investment in human capital as a core driver of corporate growth, thereby advancing human capital management across the company.

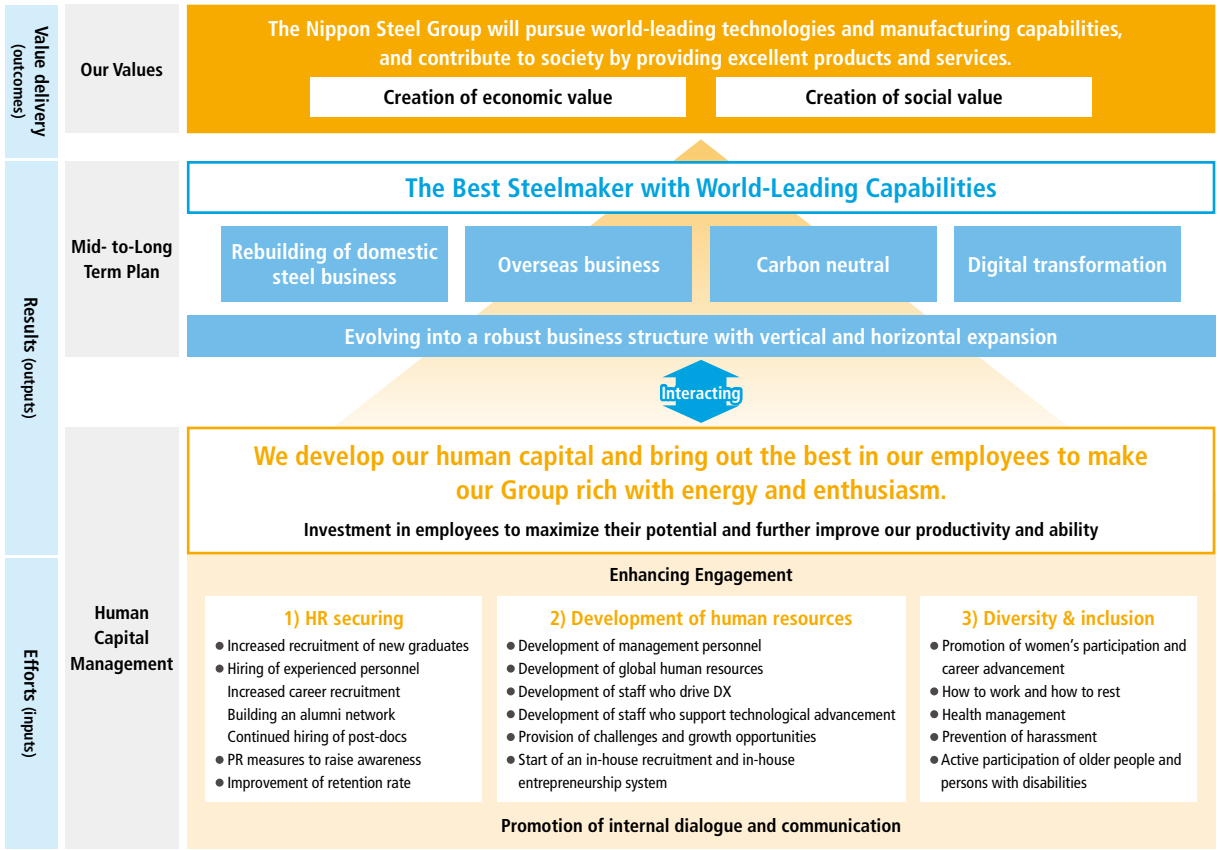
## Human Capital Management Policy

The Nippon Steel Group's basic philosophy is to "pursue world-leading technologies and manufacturing capabilities, and contribute to society by providing excellent products and services." In addition, our management principles state, "We develop and bring out the best in our employees to make our Group rich with energy and enthusiasm." In keeping with these principles, we have been working on human resource development as an important theme.

With the aim of continually evolving to become "the best steelmaker with world-leading capabilities," we are also working to transform our business structure into a robust one with vertical and horizontal expansion, resilient to changes in the external environment, in addition to implementing the measures in the four pillars of our Medium- to Long-term Management Plan.

To successfully execute these business strategies, close alignment with our personnel strategies is essential. Accordingly, we are advancing three key initiatives: Human Resources Securing, Human Resources Development, and Diversity & Inclusion.

In addition, we are fostering an open and communicative workplace culture which is the foundation of these initiatives by promoting active dialogue across the organization. Through continued investment in people, we aim to fully unlock the full potential of our employees, thereby further enhancing their productivity and capabilities. We believe that these efforts will lead to the creation of both economic and social value and, ultimately, to the sustainable enhancement of corporate value.




# HR securing

## Securing human resources

Amid significant environmental changes, including intensifying competition for talent due to the recent population decline, diversification of individuals' career targets, and higher mobilization of labor market, securing human resources and further promoting employees' participation and advancement are critically important to realize our management strategies.

To strengthen our stable recruitment of new graduates that has been implemented so far, we are expanding internship programs, introducing new workshops, and increasing opportunities for plant tours. In addition to the recruitment of postdoctoral researchers with advanced expertise, we are also proactively hiring experienced professionals, including alumni. Since FY2024, we have introduced employee referral bonuses to encourage internal recommendations. In addition, we are implementing measures for publicity, such as commercial messages or advertising, to raise awareness of Nippon Steel from not only job applicants such as students but also a wide range of generations.

Furthermore, in FY2024 we implemented a substantial increase in starting salaries and, for two consecutive years, carried out significant revisions to employee's compensation packages at levels exceeding the current rate of inflation.

By maintaining industry-leading compensation standards, we aim to secure human resourses and promote employees' participation and advancement, which is one of our highest management priorities, and improve retention in our workplace.

# Human resources development

## Basic Policy for Human Resources Development

A goal of HR development is to create employees who can understand and implement our Corporate Philosophy and our Employee Action Guidelines. With this in mind, each employee is expected to take the initiative in developing their own capabilities while also actively engaging in the development of their subordinates.

The Nippon Steel Group's basic approach to HR development is for supervisors to mentor their subordinates, through daily dialogue on the job, transferring understanding and knowledge of criteria for judgment and of operational skills. In order for this mindset to be shared by all employees, the following "Basic Policy for Human Resource Development" has been adopted.

**[Basic Policy for Human Resource Development]**

1. HR development is the job itself, and supervisors play an important role in HR development.
2. Each individual strives for continual personal improvement for further growth.
3. Supervisors share objectives and outcomes of HR development clearly with their subordinates.
4. OJT training is a basis of HR development and is complemented by off-the-job training.

| | Unit | FY2022 | FY2023 | FY2024 |
|---|---|---|---|---|
| Number of education and training hours Achievements | hours/year per employee [ten thousand/year] | 28 [80] | 35 [99] | 33 [94] |

## Development of management personnel

In order to develop management personnel who will be responsible for the future of the Group, we get to share policies and issues through dialogue with management and other means. In addition, we provide training according to the stage of their rank as candidates for management executives so that they can develop a broader perspective. Specifically, the program provides them with the opportunity to learn about corporate and organization management, business management skills (financial, business strategy), global management, etc.—contents which lead to strengthen the exchange and collaboration of personnel.

**Development of management personnel**

- Seminar for Group company executives
- Seminar for senior executives
- Seminar for executives
- Seminar for middle management

## Development of human resources who support realizing management strategies

In accordance with the organizational strategy based on the Corporate Philosophy and Management Policy, the Nippon Steel Group uses an "HR Development PDCA" to effectively implement and establish the development of human resources. A development plan is formulated for each person to conduct OJT, which is aligned with the supervisor-subordinate dialogue based on the "Assignment Commitment Sheet." As of FY2025, we revised the Assignment Commitment Sheet and introduced one-on-one meetings between supervisors and subordinates to further enhance the effectiveness of dialogue. By improving both the quality and frequency of these interactions, we facilitate employees to develop and maximize their capabilities proactively and autonomously. Through these mechanisms, we are systematically fostering human resources capable of executing the strategies of each organization.

Each employee acquires the knowledge and skills required for each role and position and, in addition to rank-based training aimed at improving the abilities of employees as a whole, and selective training based on individual development needs, training measures that support the realization of management strategies are incorporated for promoting human resource development.

**[Development of human resources who support realizing management strategies]**

| | | | |
|---|---|---|---|
| **Development of heads of department/plant/mill** | The training courses are provided to managers so that they can acquire a proper understanding of their responsibilities and authority as managers, acquire knowledge, skills, and mindset that contribute to enhancing management as supervisors and group management capabilities. | ● Seminar for supervisor empowerment<br>● Training for newly appointed heads of department/plant/mill<br>● Training for manager candidates<br>● Training for supervisor candidates and follow-up training | ● Training for newly appointed senior managers<br>● Training for newly appointed managers |
| **Development of global human resources** | ● Setting criteria for English language skills to be reached at each level to raise the overall level of our group.<br>● For those whose job requires English skills, implementing a program aimed at raising their English proficiency so that they can perform their jobs overseas without translators or interpreters.<br>● For personnel dispatched to overseas, providing pre-assignment training<br>● Developing overseas local staff (implementing OJT and OFF-JT) | ● Training for overseas dispatched personnel<br>● Training for administrative personnel<br>● Orientation prior to relocation overseas and including family members | ● Training for English and local languages<br>● English advanced course<br>● Training for studying abroad |
| **Development of staff who drive DX** | ● Delivering data science training to foster citizen data scientists capable of advanced data utilization<br>● Conducting digital management training for managers to promote DX and encourage them to change their mindset | ● Various training activities to develop expert data scientists and data science users<br>● Training for citizen data scientists | |
| **Development of staff who support technological advancement** | Preparing courses to systematically learn the essential knowledge and technologies for steelmaking engineers, from fundamental to advanced technologies | ● Technical skills training<br>● Technical courses | |

Training scheme for office staff and engineers
https://www.nipponsteel.com/en/csr/human/development/staff.pdf

## Career development

We are strengthening initiatives to enhance employees' engagement by promoting open feedback culture, as well as by creating opportunities for challenge and development such as overseas assignments for mid-career and junior employees, etc. As part of these efforts, we launched in-house entrepreneurship and in-house recruitment systems in FY2023.

Through the in-house recruitment system, we support employees' career development while revitalizing the organization by facilitating individuals with fresh perspectives and diverse skills to transfer. The in-house entrepreneurship system aims not only to develop human resources through entrepreneurial experience but also to foster a culture that encourages employees to take on new challenges beyond existing frameworks.

## Personnel development of operators and maintenance staff

The operators and maintenance staff continuously build up their skills in steelmaking and maintenance, starting when joining the Company, on the assumption of continued long-term employment to retirement, thereby providing the fundamental support for the Company's on-site manufacturing capabilities. Promoting smooth transmission of technology and skills is essential and a system has been built, which cultivates all employees who joined the company to become fully skilled. Therefore, after making the skill or skills to be acquired clear by making a list as skills matrix, through a supervisor-subordinate dialogue, a detailed skill development plan is developed and carried out. Training is conducted mainly through On-the-Job Training (OJT) for individuals, and the HR Development PDCA is kept up to date for use by repeatedly revising and implementing the development plan based on the progress of OJT.

Off-the-job training (OFF-JT), which complements individual OJT, is used throughout the Company by organizing the minimum skills and knowledge required by each rank of employees of the Nippon Steel Group into a company-wide standard system. Through this, we work at education of workplace leaders to further increase their ability to add to and improve our knowledge base from the field ("field technology") and at measures to maintain and improve motivation of older people to continue working with health and motivation. Another area we focus on is to diversify recruitment sources (especially for female employees and mid-career recruitment), and we strive to create a workplace climate in which diverse personnel can be motivated and collaborate with each other through human rights awareness and harassment prevention.

Training scheme for operators and maintenance staff
https://www.nipponsteel.com/en/csr/human/development/operator.pdf

## Personnel treatment system

Nippon Steel's administering of personnel policies aim at encouraging our employees to grow and develop their overall capabilities, from the time they join the company until they retire. We also find it important to ensure consistent, fair evaluation of all employees regarding their capability and achievement by methods including through dialogue between supervisors and subordinates, and to appropriately reflect the evaluation to their conditions every year.

# Diversity & Inclusion

Through our efforts in promotion of diversity and inclusion, we are committed to creating a company where diverse employees are empowered and feel proud and fulfilled.

## Basic policy

Our basic policy for diversity and inclusion is to create a company where diverse employees are productive, perform at their best, being empowered, and feel proud and fulfilled. We are reinforcing various efforts with a focus on the following five areas, as one of the important management issues.

1. Promotion of women's participation and career advancement
2. Realizing the work life balance as a means to enable employees with diverse situations perform well in the workplace
3. Health management aimed for employees to work at their best up to the age of 65
4. Preventing harassment
5. Empowerment of older people and persons with disabilities

As a dedicated unit to promote these efforts, the Diversity & Inclusion Department has been established. Its staff reports the progress of various efforts, the work engagement score as a general index, and other matters to the Management Committee and other committees every year.

**[Status of employees (non-consolidated basis)]**

| | Men | Women | Total |
|---|---|---|---|
| Number of employees (March 31, 2025) | 25,820 | 2,832 | 28,652 |
| Number of new hires (April 2025) | 642 | 120 | 762 |
| Average years of service (March 31, 2025) | 18.6 years | 14.1 years | 18.2 years |
| Average age (March 31, 2025) | 40.9 years old | 36.2 years old | 40.5 years old |
| Turnover rate* (FY2024) | 1.4% | 2.9% | 1.6% |

* The rate of voluntary retirees to all employees

## Promotion of women's participation and career advancement

### What we have done so far

We have endeavored to establish a comfortable working environment for female employees. Specific programs include: 1) a childcare leave benefit which is more generous than legally required; 2) a program for employees who rejoin the Company after having left it because of childcare or nursing care and other reasons; 3) a leave option to assist overseas relocation of a spouse; and 4) a temporary exemption program for employees who have difficulty in relocation because of childcare or nursing care and other reasons. We have also been opening 24-hour childcare centers in steelworks and provide maternity work clothes for use by steelwork employees who are in the childbirth/childcare phase, in order to help them continue their shift work with confidence. We are also working to improve the environment including the workplace infrastructure at manufacturing sites and the work content.

| Internal childcare centers | Users of internal childcare centers |
|---|---|
| (As of April 2025) | (As of April 2025) |
| 7 centers | 138 |

Based on the various programs and work environments that we have established, we have developed an action plan, which includes a numerical target for the number of women in management positions. Our aim is to support female employees to continue to demonstrate their abilities through career development, including enhancement of promotion to managerial positions.

General employer action plan, based on the Act on Promotion of Women's Participation and Advancement in the Workplace in Japan
https://www.nipponsteel.com/en/csr/human/diversity/target.pdf

| | FY2023 | FY2024 | FY2025 |
|---|---|---|---|
| Number of female employees in management positions (As of April) | 65 | 70 | 91 |

### Improved hiring and retention

We have been working to hire a greater number of women to promote their participation and career advancement. Career assessments for female employees are continuously conducted to facilitate flexible placement and development based on the understanding of individual circumstances and to improve retention rates.

The ratio of women in overall hiring (2025)

| Office staff and engineers | | Operators and maintenance personnel | Overall hiring |
|---|---|---|---|
| Administrative staff | Technical staff | | |
| 44% | 16% | 11% | 16% |

### Support for employees' career development and work-life balance

We encourage female employees to develop and show their abilities by providing them with opportunities for career growth through efforts in anticipation of their various life events, and by actively promoting their advancement to managerial positions. As a training measure for the promotion of managers, we implement interactive online seminars for young employees with the aim of interacting with female senior employees, and career training for mid-level employees.

We are creating a workplace culture where work and home life are comfortably balanced by supporting all employees — regardless of gender — in various ways, including providing useful brochures explaining the relevant programs and guides for employees facing life events as well as for their managers. We also provide to managers training concerning unconscious bias and diversity management.

# Realizing the work life balance as a means to enable employees with diverse situations perform well in the workplace

## Restraint on long-work hours

To foster a workplace where diverse personnel can fully demonstrate their abilities, we are committed to reducing long working hours while managing appropriate working hours. Through these efforts, we are advancing initiatives in workstyle and business management that lead to higher value-added outcomes with greater efficiency.

In addition, we had set a goal of less than 2,000 hours on average for the total annual actual working hours, and have achieved it.

## Enabling flexible ways of working and taking time off from work

From the viewpoint of performing at their best of individual abilities, all employees with their diverse attributes and circumstances ideally should make the most of their finite time available and pursue more flexible and diverse ways of working. Therefore, we are expanding our work system for that. Specifically, we utilized the remote work system and increased the number of workplaces covered by the "coreless flexible system," which eliminated the core time — an essential time period to work. We also revised the system to enable flexible working for employees who use shorter working hours for childcare, nursing care, etc.

We also have been establishing the environment that facilitates our employees to flexibly take time off from work, tailored to their individual circumstances and life stage.

Annual paid holidays can be taken on a half-day basis to meet employees' needs. Each of our steelworks and offices designates dates on which employees are encouraged to take paid holidays. The head office, for example, sets mainly Fridays in August, as "Eco-paid leave days" of approximately five days and recommends making it easier for employees to take leave by, for example, not setting up meetings and other events on those days.

Concerning childcare leave, in addition to providing a longer period than the statutory limit, the expired annual leave days (welfare leave) accrued by individual can be converted to paid off-days for parental leave. Moreover, we encourage male employees with a spouse after childbirth to take childcare and related leave.

In addition, programs for nursing care leave and time off for nursing care have been established to help employees continue working while attending to nursing care. Welfare leave can be also used for nursing care.

Welfare leave can be used for such purposes as prenatal checkups and recurrent (relearning) education, in addition to childcare and nursing care, sick leave, care of elementary to junior high school children, volunteer work, and infertility treatment. With regard to recurrent education, there is also a system of leave of absence to pursue a degree or other studies at a university or other educational institution.

**[Performance of ways of working and taking time off (FY2024)]**

| | |
|---|---|
| Average overtime hours per worker per month | 24.9 hours |
| Ratio of paid holidays taken | 80.0% |
| Average paid leave taken | 16.0 days |
| Childcare leave users and utilization rates | 700 men (77%)<br>130 women (100%) |
| Return ratio of female employees after childcare leave | 96.9% |
| Users of the short-work hour system for childcare | 188 |
| Nursing care leave and vacation program users | 18 |
| Users of the short-work hour system for nursing care | 6 |

## Benefit programs

In order to support the various life stages of employees and enable them to achieve a good work-life balance, we are also focusing on welfare measures. We support employees' personal life with various programs: home acquisition support program, including company dormitories and housing, and a cafeteria plan (work-life support program).

# Health management aimed for employees to work at their best up to the age of 65

## Basic policy

Our basic policy of health management is to become a vibrant company in which all employees maintain both mental and physical health and work at their best from the time of joining the company to retirement at age 65, which is a philosophy specified in Nippon Steel's Basic Policy on Safety and Health.

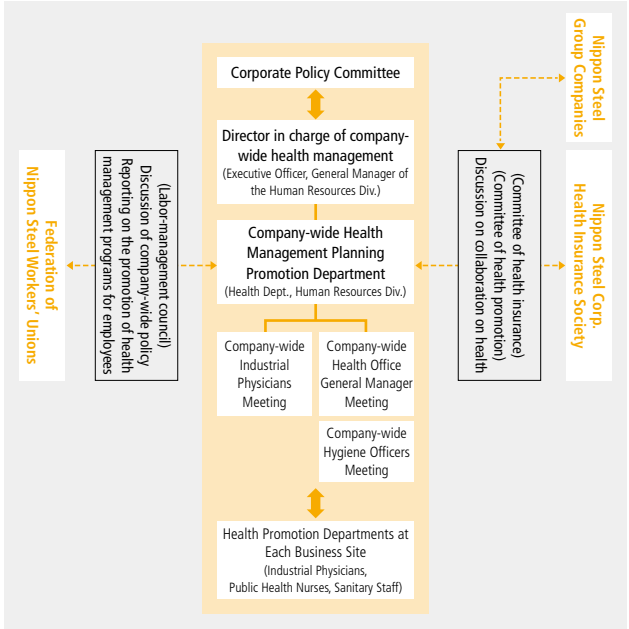
**Nippon Steel's Basic Policy on Safety and Health Basic philosophy (excerpt)**

**Principles**

1. Ensuring and maintaining the safety and health of employees of the Nippon Steel Group is the Group's most important and top-priority value, and the basis that supports business development.
2. Under the Management Principles of "developing and bringing out the best in our employees," the Nippon Steel Group makes continuous efforts to secure safety and health of our employees and continues to contribute to society through their safety and health.

April 1, 2019 Nippon Steel Corporation

**[Organization for health promotion]**



## Promoting physical wellness

### Cerebral cardiovascular disease control

We have established a unique company-wide system that enables us to assess and manage the risk of diseases based on the results of health checkups. We provide health guidance according to risk factors or control the frequency of health checkups. It is important that workers with high risk of cardiovascular disease improve their lifestyle. We are improving the implementation rate of specified health guidance, aimed at improving the dietary and exercise habits of workers, by setting a target rate and promoting medical visits. We cooperate with the Health Insurance Union for achieving these goals.

**Specified Health Guidance** (2023)

| Actual implementation rate | Target for 2025 | Target implementation rate |
|---|---|---|
| 92% | | 70% |

### Cancer disease control

Various cancer screening (including non-statutory exams) based on age and gender are incorporated in our health checkups.

In particular, regarding gastric and colorectal cancer, which are high risk diseases, we set the priority target (age and frequency for screening) based on medical evidence. We also set our target rate of screening attendance and encourage employees to take screening for early detection and treatment of cancer.

**Actual rates of taking cancer examination** (2024)

| | | | |
|---|---|---|---|
| Gastric cancer screening | 81% | Target for 2025 | 70% |
| Colorectal cancer screening | 91% | Target for 2025 | 90% |

**[Initiatives to standardize manufacturing]**

| Classification | Details |
|---|---|
| Health Challenge Campaign | ● A company-wide measure in which employees work on for two months to improve their personal habits<br>Ex. Take 8,000 steps a day / Have a good breakfast |
| Passive smoking preventive measures and non-smoking guidance | ● Since April 2020, smoking in Company buildings has been prohibited (excluding designated smoking rooms)<br>● Implementation of guidance on how to quit smoking at the on-site clinic or other clinics or via website<br>For employees who wish to stop smoking, an occupational health care professional will provide individual guidance |

## Promoting mental wellness

Aiming for each employee in the Nippon Steel Group to enjoy a vigorous life on and off the job, we provide a consulting service for prevention and early detection in the area of mental health.

We have incorporated the issue of mental health in various in-house seminars and offer education on how to be aware of one's own stress and to deal with it. For managers, we additionally offer education on how to care for their subordinates and manage their teams, and how to coordinate with the corporate health care professionals (occupational physicians, health nurses, and other staff).

Moreover, we provide stress checks through a workplace stress survey every fall. Occupational health care professionals give guidance for improvement by teams and individuals based on the result of the stress check. In contributing to a vigorous work environment, managers implement necessary measures according to the issues of their team or an individual, coordinating with the personnel department and the health department.

We identify those who are at risk at the Health Consulting Contact by various measures in association with the Company's mental health e-learning and questionnaire event conducted every June. Occupational health care professionals swiftly respond to the findings of the events to foster mental wellbeing.

**[Our mental health initiatives]**

| Classification | Details |
|---|---|
| Proactive action (Self-care) | ● Stress check for awareness of their stress<br>Training for new hires and young employees |
| (Care by management supervisors) | ● Workplace analysis of stress check to help employees become aware of their stress<br>● Support from supervisors or colleagues<br>● Training for managers |
| (Care by occupational health care professionals) | ● Providing mental health education program by occupational health care professionals |
| Early detection | ● Screening to identify those in poor condition during a regular health checkup<br>● Screening of highly stressed employees via stress checkups<br>● e-learning to identify those who wish to be consulted<br>● Establishment of a health counseling contact |
| Support for employees' return to jobs and prevention of recurrence | ● Support for employees' return to jobs based on the return-to-work program<br>● Re-designing of work assignments for a smooth return to the workplace<br>● Regular interviews with occupational health care professionals after return to the workplace |

## Prevention of harassment

We are strengthening efforts to prevent harassment in order to create a work environment where diverse human resources can fully demonstrate their abilities.

We have clarified our internal policies, created and disseminated leaflets to inform and enlighten all employees, and repeatedly provided education on harassment in training at employees' milestones, from new employees to managers. From fiscal 2020, in addition to these initiatives, we are conducting a "Harassment Prevention Campaign" every December. In the campaign, we offer e-learning and self-checks for all the employees and board members, and workplace dialogue specifying themes such as creating an open workplace.

Dedicated consultation and reporting points of contact have been established for employees in case they face a harassment issue.

Each of the contact points responds to each individual case while paying attention not to disadvantage anyone for reporting or cooperating. After investigating and confirming the existence of a problem, we take strict measures in accordance with employment rules and other regulations.

## Empowerment of older people and persons with disabilities

Concerning promoting the empowerment of older people, we have decided to raise the retirement age from 60 to 65 in fiscal year 2021, and the salary and bonus system is continuous base on the consistent employment type until the age of 65. This change reflects the decline in the working population and the raising of pension eligibility age, and was made also from the perspective of maintaining and enhancing our on-site manufacturing capacity.

As for the employment of persons with disabilities, we have implemented an action plan and work to promote their employment and provide an accommodating working environment. Since 2007, we have established special-purpose companies to expand employment opportunities.

**Employment rate of persons with disabilities** (June 2025)

**2.62%**

# Respect for Human Rights

Nippon Steel respects human rights and strives to create a working environment which allows diverse human resources to be more empowered.

## Basic policy

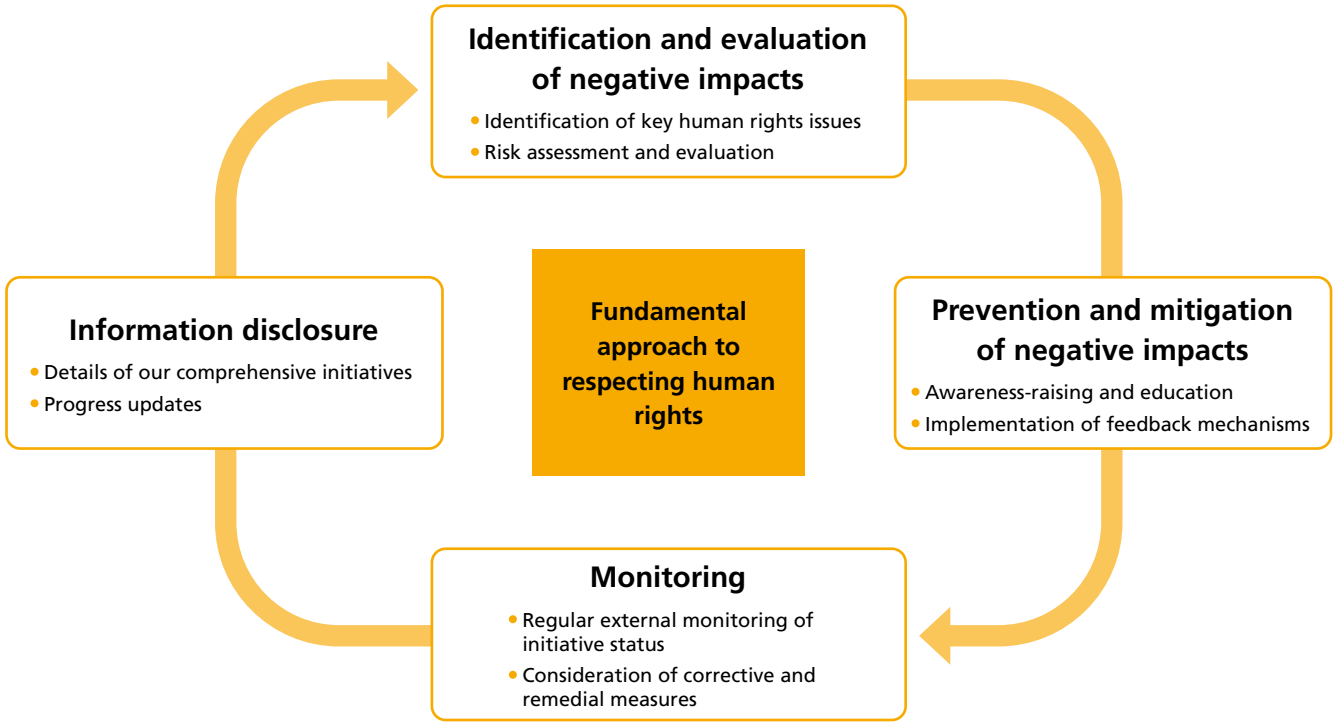
In compliance with the Universal Declaration of Human Rights and other international norms on human rights, the Nippon Steel Group respects our employees' diverse views and fully utilizes their individuality via effective communication and collaboration so as to create and deliver enhanced value. Based on the United Nations Guiding Principles on Business and Human Rights, the Nippon Steel Group Conduct Code has been set by considering our social responsibility. By adhering to its principles, Nippon Steel conducts business ethically, while paying full heed to human rights issues arising with the increasing globalization of the economy. Nippon Steel gives due attention to the rights of workers, and staunchly opposes the use of forced or child labor. These are prerequisites of our corporate activities. We have also prohibited as unjust the discriminatory treatment of workers based on nationality, race, belief, creed, gender, age, sexual orientation, and disability. In addition, we give careful consideration to the traditions and culture, business practice, and labor practice of each country or region as we accelerate overseas business development.

Informal gathering of employees of overseas operating companies and our employees

The Nippon Steel Group has established the Nippon Steel Group Human Rights Policy to demonstrate this corporate stance within and outside the Group. This policy has been approved by the Board of Directors of Nippon Steel Corporation.

Nippon Steel Group Human Rights Policy
https://www.nipponsteel.com/common/secure/en/topics/pdf/20240401.pdf

## Efforts to prevent human rights abuses




### <Response inside and outside the Nippon Steel Group>

### Conduct human rights due diligence

Based on the establishment of the Human Rights Policy effective April 1, 2024, we have established a human rights due diligence system to identify negative impacts on human rights*1, prevent or mitigate them, and are working on continuous implementation and improvement. Specifically, in the mining sector, we conducted supplier surveys*2 in questionnaire format*3, covering five companies in FY2024 and twenty-five companies in FY2025.

Following analysis and review of their responses and publicly disclosed information, we engage in dialogue with each supplier regarding our assessment of their responses as well as their planned future initiatives.

*1 Risks related to forced labor, child labor, and occupational health and safety.
*2 Suppliers were selected based on factors such as the proportion of total purchase value, product category, and country of origin.
*3 The questionnaire was prepared with reference to the UN Global Compact.

## <Actions taken by the Nippon Steel Group>

### Addressing human rights risks

From the viewpoint of promoting human rights awareness activities we have assigned human rights awareness advocates at each steelworks and each office, and implemented corporate-wide human rights awareness activities. We hold a "corporate-wide forum of human rights awareness advocates" at the end of each fiscal year to exchange views on human rights awareness education and new human rights risks, and to consider the related action policy for the next fiscal year. Based on this, we hold a "corporate-wide forum of human rights anti-discrimination promotion" at the beginning of the fiscal year, chaired by the Executive Officer in charge of Human Resources, with the human resources managers from each steelworks and each office as members. At this forum, the fiscal year's policy for promoting human rights development is determined.

In addition to implementing human rights awareness activities in accordance with the policies decided at the forum, each steelworks and each office are actively engaged in employee awareness-raising activities, including holding workshops on a specific issue of the steelworks or office. We also participate in enlightenment of organizations and activities hosted by public entities and others in each community. We make concerted efforts for human rights enlightenment within the communities.

Along with the group-wide expansion of our efforts to Group companies in Japan and overseas, we routinely carry out monitoring surveys on the status of compliance with labor-related laws and regulations, the establishment of consultation contacts, and other issues via an internal control checklist.

Through these efforts, we are continuously and systematically promoting activities to prevent human rights abuses. These include the understanding of human rights risks that change with the times and the development of a system and a strategy to reduce the risks.

### Prevention of forced or child labor

Adhering to international norms concerning forced or child labor, Nippon Steel has a policy of prevention and eradication of both types of labor. We comply with applicable regulations and conduct regular monitoring surveys of our Group companies to prevent such violations in our business activities.

### Compliance concerning salaries

We comply with the laws and regulations of each country and region regarding wages, including minimum wages, overtime pay, and equal pay for equal work. In addition, we are committed to paying workers a living wage that is necessary to maintain an adequate standard of living. With regard to bonuses, we regularly survey relevant matters, including the status of each country, region, and type of work, hold meetings with labor representatives, and appropriately reward employees by paying performance-based bonuses linked to company profits.

### Human rights awareness education

Based on the policy decided at the "corporate-wide forum of human rights anti-discrimination promotion," information on human rights awareness is incorporated in training courses for all ranks, from new employees to experienced ones. We also provide education on a variety of subjects, including the issues of harassment and discrimination, understanding of LGBTQ, and human rights issues in the conduct of our business.

Two-way communication with employees based on good labor-management relations is important in order to prevent human-rights abuses. We therefore incorporate education toward building sound labor-management relationships in the training of executives of the Company and the Group companies.

In addition to general education that contributes to the prevention of human rights abuses in workplaces, we also address specific human rights abuse risks in formulating and the oversight of specific work assignments. Examples include education on fair recruitment selection by employees assigned to the tasks of hiring in order to prevent job discrimination, and education on cross-cultural understanding and communication for those assigned to overseas business in the context of preventing human rights abuses (i.e., consideration for each country's unique traditions, culture, business practices, and labor-management practices).

The number of recipients of training courses by rank on human rights (FY2024 results)

**5,316**

### Mechanism of corrective actions

We have clarified whom to contact for consultation on various compliance issues including human rights. This is a part of the effort to establish a groupwide claims handling mechanism that makes it easy for employees and related personnel to ask for consultation, and that enables the Company to understand and identify incidents of human rights abuses.

Specifically, a Compliance Consultation Room has been established to accept inquiries and reports and give counseling regarding human rights abuses such as harassment, from employees of the Company and Group companies and their families, as well as from employees of business partners. Reports and consultations from various stakeholders are accepted through the Inquiry Form accessible on the website. Regarding the response to these individual incidents, such as internal reports and consultations, we investigate the facts and, if necessary, seek advice from outside parties, including lawyers and outside professional organizations, to protect the privacy of the persons and to ensure that they do not receive unfavorable treatment. We then provide guidance and education to those involved, and strive to appropriately resolve the incidents.

**[Inquiry form concerning human rights]**

- Consultations in Japanese
  bhr_contact@jp.nipponsteel.com
- Consultations from overseas or in English
  https://jacer-bhr.org/en/application/form.html

In the event that a target for correction or remedy is identified, we strive to take appropriate measures, and periodically check and verify the effectiveness of the measures through checklists and other means. We also strive to promote dialogue and discussions with internal and external stakeholders regarding our Group's initiatives for human rights in its business activities.

Furthermore, since labor-management relations play an important role in preventing human rights abuses and resolving related incidents, in the event of disputes concerning the interpretation of collective agreements, labor-management agreements or other rules directly related to them, a grievance committee is established to resolve the dispute, based on the agreement concerning complaint-handling procedures that has been concluded with the labor union. The committee comprises members from both the management and the labor side.

# Coexistence with Communities

Nippon Steel has many manufacturing bases all over Japan and is engaged in business activities rooted in each local community. In accordance with our attitude of maintaining harmony with local communities and society, we are promoting a wide range of activities, including the promotion of environmental preservation, support in education, sports, and music culture, and holding dialogues with shareholders and investors.

## Participation in activities of the “Mori wa Umi no Koibito” NPO

We are also a regular corporate member of the NPO, Mori wa Umi no Koibito, established in Kesennuma City, Miyagi Prefecture, by the late Mr. Shigeatsu Hatakeyama, who received the Forest Heroes award from the United Nations in 2012.

The NPO’s activities are based on a scientific mechanism according to which the ecological linkage of forests, villages, and the sea nurtures the blessings of the sea forest. In other words, the forestation leads to an increase in iron-humic acid that flows down rivers, and which enriches the growth of oysters and scallops near the river mouth.

Since 2012, we have participated in the NPO’s tree planting activity at Murone Mountain in Iwate Prefecture. In 2025, 30 people, consisting of employees of Nippon Steel and Group companies, as well as their families, participated in the 37th round of tree planting activity.

Tree planting activity

## Acceptance of teachers

We participate in the “Private Sector Training Program for Teachers” organized by the Japan Institute for Social and Economic Affairs, and every year we invite teachers from elementary and junior high schools in various regions to visit our production line, introduce our efforts in human resource development and environmental activities, and provide safety education using VR. In fiscal 2024, we welcomed 111 teachers at 8 manufacturing sites.

Training at Setouchi Works (Hirohata Area)

## On-site classes

Our staff at each steelworks go to nearby elementary schools to provide on-site classes. At the Kyushu Works (Oita Area), a total of 308 students from five neighboring elementary schools attended science experiments between November and December 2024.

On-site class operations at the Kyushu Works Oita Area

## Social interaction at festivals

Each steelworks holds a steelworks festival jointly with the local community. Factory tours and many other events are held, and many people, including steelworks employees and their families, and local residents have a wonderful time every year. We also actively participate in communities’ festivals.


Tokai Autumn Festival (Nagoya Works)

Kamaishi Festival (North Nippon Works Kamaishi Area)

## Community cleanup activities

Various cleaning activities are carried out in the vicinity of each steelworks. Each year, we participate in a citywide coastal clean-up at the East Nippon Works Kashima Area in collaboration with local residents. In fiscal 2024, the event was held on July 6. In recognition of its long-standing coastal conservation efforts, the Kashima Area received the Coastal Merit Award from the National Association of Sea Coast in June 2024.

Cleaning of beach in Kashima city

## Sports events

The Kansai Works Osaka Area (Amagasaki) hosted the 4th Nippon Steel Victory Cup Junior High School Girls' Volleyball Festival on August 24 and 25, 2024, with approximately 700 participants from local schools. Various other sports tournaments are also held at other steelworks.

Volleyball festival held at the Kansai Works Osaka Area (Amagasaki)

## Support of music culture

Nippon Steel actively supports music culture, particularly through the work of the Nippon Steel Arts Foundation. The Foundation manages the Nippon Steel Kioi Hall in Tokyo, organizes performances of its resident chamber orchestra, and promotes traditional Japanese music. We also present the annual Nippon Steel Music Awards, which were established in 1990, to young classical musicians and individuals who have contributed to the development of classical music.

Nippon Steel Kioi Hall

## Steelworks plant tours

As one of the ways to enhance dialogue with shareholders, institutional investors, and residents in local communities, we regularly hold business strategy briefing sessions and visits to steelworks in various areas. In fiscal 2024, approximately 90,000 people visited our steelworks.

Steelworks plant tours

## Activities supporting sports as a form of social contribution

Nippon Steel manages or supports sports teams in disciplines such as judo, baseball, soccer, rugby, and volleyball, each deeply rooted in the local communities of its steelworks. These teams also contribute to their communities through various sports classes for children, coaching of junior teams, and making our athletic facilities available to local residents for games and training.

Nippon Steel Kashima Baseball Club