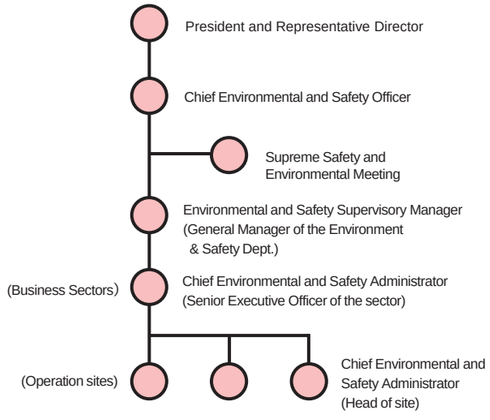
Occupational health and safety

Mitsui Kinzoku Group holds that ensuring occupational health and safety in business operations is essential for implementing integrated thinking management based on its Purpose. We provide a safe worksite environment not only for our employees but also for cooperative companies, contractors, and visitors to plants.
We are also improving occupational health and safety initiatives, including global implementation of initiatives, and reinforcing measures in line with the Mitsui Kinzoku human resources system reform.

Policy and management system

Mitsui Kinzoku Group is committed to creating a safe and comfortable work environment. This is based on our Basic Policy on Health and Safety, in which it states that "ensuring the health and safety of all people working for Mitsui Kinzoku Group is the most important element for conducting business activities." We also believe that the development of a corporate culture that places health and safety first will lead to increasing productivity and reducing operational and business risks, and even to strengthening our relationship of trust with employees and solidifying our business foundation in the medium to long term. The Basic Policy on Health and Safety, along with KPIs and initiatives, covers all employees working in the Group, including those of cooperative companies and contractors.

Environmental and Safety Management System



Health and safety management system

All major sites of Mitsui Kinzoku Group manage occupational health and safety in accordance with ISO 45001. For small-sized sites, we developed an internal certification system. At each site we work to realize an upward spiral motion by going through the PDCA cycle in accordance with the management system. Improvements to the issues identified by the review are incorporated into measures such as risk assessments and health and safety training.

Safety audit

We implement periodic internal safety audits to confirm the operational situation of the management system at each site. The internal safety auditing body checks for compliance with laws and regulations as well as the Mitsui Kinzoku Group's voluntary standards, in addition to pointing out hazardous places and following up on improvements made.

In 2023, with the lifting of COVID-19 movement restrictions, we conducted all safety audits on-site at each location.

Meeting of environmental and safety managers from sites in China. (Suzhou)

Health and safety training

Mitsui Kinzoku Group conducts health and safety training for employees regularly to increase their level of awareness of health and safety, ensure thorough compliance with health and safety regulations, and cultivate a corporate culture that places health and safety first.

We provide training materials in multiple languages and make them available on our corporate intranet for employees to review or reference at any time.

In 2023, we introduced Virtual Reality (VR) experiential training to raise our employees' risk sensitivity by enabling them to realistically experience the shaking, tilting, tipping, and impact caused by disasters through VR. Based on the characteristics of our disaster cases, we have conducted training on 'falling down stairs,' 'falling down a ladder,' 'overturned forklift truck,' and 'collision with heavy machinery.' We plan to develop VR training at each site according to the disaster situations at those locations.

Health and safety training provided in FY2023

Purposes	Major training programs
Expand knowledge on health and safety across the Group (Knowledge required for each position, key initiatives in the year, good practices, latest trends)	・New employee training ・Job-rank-based safety training ・Laws and regulations lecture ・Lecture by an external expert ・Group study session for safety and environmental experts
Promote compliance with safety rules and improve risk perception at manufacturing sites ＊ Employees of cooperative companies and contractors are also subject to these trainings.	・"*Kiken Yochi*" activity (hazard prediction) ・Experiential risk training, VR training ・Risk assessment training ・Safety communication activity ・PPE training ・Emergency training (fire/earthquake)

VR training

Accident prevention initiatives

1. Promotion of the lockout system

Occupational accidents could occur caused by human errors, such as accidently switching on a machine whose operation has been suspended for cleanup, refueling, inspection, repair, adjustment, construction, or other work. The lockout system is a system that shuts off and locks the power source of mechanical devices to prevent occupational accidents that could occur due to erroneous operation and protects the safety of workers. At present, the system to shut off power supply is available at all manufacturing sites in Japan and overseas, and we are working on introducing the system to shut off pressure, temperature, and the flow of liquids according to specific conditions at each site. In FY2023, no safety incidents occurred due to non implementation of lockout.

＊ More information on occupational health and safety is available on our website.

https://www.mitsui-kinzoku.com/en/csr/society/occupational/

Safety standard workshop (Hikoshima Smelting)

2. Establishment and operation of safety standards

We are engaged in establishing the Mitsui Kinzoku Group safety standards to prevent accidents caused by improper operation of machines, equipment, and tools. In FY2023, we established and introduced new Safety Standards for Oxygen Deficient Danger Operation and a new Standard for Wearing Protective Gear to Protect Eyes from Chemical Injury. We are committed to raising safety awareness as well as eradicating any similar accidents.

To promote effective use of the standards at all domestic and overseas sites, we provide explanatory materials in Japanese, English, and Chinese. We also review the operational status of the standards through safety audits.

3. Safety initiatives for senior employees

Mitsui Kinzoku has raised the mandatory retirement age to 65 since FY2021. In addition, as the age range of our employees is expected to rise along with the aging of Japanese society, we are developing a safety management system for senior employees so that they can work safely and with peace of mind for an extended period of time.

Aging tends to reduce some physical functions, which may be a factor that increases the incidence of occupational accidents among senior employees. To prevent these accidents, we provide safety training for managers and senior employees. In addition, based on risk assessments, we worked to create a comfortable work environment by improving lighting, eliminating steps, and taking measures against heat, as well as reviewing some of the work manuals to ensure that even senior employees can operate equipment safely. We plan to pursue these activities going forward.

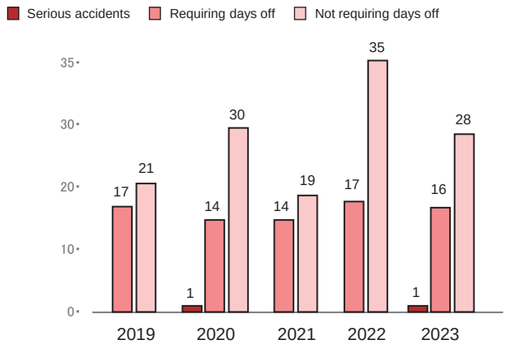
Safety performance in 2023
In 2023, the number of accidents declined compared to the previous year. There were 68 accidents in the entire Mitsui Kinzoku Group, including those at cooperative companies and contractors. However, we failed to achieve our target of zero serious accidents, as one occurred in Japan in December.

There were 45 accidents in Japan, accounting for 66% of the total number of accidents in the Group, with the three most common types being falls, getting caught in or crushed by equipment, and cuts or abrasions. In terms of the number of workers, 60% were employees of Mitsui Kinzoku Group, while 40% were employees of cooperative companies or contractors.

We will continue to scrutinize and analyze the causes of the accidents and take measures to prevent recurrence.

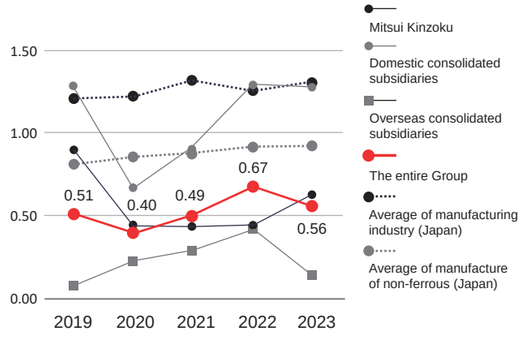
Trends in the number of accidents in sites in Japan

※ Including accidents that occurred in cooperative companies and contractors



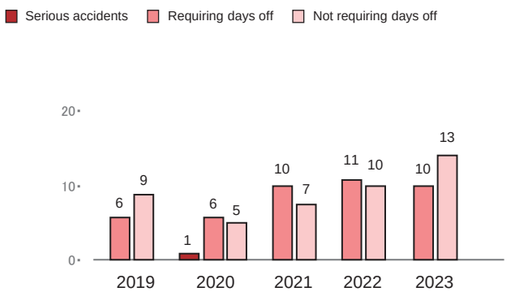
Frequency rate of accidents

※ Not including accidents that occurred in cooperative companies and contractors



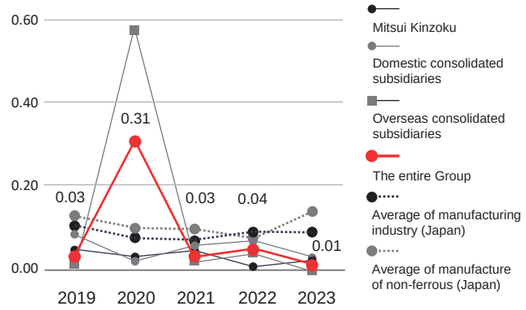
Trends in the number of accidents in overseas sites

※ Including accidents that occurred in cooperative companies and contractors



Severity rate of accidents

※ Not including accidents that occurred in cooperative companies and contractors



The values shown in the graph are for the entire Mitsui Kinzoku Group as a whole.

Initiatives for environmental issues

Mitsui Kinzoku Group recognizes the negative environmental impact of its operations as a great business risk and strives to reduce it. To achieve carbon neutrality and a circular economy, we are taking on new challenges, while making detailed improvements in each operation.

Environmental management
Mitsui Kinzoku Group has established the Supreme Safety and Environmental Meeting as a place to deliberate and determine the most important matters related to safety and the environment. At this Meeting, guidelines and action plans are determined by the Chief Environmental and Safety Officer as chairman and business line heads as members. The decisions made are then spread to each site by the Environmental and Safety Supervisory Manager (General manager of the Environment & Safety Dept.) under the direction of the Chief Environmental and Safety Officer. Each site that operates under ISO 14001 has a chief person that serves as the person responsible for managing environment and safety, and who makes sure that the required actions are being reliably executed. The Chief Environmental and Safety Officer reports to the Board of Directors on important environmental and safety issues, including the operation of the management system, and receives guidance and supervision from the Board of Directors.

The Basic Environmental Policy and the Environmental Action Plan
In 2001, Mitsui Kinzoku Group established the Basic Environmental Policy* and the Environmental Action Plan. In response to the Paris Agreement as well as the expansion of ESG investment, we revised the basic policy and the action plan in 2018, in order to strengthen our Group's efforts to address environmental issues. In the action plan, we have assessed the negative impacts of our business activities on stakeholders in our value chains and set targets for activities with significant impacts, on which we will focus our efforts to reduce their environmental footprint. We are incorporating the targets set in the Environmental Action Plan into the plans of each of our sites, and promoting activities to achieve them.

The Purpose and the Vision for 2030
In 2022, Mitsui Kinzoku Group established its Group's Purpose: We promote the well-being of the world through a spirit of exploration and diverse technologies. We aim to make life easier and greener to help address environmental and social issues around the world and build a sustainable society. Our Group's Vision for 2030, which was set based on the Philosophy and the Purpose, promotes manufacturing with low environmental impact and the construction of recycling-based services. The 22 Medium-term Management Plan, which we developed for the Vision for 2030, makes clear that each business will be evaluated from the perspective of improving our environmental and social value, including environmental impacts, and that sustainability will be considered when making business decisions.

* The Basic Environmental Policy is available on our website.
https://www.mitsui-kinzoku.com/en/csr/environment/environmental-policy

Outline of the Environmental Action Plan

1 Establishment and improvement of environmental management system

Establishment and improvement of environmental management system at each site according to the form and scale of business

2 Reduction of environmental footprint

- Prevention of global warming
- Effective resource utilization and waste reduction
- Reduction of emissions of environmental pollutants
- Utilization of renewable energy
- Appropriate utilization and management of water resources
- Biodiversity conservation
- Thorough management of mine & plant closure

3 Development and provision of environmental contribution products

Development of environmental contribution products and market expansion

4 Emergency measures

Preparation of well-organized emergency manuals for disasters and accidents and continuous improvements of them

5 Education/public relations/social contribution activities

- Strengthening environmental education
- Disclosure of environmental information
- Dialogue with stakeholders

（Revised in April 2018）

Response to climate change

Mitsui Kinzoku Group considers climate change as an important change in our external environment which would affect the continuity of our business. As we have energy-intensive operations such as non-ferrous metal smelting and electrolytic copper foil, we are well aware of the impacts of energy consumption and greenhouse gas (GHG) emissions from business activities on climate change. In order to reduce these impacts, we have identified climate change-related issues as the materiality, including reduction of GHG emissions and energy management, and make efforts to accomplish them. In the 22 Medium-term Management Plan, we have formulated a response to climate change as a key strategy in enhancing the Group's environmental and social value.

Support for the TCFD* recommendations

We recognize that climate change and the social and economic changes surrounding it pose risks to our business. However, we also recognize that an appropriate response can lead to enhanced competitiveness and new business opportunities.

In FY2020, we started to analyze the medium- and long-term risks and opportunities posed by climate change based on the TCFD recommendations and to incorporate the results of this analysis into our business strategies. In March 2022, we also announced our support for the TCFD recommendations.

* Task Force on Climate-related Financial Disclosures

Disclosure items recommended by the TCFD are indicated with TCFD .

Governance TCFD

Mitsui Kinzoku Group's basic policy and important issues to address climate change are discussed by the CSR Committee, which is chaired by the President, and then deliberated and decided by the Executive Council. The Executive Council is comprised of Representative Directors and Executive Directors, deliberating from a management perspective. Decisions are reported to the Board of Directors for monitoring and oversight.

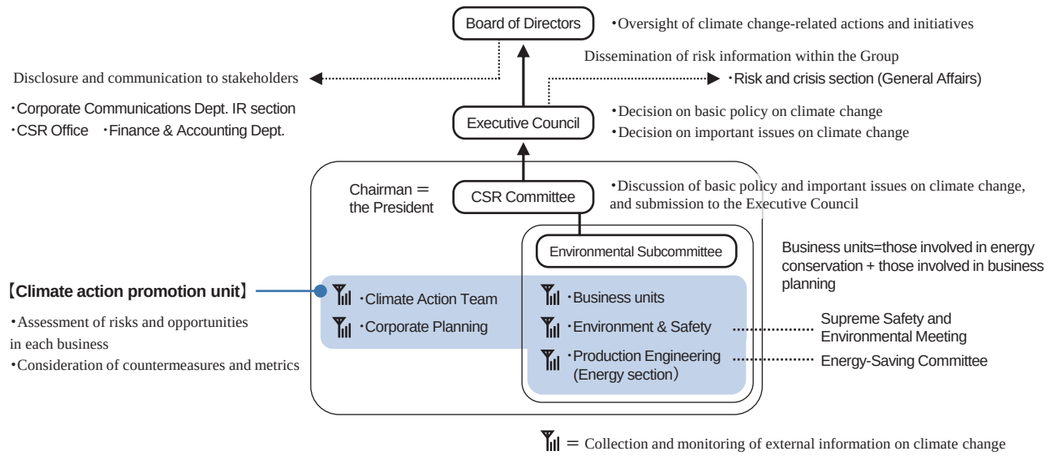
In FY2023, we introduced ESG index-based restricted stock compensation for Directors (excluding outside directors), which incorporates our efforts to reduce GHG emissions as one of the ESG indicators.

Risk management TCFD

Mitsui Kinzoku Group has multiple businesses with different business models. The Climate Action Team identifies and assesses risks and opportunities related to climate change in collaboration with each business unit, including scenario analysis, based on the findings of internal and external surveys and in accordance with the framework of the TCFD recommendations.

The results of the scenario analysis are reported to top management at the Executive Council. Each business unit is responsible for promoting countermeasures based on the results, while the Climate Action Team is tasked with monitoring the progress of the countermeasures. In line with the achievements, the team evaluates and identifies risks and opportunities afresh for the next cycle, in cooperation with the business units. By constantly implementing this risk management cycle, we formulate and promote business strategies with a view to addressing climate change.

Governance and risk management structure



Risk Management Process / Integration of scenario analysis and business strategy

❸ **Review of countermeasure implementation**

・Confirm the results and enhancements of the medium-term management plan and business strategies
・Review of response to physical risks

❶ **Identification of key risks and opportunities, and consideration of countermeasures**

・Information gathering on climate change
・Business analysis and identification/assessment of risks and opportunities
・Consideration of climate-related group-wide direction and business strategies
・Consideration of group-wide direction for physical risk response

❹ **Review key risks and opportunities, and reconsider countermeasures**

・Update climate-related information
・Review risks and opportunities
・Revise group-wide direction and business strategies as necessary
・Improve group-wide BCP

❷ **Implementation of countermeasures**

・Incorporate countermeasures into the medium-term management plan and business strategies
・Formulate and promote group-wide BCP in response to physical risks

(Important issues at each step are determined by the Executive Council.)

Strategy/Scenario analysis TCFD

Mitsui Kinzoku Group operates many businesses globally and recognizes that climate-related risks and opportunities differ among businesses. Therefore, we conduct scenario analysis starting with businesses that are relatively likely to be affected by climate change. Specifically, we rank businesses from these perspectives: amount of CO_2 emissions, magnitude of change in the business environment due to climate change, and amount of sales. We work on scenario analysis by deepening our understanding of the climate-related risks and opportunities of the target business and focusing on the integration of analysis and business strategy.

We have completed scenario analyses for our main businesses - Metals, Engineered materials and Mobility. Of these, we are updating the analyses for the Metals and Copper Foil (Engineered materials business). We will continue to analyze other business segments and update those completed previously on a periodic basis.

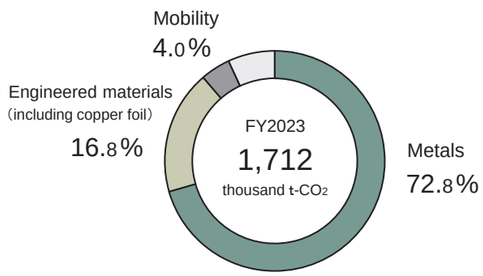
In the scenario analysis, we considered plans to minimize the decline in earnings due to each risk and to capture opportunities through the creation of new products and new businesses. Many of these measures are to be addressed from a long-term perspective, and some of them have been incorporated into the 22 Medium-term Management Plan and are being implemented. They will also be incorporated into the 25 Plan, which is currently being developed, to secure a resilient business.

In particular, in the Metals Sector, based on the scenario analysis performed in FY2020, we have made CO_2 emission reduction our top priority and launched a carbon neutral response preparation project. This project manages production and CO_2 emissions at each smelting site while exploring new CO_2 reduction technologies. At Miike Smelting Co., Ltd., we are working on issues such as replacing coal with biomass fuels.

Scenario definition

Assumed period		2030s
Scenario definition	4˚C scenario	2.7 - 4.0 ˚C higher than pre-Industrial Revolution levels by the end of 21st century. * Uses data mainly from the STEPS (Stated Policies Scenario) of the IEA (International Energy Agency).
	1.5˚C scenario	0.3 - 1.7˚C higher than pre-Industrial Revolution levels by the end of 21st century. * Uses data mainly from the NZE (Net Zero Emissions by 2050 Scenario) of the IEA.

Breakdown of CO_2 emissions



* Details of the breakdown for each business are on page 141.

Summary of scenario analysis results for Metals Business

Impact estimation items	Risks	Opportunities	4℃	1.5℃	Countermeasures
Sales	・Rising market prices of products due to higher costs of mining raw materials and smelting, leading to accelerated substitution of our products and lower sales ・Preference for environmentally-friendly companies	・Increased demand for non-ferrous metals due to electrification drive and rising energy storage technologies ・Increased market value due to accelerated decarbonization of products	Loss ▼▼▼	Profit ▲▲▲	・Monitor market conditions and ensure stable operations, while considering measures to cope with increased demand ・Accelerate measures to improve recycling rates and reduce CO_2 emissions
Carbon taxes	・Increased production and logistics costs due to introduction of carbon taxes	—		▼▼▼	・Reduce fossil fuel use, develop fuel conversion technologies, introduce renewable electricity and promote electrification of manufacturing facilities.
Energy prices	・Increased manufacturing and logistics costs due to rising prices for coal, electricity and other energy sources	—	▲▲	▲▲	・Reduce electricity costs by strengthening demand response measures ・Energy consumption reductions
Raw material prices **Raw materials**	・Sales decline due to accelerated substitution of our products caused by rising zinc and lead ore prices	—	▲▲▲	▼▼▼	・Accelerate shift to high-margin raw materials, such as recycled raw materials and difficult-to-process ones
Sub-materials	・Higher prices for chemicals and materials due to increased energy and carbon costs	—	▼	▲	・Reduce chemical use per production unit ・Diversify procurement sources

Summary of scenario analysis results for Engineered materials Business

Impact estimation items	Risks	Opportunities	4℃	1.5℃	Countermeasures
Sales	・Sales decline for low-carbon products due to cost focus over environmental benefits (4℃ scenario) ・Sales decline due to emerging competing technologies	・Increase in sales of electronic components and related materials due to growth in demand for EVs ・Growth in recycled products and related markets due to increased recycling awareness	Loss ▼▼▼	Loss ▼▼▼	・Expand sales to users in Japan and overseas ・Enhance productivity and boost sales of products with high production efficiency ・Promote renewable energy according to customers' policies ・Promote low GHG emission production and gain customer confidence ・Develop products that reduce CO_2 emissions ・Strengthen response to market needs, such as requests for recycling and reuse ・Consolidate production sites and optimize raw material stock levels
Carbon taxes & Energy prices	・Significant cost increases due to carbon taxes ・Higher operating costs due to higher energy prices ・Cost increase due to purchase of non-fossil certificates/environmental value	・ Increasing sales of CO_2-free products	▼	▼▼	・Identify policy trends of local countries and their impact on our budgets ・Improve production efficiency through yield improvement ・Reduce electricity intensity by introducing energy-saving equipment and technologies ・Consider introducing renewable energies like photovoltaic power generation and promoting waste heat use ・Long-term fixation of electricity prices through Power Purchase Agreements (PPAs) ・Promote electrification of fossil fuel facilities ・Use carbon credits
Raw material prices	・Higher costs due to higher prices for chemicals and materials in line with higher energy prices, and higher metal prices	—	▼▼	▼▼▼	・Incorporate changes in raw material prices into selling prices ・Apply recycled raw materials, increase the recycled ratio and reduce materials used in products ・Multi-source raw materials
Losses due to extreme weather conditions	・Suspension due to drought (Taiwan) ・Shutdown due to guerrilla rains (Malaysia)	—	▼		・Investment in extreme weather measures ・Secure backup power supply ・Monitor local long-term climatic conditions

Summary of scenario analysis results for Mobility Business

Impact estimation items	Risks	Opportunities	4℃	1.5℃	Countermeasures
Sales	・Decline in demand for exhaust gas purification catalyst due to lower sales of internal combustion engine vehicles (ICEVs) as a result of stricter fuel efficiency regulations ・Decline in door lock market share due to shift to EVs ・Order lost due to stricter environmental requirements from customers	・Increasing demand for products used in HEVs, PHEVs, etc. ・Growth in market for new catalyst-related products for decarbonization-related applications ・Market expansion through development of lightweight door lock products	Profit ▲	Loss ▼▼	・Shift to development and supply of catalyst products optimized for HEVs, PHEVs, etc. ・Accelerate development of door lock products for EVs ・Marketing and PR activities for door lock products aimed at EVs
Raw material prices	・Raw material costs and supply instability caused by increased demand for renewable energy-related materials ・Increased competition due to demand for lower weight of raw materials	・Early introduction of technologies to reduce raw material weight and cost reductions to gain an advantage		Difficult to quantify	・Reduce precious metals in products
Changes in customer reputation/ needs	・Increased operating costs due to demand for lower carbon emissions in manufacturing processes ・Shunning products deemed to have a high GHG emissions impact	—		▼	・Introduce renewable energy equipment and utilize green electricity ・Introduce energy-saving equipment. ・Equipment improvements to reduce waste heat loss

＊ Financial impact（4℃/1.5℃）

No indication ± less than 100 million yen ▲▼ ±100million – less than 1 billion yen ▲▲▼▼ ± 1 billion – less than 10 billion yen ▲▲▲▼▼▼ ±10 billion yen or more

Metrics and targets TCFD

Medium- and long-term CO_2 emissions reduction targets

In March 2022, Mitsui Kinzoku Group revised its medium-term and long-term CO_2 emissions reduction targets for energy-derived CO_2 emissions in Scope 1 and 2. To achieve these targets, we promote energy-saving activities, increase renewable energy use, as well as create environmental contribution products and develop innovative technologies actively.

Medium-term CO_2 emissions reduction target

Reducing CO_2 emissions by 38% globally by FY2030 (compared to the FY2013 level)

Long-term CO_2 emissions reduction target

Achieving carbon neutrality (net zero emissions) by FY2050

Implementing the Carbon Neutral Road Map

Mitsui Kinzoku Group has formulated a Carbon Neutral Road Map (CNRM) to achieve its medium- and long-term CO_2 emissions reduction targets. In order to achieve carbon neutrality by 2050, it is necessary for management to make climate-related investments that take into account social and technological trends, as well as the company's situation. We consider the CNRM as an important mechanism to support flexible and timely decision-making on these investments.

To develop investment programs eligible for the CNRM, the Executive Council deliberates investment plans as necessary to make decisions. Such deliberations are based on activity details and implementation plans submitted by business divisions and subsidiaries with the support of the business sectors. Implementation results are also monitored to develop further CO_2 emission reduction programs. In FY2024, we plan to invest 290 million yen in Scope 1 reduction measures and 200 million yen in Scope 2, with an expected reduction of 5,115 tons of CO_2 in FY2030.

Overview of Carbon Neutral Roadmap

		△38% 2030	Net zero emissions 2050
Improve processes	Energy saving/ higher efficiency	Process improvement, introduction of high-efficiency equipment, improvement and expansion of the smelting network	Process improvement, introduction of high-efficiency equipment, development of a sophisticated resource recycling system
Introduce new technologies	Energy and fuel conversion	Utilization of decarbonized/ low-carbon fuels（e.g. biomass fuels）	Utilization of innovative technologies (e.g. ferro-coke, hydrogen, ammonia)
	Shifting to low carbon electric power	Expansion of renewable energy power stations	Utilization of post-FIT power sources
		Improvement of electricity procurement	Expansion of renewable energy procurement via PPA, etc.
	Carbon offsetting/ innovation	Exploration of CCUS technologies, finding partners, development of carbon neutrality-related technologies	Utilization of carbon neutrality-related technologies

＊ The reduction target for 2030 covers CO_2 emissions derived from energy in the manufacturing process.

Summary of the Mitsui Kinzoku Group's ICP system

Internal carbon price	Scope1: 30,000yen/t-CO_2 Scope2: 20,000yen/t-CO_2 ※ Set a higher price for Scope 1 than 2 in order to further promote measures for Scope 1, where emission reduction is more critical and challenging.
Applicable objectives	Equipment/development investments accompanying changes in CO_2 emissions
Application	CO_2 emissions from planned equipment/development investments are measured using the ICP, which are then converted to cost and referred to in investment decision-making.
Effective date	April 1, 2023

We have summarized and made public our approaches towards carbon neutrality as the Group's Transition Strategy.

Internal Carbon Pricing System

Mitsui Kinzoku Group introduced an Internal Carbon Pricing (ICP) System in FY2023 to increase investment in CO_2 emission reduction activities through CNRM operation, as well as to promote new business creation that contributes to a decarbonized society. We determined our internal carbon price taking into account a comprehensive approach that includes identification of CO_2 emission reduction measures, strategic considerations based on the TCFD scenario analysis, and the external environment related to climate change. We set the price by scope because the difficulty of implementing emission reduction measures in our Group vary greatly due to different characteristics of Scope 1 and 2.

Promoting energy conservation activities

We have been working on energy conservation activities, including operational improvements in each process, such as further energy efficiency improvements in production activities, as well as the introduction of advanced equipment. We have also incorporated programs of energy conservation in our CNRM.

Energy-saving efforts at the Hibi smelter

The Tamano Smelter of Hibi Kyodo Smelting Co., Ltd. is working to reduce electricity consumption through process improvements. The smelter produces electrolytic copper with purity of 99.99+% as a finished product by conducting electrorefining at its electrolytic refining plant using anodes of 99.4% pure copper produced from copper concentrates at its smelting plant.

In the smelting plant, electricity is used to supply oxygen produced from air to the flash furnace and the converter furnace. Previously, when the oxygen supplied to the converter furnace exceeded a predetermined pressure, the excess was discharged into the atmosphere. The smelter mounted new bypass pipes that branch off from the middle of the pipes to the converter furnace to allow this excess oxygen to be supplied to the flash furnace. This reduces the loss of oxygen that was otherwise discharged, thereby curbing the amount of electricity used to produce the oxygen. As a result, in FY2023, together with the switch to LED lighting, the smelter was able to reduce electricity consumption by more than 800 MWh. In addition, as part of future efforts to reduce CO_2 emissions, it is considering converting a fuel used at the plants from heavy oil to LNG.

Increasing the use of renewable energy

In order to increase the ratio of renewable energy, we are expanding the introduction of new renewable energy generation facilities as well as operating existing hydroelectric, solar, and other power generation facilities stably. We also purchase electricity from renewable energy sources.

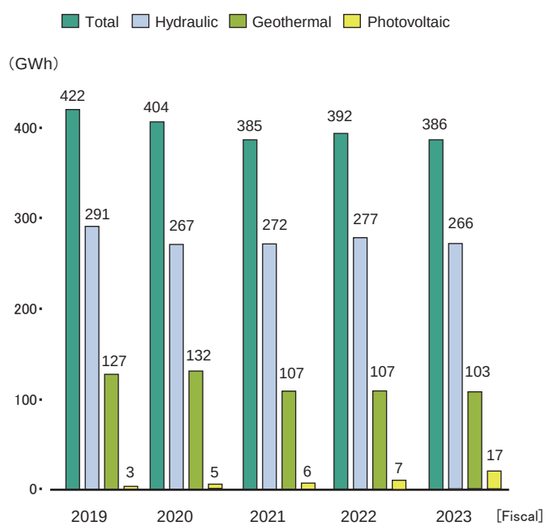
Kamioka Mining and Smelting Co., Ltd. and Compania Minera Santa Luisa S.A. operate hydroelectric power plants located on their premises. Okuaizu Geothermal Co., Ltd. produces steam for geothermal power generation, supplied to a power company.

GECOM Corp. and the Kamioka office of MITSUI KINZOKU YOURSOFT Inc. have been using 100% renewable electricity, particularly from hydroelectric power, since FY2023.

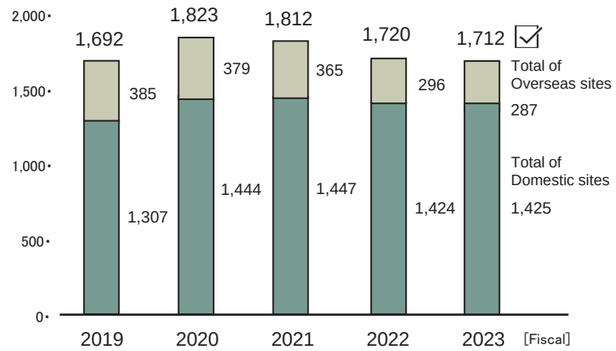
In FY2023, the copper foil business, which consumes a large amount of electricity, purchased 30% CO_2-free electricity through non-fossil certificates at the Ageo Plant in Japan. In FY2024, it plans to introduce renewable electricity to its overseas plants.

We will continue to procure electricity from renewable sources.

Total power generation using renewable energy



CO_2 emissions from energy consumption (thousand t-CO_2)



* Figures for CO_2 emissions from energy consumption were calculated using emission factors derived in a manner conforming to the Act on Promotion of Global Warming Countermeasures. CO_2 emissions from purchased electricity in Japan were calculated using the latest adjusted emission factors of electric power suppliers (basic emission factors were used until FY2019). For overseas emission factors, we used emission factors provided by power suppliers or specific locations. Where these were not available, we used the CO_2 Emission Factors from Electricity for 2021 reported by the IEA. (Until FY2020, the Electricity Emission Factors reported by GHG PROTOCOL were used).

* Emissions from using waste as fuel are not included.

* We have received an independent practitioner's assurance for the figures for FY2023 in this information to which ☑ is attached.

CO_2 emissions from energy consumption (Breakdown by scope)

(thousand t-CO_2)

Energy consumption (crude oil equivalent)

CO_2 emissions results

Mitsui Kinzoku Group has been improving energy consumption per unit of production through energy conservation activities and increased use of renewable energy. As a result of fluctuations in energy consumption due to variations in production volume, CO_2 emissions have increased or decreased. The increase in total emissions for the Group after FY2020 is due to the consolidation of Hibi smelter. In FY2023, there was a slight decrease in CO_2 emissions from energy sources, despite the increase in fuel use caused by equipment issues at smelting sites and increased production of ingots. To achieve our medium- and long-term targets, we review our actions while checking our progress.

Scope 3 emissions calculations

Mitsui Kinzoku Group recognizes that reducing GHG emissions in the value chain, including raw materials used in manufacturing processes, transportation of raw materials, as well as use and disposal of products, is one of the most important measures for addressing climate change.

We have calculated emissions in categories 1 to 9 and 13 to 15 for the domestic group for FY2021 and FY2022. Starting in FY2024, we are prioritizing issues and calculating Scope 3 emissions for the entire Mitsui Kinzoku Group, encompassing categories 10 to 12.

Participation in GX League

The GX (Green Transformation) League is a Japanese government initiative to promote GX, which has been working in earnest since FY2023. In the GX League, companies collaborate with government agencies, universities, public research institutions, and financial institutions to discuss economic and social system reform as a whole and to seek to create new markets.

Through our public-private-academic collaboration in the GX League, we will work with stakeholders in our value chain and participate in green markets to achieve our medium- and long-term CO_2 emissions reduction targets.

Water conservation

Water is an important resource of the Earth, deeply connected to the abundance of land, sea and biodiversity. Water is essential to Mitsui Kinzoku Group's manufacturing processes. We are committed to the proper use of water in all aspects of our business operations, in dialogue with local communities to conserve water resources. The Mitsui Kinzoku Group's Environmental Action Plan calls for appropriate management of water intake, wastewater discharge, and wastewater quality at each site.

Improve water efficiency

At our manufacturing sites, we monitor water use, wastewater discharge, and reuse/recycling volumes to ensure efficient water use.

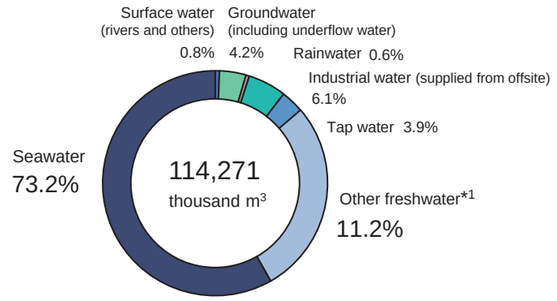
Our nonferrous smelting and refining operation, which is a mainstay business of Mitsui Kinzoku Group, makes extensive use of water for cooling refining facilities and for cleaning raw materials, products, and equipment. This business accounts for more than 90% of the Group's total water withdrawal. In using water, we strive to improve water use efficiency and conserve water resources, taking local conditions into account.

Miike Smelting Co., Ltd. uses some of the wastewater discharged and treated by other Mitsui Kinzoku Group plants adjacent to the smelter, as well as rainwater. Kamioka Mining & Smelting Co., Ltd. uses freshwater with relatively high turbidity (Other freshwater), such as mine water from the mining area after treatment. Our smelting sites located on the waterfront use seawater in the cooling process.

We are also promoting the reuse and recycling of water both between processes and within processes by identifying the requirements of each of the refining processes in terms of water quality and quantity. For example, water that has been used in a process which requires high purity is reused in other processes that require only relatively low purity, and water used once is treated and circulated for reuse in the same process.

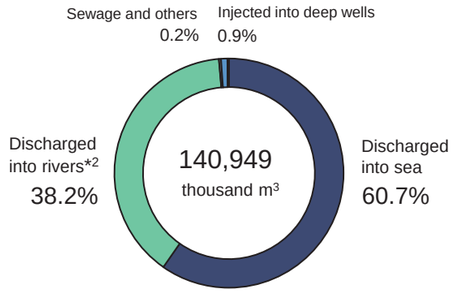
In FY2023, the total freshwater withdrawal for all smelting sites amounted to 24,631 thousand m³, of which 51% was Other freshwater. The total seawater withdrawal amounted to 83,684 thousand m³, accounting for 73% of the Group's total water withdrawal.

Breakdown of water withdrawal (FY2023)



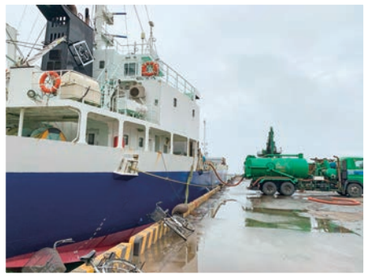
＊1 Other freshwater mainly comprises wastewater from the Group's plants and mine water from the mining areas. It is used after appropriate treatment.

Breakdown of wastewater (FY2023)



＊2 Our Group's wastewater includes water used in manufacturing processes, as well as mine effluent from mining areas and on-site precipitation. The volume of mine effluent and on-site precipitation varies with changes in precipitation and other factors. Water from these sources that is not used for manufacturing is treated according to discharge standards and released into the sea, rivers, and other bodies of water under the control of each site.

In the Miike area (Omuta City, Fukuoka Prefecture), storage ponds store wastewater treated from manufacturing sites and rainwater for reuse.



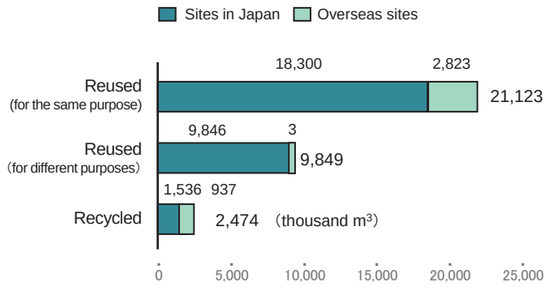
Left: The 4,000-ton settling pond for mine water treatment in the Kamioka Mine. (Kamioka)
Right: After unloading the ore from the zinc concentrate carrier, water for cleaning the carrier is also collected. (Hachinohe)

Reduction of water pollutants

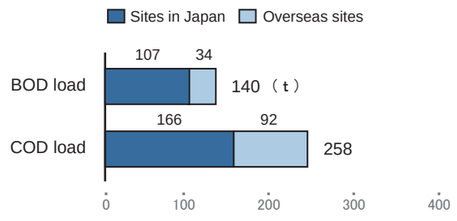
Each manufacturing site monitors the status of its wastewater, including BOD and COD, which indicate the amount of organic matter in the wastewater, under stricter voluntary standards to ensure compliance with laws, regulations and ordinances. At our smelting sites, we manage wastewater with regard to the concentration of heavy metals and other pollutants, not only according to laws and regulations, but also in compliance with even stricter agreements with authorities and local community groups.

We have several wastewater monitoring stations along the wastewater routes, including wastewater treatment units, confluence points, and discharge outlets, which are constantly monitored by our ICT system for any anomalies. Mitsui Kinzoku Group also collects and manages the monitoring results from each site on a group-wide basis as well as shares emission reduction efforts and technologies.

Amount of circulated water usage (FY2023)



Emissions to the water (FY2023)



Assessment and response to water risk situations

We use World Resources Institute (WRI)'s AQUEDUCT Water Risk Atlas＊ to assess water risks at our manufacturing sites in Japan and overseas, mainly in terms of water stress and flood hazards. In WRI's assessment, 10 sites in Morocco, Mexico, India and China are located in areas where water stress is rated Extremely High (>80%), while 5 sites in Indonesia, Thailand and China are rated High (40-80%). These sites, which mainly manufacture automotive components, had a freshwater withdrawal of 167 thousand m³ in FY2023, or 0.5% of the Group's total. At each site, we are working to improve water efficiency by reducing water intake and introducing water recycling facilities.

Some coastal sites in Asia, such as Thailand, Malaysia, and China, and sites in the Miike area of Kyushu (Omuta City, Fukuoka Prefecture), face flooding risks from heavy rainfall. We are improving and reinforcing drainage channels, raising the height of flood-prone machinery, and introducing ICT systems for faster information transmission. At smelting sites, we are enhancing reservoirs and increasing wastewater treatment capacity to prevent the leakage of wastewater containing heavy metals and other pollutants during heavy rainfall or flooding. An automatic shut-off system for wastewater has also been installed for emergencies such as leaks.

We will continue to monitor the situation, conserve water resources, and minimize the impact on our operations and neighboring areas.

＊ Used the Baseline Water Stress data from the AQUEDUCT Water Risk Atlas 4.0 released in August 2023.

Toward a circular economy

Along with global economic growth, demand for resources and energy is expanding. As a result, the amount of waste is increasing and environmental problems are becoming more serious. Accordingly, there is a growing need to shift from the conventional linear economy based on mass-production, mass-consumption, mass-disposal to a circular economy over the medium to long term. Mitsui Kinzoku Group is committed to effective use of resources, reduction of waste and environmental pollutants, as well as introduction of environmental contribution products to meet the demands of society and achieve sustainable growth.

Resource recycling

Mitsui Kinzoku Group strives to manufacture products by recycling waste and other recycled raw materials in order to make effective use of resources. In the nonferrous smelting business, we have been recovering zinc, lead, and other metals from waste, and supplying nonferrous metal products as essential raw materials for industry. This represents our effort to contribute to resource recycling while promoting our business development.

Mitsui Kinzoku Group has established its own recycling network that organically links its seven smelters in Japan for synergy effects. Toward the transition to a circular economy, we are now working to build a more advanced recycling network to expand the use of recycled raw materials and improve processing ability for difficult-to-refine raw materials. To this end, we are advancing separation and purification technologies according to materials, as well as improving technologies in our manufacturing processes.

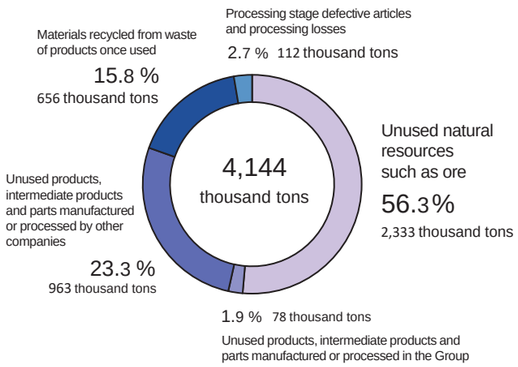
The Environmental Action Plan includes group-wide efforts to increase the use of reused and recycled raw materials.

Waste reduction

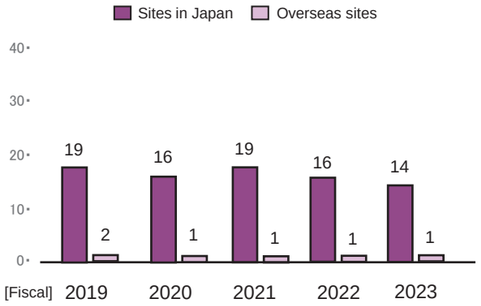
Each manufacturing site of the Group strives to reduce waste through minimization and efficiency of resources used. We work to reduce the final disposal volume by improving the recovery rate of valuable resources, promoting the 3Rs of packaging materials, and improving the yield rate of manufacturing processes. The Environmental Action Plan calls for setting a Waste Intensity Target at each site and group-wide efforts to reduce waste generation.

Of the amount of byproducts in FY2023, 88% within Japan and 98% overseas were recycled and used either within or outside of our Group.

Breakdown of usage by type of raw material (FY2023)



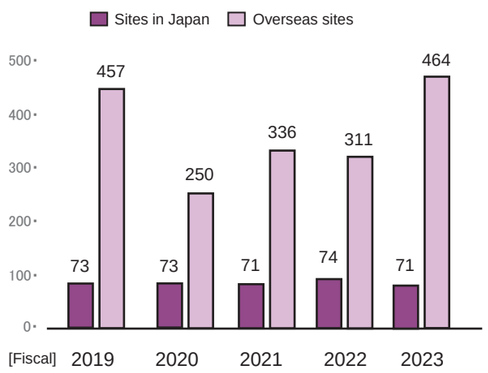
Amount of waste generation (thousand tons)



∗ Waste generation excluding reuse, recycling and heat utilization.

∗ Revised the values for FY2022 disclosed last year.

Amount of tailings waste generation (thousand tons)



∗ Revised the values for FY2022 disclosed last year.

Plastic recycling

Mitsui Kinzoku Group is committed to proper disposal of plastic waste and resource recycle. In FY2022, we set targets to reduce plastic emissions and increase the recycling rate for our domestic group, which accounts for approximately 95% of the Group's total plastic waste emissions.

Plastic waste reduction targets∗

	Baseline year FY2021	Reporting year FY2023	Target year FY2024
Emissions (thousand t)	2,244t	1,989t	2,044t
Recycling rate	33%	35%	39%

∗ Covers the scope of domestic consolidation, including Mitsui Kinzoku and domestic consolidated subsidiaries.

In manufacturing processes that use plastic materials, we are reducing both usage and emissions by improving yield rates. We are also working to switch to other materials such as metals and paper. In packaging materials, we are promoting the 3Rs and shifting to other materials.

In addition, we are introducing new equipment to convert waste that was previously disposed of into valuable materials that can be reused and recycled. Moreover, we are pursuing ICT-enabled approaches for visualizing waste data and increasing work efficiency as well as considering adopting new reduction measures. In the Ageo area (Ageo City, Saitama Prefecture) and Miike area, we have also started reduction activities through collaboration among sites.

Reduction of chemical substance emissions

Each manufacturing site of the Group files the release and the transfer amount of chemical substances to the government under 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 [PRTR]). The management of hazardous chemical substances contained in products has become an essential requirement. We also respond to the guidelines for chemical substances contained in products, such as the RoHS Directive and the REACH regulations required by customers.

We aim to reduce the emission amount of environmental pollutants in accordance with the Environmental Action Plan, including our overseas sites. We continuously strive to collect and replace chemical substances that may cause environmental pollution. Thus we focus on reducing and removing use of such chemical substances from our products.

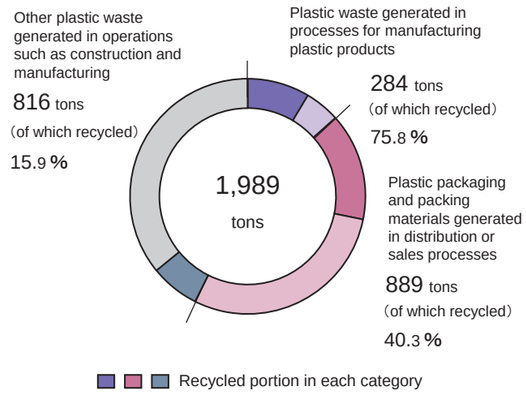
Prevent air pollution

Mitsui Kinzoku Group monitors sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust emissions into the atmosphere at each manufacturing site and facility according to stricter voluntary standards in accordance with laws and regulations.

SOx is generated during the combustion of sulfur-containing fossil fuels such as oil and coal, and NOx from combustion equipment such as boilers and incinerators. We also collect and manage these monitoring results from each site across the Group and share emission reduction efforts and technologies.

Amount of plastic waste generated (FY2023)∗

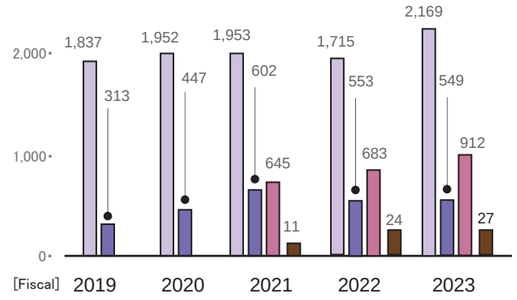
Breakdown and percentage of recycling



Recycled portion in each category

∗ Covers the scope of domestic consolidation.

Volume of chemical substances released and transferred



∗ Added the amounts of overseas sites from FY2021.

∗ Revised the values for FY2022 disclosed last year.

Emissions to the atmosphere (FY2023)