

Mitsubishi Materials

ESG Report 2022

(Archive Edition)

For People, Society and the Earth



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Editorial Policy

This report provides an easily understandable and comprehensive report, for interested persons, on the approaches, initiatives, results, issues and current direction of the Mitsubishi Materials Group ("the Group") with regard to sustainable management. It is also intended to elicit opinions and help us to continuously improve the standard of our activities.

This report is produced in accordance with the core options of the GRI Standards.

From fiscal 2021, this report is published only on the website and electronically (PDF).

■ Boundary

Qualitative data: Including group companies, with Mitsubishi Materials Corporation playing a central role.

Quantitative data: Data on group companies is as follows.

- Greenhouse gas emissions include 118 major consolidated subsidiaries for Scope 1 and Scope 2 emissions and 63 major consolidated subsidiaries for Scope 3 emissions.
- Other environmental data is for major consolidated subsidiaries with manufacturing facilities (64 companies)
- CSR training data refers to the main companies subject to CSR activities (53 companies)
- Safety data relates to the 20 major consolidated subsidiaries

Apart from the above, figures related to Mitsubishi Materials on a non-consolidated basis

*For the purposes of this report, the terms "Mitsubishi Materials" and "the Company" refer to Mitsubishi Materials on a non-consolidated basis.

■ Key Changes to Organizations Subject to Reporting

Since fiscal 2022, PT Smelting Management Gresik and one other company have been included in the scope of consolidation. In addition, Hachimantai Geothermal Co., Ltd was excluded from the scope of consolidation because of an absorption-type merger with Hachimantai Green Energy Corporation (former Akita Power Generation Co., Ltd) as the surviving company. Accurate Wire, Inc. was also excluded because of an absorption-type merger with Luvata Waterbury, Inc. as the surviving company. Mitsubishi Aluminum Co., Ltd. (now known as MMA Corporation) was excluded because its importance has decreased due to business split and succession. MA Packaging Co., Ltd. and five other companies were excluded because Mitsubishi Aluminum Co., Ltd. executed a business split and succession. Universal Can Corporation and five other companies were excluded because the Company sold 100% of its equity in these companies, and Daiya Consultant Corp. was also excluded because the Company sold part of its equity in the company.

In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Despite these organizational changes, actual figures for greenhouse gases (GHGs: Scope 1 and 2 emissions), energy consumption, workplace safety and hygiene, employment and other values for the period covered include figures of the cement business and aluminum business. The figures for GHGs (Scope 3 emissions), the environment, donations and social contributions, employee training, and others include figures of the cement business.

■ Period

Fiscal 2022 (April 1, 2021 – March 31, 2022)

*This report may also include information from April 2022 onwards, in an effort to provide the most up-to-date information on the Group.

■ Date of Publication

August 2022 (previous report was published in August 2021)

■ Guidelines

GRI Standards 2016

GRI Standards GRI Sector Disclosures (Mining and Metals)

*A GRI search function is available via the ESG section of our website.

■ Principal Reporting Tools

We systematically disclose information on the Group, mainly via the following reporting tools.

Name	Summary
ESG report	It is a comprehensive report of the plans, objectives, initiatives, results, and detailed data related to the Mitsubishi Materials Group's ESG management and material issues.
Integrated Report (PDF)	We produce an annual report on Mitsubishi Materials containing information about the business direction of the MMC Group, such as financial, management and general business information. Its content is reported in an integrated manner, focusing on both financial and non-financial aspects.
Website and ESG site	This section features content that supplements the reporting tools above, including ESG data lists , previously reported information, and reports on other activities.

■ The Process of Compiling

We place great importance on the process of compiling this report. The process is designed with the aim of improving transparency and reliability as a company, in the interests of accountability (with regard to external parties), and of tying in with promoting the Group's sustainable management.

● Improving Transparency and Reliability

Having examined and identified ten "material issues" from the perspectives of our stakeholders and management, they provide the basic framework for both our ESG activities and ESG reports. As the environment is constantly changing around us, not least in terms of stakeholder trends, we review our material issues on a regular basis. We also keep a close eye on matters of interest to our stakeholders, their expectations and business conditions, so that we can check and adjust the contents of our reports in precise detail.

To keep track of matters of interest to our stakeholders, their expectations and other related trends, we gather information from individual departments, based on sources such as questionnaires from ESG investors, responses to reader questionnaires, and intensive internal interviews prior to the compilation of the current report. We hold Stakeholder Meetings to discuss topics of particular importance. Meetings also help to establish a clear understanding of social issues, from various different angles, and to examine details of group initiatives.

We also obtain an "independent assurance," to assist in comprehensively evaluating the contents of our report against international requirements in an effort to improve transparency and reliability.

● Promoting ESG Activities based on Communication

We make the most of communication activities, as part of the process of compiling this report, to improve our ability to promote ESG activities, by establishing a shared understanding and raising awareness of changes in the external environment for example.

We conduct hearings with the relevant corporate and company departments as needed, and not only coordinate the reporting, but also exchange opinions and share information about matters of interest or concern to stakeholders, issues for the future, and the direction of our activities.

Asking relevant departments to produce articles for this report, and then exchanging opinions regarding the draft report once it has been compiled, enables departments to review their ESG activities from an external perspective and helps to develop a shared understanding of their strategic significance.

Positioning of Sustainability in the Group

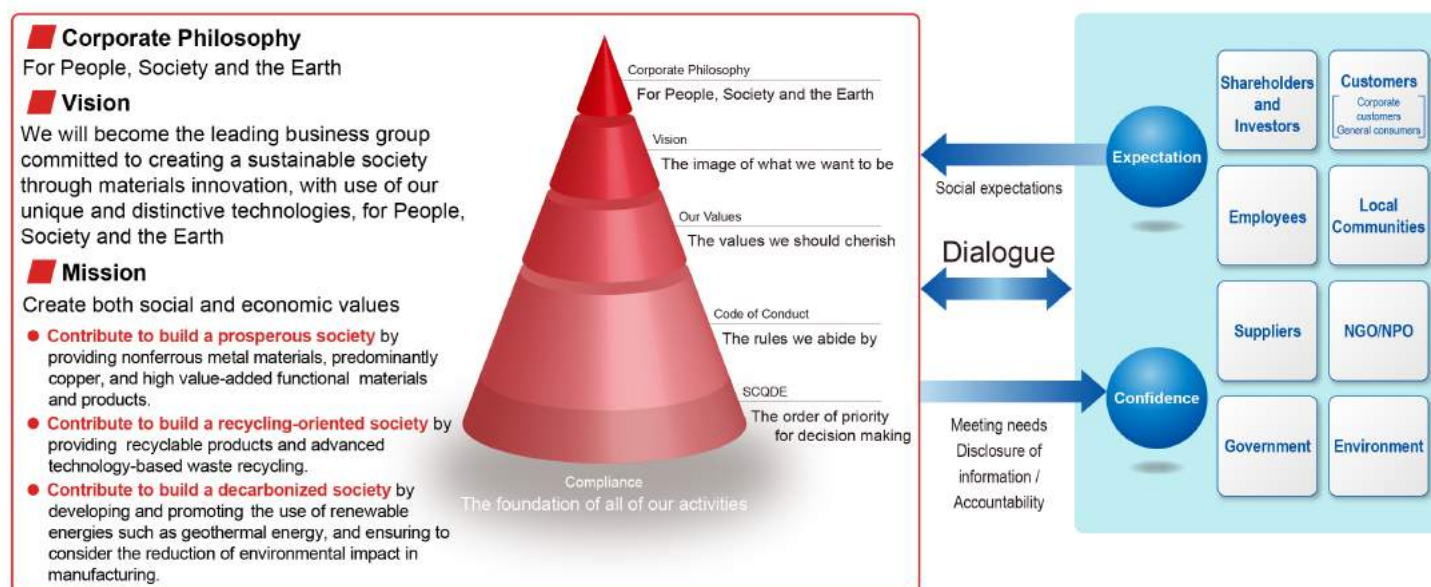
Basic Policy on Sustainability

At the Mitsubishi Materials Group, we made the CSR Declaration to announce our commitment to CSR activities in April 2005, and established the CSR Direction in May 2006, and have been pursuing initiatives accordingly. Since then, along with the growing interest in climate change, environmental and social issues, and society began to attach greater importance to sustainability. Reflecting these trends, we established a Sustainability Policy in December 2021 to clarify the Group's attitude to promote sustainability more actively and positively. We also established a Human Rights Policy and a Procurement Policy under the Sustainability Policy. ESG organizes these initiatives into the three categories of Environment, Social and Governance.

At the Mitsubishi Materials Group, we uphold our Corporate Philosophy "For People, Society and the Earth" and recognize that the sustainability of society as a whole will have a significant impact on our corporate activities in the future. Based on this understanding, we aim to create both social and economic values by solving social issues through business activities, with a focus on contributing to building a prosperous society, recycling-oriented society, and decarbonized society.

In identifying key issues too, we start with ascertaining social demand that the Group should respond to, based on a wide range of information sources, including international guidelines and ESG research questionnaires. We then evaluate and prioritize issues based on stakeholder and management perspectives. Our approach to resolving key issues, once they have been identified, is to incorporate them into our business strategy, and tackle them systematically as part of our day-to-day business processes.

Conceptual diagram of Corporate Philosophy of the Mitsubishi Materials Group and its stakeholders



Sustainability Policy

1. Build a Work Environment that puts Safety and Health First

We place utmost priority on safety and health. We will build a work environment that eliminates work-related accidents, ensures occupational health, maintains employee wellness and reinforces risk management that mitigates adverse impacts from emergency situations including natural disasters and global infectious diseases.

2. Respect Human Rights

Respect for human rights is considered to be the foundation of the business activities of the Mitsubishi Materials Group. We respect the principles enshrined in the international human rights instruments.

3. Promote Diversity and Inclusion

We embrace diversity and acknowledge its importance in creating new value. We will promote diversity and inclusion as a source of sustainable growth within the Group.

4. Cultivate Mutual Prosperity with Stakeholders

We will communicate proactively with our stakeholders – including shareholders, investors, employees, customers, suppliers, business partners, global and local communities – to foster mutual understanding toward mutual prosperity.

5. Strengthen Corporate Governance and Risk Management

We will strengthen corporate governance and reinforce risk management systems to ensure legal compliance. Fulfilling regulatory requirements is a prerequisite for enhancing our business operations and preventing corporate scandals from arising.

6. Engage in Fair Business Transactions and Responsible Sourcing

We will engage in fair and responsible business transactions with all our suppliers and business partners. We will strive to ensure responsible procurement of minerals and other raw materials in collaboration with our suppliers and business partners.

7. Ensure Stable Provision of Safe, Secure, and High Value Added Products

We practice quality control and pursue innovative solutions to develop safe and secure products, services and solutions with high added value to society.

8. Proactive Engagement for the Global Environment

We recognize the critical importance of environmental conservation. We will engage proactively in resource recycling, decarbonization and biodiversity conservation across all areas of our operations, from procurement of raw materials to the development, manufacturing, distribution, consumption, disposal, and recycling of materials and products.

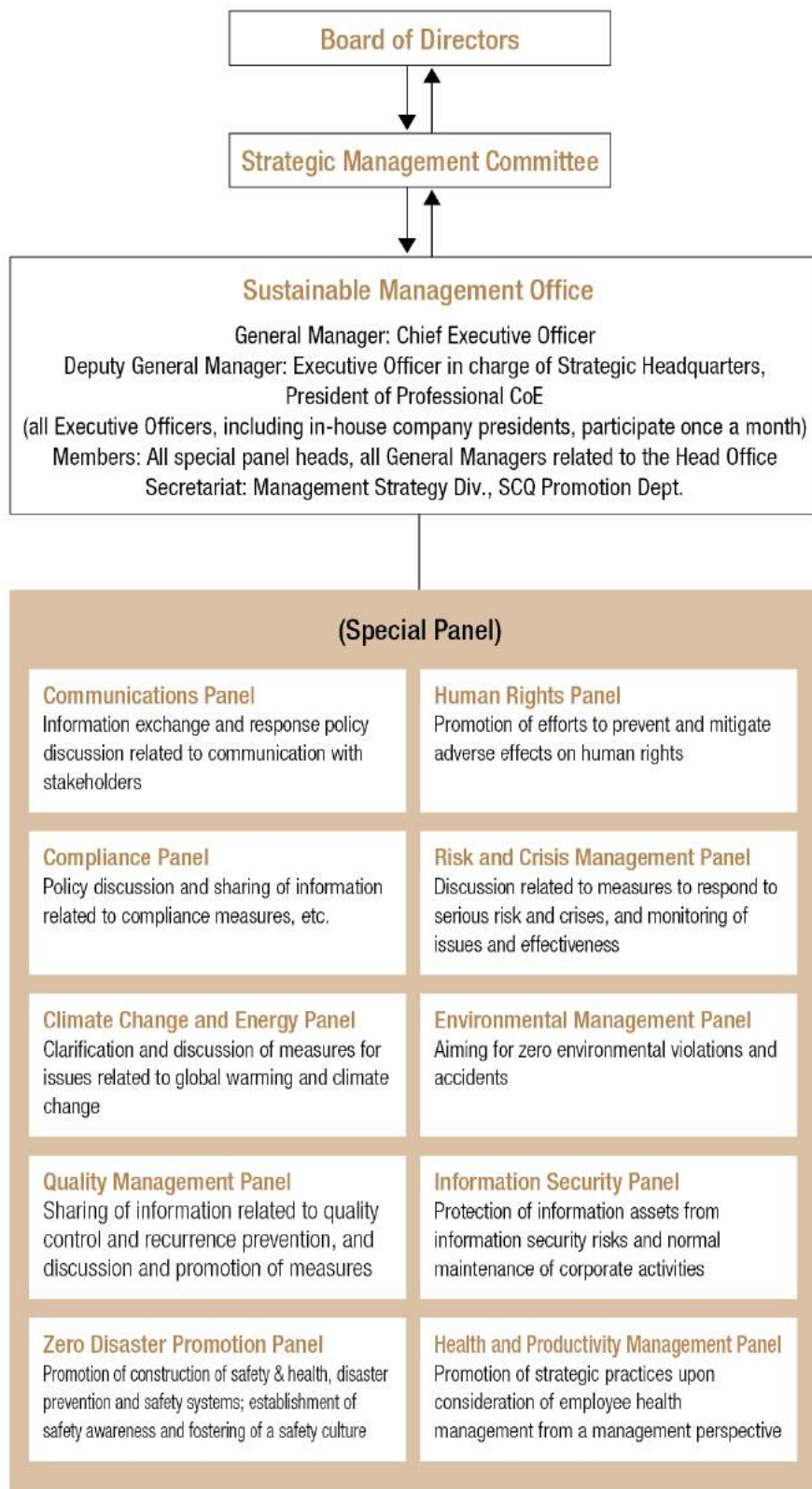
(Stipulated on December 1, 2021)

Sustainable Management System

Since tackling management issues regarding sustainability is essential for the Group to improve its corporate value in the medium- to long-term, we established the Sustainable Management Office on April 1, 2020 to promote centralized handling of such issues. The activities led by the Sustainable Management Office will enable the Group to actively solve issues regarding sustainability and appropriately handle issues from a risk management perspective, which will contribute to both building a sustainable society and improving corporate value in the medium- to long-term.

The mission of the Sustainable Management Office is to promote centralized handling of various management issues in order to contribute to developing a sustainable society and enhance corporate value in the medium- to long-term via business activities that follow the corporate philosophy of the Group. Its members include the CEO (General Manager), executive officers of related departments (Deputy General Manager), and general managers of related departments. It has panels for each specialized field as suborganizations, which deliberate on annual policies and activity plans. After following-up on specific measures and the like related to each field by the Sustainable Management Office, the status of those activities is reported to the Strategic Management Committee and the Board of Directors monthly.

■ Sustainable Management System (as of June 28, 2022)



* Mitsubishi Materials Corporation has established a Sustainability Policy as of December 1, 2021.

* Mitsubishi Materials Corporation signed the United Nations Global Compact and was registered as a participating company as of March 22, 2022.

* Mitsubishi Materials Corporation has established a Sustainability Committee consisting of directors under the Board of Directors as of June 28, 2022.

Initiatives on Material Issues

Identifying and Reviewing Material Issues

We recognize that the sustainability of society as a whole will always have a significant impact on our corporate activities in the future. That is why we identify high priority issues from the point of view of management. Once we have identified these material issues, we incorporate them into our business activities, and publish details and the results of our initiatives in our ESG report.

We identified nine material issues of the Group in fiscal 2008 by conducting a material issue assessment based on the framework of the GRI Guidelines, a set of international guidelines that address sustainability reporting. In fiscal 2016, we reorganized them into seven issues. Later, in response to changes in the external environment, we updated the Group's material issues in the Medium-term Management Strategy for the period until fiscal 2023, which we announced in March 2020. As a result, the Group now has ten material issues, which were selected based on the CSR material issues identified in 2015, following the steps shown in the figure below. Further, we also set material issues for management strategy, which are to be solved directly through business activities. Thus, we have strengthened the relationship between them and our management strategy. Our initiatives to address these material issues also helps achieve the Sustainable Development Goals (SDGs). Through these initiatives, we will improve our corporate value, achieving both social and economic value.

Now, we compile reports in accordance with the GRI Standards and by reflecting the recently-growing interest in non-financial information. We will continue to carry out regular reviews of the reports and strive to enhance their contents in response to the expectations and requests of our stakeholders.

Selection Process

1. Reviewed some of the key factors that were identified in 2015 based on information such as GRI indicators, the OECD Guidelines for Multinational Enterprises and SRI categories, from the viewpoints of latest social trends and the medium- and long-term growth of the Group
2. Evaluated the importance of the key factors for the Group and for each group of our key stakeholders -- investors, suppliers, employees, and local communities -- in light of what we aim to be
3. Identified the Group's material issues based on the result of the evaluation, and then set matters of extremely high importance for the Group and its key stakeholders as material issues related to solutions to social issues achieved through business, which are material issues for management strategy Also specified other material issues as material issues related to the reinforcement of our management base and linchpins

Mitsubishi Materials Group's Initiatives on Material Issues

	Materiality	Key Themes	Background and Key Initiatives
Materiality regarding the resolution of social issues via business	Stable supply of product/material [SCODE]	Providing nonferrous metal materials, predominantly copper Providing high value-added functional materials and products	As a diversified materials manufacturer, ensuring the steady supply of essential materials and products around the world to help enrich people's lives is our mission and a material issue. The Group supplies materials including copper, precious metal and cement, functional materials such as copper-based alloys, cemented carbide and ceramics, as well as components and products that utilize them. Moving forward, we will continue to offer new materials, new functional materials through new combinations of materials, advanced products that better cater to the needs of customers, and new applications for these offerings.
	Creation of a recycling-oriented society [SCODE]	Providing recyclable products Advanced technology-based waste recycling	In building a sustainable future, it will be essential to curb the consumption of natural resources in danger of depletion and create a recycling-oriented society. In addition to processing E-Scrap at smelters & refineries and recovering resources from a range of waste products at cement plants, the Group is involved in recycling and waste disposal processing activities across various fields including the recycling of home appliances and automobiles, and the processing of food waste and refuse incineration fly ash. Going forward, we will make every effort to improve the amount and rate of recycling by developing and advancing processing technologies. At the same time, we will switch to supplying products that can be more easily recycled, expand the range of materials that can be recycled, build widespread recycling networks, and play a central role in evolving global resource recycling efforts in terms of both hard and soft infrastructure.
	Dealing with climate change [SCODE]	Developing and promoting the use of renewable energies such as geothermal energy Ensuring that we consider the reduction of environmental impact in manufacturing	How we respond to climate change will have a large bearing on the future of the Group. The Group promotes the development and use of renewable energy such as geothermal and hydroelectric power, and pursues energy conservation activities at each plant. Moving forward we will continue to advance geothermal and other renewable energy technologies, promote the development of new sites, and strive to expand the utilization of renewable energy. We will also implement energy conservation and efficiency improvements in our business activities, reduce CO ₂ emissions and take part in the development of technologies to capture and store carbon dioxide as part of efforts to reduce our environmental impact.
	Environment protection technologies [SCODE]	Preventing environmental pollution Preserving biodiversity Developing environmental technologies and products	Preservation of the natural environment is one of the roles companies are expected to fulfill in building a sustainable future. We make every effort to preserve the environment while complying precisely with environmental regulations throughout the Group. We also work to ensure the effective utilization and recovery of resources. Although we own facilities such as limestone quarries, coal mines and nonferrous metal mines in Japan, we have suspended or discontinued all mining activities for nonferrous metal mines. We implement appropriate maintenance and upkeep measures at these abandoned mines in the interests of safety and the environment. In addition, we are actively committed to maintaining our extensive company-owned forests and developing environmentally friendly products and technologies.
Materiality regarding the strengthening of the management base and core	Workplace safety and hygiene [SCODE]	Preventing occupational accidents Creating mentally and physically pleasant workplaces	Ensuring employees' safety and health must always be one of the top priorities of our company. We are "committed to providing a safe and healthy environment for all," as enshrined at the highest level in our Code of Conduct, and continue to promote health and safety activities throughout the Group, which is also based on our experiences dealing with serious accidents in the past. We try to implement initiatives from every angle, including improving individual awareness and capabilities, refining manuals and processes, upgrading facilities, and creating positive working environments from both a mental and physical point of view.
	Governance [SCODE]	Reinforcing compliance	Companies need to establish mechanisms to enable them to make decisions transparently, fairly and quickly, and to adequately audit their operations, in line with the needs of customers, local communities, suppliers, shareholders, employees and other stakeholders. In addition to continually improving our corporate governance systems so that we can make appropriate decisions as quickly as possible, we continue to strengthen our internal auditing capabilities and reinforce governance in terms of Group-wide management, including overseas. We also strive to reinforce compliance, as the cornerstone of corporate management, and implement risk management activities across every aspect of our business, as well as putting in place business continuity plans (BCP) in case of an emergency and constantly strengthening our risk management systems in areas such as disaster prevention and security.
	Development of diverse talents	Human resource development Diversity (empowerment of women)	To maintain sustainable growth, companies need to enable a diverse human resources to make the most of their abilities. We are committed to developing and using human resources, both in Japan and overseas, and are actively focused on initiatives such as promoting the empowerment of women, ensuring an adequate work-life balance, and improving benefits and welfare. We also engage in ongoing initiatives aimed at ensuring basic human rights and creating friendly, safe and pleasant working environments for all. Initiatives such as these have the added bonus of creating a shared awareness based on partnership between labor and management.
	Responsibility in value chain [SCODE]	Respect for human rights in procurement Product quality	Companies are required to monitor and take into account the social and environmental impact of their business activities throughout the value chain. We keep a close eye on conditions at the companies that supply us with raw materials and products, and do our best to ensure that no human rights violations are committed at any point in our global supply chain, based on our CSR Investment Standards and CSR Procurement Guidelines. We are also committed to ensuring that our products are safe and reliable, from the design and development stages all the way through to manufacturing and shipping.
	Stakeholder communication	Building and strengthening relationships with stakeholders Improving customer satisfaction Engaging in dialog and coexisting with local communities	To promote CSR activities, it is essential for companies to keep track of global trends, and identify the needs and expectations of their stakeholders, so that they can incorporate them into their management activities. We also need to disclose information that is of interest to their stakeholders. We endeavor to disclose information via our ESG Reports and website, engage in a range of communication activities, and also promote dialog and consultation with our stakeholders.
	Digital transformation	Business standardization Operational enhancement Creation of new added-value	Companies need to respond to dramatic changes in the business environment and utilize data and digital technologies to reform products, services and business models based on the needs of customers and society. It is also essential to drive reforms of business operations themselves along with organizations, processes and corporate culture, and to establish a competitive advantage in doing so. Our digital transformation initiatives involve three plans of improvement: stronger business added value, enhanced operational competitiveness, and speedier management. Based on this approach, we are positioning market intelligence as the starting point of efforts to offer services that better enhance customer value, and to provide high value-added products and services.

Mitsubishi Materials Group's Business Activities and the SDGs

Universal Long-Term Goals for the International Community

In September 2015, the UN unanimously adopted the 2030 Agenda, a plan to eliminate poverty, unfairness and injustice wherever possible, protect the environment, and create a better future. One of the key features of the agenda was the Sustainable Development Goals (SDGs), which set out a vision for how the world should be by the year 2030. Following on from the Millennium Development Goals (MDGs), which the international community had been working on for 15 years since 2001, the SDGs are positioned as universal goals applicable to all countries.

Rather than relying solely on national governments, the SDGs also require companies and members of the public to take action all over the world. The SDG Compass is a guide to show companies how they should be using the SDGs, published jointly by the Global Reporting Initiative (GRI), UN Global Compact, and the World Business Council for Sustainable Development (WBCSD). It provides the following explanation.

"Unlike their predecessor, the Millennium Development Goals, the SDGs explicitly call on all businesses to apply their creativity and innovation to solve sustainable development challenges. The SDGs have been agreed by all governments, yet their success relies heavily on action and collaboration by all actors. The SDGs present an opportunity for business-led solutions and technologies to be developed and implemented to address the world's biggest sustainable development challenges."

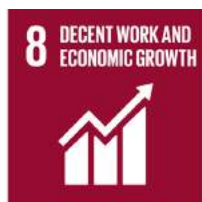
The Group's Business Activities and the SDGs

We intend to incorporate the SDGs into our strategies from the point of view of both comprehensive efforts to increase business competitiveness, and the creation of new products and businesses. We will also be actively working with a wide range of outside partners as we strive to achieve a balance between social value and economic value.

Of the 17 goals set out under the SDGs, numbers 7 (energy), 8 (growth and employment), 9 (innovation), 11 (cities), 12 (production and consumption) and 13 (climate change) in particular tie in with areas in which we are implementing priority initiatives.

The adoption of the SDGs by the UN has reaffirmed that we are going in the right direction with our business activities as a group, and provided us with a springboard from which to assess critical long-term risks and opportunities, in terms of issues that we need to address and the path we need to take in the future.

The Mitsubishi Materials Group is a diversified material manufacturer with the corporate philosophy "for People, Society and the Earth." We are also committed to achieving our vision – "We will become the leading business group committed to creating a sustainable world through materials innovation, with use of our unique and distinctive technologies, for People, Society and the Earth."



1. Donations to Four Organizations That are Addressing Social Issues



— Taking the Group's 150th Anniversary as an Opportunity to Build Ongoing Relationships —

(Goal 1) (Goal 4) (Goal 10)
(Announced on June 9, 2021)

We have decided to donate to four organizations that are addressing social issues and to provide them with continuous support.

We took the Group's 150th anniversary, which we celebrated in May 2021, as an opportunity to make the donations, with the aim of supporting organizations addressing social issues proactively, towards achieving our corporate philosophy, "For People, Society and the Earth." We selected recipients of the donations from among organizations engaged in activities consistent with our corporate philosophy to solve social issues, with a particular focus on those that support children, students, or refugees, while also considering their relationships with us, among other factors. By continuing to support organizations addressing social issues, we will strive to solve various social issues and contribute to building a sustainable society.

• Organizations Supporting Children or Students

[International Volunteer University Student Association, a specified non-profit organization \(Japanese\)](#)

Under the vision of "a society to live together," this organization plans and implements volunteer activities for solving social issues, with the leading role played by approximately 2,500 students from 80 universities across Japan as its members.

[Katariba, an approved specified non-profit organization](#)

This organization engages in activities to deliver various educational opportunities to children with the aim of creating a society where "No matter what environment they grew up in, they should be able to develop their motivation and creativity to make their own future."

• Organizations Supporting Refugees

[Japan Association for Refugees, a specified non-profit organization](#)

This organization supports refugees who have fled to Japan from conflicts, human rights abuses, or other forms of persecution, so that they can live in a new land with a sense of security, aiming to build an inclusive society.

[WELgee, a specified non-profit organization](#)

This organization co-creates shared value for Japanese society and those refugees who have fled to Japan, aiming for a society where refugees and Japanese can build a future together, regardless of their circumstances.

▶ Press release link

[Continuing Donations to Organizations Addressing Social Issues](#)

2. "MEX," a New Platform for the E-Scrap Business, Starts Operation



— Applying DX to be a Leading Company Offering High Value-Added Products and Services —

(Goal12)

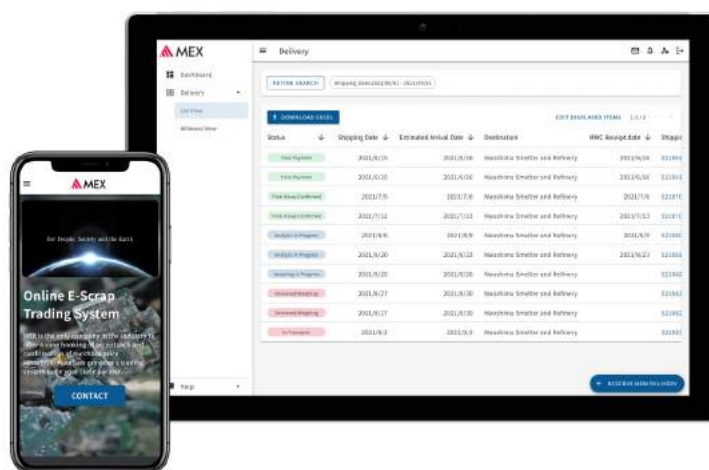
(Announced on October 26, 2021)

We have developed "MEX" (Mitsubishi Materials E-Scrap EXchange), a new platform for the E-Scrap business, and have started our operation on December 20th, 2021. This is the first achievement of the Business DX in MMDX (Mitsubishi Materials Digital Business Transformation), the digitization strategy we pursue.

By taking advantage of the Mitsubishi Process for continuous copper smelting*, a unique copper smelting technology that has achieved the industry's top environmental impact reduction performance, as our strength, we have long accepted and processed E-Scrap (such as discarded circuit boards of various electronic devices containing high concentrations of gold, silver, copper, palladium, and other valuable metals) and currently boast the world's number one E-Scrap acceptance and processing capacity of approximately 160,000 tons annually. The E-Scrap market is expected to continue to grow, and we plan to further increase the E-Scrap acceptance and processing capacity to approximately 200,000 tons annually by the end of fiscal 2031.

Against this backdrop, we have started operation of "MEX," a new platform for E-Scrap trading, starting on December 20th, 2021, to further improve our customer service. "MEX," which was developed as part of the MMDX initiative, is equipped with many features making use of the latest digital technology. First, customers are provided with around-the-clock access to all information required for E-Scrap trading. It has an inquiry feature that accepts questions anytime and allows interactive communication by dealing with frequently asked questions using e-mail or a chatbot under development capable of automatic responses. Our platform also has enhanced security by such means as adoption of two-step authentication. These various improvements will facilitate use of this platform by overseas customers and other customers who were not readily able to use our platform. In addition, we plan to make further functional additions through future updates.

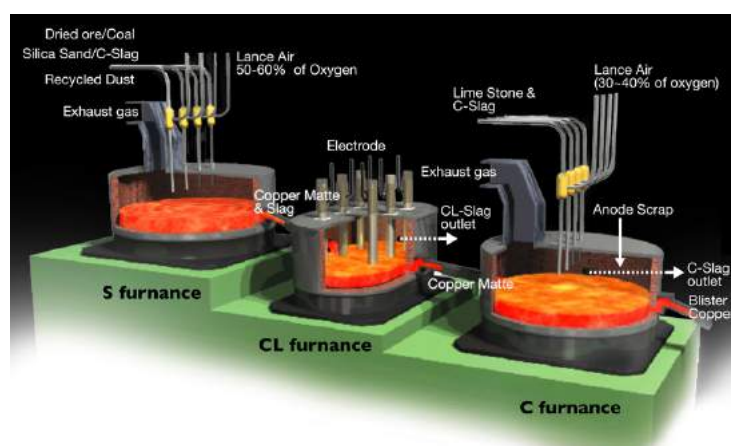
We aim to be an accessible partner for all customers in Japan and overseas by offering our long-standing experience and high technological capabilities through "MEX."



The image of "MEX"

* The Mitsubishi Process for continuous copper smelting

A copper smelting process in which, S (smelting) furnace, CL (slag cleaning) furnace, C (converting) furnace, and a refining furnace are connected by enclosed launders to make a series of batch operations. This results in a facility that is compact, conserves energy, and operates at a low cost. A non-polluting system has also been established in which sulfurous acid gas leaks are prevented and efficiently processed in an exhaust gas treatment plant.



The Mitsubishi Process for continuous copper smelting

► [Press release link](#)

"MEX," a New Platform for the E-Scrap Business, Starts Operation

3. Notice Concerning Revision of Greenhouse Gas Emissions Reduction Target

- Aiming to Achieve Carbon Neutrality Five Years Earlier than the Original Goal -

(Goal13)

(Announced on November 26, 2021)



We have revised the greenhouse gas (GHG) emissions reduction target for the group, including direct emissions by the business operator (Scope 1) and indirect emissions resulting from the use of supplied energy (Scope 2), in pursuit of reducing GHG emissions by 47% by FY2031 (compared to FY2014) and to virtually zero, or carbon neutrality, by FY2046.

In March 2021, we set a mid to long-term target for our group to reduce GHG emissions by 17% by FY2031 (compared to FY2014) and to become carbon neutral by FY2051. A month later, the Japanese government announced a GHG emissions reduction target of 46% by FY2031 compared to FY2014, and actions on climate change are becoming increasingly important. Under the circumstances, we revised the reduction targets for our group and decided to take on new initiatives as follows to reinforce our actions on climate change.

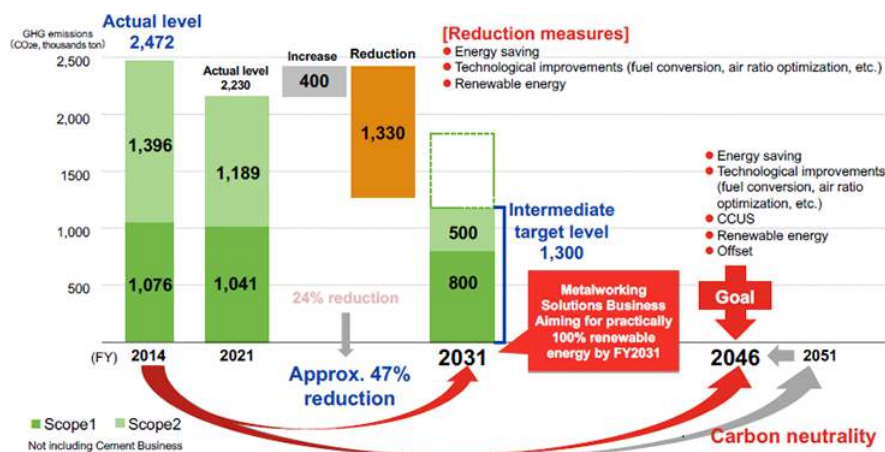
- We aim to achieve carbon neutrality by FY2046 (five years earlier than FY2051, which we announced in March 2021).
- The intermediate target announced in March 2021, which is the GHG emissions reduction target (Scopes 1 and 2) by FY2031, was also increased to 47% compared to FY2014. Specifically for Metalworking Solutions business, ahead of other businesses, we set a target to switch all power used in manufacturing to practically CO2 emission-free electricity by FY2031, and to promote manufacturing activities to contribute to our customers as their "Global Craftsman Studio".
- As for Scope 3 that includes business partners' GHG emissions, which is the emissions of the entire supply chain excluding Scopes 1 and 2, we started to collect actual data from FY2021. While working to improve calculation accuracy by sharing information with our business partners, we will project long-term reduction in consideration of their GHG reduction plans, etc.

- We will begin to evaluate and utilize the carbon footprint of products (CFP)* and work to estimate GHG emissions of the products using recycled materials such as tungsten and copper scrap.

*Please note that the targets published above do not include the cement business, for which business integration with UBE Corporation was conducted in April 2022. Specific effective GHG reduction measures for the same business will be established by the new company after the business integration.

■ Setting of New Greenhouse Gas Emission Reduction Targets

- ※ Regarding greenhouse gas emission reduction targets due to the organizational change on April 1, 2022, we have announced new targets that exclude the aluminum business as well as the cement business.



- * Carbon footprint of products (CFP) are the evaluation items related to GHG emissions extracted from LCA (Life Cycle Assessment), a method to quantitatively evaluate input resources, environmental load, and their environmental impact within a product life cycle.

▶ Press release link

[Notice Concerning Revision of Greenhouse Gas Emissions Reduction Target](#)

▶ Related link

[Setting of new greenhouse gas emission reduction targets](#)

4. Mitsubishi Materials Group Sustainability Policy Established - Actively and Positively Promote Initiatives for Realizing a Sustainable Society -



(Goal12)

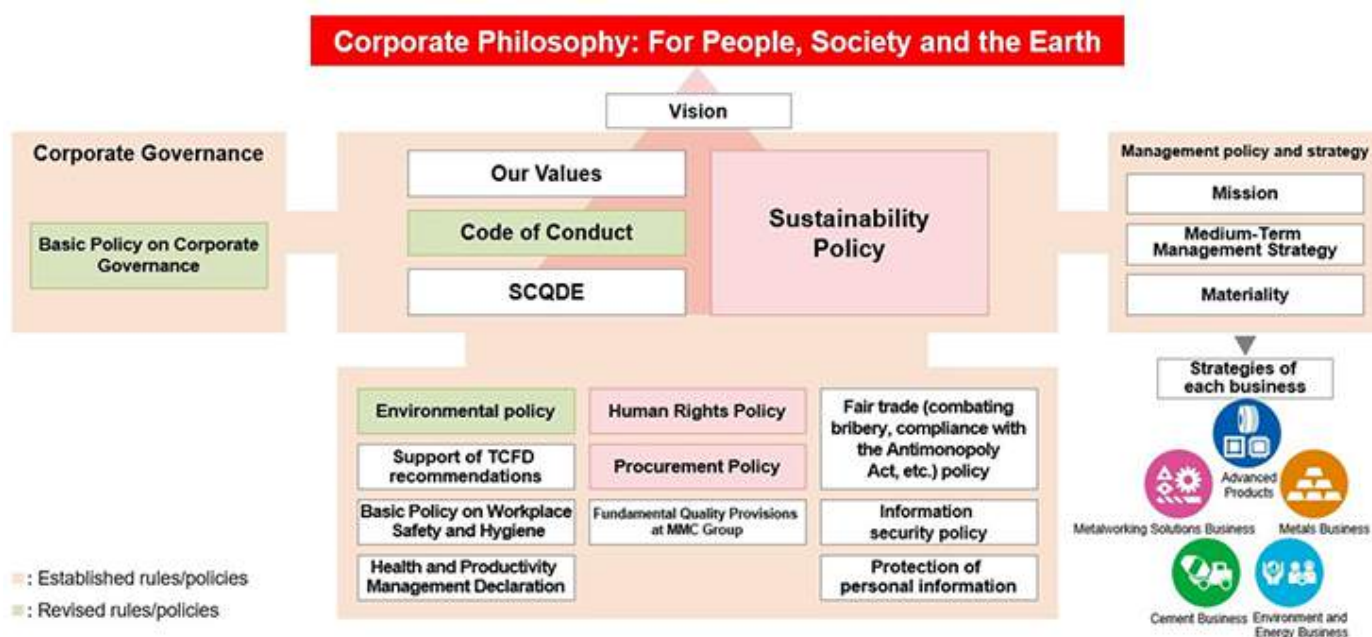
(Announced on December 1, 2021)

As of December 1, 2021, we have established a fundamental policy regarding sustainability.

To clarify our attitude for actively and positively promoting sustainability as a Group based on our Corporate Philosophy and Vision, we have newly established a Sustainability Policy. This policy is positioned as a superordinate policy governing rules and policies relating to sustainability.

Based on this policy, we have also established a Human Rights Policy and a Procurement Policy. We consider respect for human rights to be the foundation of the business activities of the Mitsubishi Materials Group, and we will work to expand and deepen our initiatives by respecting the principles enshrined in international human rights instruments. We will also strive for sound procurements.

Furthermore, we have established provisions in the Sustainability Policy and Human Rights Policy regarding the promotion of diversity and inclusion. We embrace diversity and acknowledge its importance in creating new value by promoting it as a source of sustainable growth within the Group. To that end, we will renew existing targets or set new ones concerning the ratio of women, non-Japanese, and mid-career employees etc. in managerial positions and strengthen our initiatives through various measures.



► [Press release link](#)
Mitsubishi Materials Group Sustainability Policy Established

5. Participation in NEDO's Green Innovation Fund Project/Development of Next-Generation Solar Cells - Towards Developing Peripheral Materials to Reduce Costs and Improve Performance of Perovskite Solar Cells -



(Goal7)

(Announced on January 20, 2022)

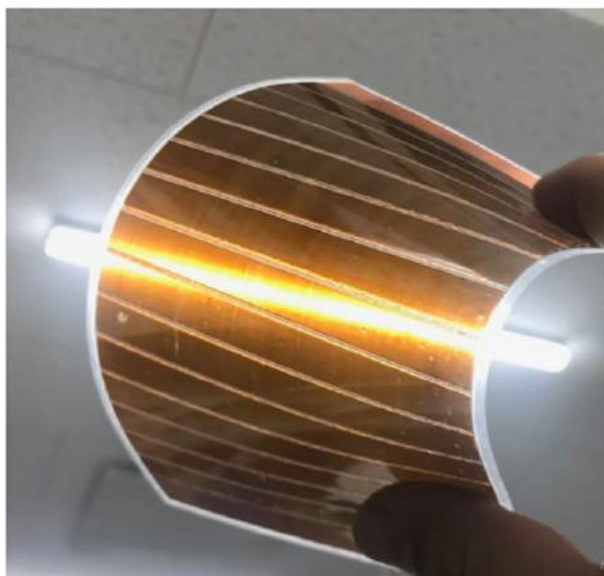
We are pleased to announce our participation in the Green Innovation Fund Project/Development of Next-Generation Solar Cells (the Project) by the New Energy and Industrial Technology Development Organization (NEDO) as a company commissioned by EneCoat Technologies Co., Ltd. (EneCoat Technologies), which it finances through the MMC Innovation Investment Limited Partnership (our CVC).

A perovskite solar cell is a type of solar cell formed by applying a layer of perovskite crystal* on a substrate, and it is expected to become widely used as the next-generation solar cell because it is lighter than the crystalline silicon solar cells commonly used at present, enables the thickness to be reduced to about 1/100, and can be folded or bent for installation in various places. EneCoat Technologies, a startup originating from Kyoto University, is working on its development. EneCoat Technologies is also developing a low-lead solar cell by replacing the lead contained in perovskite solar cells with an alternative material.

We financed EneCoat Technologies in May 2020 through our CVC and we are examining collaboration with them regarding technologies that will contribute to improving the durability of perovskite solar cells and development of the peripheral materials required for eliminating lead.

In the course of these developments, EneCoat Technologies has recently been selected for the Project based on the theme "development of technology for the practical application of perovskite solar cells featuring a high degree of installation

freedom." Towards adopting solar power generation in places where installation of the existing types of solar cells has not been possible, such as for example on the roof of a small factory or a wall of a building with low load capacity, the Project aims to achieve the practical application of perovskite solar cells, which not only realize weight reduction and provide sufficient flexibility for installation on curved surfaces of buildings but also compare favorably with existing types of solar cells in terms of performance including conversion efficiency and durability. We participate in the Project as a company commissioned by EneCoat Technologies and work on the development of peripheral materials to reduce costs and improve performance for the purpose of facilitating the wide use of perovskite solar cells.



The image of a perovskite solar cell
(Provided by EneCoat Technologies)

► [Press release link](#)

[Participation in NEDO's Green Innovation Fund Project/Development of Next-Generation Solar Cells](#)

6. Signing of the UN Global Compact

(Goal5)(Goal8)(Goal13)(Goal16)
(Announced on March 24, 2022)



We signed the United Nations Global Compact (hereafter "UNGC") and were registered as a participating company as of March 22, 2022. In addition, we have joined the Global Compact Network Japan, the UNGC's local network in Japan.



The UNGC is a voluntary initiative in which companies and organizations act as good members of society and participate in the creation of a global framework for realizing sustainable growth by demonstrating responsible and creative leadership. The companies and organizations that sign the UNGC are required to observe and practice the Ten Principles in the four areas of human rights, labor, environment, and anti-corruption, which are set forth by the UNGC.

The Group's vision is to "become the leading business group committed to creating a sustainable world through materials innovation, with use of our unique and distinctive technologies" based on its corporate philosophy of "For People, Society

and the Earth" and we intend to more actively and positively promote sustainability as exemplified by the establishment of a new [Sustainability Policy](#) as of December 1, 2021.

We will support the Ten Principles of the UNGC and practice them in our business activities, thereby contributing to the realization of a sustainable society.

- ▶ [Global Compact Network Japan Website](#) 
- ▶ [United Nations Global Compact Website](#) 
- ▶ [Press release link](#)
[Signing of the UN Global Compact](#)

The Ten Principles of the UN Global Compact

Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and
- Principle 2: make sure that they are not complicit in human rights abuses.

Labour

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- Principle 4: the elimination of all forms of forced and compulsory labour;
- Principle 5: the effective abolition of child labour; and
- Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- Principle 8: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

International Issues Surrounding Resources and the Group's Role

International Issues Surrounding Resources and the Group's Role

Worldwide Demand and Restrictions on Resources

Of all the base metals, copper in particular is used for a wide range of purposes. In spite of risks such as short-term metal prices and exchange rate fluctuations, demand is expected to continue growing over the long term, not least due to infrastructure development in emerging economies.

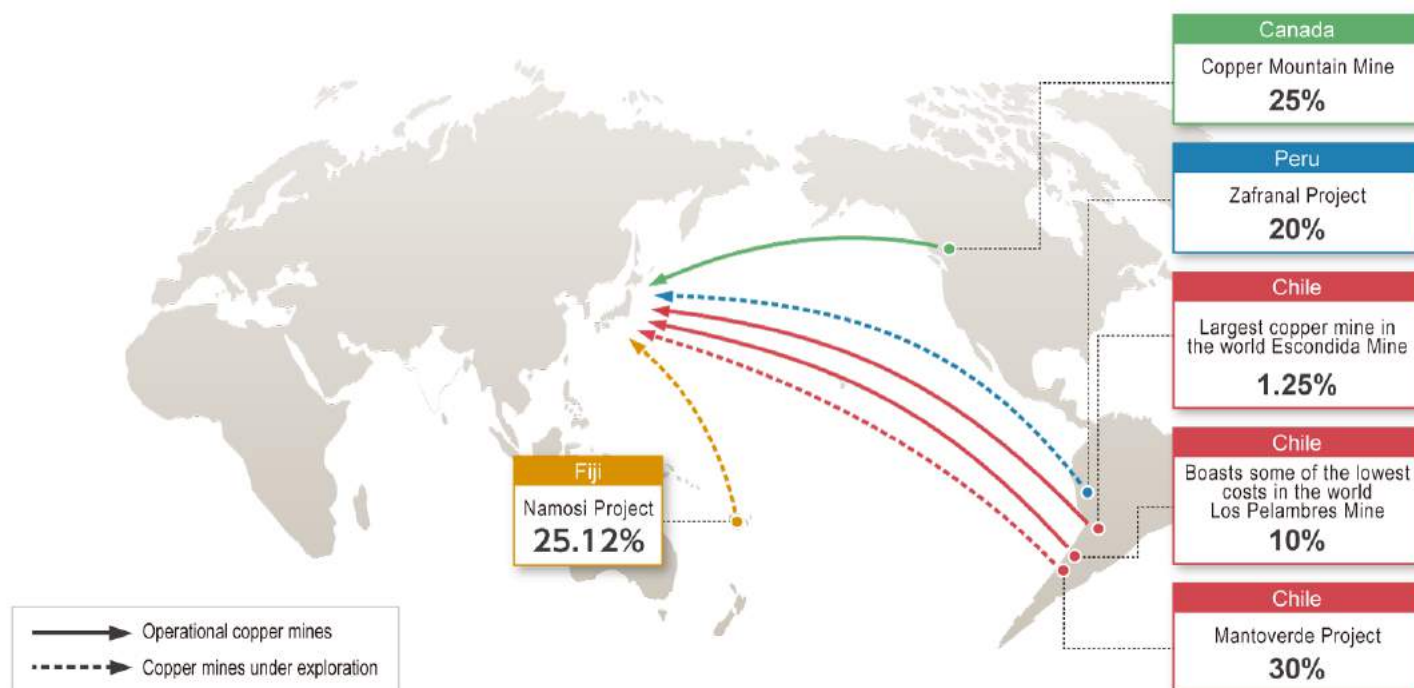
However, copper is a finite mineral resource that is produced in different areas worldwide. While competition for the resource is intensifying, excellent mines are becoming rare. Recently, securing clean copper concentrate is more important than ever because the locations of newly developed mines are higher or deeper than in the past and their quality of copper is lower, tending to contain more impurities, in addition to resource-holding countries' protection of their resources and anti-development campaigns reflecting growing environmental awareness.

Sustainable Operation of Mines

Since the closure of our Akenobe Mine in 1987, we have been reliant on imports from overseas mines for copper concentrates*, the main raw material used in our products. To ensure stable procurement, we have therefore continued to invest in overseas mines. Depending on our level of investment, we also assign personnel to mines in other countries, and provide support to ensure that mines are developed sustainably in the best interests of the environment and the local community.

*Copper concentrate: The state mined in the mine is "Ore", but when it is beneficiated and the copper grade is improved, it becomes "Concentrate". "Copper Concentrate" is imported into Japan

Overseas Copper Mines and Development Projects



* Figures indicate ownership interest in mines and development projects

The Growing Importance of Developing Urban Mines

Mechanisms and technologies to enable us to efficiently recycle resources are becoming increasingly important, in terms of securing stable supplies of metal resources and enabling the sustainable development of society as a whole.

In particular, waste electrical and electronic equipment (WEEE), such as televisions, computers and cellular phones contain large quantities of valuable metals such as precious metals and rare metals. These “urban mines”^{*} are being thrust into the spotlight because they enable highly efficient extraction (recycling) of resources with minimal impact on the environment and local communities compared to natural mines.

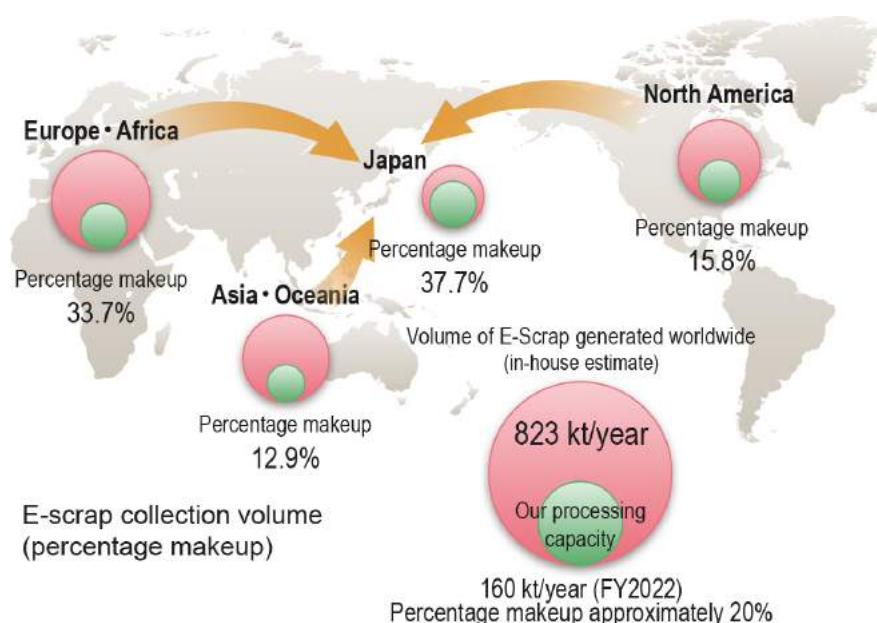
In addition to the smelting and refining technologies that our group has built up over more than a century, for copper and other nonferrous metals, we have a wealth of technologies and expertise in recycling, and continue to actively work on recycling of E-Scrap (mainly printed circuit boards and other recyclable materials picked out from dismantled and crushed WEEE).

Alongside our high-level operational expertise and the “Mitsubishi Process,” a unique continuous copper smelting and converting process developed exclusively by Mitsubishi Materials, we have established a global collection network, and are constantly working to improve and reinforce acceptance and processing capacity, as well as services such as our online booking system.

In February 2018 we completed the construction of a collection plant in the Netherlands, handling activities such as intake, inspection and sampling of E-Scrap. This has increased the group’s annual E-Scrap intake and processing capacity to approximately 160,000 tons.

^{*}So-called “urban mines” consist of resources contained in existing electronic devices and other industrial products, the idea being that those resources can be extracted in much the same way as an actual mine.

■ Rolling out E-scrap Recycling Operations Globally



Acting as a Responsible Partner in Recycling International Resources

In recent years, we have been disposing of large quantities of electronic devices that have outlived their useful lifespan as WEEE. While these devices still have potential value as urban mines, there are concerns that they could also cause environmental contamination from lead, mercury or other harmful substances if they are processed inappropriately. The European Union (EU) is taking these concerns very seriously, and in 2003 introduced a directive to limit volumes, and promote the reuse and recycling of WEEE.

Within the EU, a certification scheme is being put in place for companies throughout the recycling chain, to encourage them to handle WEEE in an appropriate manner. In fall 2016, we became the first company in Japan to obtain certification under the Standard on End-Processing of WEEE Fractions (E-Scrap) at the Naoshima Smelter & Refinery and Onahama Smelter & Refinery (Onahama Smelting & Refining Co. Ltd.).

The Group will continue to build on the technologies and expertise developed so far, so that we can contribute to the sustainable development of society as a whole through international resource recycling, as a leading partner in responsible E-Scrap recycling.

Securing Stable Products Supplies

Securing Stable Products Supplies:Copper products

We are expanding our recycling operations, which boast world-leading processing capacity, by using copper concentrate from environmentally friendly copper mines and taking advantage of the competitive edge of the Mitsubishi Process. Thus, we ensure steady supply of cleaner non-ferrous metals to society. While copper and precious metals grow more important reflecting the shift to EVs, IT, and decarbonized society, we fulfill our responsibility to supply materials with environmental considerations, thus contributing to the development of society and realization of a sustainable society.

Securing Stable Products Supplies: Cemented Carbide Products

More than 80% of the worldwide demand for tungsten, the main raw material used in cemented carbide tools, is supplied by China. Due in part to changes in the external environment with regard to resource policy, the scarcity of tungsten as a rare metal remains largely unchanged. We will remain committed to the recycling of used cemented carbide tools.

	FY2018 results	FY2019 results	FY2020 results	FY2021 results	FY2022 results	FY2023 target
Ratio of recycled tungsten as raw material	17.8%	18.1%	28.3%	41.8%	43.5%	50.0%

In Pursuit of a Recycling-oriented Business Model

In Pursuit of a Recycling-oriented Business Model

Purpose of activities	Activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onwards
Promoting the recycling of fluorine resources (Advanced Products (Electronic Materials & Components))	- The amount recycled was 1,686 tons/year, 9% below the budget - The raw material recycling rate was 15%	B	Ensure the stable operation of recycling plants and achieve the plan of the amount recycled
Promoting the recycling of tungsten (Metalworking Solutions Business)	- Recycling rate increased (by 144% from the fiscal 2018 level) - Ensure the amount of recycling (build a domestic recycling system)	A	- Recycling rate increased (by 181% from the fiscal 2018 level) - Increase the amount of recycling (start operating the overseas recycling system)
Expanding recycling operations (Metals Business)	Optimize the smelting business in response to the expansion of E-Scrap processing	A	Material flow optimization
- Aiming to be the driving force of resource-recycling systems - Providing reliable recycling systems, such as by ensuring traceability (Environment & Energy Business)	- Implementation of automatic sorting robots - Introduction of a system for managing home appliance recycling operations - Establish technologies for recovering cobalt and nickel from lithium ion batteries - Promote DX in home appliance recycling and food waste biogasification - Strengthen sales activities for the stable operation of the incineration fly ash recycling business	B	- Expand the home appliance recycling business, promote automation of home appliance recycling, and improve the added value of collected items - Demonstrate technologies for recycling lithium ion batteries and solar panels - Stable operation of the incineration fly ash recycling business and the food waste biogasification business - Promote DX (home appliances, biogas)
Steadily processing industrial waste as raw materials (Cement Business*)	- Consumption of waste plastics decreased by 9,139 tons from the previous year - Biomass and low-cost alternative thermal energy resources increased by 3,943 tons from the previous year (Data on the cement plants of the former Mitsubishi Materials Corporation)	B	

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

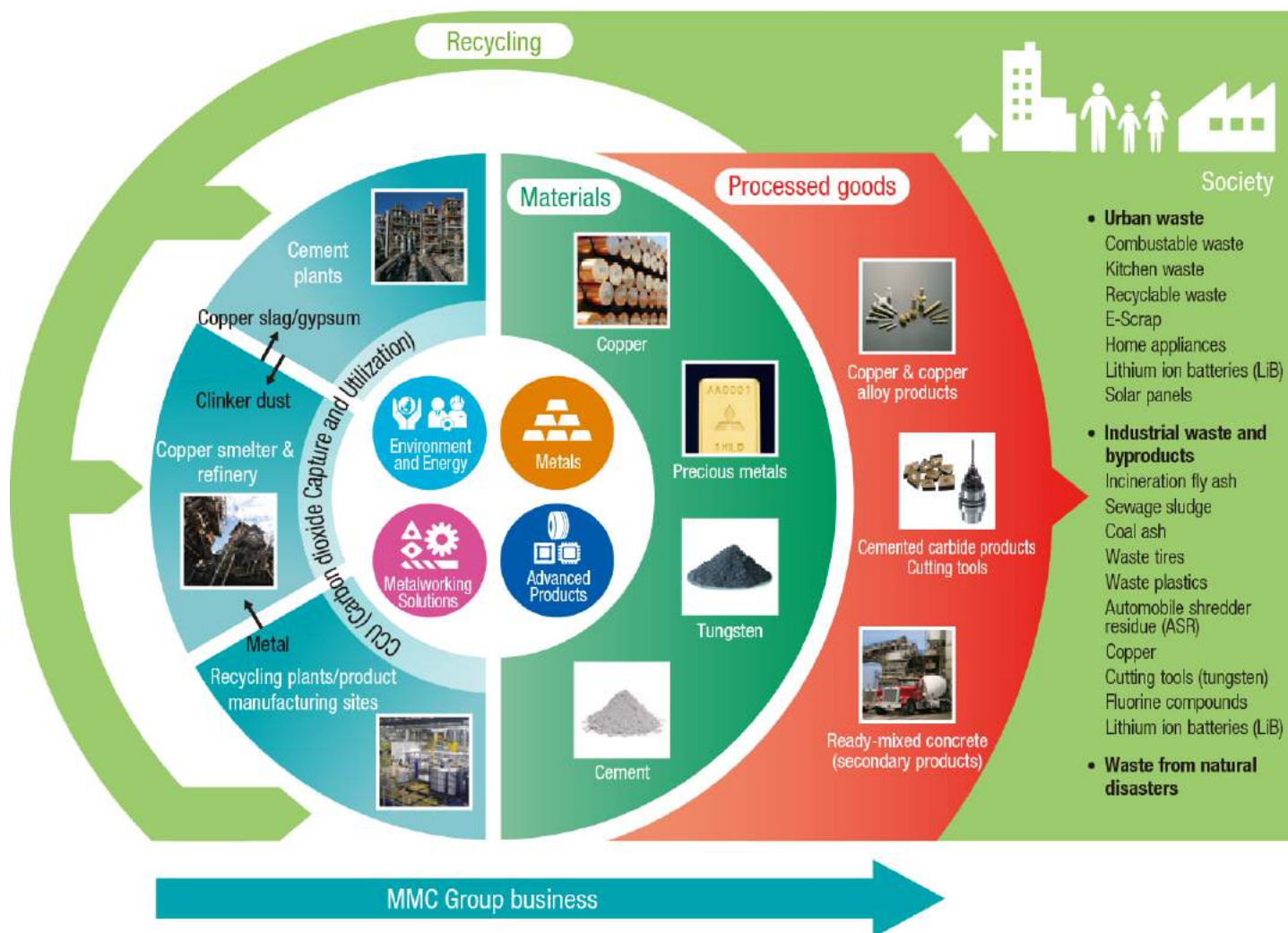
* In the process of the integration of cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Overview of our Recycling-oriented Business Model

The Mitsubishi Materials Group is a complex corporate entity encompassing a wide range of technologies and expertise, from resources upstream to materials midstream to processed products downstream. We have continued to make the most of those capabilities on a groupwide scale, in an effort to establish a Recycling-oriented business model based on recovering resources from a wide range of waste products.

We strive to create cyclical value chains in each of our businesses, so that resources and materials are processed into products and then recycled back into materials. This also helps to promote Recycling-oriented social systems (Circular Economy) .

■ Recycling-oriented Business Model of the Group



* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Recycling-oriented Value Chain

Recycling in Individual Businesses

Advanced Products (Electronic Materials & Components)

■ Recycling Fluorine Resources

We manufacture a range of fluorine compounds at the Group company Mitsubishi Materials Electronic Chemicals Co., Ltd., including materials for use in semiconductor manufacturing, flame retardant and antistatic materials, and hydrofluoric acid. Since fiscal 2007, we have been engaged in the recycling of fluorine resources in which we recover calcium fluoride waste emitted by companies using fluorine compounds and recycle it back into fluorine resources that can be used as alternative raw materials for fluorite. We will promote the recycling of fluorine resources through further technical innovation.

Metalworking Solutions

■ Recycling Tungsten

Waste containing rare metals contains such a high percentage of rare metals that it is possible to extract them more efficiently than obtaining metals from natural resources. A prime example is tungsten, the main raw material used in cemented carbide products. Making the most of the Mitsubishi Materials Group's comprehensive capabilities as a manufacturer, from raw materials through to finished products, we are currently focusing on recycling used cemented carbide products in an effort to secure stable supplies of raw materials.

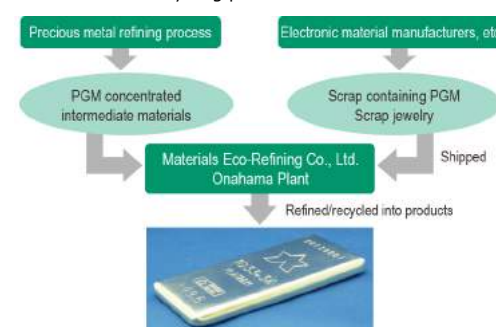
Metals

■ Recycling Rare Metals

PGM* are rare metals that are found in E-Scrap, etc. Group company Materials Eco-Refining Co., Ltd. refines PGM intermediate materials obtained from our Naoshima Smelter & Refinery, to create products such as metals and chemical compounds. Platinum and palladium in particular are key materials in the automotive, electric and electronic sectors. With that in mind, we applied to register our brand with the London Platinum and Palladium Market (LPPM), as a means of offering market assurance, and successfully obtained certification in September 2012. We are determined to keep on improving the quality of our products, and make every effort to ensure stable supplies of rare metals.

* Platinum Group Metals

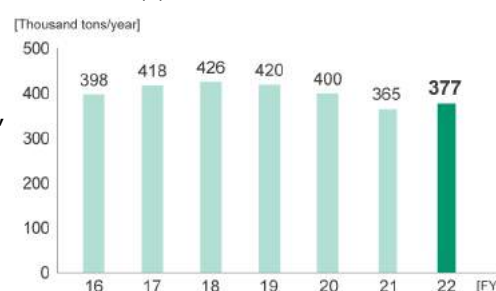
The rare metal recycling process



■ Recycling Scrap

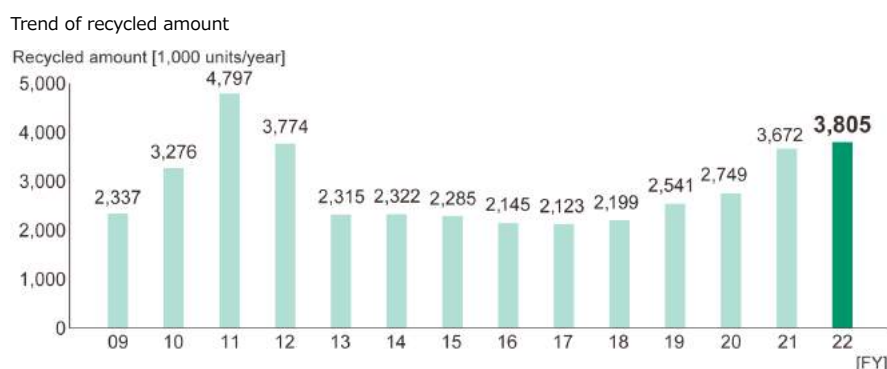
We use smelting technology for the purpose of recycling at our smelters and refineries. We take in a wide variety of scrap, including shredder dust and used batteries from sources such as used home appliances or scrap vehicles, and E-Scrap from sources such as used substrates and connectors. We then recycle scrap, by using it for raw materials or thermal energy, and recover valuable metals. We also take in clinker dust, as a byproduct from our cement plants of Mitsubishi UBE Cement Corporation, and use components such as calcium as auxiliary raw materials for smelting. After use, clinker dust turns into copper slag, which is then recycled back into raw materials at our cement plants.

Volume of scrap processed



■ Home Appliances Recycling

Home appliances are made by combinations of various materials such as glass, plastic and rubber as well as metals such as steel, aluminum, and copper. Home appliances are first of all disassembled manually, then crushed and sorted at our home appliances recycling plants. We have adopted several advanced sorting processes for components and materials, and are always trying to create more value from recovered materials and to improve recycling efficiency. We recover copper and other precious metals from recovered copper-based materials and printed circuit boards in our copper smelting process. Thus, we maximize the effect of synergies within our group. In fiscal 2022, we recycled 2,885 thousand units of home appliances at six plants of our five affiliated companies (6 companies, 7 plants, 3,805 thousand units) *. Recycling of this volume could reduce landfill disposal equivalent to 123 thousand tons.

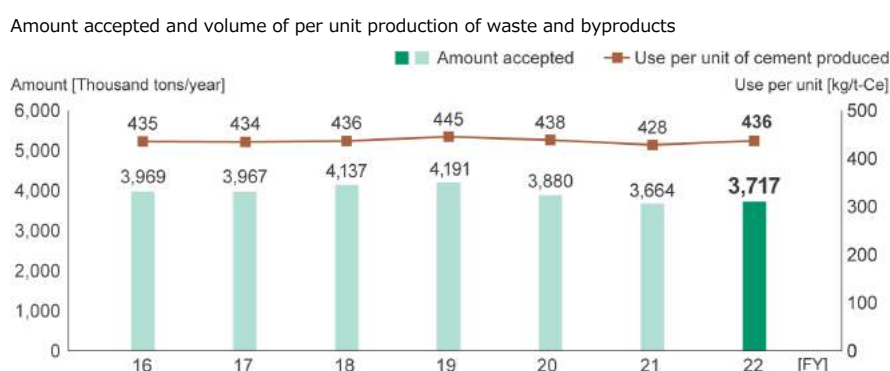


* There are 6 companies and 7 factories for home appliance recycling, but 5 companies and 6 factories are subject to LCA evaluation.

Affiliated business (Cement)

■ Recycling Industrial Waste and Byproducts

Using a burning process that reaches temperatures of 1,450°C, the Group's cement plants detoxify and make effective use of industrial waste and other difficult-to-treat materials without generating any secondary waste. As well as using substances such as coal ash, construction sludge, sludge, incineration fly ash, copper slag byproducts from copper smelters, and gypsum as the raw materials of cement, we also turn materials such as waste plastics, waste tires and wood waste back into cement, by using them as a source of thermal energy.



(Data on the cement plants of the former Mitsubishi Materials Corporation)

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Smelting and Cement Recycling System

Resource Recycling with No Need for Landfill Sites

Operating our Smelting and Cement Recycling System

As a result of an increasing volume and variety of waste products, Japan is facing issues such as a growing percentage of difficult-to-treat materials, and pressure on landfill sites. Recovering and recycling waste without producing secondary waste has therefore become a top priority.

As one of very few Groups in the world that has both nonferrous smelting and cement plants, we run a combined smelting and cement recycling system as part of our environmental recycling operations here at the Mitsubishi Materials Group, in an effort to help establish a recycling-oriented society. Our smelting plants use byproducts generated by our cement plants as raw materials, and vice versa, enabling us to recycle waste without any need for landfill sites. One of the byproducts we generate at our smelting plants is copper slag, which is increasingly being used as an aggregate for heavyweight and other concretes, as part of construction work to better prepare Japan for tsunamis and other natural disasters.

Making the most of this system, which enables us to process E-Scrap, used home appliances, scrap vehicles, batteries and various other types of waste, we have also started to recycle difficult-to-treat waste such as rubble from disaster areas, sewage sludge and waste plasterboard. We use unique technologies at our cement plants in particular to recycle sewage sludge and waste plasterboard into raw materials for cement.

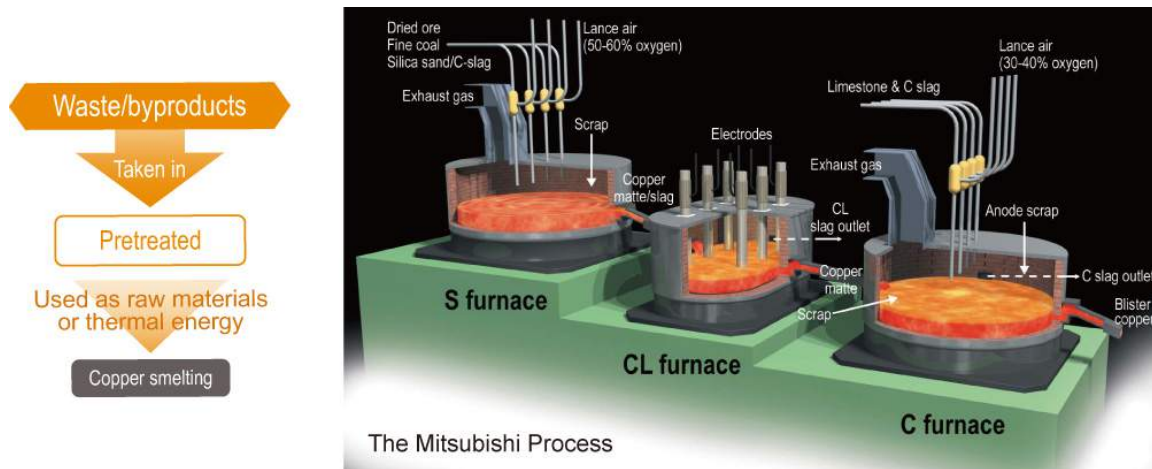


* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Smelter & Refinery: Recycling Resources from Urban Mines

■ The Mitsubishi Process

Our unique Mitsubishi Continuous Copper Smelting and Converting Process (Mitsubishi Process) is a highly efficient copper manufacturing process that has exceptionally low environmental impact. We put copper concentrate and recycled raw materials through a series of three furnaces connected by pipes to continuously produce blister copper. The required facilities are compact and also help to save energy and cut costs.

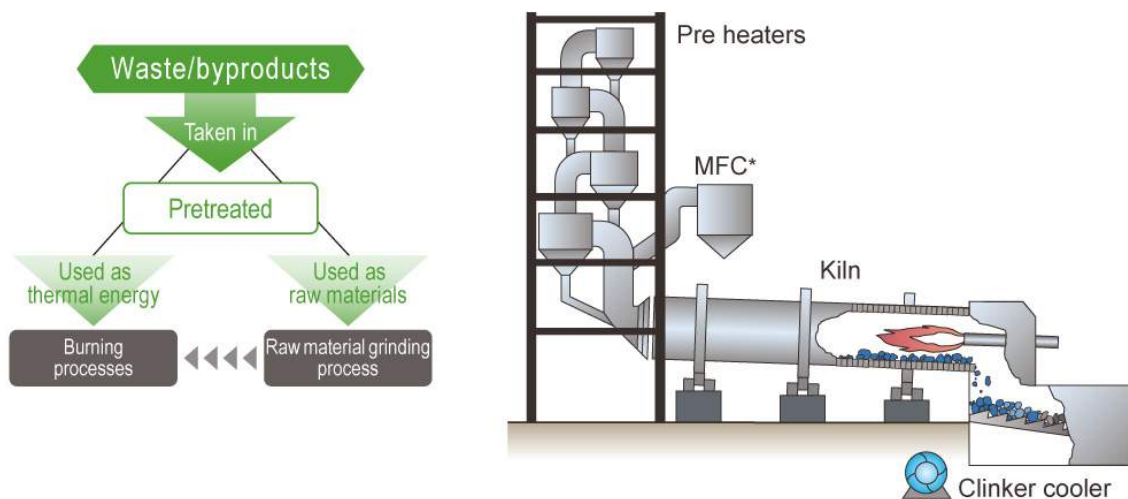


Cement Plants:

Taking in, Detoxifying and Stabilizing Difficult-to-treat Waste from Other Industries

■ High Temperature Burning Process

Raw materials (including wastes and byproducts) are prepared during the raw material grinding process and then sintered at high temperatures to produce a hydraulic mineral during the burning process. Once the raw mixture has reached the maximum temperature (1,450°C) and a series of chemical reactions are completed, it is quickly cooled into an intermediate product called clinker.



■ Key Features of Waste Treatment at Our Cement Plants

- Capacity to treat large volumes of waste
- Detoxification of waste products
- No secondary waste (extending life span of landfill sites)

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Home Appliance Recycling Plants :
Used Home Appliances are Disassembled and Recovered Items are Supplied as Materials

■ Reduction in Environmental Impact due to Recycling Home Appliances (LCA analysis for FY2022)

If recycling home appliances is conducted, so that resources are recovered from used appliances and reused as new materials.

	Effect	Total
Compared to sending used appliances to landfill and manufacturing new materials from natural resources	Reduction in CO ₂ emissions	217,000 tons
	Reduction in consumption of natural mineral resources	144,000 tons
	Reduction in energy consumption	92,000 tons
	Reduction in waste sent to landfill	123,000 tons



Recycling process of refrigerators

The above table does not take into account the impact of recovering fluorocarbons (refrigerant fluorocarbon in air conditioners, refrigerators, and washing machines, and insulation fluorocarbon in refrigerators). Expressed in terms of CO₂ emissions, recovering approximately 554 tons of fluorocarbons would equate to a reduction of approximately 1,380,000 tons.

* 5 companies and 6 plants are subject to LCA evaluation.

Climate Change Strategy

Basic Approach

Currently, there can be no doubt regarding global warming caused by anthropogenic greenhouse gas emissions. The amount and scale of damage caused by storms, floods, droughts and other abnormal weather is increasing, as is the sense of crisis due to the risk these present to the global economy.

At the Mitsubishi Materials Group, we have set up the Sustainable Development Department within the Management Strategy Division of the Strategic Headquarters, to plan and promote strategic initiatives for risks and opportunities related to global warming in coordination with group-wide management strategies. Furthermore, our "Climate Change and Energy Panel", a specialized subcommittee of the "Sustainable Management Office", promotes the examination of scenario analysis based on TCFD^{*1} recommendations, as well as discussion and sharing of information on measures to achieve GHG^{*2} reduction targets and other climate change measures. To monitor the panel, its activities are reported to the Strategic Management Committee and Board of Directors' Meeting quarterly after being reported and deliberated by the Sustainable Management Office.

Through appropriate evaluation and management of our risk and opportunity related to climate change, we are looking into reflecting these in our medium- to long-term management strategies and risk management. We will continue to improve our response to climate change and actively disclose information based on TCFD recommendations.

*1 TCFD: Task Force on Climate-related Financial Disclosures

The TCFD was established in 2016 by the Financial Stability Board, an international organization that seeks to stabilize financial systems.

*2 GHG: Greenhouse gas

Information Disclosure

In March 2020, the Group decided to endorse the recommendations of the TCFD and participate in the TCFD Consortium, which consists of companies, financial institutions and other organizations which support those recommendations. In March 2021, we established and analyzed scenarios based on the recommendations in order to ascertain the impact of climate change on the Group's business operations (risks and opportunities) and consider measures for reducing risks and securing opportunities. At present, we are updating the scenario analysis and considering indicators, targets and strategies, attempting to ensure consistency with the next Medium-term Management Strategy.

The Group answers questionnaires for the CDP (a non-profit organization) on a yearly basis. In fiscal 2022, the Group scored "B" for CDP Climate Change and "A-" for CDP Water (on an 8-step scoring scale from A to D-) in its assessment.

For details, please see the following link.

[PDF CDP Score Report Climate Change 2021](#)

[PDF CDP Score Report Water Security 2021](#)

Governance

In April 2019, we established the Sustainable Development Department within the Corporate Strategy Department (now known as the Management Strategy Division) to plan and promote strategic initiatives for risks and opportunities related to global warming in coordination with company-wide management strategies. Furthermore, the Climate Change and Energy Panel (a specialized subcommittee of the Sustainable Management Office that was established in April 2020) promotes the examination of scenario analysis based on TCFD recommendations, as well as discussion and sharing of information on measures to achieve GHG reduction targets and other climate change measures. To monitor the panel, its activities are reported to the Strategic Management Committee and Board of Directors' Meeting quarterly after being reported and deliberated by the Sustainable Management Office. " (Matters for deliberation by and reporting to the Strategic Management Committee and Board of Directors)

- Greenhouse gas emission reduction target setting and reduction plans
- Climate change-related information for disclosure
- Assessment of climate change-related risks and opportunities for each business

Target

We announced the Mitsubishi Materials Group's GHG emissions reduction targets (Scope 1 and Scope 2) in March 2021. In November 2021, we reviewed the content of these targets and set the medium- to long-term targets of reducing the emissions by 47% compared to FY 2014 by FY2031 (by 42% compared to the FY2021 level) ^(*1) and achieving net zero GHG emissions, or carbon neutrality, by FY2046, five years ahead of the previous plan.

Specifically for Metalworking Solutions business, ahead of other businesses, we set a target to switch all power used in manufacturing to practically CO₂ emission-free electricity by FY2031, and to promote manufacturing activities to contribute to our customers as their "Global Craftsman Studio".

As for Scope 3 that includes business partners' GHG emissions, which is the emissions of the entire supply chain excluding Scopes 1 and 2, we started to collect actual data from FY2021. While working to improve calculation accuracy by sharing information with our business partners, we will project long-term reduction in consideration of their GHG reduction plans, etc. For this purpose, concerning the Category 1 and 3 emissions, which together constitute approx. 70% of Scope 3 emissions, we have set a target of reducing them by 13% by 2030 (compared to the FY2021 level) ^(*1), aiming for decarbonization of the supply chain related to our products.

We will begin to evaluate and utilize the carbon footprint of products (CFP)* and work to estimate GHG emissions of the products using recycled materials such as tungsten and copper scrap.

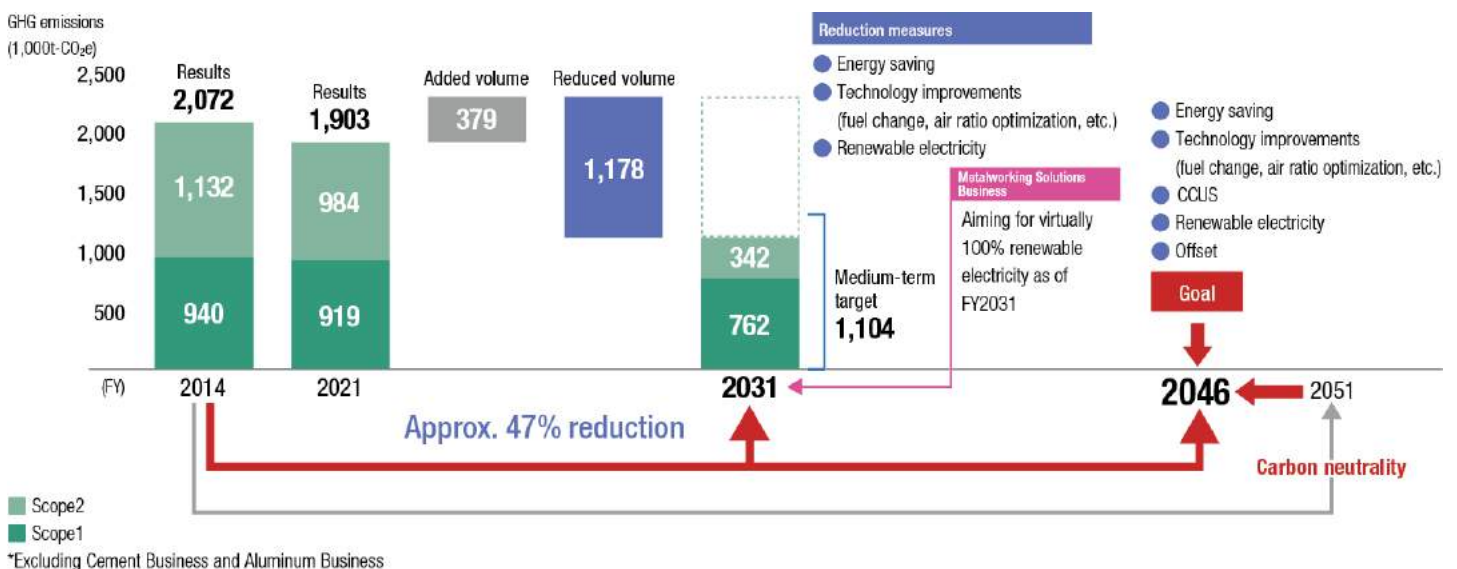
In addition, as one of our reduction measures, we have set a target of switching about 60% of the electricity used in our group's business to renewable energy by fiscal 2031.

(Regarding these targets, results and targets in the Cement Business were excluded because it is operated by Mitsubishi UBE Cement Corporation, which is an equity method affiliate. Results and targets in the Aluminum Business were excluded.)

In terms of plans for executing initiatives aimed at achieving our targets for the reduction of greenhouse gas emissions, in addition to energy-saving and utilization of existing technologies, we are also advancing considerations and discussions—primarily through our Climate Change and Energy Panel—including those regarding R&D and capital expenditure for driving new innovation.

*1 We have applied for the SBT Certification with the FY2021 standards.

■ Setting of New Greenhouse Gas Emission Reduction Targets



Risks and Opportunities Related to Climate Change

As for the financial impact on the Group, additional costs will be incurred based on GHG emissions, such as when policies and regulations on climate change are strengthened and carbon pricing is introduced or enhanced. Furthermore, if we fail to keep pace with the global shift to decarbonized societies, this could invite a decline in our corporate value due to lost sales opportunities, etc. The world is rapidly moving to achieve carbon neutrality under the Paris Agreement. We also intend to rapidly respond to these changes in the social environment and continue to provide new value. Specifically, we have defined GHG reduction targets. We will steadily reduce the amount of GHG emitted from Group business activities by introducing energy-saving equipment and increasing our use of renewable energy. Furthermore, in order to improve the market competitiveness of Group products, we will actively enhance our production processes, develop environmentally friendly products, and develop technologies such as CCUS* for reducing our environmental impact.

* CCUS: Carbon dioxide Capture, Utilization and Storage

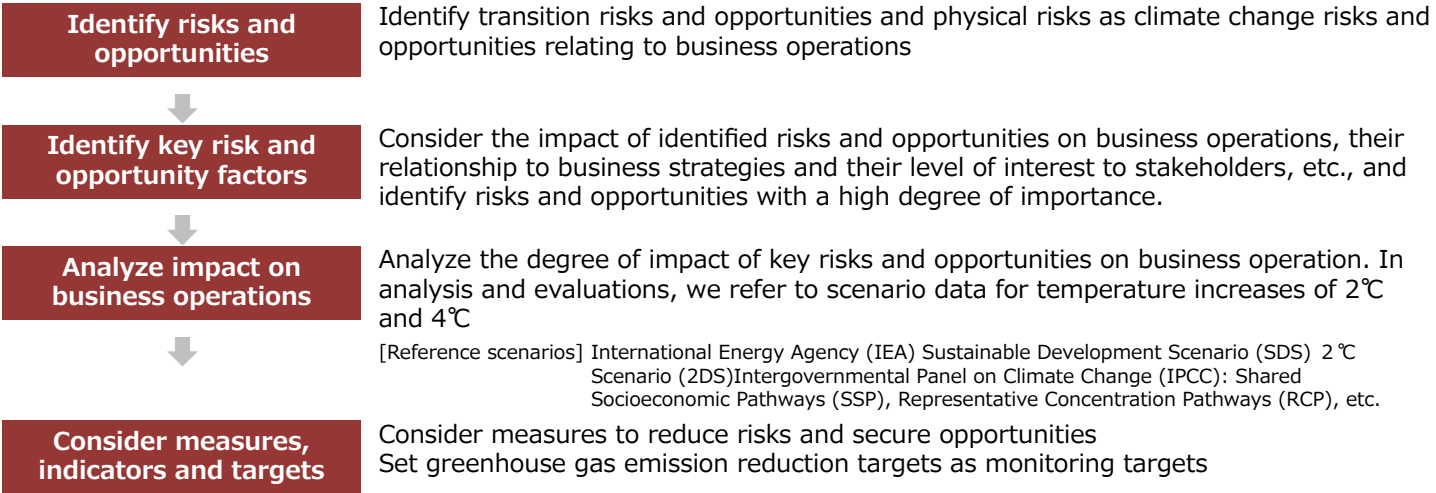
In our company-wide risk management activities, we manage physical water risks, including damage caused by acute and chronic risks such as torrential rains, floods, storm surges, and droughts, which are considered to be related to climate change. Concerning transition risks, we expect an increase in demand for technologies, products, and services that contribute to energy saving and GHG emissions reductions due to the tightening of government policies regarding climate change. We envision this as providing more significant business opportunities. The Group takes initiatives such as the development of materials, products, and technologies that contribute to decarbonization, the development and promotion of the use of renewable energy such as geothermal power, the development of technologies related to CO₂ capture and effective utilization, and conservation activities for the forest land we own. Through these initiatives, we aim to create both economic and social values.

■ Scenario Analysis

In March 2021, the Group established and analyzed scenarios to ascertain the impact of climate change on the Group's business operations (risks and opportunities) and consider measures for reducing risks and securing opportunities. At present, we are updating the scenario analysis and considering indicators, targets and strategies, while ensuring consistency with the next medium-term management strategy.

Process for Identifying Risks, Opportunities and Response Measures

■ Establish Scenarios Where Climate Change is Progressing, Analyze Business Impact and Consider Measures to Reduce Risk and Secure Opportunities



Scenario Analysis – World as Envisaged in 2030–2050

■ World as Envisioned in Analysis

2°C Scenario (sustainable society)	4 °C Scenario (society in which things are allowed to take their course)
- Average temperature increase is limited to below 2°C until the end of the century, and ambitious political policies and environmental technology innovations are implemented to achieve sustainable development. - In terms of social changes accompanying the transition to decarbonization that will impact business operations, we envisage the world as follows. [World as envisaged] - Carbon price setting and price rises globally - Advancement of the transition from fossil fuels to renewable energy - Advancement of modal shift and EV shift - Increase in demand for use of public transportation and vehicle sharing - Preferential selection of decarbonized products by users - Transition to a recycling-oriented society and an increase in waste recycling rates - CO₂ Establishment and practical application of technologies for the recovery, storage, and effective use of CO₂	- Although countries implement political policies aimed at achieving targets in line with the Paris Agreement, the level of international cooperation between countries, development of environmental technologies and shift in energy sources is insufficient, and the average temperature increases by around 4°C until the end of the century. - This scenario envisages the world as follows, where measures to mitigate climate change are unsuccessful, and global warming is allowed to progress and take its course. [World as envisaged] - Dependency on fossil fuels, increase in energy costs - Remarkable economic growth of emerging and developing countries - Slowdown in shift to modes of mobility with low CO₂ emissions - Intensification of wind and water-related disasters and increase in disaster-related waste - Increasing severity of water stress and heat stress

Scenario Analysis – Analysis themes

Analysis theme	Description of analysis	Businesses covered by analysis
1. Change in direct burden of carbon taxes	- Ascertain costs relating to implementing initiatives to reduce greenhouse gas emissions toward a global temperature increase of less than 2°C - Consider capital expenditure toward reduction based on cost differences, etc., according to propriety of targets for reducing greenhouse gas emissions	Common to all businesses
2. Change in water-related disaster risks at business locations	Ascertain financial impact of flood risks due to river flooding and tidal surges at Company business locations	Common to all businesses
3. Change in demand for Company products due to EV shift	Consider change in demand for the Company's electronic materials toward a global temperature increase of less than 2°C	Advanced Products Business

Analysis theme	Description of analysis	Businesses covered by analysis
4. Change in demand for Company products relating to modal shift, EV shift and reducing weight of transportation devices	Ascertain demand and market growth potential for products relating to the Metalworking Solutions Business based on forecasts for the transportation sector shifting to low carbon, and use of modes of transportation in the 2°C and 4°C scenarios, etc.	Metalworking Solutions Business
5. Change in demand for E-Scrap recycling due to the transition to a recycling-oriented society	Ascertain demand and market growth potential for E-Scrap recycling based on forecasts for the amount of E-Scrap that will be generated, etc.	Metals Business
6. Change in demand relating to home appliance recycling	Ascertain demand and market growth potential for the home appliance recycling business in the 2°C scenario accompanying the widespread adoption of alternative fluorocarbons and temperature increases, etc.	Environment & Energy Business
7. Change in demand for renewable energy	Ascertain demand and market growth potential for the renewable energy business in the 2°C scenario accompanying high-impact changes in the external environment.	Environment & Energy Business

Scenario Analysis – Analysis Results (outline)

■ : Risk factors ● : Opportunity factors (The arrows indicate the assessed impact for each business)

	Advanced Products	Metalworking Solutions Business	Metals Business	Environment & Energy Business
2°C Scenario	● Increase in EV unit sales Opportunity: Large ↗	■ Sudden change in the metalworking products market due to modal shift, etc. Risk: Medium ↘	● Increase in demand for the E-Scrap recycling Opportunity: Medium ↗	■ Further penetration of and demand for renewable energy ● Demand for energy-saving home appliance replacements Opportunity: Large ↗ Opportunity: Large ↗
	All businesses ■ Introduction and enforcement of the carbon taxation (operating costs) Risk: Medium ↘		Risk: Medium ↘	
4°C Scenario	All businesses ■ Increase in water-related risks, such as floods, tidal waves, and droughts Risk: Large ↘		Risk: Large ↘	

1. Change in Direct Burden of Carbon Taxes (common to all businesses)

■ Risk Factor: Introduction and Toughening of Carbon Pricing Systems (operating costs)

Envisaged world and business impact	Increase in production costs due to introduction and toughening of carbon pricing systems • Increase in energy costs due to a toughening of taxation with respect to greenhouse gas emissions and an increase in electric power prices • Increase in cost of procurement for green power certificates and emission trading costs • Total energy costs will increase by a factor of around 1.13 in comparison with fiscal 2020 by fiscal 2031, and 1.33 by 2051
Impact analysis	Carbon pricing will be a factor contributing to cost increases for the Company The impact of carbon pricing will have an impact on society overall. If the passing on of these costs to the price of Company products does not progress then there is a risk that it may lead to a decrease in earnings. Business impact assessment  Risk: Medium
Future strategy and response	• Consider technologies for recovering CO₂ emitted from factories and pay close attention to the viability and cost aspects of innovative technologies such as CCUS • Promote energy saving measures and consider the possibilities of transitioning to electrification and alternative fuels • Reduce greenhouse gas emissions by 47% by fiscal 2031 (comparison with fiscal 2014) • Advance the introduction of renewable energy toward reducing electric power-derived emissions

* The cost is the total energy cost excluding the cement business and aluminum business. The greenhouse gas target is a reduction target excluding the cement business and aluminum business.

2. Change in Water Risks at Business Locations (common to all businesses)

■ Risk Factor: Increase in Flooding, Tidal Surges, Droughts and Other Water-related Risks

Envisaged world and business impact	Increase in the amount of damages due to the increase in the frequency of natural disasters worldwide • Increase in property damages and damages from temporary closures, etc., due to the increase in the frequency of disasters • The amount of property damage at sites in Japan with a high risk of river flooding will be around 1.1 times the current level in fiscal 2051, and around 4 times the current level in fiscal 2086. At overseas sites (Thailand), property damage will be around 2.8 times the current level in fiscal 2051, and around 25 times the current level in fiscal 2086.
Impact analysis	The increase in damages due to disasters will be a factor contributing to cost increases for the Company If global temperature rises are not suppressed and the world heads toward a 4°C scenario, depending on the location of the site, there is a risk of serious impact on operations and supply chains.
	Business impact assessment  Risk: Large

Future strategy and response

- Short-term risks will be assessed using Aqueduct (a water risk assessment tool developed by the World Resources Institute (WRI)), and regular interviews will be conducted to ascertain the detailed water risk situation at each individual site and respond to high-risk areas in order.
- Appropriate measures against medium and long-term risks will be implemented by keeping tabs on the latest forecast information at IPCC, etc., and based on assessments of water disaster risks in the Company and its supply chain.

3. Change in Demand for Company Products due to EV Shift (Advanced Products Business)

■ Opportunity Factor: Increase in EV Sales

Envisaged world and business impact

Rapid increase in demand for EV-related products aimed at decarbonization

- Overall automobile sales volume will increase toward fiscal 2031, and demand for terminals and connectors for use in automobile applications will increase by a factor of around 1.6 by fiscal 2031 (in comparison with fiscal 2020) and around 2.1 by fiscal 2051.
- EV automobile sales will increase by a factor of around 22 by fiscal 2031 in comparison with fiscal 2020.

Impact analysis

The major increase in EV sales is expected to lead to **a major increase in demand for the Company's copper & copper alloys and electronic materials products, etc.** Drawing in demand by strengthening the production system for related products will offer **opportunities to expand sales.**

Business impact assessment

Opportunity: Large

Future strategy and response

- As of fiscal 2031, the Company aims to increase sales volume of copper components for new HVs and EVs by a factor of at least 1.3 in comparison with fiscal 2020, and next-generation vehicles and environmentally friendly products by at least three times in comparison with fiscal 2020.
- We will contribute to the transition to a decarbonized society by making capital expenditures and developing products, etc., for constructing a supply system that can meet the rapidly expanding demand for products for use in EVs.

4. Change in Demand for Company Products Relating to Modal Shift, EV Shift and Reducing Weight of Transportation Devices (Metalworking Solutions Business)

■ Risk Factor: Rapid Changes in the Market for Metalworking Solutions Business Accompanying Modal Shift, etc.

Envisaged world and business impact

Decline in demand for cutting tools for engines due to the increase in the percentage of EVs

- Significant increase in EV sales and increase in usage rate for lighter materials
- Production of engine-equipped vehicles is expected to decrease (by a factor of 0.76–0.96 times by fiscal 2031 in comparison with fiscal 2020), and sales of cutting tools for engines and transmissions are expected to decrease.

Impact analysis

With the expected increase in demand for tools for use on hard-to-cut materials, accompanying the expansion of the electrification and weight reduction markets, **reviewing product composition and taking in demand could provide opportunities to increase sales.** At the same time, **there is a risk that sales of cutting tools for engine-equipped vehicles—a current flagship product—will decline.**

Business impact assessment



Risk: Medium

Future strategy and response

- We will contribute to the transition to a decarbonized society by developing and supplying products that meet growing demand (for the 2°C scenario world), such as EV battery-related products and tools for difficult-to-cut materials.
- In the automotive product market we will continue to focus on the trend of EV shift, as trends in the growth or decline of product demand vary depending on the type of power source used in the vehicle. We will also continue working to develop new markets as alternatives to the automotive industry.

5. Change in Demand for E-Scrap Recycling due to the Transition to a Recycling-Oriented Society (Metals Business)

■ Opportunity Factor: Increase in Demand for E-Scrap Recycling

Envisaged world and business impact

Increase in demand for recycling of scrap electronic appliances accompanying economic growth of various countries

- Volumes of E-Scrap from scrapped automobiles will increase due to the increase in global vehicle sales (increase by a factor of 1.1 by 2030 in comparison with fiscal 2020), increase in percentage of EVs, and growth of GDP
- Demand for valuable metals will increase further as a result of the increase in demand for electronic devices due to the advancement of digitalization

Impact analysis

The volume of E-Scrap generated globally is expected to increase to 142% by 2030 in comparison with 2019. Increasing the volume of E-Scrap that the Company can process by augmenting the Company's recycling capabilities will create **an opportunity to increase sales.**

Business impact assessment



Opportunity: Medium

Future strategy and response

- The Company will contribute to build a recycling-oriented society by augmenting its waste handling capabilities, exploring ways of expanding opportunities for accepting waste through technology development, for increasing the sophistication of pretreatment, and focusing on E-Scrap recycling operations.
- Going forward, we expect to see a decline in the amount of PGM* contained in electronic circuit boards and an increase in sales of EVs in Japan. We will therefore continue to focus on the surrounding environment relating to valuable metals.

* PGM: platinum group metals

6. Change in Demand Relating to Home Appliance Recycling (Environment & Energy Business)

■ Opportunity Factor: Increase in Demand for Home Appliance Recycling

Envisaged world and business impact

Increased frequency of replacement of home appliances with energy-saving appliances due to global warming and rising energy costs

- Progressive degradation of air conditioners due to prolonged use, and increase in number of air conditions owned by each household
- Increased frequency of replacement due to low-carbon regulations and increasing energy costs (increase in volume of waste home appliances)
- Increase in waste home appliance recovery rate due to toughening of recycling regulations

Impact analysis

An increase in volume of waste home appliances such as air conditioners is expected due to factors such as temperature increase, change in number of households, and toughening of carbon regulations and recycling regulations. This will be accompanied by **an increase in the volume of waste home appliances processed of by the Company, which will present an opportunity for increasing sales. (209% in fiscal 2051 in comparison with fiscal 2020)**

Business impact assessment


Opportunity: Large

Future strategy and response

- We will seek to expand business operations through the automation of facilities aimed at increasing the number of home appliance units recycled, and by working to improve processes for increasing the value of recovered appliances.
- In particular, we will focus on market trends given the growing market scale for air conditioners and flat-panel TVs, for which the increase in the amount of appliances processed is expected to be particularly great.
- We will also create new recycling operations—including recycling of lithium-ion batteries and solar panels—while at the same time focusing on trends in overseas markets.

7. Change in Demand for Renewable Energy (Environment & Energy Business)

■ Opportunity Factor: Spread and Increase in Demand for Renewable Energy

Envisaged world and business impact

Medium to long-term expansion of the renewable energy market aimed at building a net-zero society

- Due to the state of widespread popularization and demand for renewable energy, environment value ranges between 1.3 and 4 yen/kWh.
- Although we expect to see mass widespread adoption of renewable energy with costs reduced through technology development, a decline in renewable energy purchase preference systems, and a fall in the unit selling price of electric power, sales will increase due to the increased demand for renewable energy.

Impact analysis

While unit electricity prices and non-fossil fuel certificate prices will fluctuate due to environmental policies and technological advances, **the demand for renewable energy itself will increase, presenting an opportunity for us to expand our renewable energy business operations. (Power generation: 286% in fiscal 2051 in comparison with fiscal 2020)**

Business impact assessment


Opportunity: Large

- In order to increase the total output of renewable energy power plants to 533GWh by fiscal 2031, we will focus on augmenting the power output of existing power plants, and surveys and development of new geothermal and hydroelectric power plants, including overseas expansion.
- We will work to reduce the cost of power generation by focusing on trends in solar and wind power generation R&D, the state of their widespread adoption, and unit electricity prices.

Water-related Management

The vast majority (approx. 91%) of the water we consume at the Mitsubishi Materials Group is seawater used as cooling water. Consumption of fresh water (such as industrial water and groundwater) is relatively low. However, because a shortage of fresh water may affect our business activities, securing the necessary quality and amount of water is essential for the business operation of the Group. In addition, we have considered the seriousness of the water-related problems that have occurred frequently in recent years, such as flooding caused by typhoons or torrential rains, and the great impact of these problems. We manage the risks related to these problems accordingly.

We implement measures for reducing water risks at individual facilities. To secure water resources, we save water through measures including the recycling of water, the introduction of equipment with low water consumption, and the renovation of equipment to reduce water consumption. To counteract the risk of flooding, we take initiatives including the elevation of buildings, pumps, and electric equipment, the installation of drainage pumps, as well as the implementation of disaster drills assuming high water events. We also take measures to prevent abnormalities in the quality of the effluent from our facilities and to prevent water quality accidents. These measures include the management of effluent under our own standards that are stricter than laws and regulations, as well as the introduction of sensors that detect abnormal water quality and a system that stops water discharges automatically.

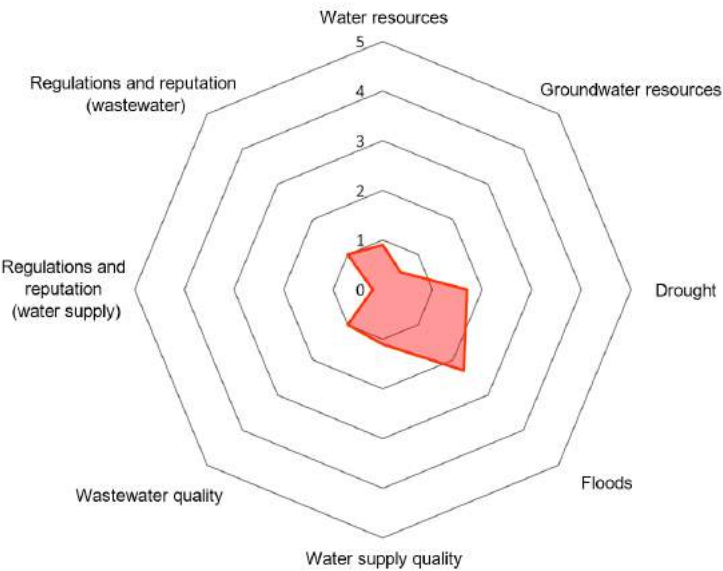
■ State of Water Risk Assessment Initiatives

To ascertain the state of water risks at the Group's manufacturing facilities (including some research institutes), we are utilizing the Aqueduct water risk assessment tool developed by the World Resources Institute (WRI) to conduct individual risk assessments for each facility, covering various water risks including those relating to securing water resources and those of incurring flood damage.

Additionally, in order to ensure that water risk assessments are in line with actual conditions at these facilities, we supplement the results of water risk assessments performed using Aqueduct by taking into account the history of any past water risk manifestations at each facility (history of occurrences of flood, drought, and water supply quality deterioration, etc., at each location) and information on water usage associated with business activities (amount of fresh water and groundwater used, emissions of pollutants contained in wastewater).

The results of these supplemented water risk assessments are used to produce visual representations of water risks for each facility, using radar charts displaying risk scores for each assessment item, and shared with each business location. Each business site registers items assessed as high risk as risk factors for that particular facility, and engages in risk management by planning and implementing measures including the reduction of water risks.

Example Radar Chart Showing Water Risks for Each Facility



"Water quality risks" are assessed separately for both water supply and wastewater, from the viewpoints of impact on operations due to the deterioration of water supply water quality and impact on the environment due to wastewater at business sites. "Regulatory and reputation risks" are also assessed for both water supply and wastewater, from the perspectives of toughness water supply and wastewater regulations and the reputation of the region.

GHG Emission Results and Initiatives

Fiscal 2022 Reduction Activities

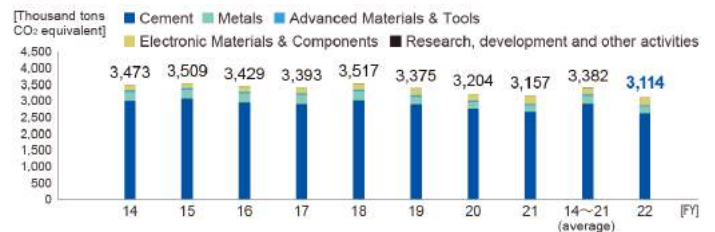
■ Total Greenhouse Gas Emissions (non-consolidated + main consolidated subsidiaries)

Total greenhouse gas emissions (non-consolidated + main consolidated subsidiaries) for the Group in fiscal 2022 was 10,487 thousand tons. Which was a decrease of 166 thousand tons compared to fiscal 2021.



■ Greenhouse Gas Emissions Derived from Energy Sources (non-consolidated)

In fiscal 2022, our non-consolidated greenhouse gas emissions from energy sources were 3,114 thousand tons. It decreased by 43 thousand tons compared to fiscal 2021.



* Greenhouse gas emissions derived from non-energy sources comes mainly from limestone, which is used as a raw material. As it is difficult to substitute or reduce volumes of limestone, however, our emissions target covers greenhouse gas emissions derived from energy sources, which can be reduced by energy saving initiatives.

■ Changes in Greenhouse Gas Emissions per Unit (non-consolidated)

Greenhouse gas emissions on a non-consolidated basis were reduced by 70 thousand tons CO₂ (1% reduction) compared to fiscal 2021. Emission intensity improved significantly due to the impact of the increase in production volume for each business and the increase in the use of thermal energy alternatives such as waste plastic and recycled oil at cement plants.



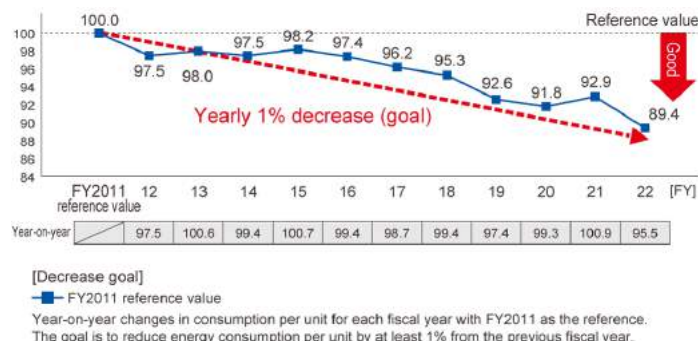
[Decrease goal]

— FY2011 reference value

Year-on-year changes in emissions per unit for each fiscal year with FY2011 as the reference. The goal is to reduce emissions per unit by at least 1% from the previous fiscal year.

■ Changes in Energy Consumption per Unit (non-consolidated)

Energy consumption by Mitsubishi Materials decreased 0.2% year on year. In addition, emission intensity improved 4.5% with the impact of the increase in production volume for each business and the increase in the use of thermal energy alternatives at cement plants. Business Operator Classification Evaluation System : S class (S class: improvement of basic unit of 1% or more on average over the past 5 years).



* Energy consumption per unit is calculated in accordance with the periodic report guidelines prescribed under Japan's Act on the Rational Use of Energy (Energy Conservation Act). As the Company's business is diverse, we identify a "value intimately related to energy use" for each business and use it as the denominator for calculations. We calculate each business's contribution by multiplying the year-on-year of each business's energy consumption per unit with that business's share of the Company's total energy use. The product is the Company's total consumption per unit (year-on-year). Greenhouse gas emissions per unit is calculated in the same way.

* In the periodic report on fiscal 2022 results prescribed under Japan's Act on the Rational Use of Energy, business locations for our cement business were excluded from the calculations. However, the values in this table were calculated by including such business locations.

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split. Regarding the Aluminum business, on March 31, 2022, we transferred all of our shares of Universal Can Corporation to Showa Aluminum Can Corporation, and on the same day, we split the Aluminum rolling and processing business from Mitsubishi Aluminum Co., Ltd. into Showa Aluminum Can Corporation through an absorption-type company split. Information is posted based on the figures as of March 31, 2021.

■ Breakdown of Total Emissions for Fiscal 2022 [Thousand tons CO₂ equivalent]

Category			Non-consolidated	Domestic group companies	Overseas group companies	Total
SCOPE1 (direct)	From energy sources (fuel, etc.)		2,600	542	609	3,751
	From non-energy sources	From processes	3,681	175	669	4,526
		From waste	434	273	28	734
		Greenhouse gases other than CO ₂	21	34	4	58
	(Reference) Total from non-energy sources		4,136	482	701	5,318
	Subtotal		6,736	1,024	1,310	9,069
SCOPE2 (indirect) ^{*1}	From energy sources (power, etc.)		514	390	514	1,418
(Reference) Total from energy sources			3,114	932	1,123	5,169
Total			7,250	1,414	1,824	★10,487

* "Group companies" includes 118 consolidated subsidiaries (54 domestic, 64 overseas).

* As emission factors, the adjusted emission factor of power companies was used for power in Japan, the emission factor published by the International Energy Agency (IEA) was used for power in other countries, and values based on the Act on Promotion of Global Warming Countermeasures were used for fuels and steam.

* SCOPE2 (Indirect) *1 emissions are market-based emissions. Location-based SCOPE2 emissions are 1,526 thousand t-CO₂e.

■ **Scope 3 Emissions for Fiscal 2022 [Thousand tons CO₂ equivalent]**

Item		Object	Non-consolidated	Group	Total	Approach to determining the amount of activity
Category 1	Purchased products and services	Same as organizations covered by environmental data other than greenhouse gas emissions	1,563	3,268	4,830	The use of raw materials accepted from outside the Group (excluding waste as raw materials and by-products as raw materials) in terms of physical quantity
Category 2	Capital goods	Same as consolidated financial statements	105	131	237	Capital expenditure in the reportable fiscal year
Category 3	Fuel and energy-related activities that do not fall under Scopes 1 and 2	Same as organizations covered by data on greenhouse gas emissions	525	221	746	Fuel consumption by type and volume of electric power and steam purchased from outside the Group
Category 4	Transportation and distribution (upstream)	Same as organizations covered by environmental data other than greenhouse gas emissions	617	1,374	1,992	1) Emissions from the physical distribution of products and services, which were purchased in the reportable fiscal year, from suppliers to the company • A transportation scenario was set for each major raw material (excluding waste as raw materials and by-products as raw materials). • Distances between countries were set using the IDEA database on distances between countries, and other distances were set using a distance search site (with distance given by an in-house company in a questionnaire adopted in some cases). 2) Emissions from the physical distribution of products that were shipped and transported in the reportable fiscal year at the expense of the company • A transportation scenario was set for each major shipped product. • Distances between countries were set using the IDEA database on distances between countries, and other distances were set using a distance search site.
Category 5	Waste generated from operation	Same as organizations covered by environmental data other than greenhouse gas emissions	2	8	10	The amount of industrial waste (waste recycled into resources and landfilled waste) was included.

Item		Object	Non-consolidated	Group	Total	Approach to determining the amount of activity
Category 6	Business trip	Consolidated	0	3	3	For Mitsubishi Materials (non-consolidated), the number of employees at each base (plants and offices) was used for the calculation. However, in consideration of the voluntary restraint on business trips for controlling the spread of COVID-19, travel expenses in the reportable fiscal year were compared with those in a normal fiscal year, and the value obtained by multiplying the number of employees by the ratio of travel expenses in the reportable fiscal year to that in a normal fiscal year was regarded as the value for the amount of activity. For consolidated subsidiaries, the number of employees of each in-house company from human resources information given in the securities report was used for the calculation.
	Employee commute	Consolidated	2	9	11	For Mitsubishi Materials (non-consolidated), the number of employees at each base (plants and offices) was used for the calculation. For the head office and other offices, however, in consideration of the voluntary restraint on going to workplaces to control the spread of COVID-19, the value obtained by multiplying the number of employees by the rate of employees who commuted to work for the reportable fiscal year was regarded as the value for the amount of activity. For consolidated subsidiaries, the number of employees of each in-house company from human resources information given in the securities report was used for the calculation.
Category 8	Leased assets (upstream)	—	—	—	—	While there are leased assets, they were excluded from the calculation because they are included in Scope 1 and Scope 2.

Item		Object	Non-consolidated	Group	Total	Approach to determining the amount of activity
Category 9	Transportation and distribution (downstream)	Same as organizations covered by environmental data other than greenhouse gas emissions	126	289	415	Emissions from physical distribution of products that were shipped and transported to sales destinations at the expense of other companies. Transportation from sales destinations to final consumers was excluded. Distances between countries were set by using the IDEA database on distances between countries, and other distances were set by using a distance search site (with the distance given by an in-house company in a questionnaire adopted in some cases).
Category 10	Fabrication of sold products	Same as organizations covered by environmental data other than greenhouse gas emissions	215	501	717	For products sold, the value for the amount of products shipped by each in-house company to companies other than group companies was regarded as the value for the amount of activity. Emissions from processing were calculated by setting the primary processing assumed for each product.
Category 11	Use of sold products	—	—	—	—	Products sold were excluded from the calculation because they are materials and parts that are used by a wide range of users and it is therefore difficult to follow their paths to final products.
Category 12	Disposal of sold products	Same as organizations covered by environmental data other than greenhouse gas emissions	107	241	348	For products sold, the value for the amount of products shipped by each in-house company to companies other than group companies was regarded as the value for the amount of activity. Emissions from disposal were calculated by setting a disposal method assumed for each product.
Category 13	Leased assets (downstream)	—	—	—	—	Leased assets were excluded because virtually no such asset is owned.
Category 14	Franchises	—	—	—	—	Franchising business was excluded because the company does not operate such a business.

Item		Object	Non-consolidated	Group	Total	Approach to determining the amount of activity
Category 15	Investment	—	—	—	—	Investments made in the pure pursuit of profit were excluded from the calculation because no such investment is made.
	Total		★3,263	6,046	9,309	

* Raw material procurement, transportation, and product shipment scenarios were set based on FY2020 results.

* The calculation was made by referring to the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain Ver. 2.4 from the Ministry of the Environment and the Ministry of Economy, Trade and Industry. Greenhouse gas emissions per unit was calculated by referring to the emission intensity database for calculating greenhouse gas emissions of an organization through the supply chain (ver. 3.2) from the above ministries.

* Scope 3 emissions for FY2022 reflect data on Mitsubishi Materials Corporation (including the cement business that has been transferred) and 63 consolidated subsidiaries (excluding the aluminum business that has been transferred) as of March 31, 2022.

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

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■ Principal Initiatives at Each Business

We regard it as a top priority to save energy wherever possible at our manufacturing facilities and plants. That is why we are so committed to energy saving activities. Specific activities include switching fuels, making effective use of untapped energy, upgrading processes and equipment, installing high-efficiency equipment, optimizing device specifications, and reviewing equipment controls and operating practices. We are constantly working to save energy at smaller facilities, too, including Head Office, branches, sales offices and research facilities, through measures such as installing LED lighting.

Logistics Initiatives

Our CO₂ emissions from transportation for fiscal 2022 totaled 18,534 tons for Mitsubishi Materials*¹ (up 1,443 tons from the previous fiscal year), and 30,237 tons in total including emissions from group companies*² (up 981 tons from the previous fiscal year). Meanwhile, energy consumption per unit*³ came to 21.47 kiloliters per million ton-kilometers for Mitsubishi Materials, which was 0.4% better than the previous fiscal year.

We will continue to promote a modal shift with a focus on long-distance transport and optimize logistics throughout the Group in our efforts to build a logistics system with low environmental impact.

■ CO₂ Emissions According to Mode of Transport (Unit: Tons CO₂)

			FY2021			FY2022		
			Mitsubishi Materials	Group companies	Total	Mitsubishi Materials *1	Group companies *2	Total
CO ₂ emissions from logistics	Total		17,091	12,165	29,256	18,534	11,703	30,237
	Breakdown	Road	9,872	5,213	15,086	10,666	4,989	15,655
		Ocean	7,170	6,948	14,118	7,809	6,712	14,521
		Rail	23	4	27	20	3	23
		Air	26	0	26	38	0	38

- *1 Effective on April 1, 2022, our cement business was succeeded by Mitsubishi UBE Cement Corporation (an equity method affiliate) through absorption-type company split, as a result of integration of cement business, etc. with UBE Corporation (former Ube Industries, Ltd.). Accordingly, the cement business was excluded from data for fiscal 2021 and fiscal 2022.
- *2 Regarding our aluminum business, effective on March 31, 2022, we transferred all shares in Universal Can Corporation that we held to Showa Aluminum Can Corporation, and effective on the same date, we had the aluminum rolling and extrusion business of Mitsubishi Aluminum Co., Ltd. succeeded by Showa Aluminum Can Corporation through an absorption-type company split. Accordingly, the above data for both fiscal 2021 and fiscal 2022 include data for Onahama Smelting and Refining Co., Ltd. and Diasalt Corporation as group companies.
- *3 Value obtained by converting energy consumption into crude oil (kl) and dividing it by transportation in ton-kilometers (million ton-kilometers)

Initiatives to Help Build a Decarbonized Society

Initiatives to Help Build a Decarbonized Society

Products and Services that Contribute to Building a Decarbonized Society

For the Group, tackling climate change has been one of its most important management issues for building a decarbonized society. Reflecting this, the Group has been approaching manufacturing with a view to reducing the environmental impact and has developed and promoted the use of renewable sources of energy, such as geothermal energy.

TOPICS

Development of Elemental Technologies Essential for Next-Generation Vehicles

We regard "next-generation vehicles," "IoT and AI," "urban mining" and "clean energy and decarbonization" as social needs that the Group should grasp in our medium-term management strategy. In the areas of "next-generation vehicles" and "IoT and AI," we will expand the business areas of its copper products, seals, wear-resistant tools, and sensors, etc., while developing new products and businesses. In the areas of "urban mines" and "clean energy and decarbonization," we will create new products and businesses from among those related to recycling, renewable energy and hydrogen society. As specific examples for next-generation vehicles, we have been making announcements since 2019 on the development of thermal conductive putty which is a material softer than thermal conductive rubber, uniform electrodeposition coating technology for high-heat-resistant and high-insulation resins, and die-bonding sinter materials for next-generation power modules. We are promoting dissemination by advancing the elemental technology development which is indispensable for next-generation vehicles. We will continue our development to be put into practical use in stages by around 2050.

■ Thermal Conductive Putty, a Material that is Softer than Thermal Conductive Rubber

Heat generation is an issue in a wide range of fields, including automobiles and fields related to electronic equipment, and this has led to growing demand for thermal conductive materials. We have begun to develop a thermal conductive putty as a thermal conductive material to be sandwiched between high-temperature components, such as lithium-ion battery modules and electronic circuit boards, and low-temperature heat-dissipating components, such as heat sinks, to facilitate heat transfer from the former to the latter components. The thermal conductive putty is expected to achieve a greater reduction in interfacial thermal resistance than is achieved by conventional thermal conductive rubber sheets. We will continue to engage in R&D to achieve the practical application of this technology.



► Start of Development of a "Thermal Conductive Putty" Material Softer than Thermal Conductive Rubber

■ Uniform Electrodeposition Coating Technology for High Heat Resistance and High Insulation resin

High insulation reliability under high temperature is required for coils used in power inductors, motors and reactors, which are used in inverters for controlling high-output motor power supply of next-generation vehicles. Recently, with demand for further miniaturization of those coil devices, a uniform coating technology is getting required to perform insulation of complex-shaped conductors. We have developed a unique electrodeposition technology that can uniformly coat resin film with high heat resistance and high insulation property even for complex shapes. Moving forward, we will aim to commercialize the electrodeposition technology and enter the incubation phase in fiscal 2024.



- ▶ Development of Uniform Electrodeposition Coating Technology for Highly Heat-Resistant and Highly Insulating Resins for Next-Generation Vehicles (Japanese)

■ Die-bonding Sinter Materials for Next Generation Power Modules

In the next-generation type power module used in the inverter for high output motor power supply control of the next-generation vehicle, there is a demand for the function enhancement in the die bonding for high-temperature operating semiconductor element such as SiC to the copper material. Previously, it was necessary to apply precious metal plating such as gold and silver to the substrate surface, and pressurize while heating. We have developed a die bonding material that can bond semiconductor die to substrate without pressure nor precious metal plating to the copper surface of the substrate, and can exhibit the bonding strength and heat resistance equivalent to the conventional die bonding products. In the future, further improvement of reliability and optimization of the process will be carried out, and the commercialization and dissemination will be aimed at by fiscal 2024.



- ▶ Development of die-bonding sinter materials for next-generation power modules that can be bonded to copper components without pressure (Japanese)

TOPICS

Development of "MOFC-HR" (HR: Heat Resistance) Oxygen-Free Copper with the World's Highest Standard in Strength and Heat Resistance

In September 2021, we have developed "MOFC*1-HR" (Mitsubishi Oxygen-Free Copper - Heat Resistance), an entirely new oxygen-free copper with strength and heat resistance enhanced to the world's highest level.

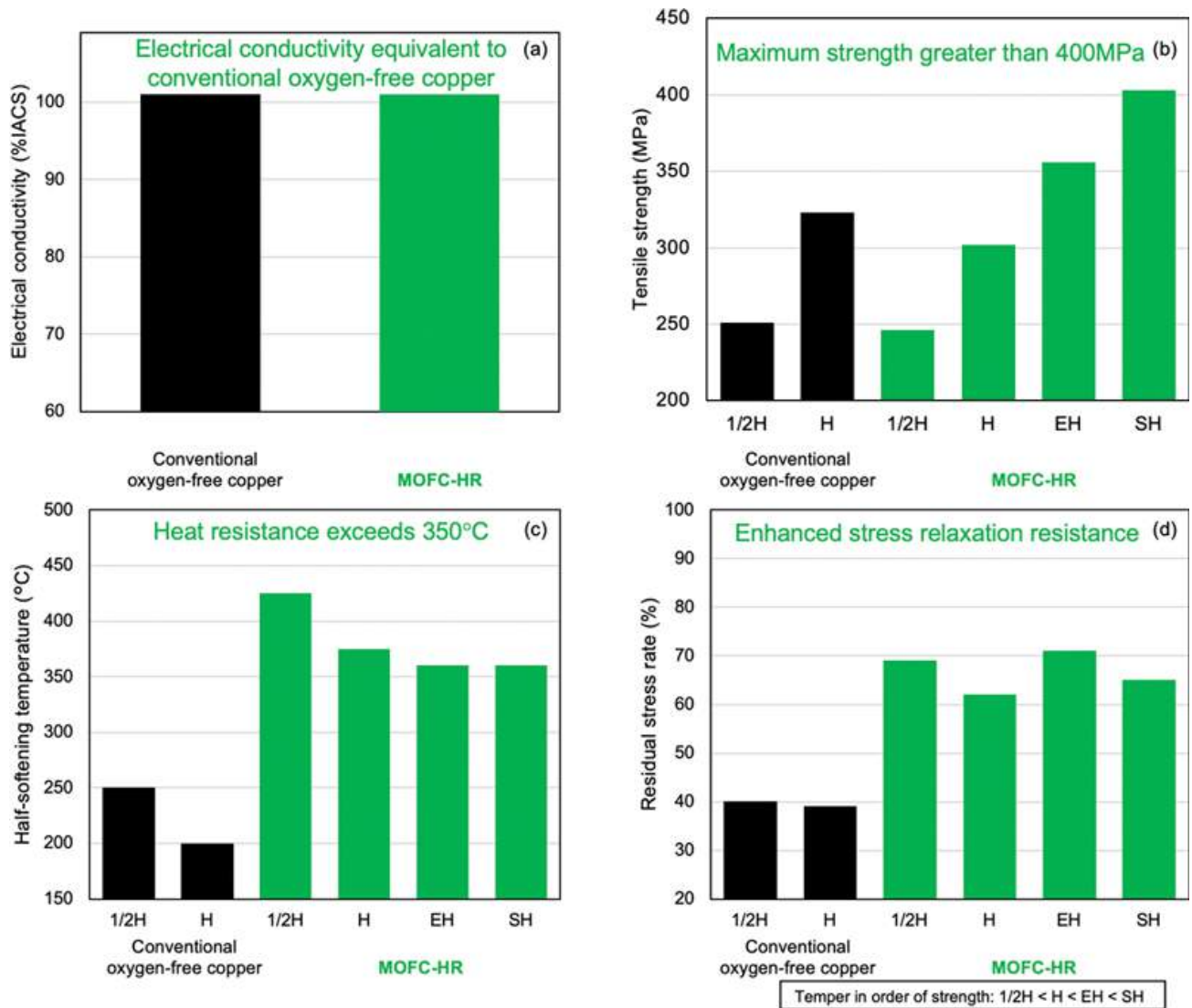
With the spread of EV and next-generation energy, electrical components are being required to accommodate large currents and offer high heat dissipation. Oxygen-free copper, which has the highest electrical and thermal conductivity of all copper materials, is rapidly expanding its presence in the industry.

However, oxygen-free copper had the following issues. Its strength and heat resistance are lowered when material temperature rises due to a large current, or when a manufacturing process involves heat treatment. It cannot be used for components that are required to be compact and strong at the same time.

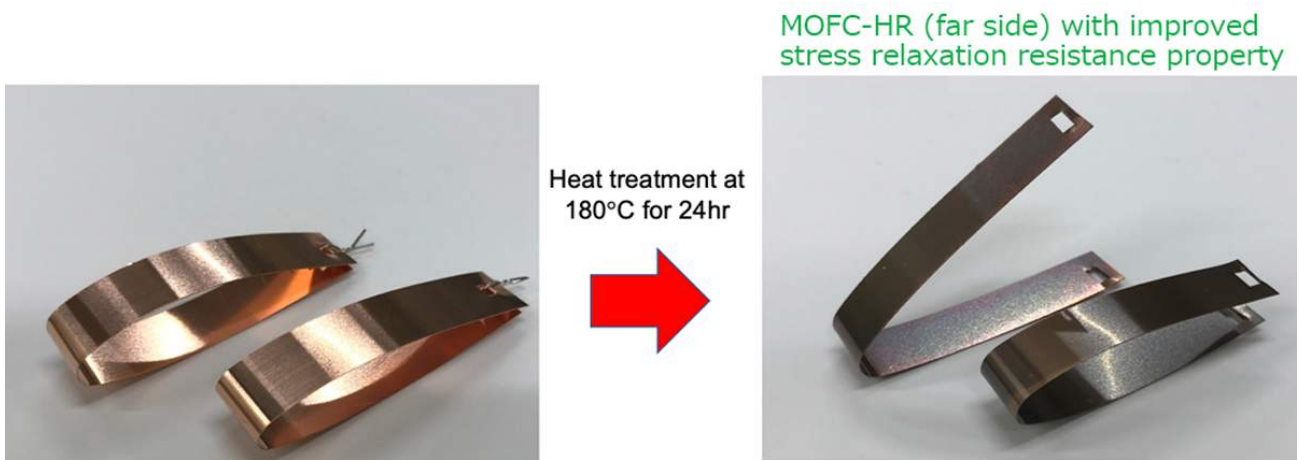
To overcome these problems, we have combined our core technology in manufacturing high-quality oxygen-free copper with our material design technology and successfully developed MOFC-HR, an oxygen-free copper with significantly enhanced strength and heat resistance that maintains high electrical and thermal conductivity.

MOFC-HR and conventional oxygen-free copper characteristics comparison

(a) Electrical conductivity, (b) Tensile strength, (c) Half-softening temperature, (d) Residual stress rate



MOFC-HR (far side) and conventional oxygen-free copper (near side) heat resistance comparison



► News release:

<https://www.mmc.co.jp/corporate/en/news/2021/news20211001a.html>

Endorsement of the Ministry of Economy, Trade and Industry (METI)'s GX League Basic Concept

We have endorsed the GX League Basic Concept announced by the Ministry of Economy, Trade and Industry in April 2022. The GX League will be established for companies working proactively on green transformation (GX) as a forum for discussion regarding the transformation of the overall economic and social system and the creation of related new markets, together with players taking on challenges to achieve GX, including the government, universities, public research institutions and financial institutions.

Participating Companies are expected to collaborate with and lead a wide range of entities, including supply chains, consumers and civil society, in addition to taking initiatives to reduce their own emissions, towards the achievement of carbon neutrality. We have decided to endorse it because the direction of our climate change initiatives is aligned with the intent of the GX League Basic Concept.

GX League Basic Concept (METI)

▶ https://www.meti.go.jp/english/press/2022/0201_001.html 

Producing Renewable Energy

Geothermal Power Generation Business

■ Activities for the Stable Operation of Existing Power Plants

We stably generate environmental loading-reducing electric power through our Ohnuma Geothermal Plant and Sumikawa Geothermal Power Station (steam supply only, power generated by Tohoku Electric Power Co., Inc.), both in the Hachimantai area of Kazuno, Akita prefecture, as well as the Wasabizawa Geothermal Power Plant (owned by Yuzawa Geothermal Power Corporation, established jointly with Electric Power Development Co., Ltd. and Mitsubishi Gas Chemical Company, Inc.), which began commercial operation on May 20, 2019 in the Takamatsu and Akinomiya areas of Yuzawa, Akita prefecture. In fiscal 2022, we generated a total of 558 GWh of power (including 296 GWh from plants in which we have equity stake, etc.). The operation of our geothermal plants and steam supply systems effectively reduced CO₂ emissions by approx. 130,000 tons (*calculated based on emissions from Sumikawa Geothermal Power Station of Tohoku Electric Power Co., Inc. and our equity stake in Wasabizawa Geothermal Power Plant of Yuzawa Geothermal Power Corporation).

In conducting the geothermal power generation business, we have to confirm the geothermal systems of Sumikawa area, in order to maintain continual and stable supplies of steam. We are working to maintain a geothermal reservoir at the Sumikawa Geothermal Area, with the aim of increasing the amount of power generated in the future. We have been examining data, and reanalyzing geothermal systems since we started operations at the site, as we continue to focus on maintaining stable operations.

■ Activities for New Geothermal Development

In addition to operating these geothermal plants, we are currently working on new projects, too. Yuzawa Geothermal Power Corporation, established jointly with Electric Power Development Co., Ltd. and Mitsubishi Gas Chemical Company, Inc. started construction of Wasabizawa Geothermal Power Plant in May 2015 and began commercial operation of this plant on May 20, 2019. In October 2015, we established Appi Geothermal Energy Corporation in conjunction with Mitsubishi Gas Chemical Company, Inc. We were joined by Electric Power Development Co., Ltd. in June 2018. The three companies are promoting commercialization and started construction in August 2019.

In August 2021, we launched a survey to quantify the geothermal resources in the Komonomori area (Kazuno), which is located northeast of the Onuma Geothermal Power Station, using subsidies from the Japan Oil, Gas and Metals National Corporation (JOGMEC). Further, we have begun a survey to quantify the geothermal resources in the upstream area of the Appi River (Hachimantai), which is east of the Appi Geothermal Power Plant, in June 2022 using subsidies from JOGMEC. In addition, in May 2022, we invested in Hakodate Esan Geothermal G.K., which is conducting geothermal surveys and development in the Esan area (Hakodate) and became involved in the construction of a geothermal power plant with RENOVA, Inc. and Daiwa Energy & Infrastructure Co. Ltd., which will begin after the resource surveys and environmental impact assessments have been completed.

We are also in the process of conducting joint surveys with other companies in the Azuma-Adatara area of Fukushima prefecture.



Wasabizawa Geothermal Power Plant (Akita prefecture)
Main business operator: Yuzawa Geothermal Corporation
Operation commenced in May 2019
Output: 46,199kW



Appi Geothermal Power Plant (Iwate prefecture, under construction)
Main business operator: Appi Geothermal Energy Corporation
Operation scheduled to commence in April 2024
Output: 14,900kW

TOPICS

Participation in a New Geothermal Development Project in the Esan Area, Hakodate City, Hokkaido

In May 2022, we have invested in Hakodate Esan Geothermal LLC (Esan Geothermal) as a new business partner of RENOVA, Inc. (Chuo-ku, Tokyo; Founding CEO, Yosuke Kiminami) and Daiwa Energy & Infrastructure Co. Ltd. (Chiyoda-ku, Tokyo; President, Morimasa Matsuda). Since its establishment in 2016, Esan Geothermal has moved ahead with business development with the aim of developing a new geothermal power plant in the Esan area of Hakodate City, Hokkaido.

We are utilizing the abundant experience and high technological capabilities we have cultivated over many years through our development and management of coal and metal mines for hydroelectric and geothermal power generation. In relation to geothermal power generation, since Onuma Geothermal Power Plant (Akita Prefecture) started operation in 1974, we have played a central role in the construction and operation of Sumikawa Geothermal Power Plant (Akita Prefecture, operation started in 1995), Wasabizawa Geothermal Power Plant (Akita Prefecture, operation started in 2019), and Appi Geothermal Power Plant (Iwate Prefecture, operation to start in 2024).

We have been working on the "development and promotion of the use of renewable energies such as geothermal energy" and intend to engage in this project by making use of our experience and technological capabilities through investment to contribute to the success of the project.



An excavation survey

► News release:

Participation in a New Geothermal Development Project in the Esan Area, Hakodate City, Hokkaido

Hydroelectric Power Generation Businesses

We have a long history of generating hydroelectric power, dating back to 1898, when we built seven hydroelectric power plants in Akita prefecture, for the purpose of supplying enough power to run Osarizawa Mine (opened as a gold mine, later operated as a copper mine, closed in 1978) and homes in the local area. We were compensated for one of those power plants when a dam was built and the plant was submerged in 2000. The remaining six however are still operating today, selling all of the power that they generate to a power company. Since 2014, we have successfully completed upgrades at three hydroelectric power plants, in an effort to deal with aging facilities. We also completed updates at Oyu Hydroelectric Power Plant (Kazuno) in March 2018. In addition, in May 2019, we began to construct the New Komatagawa Hydroelectric Power Plant in the Komata River system in Kita-Akita City, Akita. It is the first new hydroelectric power plant since the No. 4 Komatagawa Hydroelectric Power Plant, which was completed in 1953. The new plant is scheduled to start operating in December 2022. We also began investigations in multiple places last fiscal year, with the goal of constructing new small-scale hydropower plants with an output of around 1,000 kW each. In fiscal 2022, the combined total of power generated by all six hydroelectric power plants was 85 GWh. Our operation of hydroelectric power plants effectively reduced CO₂ emissions by approx. 40,000 tons.



Komatagawa New Power Plant
(Akita prefecture, under construction)

Main business operator:
Mitsubishi Materials Corporation
Operation scheduled to commence in December 2022
Output: 10,326kW

Solar Power Businesses

Having entered the solar power business in 2013, making effective use of idle group land, by 2017 we had built power plants in five locations as part of a joint venture with Mitsubishi HC Capital Inc. We are currently operating plants in Makabe (Ibaraki prefecture), Fukui (Fukui prefecture), Torigoe (Fukuoka prefecture), Irigama (Miyagi prefecture), and Yabuki (Fukushima prefecture). In fiscal 2022, the combined total of power generated by all five solar power plants was 28 GWh (including 14 GWh from power plants in which we have equity stakes). The operation of these power plants (in which we have equity stakes) effectively reduced CO₂ emissions by approx. 10,000 tons.

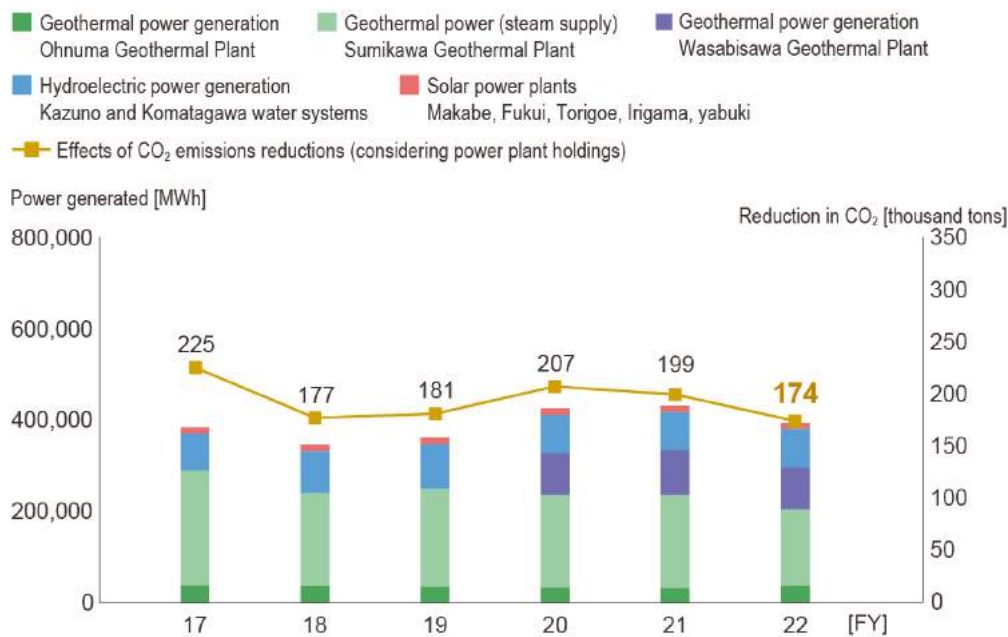


Irigama Solar Power Station
(Miyagi prefecture)

Main business operator: LM Sun Power CO.,Ltd.
Operation commenced in January 2015
Output: 6,930kW

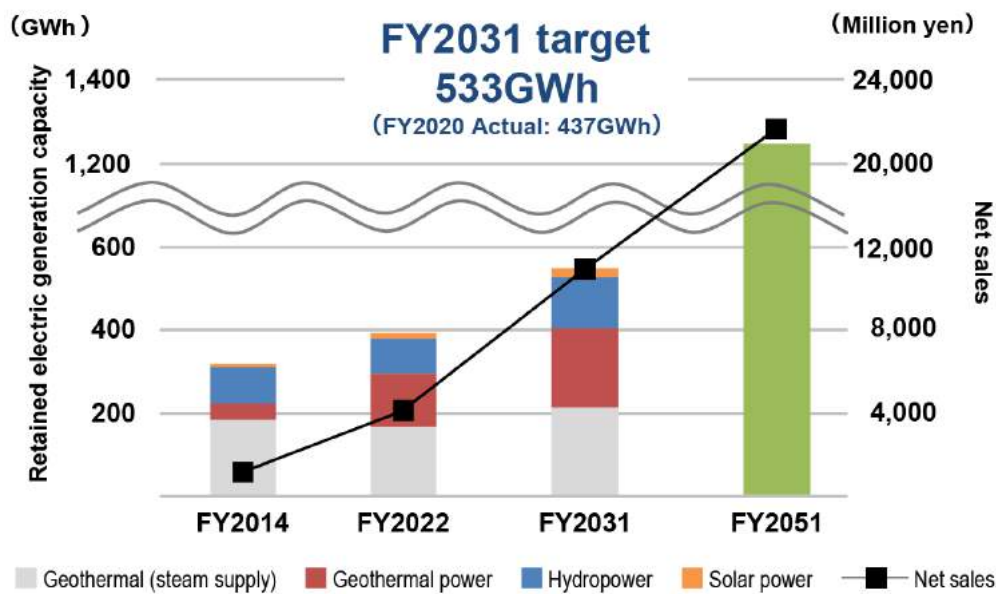
Renewable Energy's Effect on the Reduction of CO₂ Emissions

■ Reduction in CO₂ Emissions Using Renewable Energy (reflecting our equity in power plants)



* Recalculated based on the CO₂ emission factor for commercial electric power defined by METI

Renewable Energy Power Generation Targets and Results



* Steam supply to geothermal power plants (steam sales converted by electric energy volume)

Ground Source Heat Pump Systems (GSHP)

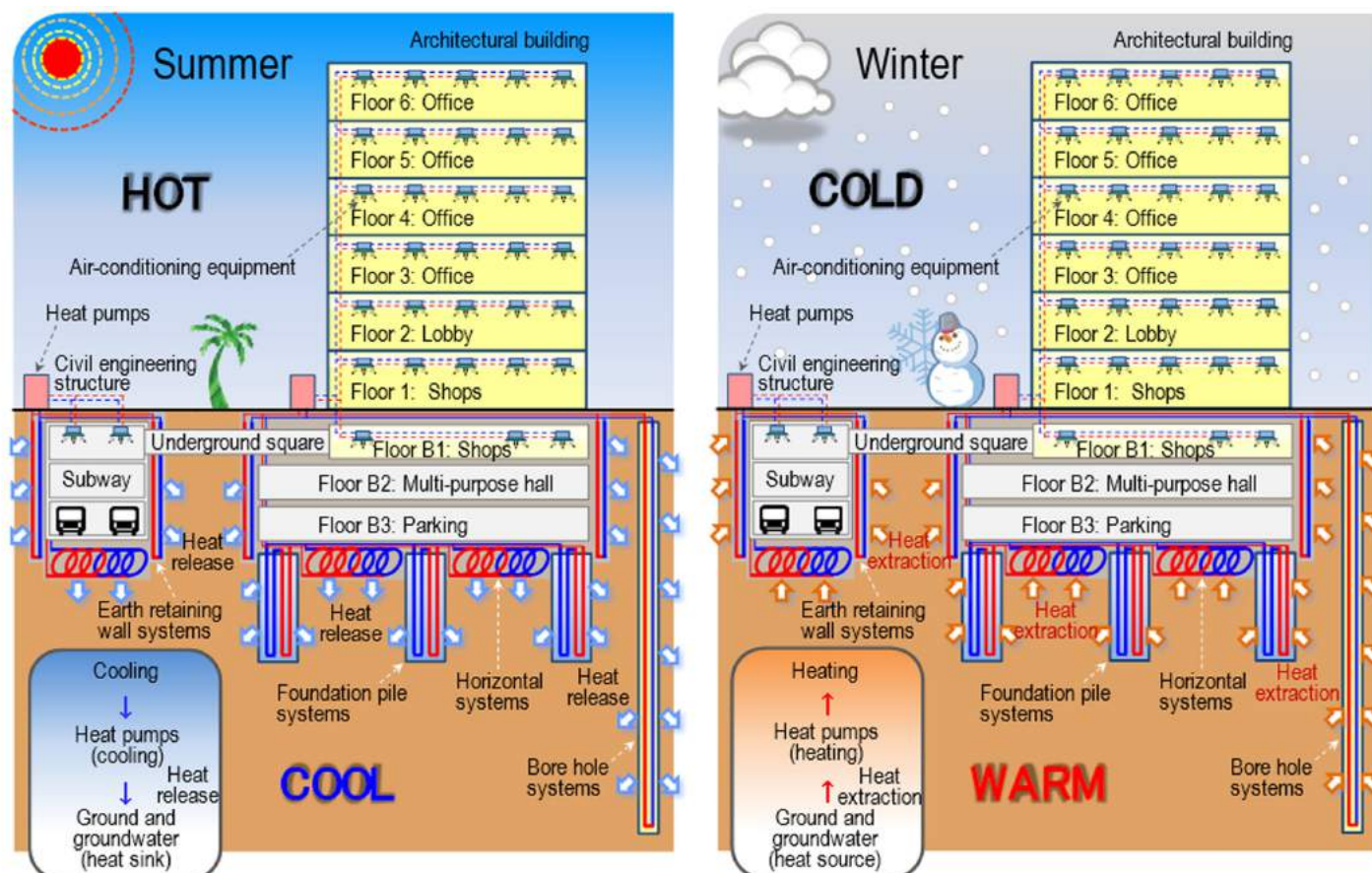
Helping to Build of a Decarbonized Society by Promoting Ground Source Heat Utilization, Which is Renewable Heat.

In 2000, Mitsubishi Materials Techno Corporation entered the business of ground-source heat, which is heat from a renewable energy source, as a provider of total engineering solutions. The company has been providing services in the process from project proposal through investigation, design, construction, and maintenance.

The company has continued its R&D efforts and acquired patented technologies through projects commissioned by the government and others, aiming to become the No.1 company in geothermal technologies. As a result, the company has succeeded in building infrastructure using ground-source heat by developing commercial systems with various heat exchange methods, including not only the common borehole method but also its patented foundation pile method as well as horizontal and earth retaining wall methods. At present, Mitsubishi Materials Techno Corporation is promoting sales of these technologies as systems for using ground-source heat utilized through urban infrastructure, aiming to contribute to smart cities in the future. Approx. 130 systems from the company have been installed. Since 2020, the large-scale use of ground-source heat has been increasing. For example, the company completed one of the largest projects in Japan, which combines the borehole method (100 m in depth x 120 boreholes) and the horizontal method (nine units x approx. 100 m long trenches), at a city hospital in Hachimantai. It also completed one of the largest projects in the Tokyo metropolitan area, which applied the foundation pile method (66 cast-in-place piles) at the Yokohama City Hall. In May 2022, Mitsubishi Materials Techno Corporation, the Yokohama City Government, Takenaka Corporation, and other companies received the 60th Gakkai-sho Gijutsu-sho (academic society award and technology award) in the building equipment category from the Society of Heating, Air-Conditioning and Sanitary Engineers of Japan for the implementation of the Yokohama City Hall environmental and facility plans. The company will continue to help establish a decarbonized society by expanding the use of ground-source heat as renewable energy.

▶ [Geothermal Heat Pump System \(Mitsubishi Materials Techno Corporation\)](#) 

■ Overview of the System for Using Ground-Source Heat Utilized through Urban Infrastructure



■ Heat Exchange Systems and Examples of Projects Which Adopted Them

Bore hole systems	Foundation pile systems	Horizontal systems	Earth retaining wall systems
 Heat supply to the Tokyo Skytree District Sonic drill method Japan's first district heating and cooling system (DHC)	 Patent No. 6452876 Adopted for use in more than 20 projects Compatible with cast-in-place piles, precast concrete piles, and steel pipe piles as well	 Patent No. 5624533/ 5859731 Quadruple tracking project of Odakyu Electric Railway The first adoption of this technology for a railway tunnel project in Japan Technological Development Projects for Global Warming Countermeasures Scheme by the Ministry of the Environment (FY2011 to FY2012, FY2012 to FY2014)	 Patent No. 5384058 NEDO project for developing technologies for using renewable energy (FY2016 to FY2019)

Carbon dioxide Capture, Utilization and Storage (CCUS)

For Carbon dioxide Capture, Utilization and Storage (CCUS)

Concerning carbon dioxide capture and storage, we invested in Japan CCS Co., Ltd., which was established in May 2008. Through Japan CCS, we are participating in the Large-scale CCS Demonstration Project in Tomakomai and Investigation of Potential Sites for CO₂ Storage. Regarding carbon dioxide capture and utilization, we have launched a demonstration test using carbon dioxide emitted and captured from the Group's plant. (See the link below for details.)

- ▶ [Recovering and using CO₂ emitted from plants -- A demonstration launched in Kyushu \(Japanese\)](#)

Environmental Management

Purpose of activities	Activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onwards
- Complying with environmental legislation - Continuous improvement of environmental load	- Strengthen efforts to observe environmental legislation - Step up education on environmental legislation	A	- Strengthen efforts to comply environmental legislation - Step up education on environmental legislation

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

Environment Policy

This “Environmental Policy of the Mitsubishi Materials Group” was established based on the Sustainability Policy and is considered to be the foundation for the business activities of the Mitsubishi Materials Group.

1. Promote Recycling and Provide Environmentally Friendly Products

We leverage our advanced recycling technologies to promote recycling of waste. At the same time, we provide environmentally friendly materials and products across our business activities starting from raw material procurement to the development, production, distribution, consumption, disposal and recycling of raw materials and products.

2. Advance Decarbonization

We work towards the decarbonization of our business activities by reducing energy consumption. We will also tap into geothermal and other renewable energy sources to decarbonize our entire value chain.

3. Respect Biodiversity

We engage in business activities that take ecosystems into account throughout our value chain, including the development of natural resources.

4. Effectively Use and Conserve Water Resources

We work to reduce water consumption through circular water management and reuse of cooling water, cleaning water and all other water used across our business activities.

5. Sustainably Manage Company-Owned Forests

We make effective use of timber and other forest resources as well as ensure appropriate management of company-owned forests that contribute to decarbonization, biodiversity and water conservation and recreational activities of the local communities.

6. Encourage Environmental Education and Harmonious Coexistence with Society

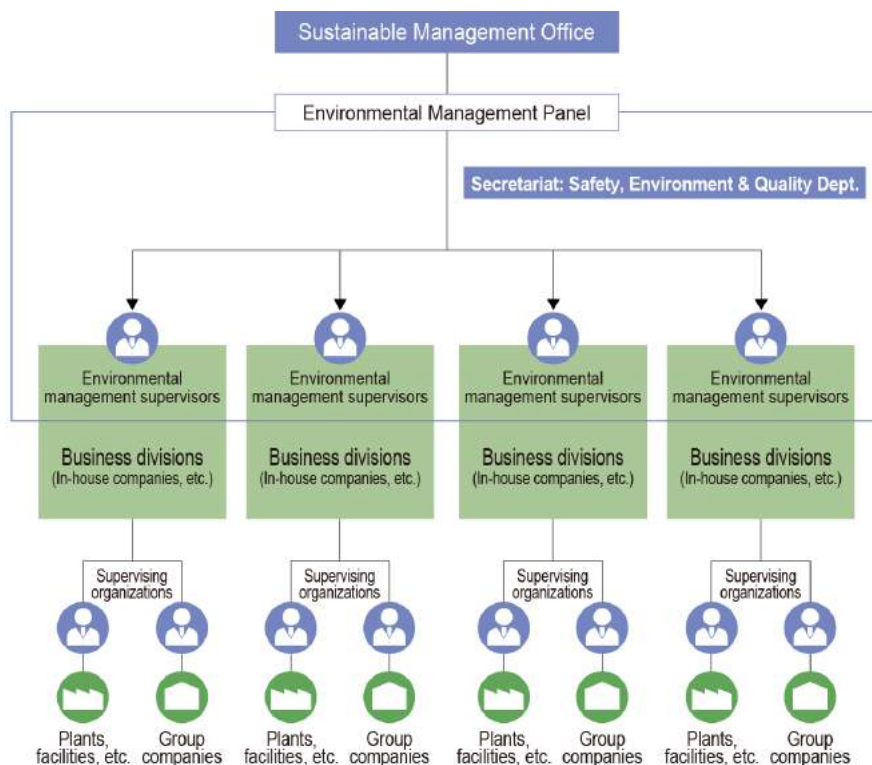
We strive to reduce the environmental impact from our business activities and prevent pollution by educating all our employees on relevant laws, regulations, and agreements on an on-going basis. We communicate proactively with our stakeholders and engage in environmental conservation initiatives.

(Last revised date : December 1, 2021)

Framework

We have established the Environmental Management Panel to be a dedicated subcommittee under the Sustainable Management Office that formulates and implements group-wide environmental measures. We appoint environmental management supervisors for each business division and manufacturing site. They work to prevent pollution and ensure compliance with environmental laws and regulations by collaborating closely with the Head Office environmental management department.

■ Environmental Management System



Environmental Management Activities

Environmental Training

We operate environmental management systems under the ISO 14001 standard and other environmental management systems at our facilities. Under those systems, we engage in continuous activities to ensure compliance with laws and regulations and improve our environmental performance. We implemented environmental training programs to promote the acquisition of knowledge regarding environmental technologies, laws and regulations which are needed by managers who promote the above activities. We are also developing and implementing a checking system for applicable laws and regulations required for day-to-day management.

1. Environmental Management Training

Management-level staff at our various facilities receive education designed to improve their understanding of pollution prevention management systems, and other basic management requirements from an environmental management perspective.

2. Waste Management Training

While the Group emits various types of waste as a consequence of its business activities, we also promote the use of recycled raw materials, such as in our metal smelting and refining business. We therefore regard waste management as a key business process, and we appoint staff who are responsible for waste management, and those in charge of practical operations at each facility. We provide training on laws and regulations and apply strict operating rules in our efforts to ensure appropriate waste management and compliance with relevant laws

and regulations. We carry out waste management training for staff who is responsible for waste management and for those in charge of practical operations.

For staff responsible for waste management, we provide education with the aim of understanding waste risks and the roles required by introducing the latest case studies on waste management.

For staff in charge of practical operations, we organize seminars for understanding the specific regulations of the Waste Management and Public Cleansing Act that are imposed on waste generators.

■ Environmental training in FY2022

		Attendance
Environmental management training	Managers	112
Waste management training	Managers	25
	Supervisors	199

Sharing Information to Address Environmental Issues

To handle the environmental issues that arise at our facilities, we have established an office providing the consultation services of staff specialized in environmental issues, at our Head Office. This office provides meticulous support, ensures that information useful in tackling environmental issues is shared between the Head Office and other facilities.

We hold an annual Meeting of Administrative Managers Responsible for Environmental Management for management-level staff at our facilities. At these meetings, we share information about environmental measures and issues. In addition, we give annual facility tours for environmental management supervisors at individual facilities. These tours are hands-on opportunities to learn methods of operating onsite related to environmental management and initiatives for preventing environmental accidents, and to exchange information with supervisors from other facilities.

Compliance with Environmental Laws and Regulations

We keep all our facilities up to date on changes in legislation applied to the Mitsubishi Materials Group by providing information via intranet or email. In the event of major revisions or revisions requiring measures such as equipment upgrades, we hold explanatory meetings to share information on the requisite measures and ensure that all our facilities are prepared to take appropriate action.

Currently applicable laws and regulations are checked periodically at each facility. In addition, the Internal Audit Department checks the status of compliance with environmental laws and regulations, how chemical substances are handled, how equipment is managed and so on. Any noncompliance discovered shall be corrected promptly and its information shall be shared with related facilities as part of our efforts to improve the level of management in the overall Group.

In the event of installation of new facilities, facilities upgrades/changes, or any other projects involving new operations above a certain scale, individual sites determine what notifications they are required to submit by law, and confirmation is also made by the relevant Head Office divisions. In addition, as a support function in the aspect of specialized legal knowledge that is needed at sites, we built a web system and began operating it in April 2021. When a name or the specifications of a facility are entered in this system, it automatically judges whether a notification or a permit application needs to be submitted about the facility in accordance with the law.

Status of Compliance with Environmental Laws and Regulations

With regard to our compliance with environment-related laws and regulations in fiscal 2022, we were not subject to any adverse dispositions (revoked permits, orders to cease operations, orders to stop use of equipment, fines, etc.) by regulatory authorities.

We received 7 complaints regarding noise and dust. For all of these we promptly investigated the causes and implemented the necessary countermeasures.

Addressing Environmental Risks

In accordance with our Environmental Policy, we identify environmental risks to the Mitsubishi Materials Group from a broad perspective and take measures to prevent such risks from materializing.

Pollution of air, bodies of water, soil or groundwater by hazardous substances leak, or inadequate treatment of industrial waste could have a detrimental impact on the environment, as well as a serious impact on our business activities as a group. We carry out risk assessments in line with the nature of our business activities, the substances that we handle, and the locations of individual facilities, and take action as necessary. In addition to preventing inadequate waste treatment at our own facilities, we take steps to ensure that we do not overlook inadequate treatment by contractors by taking measures including on-site confirmation.

At the abandoned mines (non-ferrous metal mines) we own, in order to prevent mining-induced pollution, we continue to maintain tailings dams, mining tunnels and mining water conduit, and to appropriately process acid wastewater containing heavy metals generated from these locations.

Biodiversity is also an important environmental risk for us. At the mines from which we procure raw materials (such as ores), we have established environmental and social standards, including standards for the conservation of biodiversity, and we confirm our compliance with these standards. In addition, we manage the company-owned forests in Japan to ensure a high level of ecosystem services from them. They fulfill a certain standard that has been assured by our acquisition of a forest certification.

To reduce climate change risks, we take multiple approaches for the conservation of energy and the reduction of CO₂ emissions. We also study CO₂ capture and use, and generate renewable energy. Regarding the risk that a shortage of freshwater resources could impact our business activities, we conduct risk assessments for our major facilities in Japan and overseas and take measures including the effective utilization of seawater, water conservation through the improvement of the efficiency of the production process, water recycling, and ensuring that wastewater is treated and purified.

Environmental Accounting

In fiscal 2022, we invested approximately ¥4.9 billion in areas including renewal of equipment at cement plants and copper smelting and refining facilities, with the goal of preventing air pollution and water pollution. Costs associated with environmental preservation came to around ¥7.3 billion, including environmental measures, and maintenance and management of equipment to prevent pollution.

Spending on Environmental Preservation in FY2022 [Million yen]

Category		Investment Amount	Expense Amount
Business area costs	Business area costs	4,848	6,821
	Pollution prevention costs	4,089	3,426
	Global environmental conservation costs	641	450
	Resource recycling costs	118	2,946
Upstream/downstream costs		0	0
Administration costs		46	272
R&D costs		2	32
Social activity costs		0	13
Environmental remediation costs		15	144
Total		4,911	7,282

* Calculations are based on the 2005 version of the Environmental Accounting Guidelines published by the Ministry of the Environment.

* Figures refer to Mitsubishi Materials on a non-consolidated basis.

Overall Environmental Impact

INPUT



Total Energy Input★

» **40.4** PJ

(Equivalent to 1.04 million kiloliters of crude oil)



Raw Material Input★

» **16.9** million t

(Volume of incoming recycled resources: 3.2 million t)



Water Use★

» **420** million m³

(Salt water: 403 million m³)
(Fresh water: 17 million m³)

(All values above are on a non-consolidated basis)

OUTPUT



Greenhouse Gas Emissions★

» **7,250** thousand t CO₂ equivalent

(SCOPE1,2)



Emissions into the Air and Bodies of Water★

» Airborne emissions

SO_x: **786** t NO_x: **10,756** t

» Water emissions

BOD: **31** t COD: **27** t Nitrogen: **159** t



Water discharged★

» **417** million m³

(Discharged into sea: 408 million m³)
(Discharged into other bodies of water: 11 million m³)



Volume of Industrial Waste★

» **14.0** thousand t

(8.3 thousand t of which was recycled)



Chemicals Released or Transferred★

» Released: **78** t Transferred: **40** t

(All values above are on a non-consolidated basis)

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.
Regarding the aluminum business, on March 31, 2022, we transferred all of our shares of Universal Can Corporation to Showa Aluminum Can Corporation, and on the same day, we split the Aluminum rolling and processing business from Mitsubishi Aluminum Co., Ltd. into Showa Aluminum Can Corporation through an absorption-type company split.

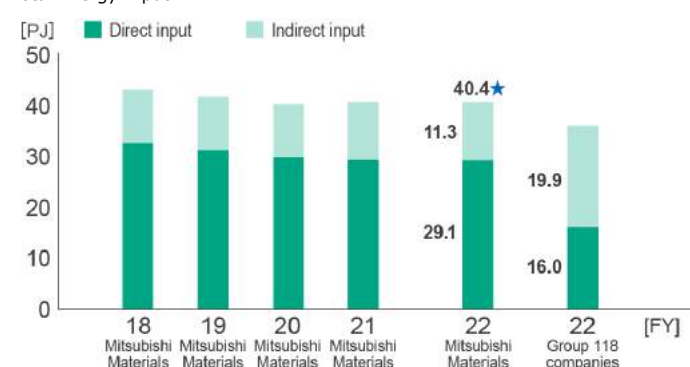
Among the following disclosure items, energy input includes data from sites belonging to the cement business and the aluminum business. The other disclosure items include data from facilities belonging to the cement business while they do not include data from sites belonging to the aluminum business.

Total Energy Input

Total energy input (non-consolidated) in fiscal 2022 decreased by 0.15% (0.1 petajoules: crude oil equivalent of 2 thousand kiloliters) in comparison with fiscal 2021.

While there was an increase in activity levels at other plants and locations despite falling production volume at some cement plants, this was offset by an increase in the use of waste plastic and other alternative thermal energy resources, producing results that were largely on par with FY2021.

Total Energy Input



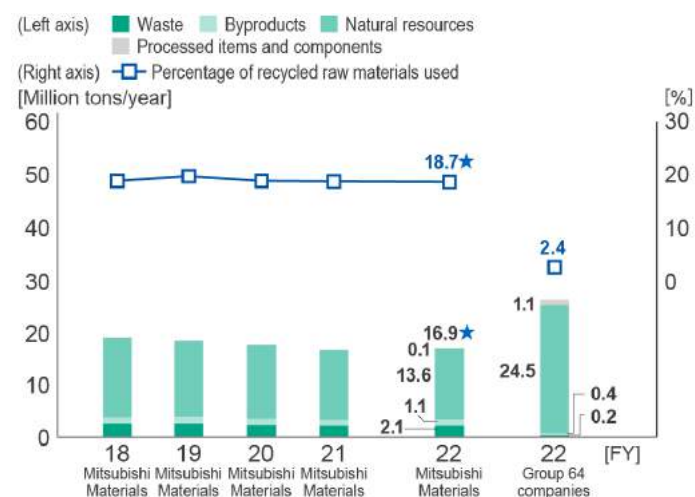
* 1PJ = 10¹⁵J = 1,000TJ

Raw Material Input

In order to contribute to a material-cycle society, we strive for the recycling and using waste and by-products.

The Company (non-consolidated) used a total of 3.2 million tons of recycled waste and byproducts during fiscal 2022 (roughly the same as in fiscal 2021), which is roughly 18.7% of the total raw material input of 16.9 million tons.

Raw Material Input



* Natural resources include limestone procured from Group mines

Water Use

The vast majority of the water we consume is seawater used as cooling water at thermal power generation facilities at our cement plants and copper plants.

The Company (non-consolidated) used a total of 420 million m³ (5% increase from the previous year) of water at during fiscal 2022. Only 16.8 million m³ (4%) of the total water consumption volume was fresh water.

Water Consumption (Excluding Seawater)



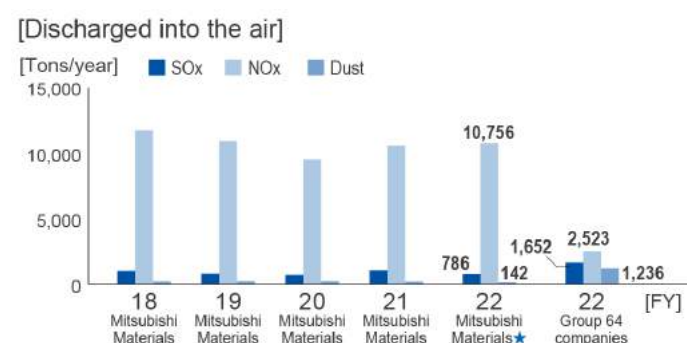
* Excluding fresh water used in hydroelectric power generation

* Excluding seawater used for cooling

Emissions into the Air and Bodies of Water

We monitor the amounts of sulfur oxides (SO_x), nitrogen oxides (NO_x) and dust contained in waste gases from facilities, as well as attributes such as BOD (biochemical oxygen demand), COD (chemical oxygen demand) and nitrogen content in wastewater.

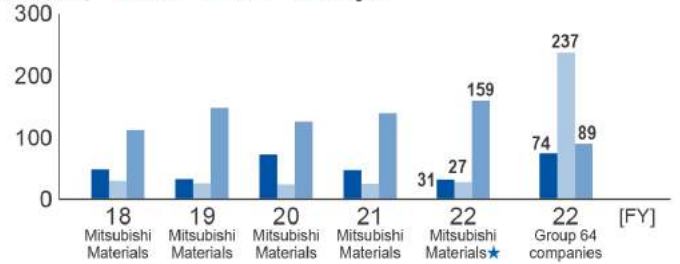
Emissions into the Air



Emissions into Bodies of Water

[Discharged into bodies of water]

[Tons/year] ■ BOD ■ COD ■ Nitrogen

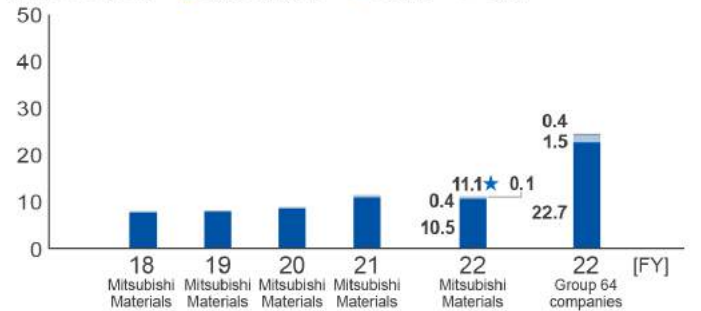


Water Discharged

The volume of water discharged (excluding water drained into the sea) by the Company (non-consolidated) in fiscal 2022 totaled approximately 11.1 million m³, roughly the same as in fiscal 2021. Water drained into the sea by the Company (non-consolidated) was 406 million m³, and the vast majority was seawater that had been used as cooling water.

Water Discharged (Excluding Water Drained into the Sea)

[Million m³/year] ■ Lakes and rivers ■ Sewers ■ Other



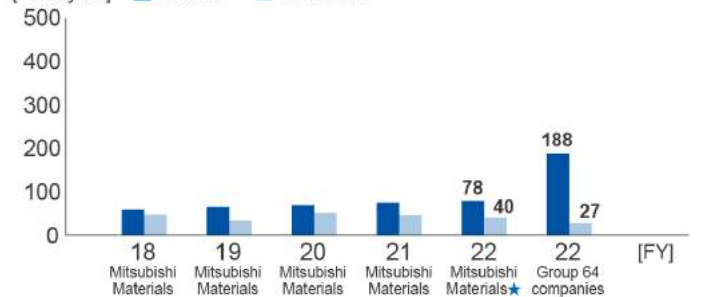
* Excluding water drained into the sea

Chemicals Released or Transferred

The Company's non-consolidated emissions in fiscal 2022 were 78 tons, roughly the same as in fiscal 2021. The transferred amount was 40 tons, which was decreased by 13% from the previous year.

Chemicals Released or Transferred

[Tons/year] ■ Released ■ Transferred

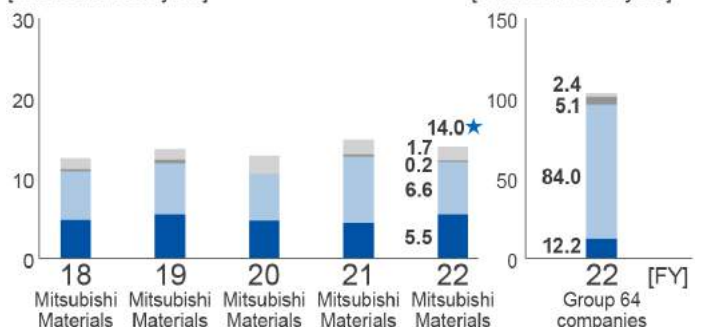


Volume of Industrial Waste

The volume of industrial waste from the Company (non-consolidated) in fiscal 2022 was approximately 14 thousand tons, which was decreased by 7% from the previous year. The volume of waste sent to landfills by the Company (non-consolidated) in fiscal 2022 was approximately 5.7 thousand tons, which was 21% increased from the previous year. The total volume of waste for the Group as a whole, including Mitsubishi Materials, came to approximately 120 thousand tons, of which around 80% was recycled.

Volume of Industrial Waste

■ Sent to landfill (Non-hazardous) ■ Sent to be recycled (Non-hazardous)
■ Sent to landfill (Hazardous) ■ Sent to be recycled (Hazardous)



Preventing Environmental Pollution

Preventing Air Pollution

The Group uses manufacturing processes that emit air pollutants such as dust and sulfur oxides (SO_x) as a result of burning fuel, etc. In particular, emissions from our copper smelting and refining plants account for the majority of those emissions. Each facility is working to suppress emissions of air pollutants by stabilizing and increasing the efficiency of operations that generate emissions, and by installing advanced waste gas treatment equipment and maintaining appropriate performance.

Preventing Water Pollution

All of our sites strive to prevent water pollution, such as by appropriately treating effluent and imposing wastewater management standards that are even stricter than the wastewater standards stipulated by law or municipal ordinance. In addition to measures such as installing dikes to prevent chemical or oil leaks, and inspecting equipment on a daily basis, we also conduct regular training aimed at preventing the spread of substances in the event of a leak.

Chemical Substance Management

The Group's manufacturing plants handle a diverse range of chemical substances. Each site is taking steps to reduce environmental risks, such as reducing the use of hazardous chemical substances, preventing their leakage into the environment, and reducing emissions. Specific initiatives include the review of processes according to the characteristics of each chemical substance, the installation of new equipment, as well as the switch to less hazardous alternative substances.

Waste Management

To contribute to building a resource-recycling society, we take comprehensive measures to reduce waste discharge and recycle resources from waste we have discharged. We also engage in recycling operations.

Managing Abandoned Mine

Purpose of activities	Activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onwards
Managing abandoned mines	- Ongoing training of engineers managing abandoned mines - Upgrading aging facilities (continued) - Tailings dam reinforcement work (continued)	A	- Ongoing training of engineers managing abandoned mines - Upgrading aging facilities (continued) - Tailings dam reinforcement work (continued)

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

Managing Abandoned Mines

We are a company with its origins in the mining industry. The Mitsubishi Materials Group owns a wide range of mines around Japan, including limestone, coal and nonferrous metal mines, such as copper, lead and zinc mines. Operations at all of our non-ferrous metal mines have now been suspended or discontinued. Currently, we are managing 21 abandoned mines in 15 locations. We have continued to implement the following controls and management programs for our abandoned mines on a long-term basis, pursuant to Article 5 of our Code of Conduct, which states, “[Environmental Management] We will work to manage our environmental impact and promote decarbonization, make efficient use of natural resources, and accelerate recycling.”

- Management of tailings dam (sites used to store rubble from mining minerals, slag and sediment from mine drainage treatment).
- Maintenance of excavated mine drift and drainage routes; implementation of safety measures at disused mine mouths and subsidence sites.
- Treatment of acidic drainage containing heavy metals from the above sites.

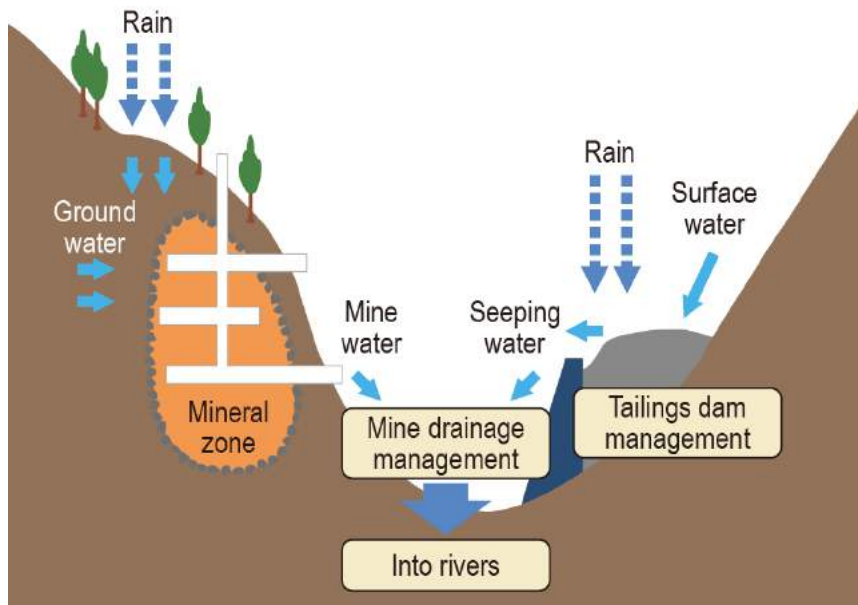
We continue to preserve and maintain sections of mine drift in some abandoned mines as cultural heritage sites or tourist facilities to exhibit their former conditions and preserve historical mining technologies for future generations.

■ Abandoned Mitsubishi Materials (non-ferrous) Mines



Overview of Acid Mine Drainage Treatment at Abandoned Mines

Broadly speaking, acid mine drainage can be generated in two ways. There is the acidic water in the pits (mine water) containing heavy metals, generated through contact between oxidized minerals and rainwater and groundwater, which can fill the underground pits and mining cavities formed in mineralized belts due to mining operations. Then there is the permeated water (wastewater) generated when small amounts of heavy metals, which are contained in slag and other substances in the tailings dams, come into contact with rainwater and surface water. The acid mine drainage goes to processing plants, where it undergoes neutralization and the removal of heavy metals. The water is then discharged into rivers according to wastewater standards.



Major Management Tasks for Abandoned Mines

The Group controls acid mine drainage treatment, tailings dams, mine drifts and entrance drifts at the abandoned mines under its management. Acid mine drainage treatment involves the appropriate processing. Tailings dam control involves preventing stored slag and sediment from leaking out in case of dam body collapse. Mine drift and entrance drift control involves inspections to maintain waterways for acid mine drainage and sealing entrances to prevent injuries due to third-party trespassing and mine drift collapse. In particular, acid mine drainage control is carried out around the clock every day of the year.



Acid mine drainage treatment facilities (Yatani Mine)



Tailings dam management (Ikuno Mine)

Digitalization of Management Tasks for Abandoned Mines

We are pushing forward with the digitalization of management tasks for abandoned mines to improve the management and efficiency of the tasks.

- Operational data is collected automatically and centrally managed as digital data. The use of this digital data enables the remote management of operations at water treatment and other facilities.
- We have improved management by creating a system for the early detection of abnormalities, including the visualization of operational data using digital data (such as the creation of graphs showing change over time) and remote alarms that are triggered when an abnormality is detected.
- We use smart devices to inspect and record water treatment facilities and tailings dams and thus centrally manage as digital data. We ensure the efficiency of the tasks by, for example, using the data to automatically create reports.



Visualization of operational data
(displaying data trends)



Recording inspection results using
smartphone (digitalization of
inspection data)

Facility Upgrading and Environmental Countermeasures for Abandoned Mines

Since 2015, our Group has been implementing responses to deteriorating natural disasters and other risks by conducting protective construction to guard against contamination and other threats, reinforcing tailing dams to prevent uncontrolled release of slag and sediment in the event of major earthquakes, reducing wastewater at the source and upgrading aging facilities and by fiscal 2019, we had completed appropriating an environmental countermeasure reserve for work expenses.

Tailings Dam Reinforcement

Drawing on lessons learned from the leakage of slag and sediment from tailings dams managed by other companies during the Great East Japan Earthquake, in November 2012, the Ministry of Economy, Trade, and Industry revised its technical guidelines on aseismic performance. Based on this, we evaluated the stability of the tailings dams at abandoned mines managed by the Group, which revealed that measures needed to be implemented at 10 locations. Thus, we started construction work to design and implement stability measures at the locations in fiscal 2016.



Reinforcement work by soil
stabilization at the Yatani Mine
Tailings Dam (completion)

Wastewater Reduction at the Source

In an effort to decrease the burden and risks of acid mine drainage due to environmental changes (large-scale typhoons and guerrilla rainstorms) in recent years, we are proceeding with source countermeasure construction and updating aging equipment. One way of the source countermeasures is to cover exposed surfaces of mineralized belts on a large scale, such as by using the latest technology (which enables greening that was previously difficult due to acidic rocks). This prevents rainwater from coming into direct contact with the mineralized belts, which is expected to reduce the amount of water to be processed as well as the burden of contamination.



Contamination containment work
(Komagi Mine)



Upgraded pit wastewater
treatment facility (Komagi Mine)

Human Resources Development

All the Group's non-ferrous metal mines are abandoned and some time has passed since the mines were closed down. As such, we have seen a decrease in relevant human resources as engineers with skills in non-ferrous metal mining have either retired or reached advanced age. In order to continue to sustainably manage abandoned mines, we are actively training young engineers with little mining experience, and setting up a variety of educational programs for engineers (including programs for acquiring skills for the management of abandoned mines and for obtaining relevant qualifications). In this way, we strive to transfer mine management skills.



Engineer training (mine tunnel
management)



Engineer training (basic training)

Joint Industry-academic Activities

In fiscal 2018, we opened an endowed laboratory in the field of resources environment and remediation at Hokkaido University. In addition to giving lectures related to the protection of the mining environment, this laboratory engages in a variety of research projects and activities.

We also work on initiatives including the development of new environmental conservation technologies in cooperation with and guided by experts from other universities and research institutions. We have widely publicized the achievements of these R&D efforts by presenting them in research papers, at symposiums and at other events.

- Greening of former mining sites (University of Tsukuba, Hokkaido University): We are researching the heavy-metal resistance that endophytic fungi can provide to plants in former mining sites, in our efforts to facilitate the greening of former mining sites, where it has been difficult for plants to take root.
- Water treatment technology using a fungus (Akita Prefectural University): We are studying a new mine drainage treatment technology using a manganese-oxidizing fungus that can remove manganese in the neutral range.
- Examination of a method to evaluate ecological effects (National Institute of Advanced Industrial Science and Technology): We are examining a method of evaluating ecological effects of inflow of mine drainage on rivers from the viewpoint of effects on aquatic organisms by using field surveys.
- Development of a passive treatment technology: We are developing a mine drainage treatment technology that makes use of natural purification for the absorption removal of heavy metals using mulch.
- Development of a remote monitoring technology (National Institute of Advanced Industrial Science and Technology): We are developing a super power-saving remote monitoring system with radio wave directivity, a technology that will enable the monitoring of locations in mining areas without a power grid or communications network.



A plant tour given to students from an endowed laboratory (site tour)



A greening survey at a former mining site



A river ecological survey (collection of benthos)



Field test of passive treatment

Communication with Local Residents

To promote local residents' understanding of our measures for preventing mining-induced pollution at our abandoned mines, we proactively hold sessions to explain countermeasure work and offer facility tours. We also strive to contribute to local communities through tree-planting and the release of juvenile fish as environmental activities, as well as participation in and cosponsoring of local events and festivals. In addition, we accept inspection tours of our mining facilities by students and researchers from Japan and overseas. We thus offer our facilities as locations for research and development and skills training related to the prevention of mining-induced pollution.

Preserving the Natural Environment

Theme of activities	Results of activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onward
Contributing to local communities, society, and the global environment through sustainable management of company-owned forests	We received and passed periodic screenings to maintain forest certification from the Sustainable Green Ecosystem Council (SGEC). (Site inspections were conducted at Teine Forest and Hayakita Forest.)	A	Maintain SGEC forest certification
	We maintained forests appropriately based on our forest management plan, including cutting and thinning (169.96 ha), planting (4.25 ha) and weeding / clearing away underbrush (47.82 ha).	A	Promote environmental conservation of forests by maintaining forests appropriately based on our forest management plan
	We tried to develop forests by making use of nature's strengths, aiming for both environmental and economic achievements.	A	Pursue beautiful forests that are resistant to disasters and have high public interest functionality, through various effective forest development practices
	We performed tree thinning with small-scale work channels at Teine Forest and Ikuno Forest, as a method for implementing disaster-resistant forest development.	A	
	The Teine Forest is being developed and maintained as a suburban environmental forest. The environmental impact of thinning is small, and a beautiful finish has been achieved through the application of horse logging (a method of timber gathering that makes use of horses).	A	
	We enhanced monitoring activities such as the introduction of a smartphone app to more accurately assess the state of the conservation of biodiversity, changes in ecosystem services (public functions) that occurred through forest maintenance, and the amount of forest growth, etc.	A	Consistently implement monitoring activities and establish quantitative evaluation methods for evaluations ecosystem services (public function) in collaboration with research institutions

Theme of activities	Results of activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onward
	We have conducted measurement tests of the amount of forest resources using remote sensing technologies including drones and satellite data, and achieved a certain level of precision.	A	Efficiently ascertain and organize forest data utilizing remote sensing, ICT and IoT technologies
	We donated Christmas trees made with trees from company-owned forests and tree graduation certificates made using wood from company-owned forests to preschools in company-owned forest areas and held tree planting events for them.	A	Continue to contribute to local communities through services related to company-owned forests (initiatives such as the donation of Christmas trees)
	We provided wood as a building material for elementary and junior high schools in Abira Town, Hokkaido, where our company-owned forest is located, as an initiative to effectively use the wood from company-owned forests.	A	Increase the value of company-owned forest by promoting utilization of high added-value wood from company-owned forests and contribute to economically sustainable forest management
	We make company-owned forests available as sites for the nature experience activities of local NPO organizations, training for the purpose of popularizing the forestry industry, research / surveys by universities and other research institutions, and sports competitions, etc.	A	Promote the provision of company-owned forests as sites for recreational activities, education, research, and training
	We ran a booth introducing our company-owned forest initiatives at Omotenashi Hiroba, a ceremonial event of the 44th National Tree-Growing Festival held in Hokkaido.	A	Continue to hold tree-planting and raising ceremonies, tree-related education and other environmental events

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

Preserving Biodiversity

The preservation of biodiversity is an element that forms the basis of our approach to business. We clarify this point both internally and externally by stating, “We will be more considerate of biodiversity and work to live in the harmony with nature”, in the Article 5 of our Code of Conduct. In addition, in our Environmental Policy we state, “We recognize that biodiversity is one of the cornerstones of a sustainable society, not least in terms of natural resource development, and will ensure that our business activities remain in harmony with society and the natural environment, taking ecosystems into consideration every step of the way.”

In our business activities, the impact on biodiversity is particularly likely from overseas mines from which we procure raw materials. At the copper mines in which we have invested and are our important suppliers (Copper Mountain Mine in Canada, Escondida Mine in Chile, Los Pelambres Mine in Chile and Mantovelde in Chile), an Environmental Impact Assessment was appropriately conducted before the mining operations commenced and environmental monitoring has continued ever since. In

ongoing copper mine development projects (at Zafran in Peru and Namosi in Fiji), we are carrying out environmental baseline studies for Environmental Impact Assessment and collecting data for preserving diversity. As an investor, we confirm with operators of the mines that these initiatives will be taken, and encourage them to take such initiatives. In addition, when we procure materials from a mine in which we do not invest, we confirm that considerations are given to natural protected areas and biodiversity is preserved, in accordance with the CSR Procurement Standards of Metals Company.

We also take initiatives to preserve biodiversity at our manufacturing facilities by considering the characteristics of each site. For example, at Naoshima Smelter & Refinery (Naoshima Town, Kagawa County, Kagawa), we have been engaged in Material-no Mori (Materials Forest) tree-planting activities in districts where trees were lost due to wildfires. At such sites, we also create biotopes, grow sunflowers, and use their seeds as part of the Wanosato Project, which is aimed at environmental education and learning. Naoshima Smelter & Refinery ensures thorough treatment of exhaust gas and effluent from the facility under its own standards, which are stricter than government standards, in its efforts to protect the natural environment of Setouchi.

We own 14,000ha of forest across Japan and manage it by considering the habitats of the plants and animals that live there.

We carry out wildlife monitoring and include rare species confirmed to be living in the areas on our red list. Our nine forests in Hokkaido have obtained certifications for sustainable forest management with consideration for biodiversity.

We will continue to pay attention to the contact points between our business activities and biodiversity, and take action to conserve biodiversity from a broad perspective.

TOPICS

Participation in the 30 by 30 Alliance for Biodiversity

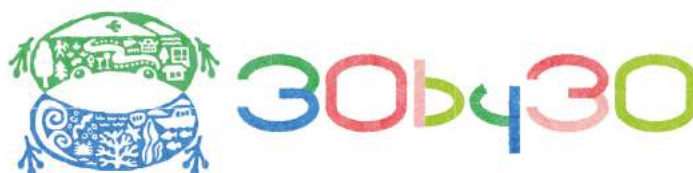
- We Will Make Use of Our Company-Owned Forests to Contribute to Conservation of Biodiversity -

Mitsubishi Materials Corporation has been enrolled as a participating company in the 30 by 30 Alliance for Biodiversity (hereinafter "Alliance") at the initiative of the Ministry of the Environment as of April 2022.

This Alliance is a coalition of the willing established for the achievement of the nature-positive global goal to halt and reverse biodiversity loss by 2030.

To accomplish this goal, Japan, with the aim of achieving the conservation and protection of at least 30% of the country's lands and waters by 2030 (30 by 30), has committed not only to expanding protected areas such as national parks, but also to designating as OECMs (other effective area-based conservation measures) areas other than protected areas, such as company forests, conducive to the conservation of biodiversity.

We own 14,000 ha of forest across Japan and practice forest management and control in consideration of the habitats of animals and plants living there. We also carry out wildlife monitoring and include rare species confirmed to be living in the areas on our red list. In addition, our nine forests in Hokkaido have obtained certifications for sustainable forest management with consideration for biodiversity.



▶ [Press release link:](#)

[Participation in the 30by30 Alliance for Biodiversity](#)

▶ [Press release link:](#)

[Cooperation in project demonstrating the certification of Natural Symbiosis Sites \(tentative name\)](#)

Biodiversity Initiatives at Our Mine

■ Monitoring Water Quality at Copper Mines (Copper Mountain Mine)

We invest in Copper Mountain Mine, located in British Columbia, Canada, where we engage in corporate management with an emphasis on biodiversity. We continually monitor the quality of water in local rivers, in accordance with quality guidelines issued by the provincial government, and also carry out ongoing surveys into fish populations, in order to gauge the impact of our activities on the ecosystem. Continuous environmental monitoring has been carried out since the mine operation started, and also closure plan is established.



Surveying fish populations

■ Environmental Impact Assessment as part of Copper and Gold Deposit Development Project

We are carrying out a basic environmental study geared towards conducting EIA* as part of a development project in Zafranal, in southern Peru. At the same time, we are studying and analyzing the potential impact on the environment by the development, and are looking into ways to secure new habitats for species of flora and fauna if there is a risk of any impact on the ecosystem.

* Environmental Impact Assessment



Exploration drilling



River water quality survey

Environmental Impact Assessment on Construction of Power Plants

■ Environmental Impact Assessment for Launch of Operations of Appi Geothermal Plant

In 2015, we established Appi Geothermal Energy Corporation in conjunction with Mitsubishi Gas Chemical Company, Inc. to the west of Appi Highlands in Hachimantai City, Iwate. We were joined by Electric Power Development Co., Ltd. in 2018, and the three companies are promoting the project towards the launch of the operation, aiming to begin operating a 14,900 kW geothermal power plant in 2024. Appi Geothermal Energy Corporation began procedures for an Environmental Impact Assessment in 2015, and studied, predicted, and assessed the impact of the construction of the Appi Geothermal Power Plant on the surrounding environment. The company received approval for the final environmental impact statement from the Minister of Economy, Trade and Industry in January 2018 and began construction of the plant in August 2019.

■ Voluntary Assessment of the New Komatagawa Hydroelectric Power Plant

We own a hydroelectric power plant immediately below the Moriyoshi Dam in the Komata River, a branch stream of the Ani River in the reservoirs along the Yoneshiro River in Kita-Akita City, Akita. In May 2019, we began construction on the New Komatagawa Hydroelectric Power Plant (rated output: 10,326 kW), a hydroelectric power plant that will use the discharged water which was used for power generation at the existing plant. When planning the construction of the new power plant, we undertook a voluntary environmental assessment to determine the impact on the surrounding environment. We are also creating a new plan to ensure that the flow rate of surplus from the new plant will be appropriate for the river to preserve the surrounding river environment. In addition, we will carry out eco-friendly construction work. We will use power generated in the existing hydroelectric power plant, a renewable energy, for construction work on the headrace tunnel with TMB method. We will also recycle trees that were felled to construct the new power plant.

■ Activities for Protecting Rare Animals

To further develop its activities for environmental protection and biodiversity preservation, PT Smelting has been co-sponsoring a program for protecting rare animals by Taman Safari Indonesia since 2018.

In this program, endangered species designated by the International Union for Conservation of Nature (IUCN) are bred and released into the wild to enhance sustainability. PT Smelting participates in a program to protect Javan hawk-eagles. The Javan hawk-eagle is the national bird of Indonesia because it has the same characteristics as Garuda, the divine bird in the national emblem of Indonesia (Garuda Pancasila). However, recently there is concern over the decrease in the population of this species due to the destruction of rainforests as well as poaching. Through this program, the company not only aims to breed Javan hawk-eagles as a national symbol but also to support the education of children as future leaders and biological research on the birds, thereby contributing to preserving biodiversity.



Javan hawk-eagle

Photo provided by Taman Safari
Indonesia

Developing Environmental Technologies and Products

Basic Policy on R&D

Developing New Products and Technologies to Anticipate Changes in the World around Us

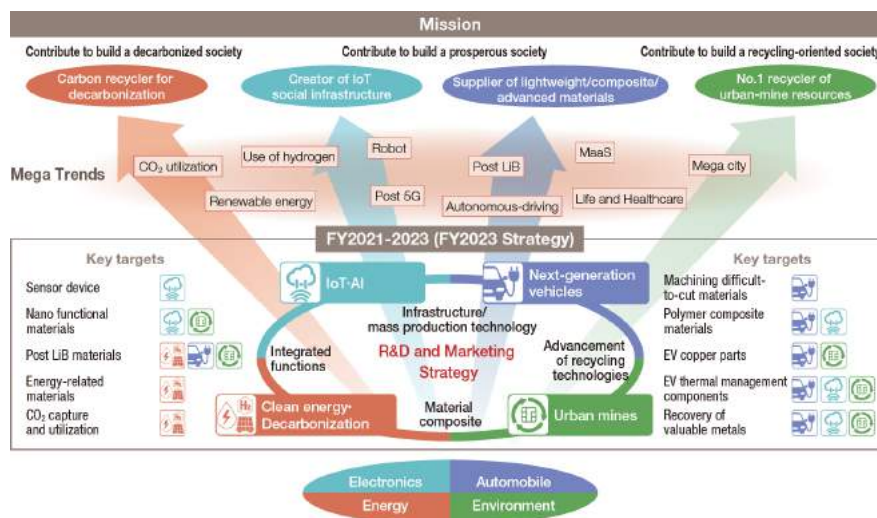
Our basic policy when it comes to development is to precisely identify customers' needs and future technology trends, and to develop and provide products and technologies that anticipate changes in the world around us. With this policy in mind, we aim to provide the Earth with new materials that make the most of the group's unique technologies. This means creating distinctive products and technologies that will be competitive in the global market, and upholding our strategy of becoming a world's leading company.

We also engage in a development strategy with the aim of creating timely new products and technologies that will help us to become the number one, and "only one", in each of our lines of business in the short term. Over the medium term, we intend to focus on developing new core businesses that will underpin the sustainable growth of the entire group, particularly in next-generation vehicles, IoT and AI-related products and areas where we can contribute to a realization of fulfilling sustainable society. On a longer-term basis, we intend to boldly take on the challenge of creating inspirational new technologies for the future. Combining technology, human resources and passion, our aim is to continually achieve innovation, with an emphasis on the customer's perspective and speed.

Examples of Environmentally Friendly Development

We are also committed to improving manufacturing processes, and reducing environmental impact from our materials and components. We use computer analysis technologies to optimize operating conditions to reduce CO₂ emissions derived from thermal energy from our plants. We have rolled out the technology to manufacturing processes for copper smelting and polycrystalline silicon, to enable us to improve quality and increase efficiency. We are also working on technologies capable of harnessing alternatives to fossil fuels, including waste plastic and shredder dust, as well as using recycled raw materials in the smelting process and recovering rare metals from urban mines. In an effort to save energy and extend the life span of our materials and components meanwhile, we are working on development in areas such as coating films for cemented carbide products, battery materials, connector terminals, insulated circuit substrates and temperature sensors.

Research and Development Strategy



■ Major Achievements in FY2022

Field	Item	Details
Renewable energy	Participation in NEDO's Green Innovation Fund Project/Development of Next-Generation Solar Cells	We are participating in a Green Innovation Fund Project as a company commissioned by EneCoat Technologies Co., Ltd., which we finance. We develop peripheral materials to reduce costs and improve the performance of perovskite solar cells to facilitate the wide use of the cells.
Recycling	Joint research with Emulsion Flow Technologies started	We have started joint research with Emulsion Flow Technologies Ltd. on metal recycling technology using the emulsion-flow method, which is an advanced solvent extraction method.

TOPICS

Carbon Recycling Technology Adopted as an R&D Project Commissioned by NEDO

For the creation of a new business for carbon neutrality, we set about research and development in 2017 for a technology to decompose carbon dioxide (CO₂) for recycling as a carbon material. In October 2021, we have been adopted as a project commissioned by the New Energy and Industrial Technology Development Organization (NEDO) with the title of "Development of Carbon Material Manufacturing Technology by Chemical Decomposition of Carbon Dioxide" in the field of "Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation / Development of Technologies for CO₂ Reduction and Utilization".

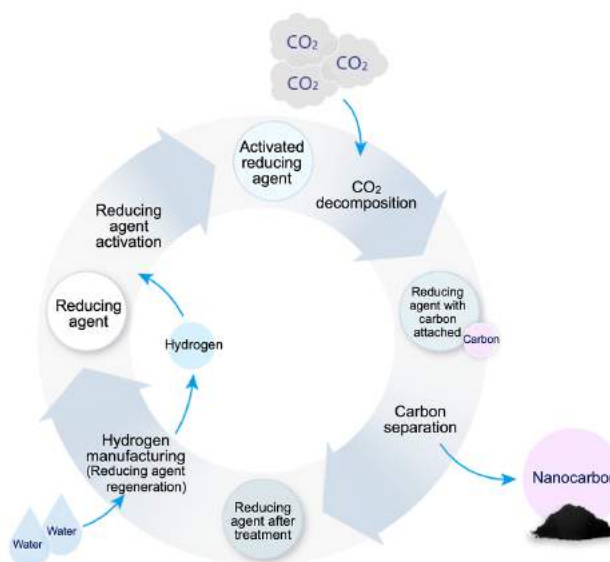
This technology uses the reaction of an activated reducing agent (powdered metal oxide) with CO₂ to break down and recover the CO₂ as a particulate carbon nanomaterial (a valuable resource). The recovered carbon nanomaterial is expected to be used in a variety of applications as a source of carbon.

Many carbon recycling technologies require hydrogen. Features of this technology are that the amount of hydrogen the process requires is relatively small, hydrogen is even generated by the process, and it is a cyclical process in which the reducing agent and other materials can be reused.

We will continue to contribute to the building of a decarbonized society by working on the reduction of CO₂ emissions and effective utilization of carbon including practical application of this technology.

▶ [Press release link](#)

[Carbon Recycling Technology Adopted as an R&D Project Commissioned by NEDO](#)



Sustainable Management and Operation of Company-owned Forests

Basic Approach to Sustainable Forest Management

We currently own around 14,000ha of forestland in Japan, mainly in Hokkaido, making us one of the largest owners of forestland in the country. We originally began acquiring forests for the purpose of supplying wooden supports for our own mines and coal mining activities. As we no longer operate domestic mines or engage in coal mining however, our forests now fulfill different roles and are subject to different expectations.

We are managing the forests for the purpose of harnessing their ecosystem services in a high level. Those services include not only the production of lumber as a renewable resource but also the provision of public recreational spaces, the prevention of global warming through CO₂ fixation, and the conservation of biodiversity. Not all company-owned forests are the same as their location and environmental conditions vary by area, as do the functions they are hoped to fulfill. As such, we divide the forests we manage into four categories (zoning): water and ecosystem conservation zones, health and cultural usage zones, selective natural forest cutting zones, and timber resource recycling zones. We specify what functions need to be developed and what management methods apply for each zone type. While steadily conducting this kind of meticulous forest management, we will pursue beautiful forests that are rich in function, under the slogan: "Materials' forests will lead the way for forests throughout Japan."

By way of outside recognition for sustainable forest management initiatives such as these, on October 1, 2012, we obtained certification from the Sustainable Green Ecosystem Council (SGEC) at Hayakita Forest in Hokkaido. Since then, the SGEC has revised and introduced certification standards outlining transitional procedures for mutual certification with the Programme for the Endorsement of Forest Certification (PEFC), an international forest certification scheme. With that in mind, we simultaneously obtained forest certification under the SGEC's new standards for a total of nine forests in Hokkaido on September 1, 2015, including Hayakita Forest.

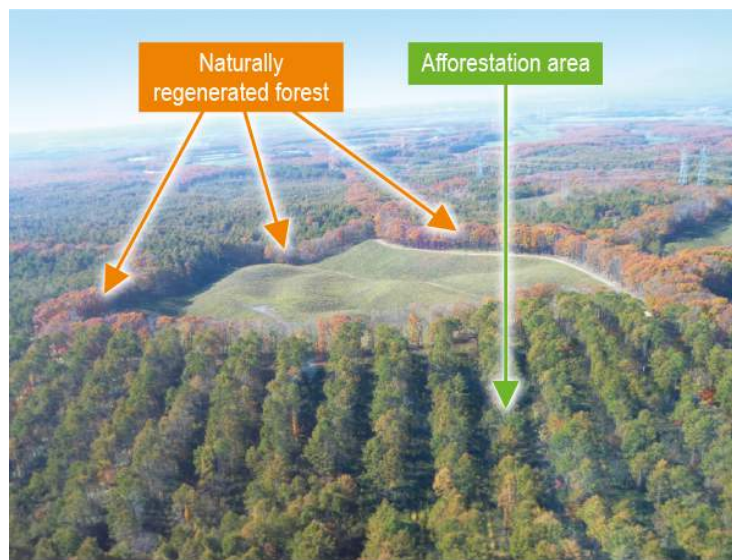


■ The Zoning of Company Forests and Management Policies

Zone	Activity
Water and ecosystem conservation zones	Maintain the natural forest by the water and convert it into a natural forest if artificial
Health and cultural usage zones	Create a model forest and facilities for walking and other forms of forest recreation
Selective natural forest cutting zones	Produce useful broad-leaved trees in a sustainable manner by felling trees in naturally regenerated forests within a range not exceeding their growth
Timber resource recycling zones	Sustainably produce lumber from artificial needle-leaved forests

■ Data on Company-owned Forests

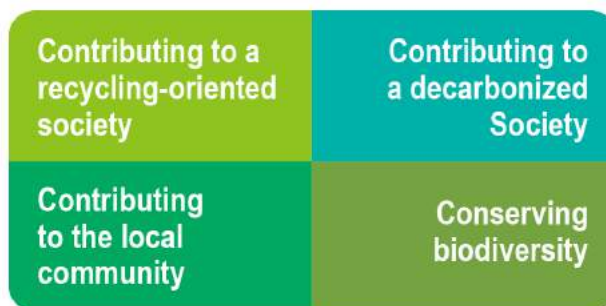
31 locations nationwide	
Total area	14,403ha
SGEC certified area	11,431ha *9 forests in Hokkaido
Natural forest	7,090ha
Manmade forest	7,374ha



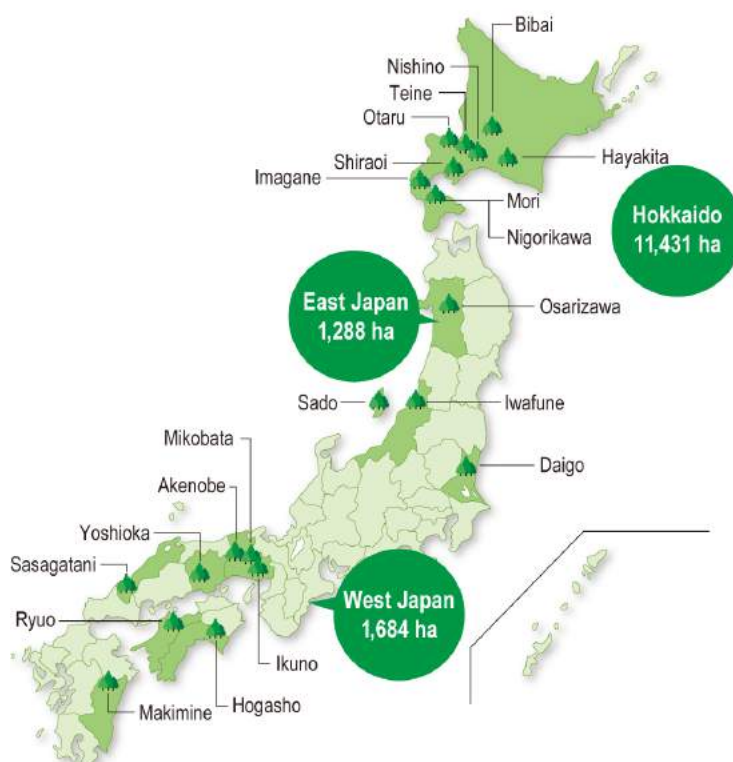
Hayakita Forest

The forest is laid out in a mosaic pattern, based on appropriate zoning between naturally regenerated forest (trees that have grown naturally), which has been conserved as a water and ecosystem conservation zone, and afforestation areas (trees grown from seedlings planted manually), planted with Japanese larch to be used as recycled resources for efficient lumber production.

The Value of Company-Owned Forests



Distribution and Scale of Company-owned Forests



1. Contributing to a Recycling-Oriented Society

–Supplying Society with Sustainable Timber Resources–

Timber is an outstanding sustainable resource. We produce approximately 10,000 m³ of timber every year, mainly in timber resource recycling zones and selective natural forest cutting zones, and supply them to society as raw materials for a variety of products, from building materials to woody biomass fuels. We thus contribute to building a recycling-oriented society.

To enable a sustainable lumber supply, we appropriately maintain and regenerate forest resources by following the management policy formulated for each zone. In timber resource recycling zones where we manage artificial forests, we maintain the cycle of felling, planting, and growing trees, thereby ensuring a sustainable, stable supply of lumber from needle-leaved trees such as cedar and Japanese larch. In addition, in selective natural forest cutting zones, we keep forests vital and sound by promoting thinning and selective cutting (lumbering selected trees) within a range not exceeding their growth, as well as appropriate natural regeneration (sprouting young trees from seeds which fall to the ground naturally). Thus, we aim to achieve sustainable supply of timber from broad-leaf trees. In natural forests, a wider variety of tree species coexist than in artificial forests. Accordingly, a high level of knowledge and skill is necessary when managing natural forests. We therefore strive to improve our knowledge and skill through initiatives such as inviting a Swiss forester with a wealth of knowledge on the management of natural forests to teach.

In Japan, many natural forests were replaced with artificial forests in the post-war period. Therefore, the depletion of forest resources, particularly the depletion of broad-leaf trees growing in natural forests, has been a chronic problem. Accordingly, furniture manufacturers have been forced to rely on imported timber, which constitutes the majority of the raw materials they use, because many of their products are made of timber from broad-leaf trees. We are attempting to convert parts of artificial forests into natural ones in our efforts to restore broad-leaf tree resources. In addition, to promote the cyclical use of timber from broad-leaf trees produced in Japan, we have chosen our own offices as the places to begin. We utilized timber from broad-leaf trees produced in our company-owned forests for the tables in the company cafeteria of the Head Office, as well as the office furniture, etc. including meeting tables and chairs for Sapporo Office, where the forest management division is located.



Supplying timber from forest thinning to society



Forest management training taught by foresters from Switzerland



A big table at the corporate cafeteria of the new Head Office

2. Contributing to the Local Community

—Forests Where Local People can Relax and Interact with the Wonders of Nature—

As well as being company's assets, our company-owned forests are also an important element of the environment, in terms of shaping the local area. We contribute to local communities through appropriate forest management, which improves the quality of ecosystem services, including watershed protection, prevention of soil loss and recreation. Company-owned forests located on the outskirts of urban areas meanwhile are positioned as "environmental forests," parts of which are open to local people to enjoy the natural environment up close. Located in the Teine area of Sapporo, Teine Forest is blessed with a slice of rich forestland that also has excellent transport access from the city center. We open up part of the forest to the people of Sapporo as a public forest, for purposes such as nature walks and camping ground. We also provide access to fields for nature activities organized by a local NPO, as a practice slope for local elementary school children to improve their skiing, and for research by universities and other institutions. That is why it is important to maintain an environment that is suitable for each of these purposes, so that everyone in the local community is able to use our company-owned forests in a meaningful way. In addition, we are proactive in activities such as thinning trees to add light to the interior of our forests, removing dangerous trees, and creating and maintaining paths in the forests.

Instead of just offering our company-owned forests for use by local residents, we hold tree planting festivals, tree growing festivals, and other environmental events in our forests to teach people about the value and fun that forests provide, including their biodiversity. Through these and other activities, we proactively reach out to local residents. In addition, we worked on the recovery of a forest owned by Mori Town, Hokkaido, which was damaged by the typhoon in 2016. We also produced Christmas trees using trees from our company-owned forests and sent them to local nurseries in Atsuma Town, which were affected by the Hokkaido Eastern Iburi earthquake in 2018. We continue to engage in activities like this.

We continue to contribute to local communities through these kinds of active initiatives and increase our efforts to make the forests of Mitsubishi Materials into valuable features of their local areas.



An environmental event making tree name plates in a company-owned forest



A Christmas tree sent to a nursery in Atsuma Town, which was affected by the Hokkaido Eastern Iburi earthquake

TOPICS

Wooden Graduation Certificates Made of Wood from Company-owned Forests

We created wooden graduation certificates by using wood waste of broad-leaf trees generated in forest maintenance. We donated the certificates to preschools that use Materials Forest as a place for contact with nature.



Wooden graduation certificates

3. Contributing to a Decarbonized Society

–CO₂ Fixation–

One important ecosystem services of forests is CO₂ fixation. As one of the largest owners of forestland in Japan, we dedicate ourselves to the steady promotion of necessary forest maintenance, and do our level best to enhance the CO₂ fixation capabilities of the trees in our forests, so that we can do our bit to prevent global warming. The CO₂ fixation capabilities of our forests is estimated* to be 51,000 tons per year (equivalent to the annual amount of CO₂ emitted by approximately 26,000 people).

The ability of trees to fix CO₂ peaks during the period when they are young or middle-aged. When they age beyond that point, their fixation capabilities start to decline. That is why we make every effort to regenerate our forests, by felling and planting new trees at the right time, or through natural regeneration, in order to maintain CO₂ fixation capabilities over the long term.

We also strive to fix CO₂ in forests by promoting the use of usable timber from forest thinning, which is a forest maintenance measure, instead of leaving this timber in forests. In addition, we have made it our primary objective to produce high-quality, large-diameter timber to be used over long time frames, as building materials or for furniture for instance. This is another of our initiatives for effective CO₂ fixation.

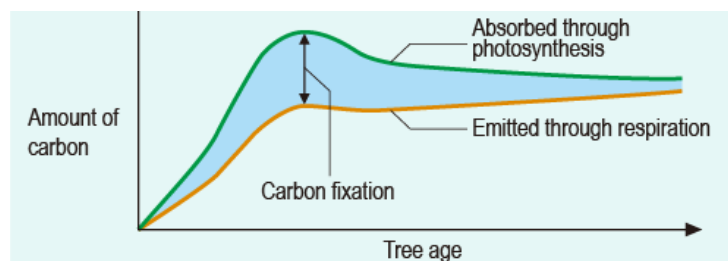


Japanese larch

* Method of calculation

$\text{Growth (m}^3\text{)} \times \text{material volume weight (t/m}^3\text{)} \times \text{carbon conversion efficiency} \times \text{tree/trunk ratio} \times \text{CO}_2 \text{ molecular weight} / \text{carbon molecular weight}$

Relationship between Tree Age and Carbon Absorption/Emissions



* Edited from documents published by the Forestry and Forest Products Research Institute (FFPRI)

4. Conserving Biodiversity

—Maintaining an Environment Suitable for a Wider Range of Wildlife—

Our company-owned forests are extremely important as a habitat for a diverse range of wildlife. We therefore take the utmost care to ensure that our various activities, including timber production, do not have a detrimental impact on living organisms. Forest ridge and riverside areas are migration pathways for creatures. They are called green corridors because those forests are extremely important for expanding the habitat of wild animals and allowing their interactions. We therefore prohibit clearcutting these forests, in principle. We also refrain from clearcutting large areas of land even in artificial forests, where we proactively produce timber, because it may reduce biodiversity in those forests. Instead, we clearcut small, dispersed areas. In addition, we are planning not to clearcut artificial forests which are judged difficult to manage efficiently. We aim to nurture these forests into natural forests with richer biodiversity. We are also introducing trial forest maintenance methods in selected areas, aimed at conserving biodiversity. These include managing felling so that we leave underlayer trees after cutting down upper layer trees, rather than bare earth, and actively mixing coniferous and broad leaf trees in certain areas, in order to give the forest a more diverse structure. By developing various types of forests in this way, we are striving to increase the diversity of the overall forest environment, thereby contributing to conserving biodiversity.

We also proactively monitor wildlife. As well as recording wildlife sightings while on daily patrol around our forests, we have positioned a large number of wildlife survey sites in our forests, where we regularly inspect the animals and plants living there and confirm the positive or negative impact of our forest maintenance. In particular, when we do forest maintenance involving felling, we separately carry out monitoring surveys before and after, to confirm that wildlife has not been affected. If any rare species are found in an area in a monitoring survey before felling, we change the time or method to one that will not affect those species, or consider the postponement of the planned maintenance.

Rare species that have been confirmed to be living in the area (most endangered species included on red lists published by the Ministry of the Environment and Hokkaido Government) are included in our own red list of rare species living in Mitsubishi Materials company-owned forests. We issue warnings to all involved parties with access to the relevant forests to conserve biodiversity, such as by holding regular training sessions for them.



Daily monitoring activities



Wildlife camera trap



Japanese sable



Black woodpecker



Masu salmon



Japanese primrose



Dogtooth violet

- ▶ [Press release link:](#)
Participation in the 30 by 30 Alliance for Biodiversity
- ▶ [Press release link:](#)
Cooperation with a Demonstration Project for Certifying "Natural Symbiosis Sites (Tentative Name)"

Policies for maintaining and improving biodiversity

1. In order to maintain and improve the biodiversity of individual forest, we conduct flora and fauna surveys, either by ourselves or by hiring someone. Based on the results, we prescribe a biodiversity conservation program in each company forest's management and administration plan.
2. The abovementioned flora and fauna surveys prioritize resource recycling forests for clearcutting.
3. The results of the abovementioned flora and fauna surveys are of highest priority for the zoning in the individual company forest's management and administration plans.
4. We stipulate preservation plans for animals and plants listed in the red data book.
5. All waterside forests in fens or marshes should be zoned as biodiversity preservation zones in the individual company forest's management and administration plan, and forest operations should not be conducted as a principle. The extent of the waterside forests' preservation zones are individually determined based on the terrain, but they should generally cover about 10 meters on each side.
6. Natural forests are as a rule zoned as either water and ecosystem conservation zones or selective cutting zones. Taking into consideration the continuity of natural forests, only suitable places will be made timber resource recycling zones for needle-leaved artificial forests.
7. Natural forests along ridges are maintained as water and ecosystem preservation zones.
8. With the exception of Japanese larches, no non-native species are to be planted.
9. Hunting is prohibited in company forests as a principle. Moreover, non-forestry activities that hinder the maintenance of biodiversity should also not be conducted as a rule.
10. The picking of wild animals and plants should not exceed sustainable levels and efforts should be made to prevent inappropriate activities.

(Excerpt from a company forest management and administration plan)

Safety and Health Management

Creating a Safe and Healthy Workplace Environment

Purpose of activities	Activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onwards
• Promoting safety and health activities	• Promote the Zero Occupational Accident Project	C	• Not causing any occupational accident resulting in four or more lost days for 365 days
	• Thorough equipment safety through risk assessment (to be implemented in 3 years)	B	• Make efforts to ensure equipment safety based on risk assessments (to be implemented over a three-year period)
	• Promote safety and health education through effective utilization of the Occupational Safety & Health Education Center and promote Virtual Reality accident simulation training	A	• Continue to promote safety and health education through effective utilization of the Occupational Safety & Health Education Center and continue to promote Virtual Reality accident simulation training
	• Promoting health and productivity management	A	• Continue to promote health and productivity management
	• Enhancing mental healthcare initiatives	A	• Enhancing mental healthcare initiatives

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

Basic Approach

In the MMC Group Code of Conduct, we vow to “We are committed to providing a safe and healthy environment for all our stakeholders.” This is based on the notion that, if we can’t keep our employees safe and healthy, they won’t be able to provide secure and happy lives for their families, we won’t be able to operate effectively, and we will never be able to keep on expanding as a company.

MMC Group Basic Policy on Safety and Health Management

1. We will carry out safety and health activities based on full participation from all employees, underpinned by leadership and initiative from the President and other managing personnel.
2. We will ensure that all employees comply with the Industrial Safety and Health Act and other applicable legislation, manuals and operating procedures, and establish a workplace culture whereby everyone follows the rules and ensures that others do too.
3. We will make every effort to create pleasant workplaces that are healthy for both body and mind, for all employees, through activities aimed at creating open workplaces and promoting health.
4. We will take preventive measures in accordance with Ministry of Health, Labour and Welfare guidelines on the prevention of work-related traffic accidents and improve road etiquette amongst all employees, in order to eliminate traffic accidents based on our commitment to promoting road safety activities as an example to society as a whole.

And since 2018, we have declared that among the goals represented by SCQDE enacted as the guideline to decision-making concerning conduct of our work (priority order), "S" which represents "Safety and Health" is the first priority.

Guideline to decisionmaking concerning conduct of our work (priority order)

Let's act while recognizing the order of priority, "SCQDE"

1	S Safety & Health	Safety & Health come first
2	C Compliance & Environment	Compliance & Environment to ensure fair activities
3	Q Quality	Quality of products and services provided to our "customers"
4	D Delivery	Delivery dates to be met
5	E Earnings	Reasonable profit (Obtained based on "customer" trust after satisfying SCQD)

"SCQDE" shows the order of priority of our business decisions. In providing customers with our products & services, we should thoroughly fulfill SCQ at first and satisfy D. We believe that we will be able to obtain trust from customers and society by continuously executing SCQD in good faith, and this will produce a reasonable profit.

Framework

In the wake of the fire and explosion at our Yokkaichi Plant in January 2014, we launched a new Zero Occupational Accident Project in April that same year, and set about strengthening the foundations of safety and health on a groupwide scale, with the aim of eliminating serious occupational accidents resulting in four or more lost days (not causing any occupational accident resulting in four or more lost days for one year).

The Zero Occupational Accident Project is led by the Zero Occupational Accident Subcommittee, which serves as a special subcommittee under the Sustainable Management Office headed by the Chief Executive Officer.

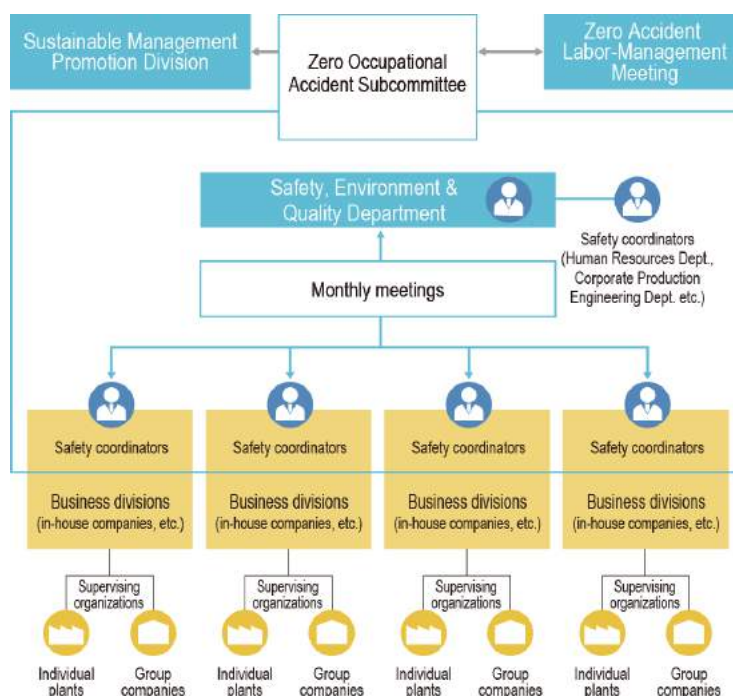
Based on factors including occupational accidents that have occurred, the Zero Occupational Accident Subcommittee, which consists of Safety Coordinators from the departments, identifies priority issues that our Group should tackle, sets priority tasks for safety and health management through exchanges of opinions with the Zero Accident Labor-Management Meeting, which consists of management and labor union members, and strives to make improvements through the PDCA cycle in accordance with the situations of each facility.

Specific measures for the Zero Occupational Accident Project are implemented after deliberations and approval at the Strategic Management Committee and their progress is regularly reported to the Sustainable Management Office.

Implementation of each measure revolves around the Mitsubishi Materials Safety, Environment & Quality Department. With Safety Coordinators appointed at each in-house company, we share information regarding progress and issues with safety and health measures at business sites under their management, including Group companies, and discuss solutions to the issues at monthly meetings with the Safety, Environment & Quality Department.

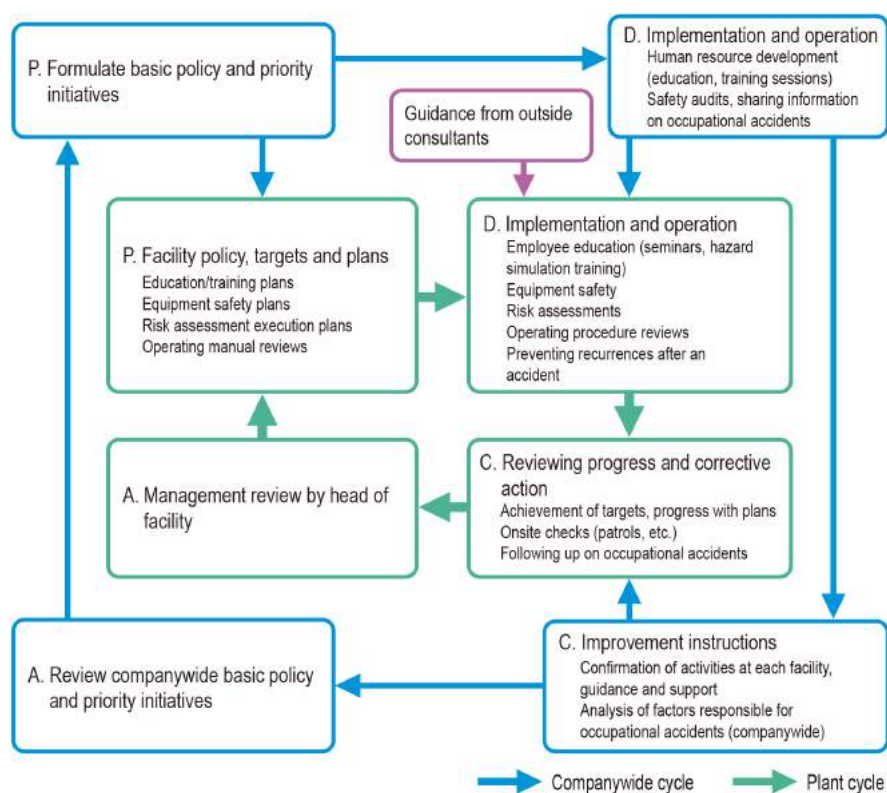
We have an integrated groupwide promotion framework in place whereby matters that extend beyond the confines of individual companies are reported and discussed at the above-mentioned Zero Occupational Accident Subcommittee.

At the same time, the occupational safety and health management systems are operated at individual business sites. In addition, Safety Managers, Safety Coordinators and Safety Instructors are assigned to individual business sites, where their role is to promote safety activities. We hold regular Groupwide Safety Manager meetings and meetings for Safety Coordinators and Safety Instructors, where we exchange openings on a wide range of occupational accident information and health and safety activities across the Group and the various business sectors in which it is involved, and endeavor to raise the level of health and safety.



Management Priorities

To expand the joint labor-management initiative to achieve zero occupational accidents, we have identified issues at the MMC Group in light of occupational accidents, etc. that occurred last year, engaged in joint labor-management discussions on the particular items to be addressed to achieve solutions, and designated management priorities on that basis. In 2021, we set out the following management priorities, and rolled out occupational safety and health management systems at each of our plants/factories accordingly.



Group-wide Priorities for Safety and Health Management (2021)

■ Thorough Efforts to Make Equipment Safe (engineering measures) through Risk Assessments (RA)

While the number of serious occupational accidents related to machines and electricity and those related to handled materials caused by equipment has been decreasing in the long term, there remains residual risk that we have yet to reduce, and not a few accidents have occurred due to unrecognized hazard sources. In response, we decided to examine the appropriateness of risk assessments that we have conducted to date, over a period of three years from FY2021, in our attempt to review requirements. We take the following actions.

- To identify new risks and lower the risk level
- Checking for hazard sources and dangerous tasks that had yet to be identified
- Reassessments of risks which have been identified and corrective actions against insufficient measures
- Promotion of inherent safety of existing equipment
- To improve risk assessment ability, etc.

An analysis of the types of occupational accidents occurring at the MMC Group has revealed that many occupational accidents occur due to two factors: “flawed protective and safety measures” such as incomplete safety measures for machinery and equipment, and “proximity to dangerous areas,” such as touching machinery or equipment while it is operating. To strengthen the physical measures in place by reviewing structures and mechanisms from the perspectives of the foolproof*¹ and failsafe*², we are employing thorough engineering-based action through risk assessments.

Further, with respect to occupational accidents caused by “flawed operating methods” such as the use of inappropriate tools and jigs or incorrect operating procedures, we will strive to make risk assessment-based improvements including the verification of operating methods, and revised operating procedures that reflect hazard prediction. Risk assessment is an effective means of discovering, eliminating or mitigating potential danger or harm attributable to operating practices and other work performed at a manufacturing site. At the MMC Group, we implement risk assessment activities from the perspective of workers on the production floor at each business sites. We have trained risk assessment instructors at each business site to improve their ability to identify unsafe equipment states and began offering training classes in October 2015. As of March 2020, more than 520 people have taken the course (although classes could not be held from April 2020 onward due to the impact of COVID-19). Centering on these instructors, the course is contributing to enhancing and stimulating on-site activities. In addition, since August 2020, we have been conducting risk assessment classes by remote learning, led primarily by front line supervisors with the aim of raising the ability level of personnel who conduct risk assessments. As of March 2022, 419 people have received training in those classes.

*1 Foolproof: A function that prevents human error from resulting in an occupational incident or disaster

*2 Failsafe: A function ensuring that equipment will operate on the safe side in the event of mechanical malfunction, power outage or otherwise

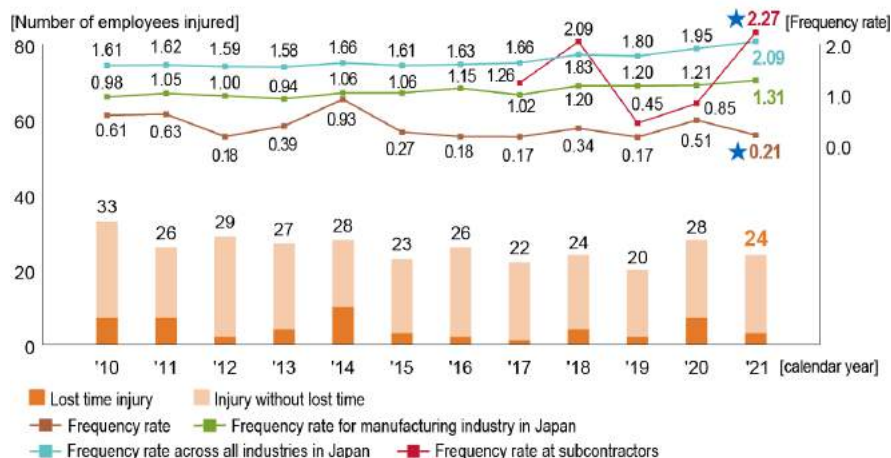
Safety Record

State of Occurrence of Occupational Accidents

The number of employees involved in occupational accidents (injuries without lost time) in the Company and at 20 major Group companies stood at 164 in 2021. Sadly, 40 of these were accidents requiring employees to take leave. The number of accidents at the Company, on a non-consolidated basis, has been showing a downward trend for the past ten years, but it has leveled off in recent years. (The number of business sites increased by two as a result of the merger of the former Mitsubishi Shindoh Co., Ltd. in April 2020.) The accident frequency rate which evaluates the state of occurrence of occupational accidents taking place at the Company (LTIFR (Lost-Time Injury Frequency Rate): casualties per million actual hours worked (employees taking time off work)) was 0.21; a lower figure than the 2021 manufacturing business average of 1.31 (Ministry of Health, Labour and Welfare (MHLW) statistical data). The accident frequency rate including accidents not requiring employees to take leave (TRIFR (Total Recordable Injury Frequency Rate): casualties per million actual hours worked including accidents not requiring employees to take leave) was 1.68.

In 2022, too, we worked thoroughly to further increase the safety of facilities through risk assessments, added further measures to prevent accidents, and made other efforts toward achieving our zero accident target.

■ Safety Record Trend (Mitsubishi Materials)



* The figures are based on calendar years. Occupational accidents frequency rate and incident rate do not include accidents during commuting or minor injuries.

■ Breakdown of Safety Performance

		2018	2019	2020	2021
MMC (non-consolidated)	Fatal	0	0	0	0
	Lost-time (or more serious)	4	2	7	3
	No lost-time	20	18	21	21
MMC (subcontractors)	Fatal	0	0	0	0
	Lost-time (or more serious)	10	2	4	10
	No lost-time	13	18	19	17
Group companies (Incl. subcontractors)	Fatal	0	0	1	0
	Lost-time (or more serious)	31	30	13	27
	No lost-time	95	120	83	86
Total	Fatal	0	0	1	0
	Lost-time (or more serious)	45	34	24	40
	No lost-time	128	156	123	124

■ Injury Frequency Rate Trend

		2018	2019	2020	2021
MMC (non-consolidated)	LTIFR	0.34	0.17	0.51	★0.21
	TRIFR	2.05	1.68	2.03	★1.68
MMC (subcontractors)	LTIFR	2.09	0.45	0.85	★2.27
	TRIFR	4.82	4.49	4.92	★6.12

* LTIFR (Lost-Time Injury Frequency Rate): casualties per million actual hours worked (number of victims of accidents requiring employees to take leave including deaths) = accident frequency rate

TRIFR (Total Recordable Injury Frequency Rate): casualties per million actual hours worked (number of victims of accidents requiring employees to take leave including deaths + number of victims of accidents not requiring employees to take leave)

State of Occurrence of Fires and Explosions.

In 2021, there were 16 accidents (fires and explosions, etc.) at the Company. They include two cases of fire, where it took a certain amount of time before the accident ended. However, all of the other 14 accidents were minor ones scoring 3 points or less (with 13 of them scoring 1 point or less) under our internal accident evaluation standards, which are a measure of the magnitude of damage and impact. There was no explosion in 2021. There were zero (0) ★ Tier 1 process safety events (PSEs) per million hours. The Company bases its definition of PSEs on the CCPS definition. ※

However, partly because the total number of accidents was much higher than in the previous year (seven), we will continue to pursue initiatives that focus on fire prevention through the internal proliferation of accident data, among other measures.

* Tabulated values are for the company (non-consolidated) for the calendar year. Tier 1 PSE (Process Safety Events) are identified based on the "Process Safety Metrics: Guide for Selecting Leading and Lagging Metrics" Version 3.2 issued by CCSP.

■ Occurrence of Fires and Explosions, etc.

	2018		2019		2020		2021	
	Number of accidents	Score	Number of accidents	Score	Number of accidents	Score	Number of accidents	Score
Fire	4	3.8	5	2.2	6	5.1	10	18.3
Explosion	1	0.6	1	0.3	0	0.0	0	0.0
Leakage, etc.	1	0.6	4	1.9	1	0.3	6	1.8
Total	6	5.0	10	4.4	7	5.4	16	20.1

■ MMC-method Accident Assessment Criteria

Severity level (points)	Assessment items			
	Human injury	Property damage	Impact of leakage/spill (Leakage of high-pressure gas, spill of hazardous material)	Time it takes before a fire is extinguished (Duration of time between occurrence and extinguishment of a fire)
V (27)	Multiple deaths	Property damage outside the premises	Impact on a wide area outside the premises, such as a river	4 hours or longer
IV (9)	One death or multiple lost days	Property damage to adjacent facilities on the premises	Impact on the area around the premises	2 - 4 hours
III (3)	Lost time injury	Burnout or damage to the building with equipment as the fire source	Impact on adjacent facilities on the premises	1 - 2 hours
II (1)	Injury without lost time	Burnout or damage of the equipment as the fire source, or minor damage to a part of the building with such equipment	Leakage/spill only inside the building with equipment as the fire source or inside protective facilities such as dikes	30 minutes - 1 hour
I (0.3)	Below Level II (Minor incidents)	Below Level II (Minor damage to a part of the equipment as the fire source)	Below Level II (Minor leakage/spill)	Shorter than 30 minutes

* Set by referring to accident assessment criteria of the Japan Petroleum Industry Association and the severity indicators for fire and spill accidents at dangerous facilities, which were notified by the Fire and Disaster Management Agency

* To be evaluated based on the total number of points, or sum of the points for the intensity level of each evaluation item that applies

* The number of points shall be zero (0) if none of the intensity levels applies.

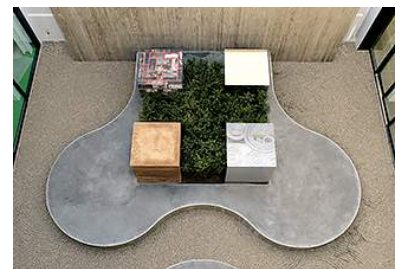
Education and Awareness-raising

Enhancing Safety and Health Education

We thought that personal experiences of hazards are important to improve hazard awareness, so started running an Occupational Safety and Health Education Center -“Midori-kan” in March 2017. The center has 50 different hazard experience facilities inspired by the actual work environment and the dangers that hide in everyday tasks. It also regularly provides specialized education needed for work safety and health in dedicated classrooms, in addition to hazard experience education by expert instructors. Since its establishment until March 2022, the center provided hazard sensitivity training for more than 4,100 Group employees, approximately 900 of whom have also completed specialized training courses.



Occupational Safety and Health Education Center - “Midori-kan”



Monument for safety and health
The monument for safety and health in the courtyard of the Midori-kan. The design consists of a green cross, meaning safety, surrounded by five materials symbolizing our business.

Hazard Experience Education Using VR (virtual reality)

We introduced VR hazard experience education at our Occupational Safety and Health Education Center in May 2018 to allow participants to experience hazard difficult to simulate with regular equipment. VR allows participants to have a 360° field of vision, better realism and immersion through haptic and other technologies, and experiences of hazard until the end (e.g., before, during and after falling). It is helpful for creating better hazard awareness. Because the devices are portable, we provide the training at each plant of the Group. In 2019, we introduced the second and third sets of devices and added five new hazard experience courses. We added another four courses in 2021. We began to lend them to Group companies as well, aiming to improve hazard awareness further.

VR hazard experience courses (Occupational Safety and Health Education Center)



High temperature accidents
(gas releases)



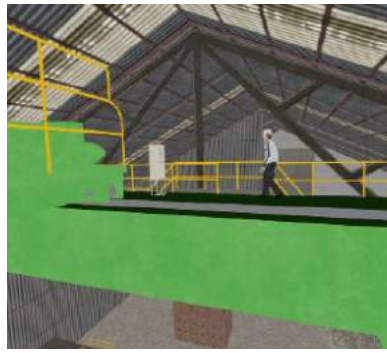
High temperature accidents
(steam explosions)



Forklift accidents
(driver moving forward)



Forklift accidents
(pedestrian moving backward)



Falling accidents
(falling from crane)



Falling accidents
(stepping through the floor)



Caught-between accidents
(press)



Caught-in accidents
(high-speed conveyor belt)



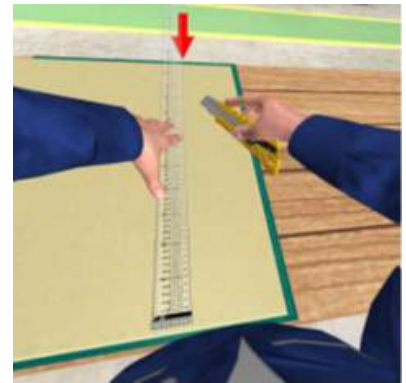
Caught-in accidents
(slow-speed conveyor belt)



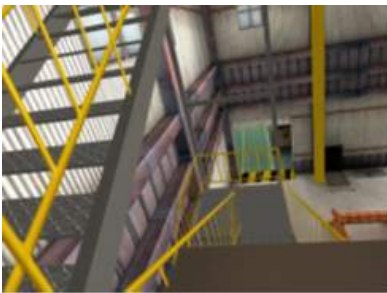
Electric shock accidents caused by contact
with power panel



Tripping accidents caused by difference in
height



Cutter accidents resulting in incision wounds



Falling accidents while descending stairs



Stepladder fall accidents



Flying object accident caused by failed crane
operation



Grinder kickback accident



Fall accident while putting a cover on a
trailer



Pinched in a V-shaped belt

Commendation System for Business Facilities with Excellent Safety Records

We commend facilities that make significant progress in safety management and achieve excellent results that are exemplary to other facilities, as an opportunity to encourage the improvement of safety management within the Mitsubishi Materials Group.

Facilities that are eligible for commendations are those of Mitsubishi Materials Corporation, consolidated subsidiaries in the manufacturing and construction industries in Japan, and unconsolidated subsidiaries.

Commendation criteria stipulate that the facility must achieve the required period (number of years) with no accidents requiring employees to take leave (a period during which no accidents requiring employees to take leave occur with regard to either company employees or contractors). Commendations are classified into the following three types.

- (1) Safety distinction award (Facilities that achieve the number of years stipulated by commendation criteria)
- (2) Safety excellence award (Facilities that achieve the number of years stipulated by commendation criteria x 2)
- (3) Safety grand prize (Facilities that achieve the number of years stipulated by commendation criteria x 3 or more)

Since risks vary significantly between industries and business types, the number of years stipulated as commendation criteria is set for each facility based on the business type. Facilities are classified into the following groups.

- Group A (Criteria: every two years)
Business types: plant type (cement, smelting), equipment-oriented industry (copper & copper alloy, etc.), construction industry
- Group B (Criteria: every three years)
Business type: Advanced materials & tools / processing and assembly type

■ October 2021 Commendations

Safety grand prize winners: 2 facilities (numbers in brackets indicate the number of times they have received the prize)

Advanced Products Company	Goto Mfg. Co., Ltd. (IV, 12 years) A, Diarecs Corporation (II, 12 years) B
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Safety excellence commendation: 1 facility

Cement Company	Shinkansai Ryoko Ready Mixed Concrete Co., Ltd. (4 years) A
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Safety distinction commendation: 9 facilities

Advanced Products Company	Tamagawa Engineering Co., Ltd. (2 years) A, Mitsubishi Materials Electronic Chemicals Co., Ltd. (2 years) A, Mitsubishi Cable Industries, Ltd. Minoshima Works (3 years) B
Metalworking Solutions Company	MOLDINO Tool Engineering, Ltd. Narita Plant (3 years) B, Japan New Metals Co., Ltd. (2 years) A
Metals Company	Onahama Smelting and Refining Co., Ltd. (2 years) A
Cement Company	Tokyo Ryoko Concrete Corp. (2 years) A
Affiliated Corporations & Aluminum Div.	MA Packaging Co., Ltd. (2 years) A, Universal Can Corporation Gunma Plant (2 years) A

■ April 2022 Commendations

Safety grand prize winners: 3 facilities (numbers in brackets indicate the number of times they have received the prize)

Metals Company	Materials Eco-Refining Co., Ltd. (I, 6 years) A
Affiliated Corporations & Aluminum Div.	Shinryo Aluminum Techno Co., Ltd. (VIII, 20 years) A, Maintenance Techno Corporation (II, 8 years) A

Safety excellence commendation: 2 facilities

Advanced Products Company	Sambo Forging Co., Ltd. (currently MM Copper Products Co., Ltd.) (4 years) A
Cement Company	Higashitani Mine (4 years) A

Safety distinction commendation: 2 facilities

Advanced Products Company	Tamagawa Seisakusyo Co., Ltd. (2 years) A
Environment and Energy Business Company	East Japan Recycling Systems Co., Ltd. (3 years) B

* Names of the commended organizations are as of the time of the commendation.

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Regarding the aluminum business, on March 31, 2022, we transferred all of our shares of Universal Can Corporation to Showa Aluminum Can Corporation, and on the same day, we split the Aluminum rolling and processing business from Mitsubishi Aluminum Co., Ltd. into Showa Aluminum Can Corporation through an absorption-type company split.

■ Safety and Health Instruction Utilizing Outside Consultants

As the results of an analysis of past occupational accidents revealed issues in risk identification, we have been providing MMC Group facilities with safety and health guidance through outside consultants. Risks that have yet to be identified are extracted from the viewpoint of an external expert and measures are taken to reduce such risks. This helps raise the on-site safety level and improves the hazard sensitivity of employees.

Promoting the Rollout of Information within the Group through Consolidation and Dissemination

The Safety, Environment & Quality Department has been running an internal portal website since February 2017 for the collection, dissemination, and viewing of information about safety, health, disaster prevention and the environment. Safety data and safety chronology that had previously only been stored on head office servers with limited access along with occupational accident case studies, documents used for safety and health training and information concerning health and mental health have been classified, organized and published to the internal portal website.

We produce videos depicting cases of typical occupational accidents that have occurred in the MMC Group, thus offering straightforward explanations of the conditions of an occupational accident, its cause, countermeasures taken and the lessons learned.

All past accidents in the Group have been entered into a database. That database has been available on the internal portal website since June 2017. It allows keyword and full-text searches and the creation of accident calendars, contributing to the preparation of safety education materials as well as measures against similar accidents. It is constructed so that all plants can obtain the necessary information swiftly and accurately, helping to bolster our safety foundation and foster a safety culture.

Disseminating Examples of Safety and Health Best Practices

Since 2014, we have been compiling a collection of safety and health best practices on a yearly basis, highlighting unique and highly-effective initiatives implemented at each MMC Group facility to prevent occupational incidents. We are promoting the spread of best practices by presenting them during National Safety Week as a shared asset for improving the Group's safety and health. For example, we introduce individual case examples on the internal portal site.

Creating Mentally and Physically Pleasant Workplaces

Raising Employees' Awareness of Health : Creating Mentally and Physically Pleasant Workplaces

Promoting Measures to Maintain and Enhance Employees' Health, and Improve Workplace Environments, in order to Prevent Work-related Diseases

We are making Group-wide efforts to promote safety and health under our Code of Conduct, which states that "We are committed to providing a safe and healthy environment for all our stakeholders."

First, regarding operations related to hazardous substances, we are committed to continually improving workplace environments to prevent work-related diseases, including stepped-up efforts to manage hazardous substances (poisonous substances, toxic substances, chemicals) and prevent exposure.

We introduced our health management system in 2018 to centrally manage health management information such as health check results using electronic data, and the system is operated by our industrial healthcare staff. We upgraded this system in September 2020, which has enabled more precise aftercare measures and data analysis. We will continue working to further improve the system and draft and implement effective health promotion measures.

Enhancing Mental Healthcare Initiatives

As our primary mental healthcare initiative, we provide a range of mental healthcare training on an ongoing basis to prevent the mental health problems of employees. Specifically, we provide job-class-specific mental healthcare training in addition to "Self-care training" for all employees and "Line-care training" for management supervisors. In fiscal 2019, we introduced a consultation service provided by a clinical psychologist stationed at each office and plant for employees who are in their third year at the Company, in an effort to prevent mental health issues. Further, as the COVID-19 pandemic has brought major changes to the way we work and to our everyday lifestyles, we conduct surveys of the mental and physical health conditions of all our employees to identify issues and formulate countermeasures.

For employees who have developed mental health problems, we continue to offer meetings and consultations with industrial healthcare staff at each of our offices and plants. For employees who are taking sick leave, we operate a program to support them in returning to work, including the use of external back-to-work programs and other initiatives to help them work smoothly after recovery.

We simultaneously perform stress check survey at all offices and plants, including those with less than 50 employees, offering face-to-face guidance with physicians as needed for those diagnosed with high stress levels. We also analyze the survey results by attribute and changes in the results over time and share information with business divisions to identify issues and formulate countermeasures. Thus, we will continue to drive the creation of workplace environments that are comfortable for employees.

Health and Productivity Management Initiatives

At the Mitsubishi Materials Group, employee safety and health has been positioned as the top-priority issue. Accordingly, diverse initiatives have been taken at each office and plant. However, we have begun to see issues that should be addressed in a Group-wide manner, including issues associated with the aging of employees reflecting the declining birthrate and aging population, the promotion of mental health measures, and the balance between treatment and work.

In response, we positioned employees' health management as a management issue and have decided to strategically work on health and productivity management in a Group-wide manner. We are engaging in activities for improving the mental and physical health of employees and their families, in collaboration with the Mitsubishi Materials Health Insurance Society. Specifically, we made the Mitsubishi Materials Group Health and Productivity Management Declaration in October 2020. We later established its promotional structure, etc., and the Mitsubishi Materials Corporation started the activities in a Group-wide manner in April 2021.

Thus, each office is engaged in activities for maintaining and improving the health of employees in a well-planned manner following company-wide priority action items.

In March 2022, based on the investigations into the content of our activities, we were selected by Nippon Kenko Kaigi (Japan Health Council) in their 2022 Certified Health & Productivity Management Outstanding Organizations (large enterprise category). The Certified Health & Productivity Management Outstanding Organizations Recognition Program is designed by the Ministry of Economy, Trade and Industry (METI) to promote the dissemination of health and productivity management. We will continue to deepen our activities to promote safety and health and create workplaces where employees can work in a healthier way and enjoy working, through health and productivity management activities, so that the activities will be very meaningful for both the company and its employees.

〈The Mitsubishi Materials Group Health and Productivity Management Declaration〉

Under our Corporate Philosophy of "For People, Society and the Earth" and our Code of Conduct which states that "We are committed to providing a safe and healthy environment for all our stakeholders," Mitsubishi Materials Group will make maximum efforts and engage in continual improvement to prevent occupational accidents, ensure occupational hygiene, and manage the health of its employees.

Specifically, the Group will engage in efforts to reform working styles, and deploy measures for improving the mental and physical health of employees and their families, in collaboration with the Mitsubishi Materials Health Insurance Society.

In response to global pandemics and other new diseases, too, we will work to prevent infections and ensure the health of employees and their families.



Corporate Governance

Basic Approach

The basic approach to corporate governance of Mitsubishi Materials Corporation (the “Company”) is described below.

- We have, based on the corporate philosophy of the Group, vision, values, code of conduct, mission and the Basic Policy on Corporate Governance* established by the Board of Directors, developed trust with all stakeholders related to the Company and its subsidiaries (hereinafter, the “Group”), such as shareholders and investors as well as employees, customers, client or supplier companies, creditors and local communities, and also develop our corporate governance.
- Among the governance systems under the Companies Act, we have chosen to be a Company with a Nomination Committee, and by separating supervision and execution, will strengthen the Board of Directors’ management supervisory functions, improve the transparency and fairness of management and accelerate business execution and decision making.
- We acknowledge the enhancement of corporate governance to be one of the most important management issues, and continuously make efforts to improve our corporate governance.

As the Group is an integrated business entity supplying basic materials and elements indispensable to the world, and is involved in recycling business and renewable energy business, we adopted an in-house company system so as to facilitate and appropriately execute business operations.

(*) We have prepared the “[Basic Policy on Corporate Governance](#)”, which is disclosed on the Company’s website, as a compilation of the basic approach to and framework of corporate governance.

Overview of Corporate Governance

(Board of Directors)

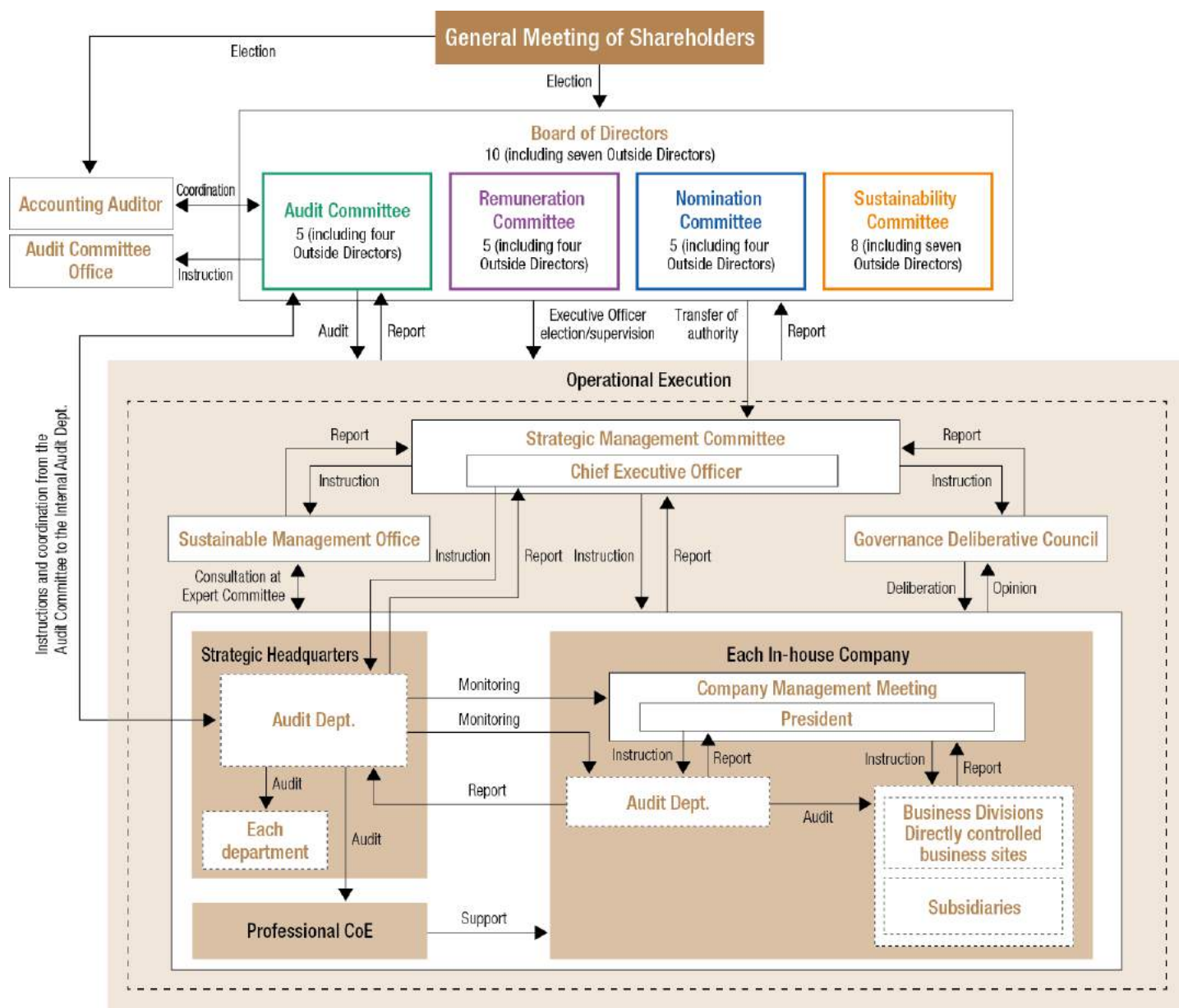
The functions and duties of the Board of Directors shall be as follows:

- Upon delegation by shareholders, the Board of Directors shall indicate the direction of its management and make an effort to enhance the Group’s medium- to long-term corporate value by, for example, engaging in freewheeling and constructive discussion on management policies and management reforms.
- The Board of Directors shall determine matters that may have a serious impact on management, such as management policies and management reforms, in accordance with the provisions of laws, the Articles of Incorporation and the Board of Directors Rules.
- The Board of Directors shall accelerate decision-making in business execution by delegating the authority over business execution to an appropriate extent to Executive Officers in accordance with the provisions of the Board of Directors Rules, etc. so that Executive Officers may assume the responsibility and authority to make decisions and execute business in response to changes in the business environment.
- The state of Group governance and the progress of the execution of duties, including the progress of the management strategy, shall be reported by Executive Officers to and supervised by the Board of Directors on a periodic basis.

Further, Outside Directors play a role in supervising the appropriateness of Directors and Executive Officers in the execution of their duties from an objective standpoint and in providing a diverse range of values regarding the management of the Company based on expert knowledge and through experience that differs from that of officers who advanced internally, so that the Board of Directors’ management supervisory functions would be further strengthened.

The Board of Directors is comprised of 10 Directors (including 7 Outside Directors), and the Chairman of the Board of Directors is performed by the Chairman of the Company.

■ Overview of the Corporate Governance System (Chart as of June 28, 2022)



(Nomination Committee)

The Nomination Committee determines the policy for the nomination of candidates for Director, the content of proposals, etc. concerning the election and dismissal of Directors to be submitted to General Meetings of Shareholders. In addition to this, the Nomination Committee reviews and responds to inquiries from the Board of Directors concerning the election and dismissal, etc. of Executive Officers. Moreover, in order to develop human resources for the next generation responsible for management, the Nomination Committee deliberates on candidates for successor to the CEO and their development plans, and it supervises the appropriate development of successor candidates.

Majority of the Nomination Committee members shall be Independent Outside Directors, and the Chairperson shall be performed by an Independent Outside Director. The Nomination Committee is comprised of 5 Directors (including 4 Outside Directors), and the Chairperson is Mariko Tokuno (Independent Outside Director).

(Audit Committee)

The Audit Committee audits the legality and validity of duties performed by Directors and Executive Officers, via audits either using internal control systems or directly by the Audit Committee member selected by the Audit committee. Majority of the Audit Committee members shall be Independent Outside Directors, and the Chairperson shall be performed by an Independent Outside Director.

The Audit Committee also elects one full-time Member of the Audit Committee in order to improve the effectiveness of audits conducted by the Audit Committee. The Audit Committee is comprised of 5 Directors (including 4 Outside Directors), and the Chairperson is Tatsuo Wakabayashi (Independent Outside Director).

(Remuneration Committee)

The Remuneration Committee establishes policies for determining individual remuneration for Directors and Executive Officers, and determines the individual remuneration to be received by Directors and Executive Officers based on such policies. Majority of the Remuneration Committee members shall be Independent Outside Directors, and the Chairperson shall be performed by an Independent Outside Director. The Remuneration Committee is comprised of 5 Directors (including 4 Outside Directors), and the Chairperson is Hikaru Sugi (Independent Outside Director).

(Sustainability Committee)

The Sustainability Committee shall review policies on sustainability issues and others after being consulted by the Board of Directors, and report the details to the Board.

Majority of the Sustainability Committee members shall be Independent Outside Directors, and the Chairperson shall be performed by an Independent Outside Director. Currently, the Sustainability Committee is comprised of 8 Directors (including 7 Outside Directors), and the Chairperson is Koji Igarashi (Independent Outside Director).

(Executive Officer)

Executive Officers execute business in accordance with the prescribed segregation of duties, based on the delegation of authority from the Board of Directors. The Company has 10 Executive Officers, of which the Chief Executive Officer Naoki Ono, and the Executive Vice President and Executive Officer Yasunobu Suzuki, are elected as Representative Executive Officers upon the decision of the Board of Directors.

(Strategic Management Committee)

Following the delegation of authority from the Board of Directors, the Strategic Management Committee reviews and determines important matters concerning the management of the entire Group. The Strategic Management Committee consists of the Chief Executive Officer and the Executive Officers in charge of each department of the Strategic Headquarters. The Chief Executive Officer serves as the chairperson of the committee.

(Governance Deliberative Council)

The Governance Deliberative Council enhances the deliberation, reporting, and follow-up system for governance-related matters (CSR, safety and health, plant safety, environmental management, quality management, auditing, etc.). It is composed of members of the Strategic Management Committee and general managers of related departments. The Governance Deliberative Council deliberates in February of each year on policies and annual plans for the next fiscal year for business divisions (including business sites and subsidiaries) involved in governance-related matters. And in September of each year, it reports on the status of actions and deliberates on review plans, thereby improving the effectiveness of group-wide initiatives.

Nomination of Candidates for Director and the Election and Dismissal of Executive Officers

1. Policy for Nomination of Candidates for Director

Our basic approach to the structure of the Board of Directors, which fulfills the roles of determining the direction of management and exercising supervision over the progress of business execution, is to ensure that it comprises a diverse range of human resources with different expert knowledge, experience, and other qualities. In particular, the Nomination Committee will consider candidates for Outside Director to ensure that they comprise individuals who possess experience and knowledge in corporate management (business similar to or different from the Group's business, etc.) and organizational management, and individuals who possess broad and advanced expert knowledge and extensive experience in relation to finance and accounting, legal affairs, production engineering, research and development, sales and marketing, or international relations, etc. In light of the basic policy on the structure mentioned above, the Nomination Committee will nominate and select individuals who satisfy the following requirements as candidates for Director, regardless of individual attributes concerning gender, nationality and race, etc.:

- An individual of exceptional insight and character;
- An individual with a strong sense of ethics and a law-abiding spirit; and
- An individual who can properly fulfill his or her duties concerning the exercise of supervision over the management of the Company and the determination of the direction of management.

Further, with respect to candidates for Independent Outside Director, the Nomination Committee will nominate and select individuals who satisfy the following requirement in addition to the above requirements:

- An individual who has no material interest in the Group and who can remain independent.

The specific selection of personnel shall be decided after deliberation by the Nomination Committee. Provided that the Company considers that an Outside Director is not independent if he or she falls under any of the conditions listed below in addition to meeting the standards for independence established by Tokyo Stock Exchange, Inc

1. An individual who falls under or has fallen under any of items (1) or (2) below, either presently or in the past:
 - (1) An executive or non-executive Director of the Company; or
 - (2) An executive or non-executive Director of the Company's subsidiary.
2. An individual who falls under any of items (1) through (5) below:
 - (1) An executive of a client or supplier company of the Company, whose value of transactions amounted to 2% or more of the consolidated net sales of the Company or the client or supplier company as of the end of the previous fiscal year;
 - (2) A person who received, as a professional or consultant, etc., consideration of not less than 10 million yen from the Company in the previous fiscal year, excluding his/her consideration as a Director;
 - (3) An executive of an organization that received a donation of not less than 10 million yen from the Company in the previous fiscal year;
 - (4) A shareholder who directly or indirectly holds at least 10% of the total number of voting rights of the Company or an executive of such shareholder; or
 - (5) The Company's Accounting Auditor or its employee, etc.
3. An individual who has fallen under any of items (1) to (5) of 2 above at any time in the past three (3) years:
4. A close relative of any of the persons listed in item (1) or (2) of 1 above, items (1) to (5) of 2 above, or 3 above (excluding unimportant persons); or
5. A person who has served as the Company's Outside Director for a period of more than eight (8) years.

2. Policy for Election and Dismissal of Executive Officers

In electing Executive Officers responsible for the execution of business tasks, the Nomination Committee will elect individuals who satisfy the following requirements, regardless of individual attributes concerning gender, nationality and race, etc.:

- An individual of exceptional insight and character;
- An individual with a strong sense of ethics and a law-abiding spirit; and
- An individual well-versed in management and the business activities of the Group.

In relation to the election process, the Chief Executive Officer will first draft a proposal for the election of Executive Officers after consulting with relevant officers as necessary. The Chief Executive Officer will then submit a proposal for the election of Executive Officers to the Board of Directors based on the deliberations and responses to inquiries at a Nomination Committee meeting, and Executive Officers will be elected by resolution of the Board of Directors based on a comprehensive review of the candidates' personal history, achievements, specialist knowledge, and other capabilities. In addition, if any event occurs that makes an Executive Officer highly ineligible in light of these standards, the Executive Officer shall be dismissed by resolution of the Board of Directors following a review by the Nomination Committee.

■ Expertise and Experience of the Directors

The main expertise and experience owned by the Directors are shown in the Skill Matrix. In addition, the table 2 shows from what perspectives the Directors contribute and provide knowledge on the corporate policies in the Company's Medium-term Management Strategy and the reforms the Company is undertaking to carry out those based on their respective expertise and experience as indicated in the Skill Matrix (For the new Directors, the expected roles are listed).

■ [Table 1] Expertise and Experience of Directors (Skill Matrix)

Name	Business experience outside the Company	Expertise and experience						
		Corporate management & organizational management	International experience	Sales & marketing	Production engineering	Research & development	Legal affairs	Finance & accounting
Akira Takeuchi		●	○				●	○
Naoki Ono		●	○	○	○		○	○
Nobuhiro Takayanagi		●	○	○			○	○

Outside Director

Mariko Tokuno	Consumer goods	●	○	○			○	○
Hiroshi Watanabe	Tax system and international finance	●	●				●	○
Hikaru Sugi	Automotive products	●	○		○	●		
Tatsuo Wakabayashi	Finance	●	○				○	○
Koji Igarashi	Food and food materials	●	○		●	○		○
Kazuhiko Takeda	Conglomerate	●	○	○			○	●
Rikako Beppu	Legal profession		○				●	

○ indicates expertise and experience owned (● indicates primary)

Note: The above Skill Matrix does not cover all the expertise and experience owned by the Directors.

■ [Table 2] Contribution and Perspectives of the Directors on Key Themes

Name	Group-wide Policy			Reform Initiative		
	Optimization of business portfolio	Comprehensive efforts to increase business competitiveness	Creation of new products and businesses	Reform of business structure/ administration	Reform of human resources system/ management	Enhancement of governanceGovernance
Akira Takeuchi	Perspective based on the Group's history				Perspective from experience as an officer in charge of human resources	Perspective based on experience in overseeing the strengthening of the Group's governance
Naoki Ono	Perspective from the position of Chief Executive Officer, overseeing the management of the Group			Perspective from the position of leading Management Reform in the Company		
Nobuhiro Takayanagi		Perspective from extensive sales experience in business of the Company				Perspective from experience as President of the Group company

Outside Director

Mariko Tokuno	Perspective of management and knowledge from different industry			Perspective from holding company management experience	Perspective in utilizing human resources with management experience	
Hiroshi Watanabe	Perspective based on global economic trends				Perspective from experience in personnel management in government offices	Perspective from ethics in national public service and business management in developing countries
Hikaru Sugi		Perspective from in-depth knowledge of the entire value chain from development to manufacturing based on technology trends		Perspective from in-depth knowledge of business performance management	Perspective on human resource management in manufacturing and engineers	
Tatsuo Wakabayashi	Perspective on portfolio management from an investor's point of view		Perspective from the experience of creating new businesses in the context of business restructuring		Perspective on human resource management of financial institutions	Perspective from experience and knowledge of governance of financial institutions
Koji Igarashi	Perspective from experience in business restructuring	Perspective from extensive technical expertise in technology development and production based on technology trends			Perspective from human resource management in the manufacturing industry	
Kazuhiko Takeda	Perspective from experience as a management executive of a conglomerate and global business experience			Perspective from experience in Business Structure Reform and management visualization initiative		Perspective from experience of senior executive as CFO of an overseas Group company
Rikako Beppu	Perspective from experience of handling many M&A transactions			Perspective from experience in international corporate legal affairs	Perspective from experience in diversity activities and initiatives	

Note 1: The items are narrowed down to those with high contribution (3-4 items) by the Directors.

Note 2: Mr. Kazuhiko Takeda and Ms. Rikako Beppu are new Directors and their expected roles are described.

Policy on Determining of Remuneration for Officers

With the aim of creating an attractive remuneration system for outstanding management personnel that will drive improvements in the Group's corporate value from a medium- to long-term viewpoint and establishing remuneration governance that will enable the Company to fulfill its accountability to stakeholders, including shareholders, the Company shall establish a policy on determining the remuneration for Directors and Executive Officers (hereinafter, "Officers") and a remuneration system as follows:

1. Policy on Determining Remuneration for Officers

- (1) A system shall be created that provides competitive standards for remuneration compared with companies of a business category and size similar to the Group.
- (2) The performance of the functions and duties assumed by each Officer and contributions to the improvement of medium to long-term corporate value shall be evaluated in a fair and equitable manner, and the evaluation results shall be reflected in remuneration.

- (3) In order to have remuneration function as a sound incentive to improve the Group's medium- to long-term corporate value, remuneration shall consist of basic remuneration, an annual bonus based on performance evaluations in each fiscal year, etc. and stock-based compensation, which is a medium- to long-term incentive linked to medium- to long-term performance and corporate value. The remuneration composition ratio shall be determined appropriately in accordance with one's job position. Provided, however, that for Directors (excluding those who concurrently hold the posts of Director and Executive Officer), only basic remuneration shall be paid in cash, in light of their function and role of supervising the performance of job duties by the Executive Officers.
- (4) An annual bonus shall be determined with the emphasis on the performance in each fiscal year, while appropriately evaluating the relative results of Total Shareholder Return (TSR)* and the status of each Executive Officer's implementation of medium- to long-term management strategies, etc.

$$*TSR = \frac{\text{Average closing price of the stock on each day in March of the current year} + \text{Total amount of dividends per share in the current fiscal year}}{\text{Average closing price of the stock on each day in March of the previous year}}$$

- (5) A medium- to long-term incentive shall be stock-based compensation that enables Officers to share awareness of profits with shareholders in order to enhance corporate value from a medium- to long-term viewpoint.
- (6) The policies for determining remuneration and the amount of individual remuneration shall be deliberated and determined by the Remuneration Committee composed of a majority of Independent Outside Directors.
- (7) Necessary information shall be disclosed actively so that stakeholders including shareholders can monitor the relationship between performance, etc. and remuneration.

2. Remuneration System for Officers

- (1) Directors (excluding those who concurrently hold the posts of Director and Executive Officer)
The remuneration system for Directors shall be determined so that only basic remuneration shall be paid in cash, taking into consideration an individual Director's job position, whether he/she is a full-time/part-time Director, etc. and referring to the standards for remuneration of other companies based on the research of outside experts.
- (2) Executive Officers
The remuneration payable to Executive Officers shall consist of basic remuneration, which is fixed remuneration, and an annual bonus and stock-based compensation, which are performance-linked remuneration. The remuneration composition ratio shall be in line with "Basic remuneration/Annual bonus/Stock-based compensation = 1.0/0.6/0.4" (*In the case where the annual bonus payment rate is 100%) as to the Chief Executive Officer, and for other Executive Officers, the ratio of performance-linked remuneration to basic remuneration shall be set lower than that for the Chief Executive Officer. Furthermore, the standards for remuneration shall be determined by referring to the standards of peer companies (similar-sized companies determined by the Remuneration Committee) based on the research of outside experts.

<Basic Remuneration>

Basic remuneration shall be paid in cash as fixed remuneration in accordance with one's job position.

<Annual Bonus (Short-term Incentive Remuneration)>

The annual bonus shall be determined based on the consolidated operating profit, relative comparison of TSR, and status of achievement of the non-financial target set for each Executive Officer, on a single-year basis.

The specific evaluation items shall be as follows:

【Evaluation Items】

1. Consolidated operating profit (or, in the case of an Executive Officer in charge of business activities, operating earnings from the relevant business sector), based on which the earning capacity of one's main job is evaluated; to be multiplied by an adjustment factor based on the consolidated operating profit growth rate compared with other companies to enhance consciousness on growth greater than market growth (choose companies for comparison mainly from among six nonferrous metal companies and similar-sized manufacturing companies)
2. Relative comparison of TSR (relative comparison with six nonferrous metal companies and the companies chosen mainly among similarsized manufacturing companies)
3. Non-financial evaluation that evaluates the status of achievement of the targets set for each Executive Officer at the beginning of the term and other relevant factors with regard to efforts aimed at improving medium- to long-term corporate value, which is less likely to be represented in short-term performance, as well as efforts in line with the Sustainability Policy*

*Sustainability Policy Items

1. Build a Work Environment that puts Safety and Health First
2. Respect Human Rights
3. Promote Diversity and Inclusion
4. Cultivate Mutual Prosperity with Stakeholders
5. Strengthen Corporate Governance and Risk Management
6. Engage in Fair Business Transactions and Responsible Sourcing
7. Ensure Stable Provision of Safe, Secure, and High Value Added Products
8. Proactive Engagement for the Global Environment

【Calculation Formula】

By deeming the amount payable for achievement of the target (Base Annual Bonus) as 100%, the amount for each individual shall be calculated by using the following calculation formula:

Annual Bonus=Base Annual Bonus by Job Position×Payment Rate Based on Performance Evaluation*

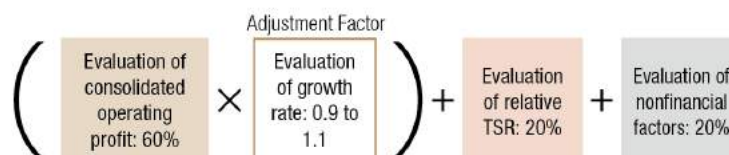
*"Payment Rate Based on Performance Evaluation" shall range from 0% to 200% based on a performance.

【Evaluation Weight】

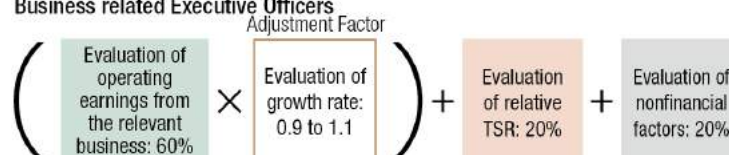
The annual bonus shall be determined based on the evaluations of each portion of 60%*, 20% and 20% of the base amount, which depends on one's job position, in terms of consolidated operating profit (or, in the case of an Executive Officer in charge of business activities, operating profit from the relevant business sector), relative TSR comparison and non-financial factors, respectively.

* To be adjusted using consolidated operating profit growth rate compared with other companies.

Chief Executive officer, Non-Business related Executive Officers



Business related Executive Officers



[Target of performance evaluation indicators for annual bonus]

With regard to the target of performance evaluation indicators for annual bonuses, in principle, the consolidated performance forecast for the next fiscal year at the time of the announcement of financial results at the end of the current fiscal year shall be applied (For operating income of the business for which the Officer is responsible, the figures on which the consolidated performance forecast was based shall be used.).

<Stock-based compensation (Medium- to long-term incentive remuneration)*>

Stock-based compensation shall be a system that utilizes a trust for the purpose of achieving the sharing of a common profit awareness with shareholders. This shall be used as an incentive for improving the medium- to long-term corporate value of the Group and under which the Company's shares and cash equivalent to the proceeds from the realization of the Company's shares shall be delivered and paid in accordance with one's job position, upon retirement from the post of Executive Officers. No performance conditions nor stock price conditions shall be set with respect to the shares to be. Please note that in the case of a non-resident staying in Japan, different treatment may be applied under laws or for any other relevant circumstances.

(*) The Officers' remuneration system adopts a structure called BIP (Board Incentive Plan) and grants to the Executive Officers the shares of the Company's common stock, etc. It is an incentive plan to accumulate points to be given to Executive Officers in accordance with their positions for each three consecutive fiscal year (initially from Fiscal 2021 to Fiscal 2023) (the "Applicable Period"), and to grant the shares of the Company's common stock equivalent to 70% of such accumulated points (shares less than one unit shall be disregarded) and cash equivalent to realized value of the shares of the Company's common stock equivalent to the remaining accumulated points as compensation to Executive Officers after their retirement. One point is deemed equal to one share of the Company's common stock, and if a stock split or reverse stock split occurs during the trust period, the number of the Company's shares per point shall be adjusted according to the stock split ratio or reverse stock split ratio of the Company's shares. The maximum number of points to be given to Executive Officers during the initial Applicable Period shall be 350,000 points in total.

Amount of Remuneration, etc. for Directors and Executive Officers (FY2022)

Classification of Officers	Total amount of remuneration, etc. (Million Yen)	Type of Remuneration, etc.					
		Monetary remuneration				Nonmonetary remuneration	
		Basic remuneration		Bonus (Performance-linked remuneration)		Stock-based compensation*4	
		Total amount (Million yen)	Number of eligible recipients (persons)	Total amount (Million Yen)	Number of eligible recipients (persons)	Total amount (Million Yen)	Number of eligible recipients (persons)
Director (Other than Outside Director)	124	124	2	—	—	—	—
Executive Officer	466	354	10	—	—	112	10
Outside Director	111	111	6	—	—	—	—

- (*1) The total amount of remuneration, etc. paid to Directors who concurrently serve as Executive Officers are shown in the total amount of remuneration for Executive Officers.
- (*2) The Company had 10 Directors and 10 Executive Officers as of the end of FY2022.
- (*3) The Remuneration Committee has deliberated and decided not to pay bonuses to Executive Officers based on performance in FY2021.
- (*4) The Company has introduced stock-based compensation based on a trust scheme, and the above amount of stock-based compensation represents the amount recorded as expenses for FY2022.
- (*5) In June 2022, based on the performance evaluation and non-financial evaluation for FY2022, bonuses (performance-linked remuneration) were paid to Executive Officers in the total amount of 347 million yen (number of eligible persons: 10 persons).

Meetings of Board of Directors that were Held, Rate of Attendance at the Meetings, and the Number of Years Served by Directors

The Board of Directors met 19 times in fiscal 2022. To ensure the effectiveness of the Board of Directors, the Company requires each Director to make every effort to attend all meetings, and the attendance rate was 100% in fiscal 2022. High attendance rates are also maintained by the Nomination Committee (which met 14 times), Audit Committee (17 times), and Remuneration Committee (9 times).

Number of Board of Directors Meetings held in FY2022 and Attendance at Them

	Board of Directors	Nomination Committee	Audit Committee	Remuneration Committee	Total
Number of meetings held	19	14	17	9	59
Rate of attendance of all Directors (%)	100	100	100	100	100
Rate of attendance of External Directors (%)	100	100	100	100	100

The term of a Director is one year pursuant to the articles of incorporation. As of July 2022, the average number of years served by active Directors was 4.2 years while the figure for Directors who have resigned in the past five years was 4.7 years.

Average Number of Years Served by Directors (As of July 2022)

Item	Unit	
Average number of years served by active Directors at present	years	4.2
Average number of years served by Directors who resigned in the past five years	years	4.7

Analysis and Evaluation of the Effectiveness of the Board of Directors

The Company analyzes and evaluates the effectiveness of the Board of Directors based on the evaluation by each Director on an annual basis. In FY2022, the effectiveness of the Board of Directors was evaluated using a third-party organization. The evaluation method and a summary of the results are outlined below.

1. Method of Analysis/Evaluation

(1) Evaluation process

- September 2021 The materials and minutes of the Board of Directors meetings were disclosed to the third-party organization.
- October 2021 The third-party organization conducted a preliminary interview with the Chairman of the Board of Directors and the Chief Executive Officer regarding the current status of the Board of Directors.
- November 2021 A questionnaire prepared in consultation with the third-party organization was distributed to all 10 Directors and anonymous responses were retrieved.
- December 2021 Based on the results of the questionnaire, the third-party organization conducted individual interviews with all 10 Directors on important matters concerning the Board of Directors.
- February and March 2022 Given the report from the third-party organization on the results of the questionnaire and interviews compiled and analyzed, the Directors discussed the effectiveness of the Board of Directors based on that report.
- March 2022 Following the discussions in February and March, the Board of Directors passed a resolution on the effectiveness of the Board of Directors for FY2022.

(2) Questionnaire items

The questionnaire uses a five-grade evaluation for the questions below (1. Strongly agree, 2. Agree, 3. Neither agree nor disagree, 4. Disagree, 5. Totally disagree) and provides a free comment space where needed.

- Roles and functions of the Board of Directors
- Scale and composition of the Board of Directors

- Status of operations of the Board of Directors
- Composition, roles and status of operations of each of the Nomination Committee, Audit Committee and Remuneration Committee
- Support system for Outside Directors
- Relationship with investors and shareholders
- Overall effectiveness of the Company's governance system and the Board of Directors

(3) Interview items

Based on the responses to the questionnaire, the third-party organization conducted interviews on the following important matters concerning the effectiveness of Board of Directors.

- Views on business and management
 - Optimization of business portfolio
 - Promotion of CX (efforts for management innovation) and organizational reform
 - Status of corporate culture and human resources
 - Status of group governance and internal control
- Views on the Board of Directors
 - Supervisory function by the Board of Directors
 - Status of discussions at the Board of Directors
 - Comments by Outside Directors
 - Quality of discussions at the Board of Directors and future responses
 - Discussions on sustainability issues
 - Setting of agenda
 - Materials and presentations
 - Views on the leading Independent Outside Directors
 - Succession plan for the Chief Executive Officer
 - Views on the Chairman and its succession plan
 - Composition of Outside Directors and their succession plan
 - Sharing of information on discussions at the Nomination Committee with the Board of Directors
 - Status of activities of the Audit Committee

2. Issues Based on the FY2021 Evaluation and Evaluation of Responses to Those Issues

As a result of the questionnaire and interviews conducted by the third-party organization regarding the initiatives concerning the following matters taken by the Company in FY2022 based on the results of the evaluation of the effectiveness of the Board of Directors for FY2021, it was confirmed that "certain measures were taken and improvements have been made" and "sufficient discussions were conducted by the Board of Directors" in general.

- (1) Matters pertaining to enhancement of management supervisory functions (the manner of supervision, including supervision of the measures taken based on the Medium-term Management Strategy, the appropriate content and number of proposals to the Board of Directors, the content and volume of materials for the Board of Directors, and time for prior consideration)
 - Distribution of materials for the Board of Directors should be made at an early timing with particularly important sections in materials highlighted.
 - Emphasis should be made on explaining new matters, and causes and countermeasures, etc. of matters that are progressing unfavorably in reports made by Executive Officers at the Board of Directors meetings.
 - In regard to matters deliberated by the Board of Directors, reporting of business results, budget, financial results, etc. should be made in the first half so that Directors may judge the appropriateness of each measure based on the general situation of business performance, etc.
 - Business briefings should be held regularly for Outside Directors in order to deepen their understanding of our business and major projects, overseas sites/business expansion, and overview and background, etc. of measures taken under the Medium-term Management Strategy.
- (2) Matters pertaining to understanding of capital cost and setting of indicators
 - In line with the partial review of the Medium-term Management Strategy, financial plans, including ROIC, were reviewed after consultation by the regular Board of Directors meetings held in March and April 2021.

- Appropriate calculation and operation methods, etc. of management indicators, including ROIC, should be further discussed by the Board of Directors to develop a monitoring structure based on appropriate management indicators applicable for the next Medium-term Management Strategy.
- (3) Matters pertaining to supervision of the policy for reduction of the Strategic Share Holdings
- Strategic Share Holdings should be examined based on business alliances, business relationships, and investment effects to systematically reduce shares if it is deemed unnecessary to hold them.
- (4) Matters pertaining to supervision of Group governance, etc.
- Initiatives should be taken on the Group-wide measures to activate communication and enhance internal control.
 - Previously implemented reports on safety, quality, compliance, etc. by the Sustainable Management Office to the Board of Directors should be continued as provision of necessary information for monitoring.

3. Results of Analysis of the Questionnaire and Interviews by the Third-party Organization

The key results of analysis of the questionnaire and interviews compiled by the third-party organizations are as follows.

- (1) Effectiveness, etc. of the Board of Directors
- The supervisory function of the Board of Directors is appropriately exercised, and its effectiveness is considered to be high.
 - In the self-evaluation of Directors, it was confirmed that each individual contributed to activating discussions at the Board of Directors meetings and to exercising the supervisory function.
- (2) Supervisory function of the Board of Directors
- The management team is currently working on business and organizational reforms, but there are still many issues recognized. The role, composition, and discussions of the Board of Directors are expected to change in response to such business and management stages. As for their role, it is considered that "the support and supervision of execution will be important in the success of reforms and the creation of growth areas" and "discussions are needed to enhance the supervision function to monitor the efforts to address issues."
 - The Board of Directors has a common understanding that supervision of management and execution is an important role. The way in which a supervisory function is exercised is considered to differ depending on the experience and perspective of each Director. Specific measures included "support execution and lead to change," "examine from both quantitative and qualitative aspects, focusing on major policies related to the whole," and "strictly monitor progress and achievements in response to commitments." There is an opinion stating that it is better for the Board of Directors to take a more leading role in matters related to the way the Company ought to be, such as sustainability issues.
- (3) Sustainability
- On sustainability issues, many directors believe it is better for the Board of Directors to demonstrate stronger leadership and set a direction from the Board's point of view. In order to conduct effective discussions, it is considered necessary to "clarify the definition of sustainability," "organize how Outside Directors can contribute," "establish a sustainability committee to hold discussions outside the Board of Directors," and "enhance the secretariat structure" among others.

4. Summary of FY2022 Evaluation Results

As a result of deliberations by the Board of Directors in consideration of the results of the thirdparty analysis, it was confirmed that the effectiveness of the Board of Directors of the Company was secured in FY2022. Matters recognized as issues in the questionnaire and interviews and a summary of deliberations of the Board of Directors regarding those issues are as follows.

- (1) Matters pertaining to the operation of the Nomination Committee, Audit Committee and Remuneration Committee
- There was an opinion that "the Nomination Committee has not sufficiently shared information with the Board of Directors regarding the status of consideration of the succession plan for the internal Directors." Regarding this, there was an opinion indicating that "this evaluation result may be due to a lack of sharing of discussions had by the Nomination Committee with the entire Board of Directors or to inadequate sharing of relevant information from Directors who also serve as Executive Officers. This can also be said of

discussions at the Remuneration Committee, etc., and from a broad perspective, it may be a question of whether each committee shares the content of deeper discussions.”

- On the other hand, there was a comment stating that "in some cases, the content of discussions at each committee includes information that is not necessarily appropriate to be shared with the Board of Directors as a whole because of the presence of relevant persons within the Board." Regarding this, an opinion was given that "opportunities for discussion among Outside Directors only should be increased, taking into account cases where it is not appropriate to share information with internal relevant parties."

(2) Matters pertaining to supervision of growth strategies by the Board of Directors

- Regarding the optimization of the business portfolio, there was an opinion stating, "Since a certain degree of business reforms, including restructuring and withdrawal, is expected to be completed, discussions on growth strategies, such as strengthening existing businesses and fostering new businesses, should be deepened from a multifaceted perspective."
- In addition, while there was an opinion stating, "It is necessary to enhance explanations and information provision from Executive Officers in order for the Board of Directors to accurately monitor the current situation," there was also an opinion stating, "This is covered by the business briefing, etc. for Directors currently held."

(3) Matters pertaining to the establishment of a sustainability committee

- Through this evaluation process, it was found that on sustainability, many Directors believe "it is better for the Board of Directors to demonstrate stronger leadership and set a direction from the Board's point of view."

5. FY2023 initiatives toward further enhancement of effectiveness

The Company's FY2023 measures to enhance effectiveness based on evaluation results of the effectiveness of the Board of Directors in FY2022 are as follows.

(1) Responding to opinions on the operation of the Nomination Committee, Audit Committee and Remuneration Committee

- In the evaluation process, a point was made that while the details of in-depth discussions by each committee need to be shared more with the Board of Directors as a whole, for matters discussed by the Nomination Committee and the Remuneration Committee in particular, the presence of stakeholders (mainly internal directors) at meetings of the Board of Directors also needs to be taken into account. Accordingly, the frequency of Outside Directors' opinion exchange meetings, where discussions take place only among Outside Directors, will be increased.

(2) Responding to opinions on the supervision of growth strategies by the Board of Directors

- When formulating the next Medium-term Management Strategy planned to be announced in 2023, the details of measures, including matters related to growth strategies, will be explained by the execution side and discussed from a multilateral perspective by making use of settings such as briefings for Directors (please refer to the following paragraph). In addition, the rolling after the formulation of the next Medium-term Management Strategy will also be discussed from a multilateral perspective.
- Business briefings for Outside Directors, which were previously held as a platform where Executive Officers provided explanations and information so that the Board of Directors accurately monitors the current situation, will be reorganized into briefings for Directors targeting all Non-executive Directors and will be held continually. The briefings will cover matters such as the next Medium-term Management Strategy, business portfolio, Group-wide strategy, individual business strategy, R&D and intellectual property strategy, business restructuring, investment, progress on each MMDX theme, and rolling review of the Medium-term Management Strategy.

(3) Responding to opinions on the establishment of the Sustainability Committee

- The Sustainability Committee was established under the Board of Directors on June 28, 2022.
- The Committee will consider monitoring methods and issues related to sustainability management and others as matters at request of the Board of Directors for advice.

Looking ahead, the Board of Directors will keep making continuous efforts toward further effectiveness improvements.

Status of Audits

Status of Audits Performed by the Audit Committee

A framework for conducting audits of the state of the execution of duties by Directors and Executive Officers has been established (1) by, utilizing methods via the Internet, attending important meetings such as the meetings of the Strategic Management Committee, conducting interviews with Directors, Executive Officers, departments in charge of internal audits, and other departments in charge of internal control concerning progress on the execution of their duties and examining important approval documentation, etc. by members of the Audit Committee, and (2) by investigating the state of business and assets at the Company headquarters and significant business sites and conducting onsite audits of subsidiaries, etc. as needed by select members of the Audit Committee according to the audit standards and audit plans, etc. of the Audit Committee as established by the Audit Committee. Additionally, the Audit Committee holds regular meetings with Corporate Auditors at major Group companies as part of efforts to enhance coordination of audit systems in line with Group management measures in place. An organization has been set up directly under the Audit Committee to assist the Committee in its duties concerning such audits performed by members of the Audit Committee.

Status of Internal Audits

As of June 28, 2022, the Audit Department of the Strategic Headquarters and the Audit Department of in-house companies, which are departments in charge of internal audits, consist of 31 persons, including the General Managers of each Audit Department. They are responsible for conducting internal audits based on the instructions of the responsible Executive Officer in cooperation with the Audit Committee to evaluate whether internal control systems are developed and applied in an appropriate manner. They also audit the effectiveness and efficiency of company operations across the Group, the reliability of financial reports, the state of safeguards for assets and their effective utilization, the risk management status, and the state of compliance with laws and regulations and internal rules and standards, based on internal audit plans approved by the responsible Executive Officer and the Audit Committee.

Furthermore, the Audit Department of the Strategic Headquarters works on their audits in close liaison with the Audit Committee by regularly reporting the results of Group-wide audits performed and sharing information.

Additionally, the Audit Committee regularly receives reports from Accounting Auditors on audit results, shares this information, and engages in audits in close cooperation with said Accounting Auditors after discussing audit plans for both with Accounting Auditors.

Internal Control

Since the establishment of the Internal Control System Management Committee in January 2006, we have taken steps such as developing a set of basic principles for improving the Group's internal control systems, and ensuring compliance with the requirements to introduce internal control evaluation and disclosure systems in relation to financial reporting, in an effort to ensure compliance with the Companies Act, the Financial Instruments and Exchange Act, and other relevant legislation, and to establish the optimal internal control systems for both Mitsubishi Materials and the Mitsubishi Materials Group companies.

Regarding evaluations conducted during fiscal 2022 on our internal control system for financial reporting, an Internal Control Report was submitted in June 2022 for which we received an unqualified opinion of the auditing firm that the content is appropriate.

Reduction of Strategic Share Holdings

The Company has a policy of not acquiring or holding shares (strategic holdings) other than purely for investment purposes, except when it is required for their business strategy.

With regard to the Shares in the Form of Strategic Share Holdings, the appropriateness of such holdings shall be specifically reviewed and examined at a meeting of the Board of Directors on an annual basis. As a result of such reviews and examinations, the Company will reduce any Shares in the Form of Strategic Share Holdings if it is not deemed to be necessary to hold such shares.

The Company will make a continuous effort to reduce the Strategic Share Holdings in accordance with the result of such reviews and examinations.

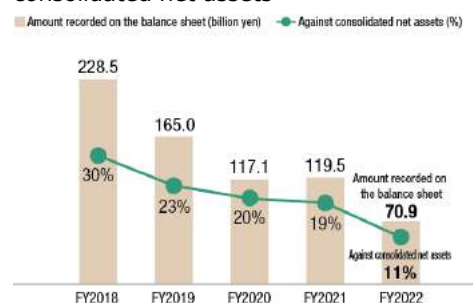
Strategic Shareholding Reduction in Fiscal 2022

In fiscal 2022, out of all of the Strategic Share Holdings (shares in 43 issuing companies held by the Company at the end of March 2021), we sold all or a part of the shares issued by 22 issuing companies. The sales price was approximately 56.6 billion yen (at market value) in total.

Changes in Number of listed Strategic Holdings



Percentage of Strategic Holdings in consolidated net assets



Toward the Enhancement of Group Governance

Future Group Governance Enhancement Initiatives

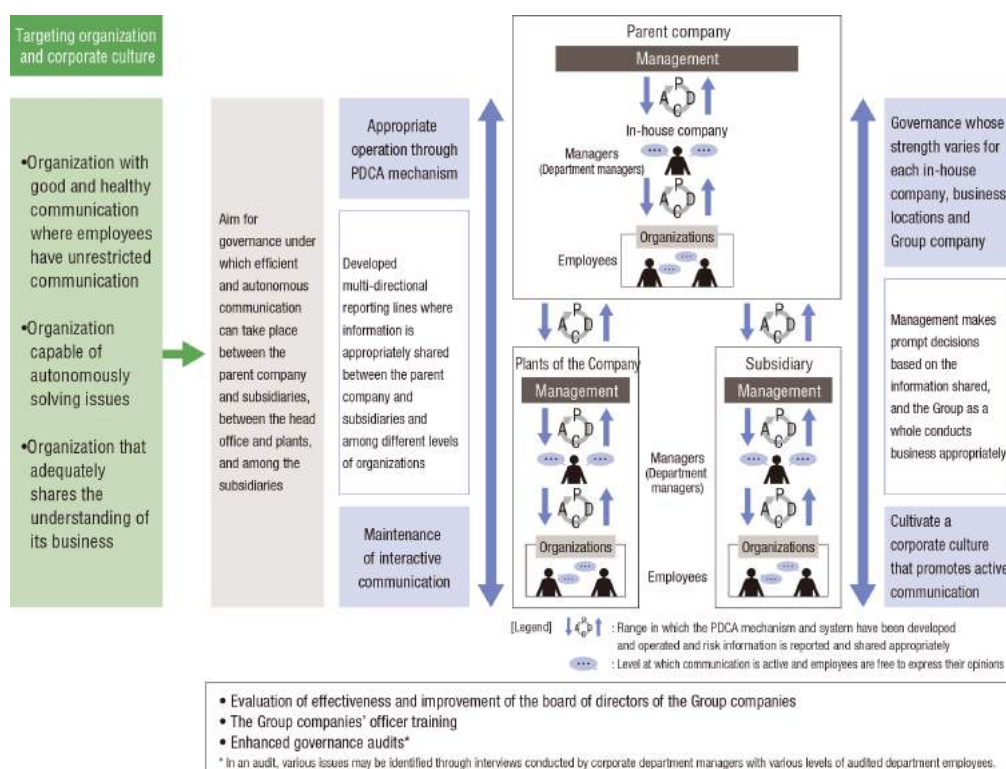
The Sustainable Management Office established within Mitsubishi Materials will oversee and promote the enhancement of the Group's governance, including quality control. In addition, the Governance Deliberative Council will continue to meet and discuss the governance plans of sites and inspect their progress, and each site will continue to implement initiatives to enhance governance formulated by the Sustainable Management Office and others. Corporate divisions will continue to support the initiatives taken at each site.

In this way, we will continue our initiatives to enhance the Group's governance, including quality control, and report the status of the initiatives' implementation to the Board of Directors.

*For details of our corporate governance system, refer to the above Corporate Governance System Outline (as of June 28, 2022).

■ The Target of Group Governance that the Mitsubishi Materials Group Aims to Achieve

Aim for governance under which efficient and autonomous communication can take place between the parent company and subsidiaries, between the head office and plants, and among subsidiaries.



Case and Measures for Robertson's Ready Mix, Ltd. (RRM)

It turned out that RRM and other companies (all of which were consolidated subsidiaries of the Company located in the U.S., hereinafter collectively referred to as "RRMs") conducted transactions with companies in which some senior executives of RRM have jointly invested. Insufficient checks on senior executives (minimized involvement in RRM to maintain a climate that supported RRM's success up to that period), concentration of authorities in senior executives and the culture to follow the top (History of success by top-down management as an owner-managed company), etc. were the causes. In addition, we conduct investigations into the existence of similar cases in the Group to confirm that there are no other cases.

* (For details, please see the "Notice Regarding Submission of the Second Quarterly Securities Report for the Fiscal Year Ending March 31, 2021," (issued on December 16, 2020).)

Group-wide Measures to Prevent Recurrence of RRM and Similar Incidents

Issues	Measure
Enhancement of compliance system	Establish a management team and have it conduct an advance review of material matters →The team was established in December 2020 (being implemented) Assign Compliance Officer and necessary Staff →Assigned in March 2021
Establish external contact window for reporting with attorneys-at-law, etc. being the contact window	→Established in April 2021
Renovation and enhancement of management system at RRM by appointing senior executives dispatched from shareholders	April 2021: President and CEO* of MCC Development Corporation and others dispatched from shareholders * Concurrently serving as CEO of Mitsubishi Cement Corporation (U.S.)
Enhancement of board of directors' effectiveness and enhancement of conversations with executives at subsidiaries, etc.	Increase the frequency of board of directors meetings and dialogs with the parent company (being implemented)

The Group-wide Internal Control Enhancement Measures

In response to the case of conflict-of-interest transactions by senior executives of RRM, in addition to RRM recurrence prevention measures, we take measures to further strengthen internal controls to prevent and detect fraud by senior executives throughout the Group at an early stage.

Themes	Specific measures	FY2022 Summary
1) Strengthening internal checks	1. Dispatch of multiple full-time officers from parent company	- Establishment of guidelines on the dispatch of multiple full-time officers and a manuals on part-time officers' activities - Implementation of surveys on the status of use of the manuals on part-time officers' activities
	2. Confirmation of concurrent businesses and related-party transactions and the establishment of rules 3. Confirmation made at the time of new transactions, confirmation of the statuses of existing business partners	- Creation of basic policies on rules and methods of confirmations made at the time of new transactions and confirmation of the statuses of existing business partners, implementation of preliminary surveys - Establishment of Rules for Management of Concurrent Businesses and Related-Party Transactions, etc. (Came into effect in April 2022)

Themes	Specific measures	FY2022 Summary
	4. Introduction of an overseas in-house reporting system	• Implementation of fact-finding surveys on the status of reporting to each company's individual reporting system • Completion of introduction of the MMC Group Global Hotline to all target companies of overseas group companies by the end of the fiscal year
2) Raising the awareness of officers	1. Governance training for officers	• Implementation of governance training for new officers in Japan and governance training for overseas officers
	2. Compliance training for managers of overseas subsidiaries	• Distribution of compliance training videos to overseas subsidiaries • Implementation of bidirectional, interactive training given by external local instructors
3) Enhancing communications between persons in the second line		• Dialogues held on the themes of illegal trade, accounting fraud, and violations of the Antimonopoly Act
4) Expanding internal audits (Internal Audit Dept.)		• Approximately half of fiscal 2022 comprehensive audit target sites were selected as priority bookkeeping audit targets • Conduct of RRM Group bookkeeping audits • Conduct of bookkeeping audits at 18 domestic sites

Group Governance Framework Enhancement Measures

We have formulated and are executing measures for enhancing the Group governance framework in order to solve issues regarding Group-wide governance that were identified based on analyses of the backgrounds and causes of quality issues that have occurred in our group since 2017. Monitoring by Outside Directors and outside experts ended on May 13, 2020, but we have continued to engage in autonomous governance enhancement activities.

Issues we have perceived	Group Governance Framework Enhancement Measures
① Communication • Harmful effects of vertically-segmented organizations • Insufficient control over subsidiaries • Insufficient sharing and communication of information regarding governance-related matters ② Compliance framework and awareness • Compliance awareness is insufficient at each level; necessary knowledge has not been acquired • Awareness of our responsibilities as an organization and business is shallow • Insufficient capacity to discover misconducts, take initiatives to resolve issues, and make timely reports ③ Resource allocation • Insufficient process capabilities that are adequate for received orders or insufficient inspection and quality assurance framework • Unsuitable resource allocation due to priority on earnings, postponement of necessary capital investment, etc.	① Enhancement of framework for discussion and reporting of governance-related matters
	② Improvement of functions of management divisions and their collaboration with business divisions
	③ Improvement of Human Resources Training and Encouragement of Active Interaction
	④ Internal audit strengthening
	⑤ Studies with a Business Optimization Focus

Results of Employee Awareness Surveys (6th) Related to Compliance Awareness Surveys, etc. (conducted in August 2021)

Points that were clarified by the 1st survey		Points that were clarified by the 6th survey
While compliance awareness has been growing, we need to continue efforts to create specific rules and procedures and keep employees fully informed of them.	▶	Initiatives for strengthening compliance, including measures taken by the management and CSR and compliance training, are also felt to be adequate.
While the importance of compliance-related reporting and provision of compliance-related information is understood, many employees feel anxious or hesitant.	▶	• Almost all employees understand the importance of compliance-related reporting and the provision of compliance-related information • On the other hand, there are still many employees who feel anxious or hesitant about reporting or providing such information.
While measures to strengthen compliance are being driven by employees in managerial positions further improvement is desired for workplace management and communication.	▶	• Most employees feel that their workplace has an atmosphere that allows them to feel free to seek advice and that they have sufficient communication. • In addition, while many employees feel that their superiors understand their duties, many employees still feel that there are duties which are understood only by specific people in their workplace, who are in charge of them. • Further, compared to managerial staff, the ratio of negative answers has remained higher among layers of employees other than managerial staff. Therefore, it is believed that the idea has yet to be instilled fully in employees other than managerial staff.

[Subjects]

All officers and employees of Mitsubishi Materials and domestic group companies (64 companies in total)

All officers and employees of overseas group companies (66 companies in total)

[Response rate] 91%

To respond appropriately to various risks surrounding the Group and to operate its business stably by minimizing damages, the Group strives to improve risk sensitivity and risk control capabilities. As one aspect of efforts to enhance its governance system, in FY2019, the Group reviewed its risk management mechanisms and built a more highly effective and reliable risk management system, and is conducting risk reduction activities at all Group business locations both in Japan and overseas.

Risk Management Activities

Basic Perspective

The Group conducts risk management activities aimed at controlling factors that could exert a negative impact on our business performance and providing steady support for sound business operations throughout the Mitsubishi Materials Group. To assure achievement of these goals, we are conducting activities under the following three basic policies:

Basic Risk Management Policies and Objectives

1. Responding to high priority risks:
Prioritizing risks and implementing measures accordingly
2. Identifying unrecognized risks:
Using risk management records to establish a comprehensive overview of all risks
3. Sharing risk information:
Disclosing the details of Group risks to all concerned parties

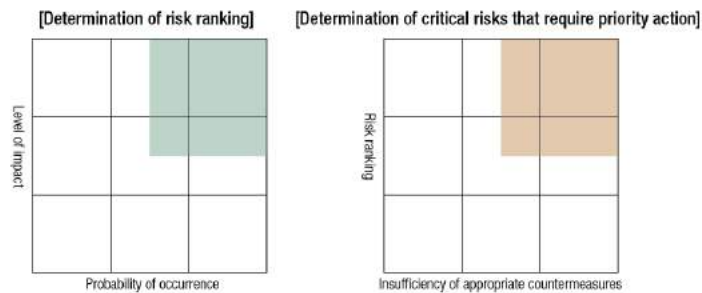
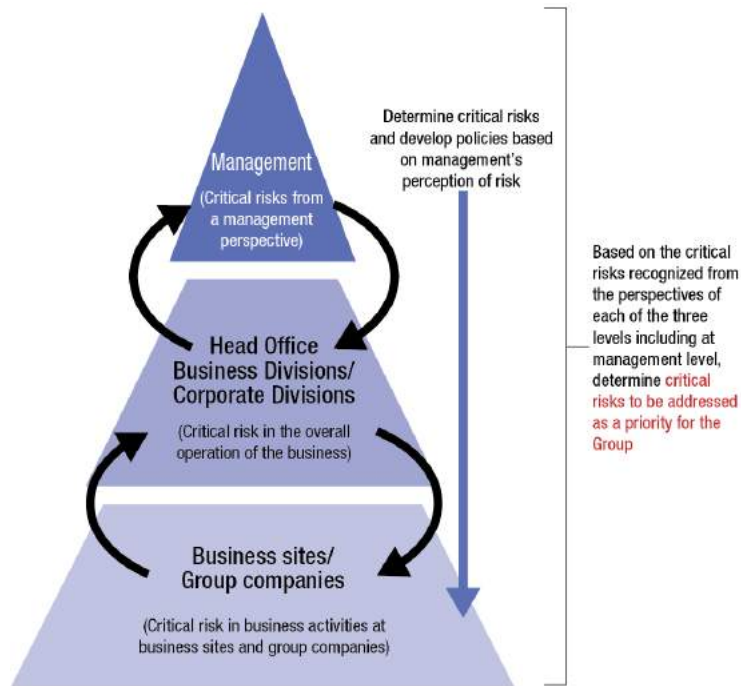
Implementation Structure

While critical risks inherent to each field of business are identified by individual business divisions, the Group identifies and evaluates serious, high priority risks at a management level which share a high degree of commonality across the Group and which are expected to have a severe impact on the Group's business management.

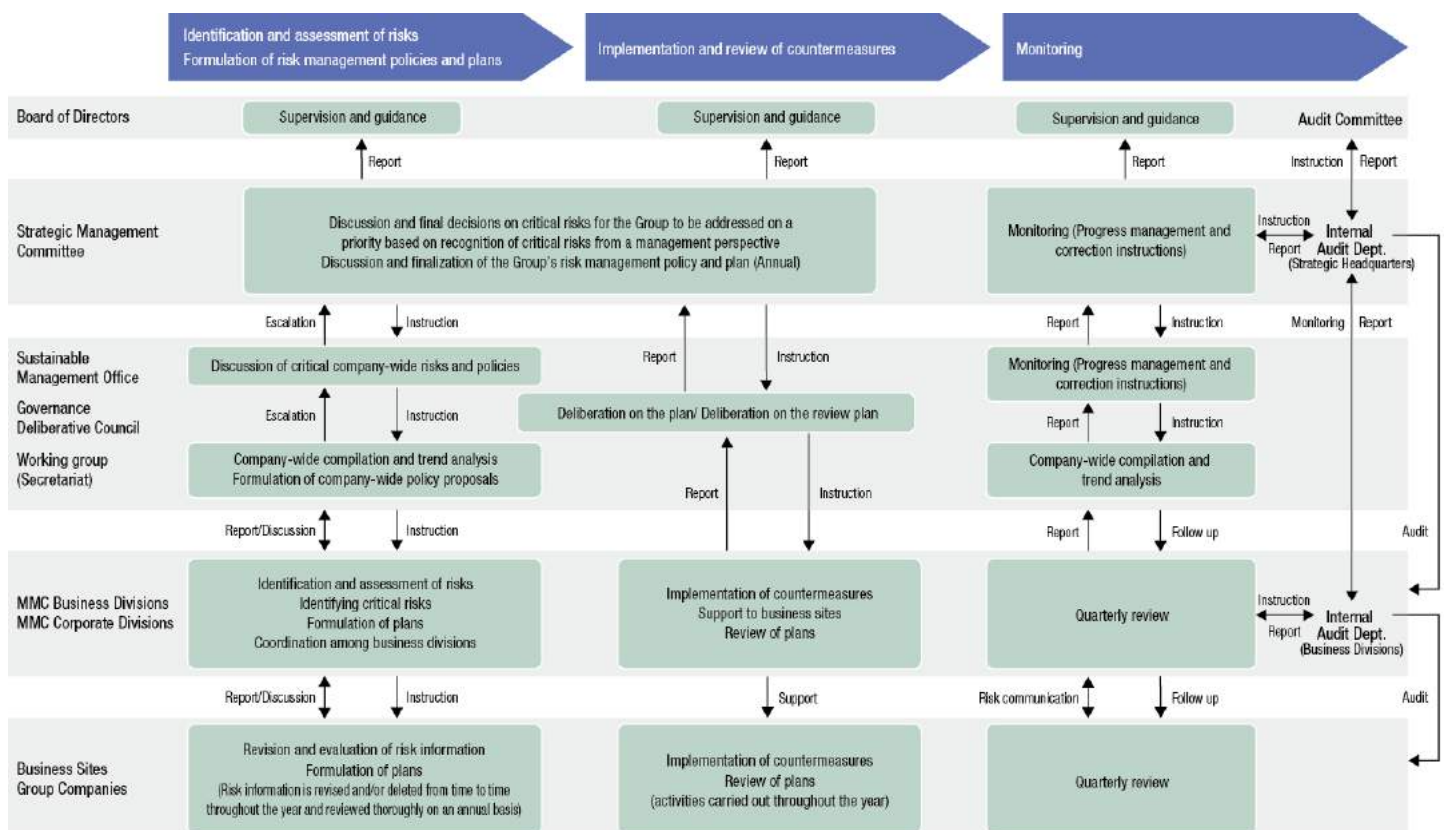
The critical risks to be prioritized by the entire Group and the contents and response approaches of critical risks to be tackled by each business division are discussed at length by the Company's Sustainable Management Office, Executive Officers' Meeting and the Board of Directors, and defined on an annual basis. Each business site formulates activity implementation plans in accordance with this. These plans then undergo review by the Governance Deliberative Council before being put into action. A structure is in place by which the content of these activities is shared with members of management and relevant departments, and progress is monitored on a regular basis by the Sustainable Management Office, the Strategic Management Committee and the Board of Directors.

Additionally, information on risks identified as part of risk management activities is provided for use in internal audits, and a system is in place to have risks that have been pointed out in audits, etc. added as necessary to the risk management scope. Strict PDCA management is applied to this entire system. With regard to training, we are striving to boost our sensitivity to risk and enhance and raise the bar concerning our risk control capabilities by implementing training sessions, both in Japan and abroad, that feature both internal and external consultants.

■ Procedure for Identifying Critical Risks



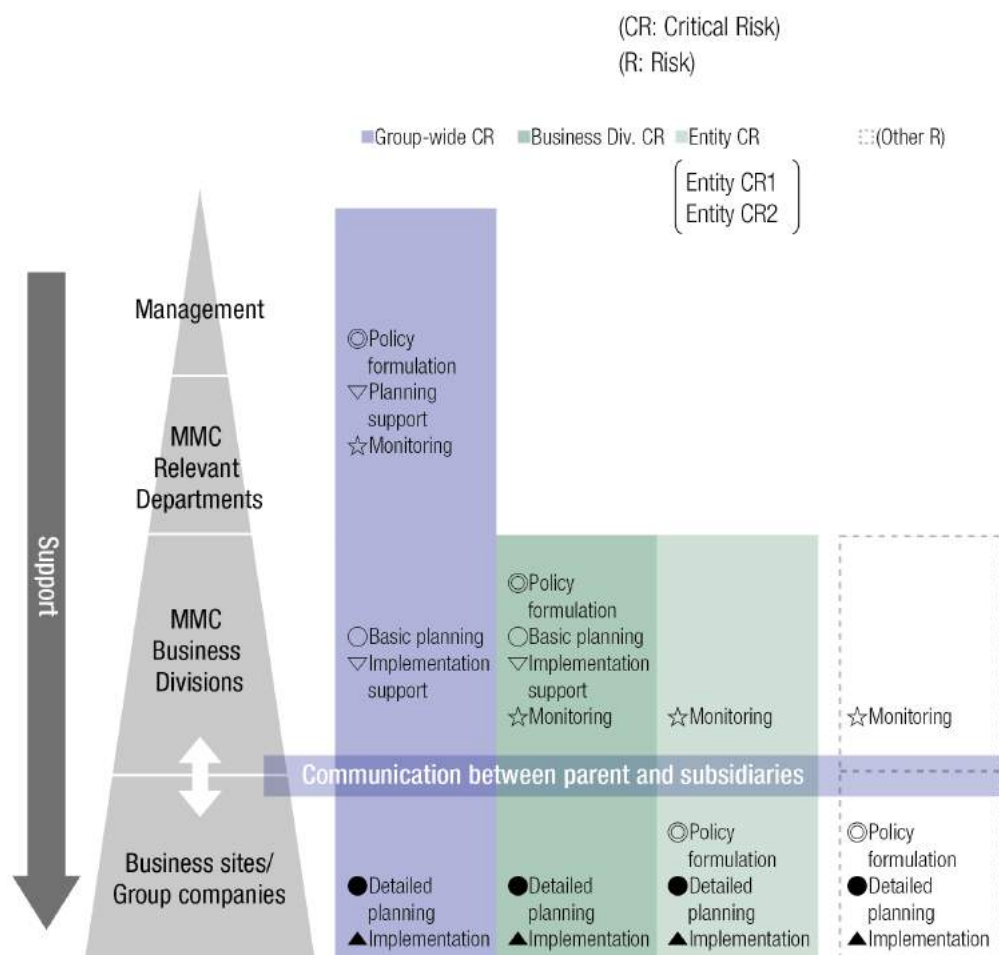
■ Risk Management System



Risk Handling Roles and Responsibilities According to Level

Critical risks are classified into four categories according to the attributes of each, with roles and responsibilities set for each level (management level, relevant departments, companies and other business divisions, and business sites). In an effort to ensure that all critical risks are addressed without fail, we have established a system that enables business sites to receive sufficient support if it proves difficult for them to address risks on their own, upon consultation with the parent company, overseeing business division, and relevant specialist departments

■ Roles and Responsibilities According to Level for Each Critical Risk



■ Business Risks

The table below shows the main risks the management of the Group has recognized, based on this system, as having the potential to significantly impact the Group's business results and financial situation. The contents of these risks are indicated in the "Business and other risks" section of the Consolidated Financial Results.

Name of risk	Probability of occurrence	Level of impact
International situation, overseas economic situation	High	Large
Market trends	Medium	Large
Fluctuations in raw material and utility prices	High	Large
Procurement	Medium	Large
Climate change	High	Large
Natural disasters and abnormal weather	Medium	Medium
Occurrence of violations of pollution and environmental laws and regulations	Medium	Medium
Infection (COVID-19)	High	Medium
Information security	High	Medium

Name of risk	Probability of occurrence	Level of impact
Financial risks	Medium	Large
Human rights risks	Medium	Medium

► Business and Other Risks of Mitsubishi Materials Corporation

Crisis Management Activities

Basic Perspective

We are striving to strengthen our crisis management systems to facilitate prompt, accurate responsiveness to emergency situations, including natural disasters, accidents, terrorist attacks and pandemic events. Besides operating crisis management related rules that apply to the entire Group, we formulate business continuity plans at all our consolidated subsidiaries in Japan and overseas, with the aim of minimizing the impact on customers of any crisis that might occur through swift restoration and continuation of operations.

We also receive the latest global information on crisis management and expert advice from an external consulting company, and have established a system that enables employees dispatched overseas and stationed regionally to receive advice on action to take in the event of an emergency, as well as direct safety assurance services and medical services. Other efforts include the deployment of a safety guidebook that considers the risks faced by each country and region, and the implementation of security checks in countries and regions deemed particularly high risk.

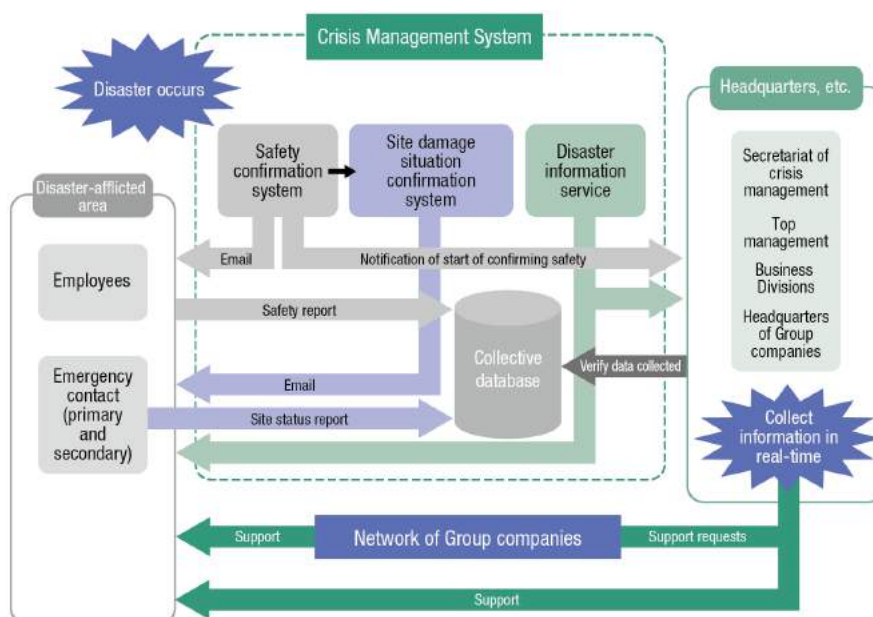
In addition, from fiscal 2021, our Crisis Management Activities include serious operational risks such as quality scandals, business legal violations, information leaks, cyber attacks, and breaches of trust, in addition to natural disasters, accidents, acts of terrorism, and pandemics, etc., which were already covered by the activities. To ensure that the system can respond to a wide range of crisis situations, it defines how to respond to each type of crisis situation, clarifies roles and responsibilities, and provides a framework that organizes the items to handle on a timeline.

Crisis Management System

The Group implemented a crisis management system both in Japan and abroad in order to help quickly assess the safety of employees and the scope of damage at business sites in the event of a disaster or other crisis, and to share this throughout the Group.

This has made it possible to initiate prompt and adequate initial response, and has also allowed us to leverage the Group's network to provide support, etc. from sites near disaster-afflicted areas.

■ Crisis Management System



The Group defines information security as one of the issues in management, and aims to conduct safe business by ensuring information management, including the handling of personal information.

Basic Policy

The Group defines information security as one of the issues in management, recognizes the personal information of customers and business partners to be the most important information asset, and strives to reduce the risk of information leakage, loss, and destruction.

Management System

In order to ensure compliance with the Group information security management policy, we have defined Group Information Security Management Regulations, Information Security Measure Standards, Confidential Information Management Regulations, and various implementation procedures that must be complied with

Group Information Security Management Regulations:

Basic rules regarding the construction and operation of a management system for Group information security, for the goal of protecting the information assets owned or managed by the Group from theft, leakage, modification, or destruction, and minimizing corporate loss

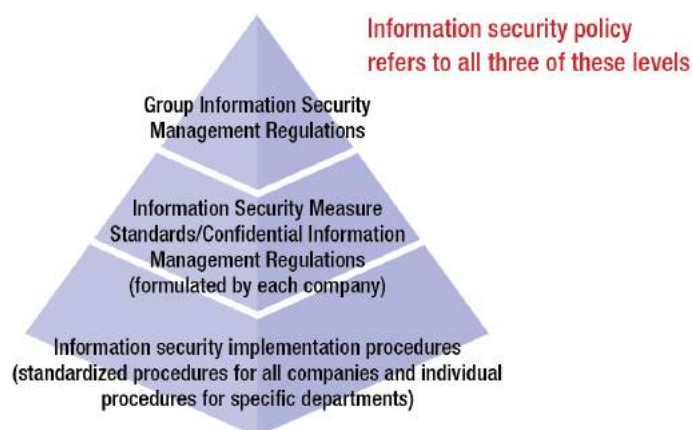
Information Security Measure Standards:

Standards defining information security countermeasures for electromagnetic information assets that the Group must follow

Confidential Information Management Regulations:

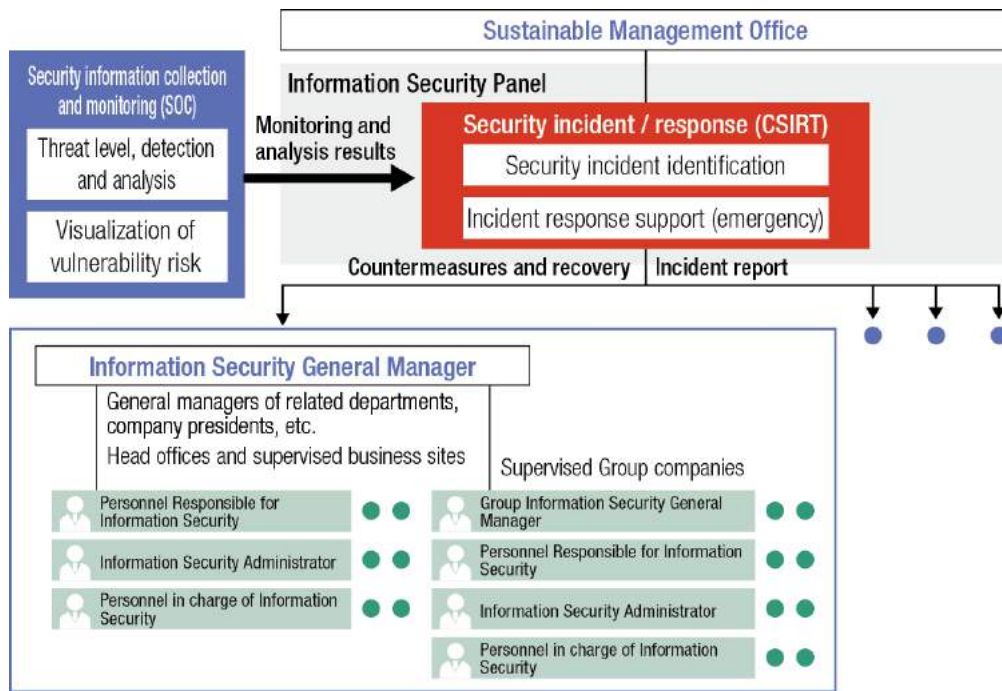
Basic rules regarding the handling of personal information and basic indicators on management methods for maintaining the confidentiality of information assets in general

■ Scheme of Information Security Policy and Documentation



In addition, “Information Security Panels” are set up to establish, adopt, operate, monitor, review, maintain and improve our information security policy, and information security managers are assigned to the Group and group companies to operate and monitor them.

■ Operating Organization for the Information Security



Various Information Security Compliance Initiatives

Our information security activities involve enhancing and expanding our information infrastructure with an eye towards business continuity in the event of a large-scale disaster, strengthening our technical measures for information systems, and introducing and operating management systems.

Technical efforts include enhancing our protective measures for preventing damage from attacks that leverage known vulnerabilities, as well as our risk reduction measures, which include enhancing defense in depth and the early detection of damage from new threats such as targeted attacks. In order to counter the rising threat of ransomware, we have introduced a system for forcibly applying updates and patches for vulnerabilities of the Group and all Group companies, including overseas companies.

On the management end, we strive to maintain and improve our level of security by implementing the PDCA cycle of performance evaluations and employee education on a continual basis.

As a measure of fiscal 2023, we will promote stable operation of the Security Operation Center (SOC) and expand the area we monitor. In addition, we aim to establish the activities of the Computer Security Incident Response Team (CSIRT) and raise security awareness through information security education and training.

Furthermore, we will not only comply with personal information protection laws of relevant countries, but also plan to implement new security measures in the OT field, where digitalization and transition to smart factory are progressing.

As security threats continue to worsen, we will continue to comprehensively, efficiently, and appropriately investigate and implement a variety of technical countermeasures.

COVID-19 Infection Prevention and Business Continuity

■ Basic Policy

The Group implements various measures under a common group policy to prevent important business from stopping, which prioritizes the prevention of employee infections and the prevention of the spreading of infections at business sites and in the local community.

1. We will make every effort to prevent infections and the spread of infections in order to prioritize the health of employees and the safety of the workplace.
2. We will conduct business activities according to the requests and instructions of national and regional government, and each of our employees shall act with awareness in their personal lives.

3. We will continue our business to ensure the production and supply of products that support society and prevent interruptions to our recycling business, and thereby meet the demands of our customers and society
4. We will take efforts for responding to COVID-19 as an opportunity to implement workstyle reforms, and improve productivity.

■ Task Force

The Group established a task force at the head office to direct a unified COVID-19 response across the Group. The task force formulates preventative measure guidelines and group action policies according to the status of the pandemic around the world and deploys them to all business sites, centralizes information on the health of employees, the situation and policies/regulations of various countries and regions, impact on business sites, and impact on the supply chain, etc., shares that information with top management, and conducts monitoring to ensure that the Group can handle changes to the situation swiftly and appropriately.

■ Measures for Preventing Infection and the Spread of Infection

The Group implements various measures for ensuring the health of all employees and maintaining workplace safety in Japan and overseas, as well as preventing the spread of infection in the various regions where we conduct business.

1. Dissemination of infection prevention measures in the workplace and thorough health management of employees.
2. Dissemination of the procedure to follow when an individual is infected or suspected to be infected.
3. Full-scale operation of working from home at offices, restrictions on using public transport, and utilization of satellite offices.
4. Restrictions on business trips, meetings, and events, and promotion of remote meetings via the Web.
5. Evacuation of employees stationed overseas, depending on the regional status of the epidemic, movement restrictions, standard of medicine, and state of medical services, etc.

■ Business Continuity

In order to continue producing and supplying products that support society and important businesses such as the recycling business, thereby meeting the demands of our customers and society, the Group is implementing various measures as appropriate given the current status of the pandemic and requests from national and regional governments, based on business continuity plans for each of our business sites.

1. Offices identify which work is important and continue to function, with all important work performed from home in principle and limiting office attendance to the minimum necessary number of BCP members.
2. Production sites identify which work is important and must be continued and implement a system for doing so based on multiple scenarios that take into account employee commuting restrictions and operation restrictions resulting from the spread of infection within the community.
3. Supply chains are enhanced by diversifying raw material suppliers and outsourcers, using multiple distribution routes, enhancing cooperation with customers, etc.

■ Resilience

In order to respond to major changes in the business environment and business structure and the severe impact to the real economy that is expected to have long-term consequences, the Group is implementing various measures for increased competitiveness, such as further enhancing cooperation with markets and customers, migrating to new work styles such as teleworking, improving management speed via digital transformation, and rebuilding business models.

▼This data is only available in Japanese on the website.

▶ ["Group Response to COVID-19 Infection" on the Corporate Website](#)

Ensuring Compliance

“Compliance” serves as a vital component of a company as the foundation for achieving sustainable development. The Group implements measures for spreading and establishing an awareness of “compliance” as a means to fostering an ethical corporate and organizational culture.

Spreading and Establishing an Awareness of Compliance

Our broad view of compliance encompasses such elements as corporate ethics and social norms in addition to legal compliance, reflecting our sincere determination to live up to our stakeholders’ expectations.

We are continually implementing new measures to enhance our Group-wide compliance framework, including domestic and overseas training aimed at realizing our steadfast commitment to improving compliance awareness among individual Group employees. We will strive to continue these initiatives in an aim to further spread and establish an awareness of compliance.

Activities Conducted to Raise Compliance Awareness

Since 2006, the Mitsubishi Materials Group has designated October as Corporate Ethics Month. Each October, the President posts a message on the Company intranet, and business sites and Group companies plan and conduct unique activities. Recognizing the importance of establishing the Corporate Philosophy system among all our employees, we produce and distribute booklets, posters, cards, and a handbook for Group employees. The booklets, posters, cards, and handbooks for our group employees are created in 22 languages so that they can be used by employees worldwide. In fiscal 2021, the employee handbook case study collection was distributed via the intranet and used in training activities conducted by Group companies in Japan.

We are working to spread awareness of the SCQDE through training, education, posters and cards, etc.

We are striving to build an organization and corporate culture with good and healthy communication where employee has unrestricted communication, and we see these efforts as further enhancing Group governance and preventing compliance violations. To this end, we are working to strengthen communication through the dialog-based communication measures and training.

Additionally, through small group compliance activities, we are working to foster compliance awareness and improve workplace communication by having employees share a healthy sense of urgency, view issues as those that affect them, and exchange opinions.

Furthermore, we aim to strengthen initiatives throughout the group through initiatives such as establishing entertainment expense management rules and a global hotline.

Expanding and Reinforcing Compliance Education

We provide compliance education and training for Mitsubishi Materials Group employees in Japan and overseas by utilizing external instructors, e-learning, etc.

We have constructed a framework that enables every employee in every domestic Group company to participate in compliance and risk management training once a year. From fiscal 2021, we have been promoting online participation in this training. We also regularly conduct communication workshops and training by job grade, etc.

For overseas education and training on compliance and risk management, we consider training content while taking into account the circumstances in each region of the world, and in addition to group training at overseas regional headquarters, we have introduced online training since fiscal 2019 to efficiently conduct training in a wide range of regions.

Since 2018, our senior management and external lawyers have been providing governance training for directors of the Group companies in Japan. The training is designed to help them to understand the duties and roles that managers must fulfill with respect to governance and compliance, and to foster an awareness and acquire the means to fulfill them. Since fiscal 2022, the training has also been offered overseas.

Furthermore, since fiscal 2019, we have conducted annual surveys on the compliance awareness of all employees. We analyze the results of these surveys to help measure the effectiveness of various initiatives and promote them.

■ **Number of Participants in Education and Training Program During Fiscal 2022 (including 53 Group companies)**

	Number of Participants
CSR training at domestic facilities, branches and group companies	17,773
CSR education at overseas group companies	832
Position-specific training	795
Total	★19,400

* Subjects of the above data for education and training program hours include non-regular employees as well as regular employees.

* The above disclosures include data for employees belonging to the Cement Business but do not include data for those belonging to the Aluminum Business.

Anticorruption Measures

Given the importance of preventing corruption, a global sustainable development challenge, in April 2018 we formulated our "Regulations for Combating Bribery of Public Officials, etc." in order to help prevent bribery in our global business activities. We provide necessary support for the creation and operation of bribery prevention systems in Group companies.

In-house Reporting System

We established an Internal Contact Office in December 2002 in Japan as a consultation service to handle reports and inquiries from employees of Mitsubishi Materials Corporation and its Group companies. Since January 2020, we have contracted an external vendor to run the "Mitsubishi Materials Group Employee Hotline" for reports and inquiries, as well as improving the response systems of Group companies to ensure that we can appropriately respond to reports and inquiries and better respond to issues, while also strengthening the reliability of report and inquiry systems. We also established a contact office for Members of the Audit Committee in June 2018 to contribute to the work performed by members of the Audit Committee in promptly detecting incidents and initiating corrective measures.

Contact information for these reporting systems is printed on cards for employees of the Mitsubishi Materials Group to keep on their person and made available on our Group website and through each training activity.

On April 1, 2021, we established and began operation of the "MMC Group Global Hotline," a global in-house reporting system for the Mitsubishi Materials Group. This in-house reporting system can be used by personnel in overseas Group companies and overseas sites (with some exceptions). The availability of the global in-house reporting system is made known to target overseas companies and sites. In Fiscal 2022, there was one report/inquiry received through the global in-house reporting system.

■ **Numbers of Reports and Inquiries Received through the In-house Reporting System (FY)**

2016	2017	2018	2019	2020	2021	2022
33	38	42	61	58	54	47

Measures for Rebuilding our Antimonopoly Act Compliance System

In September 2019, the Japan Fair Trade Commission (JFTC) issued a cease and desist order and a surcharge payment order to Universal Can Corporation, a Group company of that time, for violations of the Antimonopoly Act in the form of cartel activity. In response to this, from November 2019 onwards, the Group has engaged in various measures to rebuild its Antimonopoly Act compliance system.

- Formulation of Antimonopoly Act compliance regulations for MMC and Japanese subsidiaries
- Ongoing communiqués from top management regarding compliance with the Antimonopoly Act
- Clarification of Antimonopoly Act compliance as part of the Group's Code of Conduct

- Review and revision of regulations regarding disciplinary actions for MMC and Japanese subsidiaries
- Implementation of self-audits by MMC and Japanese subsidiaries, assessment of potential for Antimonopoly Act violations within each business segment
- Design and implementation of measures at individual business sites in the form of risk management activities
- Ongoing implementation and expansion of Antimonopoly Act compliance training
- Review and revision of internal audits related to the Antimonopoly Act
- Strengthening of measures against bid-rigging and transactions with competitors

Intellectual Property Management

At the Mitsubishi Materials Group, we engage in activities to develop a portfolio of intellectual properties and intangible assets in line with our business and development strategies, manage intellectual property risks, respond to related disputes, and improve the level of the Group's intellectual property governance.

Governance

As the importance of intangible assets including intellectual property grows, we are reinforcing our governance systems related to intellectual property in compliance with the Corporate Governance Code and proactively disclose our initiatives related to intellectual property, such as our 'Strategic Dialogue', to external parties. Further, in May, 2022, we have established the Intellectual Property Policy of Mitsubishi Materials Group, which indicates the direction of Group-wide intellectual property activities, based on the idea that we should maximize the value of intellectual property and intangible assets in a Group-wide manner.

Strategic Dialogue and Intellectual Property Creation

We promote Strategic Dialogue between business divisions and intellectual property divisions aiming for strategic creation of intellectual property.

We will focus on the creation of intellectual property in line with our business strategies and the R&D strategies that support them, based on the analysis data using the IP Landscape. as we continue to build a powerful portfolio of intellectual property rights .

■ Data as of March 31, 2022

Number of patent applications	Japan	318
	Overseas	106
Number of registered patents	Japan	3474
	Overseas	3190

* The number of patent applications is the number filed from April 2021 to March 2022.

* The number of patent applications overseas indicates the number of patent families, as PCT is included.

Handling of Technology Contract Risks

By building and operating a database on technology contracts, such as non-disclosure agreements, we give advice on contracts related to our research, development and intellectual property matters, including advice about the prevention of the leakage of confidential information, the management of contract periods, and the consideration of wording in contracts.

Intellectual Property Education

We organize a number of in-house educational programs on an ongoing basis, in an effort to improve understanding of how to establish and use intellectual property. The programs include position-specific training for employees from new recruits, young employees, and middle-level employees through to managerial-level employees, training geared towards obtaining intellectual property qualifications, and training given at business locations.

Enhancement of Countermeasures to Product Counterfeiting

As a countermeasure to address counterfeit cutting tools that are manufactured overseas, we have identified a large number of illegal operators who sell these products at local brick-and-mortar stores. Further, in fiscal 2021, we began to strengthen the monitoring and crackdowns of websites all over the world selling these products. We have deleted thousands of websites selling counterfeit products. We will continue to detect brick-and-mortar stores selling counterfeit goods and monitor websites selling these products, in our effort to eradicate counterfeit products.

Group-wide Expansion

We believe it is important to engage in initiatives related to governance, Strategic Dialogue and intellectual property creation, the handling of technology contract risks, intellectual property education, and the enhancement of countermeasures to product counterfeiting. We will expand these initiatives across the entire Group, instead of only engaging in them within Mitsubishi Materials Corporation, thus maintaining and improving the level of the Group's intellectual property governance, contributing to reducing intellectual property risks and maximizing the value of the Group's businesses.



- ▶ [Link to the website Intellectual Property](#)

Development and Empowerment of Diverse Talents

Development and Empowerment of Diverse Talents

Purpose of activities	Activities during fiscal 2022	Self-assessment	Goals/plans for activities from fiscal 2023 onwards
Promoting Diversity and Inclusion	Planning and implementing diversity and inclusion measures by setting and announcing goals to be achieved by the end of fiscal 2026	A	Accelerating an array of initiatives to achieve goals
Developing and effectively utilizing talents	Creating new Next-Generation Leadership Talent Development program	A	Steadily selecting and developing next-generation business leaders in accordance with the program
Promoting Health & Productivity management	Promoting health and productivity management based on the Mitsubishi Materials Group Health and Productivity Management Declaration	A	- Promotion of health and productivity management - Further enhancement of mental health initiatives

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

Basic Approach to Talent

Based on the idea that human resources are the source of business competitiveness creating new values, the Group consequently seeks to accept and respect diversity, with each and every employee finding work meaningful and experiencing growth while working together to achieve optimal organizational performance. We regard human resources as capital and strive to maximize their value to improve our corporate value over the medium to long terms.

Status of Employment at the Mitsubishi Materials Group (As of March 31, 2022)

■ Number of Employees (full-time equivalent)

Subject	Employees		Temporary Staff
Non-consolidated	★6,208		1,055
Consolidated	23,711		3,805
	Japan	13,290	
	Overseas	10,421	

■ Employee Numbers According to Location (consolidated)

Location	Employees
Japan	13,290
North America	3,693
South America	42
Oceania	10
Europe	1,201
East Asia	772
Southeast Asia	4,703
Total	23,711

■ **Employees Who Left the Company for Their Own Reasons (employees who left the company in fiscal 2022)**
(Non-consolidated)

Subject		Aged under 30	Aged 30-49	Aged 50 or over	Total
Number of employees who left the company for their own reasons	Men	54	44	26	124
	Women	16	6	1	23
	Total	70	50	27	147
Percentage of employees who left the company for their own reasons	Men	4.8%	1.8%	1.3%	2.2%
	Women	6.9%	1.7%	0.7%	3.1%
	Total	5.1%	1.7%	1.3%	★ 2.3%

Collaboration Between Diverse Talents

Diversity and Inclusion Initiatives

Basic Policy

We have stipulated our basic policies regarding diversity and inclusion in the Basic Policy on Corporate Governance, Sustainability Policy, and Human Rights Policy. We have also established the Guidelines for Support of Women's Development and Advancement as our policy on promotion of women's development and advancement.

We have posted these basic policies in the HR section of our internal portal website and continue to inform and cultivate the policies for all employees through activities such as explanations during internal training programs.

◆ Basic Policy on Corporate Governance

Based on the belief that employees are the source of new values and the Group's sustainable growth, we aim to maximize organizational performance by creating workplace environments in which team members with diversity in every respect, including race, religion, gender, sexual orientation and gender identity, age, disability, nationality, national origin, social origin, and professional background, can coexist, mutually recognize one another, and actively demonstrate their individual abilities at their very best. (Article 10)

◆ Sustainability Policy

We embrace diversity and acknowledge its importance in creating new value. We will promote diversity and inclusion as a source of sustainable growth within the Group. (Article 3)

◆ Human Rights Policy

We aim to build workplaces where team members with diverse attributes, values, and experiences can coexist and mutually respect one another, and where individuals can work confidently with a sense of growth and fulfillment as they elevate each other and demonstrate their capabilities to the full. (Article 8)

◆ Guidelines for Supporting Women's Development and Advancement

- (1) Actively promoting Diversity and Inclusion to embrace and respect diverse personalities, as well as to create new values, that are the sources of sustainable growth for the Group. Such promotion is one of our management strategies, and active participation of female talents is indispensable.
- (2) Aiming to be a place where all female talents with diverse personalities can demonstrate their individual abilities at their very best at all workplaces, occupation fields and positions, while experiencing growth and self-realization.
- (3) Fostering culture where every female talent can independently and autonomously build and realize their careers by improving the work environment, expanding the work area and support that respect viewpoints of work.

Targets to Achieve by the End of Fiscal 2026 and Actual Conditions

As our vision for Company-wide Diversity and Inclusion, we aim to increase the number of female and non-Japanese managers by about 2.5 times and the number of mid-career hire managers by about 1.5 times over that of fiscal 2021 by fiscal 2026. For female manager, we also aim to increase the percentage of all managers to 5.0% or higher by the end of fiscal 2026.

Targets for the Number of Female, Non-Japanese and Mid-Career Hire Managers

Subject		FY2026 Target
Female managers	Number compared to FY2021:	Approx. 2.5 times
Non-Japanese managers		Approx. 2.5 times
Mid-career hire managers		Approx. 1.5 times

Trends and Targets for Percentage of Women in Management Positions



*Results as of the end of March each fiscal year

Graduate Recruitment

Subject	Graduate recruitment	
	University graduates (including graduate school)	High school graduates
Men	73	58
Women	21	15
Total	★94	★73

Number and Ratio of Female Directors, Executive officers and Managers

Subject	Number	Ratio
Female directors (as of June 28, 2022)	2 (out of 10)	20%
Female executive officers (as of April 1, 2022)	1 (out of 10)	10%
Female managers (as of April 1, 2022)	47 (out of 1,699)	★2.8%

Our Initiatives

To achieve our targets by the end of fiscal 2026, we are involved in measures to construct a base and disseminate inclusion, including developing of the environment necessary to promote Diversity and Inclusion, as well as promoting a wide range of measures for women, non-Japanese, and mid-career hires, employees with disabilities and the LGBTQ+ community, and measures to promote childcare leave taken by male employees.

■ Main Initiatives

Base development and dissemination of inclusion measures	• Distribution of video content related to Diversity and Inclusion for all employees • Implementation of unconscious bias e-learning for managers • Conducting seminars for all employees on renewing work styles and encouraging male employees to take childcare leave • Conducting nursing care seminars for all employees • Implementing programs on Diversity and Inclusion in training at each level • Including Diversity and Inclusion elements in behavioral evaluation for managers • Discussing Diversity and Inclusion at the Board of Directors (Four times in fiscal 2022)
Career support measures	• Conducting career interviews • Opening the employee hotline • Implementing career training
Support of women's development and advancement	• Sponsorship Program (support for career acceleration sponsored by executive officers) (for female managers) • Career building support (for female career track employees) • Implementing action plans at offices and plants • Providing external training opportunities
Support for employees with disabilities	• Implementing action plans at offices and plants • Strengthening of connection with external associations for employees with disabilities • Employment support for employees with disabilities (trainees from special education schools)
Support for non-Japanese employees	• Active participation in recruitment events for international students • Foreign language support for company entrance exams • Language education support both before and after hiring
Support for mid-career hires	• Enriching information related to mid-career recruitment on our website • Support for building an internal network • Facilitating connection to share Q&As regarding internal policies
LGBTQ+ support	• Providing a consultation system • Awareness building by in-house training • Reviewing the HR policies

TOPICS

Enhancing Measures to Increase the Percentage of Male Employees Taking Childcare Leave

The Company aims to further promote Diversity and Inclusion by enabling employees to better balance work and life events such as childcare to create an environment where diverse talents can continue to perform. From fiscal 2023, we set a goal of having 100% of eligible male employees to take childcare leave and are actively working to achieve this goal through measures such as continuous awareness building in our training, holding seminars that renew work styles and encouraging childcare leave taken by male employees.

■ Trends in the Numbers, Rates and Days of Childcare Leave Taken by Male Employees

Period	Number taking leave	Rate taking leave	Average days taken
FY2020	4	2.8%	28
FY2021	27	15.6%	41
FY2022	56	36.6%	32

* A system unique to our company allows a male employee whose spouse gives birth to take 3-day post-natal leave (paid) within two weeks of the date of birth

Support for Diverse Working Styles

We promote creating working environments that enable our employees to strike a balance between their work and their home life. As well as enabling employees to adapt their working patterns in line with events in their lives, we make every effort to establish and continually improve a range of support schemes so that employees can advance their careers and take on challenging jobs.

In fiscal 2023, we introduced a work-from-home system for the entire company, including plants (For the head office area, the system was introduced in FY2020) to help employees work more flexibly while improving productivity, as well as a remote working system for managers.

Systems Supporting Flexible Workstyles

System		Outline
All	Work-from-home System	A system that allows employees to work from home who are in charge of work that can be handled at home.
	Remote Work System	A system that allows managers to work without restrictions on location (Japan only)
	Half-day paid holidays	A system under which paid holidays may be taken in half-day units
	By-the-hour paid leave system	A system under which paid leave may be taken in hour units
	Wellness leave	We allow employees to carry over up to 5 days per year of their expiring annual paid holidays, with an upper limit of 60 days. These paid holidays may be used when an employee or their family is receiving in-patient or home treatment for a non-work-related illness or injury, when an employee undergoes a complete medical checkup/gynecological examination or has in- and out-patient fertility treatment, and when an employee takes part in volunteer activities or other activities.
	Flextime system	A system which permits employees to determine their start and finish times

System		Outline
Childcare support	Maternity nursing leave (for male employees)	When the wife of an employee has given birth, the employee is entitled to three days of leave within two weeks of the date of birth.
	Support interviews for employees returning to work after childcare leave (leave to raise children), etc.	For employees taking prenatal and postnatal maternity leave and childcare leave for a total of three months or longer and who wish to have an interview
	Lump sum payment for early return to work after childcare leave (leave to raise children), etc.	Paid to employees who return to work early after maternity leave, or after one month or more of childcare leave (during the month following the month when they return to the month when the child becomes one year old).
	Shortening of prescribed working hours	Employees caring for a child up until the sixth grade of elementary school are eligible. The number of prescribed working hours per day may be shortened to a minimum of six hours.
	Childcare time	A female employee with a child younger than one year old is entitled to take two 30-minute breaks during shortened prescribed working hours.
	Staggered work hours and additional break time	Female employees who are pregnant or have given birth to a baby may move up or down their start and finish times by up to 60 minutes under certain conditions. They are also permitted to take two breaks for up to 60 minutes in total per day.
	Exemption from out-of-hours work	Employees caring for a child up until the sixth grade of elementary school are entitled not to work overtime.
	Limitations on out-of-hours work	Employees caring for a child up until the sixth grade of elementary school are entitled not to work over 24 hours of overtime a month and over 150 hours of overtime a year.
	Limitations on late-night work	Employees caring for a child up until the sixth grade of elementary school are entitled not to work from 10:00 pm to 5:00 am.
	Child nursing care leave	Employees caring for a child up until the sixth grade of elementary school are entitled to take this leave on a daily or hourly basis, in principle, separately from annual paid holidays. (For employees with children up to the age of 3, up to 5 days of paid leave will be granted per year.) • One child: 10 days / year • two or more children: 15 days / year
	Childcare fee subsidy system	Paid to employees with children under the age of 3 who attend preschool or a day care facility
Caregiving support	Extended caregiving leave	Employees may take up to a maximum of 36 months' leave per person requiring care.
	Caregiving leave	Employees with family members requiring care may take leave as follows. The leave may be taken on a daily or hourly basis, in principle, separately from annual paid holidays. - One family member requiring care: 5 days/year - Two or more family members requiring care: 10 days/year
	Shortening of prescribed working hours/staggered work hours/flextime	Employees with family members requiring care may take leave under one of the following schemes specified by the Company. - Shortening of prescribed working hours - Staggered work hours - Flextime
	Exemption from out-of-hours work	Employees with family members requiring care are entitled not to work overtime.
	Limitations on out-of-hours work	Employees with family members requiring care are entitled not to work more than 24 hours of overtime a month and more than 150 hours of overtime a year.
	Limitations on late-night work	Employees with family members requiring care are entitled not to work from 10:00 pm to 5:00 am.

Systems Related to Diverse Careers and Employment Continuation, etc.

System	Outline
Internal Job Posting System	Implemented as a part of promoting autonomous career building
Area Limited Employment System	A system that allows employees with certain circumstances, such as childcare or long-term care, to be exempt from relocation for a certain period of time
Special Temporary Leave-of-absence System	A system that allows career track employees who are accompanying a spouse on an overseas assignment or who are studying at their own expense to take leave for a certain period of time
Reemployment System for employees who have once resigned	A system that allows employees who have once resigned due to personal family circumstances (marriage, childbirth, long-term care, etc.) to rejoin the Company under certain conditions
Overseas study program	A system which provides employees desiring to study overseas who have passed an internal selection with financial support for studying at a graduate school, etc. around the world (including expenses for taking entrance examinations, tuition, and expenses for living abroad)
Position change	Employees who have passed the internal examination are allowed to change their positions in specific areas to new positions where they can demonstrate their capabilities from a company-wide perspective.

Status of Utilization of the Systems, etc. (FY2022)

Item	Male	Female	Total
Number of employees taking caregiving leave	3	2	★5
Number of employees taking childcare leave	56	20	★76
Number of employees taking prenatal and postnatal maternity leave	—	23	★23
Average number of paid holidays taken (January to December 2021)	—	—	16.7 days
Percentage of paid leave taken (January to December 2021)	—	—	★81.1%
Average overtime hours	—	—	17.1hours

* Regarding paid leave, we have determined days when employees are strongly recommended to take paid leave and days when employees are encouraged to take paid leave, before or following holidays, etc., and inform employees to that effect, as a measure to increase the percentage of paid leave taken. Thus, we have created an environment which facilitates employees taking paid leave and we proactively recommend they take paid leave.

* Regarding working hours, we use an attendance management system in which employees, including managers, input their working hours. Their superiors use the system to regularly check the attendance status of team members.

Working Styles for Employees Aged 60 and over

As of April 2021, we have extended the mandatory retirement age from 60 to 65 years old, as a measure to secure stable employment and improve the treatment of senior employees, to enable them to work with peace of mind, and to further increase their motivation. In addition, we are catering to the needs of individual employees by incorporating options such as selective retirement age and re-employment with shorter working hours, taking the state of health and life plans of each employee into account.

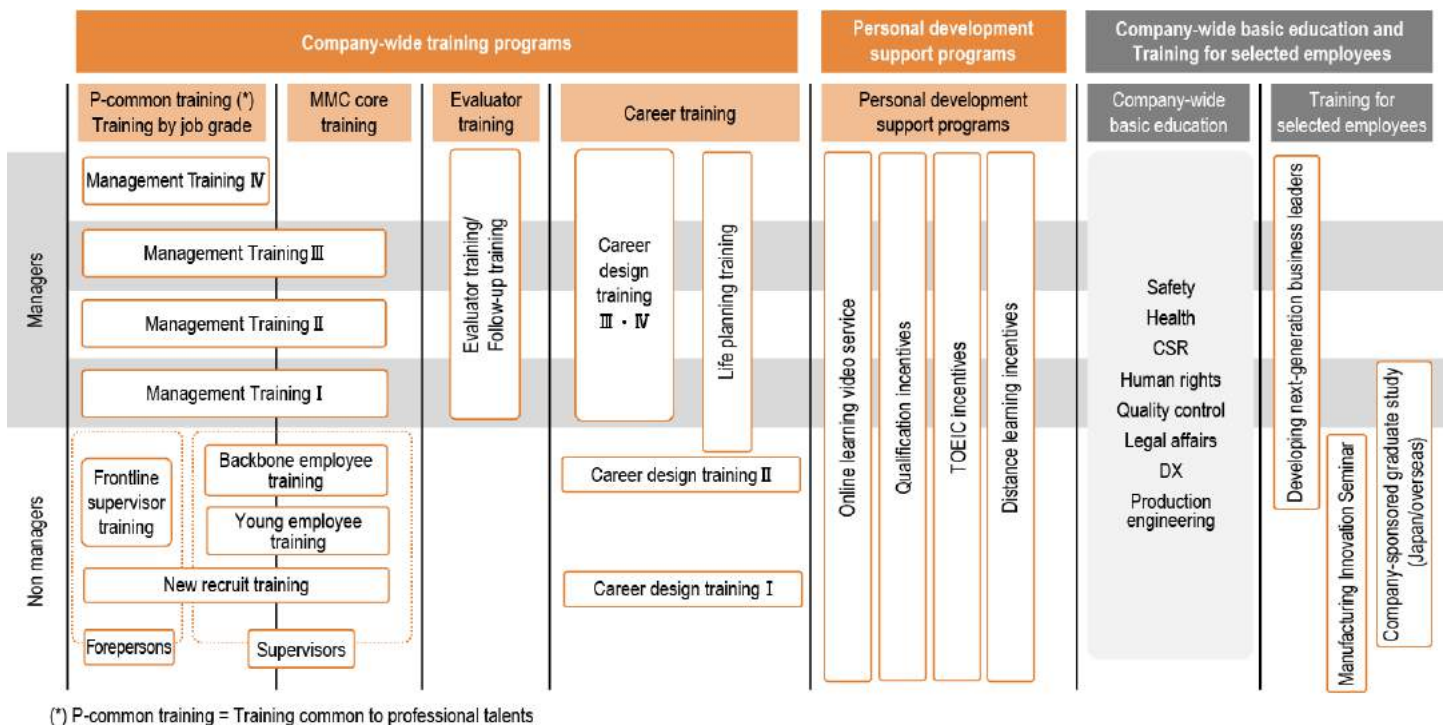
Development of Diverse Talents

Development of Diverse Talents

Talent Development System

Our talent development system consists of “P-common training (Training common to professional talent),” which is aimed at developing management skills related to people and organizations, “MMC Core Training” for learning matters related to safety and health (S), legal compliance and the environment (C), and quality (Q) as well as our technologies and strategies, training for selected employees, career training, and personal development support plans, etc. In particular, we believe that it is important that every employee takes the initiative themselves to think about their career and expertise and to voluntarily pursue the personal development needed to achieve their goals. Reflecting this belief, in April 2022 we began to operate the new talent development system based on three core elements: establish an environment for autonomous learning including an online training video distribution service, provide opportunities for employees to think about their careers, and provide training opportunities for learning management and other skills that are appropriate for the role of the each employee. Through these initiatives to develop talent, we will contribute to fostering an organizational culture of adapting flexibly and promptly to changes in society and business environment and taking on challenges.

■ Talent Development System (non-consolidated)



Employee Training (non-consolidated)

Total hours of training (annual)	Average hours per employee (annual)
★ 151,000 hours	22.4 hours

* Subjects of the above data for education and training program hours include non-regular employees as well as regular employees.

* The above disclosures include data for employees belonging to the Cement Business but do not include data for those belonging to the Aluminum Business.

Leadership Values in the Mitsubishi Materials Group

In February 2016, in order to clarify the competencies and skills commonly held by the leaders in our Group's various businesses, we drew up the Leadership Values in the Mitsubishi Materials Group (hereinafter "Leadership Values"), which is to be used as a set of guidelines for our leadership development.

Among the three Leadership Values listed, "Integrity and Spirit of a Leader" has especially deep roots in our tradition of commitment and responsibility for the safety and livelihood of our employees. Our Group traces its roots back to the era of coal and metal mining, where the workplace sometimes put one's life in danger. This value is therefore universal among requisite leadership qualities that have been passed down unbroken through generations in the Group and was selected as one of core values through keen discussions among management.

Our Leadership Values are reflected in performance assessment of managers in the Company. This is aimed at encouraging higher-ranked employees to lead the awareness reform and embody the Leadership Values. The Company's management trainings have been designed in accordance with our Leadership Values, which afford employees opportunities for leadership development appropriate to the various stages of their careers.

We have also commenced initiatives at each Group company seeking to achieve further penetration of these values within each company.

Next-Generation Leadership Talents Development Programs

We established the "Next-Generation Leadership Talent Development Program" in fiscal 2006 and we have developed future leaders with the aim of developing qualified candidates for executives. Against the backdrop of promoting the complete In-house Company system and reforms of human resource measures, we revised the program. This revised program, based on development plans that emphasize work experience that are changed from previous training-centered programs, is to select high potential talents from younger generations and develop them to become leaders with cross-divisional and Group-wide perspectives.

Building and Enhancing Relations throughout the Value Chain

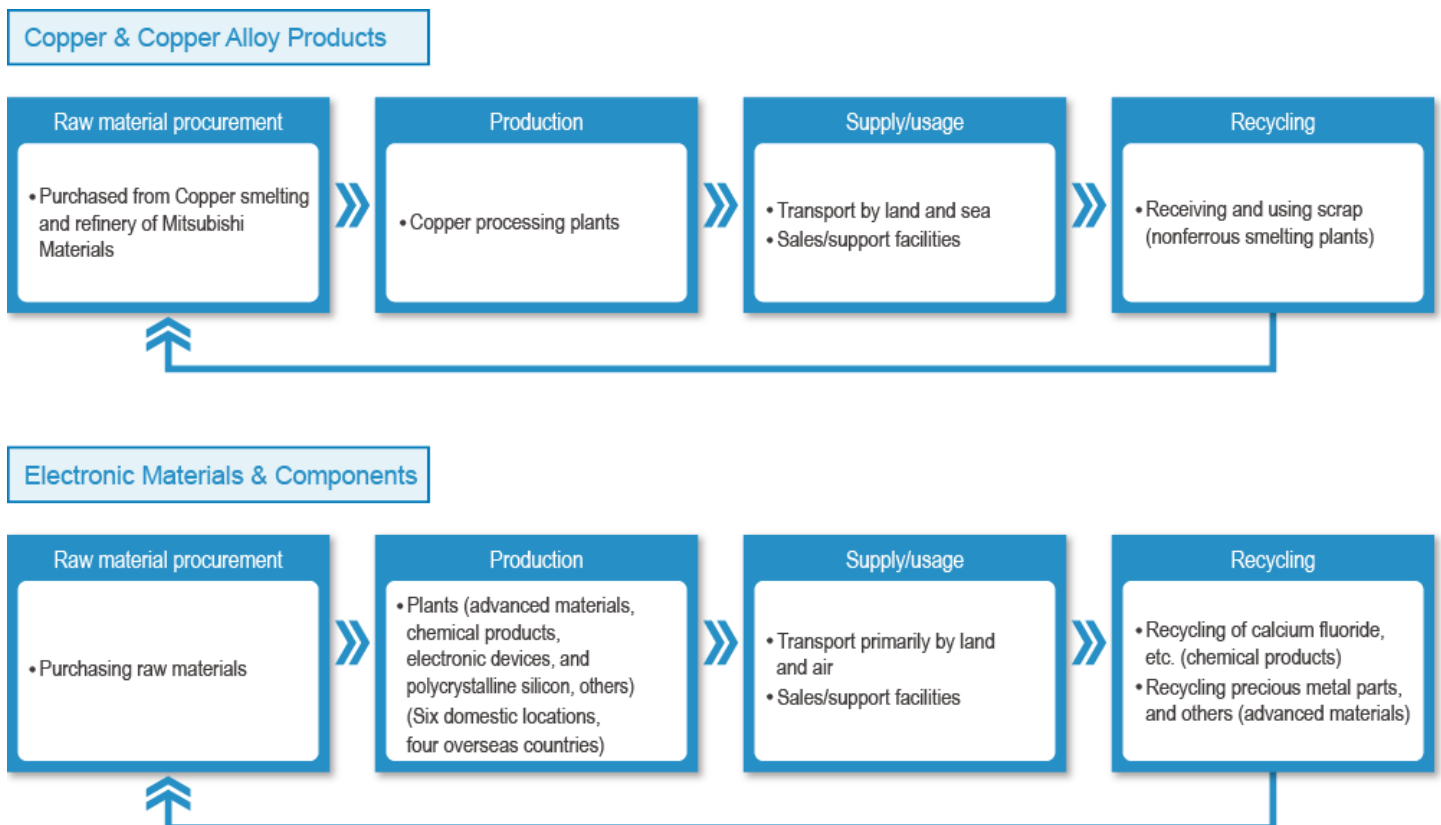
Advanced Products Business

Advanced Products Company (APC) operates two businesses in an integrated manner—the copper & copper alloy business and the electronic materials & components business—since they are very similar in terms of market needs and technology development. Taking advantage of our unique technologies, we offer various products in the markets of next-generation vehicles, semiconductor manufacturing, electronics, industrial equipment, robots, and infrastructure, which are our focus market domain.

For the next-generation vehicle market, we supply oxygen-free copper and advanced copper alloys which are essential for high current, high voltage and large amounts of data communication; lead frames and other copper & copper alloy products; solar heat-ray shielding paints that are used mainly for automotive windows to save energy; and automotive electronic components such as sensors.

For the semiconductor manufacturing and electronics market, we offer processed silicon products and seals for semiconductor manufacturing equipment. For industrial equipment, robotics, and infrastructure, we supply superconducting wires and high-performance alloy wires used for magnetic resonance imaging (MRI) scanners and scientific research, ECO BRASS and Glo Brass (an environmentally friendly, lead-free free machining brass), and others. In this way, APC contributes widely to the development of society, for instance in the popularization of new mobility services through providing high value-added products in response to mega trends.

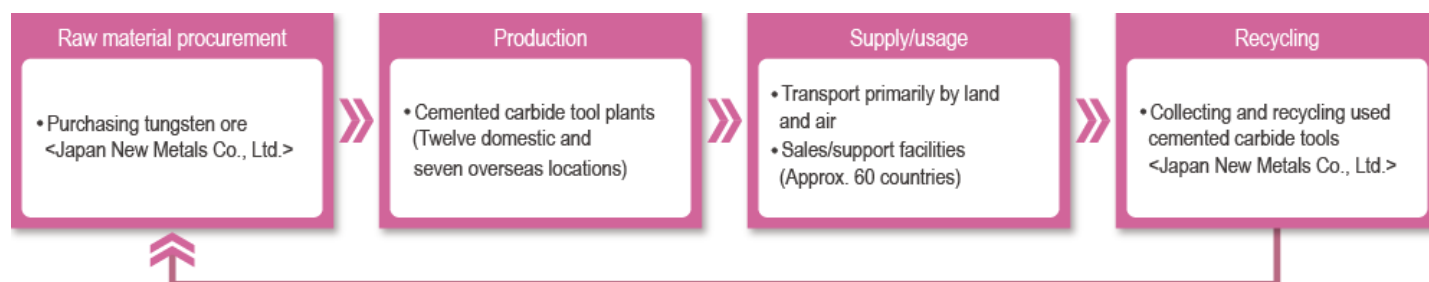
Value Chain for the Advanced Products Business



Metalworking Solutions Business

In addition to the cutting tools that are essential for processing metal parts, we also supply rock tools, wear resistant tools, and other cemented carbide products, as well as sintered parts used in the engines and drive parts of vehicles and aircraft. We operate manufacturing and sales facilities worldwide, in China and other parts of Asia, the Americas and Europe. We support manufacturing across a range of different fields by providing high value-added products and services which cater to customer needs. Those products and services are underpinned by high levels of technical expertise and reliability. Our cemented carbide products boast the largest market share domestically. In addition, we proactively recycle tungsten, a rare metal that is the main raw material for cemented carbide. We are also focusing a great deal of effort on collecting used cemented carbide tools.

Value Chain in the Metalworking Solutions Business



Metals Business

Our metals business consists of three areas of business; mining, smelting and refining, and precious metals. In the mining sector, we invest in overseas copper mines in order to procure a steady supply of copper concentrate. In the smelting and refining sector, we manufacture and sell high quality products, both domestically and overseas, thanks to the Mitsubishi Process, which combines high efficiency with exceptionally low environmental impact. Making the most of the smelting process, we have also established a recycling system for recovering valuable metals from E-Scrap, as part of our active commitment to recycling resources. In the precious metals sector, we provide precious metal bullion products and services under the brand “Mitsubishi Gold,” including our accumulation plan service called “MY GOLD PARTNER” for gold, silver and platinum for individual customers.

Value Chain for the Metals Business



Environment & Energy Business

In the energy business, we contribute to the building of a decarbonized society by providing a stable supply of renewable energy, including geothermal, hydroelectric and solar power. In the nuclear sector, our operations include treatment and disposal of radioactive waste and safety assessments. In the eco-recycling sector, we operate recycling plants that we have established together with home appliance manufacturers, while working collaboratively within the Group to expand resource recycling, not least through our smelting and cement recycling system.

■ Value Chain for the Environment & Energy Business

Environmental Recycling Business



Affiliated Businesses (Cement)

We operate a wide range of affiliated businesses via our highly distinctive group companies. Our affiliated engineering and trading companies support all manner of industrial infrastructure, not only the semiconductor industry. Salt producing companies provide a stable supply of salt, which is essential to our daily lives. We also contribute to local societies through the operation of a diverse range of businesses, including tourist mine businesses (making use of former mining sites). Moreover, we play a part in promoting renewable energy through geothermal power generation and the utilization of geothermal heat, making effective use of advanced drilling techniques and survey methods.

Cement is an essential basic material to our modern society, not least for the construction of roads, bridges, ports and buildings. In the cement business, we have established a wide-ranging business structure, from mining limestone, the main raw material in cement, through to cement plants, transportation, sales, ready-mixed concrete plants, and construction companies, etc. With this structure, we contribute to the development of social infrastructure and undertake global activities via production and sales facilities in Japan and other countries. We supply high quality products such as low-heat cement, ultra-high strength concrete cement, and non-shrink grout, in addition to regular Portland cement and other general-purpose products. Furthermore, we actively take in difficult-to-treat waste products at our cement plants, and detoxify them using a high-temperature burning process at 1,450°C. Effectively reusing resources like this enables us to contribute to the establishment of a recycling-oriented society.

* In the process of the integration of Cement business and related businesses between UBE Corporation (formerly Ube Industries, Ltd.), on April 1, 2022, MMC's Cement business and related businesses were assumed by Mitsubishi UBE Cement Corporation (an equity method affiliate of MMC) through an absorption-type company split.

Procurement and Supplier Initiatives

Responsible Procurement of Raw Materials

Purpose of activities	Activities during fiscal 2022	Self-assessment	Targets/plans for activities from fiscal 2023 onwards
Operating CSR Procurement Guidelines for the Procurement & Logistics Division	- Supplier self-check sheets for existing suppliers were submitted by 108 companies (response rate: 66%) - Supplier self-check sheets for new suppliers were submitted by 98 companies (response rate: 100%) - Reviewed and assessed 219 suppliers	A	- Rate of collection of Self-Check Sheet is 70% or higher - Assessed 200 existing suppliers - Reviewed 100% of new suppliers
Copper Product Raw Material Procurement Initiatives	Operated a policy on the responsible procurement of minerals	A	Operated and maintained a policy on the responsible procurement of minerals

Self-assessment grades A: Target achieved B: Target mostly achieved C: Target not achieved

Basic Approach

As a comprehensive materials manufacturer, we work in partnership with wide range of suppliers throughout the value chain, in an effort to improve added value and promote global procurement with an emphasis on stable product supplies and more competitive products.

Stable procurement is important in terms of reducing opportunity loss and maintaining consistent operations. We therefore aim to build close relationships with all of our suppliers, ensuring that all transactions are fair, avoid corruption, comply with the law and take into account issues such as human rights.

Mitsubishi Materials Group Procurement Policy

1. Open Door/Fair Trade

When selecting suppliers, we provide a wide range of opportunities for all suppliers to engage in transactions. We select suppliers based on fair and appropriate assessments of quality, price, delivery time, management base and so on, predicated on mutual trust for the sake of mutual prosperity.

2. Legal Compliance

In conducting procurement operations, we comply with legislation in Japan and abroad.

3. Observance of Ethical Procurement

In conducting procurement operations, we do not engage in any inappropriate transfer of profits with suppliers.

4. Working Environment and Occupational Health and Safety

In conducting procurement operations, we strive to improve working environments and ensure occupational health and safety.

5. Environmental Protection and Decarbonization

In conducting procurement operations, we endeavor to protect the environment, apply every measure for the effective use and recycling of natural resources, and work toward decarbonization.

6. Respect for Human Rights

In conducting procurement operations, we respect the fundamental principles of human rights as declared internationally.

7. Information Security

In conducting procurement operations, we maintain strict confidentiality of information obtained from suppliers.

In conducting procurement operations, we promote CSR initiatives in all business activities, including the procurement of raw materials, development, production, distribution, consumption, disposal, and recycling of materials and products.

(Establishment date: December 1, 2021)

Operating CSR Procurement Guidelines for the Procurement & Logistics Division

In an effort to reinforce our organizational capabilities with regard to CSR priorities throughout the global supply chain, we have informed suppliers of the CSR Procurement Guidelines for the Procurement & Logistics Division and incorporated the guidelines into basic agreements.

The guidelines apply to all raw materials (excluding copper ores) and equipment. They consist of a Basic Procurement Policy, which sets out the division's responsibilities, such as respect for human rights, legal compliance, occupational hygiene, and environmental protection, and in addition to these items, we require our suppliers to comply to secure product quality and safety, workers' rights, etc., which we state in our CSR Procurement Standards.

To ensure the effectiveness of initiatives taken by suppliers, the division has been screening and evaluating suppliers since April 2016.

Before starting transactions with new suppliers, we request that they conduct self-evaluations using a Supplier Self-Check Sheet, which consists of items that assess their initiatives on social responsibilities related to human rights (such as child labor, forced labor, and unreasonably cheap labor) and procurement (including negative environmental impact), in addition to general items such as quality, cost and delivery. The division assigns scores according to their answers to the 12 evaluation items on the Self-Check Sheet.

Based on rules of the division, we request that existing suppliers evaluate themselves every other year using the Supplier Self-Check Sheet, thereby checking the progress of their initiatives. In addition, concerning major raw materials that must be managed on an item-by-item basis, the division evaluates the comprehensive performance by using the Supplier Evaluation Sheet, which consists of 28 evaluation items.

We provide feedback on the results of these evaluations to suppliers, including items that need improvement, and monitor them as needed.

In fiscal 2022, we collected Supplier Self-Check Sheets from 206 suppliers (98 new ones and 108 existing ones). We conducted screenings of all 98 new suppliers and periodic evaluations of 121 existing ones.

The division's priority activity in fiscal 2023 is to promote the use of multiple suppliers of important raw materials and equipment, which have been purchased from single supplier, from the perspective of ensuring stable procurement.

Mitsubishi Materials Corporation CSR Procurement Guidelines

The Mitsubishi Materials Corporation is an ensemble of companies operating under the composite profile of a comprehensive basic materials manufacturer. We provide resources, basic materials and energy indispensable to modern lifestyles, and adhere to a corporate philosophy that emphasizes efforts that contribute to people, society and the Earth. The Company's approach to CSR activities hinges on the idea of making this philosophy a reality, through the sincere fulfillment of the obligations and expected roles that society places on corporate citizens, disclosure and proper explanation of the Company's activities to stakeholders, and the pursuit of a deeper level of two-way communication with stakeholders, in order to promote greater mutual understanding.

Mitsubishi Materials Corporation's CSR Guidelines are composed of a Basic Procurement Policy and CSR Procurement Standards. The Basic Procurement Policy clarifies philosophies and standards to be upheld by the Company in executing its procurement duties, while the CSR Procurement Standards clarify standards that the Company requests its suppliers (and their suppliers) to observe and uphold.

These guidelines were established based on the understanding that CSR procurement is not something that can be completed as an internal effort, and that it will only be effective if efforts are made across the entire supply chain.

Basic Procurement Policy

1. Open Door/Fair Trade

When selecting suppliers, we provide a wide range of opportunities for all suppliers to engage in transactions. We select suppliers based on fair and appropriate assessments of quality, price, delivery time, management base and so on, predicated on mutual trust for the sake of mutual prosperity.

2. Legal Compliance

In conducting procurement operations, we comply with legislation in Japan and abroad.

3. Observance of Ethical Procurement

In conducting procurement operations, we do not engage in any inappropriate transfer of profits with suppliers.

4. Working Environment and Occupational Health and Safety

In conducting procurement operations, we strive to improve working environments and ensure occupational health and safety.

5. Environmental Protection and Decarbonization

In conducting procurement operations, we endeavor to protect the environment, and applies every measure for the effective use and recycling of natural resources, and works toward decarbonization.

6. Respect for Human Rights

In conducting procurement operations, we respect the fundamental principles of human rights as declared internationally.

7. Information Security

In conducting procurement operations, we maintain strict confidentiality of information obtained from suppliers

Mitsubishi Materials Corporation promotes CSR initiatives in all business activities, including procurement of raw materials, development, production, distribution, consumption, disposal, and recycling of materials and products.

CSR Procurement Standards

1. Respect for Human Rights

Suppliers shall respect basic human rights, to not discriminate with regard to employment or treatment, and to not engage in harassment, child labor, forced labor, human trafficking or unfair low-wage labor.

2. Compliance with Legislation and Corporate Ethics

Suppliers shall comply with legislation in Japan and abroad and to not act in ways that go against corporate ethics, including the provision or acceptance of inappropriate benefits and dealing with anti-social individuals or groups.

3. Fair Business Activities

Suppliers must not obstruct free competition, or engage in unfair competition.

4. Safety and Health

Suppliers shall work to ensure and improve safety and health, such as by preventing occupational accidents.

5. Development of Working Environment and Working Hours

Suppliers shall uphold the Labor Standards Act and endeavor to create a stable working environment, and comply with local applicable laws and regulations regarding employee's working hours, holidays, and vacations.

6. Freedom of Association

Suppliers shall recognize employees' right to freely associate, or not to associate, complying with local applicable laws and regulations.

7. Environmental Preservation

Suppliers shall abide by legally established environmental standards and strive to preserve the environment, such as by preventing air, water and soil pollution, endeavoring to reduce greenhouse gas emissions, and processing and disposing of industrial waste in an appropriate manner.

8. Responsible Procurement of Mineral Resources

Suppliers shall consider the impact of raw materials, which can cause human rights violations and social problems such as environment destruction, in procurement activities, and take measures to avoid their use if there is concern.

9. Ensuring Product Quality and Safety

Suppliers shall establish a quality assurance system to ensure the quality and safety required for products, and provide accurate information about products.

10. Protection of Intellectual Property

Suppliers shall not infringe on the intellectual property rights of others in the course of business activities such as R&D, production or sales, etc., of products and services.

11. Information Security

Suppliers shall establish an information management system (organization and rules) and take measures to prevent leakage of confidential information obtained in connection with transactions. In particular, the handling of acquired personal information shall be strictly controlled.

12. Disclosure of Information

Suppliers shall disclose details of business activities and risk information, etc., as required by laws and regulations in a timely and appropriate manner. In particular, suppliers shall disclose information promptly, especially if there is a risk of affecting the continuation of transactions.

13. Protection of Whistleblowers

Suppliers shall establish an internal reporting system that ensures the protection of whistleblowers, together with a system that prevents retaliation for reporting.

Mitsubishi Materials Corporation hopes that suppliers will work to extend fair transactions based on the purport and spirit of these guidelines to their suppliers, and will work together to build a resilient and competitive supply chain.

(Last revised date: December 1, 2021)

Copper Product Raw Material Procurement Initiatives

We procure copper concentrate, a raw material for copper products, primarily from the overseas mines in which we invest, to ensure a stable supply to smelters and refineries both in Japan and overseas, and while this places us in the position of a non-operator not directly involved in mine management, as a company engaged in global procurement activities, we hope to fulfill our sustainable development responsibilities.

We place importance on dialog with indigenous peoples and members of local communities. For example, we assign specific staff members to participate in the advisory committees of mines in which we have a certain scale of interests.

Moreover, our Metals Company requires the mining companies to comply with CSR Investment Standards (if we are investing) and CSR procurement standards. We also check that those standards are followed, for example through regular questionnaire surveys, and if deemed necessary, we seek to understand and improve the situation. We include environmental preservation and respect for human rights as important matters to consider in our business processes as we manage our global supply chain.

Metals Company: Outline of CSR Procurement Standards

[Continual Improvement of Environmental Performance]

- Introduce and implement environmental management systems focusing on continual improvement.
- Reduce negative environmental impact from mine development and operation.
- Take into account protected natural areas and protect biodiversity.
- Consult with stakeholders regarding environmental issues.

[Continual Improvement of Occupational Safety and Health]

- Introduce safety and health management systems focusing on continual improvement.
- Protect employees and contractors from occupational accidents. Implement disease prevention measures including local communities.

[Protection of Basic Human Rights]

- Prevent forced and child labor.
- Eliminate harassment and discrimination.
- Avoid forced resettlement, or provide compensation.
- Protect indigenous people.
- Manage and record complaints and disputes with stakeholders.
- Eliminate any involvement, either direct or indirect, with militia or other armed groups in areas of conflict where there are concerns regarding human rights violations.

Metals Company: Outline of CSR Investment Standards

[Protection of basic human rights]

Protect the basic human rights of people impacted by our business operations. Consult with stakeholders regarding local community issues. Eliminate any involvement, either direct or indirect, with militia or other armed groups in areas of conflict where there are concerns regarding human rights violations.

[Mining and protected areas]

Identify and evaluate impact on cultural and natural heritage, and risks to biodiversity at every stage of our business. Develop and implement mitigation measures.

[Mining and indigenous people]

Understand and respect the society, economy, environment, culture and rights of indigenous people. Conduct social impact assessments with regard to indigenous people and provide appropriate compensation.

[Relationship with the local community]

Verify if there are any disputes or lawsuits with the local community. Engage in consultation and dialogue to explain business plans.

[Environmental preservation]

Conduct environmental impact assessments (EIA) and obtain appropriate permits. Set out specific policies to reduce the environmental impact of mine development and operation.

[Mineral resources and economic development]

Contribute to sustainable economic development at the regional and national level.

■ Environmental Impact Assessment for Zafranal Project (Peru)

Mitsubishi Materials Corporation joined Zafranal copper mine development project in Peru with Canadian mining company Teck Resources Limited and its subsidiary.

Compania Minera Zafranal S.A.C. (CMZ) operates the project. Mitsubishi Materials Corporation (MMC) has 20% share of the project and assigns personnel at the subsidiary established in Peru. MMC communicates closely with CMZ and works together in order to progress the project.

CMZ prizes the cultures, values, traditions and historical heritages of local communities, and has been establishing transparent and sincere long-term partnership with them. CMZ is having dialogues with local communities and additional stakeholders, and also conducting individual briefing, responding their inquiries. CMZ has been building public trust with taking in local opinions and needs through these activities.

In preparation for the legal process and to get approval of the Environmental Impact Assessment, CMZ is consulting with local communities, and undertaking environmental and social baseline studies in the project and related infrastructure areas.

As a Responsible Business Operator Procuring and Smelting Minerals

From Conflict Mineral Management to Responsible Mineral Procurement Management

The United States' Dodd-Frank Wall Street Reform and Consumer Protection Act requires all companies listed in the US to disclose whether their products contain "conflict minerals," defined as gold, tin, tantalum and tungsten, along with details of reasonable survey on producing countries and the survey results, in an effort to prevent minerals mined in the Democratic Republic of Congo (DRC) or its neighboring countries from being used to fund the activities of armed groups responsible for human rights violations and other acts of violence. Recently, considerations are given beyond the scope of conflict minerals and from a broader perspective of responsible mineral procurement, mainly in EU countries. At present, cobalt and silver are also examined, and in tandem with movements of OECD and SEC, organizations such as RMI^{*1} and LBMA^{*2} have formulated guidance related to the issue of conflict minerals (responsible mineral procurement management).

As a responsible business operator smelting gold, silver, and tin, we promoted initiatives to respond to these global requirements, formulated a related policy, and disclosed it.

*1 Responsible Minerals Initiative (RMI)

*2 London Bullion Market Association (LBMA): The LBMA implements and oversees compliance with quality requirements for gold and silver bullion circulated in the market.

Metals Company (Initiatives with Respect to Gold, Silver, and Tin)

The Metals Company has pledged its support for a campaign to ensure a transparent flow of funds related to mineral resources, as promoted by the Extractive Industries Transparency Initiative (EITI)^{*1} since June 2011.

We began preparations for tackling the issue of conflict minerals in 2012, obtained certification in August 2013 for our compliance with the London Bullion Market Association (LBMA)^{*2} gold guidance on avoiding use of conflict minerals and have had this certification renewed every year since. We have also begun operations and obtained certification with regard to silver. Since February 2014, we have received annual certification of our conformance with the RMI^{*3} of RMAP^{*4} regarding tin.

*1 Extractive Industries Transparency Initiative (EITI): The EITI is a global framework established to improve the transparency of financial flows from extractive industries engaging in the development of oil, gas and mineral resources to the governments of resource-producing countries. Its aim is to prevent corruption and conflicts, and thus to promote responsible resources development that can facilitate growth and help to reduce poverty. <http://eiti.org/> 

*2 London Bullion Market Association (LBMA): The LBMA implements and oversees compliance with quality requirements for gold and silver bullion circulated in the market. <http://www.lbma.org.uk/> 

*3 Responsible Minerals Initiative (RMI)

*4 Responsible Minerals Assurance Process (RMAP, formerly the Conflict-Free Smelter Program [CFSP])

Contact [the Responsible Minerals Control Hotline](#)  if you identify any act in violation of the provisions of our Responsible Minerals Control Policy.

Mitsubishi Materials Corporation Metals Company Responsible Minerals Control Policy

Establishment date: 19th June 2013

Last revised date (Rev. 6): January 27, 2022

The Metals Company (hereinafter the "Company") engages in bullion manufacturing for gold, silver and tin. The Company does not procure materials originating from high risk areas, such as conflict-affected areas, connected to human rights abuses, terrorist financing, money laundering and illegal trade. Also, the Company recognizes the importance of addressing Environment and Sustainability responsibilities for procurement of materials. To rigidly maintain this practice, the Company has adopted a control system that follows the London Bullion Market Association (LBMA) guidance for gold and silver, and the Responsible Mineral Initiative (RMI) Responsible Minerals Assurance Process (RMAP) for tin and undergoes regular audits by third-party bodies.

The Company hereby sets out its responsible minerals control policy applicable to gold, silver and tin as follows and will implement the following measures.

1. General Provisions

- (1) The Company will respect human rights and avoid direct or indirect involvement with inhumane acts. For this purpose, the Company will not use suspicious minerals which may be connected to conflict-affected and high risk areas where armed conflict, widespread violence and other risks may harm individuals. Risks listed in "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas" AnnexII (listed below) are managed.

- ①Direct or indirect support to non-state armed groups
- ②Serious abuses associated with the extraction, transport or trade of minerals
- ③Public or private security forces
- ④Bribery and fraudulent misrepresentation of the origin of minerals
- ⑤Money laundering
- ⑥Payment of taxes, fees and royalties due to governments

In addition, in accordance with LBMA's guidance on gold and silver, the Company will not procure suspicious minerals against its Environment and Sustainability responsibilities.

- (2) The Company will immediately stop a transaction when its risk controls on material procurement detects that the minerals are connected to those in power in conflict-affected and high-risk areas, or suspicious against Environment and Sustainability responsibilities of the Company.
- (3) The Company annually receives third-party assurance on its procurement of materials containing gold, silver and tin, and reports the audit results concerning gold and silver to LBMA and those concerning tin to RMI.

2. Control System and Responsibility

- (1) The Company's headquarters deals with all operations for mineral control. Smelters and refineries do not procure materials independently.
- (2) The compliance officer appointed by the Company assumes authority and responsibility stipulated in the control manual, including those for overseeing relevant sections and divisions and for operating the control system.
- (3) The supply chain officer appointed by the Company assumes authority and responsibility stipulated in the control manual, including those for overseeing the entire control system and for regularly conducting management reviews.

3. Judgment Criteria for Material Procurement from Conflict-Affected and High-risk Area.

The Company considers the procurement of materials containing gold, silver and tin as a high-risk when those materials are determined to have a high relation to any suspected OECD Annex II risks(1.General Provisions (1)①-⑥) in conflict-affected and high-risk areas defined by the Company. The Company also considers the procurement of materials containing gold and silver as a high-risk when those materials are determined or highly suspected to be non-compliant with Environment and Sustainability legal requirements.

4. Implementation of Due Diligence on Material Suppliers

The Company will practice due diligence and perform risk assessments on all suppliers of materials containing gold and silver and all suppliers of materials containing tin. The Company will immediately stop a transaction when it is deemed by the supply chain officer as being high risk, as a result of the risk assessment.

5. Monitoring of Materials Purchased by the Company's Headquarters

- (1) Materials purchased by the Company headquarters are supplied to smelters and refineries, which will check the actual goods and analyze the content of gold, silver, tin and/or other metals for every lot, to examine consistency with the information from suppliers provided in advance by the Company headquarters and to report the findings to the Company headquarters.
- (2) The Company will effectively utilize the monitoring system for incoming materials, which has long been in place, for the purpose of responsible minerals procurements control at the Company headquarters and operate it as a system for the prevention of contamination with high risk minerals.

6. Operation of the Responsible Minerals Sourcing Control System

- (1) The compliance officer will provide education and training to the relevant sections and divisions of the Company headquarters and to the smelters and refineries as needed.
- (2) The compliance officer will perform at least one internal monitoring per year of the relevant sections and divisions of the Company headquarters and of the smelters and refineries to assess if operations are properly performed in accordance with the responsible minerals sourcing control system or if there are any deviances from the system.
- (3) In the event of starting transactions with a new supplier for material procurement, the Company will ensure that the information is communicated to the compliance officer in an effort to prevent contamination with high risk minerals.
- (4) The compliance officer will keep the records of all operations concerning responsible minerals sourcing control and retain them for five years. The relevant documents of the control manual will be revised as needed and properly managed.

[PDF](#) [LBMA Responsible Gold Guidance Compliance Report and the Independent Assurance Report \(KPMG AZSA Sustainability Co., Ltd.\) \(853KB\)](#)

Japan New Metals Co., Ltd. (Supervised by the Metalworking Solutions Company) (Initiatives with Respect to Tungsten)

In June 2021, Japan New Metals Co., Ltd., a Group company whose operations include tungsten smelting and refining, revised its system for managing the use of conflict-free minerals based on the Conflict Mineral Management Policy to the system based on the Responsible Mineral Procurement Management Policy, which has expanded its scope of control to a wider range of areas and minerals. As a company smelting and refining tungsten in Japan, Japan New Metals Co., Ltd. carries out management to ensure that raw materials put into the smelting and refining process are ones conforming to the Responsible Mineral Procurement Guidelines. The company also carries out the similar management for raw materials purchased from external tungsten smelting and refining companies. In November 2021, the company acquired the Responsible Minerals Assurance Process (RMAP) conformance certification, which was updated from the CFS Certification.



Responsible Mineral Procurement Management Policy of Japan New Metals Co., Ltd.



RMAP certification obtained by Japan New Metals Co., Ltd.

Product Quality and Safety

Product R&D and Approval Risk Management

We endeavor to prevent quality issues by engaging in risk management activities for reducing quality risks at Group companies both in Japan and overseas, in order to prevent quality risks from materializing.

So as to ensure that delivery time and cost are not prioritized over quality, we have established the order of priority for decision making in the performance of duties as SCQDE^{*1}. By repeatedly informing and educating employees, we are fostering an environment that will prevent hesitation in judgment. The same concept is applied in product R&D, and is fundamental to all decisions that require problem solving or response to potential risks. We have also established front-loading system guidelines, whereby the design, R&D, manufacturing, quality assurance, research and sales departments identify risks and problems that may be considered during production or mass production, and deliberate on improvements and measures. Expert reviews and customer evaluations are conducted at each stage of the design and prototyping, and proper execution of new businesses is ensured by approval before the transition to mass production.

^{*1} SCQDE" shows the order of priority of our business decisions. In providing products and services to customers, we must thoroughly implement SCQ and satisfy D. We believe that we will be able to obtain trust from customers and society by continuously executing SCQD in good faith, and this will produce a reasonable profit.

1. S (Safety & Health: safety and health come first)
2. C (Compliance & Environment: legal compliance, fair activities and environmental conservation)
3. Q (Quality: quality of products and services provided to our customers)
4. D (Delivery: strict adherence to delivery deadlines)
5. E (Earnings: appropriate earnings)

With reflection on quality Issues, we prioritize adherence to SCQ.

The trust of customers is secured only when all requirements up to and including D have been satisfied. E is obtained based on the trust of customers after satisfying SCQD.

Product Safety

As a manufacturer, we are committed to providing our customers with safe, high quality products. We therefore implement a range of quality and safety initiatives, as a precautionary approach and to ensure compliance with the law and other applicable regulations. We have also developed a set of regulations for the control of hazardous chemical substances contained in our products. As well as ensuring that we do not release any products containing hazardous substances to customers, including via group companies, we are committed to disclosing product information when deemed necessary.

Ensuring Safety in Transit

We make every effort to guarantee safety when transporting products that require additional safety measures in transit, such as sulfuric acid. Specific measures include ① avoiding contact with other substances, ② using protective equipment when loading and unloading products, ③ preventing leaks or dispersal from containers, and ④ providing drivers with SDS clearly outlining measures in the event of an accident.

Providing Safety Information

Providing safety information on our own products is vitally important, to ensure product safety further along the supply chain. We therefore attach Safety Data Sheet (SDS) to Mitsubishi Materials products so as to effectively disclose and convey information on chemical substances.

Controls on Chemical Substances Contained in our Products

We have formulated a set of regulations for the control of hazardous chemical substances contained in our products, and continue to reinforce management and ensure legal compliance in relation to chemical substances contained in our products. We register, maintain and manage chemical substances based on the Revised Chemical Substances Control Law^{*2} We

successfully completed the registration of substances covered under REACH regulations^{*3} by September 2017, and currently maintain and manage those substances. We are also gathering information on and responding to chemical-related laws and regulations in other countries as needed.

We provide Group companies with the latest information through quality liaison conferences and quality meetings, and give them advice on compliance with all applicable legislation.

*2 Revised Chemical Substances Control Law: Act on the Partial Revision of the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.

*3 REACH (Registration, Evaluation, Authorization and Restriction of Chemicals): EU regulation that governs the registration, evaluation, authorization and restriction of chemical substances manufactured within or imported into the EU.

Impact Assessments at the Development and Prototype Stages

We carry out a review during R&D at four key stages, when exploring areas of R&D, conducting R&D and trial production, conducting mass production trials, and commercializing products. We repeatedly confirm and meticulously examine all of our products from the very beginning, including checking for the use of hazardous chemical substances, guaranteeing that products meet customers' requirements and ensuring legal compliance, always taking into consideration the safety of products and processes as we engage in development works.

Quality Management and Group-wide Quality Initiatives

Establishment of Quality Review Day

The Group has declared November 1 to be our Group-wide Quality Review Day so that the quality issues that occurred in 2017 will not be forgotten and the same issue will not occur again.

In fiscal 2022, this is an opportunity to review quality issues by watching a video message from the President and a video of lessons learned from the series of quality issues. It is also an opportunity to verify that the products and services provided to customers at each site do not have quality issues.

We have also implemented various initiatives, including the verification of the effectiveness of the measures for preventing the recurrence of complaints, and a review of the standards and procedures.

Quality Management Strategy

We operate in accordance with the "Fundamental Quality Provisions at Mitsubishi Materials Group" in order to enhance governance relating to quality. Under the quality provisions, we have established a Group-wide "Quality Policy" that aims to provide first-class products and to obtain customer satisfaction, and established and operate the "Quality Control Guidelines at Mitsubishi Materials Group" to complement the Group Quality Policy. We have established and are striving to maintain our quality management, from design and development to production, shipping and sales, for all organizations involved in quality improvement of products and services provided by us.

We handle a wide variety of products at the domestic and overseas sites of our Group companies, and it is important to share the information related to quality management.

At this meeting, Professional CoE's Safety, Environment & Quality Dept. provides and shares the variety of up-to-date information about our quality. Participants can then share examples of improvement at each site and hold group discussions on specific topics.

The purpose is to deepen the understanding of quality representatives and bring back the shared information and the outcomes from discussion to each site to enable further improvements.

We have also set up a Quality Liaison Conference comprised of the persons in charge of quality from Professional CoE's Safety, Environment & Quality Dept., each in-house company, and others, in our efforts to enhance our governance system. At the quality liaison conference, the progress and status of quality training, quality audits, the automation of testing equipment, and quality initiatives at each in-house company, including Group companies, are reported. The necessary information is then shared by participants.

Further, where necessary, we hold quality meetings that are aimed at sharing quality information. At quality meetings, we provide detailed support to each site, such as checking and discussing the situation of quality management, etc., individually with quality person in charge of the sites. The Quality Audits as a part of the Theme Audits led by the Internal Audit Dept. are conducted. The purpose of the quality audit is to confirm by objective evidence that there is no quality fraud and that effective quality management is implemented. It also aims to identify issues and improvements related to quality, and to provide an opportunity for the audited sites to make continuous improvements.

Quality Training

Given the reflection that Group-wide crisis sharing was not working with a poor sense of ownership when the quality issues occurred, quality training is conducted for each level of younger employees, middle employees and managers, to continue to change their mindset on quality. The quality management system (QMS) based on ISO 9001 is fundamental to our quality management and quality assurance.

ISO9001 internal auditor training is conducted regularly for newly appointed auditors.

In fiscal 2022, nine classes were held with a total of 150 participants. In addition to this, we also held seven classes aimed at maintaining and improving the auditing skill and capabilities for the experienced internal auditors. A total of 61 people participated in these classes.

Quality Management Initiatives at Overseas Manufacturing Sites

Our Metalworking Solutions Company has 10 manufacturing sites in Europe, the United States and Asia, which manufacture high quality products in conjunction with our domestic sites.

To accommodate the expansion of locally manufactured products overseas, we have continued efforts to provide technical instructions from domestic sites on equipment maintenance, production technologies, inspection standard and other matters.

This initiative over a number of years has resulted in spontaneous activities by local employees overseas, e.g. kaizen (improvement) meetings and reviews of QC systems. Their motivation to acquire new skills and technologies is driving improvements in quality. We engage in activities to improve quality, such as the raising of quality awareness and the improvement of quality documents through ongoing quality training.

Also, electronic components business, a part of Advanced Products Company, was expanded to Southeast Asia early and has transferred the production to the region.

Today, in Southeast Asia, we have a total of five manufacturing sites of subsidiaries and subcontractors dedicated to the business, and have worked closely with the Ceramics plant in Japan as the “mother plant” to develop a business scheme.

The Copper & Copper Alloy Div., too, has a total of 12 sites in Europe, the United States and Asia, and is working to maintain and improve the level of quality management by enhancing an alliance with Japanese sites and head office.

In particular, to reduce customer complaints about product quality and maintain governance, we encourage the sharing of information and conduct multifaceted activities aimed at further raising awareness and improving the abilities of local staff and personnel posted overseas, including Advanced Products Company quality supervisor meetings, small group activities and presentation meetings, quality audits conducted by the in-house company, and web conferences held on a timely basis.

Governance Restructure Relating to Quality Management and Preventive Measures

As the result of efforts to implement and strengthen prevention measures for recurrence within the Group’s quality management, we have improved both quality awareness and control level across the Group and various measures have been disseminated across the Group. To prevent the recurrence of quality issues going forward, we will incorporate a series of measures to prevent quality issues into our quality management systems such as the systems that comply with the ISO 9001 standard, and continuously implement them.

Main causes of the shipment of non-conforming products	Preventive Measures for Quality Issues	Concrete Measures
◆ Inadequate framework for exerting influence on product development and order receiving processes at order receiving stage ◆ Attitude excessively prioritizing "order receiving" and "delivery date" ◆ Order received and mass production that the specifications exceeding manufacturing capability	① Implementation of a Front Loading System (FLS) for Order Receiving	• Implementation of the Front Loading System Guidelines was confirmed through quality audits, etc.
◆ Insufficient framework of quality assurance system ◆ Pressure on quality assurance departments from other departments	② Enhancement of the Framework and Authority of the Quality Control Department	• Authority including independence of quality assurance function, and the implementation were confirmed through quality audits, etc.
◆ Low awareness of compliance with specifications ◆ Arrogance in thinking that quality management is being achieved ◆ Low sensitivity to risk in relation to quality issues	③ Expansion of Quality Training	• Continued implementation of quality training for employees at domestic and overseas sites. • Implementation of quality training on the basics of quality control for younger employees. • Implementation of quality compliance training for mid-level employees and managers. • Implementation of quality training to improve professional quality management skills, including ISO9001
◆ Insufficient business resources (insufficient inspectors, inspection equipment, etc.)	④ Promoting Automated Inspection Equipment	• Continued implementation of automated inspection equipment
◆ Audit procedures that have become a mere facade	⑤ Enhancement of Quality Audits	• Continued to conduct quality audits at necessary sites
	⑥ Utilization of Outside Consultants	• Continued implementation of consultations and seminars by quality consultants

Building and Enhancing Relations with Stakeholders

Interaction with Stakeholders

Basic Approach to Building Relationships with our Stakeholders and Key Means of Communication

In the interests of sustainable corporate management, we believe that communicating with our stakeholders is crucial if we are to reflect their expectations and requirements in our business strategies and activities. While creating more opportunities for communication, our aim is to incorporate stakeholders' perspectives into our management practices to a greater extent than ever before.

Basic Approach to Building Relationships with Our Stakeholders and Key Means of Communication



Responding to the Expectations and Needs of Stakeholders

We respond to issues highlighted and suggestions made by our stakeholders so that we can improve the standard of our sustainable management. We have launched a number of initiatives in response to key comments and requests, including the following. For information on methods of communication with stakeholders when ascertaining details, please see "Interaction with Stakeholders".

Key comments and their source	Group response
Continuing to expand and improve resource recycling measures	• "Contributing to the development of a recycling-oriented society" is stated as one of the three pillars of the company's vision. • Optimization of material flow across the overall Group • Business expansion, research and development aimed at improving urban resource recycling
Responding to the risks and opportunities associated with climate change	• Driving the reduction of GHG emissions to achieve carbon neutrality by FY2046 • Developing materials, products and technologies that contribute to decarbonization • Developing and promoting the use of renewable energies (geothermal energy, geothermal heat, hydroelectric energy, solar energy, etc.) • Pushing forward with demonstration testing and technology development related to CO₂ capture and utilization • Performing scenario analyses based on the TCFD recommendations • Calculation of our carbon footprint
Managing abandoned mines	• Continuing management work, such as mine drainage treatment and maintenance of tailings dams, at abandoned mines (non-ferrous metal mines) owned by the Group in Japan (including the preservation and effects of some mines as cultural assets) • Systematically implementing facility upgrades and construction work for environmental measures (construction work to prevent mine pollution and hazards to prepare for increasingly severe natural disasters, tailings dam reinforcement work in preparation for a major earthquake, measures to deal with the source of pit and waste water, upgrading of obsolete equipment, and so on) • Digitalization of management tasks for abandoned mines • Cultivating the development of abandoned mine workers • Developing technologies related to the management of abandoned mines
Preserving biodiversity (company-owned forests, areas around mines)	• Obtaining the forest certification by SGEC for company-owned forests and promoting sustainable forest management • Confirming that biodiversity has been factored into mines in which we invest, and carrying out preservation activities at facilities located adjacent to national parks
Respecting human rights throughout the supply chain	• Rolling out multi-layered initiatives with the goal of ensuring the effectiveness of the Mitsubishi Materials Group's Human Rights Policy, Procurement Policy, etc. in the supply chain including the Group, such as awareness-raising activities, due diligence, and ensuring that corrective measures are taken • Operating CSR investment and loan standards and CSR Procurement Standards in the Metals Business, and engaging in dialogue with local communities where the Company has invested in mines where its interests are over and above a certain scale • Maintaining responsible mineral procurement certifications (gold, silver, tin, and tungsten)
Quality control	• Continued implementation of preventive measures regarding quality issues • Days to reflect on quality and prevent quality Issues from being forgotten • Developing mechanisms that avoid producing non-standard goods through "aggressive quality"

Key comments and their source	Group response
Creating safe, healthful working environments	- Activities to raise awareness of SCQDE (prioritizing safety and health in every action) - Continuing the Zero Occupational Accident Project - Thorough efforts to make equipment safe (engineering measures) through risk assessments (RA) - Strengthening health and safety education - Raising employees' awareness of health - Strengthening safety and health systems - Ensuring the safety of employees of operating support providers (partner companies) - Preventing fire, explosion, and other accidents
Human resources development	- Activating employee communication - Development and continual improvement of an education and training system - Developing next-generation business leaders - Building and utilizing a management system
Promoting greater roles for diverse human resources	- Promoting diversity and inclusion - Practicing health and productivity management
Strengthening information security	- Improving and expanding the information infrastructure - Expanding effective measures to defend against attacks aimed at vulnerabilities that are already known by attackers - Reducing the risks of new threats, including targeted attacks - Monitoring vulnerability and threats by the security operations center (SOC), and promptly handling incidents by establishing a computer security incident response team (CSIRT)
The evolution of corporate governance	- Group governance enhancement (communication, compliance framework and awareness, allocation of resources) - Building a new risk management system that enhances effectiveness and certainty - Responses based on the corporate governance code

Distribution of Economic Value to Stakeholders

Striving to Adequately Distribute Economic Value

As we continue to earn operating revenue and generate economic value added thanks to the involvement of our many and varied stakeholders, we believe that it is important to fulfill our social responsibilities and adequately distribute that added value among our stakeholders.

Economic Value Added in Fiscal 2022

Revenue for Mitsubishi Materials in fiscal 2022 came to ¥1214.6 billion. That included proceeds from the sale of products and services, dividends and other forms of non-operating income, and extraordinary income. Operating costs, which consist primarily of payments to suppliers, totaled ¥1123.8 billion. After subtracting operating costs from our total revenue, the amount of added value generated through our business activities came to ¥90.8 billion.

Distribution of Added Value

Personnel costs, which include statutory welfare expenses and pension contributions and represent the portion of revenue distributed to our employees, came to ¥50.6 billion.

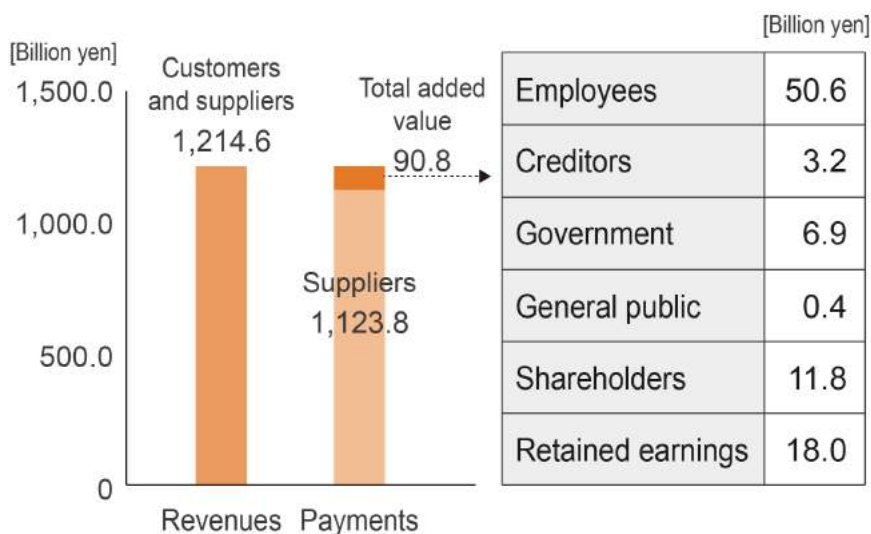
In the meantime, we distributed a total of ¥3.2 billion to financial institutions and other creditors, in the form of interest on borrowings.

We distribute value to society and local communities through the government and through our own social contribution activities. We paid ¥6.9 billion to the government this year, as the combined total of corporate income tax plus other taxes and public charges liable as expenses. We also gave ¥0.4 billion back to the community in the form of social contribution activities, including donations, lending our facilities to the public and providing employees' services.

Cash dividends, which represent the value that we distribute to our shareholders (companies and individuals, in Japan and overseas), came to a total of ¥11.8 billion.

Retained earnings to cover investment and contingencies for the future meanwhile totaled ¥18.0 billion.

■ Economic Added Value



Category	Stakeholder	Amount(million yen)	Details/method of calculation
Revenues	Customers and suppliers	1,214,598	Net sales, non-operating income, extraordinary income
	Suppliers	1,123,771	Operating costs (cost of sales and selling, general and administrative costs, minus deductions for personnel costs, tax and public charges, and donations)
Payments	Employees	50,557	Personnel costs (including statutory welfare expenses and pension contributions)
	Creditors	3,172	Interest expense
	Government	6,857	Taxes (corporate income tax, and other taxes and public charges liable as expenses)
	General public	444	Donations, etc.*
	Shareholders	11,783	Cash dividends paid
	Retained earnings	18,014	Net income minus cash dividends paid

* Calculated based on the value of items such as donated goods, public lending of our facilities and the provision of employees' services as well as cash donations, as specified by Nippon Keidanren.

Contributing to Local Communities as part of our Overseas Operations

Whenever we engage in business activities overseas, we make every effort to understand conditions in the relevant country and the national identity of its people, so that we can integrate into the local community as a corporate citizen. We re-invest money that we make through our overseas operations back into the local community wherever possible, in order to continue growing our business and contribute to the sustainable development of the local area.

Pension Contributions

Obligations relating to unfunded lump-sum severance payment plans and funded defined benefit pension plans totaled ¥42.2 billion and ¥48.7 billion respectively. ¥76.1 billion of this total was paid out in the form of pension assets to outside funds (coverage: 83.7%). A further ¥9.8 billion was registered as expenses in the form of accrued retirement benefits, with the remaining ¥5 billion classed as unrecognized benefit obligations. We plan to amortize all unrecognized benefit obligations over the next ten years. Unrecognized pension liabilities are mainly posted as expenses using the straight-line method for a 10-year period.

Financial Assistance from the Government

We received ¥0.3 billion in grants, subsidies and other financial assistance from the government. The government does not hold shares in Mitsubishi Materials or any of our group companies.

Respect for Human Rights

Respect for Human Rights

1. Human Rights Policy

In developing our businesses globally, we believe that it is essential not only to comply with the laws and regulations of each country, but also to respect international human rights standards. In December 2021, the Mitsubishi Materials Group established a Human Rights Policy in compliance with the UN Guiding Principles on Business and Human Rights, and is promoting initiatives to respect human rights. This Policy applies to all officers and employees of the Mitsubishi Materials Group. We also expect the Group's business partners to support and practice this Policy and aim to promote respect for human rights together with them.

Human Rights Policy	
	Established on December 1, 2021
1. Respect for International Human Rights Norms 2. Governance and Promotion Structure 3. Human Rights Due Diligence 4. Stakeholder Engagement 5. Grievance Mechanisms 6. Training and Awareness-Raising 7. Reporting and Disclosure 8. Commitment to Human Rights Issues	

- ▶ We established our Human Rights Policy effective on December 1, 2021.
- ▶ We signed the UN Global Compact and were registered as a participating company as of March 22, 2022.

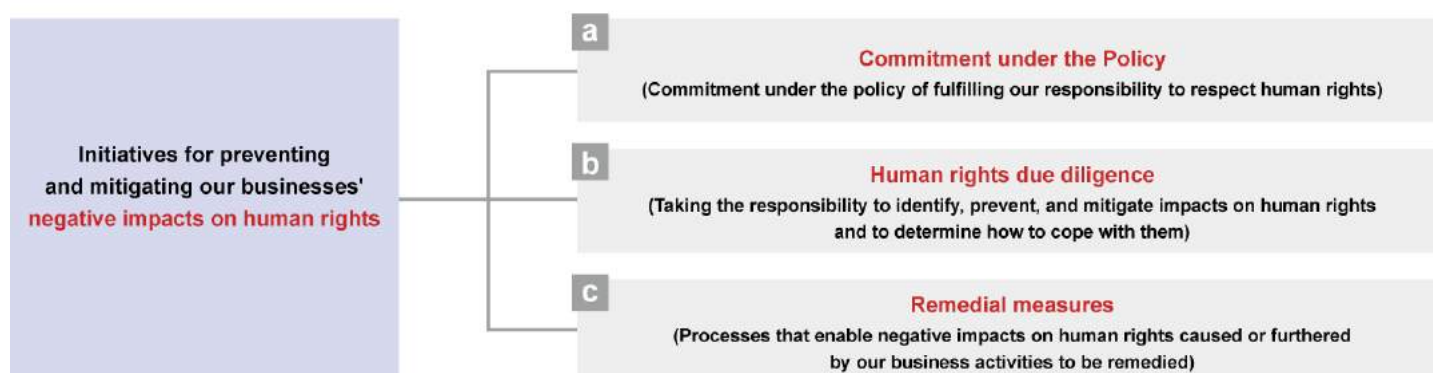
2. Human Rights Roadmap

To enhance our human rights initiatives, the Mitsubishi Materials Group will drive human rights due diligence internally, as we seek to reduce human rights risks. We will also drive collaborative initiatives with our business partners. We plan to establish a PDCA cycle to identify and review assumed risks based on the results of fact-finding surveys on human rights issues, further instill it internally through human rights awareness trainings and other measures, and expand them globally. From fiscal 2023, we will work on the following three items in accordance with the United Nations Guiding Principles on Business and Human Rights in order to mitigate and prevent our business activities from negatively impacting human rights.

- Dissemination of commitment to human rights policy
- Implementation of human rights due diligence
- Remedial action (processes that enable remedial action for negative impact on human rights caused or promoted by businesses)



3. Human Rights Initiatives



1. Commitment under the Policy

In FY2022, we conducted internal human rights awareness trainings on a group-wide basis in Japan with regard to privacy issues on the internet, human rights, and power harassment (abuse of authority), etc. Total of 7,717 employees underwent a combined total of 7,395 hours of training. We also gave trainings on power harassment as a part of CSR director training. A combined total of 426 hours of training was given to 142 persons. We began to provide human rights training as a part of training for managing directors in FY2022.

2. Human Rights Due Diligence

(1) Human rights due diligence within the Mitsubishi Materials Group

At the Mitsubishi Materials Group, we will perform human rights due diligence to identify, assess, prevent, and mitigate negative impacts on human rights related to our business activities. For the identification and assessment, we will incorporate the opinions of external specialists and include human rights issues throughout the value chain

	Creation of a roadmap for human rights due diligence
	Designing the overall procedures of managing human rights risks
	Human rights risk assessment

(2) Human rights due diligence in the supply chain

See Responsibility throughout the Value Chain - [Procurement and Supplier Initiatives](#) in the ESG Report

3. Remedial Measures

For employees of the Group, we have established consultation offices, including overseas offices. In Japan, we began to comply with the revised Whistleblower Protection Act in June 2022. In other countries, we raise awareness through training sessions and other opportunities to increase the effectiveness.

For inquiries from outside the Group, we currently have a contact for inquiry at our corporate website. We are considering setting up a designated contact point for accepting inquiries from each stakeholder.

Engaging in Dialogue and Coexisting with Local Communities

Social Contribution Activities

Career Lecture at a Junior High School (Mitsubishi Materials Corporation)

In September 2021, the Wakamatsu Plant of Mitsubishi Materials Corporation participated in a career lecture held at Ikki Junior High School run by the government of Aizuwakamatsu-shi, Fukushima prefecture. Approx. 110 students in two grades attended the lecture about the difficulty, value, and fun of manufacturing, the aptitude and abilities that are required for our jobs, the roles we play locally and other topics based on our experience. Quizzes were also included in the lecture. We could not invite the students to see our manufacturing sites or see and touch our products due to COVID-19. We believe, however, that the lecture was an opportunity to explain our work in an easy-to-understand manner and increase the students' familiarity with the Group, and to help the students think about their future.



The career lecture

Communication with Foreigners Working in Japan (Mitsubishi Materials Corporation)

In September 2021, the Sanda International Association in Hyogo prefecture held an online seminar for learning how to communicate effectively with foreign staff members, which was intended for business operators planning to employ foreigners. This seminar attracted multiple business operators, university faculty members and other participants. The seminar included talks by foreign staff working in Japan about their experiences. A foreign employee working at Mitsubishi Materials Corporation's Sanda Plant participated in the seminar and talked about her experiences to people intending to work in Japan and business operators who are working or planning to work with foreigners. The seminar was an opportunity to remember that it is very important that people with different cultural backgrounds and values should take time to communicate with each other to prevent troubles that may arise from different backgrounds and differing cultural understandings of each non-Japanese worker, and that the same applies to workplaces with Japanese workers only, which are becoming more diverse.



Participation from the plant via the internet

Main Recognition for the Mitsubishi Materials Group's Activities

■ Main Awards and Commendations from Outside Organizations in Fiscal 2022

Recipient	Awarding body or organization	Details	
Central Research Institute, Mitsubishi Materials Corporation	The Japan Institute of Metals and Materials	Industrial Achievement Award	R&D and practical application of high-performance copper alloys
Tsukuba Plant, Mitsubishi Materials Corporation	MONODZUKURI Nihon Conference, The Nikkan Kogyo Shimbun, Ltd.	2021 Cho Monodzukuri Grand Award for Parts, Machinery and Robotic Parts Award	MV1020 and MV9005, the MV-series coated insert grades

Recipient	Awarding body or organization	Details	
Tsukuba Plant, Mitsubishi Materials Corporation	Japan Cutting & Wear-resistant Tool Association	2021 Japan Cutting & Wear-resistant Tool Association (JTA) Award: Technological Achievement Award	Development of CVD coated insert grade MC6115 for steel turning
Tsukuba Plant, Mitsubishi Materials Corporation MOLDINO Tool Engineering, Ltd.	Japan Cutting & Wear-resistant Tool Association	2021 Japan Cutting & Wear-resistant Tool Association (JTA) Award: Technology Encouragement Award	• Tsukuba Plant: Development of double-sided insert type general-purpose shoulder mill WWX • MOLDINO Tool Engineering, Ltd.: Development of 8-flute end mill for vertical wall/bottom face finishing
MMC Ryotec Corporation	Japan Cutting & Wear-resistant Tool Association	2021 Japan Cutting & Wear-resistant Tool Association (JTA) Award: Environment Award	Awarded for efforts in environmental activities.
MOLDINO Tool Engineering, Ltd.	MONODZUKURI Nippon Conference Nikkan Kogyo Shimbun	2021 Cho Monodzukuri Grand Award for Parts, Machinery and Robotic Parts Award	ER8WB-ATH, 8-flute end mill for vertical wall/bottom face finishing
Naoshima Smelter & Refinery, Mitsubishi Materials Corporation	Ministry of Education, Culture, Sports, Science and Technology	2021 award granted by the Minister of Education, Culture, Sports, Science and Technology for contributions with originality and ingenuity in the field of science and technologies	Improvement of lead time for sample preparation for analytical estimation of discarded home appliances
PT. Smelting (PT. Smelting (Indonesia) Gresik Smelter and Refinery)	Gresik Regency of the Indonesian Journalists Association	Giri Pancasuar Awards	Support for sports promotion activities in Kabupaten Gresik
PT. Smelting (PT. Smelting (Indonesia) Gresik Smelter and Refinery)	Minister of Industry	Green Industry Award	Granted Level 5, the highest level in the standard applied to the green industry

Our Approach to Society

Signing of the UN Global Compact

Mitsubishi Materials Corporation signed the United Nations Global Compact (hereafter "UNGC") and was registered as a participating company as of March 22, 2022. In addition, it has joined the Global Compact Network Japan, the UNGC's local network in Japan.



The UNGC is a voluntary initiative in which companies and organizations act as good members of society and participate in the creation of a global framework for realizing sustainable growth by demonstrating responsible and creative leadership. The companies and organizations that sign the UNGC are required to observe and practice the Ten Principles in the four areas of human rights, labor, environment, and anti-corruption, which are set forth by the UNGC.

The vision of the Mitsubishi Materials Group is to "become the leading business group committed to creating a sustainable world through materials innovation, with use of our unique and distinctive technologies" based on its corporate philosophy of "For People, Society and the Earth" and we intend to more actively and positively promote sustainability as exemplified by the establishment of a new Sustainability Policy (URL:<https://www.mmc.co.jp/corporate/en/sustainability/>) as of December 1, 2021.

We will support the Ten Principles of the UNGC and practice them in our business activities, thereby contributing to the realization of a sustainable society.

- ▶ [Global Compact Network Japan Website](http://www.ungcn.org/) <http://www.ungcn.org/> 
- ▶ [United Nations Global Compact Website](https://www.unglobalcompact.org/) <https://www.unglobalcompact.org/> 

The Ten Principles of the UN Global Compact

Human Rights

Principle 1:

Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2:

make sure that they are not complicit in human rights abuses.

Labour

Principle 3:

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4:

the elimination of all forms of forced and compulsory labour;

Principle 5:

the effective abolition of child labour; and

Principle 6:

the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7:

Businesses should support a precautionary approach to environmental challenges;

Principle 8:

undertake initiatives to promote greater environmental responsibility; and

Principle 9:

encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10:

Businesses should work against corruption in all its forms, including extortion and bribery.

Dialogue with Shareholders and Investors

Dialogue with Shareholders

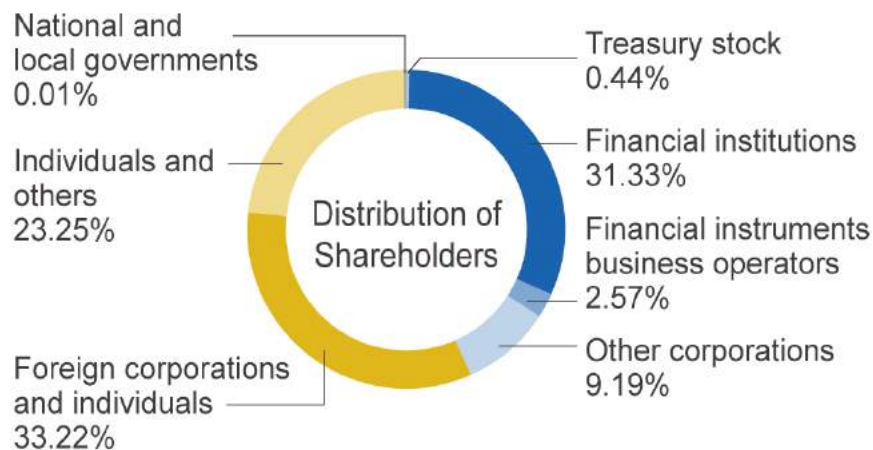
Our Ordinary General Meeting of Shareholders offers an invaluable opportunity for direct communication between our management members and shareholders. We therefore strive to send out convocation notices at the earliest possible date, while also providing details on our Website, to give shareholders sufficient time to consider the matters to be presented and resolved at the meeting. We continue to expand the range of our information disclosure, by posting new content to our annual business report, including details of our policies concerning remuneration and the status of corporate governance.

Besides permitting shareholders to exercise their voting rights in writing or online, we have introduced an electronic voting platform to facilitate voting by both domestic and international institutional investors.

We use slides with accompanying narrations at the General Meeting of Shareholders to help ensure participants' clear comprehension of the presented contents. We also publish shareholders' voting results for every resolution on the Website, after the meeting.

Further, to improve shareholder convenience, a hybrid participation-type General Meeting of Shareholders (live streaming) has been conducted from the 96th Ordinary General Meeting of Shareholders held on June 24, 2021. The streamed video of the General Meeting of Shareholders will also be posted on the Company's website for a certain period of time.

■ Distribution of Shareholders



Dialogue with Investors

In fiscal 2022, financial results briefings (quarterly), Investor Conference, IR Day, and ESG meetings were held for institutional investors and securities analysts.

At each meeting, we explained the contents of our financial results, management strategy and ESG initiatives, etc., and utilize the questions and opinions received from participants by feeding them back to management. We also actively exchange opinions and communicate through individual meetings with institutional investors and securities analysts and participation in conferences hosted by securities companies.

We are also communicating with individual investors by engaging in dialogue with them in briefings for individual investors hosted by securities companies, by posting our shareholder newsletters on our website, etc.

Although opportunities to have conventional face-to-face activities have been reduced, partly due to the impact of COVID-19, we will continue to engage in proactive IR and SR activities by deepening dialogue with stakeholders and maintaining and improving information disclosure, while utilizing telephone conference and online systems.



■ IR and SR Activities in Fiscal 2022

Item	Number of times held during fiscal 2022
Financial Results Briefing (quarterly)	4
Investor Conference	1
IR Day	1
ESG meeting	1
Individual IR/SR meeting	131
Overseas IR	4
Domestic conference hosted by a securities company	2
Briefing for individual investors hosted by a securities company	2

* All of the above were held online (telephone or web meetings).

Improving Customer Satisfaction

Improving Customer Satisfaction

Customer Satisfaction Surveys

As a part of our quality management activities, we analyze complaints and conduct customer satisfaction surveys at all Mitsubishi Materials facilities and group companies in order to reflect the diverse views of our customers. We take analysis results and customers' comments seriously and submit our findings to management reviews, in an effort to provide customers with better quality products and services.

Advanced Products Business

We deliver advanced products that are essential for customers, leveraging our manufacturing technologies like oxygen-free copper, high-performance copper alloys, and silicon, as well as process technologies like bonding different materials. Sharing the future product road map with customers to identify the functional value they demand promptly, we will be a good partner of our customers as their first call vendor.

Metalworking Solutions Business

At our Machining Technology Center, we provide technical support to help our customers use cutting tools correctly. We offer the Machining Academy to increase attendees' knowledge of tools and cutting operations, along with cutting tests and technical support aimed at enabling our customers to use our tools more efficiently. We also offer toll-free telephone technical counseling. With these and other support services, we strive to ensure direct communication with our customers at all times. In fiscal 2022, we focused our efforts on offering web seminars and remote cutting tests. Based on customer demand, we will continue to provide comprehensive solutions through technical diagnoses of processing lines and analyses of cutting operations on them.



Web seminars held through live demonstrations from machining technology center

Metals Business

By taking advantage of the Mitsubishi Process for continuous copper smelting, a unique copper smelting technology that has achieved the industry's top environmental impact reduction, we have long accepted and processed E-Scrap and currently boast the world's number one E-Scrap acceptance and processing capacity of approximately 160,000 tons annually. Against this background, we began operating the new MEX platform for E-Scrap trading, on December 20, 2021 to further improve our customer services. MEX uses the latest digital technologies and includes a large number of features. We aim to be an accessible partner for all customers in Japan and overseas by offering our long-standing experience and high technological capabilities through MEX.

Environment & Energy Business

We are contributing to the creation of a recycling-oriented society through the business of recycling mineral resources and the development of renewable energy.

In the eco-recycling sector, we devise creative measures to continue to improve the recycling process, including methods of recovering raw materials, so as to supply recycled resources (such as copper, iron, and resins) in a well-planned manner by offering grades and quantity demanded by customers. In addition, at each recycling plant, we are proactively providing plant tours to customers as part of our social contribution activities, with the goal of creating opportunities to provide environmental training.

With respect to renewable energy, we inspect and maintain our facilities daily, aiming to contribute to the building of a decarbonized society by maintaining the stable supply of energy with less environmental impact over long periods of time. We also provide new value derived from renewable energy by providing electricity to regional power producers and suppliers under the concept of "local production and local consumption of energy" and participating in the auction for non-fossil fuel energy certificates, in our efforts to obtain trust from customers and local communities.

Employee Communication

Labor Union and Management Partnership

Under our union shop scheme, we respect collective bargaining rights and freedom of association as the basic rights of workers, thereby striving to maintain a good labor-management relationship. The scheme also enables us to share information and exchange opinions between labor union and management on a regular basis. In particular, our biannual Labor-Management Conference, which is held with the Mitsubishi Materials Federation of Labor Unions, is aimed at strengthening solidarity through active discussion, covering subjects such as recent issues, strategies and policies in each sector, and establishing a shared direction in the interests of the Company's sustainable growth for the future.

Also, management spend substantial time on careful explanation and consultation with labor upon facing such events as business restructuring. As of the end of March 2022, the number of union members amongst those directly employed by Mitsubishi Materials (including employees on assignment) stood at 4,858. Including labor unions of group companies that belong to Mitsubishi Materials Federation of Labor Unions, the total number of members was 7,084.

■ Number of Union Members (full-time equivalent)

Item	Number of employees
Non-consolidated	4,858
Consolidated	7,084

Communication Measures

Implementing Wide-ranging Communication Measures to Support the Four Management Reforms and Becoming a Free, Strong Organization

The Group is implementing a wide range of communication measures in line with its policy that unrestricted communication is essential to building a better organization.

The Group's vision for governance is to enable smooth, autonomous communication, particularly between Head Office and subsidiaries, between Head Office and plants, and within each subsidiary. Work is also being done to implement workplace revitalization in areas such as dialogue (communication work) and to enhance compliance awareness. These initiatives aim to develop a corporate culture that encourages the building of healthy and open relationships of mutual trust and understanding between managers and employees.



Reverse Mentoring

Reverse mentoring is being deployed on a Company-wide basis with the aim of fostering an organizational culture that facilitates frank communication and open discussion in all directions by promoting communication that transcends hierarchies and organizations. Mentoring is normally a system in which senior employees (mentors) provide advice and support to junior employees (mentees) relating to both work and personal matters. With reverse mentoring, however, young employees become the mentors and give mentoring to the managerial level. This also leads to more equitable communication with the managerial level and interaction between mentors.



Company-wide Implementation of 1-on-1

1-on-1 meetings have been introduced in order to enhance the quality and quantity of communication between managers and employees within workplaces, helping managers to provide continuous and timely support for the growth of those they lead. The hyphenation in “1-on-1” is included as an expression of the connection between managers and employees. These regular meetings are shorter and more frequent than conventional employee interviews, and employees can speak freely with peace of mind in the knowledge that their manager will listen attentively. This enhances the relationship of trust between managers and employees, creating workplaces with an even greater sense of “psychological safety.”



Inner Branding

The Group began its inner branding activities in fiscal 2022 with the goal of encouraging employees to take ownership of our Mission. We are implementing numerous initiatives based on the three directions of “1. Communication with management,” “2. Connect every single employee and the entire Group horizontally” and “3. Support each challenge.” In fiscal 2022, “Ambassadors,” members recruited from among employees following applications from across the Group, played a central role in starting initiatives such as half-day workplace experiences and internal radio-style broadcasts. The development of new measures is planned to continue in future.

■ Ambassador Activities

Ambassadors for the promotion of inner branding have been appointed and are currently actively fulfilling this role. Their main role is to create a mechanism for each employee to take ownership of the Group’s Mission and apply it in their own behavior. Through discussions at regular monthly meetings, Ambassadors develop an understanding of the current situation and recognize issues while also holding interviews with the President and their colleagues, deepening discussion and formulating action plans. They also disseminated a wide range of information in fiscal 2022 to deepen understanding of the Group’s Mission among employees. Furthermore, Ambassadors have been active in promoting inner branding through activities such as guest appearances on internal radio-style broadcasts and half-day workplace experience trials.

■ Half-day Workplace Experiences

Half-day workplace experiences are being carried out as an opportunity for employees to experience jobs at other workplaces. By promoting communication to know (getting to know the people and work at other divisions and Group companies, and understanding how they contribute to the Mission) and connect (horizontal communication and relationship building that transcends divisions and companies, and horizontal communication and relationship building within the workplace) to other divisions and Group companies, we will continue to establish an organizational culture that truly enables free and open-minded communication. This initiative also serves as an opportunity for individuals to consider their own career on an autonomous basis.



■ Internal Radio-style Broadcasts

Created to promote communication with managers and employees, regular radio-style broadcasts where the President personally acts as an entertainment personality, answering a range of questions from Group employees is delivered. Episodes of the show are also archived on Link MATERIALS for employees who are unable to listen to the stream in real time. Questions to the President are also received on a constant basis, and various innovations—including having managers and actual employees who have submitted questions appear as guests—are being trailed. We have received feedback that this opportunity to hear the President’s honest views and get an insight into his personality as he converses with guests in a friendly atmosphere distinct from official management messages leads to a better understanding of the Company and management reforms.

Link MATERIALS: An in-house website for the dissemination of information has been established, acting as a Group-wide communication hub for the timely dissemination of major news items, directional planning leading to revitalized communication and the introduction of initiatives aiming to realize the Group’s Mission.

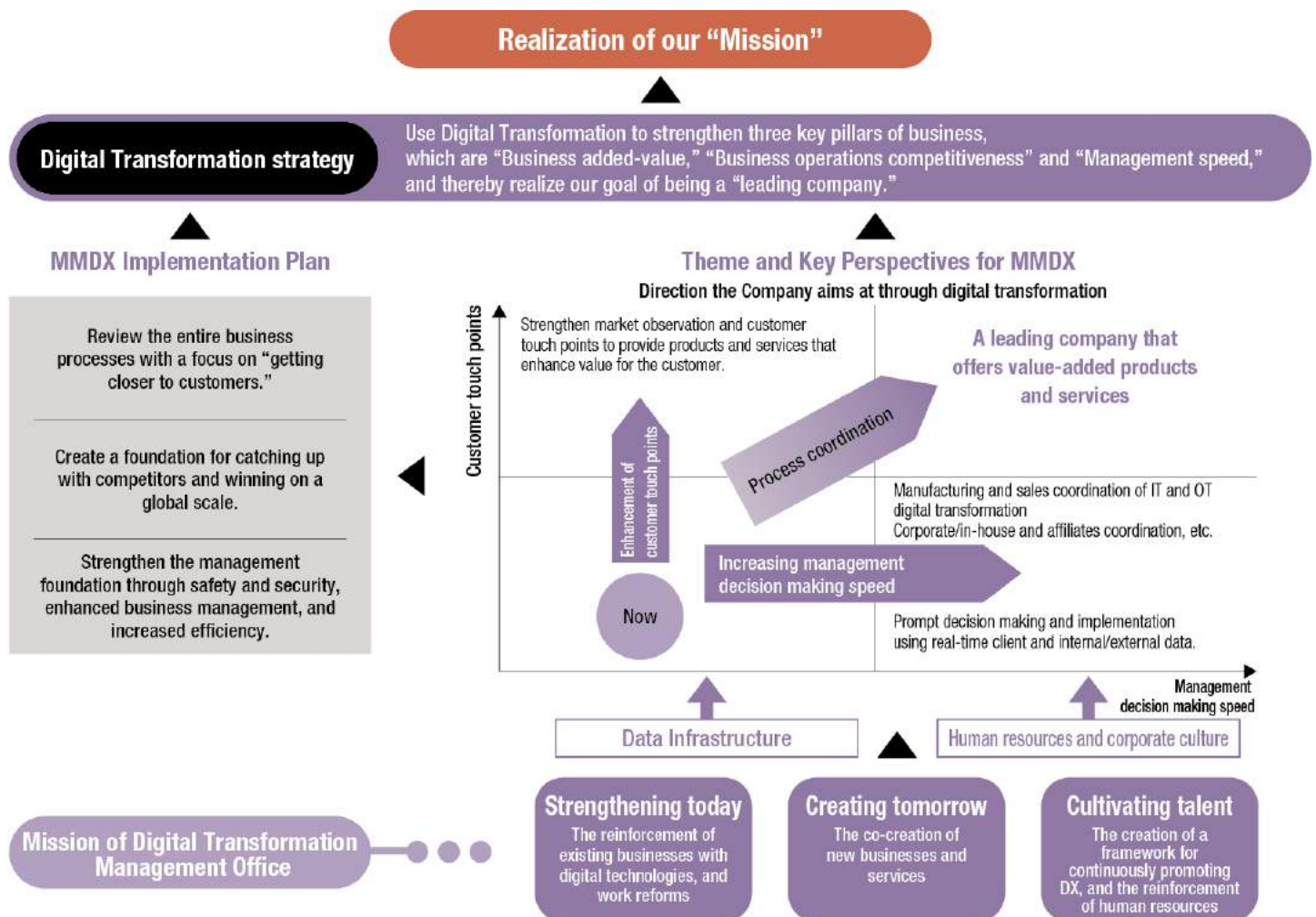


Digital Transformation

Digital Transformation (DX) Strategy

We strongly promote digitalization strategies that use data and digital technology to strengthen three key pillars of business, which are “Business added-value,” “Business operations competitiveness” and “Management speed,” and thereby realize the Group’s goal of being a “leading company.”

The Group is implementing DX strategies that will serve as the foundation that enables us to prevail in global competition. In April 2020, we established a Digital Transformation Management Office that pursues three missions: **“Strengthening today:** Using digital technology to reinforce existing business,” **“Creating tomorrow:** Co-creation of new business and services,” and **“Cultivating talent:** Reinforcing human resources and systems to effect reform continuously” to work with each of our businesses toward our Group’s mission from 2030 to 2050. To materialize the three key pillars of our DX measures—business added-value, business operations competitiveness and management speed—we have chosen priority themes based on our key DX perspectives of “enhancement of customer touch points,” “process coordination,” and “increasing management decision making speed” as well as their foundation of “system and data infrastructure improvement” and “human resource and culture development”, and we are carrying out joint activities that unite the business departments and our IT/digital departments. Through speedy implementation of these themes, the Group aims to achieve real-time management that is responsive to social changes, environmental changes, and our own transformation. These initiatives have been named Mitsubishi Materials Group DX, or “MMDX.” We have formulated a concrete six-year roadmap for the period from fiscal 2021 to fiscal 2026 and defined implementation measures, and over this period we will carry out our investment plans and implementation resource plans.



Points for Strengthening Operations in Fiscal 2023 and After

This is the third year of our MMDX activities, and each theme has progressed to the implementation stage. While specific results and efforts are already underway in several themes, visualization of overall movement of implementation, response to further strengthen the organization, review of themes and movement for the next Medium-Term Management Strategy and CX system have become challenges. Therefore, we will focus on the following three points for our strengthening efforts in fiscal 2023.

The first is strengthening the structure. In business digital transformation, we will accelerate the construction of DX organization within business divisions with the aim of introducing and utilizing digital solutions, while strengthening their maintenance and operations support. In addition, we are proceeding with in-house production for operation and development in areas that have relied heavily on external support until now.

The second is strengthening program management (PM). As we enter the execution phase, we need to be able to more accurately visualize our schedules, resources, costs and tasks, as well as strengthening the management. By establishing a PMO system across each theme in the DX Management Office, we will comprehensively manage and operate multiple themes.

The third point is reviewing our themes. The 21 MMDX themes have been organized into 19 themes according to progress. Furthermore, we are strengthening coordination with digitalization efforts in manufacturing departments, while also proceeding with integration of contact points and response, and considering the creation of new themes.

■ MMDX Themes and Aims

		Theme		Aims	Points
Strengthen customer touch points and S&OP ^{*1}	Product-based Business	1. MI ^{*2} : Digital customer touch point	Networking Solutions C	Business growth Create a foundation to catch up with competitors' efforts and winning on a global scale	Strengthen customer touch points and process coordination Review the entire business process with a focus on "getting closer to customers"
		2. Ability to propose solutions			
		3. Demand & supply management			
	Recycling-Based Business	4. Improvement of customer touch points		Business development, "For People, Society and the Earth" Contribute to a sustainable society	Strengthen business by leveraging current business strengths and involving industry Establish an underlying platform
		5. Supply chain integration			
		6. Advance development and production data utilization			
		7. Advance cost control of electronic materials			
Reformation of Manufacturing	Manufacturing DX	8. Strengthening E-Scrap processing		SCQDE, improving work site capabilities, improving product capabilities	Thorough operational efficiency, and sophisticated business operations through utilization of data
		9. Environmental recycling DX			
Strengthen Management Foundation	Key Operations / Business Administration / Data Infrastructure	10. Security and safety	Advanced Products C	Advancement of business administration to support CX Data-driven management Speedy decision making and execution based on data	Capture real situation and data in the field and market, not monthly, and the ability to look ahead Thorough utilization of existing data
		11. Maintenance			
		12. Advance procurement			
		13. Innovation Center DX			
	Operational Efficiency	14. ERP		Make work easier, focus on professional work in office, and for manufacturing	Review (standardization, universalization, and externalization) and thorough automation of business processes
		15. Upgrading of business administration			
		16. Data infrastructure and utilization			
	Human Resource Base	17. Operational efficiency		Strengthen talents for sustainable development Good and healthy communication Corporate culture with a spirit of challenge	High visibility of talents and transparency of evaluations DX talent development Improved DX mindset and literacy
		18. Talent management			
		19. DX talent development and literacy improvement			

*1 Abbreviation of Sales and Operation Planning: Optimization of the entire supply chain through sharing information and accelerating decision-making between management, sales and manufacturing sites.

*2 MI: Market intelligence

Evaluation by External Organizations

Evaluation by External Organizations

■ MSCI Japan ESG Select Leaders Index

The ESG Select Leaders Index is an index of companies that are carrying out outstanding ESG activities, which are selected from the MSCI Japan IMI Top 500 Index. Mitsubishi Materials Corporation has been selected as a component of the index since July 2017.

2022 CONSTITUENT MSCI JAPAN
ESG SELECT LEADERS INDEX

(Click to check related information)

■ MSCI Japan Empowering Women Index ("WIN")

WIN is an index of companies that are more gender diversified than others in their industries, selected from an index of the top 500 Japanese stocks by market capitalization. Mitsubishi Materials Corporation has been selected as a component of the index since July 2017.

2022 CONSTITUENT MSCI JAPAN
EMPOWERING WOMEN INDEX (WIN)

(Click to check related information)

* The Government Pension Investment Fund (GPIF), which manages and operates employee pension and national pension deposits, links its operations to ESG indexes of Japanese stocks in order to make investments that consider Environment, Social and Governance (ESG) factors.

The MSCI Japan ESG Select Leaders Index and MSCI Japan Empowering Women Index ("WIN") have both been selected as ESG indexes by the GPIF.

* THE INCLUSION OF Mitsubishi Materials Corporation IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF Mitsubishi Materials Corporation BY MSCI OR ANY OF ITS AFFILIATES.
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■ FTSE Blossom Japan Sector Relative Index

FTSE Blossom Japan Sector Relative Index is an index created by FTSE Russell, a global index provider, that reflects the performance of Japanese companies demonstrating outstanding environmental, social, and governance (ESG) practices in their respective sectors and is designed to be sector neutral. To promote the transition to a low-carbon economy, companies with particularly high greenhouse gas emissions are included only if their improvement efforts are positively evaluated using the TPI Management Quality Score. In addition, the FTSE Blossom Japan Sector Relative Index has been adopted as an ESG passive management benchmark for the Government Pension Investment Fund (GPIF). Mitsubishi Materials Corporation has been selected as a component of the index since March 2022.



FTSE Blossom Japan Sector Relative Index

(Click to check related information)

* FTSE Russell (a registered trademark of FTSE International Limited and Frank Russell Company) hereby verifies that Mitsubishi Materials Corporation has met the entry requirements for the FTSE Blossom Japan Sector Relative Index as a result of a third-party investigation. The FTSE Blossom Japan Sector Relative Index is widely used for creation and evaluation of sustainable investment funds and other financial instruments.

■ ECPI

ECPI is an investment management consulting firm based in Luxembourg and Milan that specializes in sustainable investments. Comprising multiple ESG indexes arranged by industry, region and theme, ECPI maintains indexes for each industry, region and theme made up of global companies that have met certain standards in their ESG-related activities. Mitsubishi Materials Corporation has been selected as a component of the index since December 2018.



■ CDP

CDP is a non-profit organization based in London, UK, and operating an international framework project to require top market capitalization companies to disclose their strategies and data on “climate change” and “water risk” collaborating with institutional investors. On an eight-stage scale from A to D-, we were evaluated as CDP Climate Change “B” and CDP Water “A-” in FY2022.



(Click to check related information)

ESG Data List (Non-Consolidated and Consolidated)

ESG Data List (Non-Consolidated and Consolidated)

The Environment

(1) Input			Unit	Fiscal 2019 Non-consolidated	Fiscal 2020 Non-consolidated	Fiscal 2021 Non-consolidated	Fiscal 2022 Non-consolidated
Raw material input	Total		kilotons	18,266	17,529	16,597	★16,882
	Breakdown	Waste	kilotons	2,454	2,233	2,128	2,085
		Byproducts	kilotons	1,170	1,084	994	1,072
		Natural resources	kilotons	14,565	14,157	13,408	13,646
		Processed items and components	kilotons	77	55	66	79
	Percentage of recycled raw materials used		%	19.8	18.9	18.8	★18.7
Energy input	Total		TJ	41,563	40,015	40,452	40,390
	Breakdown	Electricity	GW h	1,016	1,006	1,099	1,113
		Fuel (crude oil equivalent)	Megaliters	820	782	770	765
Water use	Total		thousand m ³ per year	420,942	422,012	401,402	★419,792
	Fresh water used		thousand m ³ per year	14,369	14,059	17,026	★16,785
	Breakdown	Municipal water	thousand m ³ per year	1,353	1,500	1,641	1,692
		Industrial water	thousand m ³ per year	4,381	4,183	4,376	4,377
		Groundwater	thousand m ³ per year	2,895	2,933	2,851	2,670
		Other fresh water	thousand m ³ per year	5,740	5,443	8,159	8,046
	Seawater used		thousand m ³ per year	406,573	407,953	384,376	403,007

(2) Output				Unit	Fiscal 2019 Non- consolidated	Fiscal 2020 Non- consolidated	Fiscal 2021 Non- consolidated	Fiscal 2022 Non- consolidated		
Greenhouse gas emissions	Total (CO ₂ equivalent)			kilotons	7,933	7,540	7,320	7,250		
	Breakdown		Derived from energy sources	kilotons	3,375	3,204	3,157	3,114		
			Derived from processes	kilotons	4,073	3,854	3,716	3,681		
			Derived from waste	kilotons	468	462	428	434		
			Other	kilotons	17	19	19	21		
	SCOPE3 Total (CO ₂ equivalent)			kilotons	-	-	2,913	★3,263		
	Breakdown	1.Purchased goods and services		kilotons	-	-	1,290	1,563		
		2.Capital goods		kilotons	-	-	114	105		
		3. Fuel and energy related activities not included in Scope 1 or 2		kilotons	-	-	505	525		
		4.Transportation and delivery (upstream)		kilotons	-	-	572	617		
		5.Waste generated in operations		kilotons	-	-	1	2		
		6.Business travel		kilotons	-	-	0	0		
		7.Employee commuting		kilotons	-	-	2	2		
		8.Leased assets (upstream)		kilotons	-	-	N/A	N/A		
		9.Transportation and delivery (downstream)		kilotons	-	-	120	126		
		10.Processing of sold products		kilotons	-	-	202	215		
		11.Use of sold products		kilotons	-	-	N/A	N/A		
		12.End-of-life treatment of sold products		kilotons	-	-	106	107		
		13.Leased assets (downstream)		kilotons	-	-	N/A	N/A		
		14.Franchises		kilotons	-	-	N/A	N/A		
		15.Investments		kilotons	-	-	N/A	N/A		
Water discharged	Total			thousand m ³ per year	417,554	419,613	398,436	★416,837		
	Amount (excluding amount discharged into sea)			thousand m ³ per year	8,060	8,784	11,331	★11,106		
				Breakdown	Lakes and rivers	thousand m ³ per year	7,837	8,478	10,756	10,545
					Sewers	thousand m ³ per year	169	191	436	430
					Other	thousand m ³ per year	54	115	139	132
	Sea			thousand m ³ per year	409,493	410,829	387,104	405,731		
Emissions into the air	SOx			tons	813	730	1,084	★786		
	NOx			tons	10,932	9,542	10,560	★10,756		
	Soot and dust			tons	229	221	197	★142		
Emissions into water	BOD			tons	32	72	46	★31		
	COD			tons	25	23	24	★27		
	Nitrogen			tons	148	125	139	★159		
	Phosphorus			tons	0	0	0	0		

Volume of industrial waste	Total			tons	13,816	12,987	14,982	★13,970
	Breakdown	Hazardous	Sent to be recycled	tons	1,329	2,325	1,945	1,733
			Sent to landfill	tons	6,426	5,907	8,335	6,553
		Non-hazardous	Sent to be recycled	tons	533	48	180	207
			Sent to landfill	tons	5,528	4,706	4,522	5,477
Chemicals released and transferred	Amount released into		Atmosphere	tons	28	34	48	47
			Public waters	tons	36	34	27	31
			Soil	tons	0	0	0	0
			Landfills	tons	0	0	0	0
	Amount transferred to		Sewers	tons	0	0	0	0
			Waste	tons	33	51	46	40

(3) Spending on environmental preservation			Unit	Fiscal 2019 Non-consolidated	Fiscal 2020 Non-consolidated	Fiscal 2021 Non-consolidated	Fiscal 2022 Non-consolidated
Investment	Business area costs		million yen	1,542	1,506	2,500	4,848
		Pollution prevention costs	million yen	867	885	1,404	4,089
		Global environmental conservation costs	million yen	457	442	813	641
		Resource recycling costs	million yen	217	179	283	118
	Upstream/downstream costs		million yen	0	0	0	0
	Administration costs		million yen	142	108	58	46
	R&D costs		million yen	4	3	3	2
	Social activity costs		million yen	0	0	0	0
	Environmental remediation costs		million yen	9	26	14	15
Costs	Business area costs		million yen	5,762	5,606	6,584	6,821
		Pollution prevention costs	million yen	2,608	2,605	2,867	3,426
		Global environmental conservation costs	million yen	250	369	326	450
		Resource recycling costs	million yen	2,905	2,632	3,390	2,946
	Upstream/downstream costs		million yen	0	0	0	0
	Administration costs		million yen	295	269	342	272
	R&D costs		million yen	28	13	22	32
	Social activity costs		million yen	11	11	10	13
	Environmental remediation costs		million yen	101	105	102	144

Note 1: The data on the volume of industrial waste represent values reported in accordance with the Waste Management and Public Cleansing Act.

Note 2: The data on chemicals released and transferred represent values reported under the Japanese Pollutant Release and Transfer Register (PRTR) system.

				Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
Human resources	Number of employees (non-consolidated)	Men	Non-consolidated	4,240	4,299	5,432	5,455
		Women	Non-consolidated	567	607	721	753
		Total	Non-consolidated	4,807	4,906	6,153	★6,208
	Number of employees (consolidated)	Total	Consolidated	28,426	28,601	27,162	23,711
	Percentage of employees holding rights of collective bargaining	Total	Non-consolidated	74.1%	73.9%	75.0%	74.6%
	Number of graduate recruits	Men	Non-consolidated	153	172	174	131
		Women	Non-consolidated	41	44	44	36
		Total	Non-consolidated	194	216	218	★167
	Average duration of service	Men	Non-consolidated	17.5years	17.7years	18.0years	18.2years
		Women	Non-consolidated	14.4years	14.3years	14.4years	14.1years
		Total	Non-consolidated	17.2years	17.3years	17.6years	17.7years
	Average age		Non-consolidated	41.2years	41.3years	41.8years	42.0years
	Average overtime hours		Non-consolidated	20.7h	20.0h	14.2h	17.1h
	Percentage of paid holidays taken		Non-consolidated	85.1%	89.1%	79.5%	★81.1%
	Percentage of employees with disabilities		Non-consolidated	2.3%	2.3%	2.4%	★2.3%
	Percentage of women in management positions		Non-consolidated	1.6%	1.8%	2.1%	2.5%
	Number of employees taking maternity leave		Non-consolidated	18	26	25	★23
	Number of employees taking family care leave	Men	Non-consolidated	3	1	3	3
		Women	Non-consolidated	2	0	1	2
		Total	Non-consolidated	5	1	4	★5
	Number of employees taking childcare leave	Men	Non-consolidated	6	4	27	56
		Women	Non-consolidated	32	21	24	20
		Total	Non-consolidated	38	25	51	★76
	Percentage of employees who returned to work after maternity and childcare leave		Non-consolidated	100%	100%	100%	100%
	Employee turnover ^{*1*2}		Non-consolidated	3.8%	4.5%	3.8%	2.9%
	Percentage of employees who left the company for their own reasons		Non-consolidated	1.7%	2.2%	1.5%	★2.3%
Education	Number of employees receiving education and training ^{*3}		Group companies ^{*3}	20,626	18,575	20,989	★19,400
Safety	Occupational accident frequency rate ^{*4}		Non-consolidated	0.34	0.17	0.51	★0.21
	Number of occupational accidents ^{*4}		Non-consolidated	24	20	28	24

Mines	Number of abandoned mines managed by Mitsubishi Materials Group	Non-consolidated	21	21	21	21
	Number of abandoned mines made publicly accessible as cultural assets by Mitsubishi Materials Group	Non-consolidated	4	4	4	4
Community	Spending on social contribution (excluding political donations)	Non-consolidated	344million yen	303million yen	436million yen	444million yen

*1 The number of regular employees who left the company in FY2022 (those who left the company because they reached the mandatory retirement age, those who left the company because of the expiration of the period of absence, and those who left the company voluntarily)/ The number of regular employees at the end of FY2022

*2 In April 2021, the existing mandatory retirement age was raised from 60 to 65 years old.

*3 Number of group companies to which employees receiving education and training belonged: 70 in 2018, 67 in 2019, 62 in 2020, and 53 in 2021. From fiscal 2022, the number of participants in education and training includes non-regular employees as well as regular employees.

*4 Occupational accidents frequency rate and incident rate do not include accidents during commuting or minor injuries.

Governance

			Fiscal 2019	Fiscal 2020	Fiscal 2021	Fiscal 2022
Corporate governance	Number of directors	Non-consolidated	11	11	10	10
	Number of outside directors	Non-consolidated	6	6	6	6
	Number of female directors	Non-consolidated	1	1	1	1
	Percentage of female directors	Non-consolidated	9.1%	9.1%	10.0%	10.0%
	Remuneration for directors (total)	Non-consolidated	413million yen	273million yen	245million yen	235million yen
In-house reporting	Number of reports and inquiries received through the in-house reporting system	Non-consolidated & Group companies	61	58	54	47

GRI Content Index

102 : General Disclosures

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102-30	Effectiveness of risk management processes	Positioning of Sustainability in the Group Corporate Governance Report	P4	
102-31	Review of economic, environmental, and social topics	Positioning of Sustainability in the Group Initiatives on Material Issues	P4 P7	
102-32	Highest governance body's role in sustainability reporting	Positioning of Sustainability in the Group	P4	
102-33	Communicating critical concerns	Positioning of Sustainability in the Group	P4	
102-34	Nature and total number of critical concerns	Product Quality and Safety		
102-35	Remuneration policies	Corporate Governance	P93	
102-36	Process for determining remuneration	Corporate Governance	P93	
102-37	Stakeholders' involvement in remuneration	Corporate Governance	P93	
102-38	Annual total compensation ratio	Corporate Governance	P93	
102-39	Percentage increase in annual total compensation ratio	Corporate Governance	P93	
5. Stakeholder engagement				
102-40	List of stakeholder groups	Building and Enhancing Relations with Stakeholders	P148	
102-41	Collective bargaining agreements	Safety and Health Management Employee Communication	P81 P162	
102-42	Identifying and selecting stakeholders	Building and Enhancing Relations with Stakeholders	P148	
102-43	Approach to stakeholder engagement	Positioning of Sustainability in the Group Building and Enhancing Relations with Stakeholders Dialogue with Shareholders and Investors	P4 P148 P158	
102-44	Key topics and concerns raised	Positioning of Sustainability in the Group	P4	
6. Reporting practice				
102-45	Entities included in the consolidated financial statements	Editorial Policy	P2	
102-46	Defining report content and topic Boundaries	Editorial Policy Initiatives on Material Issues	P2 P7	
102-47	List of material topics	Initiatives on Material Issues GRI Content Index	P7 P174	
102-48	Restatements of information			
102-49	Changes in reporting	Initiatives on Material Issues	P7	
102-50	Reporting period	Editorial Policy	P2	
102-51	Date of most recent report	Editorial Policy	P2	
102-52	Reporting cycle	Editorial Policy	P2	
102-53	Contact point for questions regarding the report	Contact us		
102-54	Claims of reporting in accordance with the GRI Standards	Editorial Policy	P2	
102-55	GRI content index	GRI Content Index	P174	
102-56	External assurance	Independent Assurance Report		
7. Management Approach				
103-1	Explanation of the material topic and its Boundary	Initiatives on Material Issues; Material Issues	P7	
103-2	The management approach and its components	Mitsubishi Materials Group's Business Activities and the SDGs Positioning of Sustainability in the Group Building and Enhancing Relations with Stakeholders	P9 P4 P148	
103-3	Evaluation of the management approach	Positioning of Sustainability in the Group Independent Assurance Report	P4	

Disclosure		Content	ESG Report 2022	External Assurance
201 : Economic Performance				
201-1	Direct economic value generated and distributed	Building and Enhancing Relations with Stakeholders	P148	
201-2	Financial implications and other risks and opportunities due to climate change	Climate Change Strategy	P27	
201-3	Defined benefit plan obligations and other retirement plans	Building and Enhancing Relations with Stakeholders	P148	
201-4	Financial assistance received from government	Building and Enhancing Relations with Stakeholders	P148	
202 : Market Presence				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage			
202-2	Proportion of senior management hired from the local community	Overseas Human Resource Development		○
203 : Indirect Economic Impacts				
203-1	Infrastructure investments and services supported	Engaging in Dialogue and Coexisting with Local Communities Materials' Forests Biodiversity Conservation	P155 P74 P67	
203-2	Significant indirect economic impacts	Building and Enhancing Relations with Stakeholders	P148	
204 : Procurement Practices				
204-1	Proportion of spending on local suppliers			
205 : Anti-corruption				
205-1	Operations assessed for risks related to corruption			
205-2	Communication and training about anti-corruption policies and procedures	Ensuring compliance	P118	
205-3	Confirmed incidents of corruption and actions taken			
206 : Anti-competitive Behavior				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	ESG Data	P169	
207 : Tax				
207-1	Approach to tax			
207-2	Tax governance, control, and risk management			
207-3	Stakeholder engagement and management of concerns related to tax			
207-4	Country-by-country reporting			

Disclosure		Content	ESG Report 2022	External Assurance
301 : Materials				
301-1	Materials used by weight or volume	Environmental Management In Pursuit of a Recycling-Oriented Business Model	P54 P20	○
301-2	Recycled input materials used	Recycling-oriented value chain Recycling Wastes with Advanced Technologies Environmental Management In Pursuit of a Recycling-Oriented Business Model	P22 P54 P20	○
301-3	Reclaimed products and their packaging materials	Providing Lead and Other Non-ferrous Materials Recycling-oriented value chain	P22	
302 : Energy				
302-1	Energy consumption within the organization	Environmental Management	P54	○
302-2	Energy consumption outside of the organization	Climate Change Strategy	P27	
302-3	Energy intensity	Climate Change Strategy	P27	
302-4	Reduction of energy consumption			
302-5	Reductions in energy requirements of products and services	Performance	P38	
303 : Water				
303-1	Water withdrawal by source	Climate Change Strategy	P27	○
303-2	Water sources significantly affected by withdrawal of water			
303-3	Water withdrawal	Overview of Environmental Load	P58	○
303-4	Water discharge	Overview of Environmental Load	P58	○
303-5	Water consumption	Overview of Environmental Load	P58	
304 : Biodiversity				
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity Conservation Materials' Forests	P67 P74	
304-2	Significant impacts of activities, products, and services on biodiversity	Biodiversity Conservation Materials' Forests	P67 P74	
304-3	Habitats protected or restored	Biodiversity Conservation Materials' Forests	P67 P74	
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Biodiversity Conservation	P67	
MM1	Amount of land (owned or leased, and managed for production activities or extractive use) disturbed or rehabilitated	This item does not apply because there is no mine where we have management rights.		
MM2	The number and percentage of total sites identified as requiring biodiversity management plans according to stated criteria, and the number (percentage) of those sites with plans in place	Biodiversity Conservation	P67	
305 : Emissions				
305-1	Direct (Scope 1) GHG emissions	Climate Change Strategy Performance Environmental Management	P27 P38 P54	○
305-2	Energy indirect (Scope 2) GHG emissions	Climate Change Strategy Performance Environmental Management	P27 P38 P54	○
305-3	Other indirect (Scope 3) GHG emissions	Climate Change Strategy Performance	P27 P38	○
305-4	GHG emissions intensity	Climate Change Strategy	P27	
305-5	Reduction of GHG emissions	Recycling Wastes with Advanced Technologies Climate Change Strategy Materials' Forests	P27 P74	

305-6	Emissions of ozone-depleting substances (ODS)			
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	Environmental Management	P54	○
306 : Waste				
306-1	Water discharge by quality and destination	Environmental Management	P54	
306-2	Waste by type and disposal method	Environmental Management In Pursuit of a Recycling-Oriented Business Model	P54 P20	
306-3	Significant spills	Environmental Management	P54	○
306-4	Transport of hazardous waste			○
306-5	Water bodies affected by water discharges and/or runoff	Environmental Management	P54	○
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks	This item does not apply because there is no mine where we have management rights.		
307 : Environmental Compliance				
307-1	Non-compliance with environmental laws and regulations	Environmental Management	P54	
308 : Supplier Environmental Assessment				
308-1	New suppliers that were screened using environmental criteria	Procurement and Supplier Initiatives	P135	
308-2	Negative environmental impacts in the supply chain and actions taken			

400 : Society

Disclosure		Content	ESG Report 2022	External Assurance
401 : Employment				
401-1	New employee hires and employee turnover	Development and Empowerment of Diverse Talents	P122	○
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees			
401-3	Parental leave	Collaboration Between Diverse Talents	P124	○
402 : Labor/Management Relations				
402-1	Minimum notice periods regarding operational changes	Collaboration Between Diverse Talents	P124	
403 : Occupational Health and Safety				
403-1	Workers representation in formal joint management-worker health and safety committees	Occupational Safety and Health	P81	
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Occupational Safety and Health	P81	
403-3	Workers with high incidence or high risk of diseases related to their occupation			
403-4	Health and safety topics covered in formal agreements with trade unions	Safety and Health Management	P81	
403-5	Worker training on occupational health and safety	Safety and Health Management	P81	
403-6	Promotion of worker health	Safety and Health Management	P81	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships			
403-8	Workers covered by an occupational health and safety management system			
403-9	Work-related injuries	Safety and Health Management	P81	○
403-10	Work-related ill health			
404 : Training and Education				
404-1	Average hours of training per year per employee	Collaboration Between Diverse Talents	P124	○

404-2	Programs for upgrading employee skills and transition assistance programs	Development of Diverse Talents	P130	
404-3	Percentage of employees receiving regular performance and career development reviews			
405 : Diversity and Equal Opportunity				
405-1	Diversity of governance bodies and employees	Corporate Governance Development and Empowerment of Diverse Talents Collaboration Between Diverse Talents	P93 P122 P124	○
405-2	Ratio of basic salary and remuneration of women to men			
406 : Non-discrimination				
406-1	Incidents of discrimination and corrective actions taken	Development and Empowerment of Diverse Talents	P122	
407 : Freedom of Association and Collective Bargaining				
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk			
408 : Child Labor				
408-1	Operations and suppliers at significant risk for incidents of child labor	Procurement and Supplier Initiatives	P135	
409 : Forced or Compulsory Labor				
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Procurement and Supplier Initiatives	P135	
410 : Security Practices				
410-1	Security personnel trained in human rights policies or procedures			
411 : Rights of Indigenous Peoples				
411-1	Incidents of violations involving rights of indigenous peoples			
MM5	Total number of operations taking place in or adjacent to indigenous peoples' territories, and number and percentage of operations or sites where there are formal agreements with indigenous peoples' communities	This item does not apply because there is no mine where we have management rights.		
412 : Human Rights Assessment				
412-1	Operations that have been subject to human rights reviews or impact assessments	Procurement and Supplier Initiatives Respect for Human Rights	P135 P153	
412-2	Employee training on human rights policies or procedures			
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Procurement and Supplier Initiatives Respect for Human Rights	P135 P153	
413 : Local Communities				
413-1	Operations with local community engagement, impact assessments, and development programs	Biodiversity Conservation Procurement and Supplier Initiatives Social and Environmental Considerations in Overseas Mines	P67 P135	
413-2	Operations with significant actual and potential negative impacts on local communities	This item does not apply because there is no mine where we have management rights.		
MM6	Number and description of significant disputes relating to land use, customary rights of local communities and indigenous peoples	This item does not apply because there is no mine where we have management rights.		
MM7	The extent to which grievance mechanisms were used to resolve disputes relating to land use, customary rights of local communities and indigenous peoples, and the outcomes	This item does not apply because there is no mine where we have management rights.		

MM8	Number (and percentage) of company operating sites where artisanal and small-scale mining (ASM) takes place on, or adjacent to, the site; the associated risks and the actions taken to manage and mitigate these risks	This item does not apply because there is no mine where we have management rights.		
MM9	Sites where resettlements took place, the number of households resettled in each, and how their livelihoods were affected in the process	This item does not apply because there is no mine where we have management rights.		
MM10	Number and percentage of operations with closure plans	This item does not apply because there is no mine where we have management rights.		
414 : Supplier Social Assessment				
414-1	New suppliers that were screened using social criteria	Procurement and Supplier Initiatives Respect for Human Rights	P135 P153	
414-2	Negative social impacts in the supply chain and actions taken			
415 : Public Policy				
415-1	Political contributions			
416 : Customer Health and Safety				
416-1	Assessment of the health and safety impacts of product and service categories	Product Quality and Safety; Striving for Materials Stewardship	P144	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services			
417 : Marketing and Labeling				
417-1	Requirements for product and service information and labeling	Product Quality and Safety	P144	
417-2	Incidents of non-compliance concerning product and service information and labeling			
417-3	Incidents of non-compliance concerning marketing communications			
418 : Customer Privacy				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	There were no applicable events.		
419 : Socioeconomic Compliance				
419-1	Non-compliance with laws and regulations in the social and economic area	There were no applicable events.		



Independent Assurance Report

To the Chief Executive Officer of Mitsubishi Materials Corporation

We were engaged by Mitsubishi Materials Corporation (the “Company”) to undertake a limited assurance engagement of the environmental and social performance indicators marked with a star ★ (the “Indicators”) for the period from April 1, 2021 to March 31, 2022 included in its ESG Report 2022 (Archive Edition) (the “Report”) for the fiscal year ended March 31, 2022.

The Company’s Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company’s reporting criteria”), as described in the Report.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with the ‘International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information’ and the ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’ issued by the International Auditing and Assurance Standards Board. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing the Company’s responsible personnel to obtain an understanding of its policy for preparing the Report and reviewing the Company’s reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical procedures on the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company’s reporting criteria, and recalculating the Indicators.
- Making inquiries and reviewing materials including documented evidence of the Company’s Gifu Plant and Wakamatsu Plant selected on the basis of a risk analysis, as alternative procedures to site visits.
- Evaluating the overall presentation of the Indicators.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Report are not prepared, in all material respects, in accordance with the Company’s reporting criteria as described in the Report.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control 1, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Kazuhiko Saito, Partner, Representative Director
KPMG AZSA Sustainability Co., Ltd.
Tokyo, Japan
September 28, 2022



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