

# ESG DATA BOOK 2019

For the Year Ended March 31, 2019

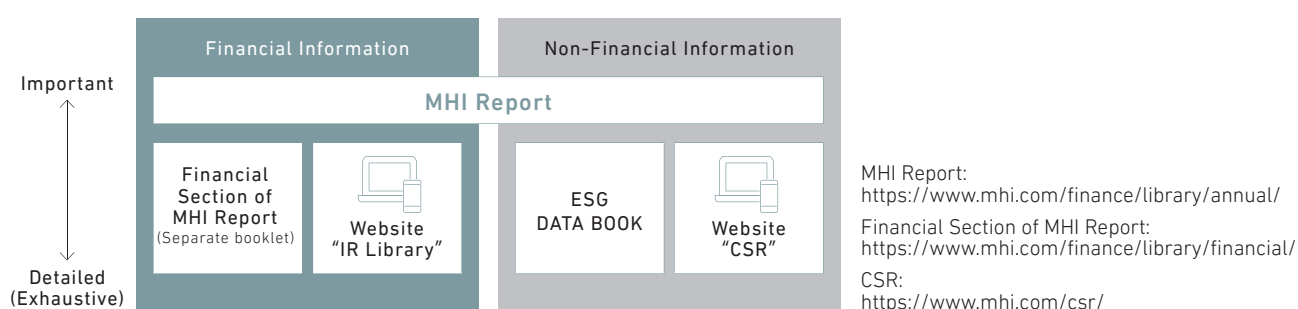
# Editorial Policy

## Reason for Publishing and Positioning of This Report (ESG DATA BOOK)

Keeping its principles and Group Statement as its base, MHI Group aims to continue its development alongside the changing world by responding to the present and future issues and needs of society with a variety of technologies and services. To enhance the understanding of our philosophy among all of our stakeholders, we have integrated financial information, including management strategy and operating performance, with non-financial information related to the Group's environmental and social activities into the MHI Report (MHI Group Integrated Report). This ESG Report (ESG DATA BOOK) functions as a supplementary document to the MHI Report and summarizes information pertaining to environmental, social, and governance (ESG), meant to introduce detailed performance data of our ESG efforts to all of our stakeholders, who possess a vested interest in this information.

## Structure of Information Disclosure

The MHI Report contains financial and non-financial information that is important to understanding MHI Group. The ESG DATA BOOK and the Company CSR website contain more detailed non-financial information.



## Coverage

**Target organization:** In principal, the scope of reporting includes MHI and its consolidated subsidiaries.

The scope of some information is for MHI on a non-consolidated basis, in which case it is identified as such.

**Target period:** From April 1, 2018 to March 31, 2019 (includes information on some activities after March 31, 2019)

## Third-party Assurance

To enhance the reliability of data, we have received third-party assurance. (For details, please see pages 81-85.)

(Note) Data subject to third-party assurance is indicated with ✓.

- Assurance Statement on Environmental data
- Assurance Statement on Social data

## Reference Guidelines

- International Integrated Reporting Council (IIRC) International Integrated Reporting Framework
- Global Reporting Initiative (GRI) Sustainability Reporting Standards  
GRI Guidelines Comparison Tables [https://www.mhi.com/csr/management/report\\_gri.html](https://www.mhi.com/csr/management/report_gri.html)
- Ministry of the Environment of Japan Environmental Reporting Guidelines (2018 version)
- Ministry of Economy, Trade and Industry of Japan's "The Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation"

## Forward-Looking Statements

Forecasts regarding future performance presented in these materials are based on judgments made in accordance with information available at the time this presentation was prepared. As such, these projections involve risks and uncertainty. For this reason, investors are recommended not to depend solely on these projections for making investment decisions. It is possible that actual results may change significantly from these projections for a number of factors. Such factors include, but are not limited to, economic trends affecting the Company's operating environment, currency movement of the yen value against the U.S. dollar and other foreign currencies, and trends of stock markets in Japan. Also, the results projected here should not be construed in any way as being guaranteed by the Company.

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# CSR Management

## ► CSR Framework

### Policy

In accordance with the three statements that are at the heart of our Principles, the MHI Group serves as a manufacturing corporation that contributes to societal progress through its business endeavors of delivering products and technologies in support of social and industrial infrastructure worldwide. In this way, MHI is contributing to the resolution of global issues. Furthermore, MHI believes the basis of corporate social responsibility (CSR) is to engage in business activities that take its diverse range of stakeholders into consideration and return profits to all stakeholders in optimum fashion, while at the same time providing excellent products and technologies to realize a sustainable society and a secure future for people and the planet.

In 2007, we formulated CSR Action Guidelines to serve as collective standards for all MHI Group employees. These guidelines provide a concrete and easy-to-understand way for employees to consistently keep CSR in mind as the Group contributes to societal progress through its business endeavors and through a corporate creed centered on the principles of CSR.

In 2015, we formulated the MHI Group Code of Conduct in response to the Group's globalization and diversification. As a global company, the MHI Group employs individuals from different backgrounds, nationalities, and cultures, and the code of conduct describes how MHI employees should conduct themselves. Furthermore, we promote respect for human rights and support international standards such as the Universal Declaration of Human Rights. In light of the Guiding Principles on Business and Human Rights, adopted by the United Nations in 2011, and in keeping with international society's increasing emphasis on human rights, we formulated the MHI Basic Policy on Human Rights in 2014. In 2017, we stepped up our global activities, such as participating in the World Business Council for Sustainable Development (WBCSD). Going forward, as well, we aim contribute further toward the realization of a sustainable society.

### CSR Action Guidelines

MHI strives to move the world toward a more secure future. Through our technology, our business practices, and our people, we:

#### ► Care for the planet

We are eco-conscious, and engineer environmentally-friendly technologies that improve sustainability and protect the Earth

#### ► Create a more harmonious society

We embrace integrity and proactive participation to solve societal challenges

#### ► Inspire the future

We cultivate global talent who share a vision and desire to move the world forward for generations to come

(Others)

MHI Group Code of Conduct	<a href="https://www.mhi.com/company/aboutmhi/policy/conduct.html">https://www.mhi.com/company/aboutmhi/policy/conduct.html</a>
MHI Basic Policy on Human Rights	<a href="https://www.mhi.com/csr/social/huamnrights.html">https://www.mhi.com/csr/social/huamnrights.html</a>
Privacy Policy	<a href="https://www.mhi.com/privacy.html">https://www.mhi.com/privacy.html</a>
Policy of Safety and Health	<a href="https://www.mhi.com/company/aboutmhi/policy/safety_health.html">https://www.mhi.com/company/aboutmhi/policy/safety_health.html</a>
Procurement Policy	<a href="https://www.mhi.com/company/procurement/policy/index.html">https://www.mhi.com/company/procurement/policy/index.html</a>
MHI Group Supply Chain CSR Promotion Guidelines and Basic Policy Concerning Conflict Minerals	<a href="https://www.mhi.com/company/procurement/csr/">https://www.mhi.com/company/procurement/csr/</a>
MHI Group Policy for Social Contribution Activities	<a href="https://www.mhi.com/csr/social/contribution.html">https://www.mhi.com/csr/social/contribution.html</a>

**CSR Promotion System**

MHI has established the CSR Committee as the management-level body for making decisions related to CSR. Chaired by the CoCSO (the executive officer in charge of CSR), the CSR Committee comprises six members including the General Counsel (GC, director), CFO (director), CTO, the officer in charge of human resources (HR), and head of the Business Strategy Office. In principle, with the aim of establishing an ESG/Sustainability Promotion System, the committee meets twice each year to determine various policies and material items related to CSR and conduct status reports, and deliberates and reports on important matters related to ESG at the Management meeting attended by multiple directors.

As is outlined below, we have also put in place various committees<sup>(Note)</sup>, such as the Compliance Committee and the Environment Committee, to deliberate material items related to CSR.

<b>■ Audit and Supervisory Committee</b>	Members: Audit and Supervisory Committee Members (five) Number of meetings: 17 (FY2018)
<b>■ Nomination and Remuneration Meetings</b>	Members: Outside directors (five) and the President and CEO Number of meetings: 8 (FY2018)
<b>■ Outside Directors' Meetings</b>	Members: Outside directors (five) + management personnel (as necessary) Number of meetings: 2 (FY2018)
<b>■ CSR Committee</b>	Members: Chaired by the CoCSO (the executive officer in charge of CSR), including the general counsel (GC, director), CFO (director), CTO, the officer in charge of human resources (HR), and head of the Business Strategy Office. Number of meetings: 2 (FY2018)
<b>■ Compliance Committee</b>	Members: Chaired by the Executive Vice President, GC, and composed of 24 members. Number of meetings: 2 (FY2018)
<b>■ Committee for Raising Awareness of Human Rights</b>	Members: Chaired by the Senior Vice President, who is in charge of HR, and composed of 25 members. Number of meetings: As many as necessary
<b>■ MHI Group Environment Committee</b>	Members: Chaired by Senior Executive Vice President, CTO and composed of 10 members. Number of meetings: 1 (FY2018)
<b>■ International Trade Control Committee</b>	Members: Chaired by the Executive Vice President, GC, and composed of 13 members. Number of meetings: 2 (FY2018)

(Note) The number of meetings held is the number within the target fiscal year. Committee members are to issue the report.

**Conformity to International Code of Conduct**

Being a global company, MHI always conducts its business activities in accordance with international codes of conduct. In 2004, MHI became a participant in the United Nations Global Compact, committing itself to making ongoing efforts throughout the Group to respect and carry out its Ten Principles spanning four basic areas: human rights, labour, environment, and anti-corruption. We promote CSR activities that are in accordance with ISO 26000, which was formulated in 2010 as an international guideline on the social responsibilities of organizations. We endeavor to disclose information in accordance with Japanese and overseas reporting standards. One such international standard for the reporting of non-financial information is the Sustainability Reporting Standards of the Global Reporting Standards Initiative.

Pick Up

**The Ten Principles of the Global Compact**

In 2004 MHI became a signatory to the UN Global Compact. In addition to carrying out its Ten Principles on human rights, labor, the environment, and prevention of corruption, in 2015 we formulated the “MHI Group Global Code of Conduct” indicating rules of behavior for all MHI Group employees to follow. Going forward, we will continue to conduct our business activities with sincerity and high ethical standards appropriate to a global company.

**Participation in the UN Global Compact**

<b>Human Rights</b>	■ <b>Principle 1</b>	Businesses should support and respect the protection of internationally proclaimed human rights; and
	■ <b>Principle 2</b>	make sure they are not complicit in human rights abuses.
<b>Labour</b>	■ <b>Principle 3</b>	Business should uphold the freedom of association and the effective recognition of the right to collective bargaining;
	■ <b>Principle 4</b>	the elimination of all forms of forced and compulsory labour;
	■ <b>Principle 5</b>	the effective abolition of child labour; and
	■ <b>Principle 6</b>	the elimination of discrimination in respect of employment and occupation.
<b>Environment</b>	■ <b>Principle 7</b>	Businesses should support a precautionary approach to environmental challenges;
	■ <b>Principle 8</b>	undertake initiatives to promote greater environmental responsibility; and
	■ <b>Principle 9</b>	encourage the development and diffusion of environmentally friendly technologies.
<b>Anti-Corruption</b>	■ <b>Principle 10</b>	Businesses should work against all forms of corruption, including extortion and bribery.

**The seven core subjects of ISO 26000, and MHI’s main efforts**

**1. Organizational governance**

Organizational governance

- Corporate Governance    ■ Risk Management

**2. Human rights**

Due diligence / Human rights risk situations / Avoidance of complicity / Resolving grievances / Discrimination and vulnerable groups / Civil and political rights / Economic, social and cultural rights / Fundamental principles and rights at work

- Human Rights    ■ Supply Chain Management

**3. Labour practices**

Employment and employment relationships / Conditions of work and social protection / Social dialogue / Health and safety at work / Human development and training in the workplace

- Labour Practice    ■ Occupational Health and Safety    ■ Human Capital Development    ■ Talent Attraction and Retention

**4. The environment**

Prevention of pollution / Sustainable resource use / Climate change mitigation and adaptation / Protection of the environment, biodiversity and restoration of natural habitats

- Environmental Management    ■ Climate Change    ■ Water Risk    ■ Biodiversity    ■ Waste Pollution

**5. Fair operating practices**

Anti-corruption / Responsible political involvement / Fair competition / Promoting social responsibility in the value chain / Respect for property rights

- Compliance

**6. Consumer issues (responsibility towards customers)**

Fair marketing, factual and unbiased information and fair contractual practices / Protecting consumers' health and safety / Sustainable consumption / Consumer service, support, and complaint and dispute resolution / Consumer data protection and privacy / Access to essential services / Education and awareness

■ Product Stewardship      ■ Customer Relationship Management

**7. Community involvement and development**

Community involvement / Education and culture / Employment creation and skills development / Technology development and access / Wealth and income creation / Health / Social investment

■ Corporate philanthropy

(Note) The core subjects and issues were determined in reference to Understanding ISO 26000 (November 2010), translated by the Japan Standards Association.

## ► Stakeholders

### Our Stakeholders

In accordance with the three principles that define the spirit of our creed, the MHI Group serves as a manufacturing corporation that contributes to societal progress through its business endeavors of delivering products and technologies in support of social and industrial infrastructure worldwide. In this way MHI is contributing to the resolution of global issues. Furthermore, MHI believes the basis of corporate social responsibility (CSR) is to engage in business activities that take its diverse range of stakeholders into consideration and return profits to all stakeholders in optimum fashion, while at the same time providing excellent products and technologies to realize a sustainable society and a secure future for people and the planet.



### Relationship with Stakeholders

MHI Group prioritizes management initiatives that reflect input from the various stakeholders in its business activities, including customers, suppliers, business partners, Group employees, and local communities. In addition to seeking out stakeholder input in its everyday activities, MHI engages in dialogue with experts and NGOs having specialized expertise related to CSR and global issues, striving to incorporate societal viewpoints.



■ Stakeholder dialogues

Contents	Date	Attendees <sup>(Note)</sup>	Outline
Mediation between business and human rights	September 14, 2016	Roel Nieuwenkamp (Chair of the Organisation for Economic Co-operation and Development (OECD) Working Party on Responsible Business Conduct) Thomas Thomas (CEO, the ASEAN CSR Network (ACN))	Dialogue with experts who have extensive knowledge on human rights, environmental issues, governance, etc. regarding measures to deal with human rights risks in the supply chain.
The material issues and future initiatives	September 15, 2015	Motoko Aizawa (Managing Director and Chair, IHRB US Board, Institute for Human Rights and Business) Amol Mehra (Director, International Corporate Accountability Roundtable) Christopher Schuller (Legal Adviser on Business and Human Rights, German Institute for Human Rights) Allan Lerberg Jørgensen (Department Director of Human Rights and Development, Danish Institute for Human Rights)	Held dialogue with overseas experts centered on formulating a global debate on business and human rights with regard to the content of material issues and future initiatives.
Material Issues Identification Process	September 3, 2014	John Morrison (Institute for Human Rights and Business) Catherine Poulsen-Hansen (Danish Institute for Human Rights) Amol Mehra (International Corporate Accountability Round Table)	MHI Group conducted a dialogue with three experts from overseas concerning our Material Issues Identification Process, which determines what social issues are to be prioritized and addressed.
Main human rights issues in the manufacturing sector	March 13, 2013	Makoto Teranaka (Visiting Professor, Faculty of Contemporary Law, Tokyo Keizai University) Hiroshi Ishida (Executive Director of Caux Round Table Japan, Global CRT Senior Advisor, Professor at Institute of Business and Accounting, Kwansei Gakuin University, Part-time Lecturer Kyushu University Business School)	MHI held a stakeholder dialogue to learn from two experts, Mr. Makoto Teranaka and Mr. Hiroshi Ishida, in order to identify human rights impacts.
Approach to Environmental and Energy Technologies In Line with MHI's "Environment Vision 2030"	February 27, 2012 March 8 and 27, 2012	Mariko Kawaguchi (Head of ESG Research Department Daiwa Institute of Research) Norio Fukao (Professor and Director of Publicity Strategy Headquarters, Nagasaki University) Setsu Mori (Editor-in-Chief of "Alterna," a business information magazine about the environment and CSR)	MHI Group conducted a dialogue about our "Environment Vision 2030," with outside experts.
Expectations for Science Class Support Activities	February 17, 2011	Takuya Suga (Teacher and Vice Principal, Hiroshima Minamikanon Elementary School) Sumio Endo (Director, Kodomo Uchu Mirai Association) Yuichi Taguchi (Kodomo Uchu Mirai Association)	Discussions were held with the Board of Education and NPO to exchange opinions on the Kodomo Uchu Mirai Association(KU-MA), or "Children, Space, Future Association."

(Note) Indicated roles and titles are as of the indicated date.

### Collaboration with our Stakeholder

MHI has operated the in-house system Funds for Community Engagement (former Social Contribution Fund) since fiscal 2012 to promote active involvement in social contribution activities designed to address needs and issues of the local communities around Company facilities and contribute to the solution of global societal issues. Under this system, time donated to volunteer work by Company employees is converted to a monetary value, which is then converted to an equivalent budget allocation. Money in the budget is used along with the dispatch of employee volunteers to build collaborative relationships with NPOs and other local groups and address social issues together.

#### List of support recipients in fiscal 2018

Region of activity	Affiliated organization	Field of activity
Nagasaki (Japan)	Fine Network Nagasaki (NPO)	Social welfare
Nagasaki (Japan)	Association to protect the Dozaki of environment	Environment
Yamaguchi (Japan)	Social welfare corporation Shimonoseki Taihei Gakuen	Education
Yamaguchi (Japan)	MOA Museum of Art Children's Art Exhibition Executive Committee	Culture and art
Yamaguchi (Japan)	Symphony Net (NPO)	Social welfare
Yamaguchi (Japan)	Girl Scouts of Japan 30th Yamaguchi	Education
Yamaguchi (Japan)	Toastmasters Leadership Institute Shimonoseki	Education
Shiga (Japan)	Ritto Forest Club projects, Ritto-city Society of Commerce and Industry	Environment
Shiga (Japan)	Network for Protection Lake Biwa with the Common Reed (Phragmites Australis)	Environment
Kanagawa (Japan)	Sagamihara City Rugby Ball Association (NPO)	Health and sports
Kanagawa (Japan)	Seiko Gakuin High School	Health and sports
Kanagawa (Japan)	Hashimoto shopping district cooperative association	Regional contribution
Kanagawa (Japan)	Elementary Schools in Sagamihara	Health and sports
Kanagawa (Japan)	Sagamihara Youth Counseling Center and Yokoyama Park Group management joint venture Public Interest Incorporated Foundation Sagamiharashi Machimidori	Health and sports
Kanagawa (Japan)	Date Rugby Football Union	Health and sports

## ► Materiality

### Material Issues of MHI Group

We at MHI Group consider issues that could have significant impact on the creation of corporate and social values within the group as material issues which need to be addressed with high priority.

The following issues have been identified as material issues through a materiality assessment conducted within MHI Group from both corporate and social perspectives with due considerations given to internationally recognized standards and the concerns of our stakeholders.

#### Material Issues

##### 1. An Optimal Governance Structure Based on Our Corporate Culture

- An optimized organization to continually contribute to society through our business
- The assurance of fair operating practices and appropriate labour practices

##### Objective

- Ensure an organizational culture in which values are shared globally and universally

##### Strategic KPIs

- Instill globally consistent policies that conform with the international code of conduct (establish universality)
- Enhance transparency (assure universality)  
Enhance disclosure and stakeholder engagement

##### 2. The Use of Global Human Resources

- The attraction and development of human resources with the ability to respond to globalization
- Diversity and equal opportunity, including the empowerment of female employees.

##### Objective

- Be an organization that embraces diversity (Ensure that barriers to diversity are removed)

##### Strategic KPIs

- Improvement in diversity-related indicators

##### 3. Response to Mega Trends

- Innovation and quality control to meet global needs
- Enhanced safety and security, including improved information disclosure and transparency

##### Objective

- Enact strategic measures and business operations that meet the needs of global society

##### Strategic KPIs

- Improvement in stakeholder evaluations (SRI surveys, customer satisfaction surveys and others)

### Key Performance Indicators for Material Issues

MHI Group has set KPIs to enable the evaluation of strategic KPI outcomes and progress towards the achievement of target material issues, and conducts CSR activities accordingly. As the number of initiative indicators increases, we will report on targets, results, and case studies for specific initiatives.

#### KPI for material issue 1: Number of whistleblowing cases

We have provided two hotlines where any actual or potential breach of the Code of Conduct, and any other actual or potential breaches of ethics, including bribery and corruption, can be reported: the MHI Whistleblowing Hotline, which is available to all employees, including those of Group companies, and the MHI External Whistleblower Hotline. The Compliance Committee Secretariat promptly investigates all reports made to these hotlines, and takes appropriate remedial or preventive action where breaches are identified.

**Number of whistleblowing cases, by type**

Type	FY 2016	FY 2017	FY 2018
Labour and the work environment	42	49	81
Overall discipline and breaches of manners	28	17	13
Transaction-related laws	11	11	15
Consultations and opinions	3	0	1
Other	34	36	32
Total (number of corrections and improvements)	118 (64)	113 (59)	142 (65)

**KPI for material Issue 2: Number of female managers**

In July 2014, MHI set a target to increase the number of the Company's female managers in positions of section manager and higher threefold from the current level by 2020. To this end, the Company is promoting the active participation of women in the workplace in conjunction with its pursuit of diversity management.

**Number of female managers**

FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
85	102	126	149	171

(Note) People in positions of section manager or higher as of April 1 of each year. In principal, figures are for MHI and Mitsubishi Hitachi Power Systems, Ltd.

**Processes Defining Material Issues**

Material issues are specified and verified in the following process from the perspective of stakeholder dialogue.

<b>Incorporating Society's Perspective</b>	Through taking a stakeholder perspective <sup>(Note 1)</sup> on the core subjects of ISO 26000, we narrowed potential issues down to 84 items of importance to MHI. We then referred to such guidelines as the Global Reporting Initiative's (GRI) Sustainability Reporting Guidelines (Fourth Edition, G4) and subsequently grouped together similar items and reduced the list to 49 items in seven departments.
<b>Arranging the Issues from the Perspective of MHI's Business</b>	We conducted hearings with of our 16 departments, confirming the importance of the 49 issues to our business. We also ascertained three major changes that were consistently raised as issues with the business reorganizations the Company has undergone in recent years: changes in the ideal state of the organization, globalization, and changes in the business model.
<b>Confirming Appropriateness</b>	We engaged in dialogue with specialized overseas institutions to confirm that our process of identifying material issues was appropriate.
<b>Narrowing Down the Issues in Line with Mega Trends</b>	We referred to priority items from 2015 in Building the Post-2015 Business Engagement Architecture <sup>(Note 2)</sup> , published by the United Nations Global Compact, confirming that our business perspective was not divergent from sustainability mega trends. This resulted in consolidating the number of items to 25.
<b>Identifying Material Issues</b>	Based on the shortlist of 25 items determined from the perspectives of the Company's business and mega trends, we identified three material issues for the Company.
<b>Obtaining Management Authorization</b>	The CSR Committee deliberated and decided on the items.

(Note 1) We referred to the results of stakeholder questionnaire surveys, SRI surveys, records of meetings with institutional investors, supplier surveys submitted to our customers, and stakeholder engagement programs, among others.

(Note 2) This publication is a call for companies to commit to and promote and support activities aimed to achieve the targets set by the United Nations.

## ► SDGs Initiatives

### MHI GROUP × SDGs

MHI Group has been an innovative partner to society through a broad range of businesses for more than 130 years. We are now being called on as a company to play an even greater role in responding to the megatrends society faces and helping resolve the various issues outlined by the Sustainable Development Goals (SDGs<sup>(Note)</sup>). Going forward, and in keeping with the spirit of its principles ("We deliver reliable and innovative solutions that make a lasting difference to customers and communities worldwide.") and as a manufacturing company, MHI Group will deliver reliable and innovative solutions that make a lasting difference to customers and communities worldwide. We provide the world with products and technologies that support the social and industrial infrastructure. We also contribute toward the resolution of issues on a global scale.

(Note) SDGs: In September 2015, the United Nations adopted these 17 goals to be achieved by 2030.



MHI Group is well-placed to focus its energies on Goal 13 of the SDGs: "Take urgent action to combat climate change and its impacts." In addition to decreasing greenhouse gas emissions, we are striving to reduce environmental impact of all processes across our business activities. At the same time, we are pursuing specific measures to address climate change, such as by providing power plants with low environmental impact, renewable energy facilities, and CO<sub>2</sub> recovery plants.

# Governance

## ► Corporate Governance

As a company responsible for developing the infrastructure that forms the foundation of society, MHI Group's basic policy is to manage the Company in consideration of all stakeholders and to make efforts to enhance corporate governance on an ongoing basis in pursuit of sustained growth of MHI Group and improvement of its corporate value in the medium and long term. In accordance with such basic policy, MHI endeavors to improve its management system by, among other ways, working to enhance its management oversight function, separating management oversight and execution, and inviting outside directors on the Board, and develop a "Japanese-style global management" focusing on the improvement of the soundness and transparency of its management as well as on diversity and harmony. As part of a corporate governance reform, in 2015 MHI transitioned to a Company with an Audit and Supervisory Committee, with outside directors numbering five, including three who are Audit and Supervisory Committee members. In 2016, we established the Nomination and Remuneration Meetings and reduced the number of directors from 14 to 11 (maintaining the number of outside directors at five). Through this reform, we aim to accelerate decision-making and strengthen the supervisory function.

(Reference) Corporate Governance of Mitsubishi Heavy Industries, Ltd. <https://www.mhi.com/company/aboutmhi/governance/>

### Number of Outside Directors

2019

5

### Ratio of Outside Directors

2019

45%

## Performance Data

### Corporate Governance

#### Independence of the Board of Directors

Independence policy,  
target

(Reference)

Article 21 of the Corporate Governance Guidelines of Mitsubishi Heavy Industries, Ltd. clearly addresses our goal: "MHI shall endeavor to make the number of independent outside directors who meet MHI's independence criteria ... constitute one third or more of all members of the Board of Directors."

Corporate Governance Guidelines of Mitsubishi Heavy Industries, Ltd.

[https://www.mhi.com/finance/management/governance/pdf/corporate\\_governance.pdf](https://www.mhi.com/finance/management/governance/pdf/corporate_governance.pdf)

## Diversity of Board of Directors

When selecting directors who are not Audit and Supervisory Committee members, it is MHI's policy to nominate as candidates those who have extensive experience in executing MHI's business, and who see things from the perspective of senior management; and in addition, to invite more than one individual as candidates for the role of outside directors to perform supervision from an objective standpoint while giving consideration to external stakeholders.

Moreover, the Board of Directors strives to ensure that its composition strikes a balance between diversity and appropriate size while maintaining a good balance overall in terms of knowledge, experience, competence, and other qualities. Furthermore, from the perspective of ensuring effective audits, as directors who are Audit and Supervisory Committee members, MHI's policy is to select individuals who have extensive knowledge and experience in various fields such as corporate management, legal, finance, and accounting in a well-balanced manner.

## Corporate governance structure

MHI has adopted the form of a Company with an Audit and Supervisory Committee. In addition, we have established the Nomination and Remuneration Meeting as an advisory body to the Board of Directors with the goal of obtaining the opinions and advice of outside directors and further enhancing transparency and fairness prior to deliberations by the Board of Directors on matters relating to the nomination of candidates for directors, the dismissal of directors, and the appointment and dismissal of other executives and officers, and matters relating to the remuneration of directors (excluding directors who serve as Audit and Supervisory Committee members). The Nomination and Remuneration Meeting deliberates on the amount of director remuneration and the policy for determining its calculation method and decides on that policy after reporting the outline of its deliberations to the Board of Directors.

The Company's Board of Directors is 11 directors (of whom five are Audit and Supervisory Committee members), five (of whom three are Audit and Supervisory Committee members) are elected from outside the Company.

By obtaining beneficial views and candid assessments from outside directors on the Company's management from a standpoint neutral to operational divisions, the Company is enhancing its management oversight function and ensuring that the oversight function by outside directors is more effective. Accordingly, the Company ensures that the number of outside directors who meet MHI's independence criteria constitutes one-third or more of all members of the Board of Directors, as described later. Moreover, in accordance with the Company's Articles of Incorporation and a resolution by the Board of Directors, the Company delegates decisions on important operations to the president and CEO, excluding matters designated by laws and ordinances as matters to be decided exclusively by the Board of Directors, business plans, and the appointment, dismissal, and remuneration of directors, chief officers, and administrative executive officers, as well as other important individual business plans and investments, etc. This approach facilitates timely decision making and flexible business execution while also enabling the Board of Directors to focus on the oversight of those in charge of business execution.

### Number of directors

Total	11
Executive directors	3
Non-executive directors	8
Independent directors	5
Female directors	1
Non-Japanese directors	1

### Separation of role of Chairman and CEO

Separate

**Functions and committees** (Note)

<b>Audit</b>	<b>Name</b>	Audit and Supervisory Committee
	<b>Members</b>	Audit and Supervisory Committee members (five)
	<b>Number of meetings</b>	17 (FY2018)
<b>Selection and nomination</b>	<b>Name</b>	Nomination and Remuneration Meetings
	<b>Members</b>	Outside directors (five ), Chairman of the Board, and the President and CEO
	<b>Number of meetings</b>	8 (FY2018)
<b>Others-related to governance</b>	<b>Name</b>	Outside Directors' Meetings
	<b>Members</b>	Outside directors (five) + management personnel (as necessary)
	<b>Number of meetings</b>	2 (FY2018)
<b>CSR</b>	<b>Name</b>	CSR Committee
	<b>Members</b>	Chaired by the CoCSO (the executive officer in charge of CSR), the general counsel (GC, director) CFO (director), CTO, and the officer in charge of human resources (HR), and the head of the Business Strategy Office.
	<b>Number of meetings</b>	2 (FY2018)
<b>Compliance</b>	<b>Name</b>	Compliance Committee
	<b>Members</b>	Chaired by the Executive Vice President, GC, and composed of 24 members.
	<b>Number of meetings</b>	2 (FY2018)
<b>Human Rights</b>	<b>Name</b>	Committee for Raising Awareness of Human Rights
	<b>Members</b>	Chaired by the Senior Vice President, who is in charge of HR, and composed of 25 members.
	<b>Number of meetings</b>	As many as necessary
<b>Environment</b>	<b>Name</b>	MHI Group Environment Committee
	<b>Members</b>	Chaired by Senior Executive Vice President, CTO and composed of 10 members.
	<b>Number of meetings</b>	1 (FY2018)
<b>Others-related to governance</b>	<b>Name</b>	International Trade Control Committee
	<b>Members</b>	Chaired by the Executive Vice President, GC, and composed of 13 members.
	<b>Number of meetings</b>	2 (FY2018)

(Note) The number of meetings held is the number within the target fiscal year. Committee members are to issue the report.



## Effectiveness of the Board of Directors

Board meeting attendance		Unit	
	Average	%	97 (FY2018)
	The minimum attendance	%	93 (FY2018)

Rate of Attendance at Board of Directors Meetings by Directors	Name	Position (as of March 31, 2019)	Board meeting attendance (for the year ended March 31, 2019)
	Hideaki Omiya	Chairman of the Board	100%
	Shunichi Miyanaga	President and CEO	100%
	Masanori Koguchi	Director, Senior Executive Vice President, CFO	100%
	Seiji Izumisawa	Director, Executive Vice President	100%
	Naoyuki Shinohara	Outside Director	100%
	Ken Kobayashi	Outside Director	93%
	Toshifumi Goto	Director, Full-time Audit and Supervisory Committee Member	100%
	Hiroki Kato	Director, Full-time Audit and Supervisory Committee Member	100%
	Nobuo Kuroyanagi	Outside Director, Audit and Supervisory Committee Member	100%
	Christina Ahmadjian	Outside Director, Audit and Supervisory Committee Member	93%
	Shinichiro Ito	Outside Director, Audit and Supervisory Committee Member	100%

Directors' terms of office		Unit	
		year	1 (2 for Audit and Supervisory Committee members)
	Average	year	3 (As of October 2019)

Standards related to restrictions on number of concurrent positions	
	Around three for inside directors

### Board evaluation results

MHI has been engaged in multiple measures for enhancement of corporate governance. Taking advantage of the enactment of the Corporate Governance Code, we have introduced an annual evaluation of the Board of Directors (MHI Corporate Governance Guideline, Article 32) aiming at ensuring further effectiveness of the Board of Directors by verifying its functional efficiency as an entity and being fully accountable for stakeholders, by conducting holistic analysis and evaluation of the Board.

In fiscal 2018, continuing from the previous fiscal year's analysis and evaluation, we, using the process below, conducted analysis and evaluation from five main perspectives. These were composition of the Board of Directors, operation of the Board of Directors, deliberations of the Board of Directors, a structure to support outside directors, and paving the way for better corporate governance.

- Self-evaluation questionnaire completed by all directors (including outside directors).
- Meetings carried out exclusively with outside directors.
- Discussing results of the self-evaluation at the Board meeting.
- Results of the evaluation are reported and resolved at the Board meeting based on the self-evaluation and discussions.

Through the processes mentioned above, the overall effectiveness of the Board of Directors in 2017 has been ensured with no major concerns.

The status of activity concerning the issues recognized in the Board evaluation conducted in the previous year (FY2017), as well as major issues recognized this time, and future responses are as follows.

#### 1. Initiatives to address issues recognized in the previous year

##### (1) Reconsideration of governance systems (including the Nomination and Remuneration Meeting)

We converted the Nomination and Remuneration Meeting into an advisory body to the Board of Directors to improve the objectivity and transparency of its processes, based on the revised Corporate Governance Code.

##### (2) Enhancing deliberations at the Board of Directors

We will further enhance deliberations at the Board of Directors by clarifying points of discussion in materials used by the Board of Directors, providing these materials to directors in advance, and making explanations to the Board members in a simple and clear manner.

##### (3) Increasing opportunities for outside directors to gather information

We will hold meetings between outside directors and executive officers in each department to increase opportunities for outside directors to gather information and deepen their understanding of the Company.

#### 2. Issues recognized this time and future initiatives

##### (1) Deliberations on the future of MHI Group

Separate from the usual matters for deliberation and reporting at the Board of Directors, we will create opportunities for deliberations with outside directors on topics including the medium- to long-term direction of the Group and its vision.

##### (2) Enhancing reports on business conditions at the Board of Directors

With regard to reports on business conditions for each domain, which are conducted annually, reporting will be devised with a focus on the key measures and priority issues for the relevant division, not only on the general conditions of each division.

##### (3) Increasing opportunities for outside directors to gather information

We will continue to conduct initiatives such as lectures for outside directors on specific themes and meetings between outside directors and each division, while attempting to make improvements that take into account the opinions and requests of outside directors.

##### (4) Management of the Board of Directors to improve its oversight function

To improve deliberations at the Board of Directors, we will continue to make efforts in areas such as preparing materials that clarify the focus of deliberations and explanations that concentrate on key points.

## Remuneration of directors

### Remuneration of Directors (Excluding Audit and Supervisory Committee Members and outside directors)

- The remuneration of directors (excluding Audit and Supervisory Committee Members and outside directors) consists of base remuneration, performance-linked remuneration, and stock remuneration from the viewpoint of reflecting business performance and sharing interests with shareholders.
- Performance-linked remuneration is determined based on consolidated earnings while also taking into account the roles of each director and the business performance and accomplishments of the business of which he or she is in charge, etc.
- For stock remuneration, the Board Incentive Plan Trust structure is used. MHI shares are issued, and remuneration is paid based on stock award points that are granted in accordance with the individual role of each director and the Company's business performance, etc.
- After revising the share remuneration system through a resolution passed at the 94th General Meeting of Shareholders, which was held on June 27, 2019, the standard for the remuneration of the Company's president was set at roughly 30% base remuneration, 40% performance-linked remuneration, and 30% stock remuneration (in the event that profit before income taxes reached ¥200.0 billion; calculated based on the fair value of stock award points granted during fiscal 2018), making for a remuneration structure in which the higher a director's rank is, the greater his or her performance-linked remuneration will be. Also, the Company has established profit before income taxes as the core indicator for determining performance-linked remuneration and stock remuneration in order to reflect the results of the Company's business activities, including financial income and expenses, in these remunerations. In fiscal 2018, the Company's profit before income taxes totaled ¥182.6 billion, which more than cleared its target (initial forecast) of ¥170.0 billion, which was set at the start of fiscal 2018.

**Outside directors**

The Company expects that the outside directors offer their objective opinions and guidance, primarily on their vision for the Company over the medium to long term, from an independent standpoint. Accordingly, the outside directors are only paid a base remuneration, which is set at an appropriate amount.

**Directors Who Serve as Audit and Supervisory Committee Members**

Directors who serve as Audit and Supervisory Committee members are only paid a base remuneration. The amount for this base remuneration is determined in consideration of each member's roles and responsibilities and based on whether he or she is a full-time or part-time member. However, the base remuneration for full-time Audit and Supervisory Committee members can be reduced in consideration of the status of the Company's management and other factors.

Remuneration <sup>(Note)</sup>	Position	Number	Unit	Total	Base remuneration	Performance-linked remuneration	Stock remuneration
Directors who are not serving as Audit and Supervisory Committee members (excluding outside directors)		5	Millions of yen	510	230	187	93
Directors who are serving as Audit and Supervisory Committee members (excluding outside directors)		3	Millions of yen	130	130	-	-
	Outside directors	5	Millions of yen	85	85	-	-

(Note) Table above includes one director who was not an Audit and Supervisory Committee member retired and one director who was an Audit and Supervisory Committee member who stepped down this fiscal year.

**Measurement metrics for variable remuneration**

Internal Financial Success Metrics

The remuneration is determined based on the business performance of which he/she is in charge.

External Financial Success Metrics

The remuneration is determined based on the consolidated earnings of the Company.

**Variable remuneration linked to long-term performance**

Ratio

18.8%  
Stock remuneration

Individual remuneration <sup>(Note)</sup>	Name	Position	Unit	Total	Base remuneration	Performance-linked remuneration	Stock options
	Hideaki Omiya	Director	Millions of yen	154	68	57	29
	Shunichi Miyanaga	Director	Millions of yen	154	68	57	29
	Masanori Koguchi	Director	Millions of yen	111	51	40	20

(Note) Officers receiving more than 100 million yen in total sum

**Average salary of all employees and CEO remuneration**

	Unit	
CEO remuneration	Millions of yen	154
Mean employee salary	Millions of yen	8.5
Ratio	time	18.1

## Effectiveness of the Audit and Supervisory Committee

### ■ Duties, etc.

The Audit and Supervisory Committee monitors and verifies various aspects of the Company's operations, including the execution of duties of directors, the appropriateness of business report, etc., adequacy of audits by the accounting auditor, and the effectiveness of internal control systems. The results of this monitoring and verification are provided to the Company's shareholders via audit reports. In addition, the Audit and Supervisory Committee decides on opinions pertaining to the selection of and remuneration for directors who are not Audit and Supervisory Committee members. The committee is also responsible for determining the details of agenda items related to the appointment of accounting auditors, among other duties. Moreover, distinct from directors who are not Audit and Supervisory Committee members, directors who are Audit and Supervisory Committee members are appointed at the General Meeting of Shareholders. Each director has a duty of due care, based on their contract of service with the Company.

### ■ Composition, etc.

The Audit and Supervisory Committee comprises five directors, the majority of whom (three) are outside directors. In addition, to ensure the effectiveness of the Audit and Supervisory Committee's activities, two full-time members of the Audit and Supervisory Committee are mutually selected by the committee's members. One of these full-time members has extensive work experience in accounting and financial divisions, giving him a considerable amount of insight on financial and accounting affairs.

The Audit and Supervisory Committee fully utilizes the results of comprehensive and regular audits implemented by the Management Audit Department. Full-time Audit and Supervisory Committee members confirm the formulation and progress of audit plans by the Management Audit Department in a timely manner, are present at audits by the Management Audit Department as necessary, and receive reports of audit results. In addition, full-time Audit and Supervisory Committee members receive reports from the Management Audit Department at each stage on the occurrence of, response to, and countermeasures against misconduct, and confirm that the appropriate response is being provided. For these reasons, we hold meetings to exchange information between full-time Audit and Supervisory Committee members and the Management Audit Department on a monthly basis while the Management Audit Department holds meetings to report the results of audits to full-time Audit and Supervisory Committee members on an as-needed basis.

Moreover, Audit and Supervisory Committee members and the accounting auditor regularly exchange opinions on audit plans by the accounting auditor and audit results while full-time Audit and Supervisory Committee members and the accounting auditor hold meetings to exchange information on a monthly basis. In these ways, we are facilitating close communication between the Audit and Supervisory Committee and the accounting auditor. Furthermore, full-time Audit and Supervisory Committee members regularly hold meetings to exchange information that are attended by the full-time statutory auditors of Group companies, at which the full-time Audit and Supervisory Committee members confirm the status of the establishment and operation of the internal controls of major subsidiaries.

To support auditing activities, the Audit and Supervisory Committee's Office has been set up with its own dedicated staff of six to facilitate the work carried out by the Audit and Supervisory Committee.

### ■ Auditing Activities

Directors who are Audit and Supervisory Committee members attend meetings of the Board of Directors as directors, and full-time Audit and Supervisory Committee members attend important meetings such as those of the Executive Committee and those related to business planning in an effort to understand and monitor the status of management execution in a timely and accurate manner while conducting audits to ascertain whether the duties of the Directors are being executed in compliance with laws and ordinances and the Articles of Incorporation, in addition to whether corporate operations are being performed properly. The audits are conducted through the inspection and confirmation of compliance status and the monitoring and verification of the status of the establishment and operation of internal control systems, including those related to financial reporting. Additionally, through the monitoring and verification of the directors' execution of duties throughout the fiscal year, the Audit and Supervisory Committee forms its audit opinion on the appropriateness of the Accounting Auditor's auditing methods and results pertaining to whether or not the financial statements in a given fiscal year present fairly the financial position and results of the Company.

In fiscal 2018, the Audit and Supervisory Committee discussed the progress of business plans and risk status centered on the overall outlook of the Company, with a focus on the status of the establishment of internal control systems across the entire Group and the monitoring and surveys of important individual projects.

### ■ Results of Initiatives Implemented in Fiscal 2018

Pertaining to activities in fiscal 2018, the Audit and Supervisory Committee prepared an Audit Report giving its opinion that the Business Report and other reports fairly represent the conditions of the Company in accordance with laws and ordinances and the Articles of Incorporation; that it found no misconduct or significant facts in violation of laws and ordinances or Articles of Incorporation in the execution of duties by directors; that the

content of the Board of Directors' resolutions on internal control systems is appropriate; that it found no matters warranting comment regarding the contents of the Business Report and directors' execution of their duties related to internal control systems, including internal control systems related to financial reporting; and that the Accounting Auditor's auditing methods and results are appropriate.

The Audit and Supervisory Committee reported on the contents of the Audit Report to shareholders at the General Meeting of Shareholders, which was held on June 27, 2019, and commented on the appointment and remuneration of directors who are not members of the Audit and Supervisory Committee.

Furthermore, the Audit and Supervisory Committee assessed the Accounting Auditor on ensuring a system for the proper execution of duties (matters specified in the items under Article 131 of the Company Accounting Ordinance), independence, appropriateness of audits, auditing ability and expertise for responding to the diversity and internationality of operations, and appropriateness of remuneration. The Committee also resolved to reappoint KPMG AZUSA LLC as the Accounting Auditor for fiscal 2019.

### Effectiveness of the Audit and Supervisory Committee members

Audit and Supervisory Committee attendance	Unit	
Average	%	97.6 (FY2018)
The minimum attendance	%	94.1 (FY2018)

Rate of Attendance at Audit and Supervisory Committee by Audit and Supervisory Committee members	Position (as of March 31, 2019)	Audit and Supervisory Committee attendance (for the year ended March 31, 2019)
Toshifumi Goto	Director, Full-time Audit and Supervisory Committee Member	100%
Hiroki Kato	Director, Full-time Audit and Supervisory Committee Member	100%
Nobuo Kuroyanagi	Outside Director, Audit and Supervisory Committee Member	100%
Christina Ahmadjian	Outside Director, Audit and Supervisory Committee Member	94.1%
Shinichiro Ito	Outside Director, Audit and Supervisory Committee Member	94.1%

(Note) As at December 2019, Hiroki Kato, Toshifumi Goto, Christina Ahmadjian, Hiroo Unoura, and Nobuyuki Hirano serve as Audit and Supervisory Committee members by resolution of the 94th General Meeting of Shareholders, held on June 27, 2019.

### Ensuring the Reliability of Our Financial Statements and Independence of Accounting Auditor (FY 2018)

1. Remuneration for KPMG AZUSA LLC, the Company's Accounting Auditor, was as follows.
  - (1) Amount of remuneration for audit services  
618 million yen (the Company: 320 million yen, consolidated subsidiaries: 298 million yen)
  - (2) Amount of remuneration for non-audit services <sup>(Note 1)</sup>  
165 million yen (the Company: 133 million yen, consolidated subsidiaries: 32 million yen)
2. Remuneration for KPMG AZUSA LLC, the Company's Accounting Auditor, was as follows. (Excluding the contents of 1)
  - (1) Amount of remuneration for audit services  
618 million yen (the Company: 320 million yen, consolidated subsidiaries: 298 million yen)
  - (2) Amount of remuneration for non-audit services <sup>(Note 2)</sup>  
165 million yen (the Company: 133 million yen, consolidated subsidiaries: 32 million yen)

(Note 1) The amount of remuneration for non-audit services is in respect of advisory and other services related to examining the application of International Financial Reporting Standards by the Company as well as such services as new business promotion and preliminary investigation of new business establishment at consolidated subsidiaries.

(Note 2) Remuneration for non-audit work of consolidated subsidiaries pertains to advisory and other services in regards to transfer pricing.

Commitment to initiatives

Commitment to initiatives

- UN Global Compact (UNGC)
- Global Reporting Initiative (GRI)
- Task Force on Climate-related Financial Disclosures (TCFD)
- World Business Council for Sustainable Development (WBCSD)

WE SUPPORT



## ► Risk Management

### Enhancement of business risk management

Throughout its history, MHI Group has achieved sustained growth by taking up diverse new challenges and initiatives in numerous business areas. At the same time, on occasion we have experienced losses on a large scale. In recent years especially, with the globalization of its business activities, the expanding scale of individual projects, and ongoing development of increasingly complex technologies, the scale of attendant risks is becoming larger than ever before.

In order for MHI Group to mark sustained growth amid an ever-changing business environment, it is necessary to continue to take up challenges in new fields, new technologies, new regions, and new customers as well as to improve and strengthen operations in its existing business markets. Such challenges will entail business risks, and a company’s ability to curb risks wields significant influence on its business results and growth potentials.

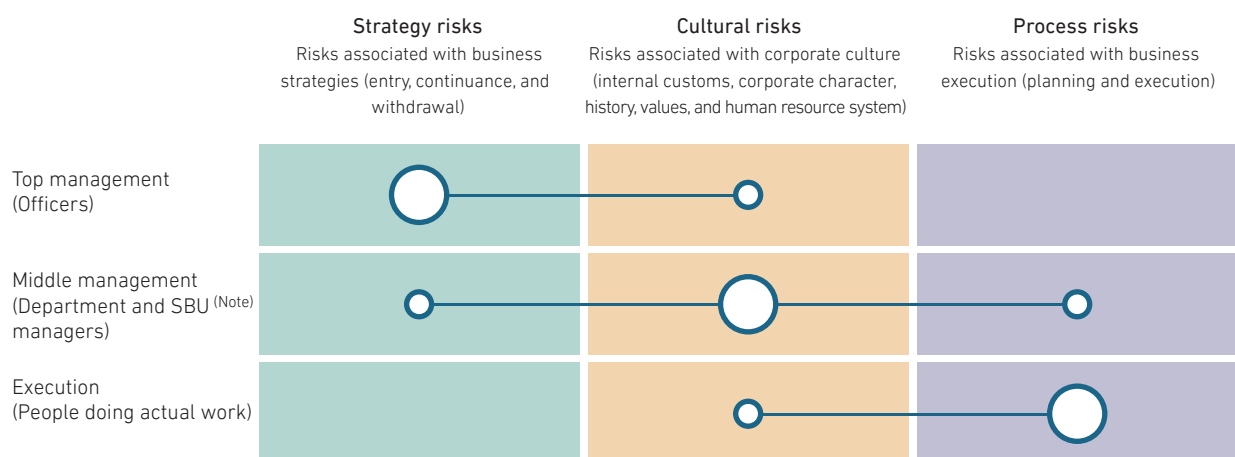
To promote challenges of this kind and prepare for the next leap into the future, MHI Group, applying its past experience and lessons learned, aims to create the mechanisms that will ensure the effective execution of business risk management. At the same time, we reinforce advanced, intelligent systems and process monitoring, both of which support top management’s strategy decisions. Through these approaches, we will pursue “controlled risk-taking” that will enable us to carry out carefully planned challenges toward expanding our business.

### Outline of Business Risk Management

No corporation can avoid taking risks. We believe that risk management is a part of governance and functions only when the elements of systems and processes, corporate culture, and human resources are in place. For our Group to succeed in the global market, we need to take bold and daring risks, but we also need to manage those risks. That is the perfect combination for continually increasing our corporate value.

In this sense, it is very important that all business participants, from people engaged in the actual business to management, comprehend and control risks in business, from processes to strategies. For details, please see the chart below (Matrix of Business Risk Management).

### ■ Matrix of Business Risk Management



(Note) SBU: Strategic Business Unit

**Business Risk Management Structure**

Through the following measures, MHI Group is pursuing more organized business risk management and clarifying the roles of management, business segments, and corporate departments.

1

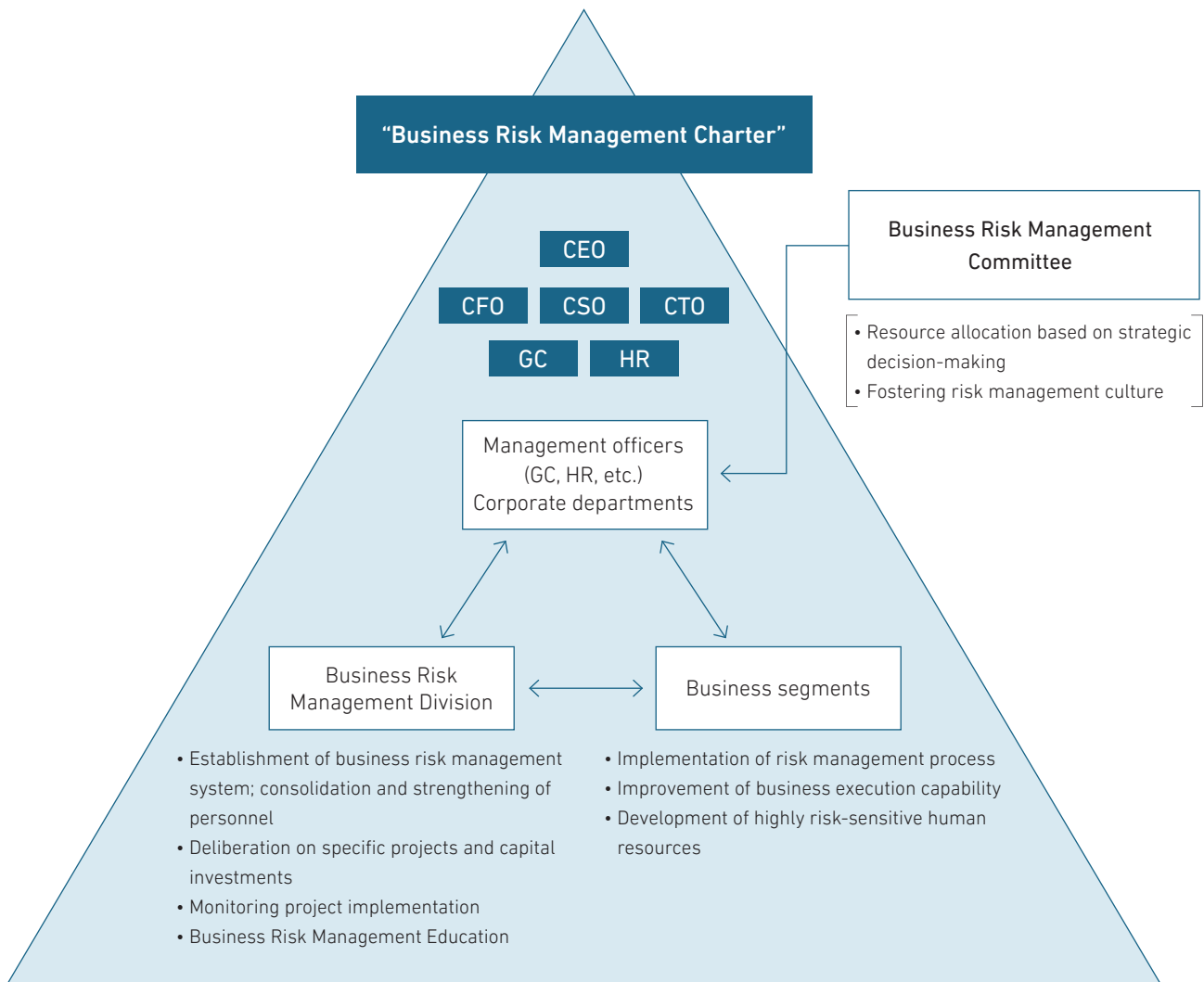
**Observe and practice the Business Risk Management Charter as the Company's foremost set of rules**

→Clarify, observe, and practice risk management targets, etc.

2

**Hold meetings of the Business Risk Management Committee**

→Share information on important risks and discuss policy response by top-level management



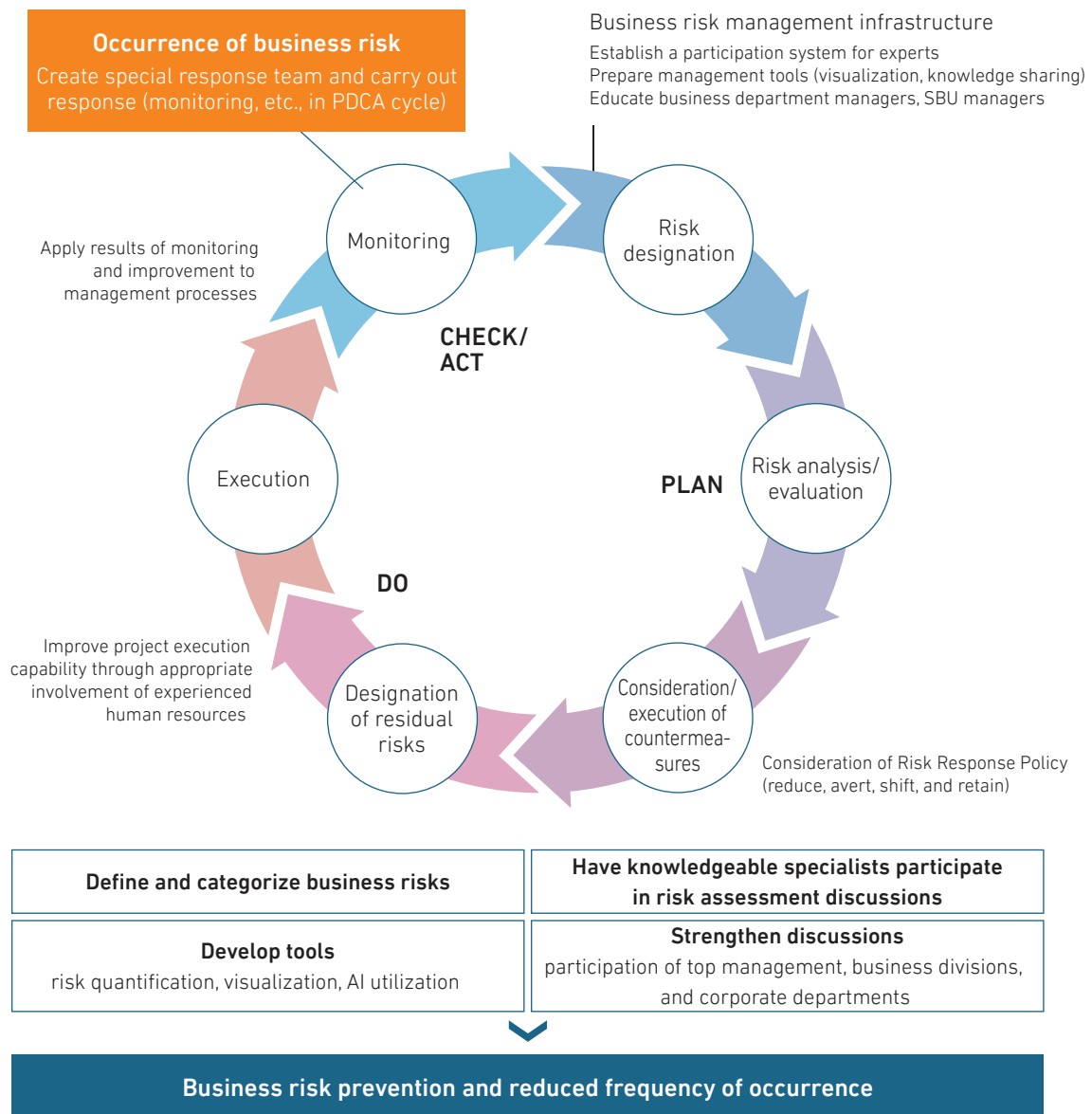


**Content of Activities**

With the Business Risk Management Department acting since April 2016 as the responsible department, MHI Group engages in business risk management activities bringing together management, business segments, and corporate departments. The chart below (Business Risk Management Process) outlines specific activities. In addition to improving systems and processes to prevent business risks and reduce the frequency with which such risks manifest themselves, we also develop human resources in charge of business risk management and cultivate a culture of responding to risks through such efforts as providing training with the involvement of the Group’s management team and including special features on business risk management in the company newsletter (April 2018).

■ Business Risk Management Process <sup>(Note)</sup>

**Business Risk Management Process**



(Note) Refer to ISO 31000

## ► Compliance

MHI Group attaches importance to complying with applicable laws and social norms, and promoting fair and honest business practices. The Compliance Committee, established in May 2001, meets biannually to draw up Groupwide compliance promotion plans, confirm progress of previously made plans, and engage in other activities.

Since 2003, to increase awareness of compliance among individual employees, we have conducted discussion-based compliance training every year at the workplace level, themed on compliance cases that could arise on-site. MHI Group has also set up whistleblowing hotlines in Japan and overseas in an effort to swiftly respond to various compliance-related risks, including compliance violations or actions that run the risk of becoming compliance violations.

In May 2015, we issued the MHI Group Global Code of Conduct. As a global group, MHI Group employs thousands of individuals from different backgrounds, nationalities, and cultures. This diversity of talent and perspectives is one of our greatest assets. With recognizing the diverse backgrounds of our employees, it is important to work together and to promote our business under a common corporate culture.

This Code of Conduct sets out the basic principles and policies that all MHI employees should follow. We disseminate this Code of Conduct among the MHI Group employees around the world through e-learning and by distributing booklets.

In September 2017, we formulated “Compliance Promotion Global Policy”, clarifying basic matters and rules related to compliance promotion, such as the organizational framework, roles, and administration standards that each Group company should follow. Along with the MHI Group Global Code of Conduct, by clarifying our common code of conduct and basic rules that must be complied with throughout the Group, we are working to strengthen internal controls and enhance the level of compliance throughout the entire Group.

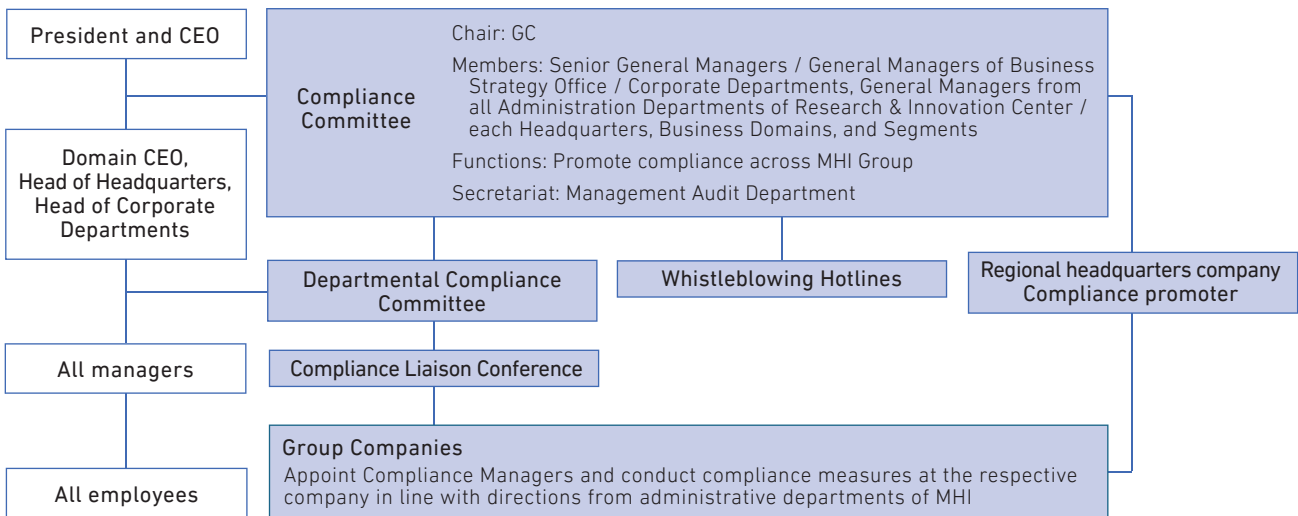
The MHI Board of Directors is keeping grasp of important compliance-related cases of the Group, including status of compliance with the MHI Group Global Code of Conduct, by confirming the status on compliance promotion, compliance risks management, and the occurrence of compliance-related incidents by being reported of the operation on internal control systems as well as the execution of roles and duties of the General Counsel.

In addition, and in order to keep raising awareness of compliance, we are conducting e-learning and training programs for Group employees in Japan and overseas on anti-trust laws, anti-bribery, and export-related laws and regulations. Furthermore, we have created a compliance guidebook for employees engaging in technical and skilled jobs at MHI and Group companies in Japan, and we are promoting face-to-face training at each worksite.

With an even greater focus on ensuring compliance in regions outside of Japan, MHI Group appointed Regional Audit & Compliance Officers (RAO) in each of the four regions of the Americas, Europe, Asia Pacific, and China, to promote the Compliance activities for the MHI Group in the relevant region, as well as carry out internal audit functions. Through compliance liaison conferences and compliance monitoring, which are organized mainly by the RAO, in each country and region, we are making efforts to reinforce compliance promotion at Group companies outside of Japan.

(Reference) MHI Group Global Code of Conduct      <https://www.mhi.com/company/aboutmhi/policy/conduct.html>

Compliance Promotion System (as of April 1, 2019)



Number of participants in compliance training (e-learning)

FY2018 Approximately **90,300**

Pick Up

**Firm response to unjust demands made by any organization, group or individual engaged in unlawful activities**

MHI will at all times respond firmly to and will not have any relationship with any organization, group or individual, including, but not limited to, crime syndicates, gangs, mafias, terrorists, drug dealers or other criminal organizations that are engaged in unlawful activities or would damage the Company's reputation in accordance with the MHI Group Code of Conduct.

MHI has established departments to take measures in the event that unjust demands are made by such elements. The departments work together with related divisions or group companies to deal comprehensively with any incident that arises. In addition, MHI has issued alerts to relevant divisions and group companies and conducted compliance training, to thoroughly make all employees understand the essentials of how to be prepared for and respond to any unjust demand made of them. To gain advice and support for dealing with such demands, the Company also works proactively to build close cooperative relationships with police, attorney-at-law, and organizations specialized in such matters.

As ordinances to eliminate organized crime groups were enacted by all prefectures in Japan since 2011, MHI Group has added clauses to its contracts with clients and business partners accordingly and further step up efforts to eliminate such elements.

Performance Data

Compliance

Compliance structure

Chief executive

Masahiko Mishima (Executive Vice President, GC)

Responsible institution or committee	Name	Compliance Committee
	Members	Chaired by the Executive Vice President, General Council, and composed of 24 members.
	Number of meetings	2 (FY2018)

**Whistle-blowing system**

We have whistleblowing hotline, which is available to all employees, including those of Group companies, and whistleblowing hotline, which is overseen by external lawyers. In addition to Group employees, any related external parties, including business partners, can utilize these hotlines to report concerns on compliance-related issues, including corruption, (such as bribery) and harassment. Information on how to report can be found on the MHI Group Portal and other sources. We also have systems which accept reports in the languages spoken at our major business locations, including English, Chinese, and Thai. The Compliance Committee Secretariat promptly investigates and responds appropriately to all reports made to these hotlines. Information on how to report is contained in the MHI Group Portal accessible by all employees and in bulletins published in-house.

With the operation of the hotlines, protection of the rights afforded to informants, including confidentiality, were set out in the 2007 Company regulations entitled Compliance Promotion Regulations. These regulations state that the whistleblower's name will not be released without his/her consent, and that the whistleblower will not be placed at any disadvantage because of the information he/she has reported.

In conjunction with making employees aware of the existence of the hotline, we have established regulations for the protection of whistleblowers, including their anonymity. We also make employees aware of these regulations and thoroughly enforce them.

**Compliance situation**

Training	2014	2015	2016	2017	2018	Coverage
Number of attendees	82,292	75,303	93,353	84,300	90,300	Group

Number of whistle-blowing reports	2014	2015	2016	2017	2018	Coverage
	185	131	118	113	142	Group

**Compliance awareness survey**

Since fiscal 2004, MHI has been conducting a yearly compliance awareness survey. Since fiscal 2013, MHI had expanded this survey to all employees of the Group, in combination with its e-learning compliance training. In fiscal 2015, we checked the degree of recognition and awareness of the MHI Group Global Code of Conduct, formulated that year, which has led to greater awareness of compliance among employees and consideration of measures to ensure thorough compliance promotion. Through these surveys, we are able to check the efficacy of existing measures while keeping our compliance efforts consistent and thorough.

**Reporting on breaches**

There were 66 compliance violations among the compliance whistleblowing reports, including on corruption (such as bribery), in fiscal 2018. Among them, we took corrective action on 65 cases.

There was no significant breach last year, with no related fines or penalties as a result.

## Anti-corruption

### Anti-corruption Policy

MHI maintains a policy prohibiting conduct that leads to any form of corruption, and as a signatory company of the UN Global Compact since 2004, we have worked to disseminate and practice the ten principles contained within the four domains of the Compact, including anti-corruption. MHI strives for fairness in its global commercial transactions by strictly complying with the anti-bribery laws of all countries, including Japan's Unfair Competition Prevention Act which prohibits the giving of illicit benefits to foreign public officials. In 2005, MHI established the Guidelines for the Prevention of Bribery Involving Foreign Civil Servants to define rules of conduct based on the Unfair Competition Prevention Act. In addition, we issued the Anti-Bribery Rules and Anti-Bribery Procedural Guidelines based on these guidelines in February 2012 in order to respond to the enactment of the British Bribery Act 2010 of July 2011 and strengthened regulations in various countries. MHI also set forth screening procedures for engaging with trading companies and distributors. Furthermore, through the MHI Group Global Code of Conduct, established in May 2015, we are thoroughly engaged in preventing bribery toward all Group directors and employees. In September 2016, we also issued the Guidance for the Prevention of Bribery of Foreign Public Officials, an interpretation of related legislation and internal rules, and we strive to comply with the rules and the Global Code of Conduct. A global policy, formulated in September 2017, stipulates MHI Group companies to monitor whether measures to prevent bribery are being appropriately managed and deal with if needed. Moreover, to evaluate and improve the MHI Group's system for preventing bribery, we appointed an expert and carried out a bribery risk assessment in 2017. Based on that assessment, we revised our rules on preventing bribery. Moreover, in 2019 we conducted audits in Asia and other regions to ascertain the status of fraud risk management at high-risk project sites. We are establishing an effective system through measures such as reporting major compliance violations to the Board of Directors.

### Coverage

(Reference)

MHI Group  
MHI Group Global Code of Conduct <https://www.mhi.com/company/aboutmhi/policy/conduct.html>

### Total Donations and Contributions (fiscal 2018)

Amount	Recipient
Political contributions: ¥33 million	Donate to: The People's Political Association

### Employee training

Since fiscal 2014, we have promoted anti-bribery education across MHI and Group companies in Japan and overseas. Since fiscal 2015, we have conducted training to make every employee in MHI Group worldwide aware of the MHI Group Global Code of Conduct, which includes prohibition of bribery. Since fiscal 2014, MHI and its Group companies worldwide have steadily conducted e-learning education to prevent bribery, mainly for manager-level employees. Approximately 18,600 employees in total have taken these courses so far. In 2018, we conducted face-to-face training on bribery prevention in six locations nationwide, and around 967 people have taken this training so far.

## Anti-trust

### Anti-trust policy

MHI has worked to prevent the violation of anti-trust laws through messages from top management and through the use of rules and manuals such as the Code of Conduct Pertaining to Communication/Contact with Competitors. In May 2015, we published the MHI Group Global Code of Conduct and thoroughly ensured that all executive officers and employees throughout MHI Group are aware that anti-competitive conduct is strictly forbidden.

<b>Coverage</b>	MHI Group
<b>(Reference)</b>	MHI Group Global Code of Conduct <a href="https://www.mhi.com/company/aboutmhi/policy/conduct.html">https://www.mhi.com/company/aboutmhi/policy/conduct.html</a>
<b>Employee training</b>	<p>MHI entered into a plea agreement with the U.S. Department of Justice concerning the U.S. anti-trust laws in 2013, in connection with the sales of compressors and condensers for automotive air-conditioning systems. In response to this, we have continued every effort to raise compliance awareness and to prevent its recurrence. Specifically, in order to ensure thorough compliance throughout the whole MHI Group, we have reinforced compliance training by various means including educational videos, lectures by lawyers, and e-learning programs.</p> <p>In addition, since fiscal 2015 we have conducted training to make every employee in the MHI Group worldwide aware of the MHI Group Global Code of Conduct, which includes compliance with competition laws.</p> <p>Since fiscal 2014, MHI and its Group companies worldwide have steadily conducted e-learning education to comply with anti-trust laws, mainly for manager-level employees. Approximately 16,600 employees in total have taken these e-learning courses so far. In 2018, we conducted face-to-face training on compliance with anti-trust law in six locations nationwide, and around 1,080 people have taken this training so far.</p>

### Security Export Control

<b>Export Control Policy</b>	<p>From the perspective of maintaining international peace and safety, the export and transfer of products, services, technologies or information that could be used in the development or manufacture of weapons of mass destruction or conventional weapons are managed under an international security trade control framework.</p> <p>MHI Group also strives to conduct thorough monitoring by performing assessments and transaction screenings, including confirmation of the country or region of destination, use, and customer when exporting commodities or providing technologies overseas and acquiring the necessary export licenses and permissions prior to export.</p> <p>Through the MHI Group Global Code of Conduct, established in May 2015, we have conducted awareness training of export control to all MHI Group executives and employees. Furthermore, through the Global Policy on Export-Related Laws and Regulations Compliance, released in October 2017, we have set fundamental standards and rules in connection with the proper implementation of Export Controls that each Group company is expected to follow.</p>
<b>Coverage</b>	MHI Group
<b>(Reference)</b>	MHI Group Global Code of Conduct <a href="https://www.mhi.com/company/aboutmhi/policy/conduct.html">https://www.mhi.com/company/aboutmhi/policy/conduct.html</a>
<b>Employee training</b>	<p>We are making steady progress in providing education, including face-to-face education and e-learning, focused on export controls throughout the whole MHI Group. We have conducted e-learning on export control for MHI and Group companies in Japan since fiscal 2007, and a total of 38,000 people have taken these courses to date. Since fiscal 2016, we have been conducting e-learning on export control for people at overseas Group companies at the management level, and 5,400 people have completed these classes so far. Furthermore, since fiscal 2015 we have made steady progress in providing education for all employees of MHI and its Group companies in Japan and overseas to further familiarize themselves with the MHI Group Global Code of Conduct, including export control.</p>

## ► Product Stewardship

It goes without saying that, as a global and highly diversified manufacturer, the MHI Group's top priority is to ensure the safety and quality of its products. We have formulated a quality management system (QMS) for individual businesses and products based on ISO 9001<sup>(Note)</sup> and other official standards and obtain third-party assurance on an individual basis. As awareness efforts related to safety and quality, we work to educate employees about safety and quality to prevent product accidents. One example of this is the establishment of the Accident Exhibit and Materials Room based on past accidents.

(Note) Includes quality management systems (such as JISQ9100) that are specifically designed for aerospace products

Total number of product safety and quality trainees

2018 Total Approximately **16,000**

### Pick Up

#### Quality and safety programs for key products

##### Nuclear Safety Steering Committee continues to establish nuclear safety

In December 2004, we established the Managing Board for Innovation in the Nuclear Business in light of a secondary piping damage accident in August 2004 at the Mihama Nuclear Power Station Unit 3, which was built by MHI and operated by Kansai Electric Power. In January 2013, the name of the board was changed to Nuclear Safety Steering Committee to share and decide the issues and courses of action related to MHI's nuclear business, as well as to internally reform and expand the nuclear quality assurance management system. The committee has been conducting these activities under the guidance of a steering committee whose mission is to manage activities that help ensure nuclear safety.

In fiscal 2018, the Nuclear Safety Steering Committee reported and deliberated on initiatives designed to prevent the recurrence of accidents and the memory of such accidents from fading and initiatives to enhance the safety of nuclear power plants. These efforts included initiatives to improve safety and reliability through the promotion of comprehensive conservation measures for existing PWR plants and initiatives for the management of pipe thinning based on information sharing with power companies in secondary construction work and for pre-empting trouble.

##### Measures for enhancing PWR power plant safety

MHI set up an emergency task force immediately after the Great East Japan Earthquake. After the Advanced Station Safety Department was established in August 2011, the task force was transferred to this department and developed countermeasures against the blackout that occurred at the Fukushima Daiichi Nuclear Power Plant. The task force has been reflecting these countermeasures at PWR power plants built by MHI in Japan. Furthermore, the new safety criteria that was developed by the Nuclear Regulation Authority (NRA: established in September 2012) went into effect in July 2013, and in August 2015, PWR power plants that have satisfied the new safety criteria resumed operations.

Currently, safety inspections are underway at other PWR power plants geared toward restarting their operations and sequentially these plants have been restarting. MHI is providing technical support to power companies to restart operations at these domestic PWR power plants at the soonest date possible. MHI has been supporting power companies to implement medium- and long-term countermeasures, such as equipment for dealing with specific major accidents, etc. MHI continues to contribute to the improvement of the safety and reliability of nuclear power plants and to the establishment of a stable power supply.

**Shipbuilding: enhancing QMS activities to prevent product accidents**

Mitsubishi Shipbuilding Co., Ltd. (MHIMSB), and Mitsubishi Heavy Industries Marine Structure Co., Ltd. (MHIMST), which are involved in the commercial ships business & marine structure business, are engaged in the manufacturing and engineering business for a wide range of ships and marine products in the Yokohama, Shimonoseki, and Nagasaki regions. The companies strive to adopt the same quality indicators, non-conformity management systems, safety and quality education programs, and internal audits in all regions, and are working with each region to improve work processes and quality management framework to realize a more advanced QMS and cultivate an attitude focused on safety and quality. In our commercial ships business & marine structure business, MHIMSB and MHIMST work to deliver products and services that meet customers' expectations through ISO 9001 external audits for QMS activities.

**Aircraft: Raising awareness for aircraft safety through education and training, and promoting of QMS-related activities**

In the aircraft manufacture business, based on the Aircraft Safety Policy, assurance of aircraft safety is our top priority. All employees engaged the aircraft manufacturing operation and management understand the gravity of aviation accidents. Accordingly, as part of our educational activities aimed at ensuring thorough awareness of aircraft safety, we are implementing various training programs for relevant employees, primarily in management positions. These include training where employees learn through educational tours of the Japan Airlines Safety Promotion Center and climbing the Osutaka Ridge to pay respects to those who died in the Japan Airlines Flight 123 accident in 1985; workshops that communicate the lessons learned from an emergency landing accident involving an MH2000 helicopter and an accident where a F-2 jet fighter crashed and burst into flames (instructions on new work procedures / application of independent verification programs) in 2000 and 2007 respectively; initiatives to prevent leftover foreign objects; and training where employees learn through active discussions with pilots. In addition, we are working to improve quality on an ongoing basis through QMS-related activities based on JIS Q 9100.

**Transportation systems: ensuring the safety of transportation systems based on quality management systems**

Mitsubishi Heavy Industries Engineering, Ltd. (MHIENG) is working on the development of various transportation systems with a high potential for use in public settings, such as Automated People Mover (APM) for use in airports and other facilities in cities and Light Rail Vehicle. To ensure that such transportation systems function with a high degree of safety, MHIENG operates a quality management system based on ISO 9001 and our own quality policies in all processes from design, procurement, and manufacturing to installation, test operation, and maintenance. Every year, top managers review these activities, evaluate the effectiveness of the quality management system, and propose new actions for improvement. Workshops are also held so that relevant personnel can share information, for example, information on revisions made to laws, regulations and standards pertaining to railways. Mechanisms are also being developed to incorporate safety standards and customer requirements in various countries into the initial design stage of projects developed in and outside Japan.

In addition to these efforts, MHIENG has introduced a system tool for the sharing of lessons learned from past projects. Employees involved in past projects disclose and record their experiences and lessons learned so that current project members can acquire and share useful skills and knowledge, and find a stronger awareness of product safety.

**Air-conditioners: With customer safety as a top priority, safety design, verification processes and product-related risk management processes are incorporated in design management standards**

The air-conditioning and refrigeration business<sup>(Note)</sup> acquired ISO 9001 certification in 1994 and established design management standards for product design and development to ensure the safety of air-conditioners. These standards are based on quality policies that are derived from our quality management system. During product development, quality checksheets and other measures are used per these standards to fully verify safety throughout the life cycle of a product, from development to usage and disposal, in addition to checks against physical harm or financial damage caused by fire, explosions, and toxic substances. In the unlikely event that a serious product-related accident does occur in the market, we will take immediate steps to ensure customer safety, promptly confirm facts, analyze the cause, conduct an investigation, implement corrective actions, report to the appropriate government agencies, and disclose this information to users and the market. Based on the product safety policy described above, in January 2018 we requested that users of our air-conditioners who meet certain conditions submit them for free inspection and repair. We will take the lessons learned from this occurrence to foster a work climate throughout the Company, including businesses overseas, that places the prevention of reoccurrences of incidents and product safety as top priorities.

(Note) MHI's air-conditioning and refrigeration business has been taken over by Mitsubishi Heavy Industries Thermal Systems, Ltd. who commenced operations in October 2016.



## Maintaining and strengthening defense production and technological bases

### Contributing to the peace and safety of Japan through technology

MHI is dedicated to the core vision of supplying cutting-edge technology for national safety and security. As a leading supplier in the Japanese defense industry, MHI endeavors to maintain and strengthen defense production and technological bases. MHI develops and manufactures a vast array of defense equipment based on the requirements of the government of Japan, including fighter planes, helicopters, missiles, defense vessels, and tanks, and also provides operational support. The environment surrounding the defense of Japan has been changing dramatically over the last few years. In light of the current financial difficulty of Japan and the speed of technological progress, it is increasingly important to maintain and strengthen defense production and technological bases, in order to satisfy the requirements of the government. MHI is focusing on the future security environment and is developing various technologies that meet the needs of the country. This includes research into stealth and weight-reduction technologies and avionics to be applied to future jet fighters, and into technology related to high-water-speed at sea for amphibious vehicles. We are also working on dual-use businesses such as cybersecurity, drone application, and satellite data analysis that utilize advanced technologies developed on the foundation of experience in the defense business up to this point. Cutting-edge technologies in the defense sector have a broad reach, and ripple effects to the civilian sector are expected, in the fields of materials, components, and processing technology.

Therefore we believe defense technologies can also contribute to long-term technological advances in Japan and the defense sector is expected to develop as a national strategic industry.



Type 16 Mobile Combat Vehicle

### Promoting nuclear power Public Acceptance (PA) activities

MHI has been hosting tours of nuclear power plant factories at Kobe Shipyard & Machinery Works to promote nuclear PA activities so that the attendees can gain a better understanding of the need for and safety of nuclear power generation. MHI encourages attendance on these tours every year. In addition, although the nuclear power plants we manufacture are PWRs, which are different from the BWRs of TEPCO's Fukushima Daiichi Nuclear Power Station, MHI has been working on a variety of technological developments in order to support TEPCO in its stabilization efforts following the accidents caused by the Great East Japan Earthquake. MHI has also been deploying safety countermeasures, not only at MHI-built PWR nuclear power plants but also at BWR nuclear power plants, to increase their safety and reliability. MHI will continue PA activities, such as providing related information and hosting tours, to restore public confidence in nuclear power generation.

(Note) Nuclear Power PA (Public Acceptance) activities: Public outreach programs to provide a better understanding of nuclear energy



Touring the Kobe Shipyard & Machinery Works

## Performance Data

## Product Stewardship

## Safety and quality management

## Impact evaluation related to safety and quality

In the MHI Group Global Code of Conduct, with regard to "health, safety and quality of services and products," the Company emphasizes complying with relevant laws, internal standards, and customer specifications, and making efforts to ensure product safety, as well as responding promptly and appropriately should a safety or quality problem be identified.

As the markets for the MHI Group's products are diverse, we have a quality management system (QMS) in place for individual businesses and products to meet customer and market needs based on ISO 9001 and other official standards. 94% of locations in Japan and 94% of locations overseas have also acquired individual third-party certification. In April 2013, MHI established a QMS Promotion Group in the Monozukuri Innovation Planning Department (now the Value Chain Innovation Department). The QMS Promotion Group has been working to strengthen quality management, including at Group companies, and improve work processes to meet the needs of globalization by sharing technologies and knowledge horizontally across the Group.

## Education and awareness related to safety and quality

It goes without saying that, as a global and highly diversified manufacturer, MHI Group's top priority is to ensure the safety and quality of its products. To promote product safety, we work to educate employees about safety and quality to prevent product accidents. One example of this is the establishment of the Accident Exhibit and Materials Room based on past accidents. The Accident Exhibit and Materials Room, opened in April 2010 at an MHI training center in Nagoya, introduces examples of serious accidents that have happened involving MHI Group products, such as a large cruise ship that caught fire while under construction. Its mission is to have all employees who handle MHI Group products, whether it be through design, procurement, manufacturing, or after-sale services, to pledge not to allow accidents like these to happen again, to learn from these accidents, and to put the lessons learned from these accidents to use in their respective jobs. The facility was given an extensive overhaul in April 2012, including the addition of new video presentations and artifacts designed to convey a greater sense of realism with regards to the nature of the accidents and the events experienced at the accident site. Approximately 36,000 visitors have passed through the facility since its opening. Meanwhile, since 2010 MHI has also held safety and quality training sessions describing past safety incidents, attended by employees, thereby increasing the total number of employees who have received this training to around 16,000.

Going forward, MHI will continue to expand its product safety education program to give employees more opportunities to become aware of the importance of safety and quality.

## ▶ Customer Relationship Management

One statement of our Principles is: "We deliver reliable and innovative solutions that make a lasting difference to customers and communities worldwide." Therefore, the company's top priority is to always place itself in the customer's shoes and meet their expectations by providing products and services with high added value.

In fields of business where companies are our customers, such as power generation and engines, we ask customers directly to complete questionnaires. For example, for areas in which general consumers are our customers, such as air-conditioning, we have set up a desk to respond to Internet and telephone inquiries. Each year, we receive around 7,000 responses through these channels.

Basic CS Training, introduced in 2002, is used to improve employee awareness and foster the development of a customer-oriented corporate culture at MHI. Through these activities, MHI will continuously work to provide products and services that satisfy customers.

### Number of violations related to advertising

2018

0

### Pick Up

#### Implementing technical support as an aspect of preventative maintenance

Since 1999, Mitsubishi Hitachi Power Systems, Ltd. has been maintaining high operating rates at thermal power plants (gas turbine) around the world and providing technical support services to prevent problems. Through these paid services, we observe and support the operations of gas turbine plants 24 hours a day, 7 days a week in real time from remote monitoring centers established in two locations, one in Japan and the other abroad. We also established a remote monitoring center in the Philippines to monitor conventional plants, and are working to expand our services. We have been utilizing more than 10 years of the operational data of the plants to prevent problems. Also, we minimize shutdown of the plants by quickly and automatically detecting plant anomalies, applying quality engineering, and immediately implementing troubleshooting procedures.

As of October 2019, these services were used globally on 168 generators whose total output is over 30 million kilowatts, and we have been contributing to stable power generation operations for our customers.



Remote monitoring center

## Performance Data

## Customer Relationship Management

## Customer satisfaction

## Customer satisfaction survey

Since customer characteristics and business practices are quite different in each of our businesses, MHI Group does not conduct a uniform standardized customer satisfaction survey across the board. Each business unit utilizes their own optimized measurement method for Customer Relationship Management.

**Thermal power systems**

Mitsubishi Hitachi Power Systems, Ltd., collects Voice of Customer (VOC) information through daily face-to-face communication. VOC information is classified into five categories (Maintainability and Operability, Consideration, Necessary Ability, Price, and Response Speed) to identify strengths and weaknesses. We work on areas such as technology development and Kaizen. Improvement activities based on the results of analyses are carried out on a daily basis.

In addition, the Company deploys web-based questionnaires specifically targeting overseas customers, with whom face-to-face communication is not easy, on an annual or biannual basis. The system collects and analyzes customers' comments on quality, price, and responsiveness of MHPS contact. The results are then used to further improve product quality and customer service.

**Air-Conditioning & Refrigeration:**

Mitsubishi Heavy Industries Thermal Systems, Ltd., which engages B-to-C business in air-conditioners, ensures that customer input is always incorporated through the contact points set up with Internet, telephone, and so on.

## Online strategy

## Online strategy

**Thermal power systems**

Mitsubishi Hitachi Power Systems, Ltd. provides online surveillance of product operation and evaluation of predictors or potential signals of trouble while also issuing operational status reports for some customers.

**Air-Conditioning & Refrigeration:**

Mitsubishi Heavy Industries Thermal Systems, Ltd. provides a remote monitoring service that enables energy-saving and centralized management of operational status of centrifugal chillers, air-conditioners, and heat pump units. This service includes trouble-sign diagnosis and the analysis of the cumulated operational data to make customer proposals for further energy-saving improvements.

**Engine & Energy:**

The Engine & Energy division of Mitsubishi Heavy Industries Engine & Turbocharger, Ltd., remotely monitors the status of engine power plant via the Internet to find warning signs of trouble, and to prevent it.

**Advertising activities**

**Responsible advertising activities**

MHI Group carried out advertising activities based on its business plans that target stakeholders globally. Before carrying out any of its activities, MHI Group confirms facts to ensure that accurate information is provided, while endeavoring to abide by all provisions in related laws and industries. After running advertisements, the department assesses the improvement in the brand's awareness and understanding.

As part of our worldwide advertising strategy for fiscal 2018, we placed advertorials in globally renowned media outlets such as The Financial Times, Bloomberg, The Economist, The Wall Street Journal, BBC, CNBC, and The Washington Post, as well as in leading newspapers in Japan (including the Yomiuri and the Nikkei). The advertising provide a holistic introduction to MHI Group's operations and endeavored to communicate information with the objective of raising awareness among stakeholders in Japan and overseas.

**Number of violations related to advertising, their content, and measures**

There were no legal or regulatory violations related to our advertising activities in fiscal 2018.

## ► Innovation Management

Manufacturing technologies are the source of value creation for the MHI Group, and intellectual property activities and R&D are the bedrock of its businesses. Supporting our business strategies for growth, we are promoting the construction of a global system, led by the Chief Technology Officer (CTO), who is the head of technology.

In April 2016, MHI launched a new Shared Technology framework consolidating the Company's technologies as well as its marketing, procurement, and other functions, overseen by the CTO. We created this framework to maximize the MHI Group's comprehensive technological strength to bolster competitiveness over the medium to long term. About Research and Development, in 2015 we established a comprehensive Research & Development Center, consolidating five domestic R&D centers and transitioning to cross-organizational management in our R&D structure. Through this approach, we anticipate new technological synergies, enhanced human resource development, and greater efficiency in work performance and facility utilization. We are globalizing our R&D structure, and as part of these efforts, we are dispatching specialist engineers from research centers in Japan to our bases in the United Kingdom, Singapore, the United States, and China. We are making efforts to secure leading global technologies, information, and human resources, while conducting research and providing technological support that is closely aligned with market needs.

### R&D expenditure

2018 **1,521** billions of yen

### Percent of sales

2018 **3.7**%

## Performance Data

### Innovation Management

#### R&D situation

R&D expenditure	Unit	2014	2015	2016	2017	2018	Coverage
Total	Billions of yen	1,455	1,506	1,607	1,768	1,521	Group
% of sales		3.6	3.7	4.1	4.3	3.7	Group
Employees of R&D position	FTEs	1,300	1,300	1,300	1,300	1,350	Group

#### Open innovation case

##### Open innovation case 1

##### ■ Case

MHI Group utilized the world's largest CO<sub>2</sub> capture system, using the KM CDR process, with a capture capacity of 4,776 metric tons per day for Petra Nova in the U.S. state of Texas, as part of a joint venture between Japan-based JX Nippon Oil & Gas Exploration Corporation (JX Nippon) and NRG Energy, Inc., an independent power producer in the U.S. This project was carried out in collaboration with Southern Company, a leading U.S. power producer. This process was well received by the energy sector and received the "Plant of the Year 2017" award from POWER Magazine.

<ul style="list-style-type: none"> <li>■ Benefit</li> </ul>	<p>MHI has been involved in R&amp;D into CO<sub>2</sub> recovery technology for more than 25 years. This demonstration test of emissions at a coal-fired power plant owned by Southern Company has shortened the development period substantially. Furthermore, over a period of approximately five years, we have succeeded in scaling up the CO<sub>2</sub> recovery tenfold, from 500 tons per day (demonstration) to 5,000 tons (commercial). We believe this joint development has enabled us to significantly shorten the cycle from development to practical realization.</p>
<ul style="list-style-type: none"> <li>■ Other Impacts</li> </ul>	<p>The CO<sub>2</sub> recovery process we have developed is currently being used at WA Parish Generator No.8, a coal-fired thermal power plant owned by NRG Energy, Inc., in the U.S. state of Texas. This recovery, which commenced on December 29, 2016, resulted in the world's highest volume of CO<sub>2</sub> recovery (4,776 tons per day). We expect CO<sub>2</sub> recovery technology to grow more popular, contributing to efforts to stop global warming. As a result, we anticipate a 14% reduction in overall CO<sub>2</sub> emissions by 2050.</p>

<b>Open innovation case 2</b>	
<ul style="list-style-type: none"> <li>■ Case</li> </ul>	<p>MHI has invested in the Geodesic Capital Fund, an investment fund operated by Geodesic Capital. This company, based in the U.S. state of California, was established by John V. Roos, former U.S. ambassador to Japan.</p>
<ul style="list-style-type: none"> <li>■ Benefit</li> </ul>	<p>This action will introduce us to multiple venture companies centered in Silicon Valley. In addition, we will introduce the products and services of several of these companies and conduct evaluation research related to the introduction of such products and services into those of MHI. This in turn will lead to collaboration with individual companies.</p>
<ul style="list-style-type: none"> <li>■ Other Impacts</li> </ul>	<p>By participating in Geodesic-sponsored events to introduce venture companies, as well as seminars, we aim to obtain information on leading-edge technologies such as the Internet of Things, artificial intelligence (AI), and security, and promote their application to our products.</p>

<b>Open innovation case 3</b>	
<ul style="list-style-type: none"> <li>■ Case</li> </ul>	<p>MHI has collaborated with multiple recycled carbon fiber manufacturers to pioneer a new value chain framework ahead of the competition where recycled carbon fibers with high added value are extracted from composite waste materials produced during aircraft wing production for reuse as raw materials for carbon fiber composites.</p>
<ul style="list-style-type: none"> <li>■ Benefit</li> </ul>	<p>Through this process, MHI has reduced the energy load involved in carbon fiber production and reduced CO<sub>2</sub> emissions by 10%. MHI produces less than 1,000 tons of composite waste materials a year, and by recycling these materials, it is possible reduce emissions by close to 10,000 tons annually.</p>
<ul style="list-style-type: none"> <li>■ Other Impacts</li> </ul>	<p>We have created a new value chain that leverages the strength of a stable supply of composite material waste.</p>

**Process innovation**

<b>Process innovation</b>	
<ul style="list-style-type: none"> <li>■ Case</li> </ul>	<p>Value chain innovation activity:</p>
<ul style="list-style-type: none"> <li>■ Benefit</li> </ul>	<p>We are continuously working on process streamlining and improvement in all business domains, contributing to shortening work hours and reducing costs. For example, by improving the manufacturing process and increasing the sophistication of production management systems in the renewable energy field, we were able to reduce the manufacturing lead time by half, and lower energy costs.</p>

## Environmental innovation

### Environmental innovation

■ Case

■ Benefit

#### Air-Conditioning & Refrigeration:

In 2017, Mitsubishi Heavy Industries Thermal Systems, Ltd. launched new series, a high-efficiency condensing unit for freezing and refrigeration using the natural refrigerant CO<sub>2</sub>, without using any fluorocarbon refrigerant. The specifications of these refrigerants have a global warming potential (GWP) of 1, a significant reduction compared with conventional fluorocarbons. Moreover, by installing the Company's original "scroll compressor," which integrates scroll and rotary mechanisms, we have reduced annual energy consumption by 16%, compared with conventional models <sup>(Note)</sup>.

(Note) HCA751M (using R22 refrigerant)

## Product adaptation for emerging markets

### Product adaptation case

#### Small and medium-sized gas turbine:

In emerging countries where power grid infrastructure is still rather poor, there is a strong demand for small distributed power sources. H-25 (HP: 28-42MW) <sup>(Note)</sup>, a small- to medium-sized gas turbine, is a compact but highly efficient quality product tailored to the needs of emerging markets, and has been enjoying strong demand. In fiscal 2018, there were orders from China.

(Note) For reference, normally a large gas turbine for power generation has HP200 –300 MW and above, mostly for use in developed markets.

#### Air-Conditioning & Refrigeration:

Through selling environmentally friendly products to the emerging countries of Southeast Asia—where living standards have risen—that are equivalent to those sold in developed countries, we are endeavoring to strike a balance between providing comfortable living environments and environmental conservation.

## Improving productivity

### Technology introduction

By transferring sophisticated manufacturing technology as is, such as machine work and assembly in Japanese factories, we have been achieving both high quality production capability and cost competitiveness. This approach has been taken in various business and products in which quality is essential.

In addition, the technology of our primary thermal power plant products, including gas turbines, steam turbines, boilers, Flue Gas Desulfurization (FGD) plants and Selective Catalyst Reduction (SCR), has been introduced by providing licenses to manufacturers in China, Korea, India, etc.

### Improving labour productivity

To maintain Japanese standards for high quality, a small group operation has been implemented; for developing skilled workers, Japanese engineer educators have been dispatched and overseas trainees have been accepted at Japanese sites.

Vietnam aircraft manufacturers have established an in-house manufacturing technology school where Japanese instructors instruct and educate the Vietnamese employees for their talent development. On-site OJT is also provided, for facilitating early acquisition of the skills. OJT opportunities in Japan (Oye Plant, Eba Plant) are also provided for the Vietnamese employees, aiming at skill acquisition through mutual exchange of employees.



**Reviewing procurement agreements  
or inventory levels**

**Air-Conditioning & Refrigeration:**

We sell our products through dealerships and distributors in each country (including emerging countries). However, when orders are received, we perform checks of the inventory status along trading routes and the level of demand in each country to keep inventory from accumulating.

Furthermore, by devising improved production methods, we are building a supply system that can adjust to changes in demand by shortening production lead time.

## ► Supply Chain Management

MHI procures a variety of materials and services both domestically and globally, including raw materials, machinery, equipment, and components. MHI is open to all motivated and competitive suppliers. Suppliers are fairly and impartially evaluated and selected in accordance with related laws, regulations, and social norms in order to build relationships of trust based on win-win partnerships.

In December 2018, MHI Group revised the MHI Group Supply Chain CSR Promotion Guidelines established in June 2010, to include more specific details on consideration of human rights and occupational safety and consideration of the environment. By sharing the Group's approach to CSR procurement with business partners and the partners that build the supply chains of partners, we are promoting CSR activities across the entire supply chain. As MHI Group's basic policy on the supply chain with the aim of realizing sustainable societies, the guidelines seek the understanding and cooperation of business partners. In addition to improving product safety, quality, price, and timely delivery and enhancing technological development capabilities, the guidelines describe compliance, corporate ethics, consideration for human rights, occupational safety, and the environment, and regional and social contributions. Moreover, at platforms such as "business partner meetings" and "business policy briefings," we explain the Group's CSR promotion guidelines. In these ways, we are carrying out training on the conduct expected of business partners from a social aspect.

(Reference) MHI Group Supply Chain CSR Promotion Guidelines <https://www.mhi.com/company/procurement/csr/>

### Number of partner participants in CSR training

2019

Total number of participants **1,773** companies

## Performance Data

### Supply chain management

#### Supply chain structure

#### Spending analysis (analysis of procurement history)

Amounts by Supplier (Billions of yen)

We conduct spending analysis, in respect of the total amount of money spent on orders and analyze procurement amounts and other expenditures by procurement region.

Results for Fiscal 2018

Japan	1,409
North America	294
Europe	223
China	177
Asia / Oceania	107
India	95
Korea	43
Middle East	28
Taiwan / Hong Kong	16
Central and South America	12
Africa	2

### Critical suppliers

<b>Definition of critical suppliers</b>	By business unit, MHI nominates critical suppliers those suppliers that supply important or large quantities of parts or equipment or suppliers that are available where no alternatives exist.
<b>Tier 1 suppliers</b>	17,443 (FY2018)
<b>Primary Tier 1 suppliers</b>	725 (FY2018)

### Supply chain monitoring

<b>Supply chain monitoring</b>	MHI monitors and evaluates its critical Tier 1 suppliers' quality, cost, delivery, technical capability, and management (including ESG) based on each business unit. By doing so, it monitors the Group's supply chain with the goal of analyzing supply chain risks and identifying high risk suppliers.
<b>Evaluated suppliers in last 3 years</b>	1,050 companies
<b>Ratio</b>	6%
	In addition, we conduct surveys in order to ascertain the status of CSR promotion initiatives by suppliers.
<b>Number of suppliers surveyed</b>	725 companies

### Conflict minerals

<b>Basic Policy Concerning Conflict Minerals</b>	Armed groups engaged in conflicts in the Democratic Republic of the Congo and neighboring countries have committed serious human rights abuses and acts of environmental destruction. This issue has caught the world's attention. Some of the proceeds from the minerals produced in this region (tin, tantalum, tungsten, and gold, hereinafter "conflict minerals") are thought to be a source of funding for these armed groups. MHI Group has no intention of abetting human rights abuses or environmental destruction by procuring raw materials, parts or products which contain the conflict minerals. A survey conducted in fiscal 2018 targeting smelter and country of origin, which is mineral procurement source for aircraft and automobile parts, the results confirmed that 2,926 smelters out of 4,920 identified are certified under the conflict-free smelter program. We will continue to work with our customers, suppliers, industry groups and others in efforts to avoid benefiting the armed groups.
<b>(Reference)</b>	MHI Group Supply Chain CSR Promotion Guidelines <a href="https://www.mhi.com/company/procurement/csr/">https://www.mhi.com/company/procurement/csr/</a>

## Our improvements in the supply chain

### Procurement Education and Training

Procurement departments at MHI provide a range of training programs designed to ensure compliance with the applicable laws and regulations. In fiscal 2018, a total of 33 new employees and employees just transferred to procurement departments attended an introductory course on basic information concerning procurement practices, overseas procurement, and the negotiation of commercial contracts.

We are also advancing initiatives for promoting CSR throughout the supply chain. We explain the importance of CSR to our business partners while raising awareness of the MHI Group Supply Chain CSR Promotion Guidelines. In fiscal 2019, a total of 1,773 business partners participated in these activities.

**Educated suppliers** Fiscal 2019 Plan 1,600 companies

## Participating in Initiatives

### Participating in Supply Chain-Related Initiatives

In order to advance MHI Group's CSR procurement initiatives, we take part in the Supply Chain Working Group of the Global Compact Network Japan, the local network of the UN Global Compact in Japan. Through activities with other companies, including those from other industries, we are promoting discussions on issues that we face on a practical level and generating outputs (deliverables) aimed at contributing to the resolution of those issues.

# Environment

## ► Environmental Management

### Basic Policy on Environmental Matters and Action Guidelines

With environmental problems gaining recognition on a global scale, MHI Group established the Environment Committee in 1996 in order to clarify its attitude toward the environment, to express its stance to people both inside and outside the Company, and to direct and promote its environmental activities. At its first meeting, the Environment Committee formulated the Basic Policy on Environmental Matters and Action Guidelines (refer below), in line with the MHI Group's Principles: "We deliver reliable and innovative solutions that make a lasting difference to customers and communities worldwide." Since that time, the entire Group has worked to promote environmental initiatives through maintaining a dialogue with suppliers and other stakeholders in accordance with this Basic Policy and these guidelines. MHI Group made partial revisions to its Basic Policy on Environmental Matters and Action Guidelines in January 2018 with the approval of the Executive Committee, chaired by the President and CEO.

### Basic Policy on Environmental Matters

Provision 1 of MHI Group's principles reads: "We deliver reliable and innovative solutions that make a lasting difference to customers and communities worldwide." This means that our primary purpose is to contribute to society through R&D, manufacturing and other business activities. The company shall undertake all aspects of its business activities with the understanding that it is an integral member of society and will strive to reduce its burden on the environment, contributing to the development of a sustainable society.

### Action Guidelines

1. Prioritize environmental protection within company operations, and take steps across the entire MHI Group to protect and enhance the environment.
2. Clarify roles and responsibilities regarding environmental protection by developing an organizational structure to deal with matters related to environmental protection, and to define environment-related procedures, etc.
3. Strive continuously to improve and enhance environmental protection activities not only by fully complying with environmental laws and regulations but also, when necessary, by establishing, implementing and evaluating independent standards and setting environmental goals and targets.
4. Strive to alleviate burden on the environment in all aspects of company business activities, from product R&D and design to procurement of raw materials, manufacture, transport, usage, servicing and disposal, through pollution prevention, conservation of resources, energy saving, and waste reduction.
5. Strive to develop and market advanced and highly reliable technology and products that contribute to solving environmental and energy challenges.
6. Strive to preserve the environment in partnership with our stakeholders and gain their understanding of this policy.
7. Take steps to raise environmental awareness among all group employees through environmental education, etc., while delivering environment-related information to the public and taking part in CSR activities.

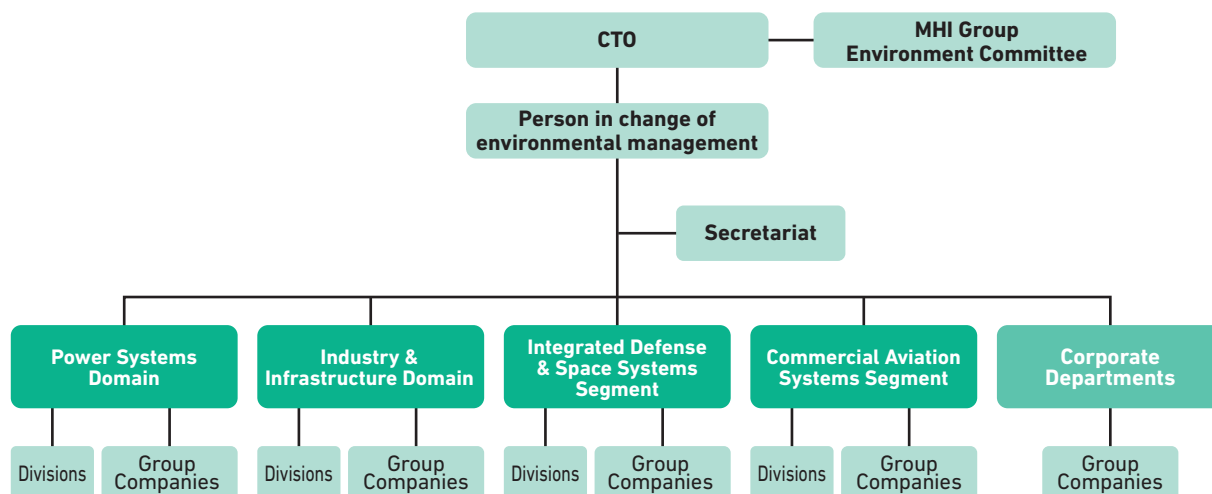
Formulated in 1996 (Revised in January 2018)

(Paragraph 6 Supplementary Information) Stakeholders include suppliers, joint venture partners, licensees, external outsourcing companies, and other business partners. In addition, cases involving environmental due diligence and M&As will be taken into consideration.

### Environmental Management Structure

At MHI Group, the MHI Group Environment Committee, chaired by the Chief Technology Officer (CTO) who takes charge of environmental management, promotes policies and initiatives shared throughout the Group. The Committee, whose members are selected from the domains and segments, and corporate units, drafts plans for deployment across all Group companies via the domains, segments of each business, and corporate units. The MHI Group's organizational chart for environmental management is shown below.

### The MHI Group's Environmental Management Organization



### Environmental Targets

The MHI Group Long-Term Environmental Target and the Fourth MHI Group Environmental Targets, which represent the Group's medium-term goals, were established at a meeting of the Environment Committee held in December 2017. The Long-Term Environmental Target is focused on reducing CO<sub>2</sub> by fiscal 2030, the same target year as the Paris Agreement. The Fourth MHI Group Environmental Targets aim for reduction in CO<sub>2</sub> emissions, more efficient water usage, and reduction in waste generation by fiscal 2020. MHI Group will work together to achieve these goals in order to address the problem of climate change.

#### Long-Term Environmental Target (FY2030)

**Unit CO<sub>2</sub> emissions** **-16%** Compared with FY2014 (Note)

#### The Fourth MHI Group Environmental Targets (FY2020)

**Unit CO<sub>2</sub> emissions** **-6%** Compared with FY2014 (Note)

**Unit water consumption** **-6%** Compared with FY2014 (Note)

**Unit waste generation** **-6%** Compared with FY2014 (Note)

(Note) Consolidated Group Companies

### ■ The MHI Group Long-Term Environmental Target (FY2030)

Category	Item	Scope of target	Target (FY2018-FY2030)
Reduction in greenhouse gas emissions	Reduction in CO <sub>2</sub> emissions	Entire MHI Group	Reduce <sup>(Note 1)</sup> the unit CO <sub>2</sub> emissions in FY2030 by 16% compared to FY2014. The numerator: The sum of the CO <sub>2</sub> emissions of all Group companies. Unit: ton. The denominator: The total consolidated sales of all Group companies. Unit: Yen. (Note 1) Annually whether 1% reduction of the unit CO <sub>2</sub> emissions is achieved or not will be evaluated.

(Note) Consolidated Group Companies will be subject to this target

### ■ The Fourth MHI Group Environmental Targets (FY2018-FY2020)

Category	Item	Scope of target	Target (FY2018-FY2020)
1. Reduction in greenhouse gas emissions	1.1 Reduction in CO <sub>2</sub> emissions	1.1.1 Entire MHI Group	Reduce <sup>(Note 1)</sup> the unit CO <sub>2</sub> emissions in FY2020 by 6% compared to FY2014. The numerator: The sum of the CO <sub>2</sub> emissions of all Group companies. Unit: ton. The denominator: The total consolidated sales of all Group companies. Unit: Yen. (Note 1) Annually whether 1% reduction of the unit CO <sub>2</sub> emissions is achieved or not will be evaluated.
2. More efficient water usage	2.1 Reduction in water usage	2.1.1 Entire MHI Group	Reduce <sup>(Note 1)</sup> the unit water consumption in FY2020 by 6% compared to FY2014. (Water: industrial water, tap water, groundwater, rivers, lakes; excluding seawater). The numerator: The sum of the water consumption of all Group companies. Unit: m <sup>3</sup> . The denominator: The total consolidated sales of all Group companies. Unit: Yen. (Note 1) Annually whether 1% reduction of the unit water consumption is achieved or not will be evaluated.
3. Reduction in waste generation	3.1 Reduction in waste generation	3.1.1 Entire MHI Group	Reduce <sup>(Note 1)</sup> the unit waste generation in FY2020 by 6% compared to FY2014. The numerator: The sum of the waste generated by all Group companies' activities. Unit: ton. The denominator: The total consolidated sales of all Group companies. Unit: Yen. (Note 1) Including hazardous waste generation. Annually whether 1% reduction of the unit waste generation is achieved or not will be evaluated.

(Note) Consolidated Group Companies will be subject to this target

Performance Data

Environmental management

Responsible person

Chief Technology Officer (Senior Executive Vice President)

Committee

<b>Name</b>	MHI Group Environment Committee
<b>Members</b>	Chaired by Senior Executive Vice President, CTO and composed of 10 members.
<b>Number of meetings</b>	1 (FY 2018)

ISO14001 certification  
(As of March 31, 2019)

	Coverage ratio of target sites (net sales basis)	
<b>MHI and Group company in Japan</b>	21 companies	57%
<b>Overseas Group company</b>	28 companies	26%

Other certification  
(As of March 31, 2019)

<b>EcoAction 21</b>	1 company
<b>K-EMS (Certification by City of Kobe)</b>	4 companies
<b>ECO STAGE 1</b>	1 company

Environmental audit

At MHI Group, two levels of audits are conducted including one by each domain, segment, and corporate unit on their respective organization as well as one by the environmental secretariat at MHI headquarters on the environmental management division of each domain, segment, and corporate unit. As a general rule, the respective domains, segments, and corporate units conduct internal environmental audits at the works, plants, and other facilities in Japan they oversee to ensure compliance with environmental laws and regulations and to conduct physical, on-site verification of operational conditions. Based on the Group's environmental policy, these audits confirm that environmental management associated with addressing climate change and pollution as well as water conservation have been properly employed. The environmental secretariat at MHI headquarters conducts audits on the status of compliance and environmental management of the environmental management division of each domain, segment, and corporate unit.

Environmental management  
in each sites <sup>(Note 1)</sup>

MHI Group has prepared and uses an ISO-based manual for each works (plants), encompassing such issues as risk identification methods, daily management procedures, and contingency plans. At each works (plants), emergency response drills are carried out to confirm the effectiveness of the response procedures for emergencies such as oil spills and earthquakes.

In the event of any crisis, the Company's in-house crisis management information system is prepared to quickly convey information to the President.

Reporting on breaches <sup>(Note 2)</sup>

There was no significant breach last year. (As of December 31, 2019)

(Note 1) In principle, MHI on a non-consolidated basis

(Note 2) Coverage is group companies of Japan



**Environmental KPIs**

**The Fourth MHI Group Environmental Targets**

<b>KPI(1) CO<sub>2</sub> emissions / Amount of sales</b>	Target	Reduce the unit CO <sub>2</sub> emissions by 6% compared to FY2014.
	Target Year	FY2020
<b>KPI(2) Water usage / Amount of sales</b>	Target	Reduce the unit water consumption by 6% compared to FY2014.
	Target Year	FY2020
<b>KPI(3) Waste generation / Amount of sales</b>	Target	Reduce the unit waste generation in by 6% compared to FY2014.
	Target Year	FY2020

	2015		2016		2017		2018	
	Performance	Compared with FY2014	Performance	Compared with FY2014	Performance	Compared with FY2014	Performance	Compared with FY2014
<b>KPI(1) CO<sub>2</sub> emissions<sup>(Note 1)</sup> / Amount of sales<sup>(Note 1)</sup></b>	19.41	Down 6.5%	19.81	Down 4.5%	18.00	Down 13.3%	17.47	Down 15.8%
<b>KPI(2) Water usage<sup>(Note 2)</sup> / Amount of sales<sup>(Note 2)</sup></b>	0.199	Down 8.5%	0.206	Down 4.9%	0.179	Down 17.0%	0.183	Down 15.0%
<b>KPI(3) Waste generation<sup>(Note 3)</sup> / Amount of sales<sup>(Note 3)</sup></b>	2.46	Up 10.8%	2.24	Up 1.0%	2.02	Down 9.1%	1.76	Down 15.9%

(Note 1) Data is for MHI on a non-consolidated basis and 163 Group companies

(Note 2) Data is for MHI on a non-consolidated basis and 150 Group companies

(Note 3) Data is for MHI on a non-consolidated basis and 118 Group companies

**Environmental activities**

<b>Fostering environmental awareness<sup>(Note 1)</sup></b>	MHI formulates its own environmental education curriculum based on e-learning and other methods to provide environmental education to employees. In addition to the internal environmental auditor training program organized by our training center, specialized training that deals with daily management procedures and handling emergencies also takes place for employees doing painting tasks and handling dangerous materials.
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(Note 1) In principle, MHI on a non-consolidated basis

<b>Activities for environmental preservation</b>	Supporting conservation survey for loggerhead turtles in danger of extinction Promoting forest conservation and non-native species removal activities
<b>(Reference)</b>	Biodiversity (p57)

## Product Stewardship

### Life-cycle assessment

#### Environmental Standards for Product Development and Assessment of environmental impact<sup>(Note 1)</sup>

In 2005, we formulated the Basic Guidelines for Environment-Friendly Product Fabrication (not disclosed). This internal common technology standard provides a framework for creating products that contribute to environmental preservation and CO<sub>2</sub> reduction. Under these guidelines, we assess the environmental impact of products across their life cycles and strive to create products that reduce environmental impact.

#### Reduction in CO<sub>2</sub> from using MHI's products

Every year, we calculate the amount of CO<sub>2</sub> reduction achieved by the use of our representative products. CO<sub>2</sub> reductions the use of MHI Group's products<sup>(Note 2)</sup> in fiscal 2018 came to approximately 65,331 thousand tons.

(Note 1) In principle, MHI on a non-consolidated basis

(Note 2) Base lines were determined (base year / comparison target) in accordance with the characteristics of each product. Using these base lines, the amount of CO<sub>2</sub> reduced through product use was calculated in accordance with such factors as the number of products in operation and the number of units sold in the relevant fiscal year.

### Environmental product declaration

#### Environmental product declaration

Since the majority of our products are industrial products for BtoB sales, we need confirmation with each customer regarding the precise details required for product tests, provisions, and contracts by going beyond the general Environmental Product Declaration in order to ensure the environmental standards and performance to be met. As for products for the general public (BtoC), we have air conditioners that are fully compatible with the Energy Saving Labeling Program authorized by the Ministry of Economy, Trade and Industry (METI) by meet 100% of the set energy-saving standards. Concerning the S6M3F-MTK-S marine engine, we have also obtained the Environmental Advanced Secondary Qualification Label for Fishing Vessels certified by the Ministry of the Environment in Japan. In addition, certain chillers, heat pumps, gas engines, and other units have been recognized with the L2-Tech certification of the Ministry of the Environment in Japan for their low-carbon technology.

#### % of revenue

Less than 5%

### Collection and recycling of used products

#### Collection and recycling of used products

Although the majority of our products are industrial products targeted for business to business (BtoB) use, we promote product management throughout their entire life cycle, including disposal and recycling, through project stewardship centered on eco-design and eco-labeling.

As for products targeted for the general public (BtoC), air conditioners are subject to the Home Appliances Recycling Law of Japan, and are therefore collected in compliance with relevant laws and regulations. Furthermore, our rental forklifts are selected from registered Rental UP vehicles, inspected, and have parts replaced based on our in-company standards. These vehicles are then divided into three ranks according to replacement parts, painting, and warranty period for sale as a "certified second-hand vehicle." We are currently developing this business model as the first of its kind in Japan.

**% of revenue**

Less than 5%

**Recognizing Outstanding Environmental Contributions through MHI's Best Innovation Awards**

In fiscal 2017, MHI Group introduced its Best Environmental Product Awards and Best Environmental Practice Award as part of its "Best Innovation" in-house award program.

In fiscal 2018, the Best Environmental Product Awards were presented to three products including a high-efficiency chiller/freezer unit free of CFC refrigerants, the world's first large scrubber system for ships, and an energy-saving ship that ranks as one of the most fuel-efficient ferries in all of Japan. Meanwhile, the Best Environmental Practice Award, which recognizes business activities that reduce environmental impact, was presented to members of Mitsubishi Turbocharger Asia Co., Ltd. for their environmental load reduction efforts in Thailand with the installation of photovoltaics (PV) on the rooftop of the company's Thailand plant.

(Reference)

Products / Projects that Contribute to the Environment

**Environmental reporting coverage**

**Coverage**

In principle, scope of the financial and environment-related non-financial information disclosure of MHI Group includes Mitsubishi Heavy Industries Ltd. and consolidated subsidiaries. When some non-financial information applies to either only MHI Ltd. or the specific scope of business at our subsidiaries, such specific scope is defined separately.

**Referenced guidelines**

**Referenced guidelines**

- Global Reporting Initiative's (GRI) Sustainability Reporting Standards
- The International Integrated Reporting Council's (IIRC) International Integrated Reporting Framework
- Ministry of the Environment's Environmental Reporting Guidelines (2018 version)
- ISO 26000 Guidance on Social Responsibility
- Ministry of Economy, Trade and Industry of Japan's The Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation

## ► Climate Change

The MHI Group has established CO<sub>2</sub> emission reduction targets within its MHI Group Long-Term Environmental Target (FY2018–2030) and Fourth MHI Group Environmental Targets (FY2018–2020) and is engaging in efforts to address climate change through its business activities and products and services.

Greenhouse gas emissions in our business activities, in fiscal 2018 amounted to 794 thousand tons, decrease from fiscal 2017. The Group will continue its efforts to reduce CO<sub>2</sub> emissions in fiscal 2019 and beyond in accordance with the Fourth MHI Group Environmental Targets through ongoing efforts to promote energy saving and improve work processes, contributing to further reductions in energy load and other environmental improvements.

### CO<sub>2</sub> emissions (Scope 1 & 2)

**FY2018** **794** thousand tons (Note 1)

### CO<sub>2</sub> emissions rate (Compared with FY2014 levels)

**FY2018** **15.8** %

(Note 1) Data is for MHI on a non-consolidated basis and 163 Group companies.

## Performance Data

### Climate Change

#### Climate change governance

##### Committee

MHI Group Environment Committee

##### Risk management measures

At MHI, the Environment Committee chaired by the Chief Technology Officer, is the Committee with the chief responsibility for matters concerning climate change. In fiscal 2016, the Environmental Planning Group at MHI Headquarters served as the Secretariat. The managers of individual divisions assess climate change risk and other forms of environmental risk using benchmarks for the scale of impact on business operations and society, and the urgency of risk countermeasures. Significant risks are relayed through Environmental Planning Group channels to the Environment Committee, which then deliberates on countermeasures. Especially serious risks are reported to the Executive Committee headed by the Company President. The Executive Committee then explores reported risks and implements Companywide measures against those deemed important. These risks will be proposed to the Board of Directors for deliberation when members of the Board of Directors present at the Executive Committee deem it important to do so.

##### Climate change opportunities

Implementation of the Paris Agreement is expected to spur global growth in the demand for highly efficient power generation as a step toward the creation of a low-carbon society. MHI Group has developed and begun supplying power generation systems that use hydrogen fuel, power-generating plants powered by high-efficiency gas turbines as well as systems for the recovery of CO<sub>2</sub> from power plant exhaust gases. The Group considers emissions regulations overseas to be a significant business opportunity.

**Incentives toward management activities related to the issue of climate change**

In fiscal 2018, we granted Best Environmental Product awards to people responsible for three products: a high-efficiency chiller/freezer unit free of CFC refrigerants, the world's first large scrubber system for ships, and an energy-saving ship that ranks as one of the most fuel-efficient ferries in all of Japan. The Best Environmental Practice Award recognizes business practices that reduce environmental impact. This award was given to members of Mitsubishi Turbocharger Asia Co., Ltd. who were responsible for the installation of photovoltaics (PV) on the rooftop of its Thailand plant, which contributes to environmental load reduction in Thailand.

**CDP submission**

We have submitted a CDP response since fiscal 2004, and the evaluation of fiscal 2018 was B.

**Recommendations for policies related to climate change**

In order to maximize efforts to combat climate change, MHI Group makes policy recommendations through the Japan Business Federation.

**Efforts toward the Task Force on Climate-related Financial Disclosures**

**Efforts toward the Task Force on Climate-related Financial Disclosures**

Offering solutions to address the issue of climate change is MHI Group's contribution and responsibility to society. Efforts to do so are part of the Group's business strategy and determined after Groupwide discussion. Initiatives on reducing environmental burden are carried out across the entire Group. We conducted the initiatives and analysis below centered on the energy-related products business, which has the biggest impact on the environment.

**1. Climate scenario for the Under 2°C Increase Goal**

Power demand will grow worldwide and share of renewable energy will increase.  
 United States and Europe: Power demand is increasing due to the progress in electrification. Meanwhile, society is aiming for decarbonization as the penetration of renewable energy.  
 Southeast Asia : Power demand is increasing by economic growth. Stable power supply is required in addition to renewable energy.

**2. Climate-related risks and opportunities**

- Downward trend in the market for new coal-fired thermal power facilities.
- Meanwhile, demand still remains for the thermal power with low environmental emissions with the energy security needs. Strong demand for modernizing existing power plants reducing CO<sub>2</sub> and other environmental emissions for stable energy supply.
- Solid market expected over medium- to long-term demand for new gas power plants with expansion of the LNG market.
- Growth in offshore wind turbine market  
 (Expansion from the Europe into greater North America and Asia (approx. 4–6 GW per year))

**3. Business strategies and risk management**

- Optimization of resources for the market after 2021 (reorganization, personnel shifts, etc.)
- Provision of solutions for low-carbon needs  
 Strengthen mass production systems for offshore wind turbines and launch the world's largest turbine Collaboration with renewable energy toward realizing a decarbonization society in the future (eg. the development of hydrogen-powered gas turbines.)
- Promotion of state-of-the-art technologies (IGCC, highly efficient GTCC/USC, CCS/CCUS)
- Provision of AI/IoT technology solutions
- Development of Key Index Approach (QoEn™ Index) <sup>(Note 3)</sup> to support necessary energy supply with high-quality energy infrastructure in accordance with the characteristics and needs of target area.

**4. Financial impact**

Disclosure of results at earnings announcements, business strategy meetings, etc., upon examination within business forecasts.

(Note 1) Ultra super critical

(Note 2) Carbon capture and storage/carbon capture utilization and storage

(Note 3) QoEn™ is a registered trademark of Mitsubishi Heavy Industries, Ltd.

## Climate change opportunities and risks

### Activities that mitigate climate change

#### Energy-saving activities

MHI Group conducts a variety of energy-saving activities at each site, including the use of LED lighting and highly energy efficient substation equipment, and is working to improve energy-saving and energy efficiency.

#### Introduction of Renewable Energy

MHI Group has installed photovoltaic (PV) systems at its facilities and purchases electricity generated through hydroelectric power. Also, in March 2018 photovoltaic systems were installed on the rooftop of the Thailand plant of Mitsubishi Turbocharger Asia Co., Ltd. This effort contributed to reductions of nearly 3,000 tons of CO<sub>2</sub> emissions annually, for which the company received high acclaim from the Thai government.

### Products and technologies that mitigate climate change

#### Products and technologies that mitigate climate change and reduction in CO<sub>2</sub> from using MHI Group products

MHI Group is working to create a low-carbon society across a broad spectrum of fields, including large-scale power generation technologies such as highly efficient thermal power generation plants and nuclear power plants; power generation systems that utilize wind, geothermal, and other renewable energies; ships and transportation systems for improving the efficiency of the transportation sector; and high energy-saving air-conditioning systems that use heat pump technology. In fiscal 2018, through the reduction in CO<sub>2</sub> from using MHI Group's main products came to about 65,331 thousand tons.

(Note) Base lines were determined (base year/comparison target) in accordance with the characteristics of each product. Using these base lines, the amount of CO<sub>2</sub> reduced through product use was calculated in accordance with such factors as the number of products in operation and the number of units sold in the relevant fiscal year.

## GHG Emissions

### Direct GHG emissions (Scope 1)

		Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
CO <sub>2</sub> emissions (consolidated)	Performance	t	185,951	221,316	188,712	184,647
	Assurance (domestic)	t	Acquisition	193,303	151,681	135,570 <sup>(Note 5)</sup>
Other emissions (MHI)						
CH <sub>4</sub>	Performance	t-CO <sub>2</sub>	486.3	193.1	82.0	259
N <sub>2</sub> O	Performance	t-CO <sub>2</sub>	186.9	123.7	458.1	464
HFCs	Performance	t-CO <sub>2</sub>	1,036.7	1,545.5	791.6	1,303
PFCs	Performance	t-CO <sub>2</sub>	0	0	0	0
SFCs	Performance	t-CO <sub>2</sub>	44.8	44.1	42.8	39
Other	Performance	t-CO <sub>2</sub>	0	0	0	0

(Note 1) Data is for MHI on a non-consolidated basis and 70 Group companies.

(Note 2) Data is for MHI on a non-consolidated basis and 137 Group companies.

(Note 3) Data is for MHI on a non-consolidated basis and 152 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 163 Group companies. (Coverage: 96% of consolidated revenues)

(Note 5) Data is for MHI on a non-consolidated basis and 16 Group companies.

**Indirect GHG emissions (Scope2)**

	Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
<b>Performance</b>	t	606,087	653,269	649,549	609,759
<b>Assurance (domestic)</b>	t	Acquisition	469,309	433,845	358,250 <sup>(Note 5)</sup>

(Note 1) Data is for MHI on a non-consolidated basis and 70 Group companies.

(Note 2) Data is for MHI on a non-consolidated basis and 137 Group companies.

(Note 3) Data is for MHI on a non-consolidated basis and 152 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 163 Group companies. (Coverage: 96% of consolidated revenues)

(Note 5) Data is for MHI on a non-consolidated basis and 16 Group companies.

**GHG Emissions (other) <sup>(Note)</sup>**

	Unit	2017	2018
<b>Transport and delivery (downstream emissions)</b>	t	3,095	1,374

(Note) Data is for MHI on a non-consolidated basis

**Energy Consumption**
**Total energy consumption**

	Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
<b>Performance</b>	MWh	2,039,087	2,425,331	2,231,491	2,147,869

**Electricity purchased**

	Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
<b>Performance</b>	MWh	1,106,660	1,263,512	1,269,718	1,191,576

(Note 1) Data is for MHI on a non-consolidated basis and 70 Group companies.

(Note 2) Data is for MHI on a non-consolidated basis and 137 Group companies.

(Note 3) Data is for MHI on a non-consolidated basis and 152 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 163 Group companies. (Coverage: 96% of consolidated revenues)

**Renewable energy**

	Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
<b>Renewable energy consumption</b>	MWh	2,246	10,198	12,601	17,567

(Note 1) Data is for MHI on a non-consolidated basis

(Note 2) Data is for MHI on a non-consolidated basis and 137 Group companies.

(Note 3) Data is for MHI on a non-consolidated basis and 152 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 163 Group companies.

## Energy use (Japan)

	Unit	2017 <sup>(Note 1)</sup>	2018 <sup>(Note 2)</sup>
Electricity	MWh	840,664	739,815
Heavy fuel oil A	kL	4,512	5,102
Heavy fuel oil B・C	kL	0.1	0
Gasoline	kL	2,211	783
Diesel/Gas oil	kL	7,007	4,221
Kerosene	kL	3,319	2,373
Jet fuel	kL	749	757
Coal for fuel use	t	262	121
Coke	t	0	0
City gas	thousand tons	39,434	38,343
Liquefied Petroleum Gas	t	5,346	4,768
Liquefied Natural Gas	t	578	215
Petroleum hydrocarbon gas	thousand tons	0.4	0
Hot water	GJ	5	30
Chilled water	GJ	13,064	17,326
Steam	GJ	11,278	10,948

(Note1) Data is for MHI on a non-consolidated basis and 66 Group companies in Japan.

(Note2) Data is for MHI on a consolidated basis and 16 Group companies in Japan.



## ► Water Risk

The Fourth MHI Group Environmental Targets (FY2018–FY2020) established the target of reducing unit water usage in our business activities.

In fiscal 2018, water usage is 9,305 thousand m<sup>3</sup>, an increase due to factors such as increased production from fiscal 2017. MHI Group will continue its efforts to reduce water usage in fiscal 2019 and beyond in accordance with the Fourth MHI Group Environmental Targets by conducting checks on water leakage and undergoing repairs in a timely manner as well as through water-reduction activities through improved work processes.

### Water Usage

FY2018

# 9,305

 thousand m<sup>3</sup> (Note 1)

### Unit reduction rate (Compared with FY2014 levels)

FY2018

# 15.0%

(Note 1) Data is for MHI on a non-consolidated basis and 150 Group companies.

## Performance Data

### Water Risk

#### Water risk governance

##### Committee

MHI Group Environment Committee

##### Risk management measures related to water risks

In the Fourth MHI Group Environmental Targets (FY2018–FY2020), MHI also set consistent Groupwide reduction targets in relation to the effective use of water resources, and is currently undertaking Groupwide measures. An IT system is being used for the reporting and accumulation of water-related data for MHI factories in Japan of MHI on a non-consolidated basis and for Group companies within and outside Japan.

#### Water risk management

##### Management of water quality

Waste water is managed and treated in accordance with relevant laws and regulations.

##### Management of changes to laws, regulations, taxes, and water prices

Domestically, once information on any regulation change or revision is obtained, we take appropriate action promptly as necessary. With regard to overseas factories belonging to Group companies, we are promoting the collection of data related to their water use.

## Water Used During Products' Life Cycle

### Products contributing to the reduction of water use

For example, desalination plants for converting sea water into plain water are often built in combination with power plants constructed in Saudi Arabia, where water resources are limited. Combining our products from a wide range of areas, MHI has been delivering solutions for issues pertaining to water resources.

### Relaxation of water quality effects by using products

We are contributing to alleviating the influence of water quality through environment-friendly thermal power generation systems, such as wastewater treatment of desulfurization equipment.

## Water Usage

### Reducing water usage

Reducing water usage	Unit	2015	2016	2017	2018
Quantity of water intake	thousand m <sup>3</sup>	8,474 <sup>(Note 1)</sup>	9,044 <sup>(Note 2)</sup>	8,513 <sup>(Note 3)</sup>	9,305 <sup>(Note 4)</sup>
Third-party Assurance (domestic)	thousand m <sup>3</sup>	Acquisition	7,756	6,832	6,667 <sup>(Note 5)</sup>
Breakdown by Quantity of water intake					
Tap water	thousand m <sup>3</sup>	-	3,837	3,685	4,171
Third-party Assurance (domestic)	thousand m <sup>3</sup>	-	2,754	2,249	2,126 <sup>(Note 5)</sup>
Industrial water	thousand m <sup>3</sup>	-	3,446	3,070	3,084
Third-party Assurance (domestic)	thousand m <sup>3</sup>	-	3,290	2,845	2,865 <sup>(Note 5)</sup>
Groundwater	thousand m <sup>3</sup>	-	1,761	1,758	2,050
Third-party Assurance (domestic)	thousand m <sup>3</sup>	-	1,712	1,738	1,676 <sup>(Note 5)</sup>
Reused water usage <sup>(Note 5)</sup>			322	262	220
Ratio of recycled water usage <sup>(Note 6)</sup>	%		7.8	6.7	6.0
Usage amount	thousand m <sup>3</sup>	8,474 <sup>(Note 1)</sup>	9,366 <sup>(Note 2)</sup>	8,775 <sup>(Note 3)</sup>	9,467 <sup>(Note 4)</sup>
Unit water consumption <sup>(Note 7)</sup>		0.199	0.206	0.179	0.183
Unit reduction rate (Compared with FY2014 levels)	%	8.5	4.9	17.0	14.9

(Note 1) Data is for MHI on a non-consolidated basis and 75 Group companies.

(Note 2) Data is for MHI on a non-consolidated basis and 131 Group companies.

(Note 3) Data is for MHI on a non-consolidated basis and 156 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 150 Group companies. (Coverage: 94% of consolidated revenues)

(Note 5) Data is for MHI on a non-consolidated basis and 15 Group companies.

(Note 6) Data is for MHI on a non-consolidated basis.

(Note 7) Calculated as water usage per net sales.

## ► Biodiversity

The Basic Policy on Environmental Matters and Action Guidelines and the MHI Group CSR Action Guidelines include the concepts of the Guidelines for Private Sector Engagement in Biodiversity released by the Ministry of the Environment and the Biodiversity Declaration from the Japan Business Federation.

Each district pursues various biological diversity activities in accordance with these principles and guidelines.

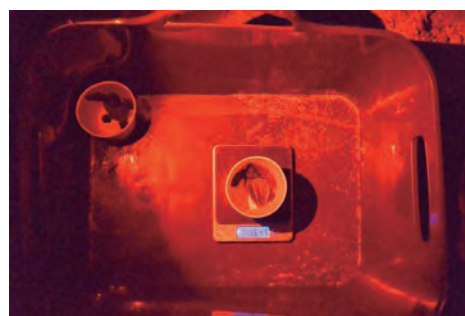
### Pick Up

#### Supporting conservation survey for loggerhead turtles in danger of extinction

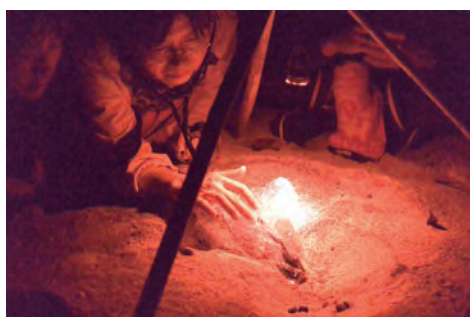
Since 2015, in Tanegashima, a key location for the Group's rocket launch business, MHI Group has offered its support for the Tanegashima Loggerhead Turtle Survey, an event sponsored by EarthWatch Japan, an authorized NPO. The loggerhead turtle is in danger of global extinction. Although Tanegashima is the second largest spawning ground for the loggerhead turtle, there have been very few individual identification surveys conducted in the past for the purpose of preservation. Accordingly, we anticipate that the Tanegashima Loggerhead Turtle Survey will not only help to clarify the ecology of the loggerhead turtle but also lead to its preservation. Surveys were conducted six times between June and August 2018, and Group employees acted as volunteers to assist in weighed the newly spawned turtles and examined their shells under the direction of the Sea Turtle Association of Japan. This project is recognized as a project promoted by the Japan Committee for United Nations Decade on Biodiversity (UNDB).



Checking turtle shell patterns (infrared photo)



Weighing newly hatched turtles (infrared photo)



Waiting for turtles to leave the nest (infrared photo)



Newly spawned turtles heading out to sea (infrared photo)



Participants of the 6-8 August 2018 survey

### Promoting forest conservation and non-native species removal activities

In recent years, MHI Group has been an active supporter of corporate forestry programs together with local governments and other organizations. We are involved in ongoing local government forest care programs. Centering on employees and their families, tree planting and thinning efforts are underway to protect the forests that provide habitats for many different creatures.

Working with NPOs and other organizations, MHI also actively participates in programs to remove non-native species that are impacting Japan's ecosystem.

At the Sagami-hara Machinery Works, Mitsubishi Heavy Industries Engine & Turbocharger, Ltd. has worked with Kanagawa prefecture as partners in forest rebuilding through the Kanagawa Suigen no Morizukuri Jigyō (Kanagawa Water Forest Creation Project) every year since 2009, assisting with planning and carrying out forest conservation activities. The purpose of this partnership is to raise awareness for the conservation of the natural environment among employees.



Participating employees and their families

### Conserving Biodiversity at Business Sites

Based on the results of environmental assessments at the Takasago plant of Mitsubishi Hitachi Power Systems, Ltd., the Company has established flowerbeds to preserve *salvia plebeia*, a rare plant. In addition, the Company is working to exterminate invasive alien plants, such as the Madagascar ragwort, that have been placed on the blacklist of warning species by the Ministry of the Environment and Hyogo prefecture. Furthermore, as a business with locations in the same prefecture as Lake Biwa, Mitsubishi Heavy Industries Machine Tool Co., Ltd. with headquarters in Ritto City, Shiga Prefecture, participates yearly in efforts to remove invasive fish in an event sponsored by the Biwako-Wo-Modosukai (Team to Bring Back Lake Biwa). Through these efforts, the Company is cooperating in the environmental conservation and ecological conservation of Lake Biwa.

## Performance Data

### Initiatives on Biodiversity

#### Action plan and impact assessment pertaining to biodiversity

We are performing a variety of initiatives to minimize the impact on biodiversity surrounding business locations.

## ► Waste / Pollution

As part of the Fourth MHI Group Environmental Targets (FY2018–FY2020), we set targets to reduce waste generation, including hazardous waste, promote thorough separation and reuse of waste, and reduce waste generation through minimizing process loss. Regarding volatile organic compounds (VOCs), we set internal targets to reduce levels of xylene, toluene, and ethylbenzene—chemicals that are emitted in large volumes—in the atmosphere.

In fiscal 2018, the amount of waste generated decreased compared with fiscal 2017 as a result of the changes in the number of data aggregation companies. However, landfill disposal amounts increased. The primary reason for this increase was the sludge generated through maintenance at some sites. Atmospheric emissions of VOCs amounted to 759 tons in fiscal 2018, a decrease from fiscal 2017.

MHI Group will continue its efforts to reduce waste generation and VOC emissions.

### Amount of waste generated

FY2018

# 158

 thousand tons (Note 1)

### Atmospheric Emissions of Xylene, Toluene, and Ethylbenzene

FY2018

# 759

 t (Note 2)

(Note 1) Including valuables. Data is for MHI on a non-consolidated basis and 118 Group companies. (Coverage: 90% of consolidated revenues)

(Note 2) Data is for MHI on a non-consolidated basis and 22 Group companies in Japan.

## Performance Data

### Waste / Pollution

#### Waste generation

Waste generation	Unit	2015 (Note 2)	2016 (Note 3)	2017 (Note 4)	2018
Waste generation (Note 1)	t	131,395	178,665	169,181	157,561 (Note 5)
Third-party Assurance (domestic)	t	Acquisition	96,029	119,268	49,053 (Note 6)
Recycling amount (Note 1)	t	118,478	149,435	139,951	131,589 (Note 5)
Landfill waste disposal amount	t	2,144	7,668	9,652	14,385 (Note 5)

(Note 1) Including valuables.

(Note 2) Data is for MHI on a non-consolidated basis and 20 Group companies in Japan.

(Note 3) Data is for MHI on a non-consolidated basis and 137 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 152 Group companies.

(Note 5) Data is for MHI on a non-consolidated basis and 118 Group companies. (Coverage: 90% of consolidated revenues)

(Note 6) Data is for MHI on a non-consolidated basis and 14 Group companies. Excluding valuables.

**Hazardous waste generation**

Hazardous waste generation	Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
	t	6,238	11,288	11,253	9,979

(Note 1) Data is for MHI on a non-consolidated basis.

(Note 2) Data is for MHI on a non-consolidated basis and 137 Group companies.

(Note 3) Data is for MHI on a non-consolidated basis and 152 Group companies.

(Note 4) Data is for MHI on a non-consolidated basis and 118 Group companies. (Coverage: 90% of consolidated revenues)

**VOC emissions**

VOC emissions	Unit	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 2)</sup>	2017 <sup>(Note 3)</sup>	2018 <sup>(Note 4)</sup>
Total	t	1,546	1,199	1,150	759
Toluene	t	336	310	342	256
Xylene	t	797	596	520	329
Ethylbenzene	t	396	293	288	174

(Note 1) Data is for MHI on a non-consolidated basis and 4 Group companies in Japan.

(Note 2) Data is for MHI on a non-consolidated basis and 10 Group companies in Japan.

(Note 3) Data is for MHI on a non-consolidated basis and 28 Group companies in Japan.

(Note 4) Data is for MHI on a non-consolidated basis and 22 Group companies in Japan.

# Contributions to Society

## ► Labour Practice

In order to provide a work environment where each and every employee can reach their full potential, MHI Group formulated the MHI Group Global Code of Conduct and is working to foster a corporate culture and establish various systems to serve such a purpose.

In regard to payment, working hours, and labour standards, we carefully comply with the laws and regulations of each country and adhere to the laws and regulations of Japan such as the establishment of labour conditions that prohibit employees from working more than eight hours a day and 40 hours a week. Through such measures, we are working to provide an even better work environment for our employees. At the same time, we are working to further improve our work environment.

Moreover, we are concluding collective agreements with labour unions and compiling opinions regarding topics such as living wages, bonuses, occupational health and safety, improvements to various systems, and business conditions. In doing so, we are maintaining a dialogue between labour unions and management.

MHI considers diversity to be essential for human resources, who represent the core of its business activities from the perspectives of accelerating globalization and adapting to various business environments. Focusing on securing and enhancing the readiness of our global business as well as on promoting the active participation of women, we will strengthen diversity management.

To promote diversity, we will advance diversity management in position-based training and thereby foster a corporate culture where women play an active role. In addition, the Chairman of the Board regularly attends meetings for The Declaration on Action by a Group of Male Leaders Who Will Create a Society in Which Women Shine held by the Gender Equality Bureau Cabinet Office, in solidarity with the goals of the declaration.

In July 2014, MHI set a target to increase the number of female managers in positions of section manager and higher in the Company threefold from the current level by 2020. Our current phase of activity addresses four themes: increasing the number of female employees, offering career support for employees raising children or providing nursing care, systematically developing female employees in managerial positions, and fostering a corporate culture that supports diversity management. Moreover, we are considering flexible working styles that facilitate a quick return to work after childbirth or raising children, and creating a framework and an environment to further promote the careers of female employees. In April 2019, we appointed our first female executive officer.

We aim to promote social independence for differently abled people and provide a place where they can find success in accordance with their abilities. We are also supporting our employees by continuously considering our workplace environment and appropriate equipment and facilities –including a move to barrier-free facilities– maintaining a health management center and providing consulting services. In December 2018, we also created areas where differently abled people can play an active role. Moreover, since 2003, we have formulated a system for reemploying workers who are past retirement age (aged 60).

In addition, we implemented the Employment Extension System in 2013 to realize more balanced treatment and improved employee benefits for these workers than what was offered under the previous reemployment system.

In addition, with the diversifying beliefs among our employees, we opened up our meeting room to provide them with a place for holding prayers and religious services. We are also working to promote the involvement of highly skilled employees with experience in various settings such as by considering the possibility of providing same-sex couples with the same welfare benefits as married couples.

Number of female managers at MHI

FY2018

**100** (MHI)

## Performance Data

## Labour Practice

## Diversity and Equal Opportunity

Number of employees (At the end of the fiscal year)		Unit	2014	2015	2016	2017	2018	Coverage
Total			80,583	81,845	83,932	82,728	80,744	Consolidated
			21,117	19,357	16,824	14,717	14,534	MHI
Male			19,069	17,414	15,166	13,213	13,104	MHI
	%		90.3	90.0	90.1	89.8	90.2	MHI
Female			2,048	1,943	1,658	1,504	1,430	MHI
	%		9.7	10.0	9.9	10.2	9.8	MHI

Average length of service and age for employees		Unit	2014	2015	2016	2017	2018	Coverage
		years	16.3	16.1	16.2	16.4	17.0	MHI
		age	38.9	39.0	39.2	39.5	40.1	MHI
Male		years			16.2	16.4	17.0	MHI
Female		years			16.6	16.6	17.2	MHI

Executive		Unit	2014	2015	2016	2017	2018	Coverage
Total			55	59	54	58	57	MHI
			54	58	53	57	56	MHI
Female	%		98.2	98.3	98.1	98.3	98.2	MHI
			1	1	1	1	1	MHI
	%		1.8	1.7	1.9	1.7	1.8	MHI

Manager (in positions of section manager and higher)		Unit	2014	2015	2016	2017	2018	Coverage
Total			4,057	4,108	3,478	3,083	3,196	MHI
			3,990	4,029	3,398	2,998	3,096	MHI
Female	%		98.3	98.1	97.7	97.2	96.9	MHI
			67	79	80	85	100	MHI
	%		1.7	1.9	2.3	2.8	3.1	MHI

Differently -abled people		Unit	2014	2015	2016	2017	2018	Coverage
Employment rate	%		2.17	2.22	2.17	2.13	2.1	MHI

Number of employees re-hired over retirement age (60yrs)		Unit	2014	2015	2016	2017	2018	Coverage
Total			1,844	1,613	1,284	925	696	MHI

## Freedom of Association

		Unit	2014 <sup>(Note 1)</sup>	2015 <sup>(Note 1)</sup>	2016 <sup>(Note 1)</sup>	2017 <sup>(Note 1)</sup>	2018
Employees covered by collective bargaining agreements	%		99.9	99.9	99.9	99.9	88.9 <sup>(Note 2)</sup>
Number of labour union-management consultations	times		36	44	36	43	40 <sup>(Note 1)</sup>

(Note 1) Data is for MHI on a non-consolidated basis.

(Note 2) Data is for MHI on a non-consolidated basis and 10 Group companies in Japan.



## Layoffs

	Unit	2014	2015	2016	2017	2018	Coverage
Number of employees laid off		0	0	0	0	0	MHI
Number of labour union-management consultations	times	0	0	0	0	0	MHI

## ► Occupational Health and Safety

MHI embraces a basic policy for employee health and safety founded on the following three commitments: (1) Safety is the number one priority. We will do everything in our power to protect lives; (2) We devote every effort to safety in creating outstanding products that contribute to the development of society; and (3) Our physical and mental wellbeing is fundamental to everything we do at MHI Group, and we must continue to elevate and embrace a culture of health and safety across our workplaces. This policy extends to subcontracted companies engaged in business with our employees. Based on these principles, we operate an occupational health and safety management system throughout the Company to create safe, pleasant workplaces. As part of efforts related to occupational health and safety, the Central Production Committee, chaired by the executive officer in charge of HR, performs regular consultations and follow-ups on progress regarding health and safety management plans. Every month, the health and safety committee at each work location, comprising the health and general safety manager, employees, and the labour unions, meet with health and safety committees in each division. In addition, we consult with labour unions on a regular basis.

Frequency rate of industrial accidents requiring leave

FY2018 **0.24** (Consolidated) ✓

Manufacturing industry average

FY2018 **1.20**

### Basic Policy for Employee Safety and Health

The MHI Group Health and Safety Policies

[Our Health and Safety Principle]

At the MHI Group, safety is the number one priority. We will do everything in our power to protect lives.

[Our Health and Safety Policies]

1. Each and every one of us across the MHI Group must join forces as one united team to maintain and heighten our health and safety standards.
2. We hold health and safety as a top priority at each of the MHI Group companies by establishing procedures, defining roles and responsibilities, and engaging in health and safety initiatives.
3. To prevent occupational accidents or illness, we work to continually enhance our health and safety initiatives by setting measurable goals and evaluating results.
4. We minimize risks at the workplace by assessing all potential issues and implementing appropriate measures to ensure a safe and secure work environment.
5. It is a responsibility of each one of us at the MHI Group to learn, understand, and comply with our health and safety policies and procedures, as well as applicable laws and regulations, through education and training programs.
6. Our physical and mental wellbeing is fundamental to everything we do at the MHI Group.  
We must continue to elevate and embrace a culture of health and safety across our workplace.

## Pick Up

## Opening the Safety Transmission Center at Nagasaki Shipyard &amp; Machinery Works

MHI opened a facility for providing education on work safety in October 2010. The facility, called the Safety Transmission Center at the Nagasaki Shipyard & Machinery Works, is dedicated to the Nagasaki Shipyard & Machinery Works' resolution not to let any fatal accidents occur in its production operations. The facility consists of two zones: the Accident Case Studies Zone, where videos and displays show employees how accidents happen and what to do to prevent them, and the Human Error Study Zone, where employees can learn, in a hands-on format and using real-life examples, the principles that trigger human error and how to identify risks before accidents occur.

The Nagasaki Shipyard & Machinery Works is working to cultivate in its workforce a sensitivity to hazards and a culture of safety by using the Safety Transmission Center as a place where all employees, from managers to operators, can learn nearly firsthand the horror of accidents and the pain they cause, and decide for themselves what they can and should do to prevent them.



Safety Transmission Center

## Performance Data

## Occupational Health and Safety

Fatalities		2014	2015	2016	2017	2018
Coverage		MHI	MHI	MHI	Consolidated <sup>(Note 1)</sup>	Consolidated <sup>(Note 1)</sup>
Employees		0	0	0	0	0 ✓
Contractors		0	0	2	1	0 ✓
LTIFR <sup>(Note 2)</sup>		2014	2015	2016	2017	2018
Coverage		MHI	MHI	MHI	Consolidated <sup>(Note 1)</sup>	Consolidated <sup>(Note 1)</sup>
Employees		0.09	0.11	0.28	0.18	0.17 ✓
Contractors		0.19	0.45	0.41	0.46	0.29 ✓
OIFR		2014	2015	2016	2017	2018
Coverage		MHI	MHI	MHI	MHI	MHI
Employees		0.04	0.02	0.02	0.08	0.03 ✓
Number of Industrial accidents		2014 <sup>(Note 3)</sup>	2015 <sup>(Note 3)</sup>	2016 <sup>(Note 3)</sup>	2017	2018
Coverage		MHI	MHI	MHI	Consolidated <sup>(Note 1)</sup>	Consolidated <sup>(Note 1)</sup>
Employees		29	34	39	19	17 ✓
Contractors		-	-	-	52	37 ✓

(Note 1) Data is for MHI on a non-consolidated basis and 23 Group companies in Japan.

(Note 2) The accident frequency rate is the number of casualties and injuries due to occupational accidents per 1 million total working hours and represents the frequency at which disasters occur. Number of casualties due to occupational accidents of requiring 1 day or more of leave ÷ total number of working hours × 1,000,000.

(Note 3) The number of industrial accidents for 2014 to 2016 represents all accidents including those not requiring leave of absence.

Working hours	Coverage Hours	2014	2015	2016	2017	2018
		MHI	MHI	MHI	Consolidated <sup>(Note 1)</sup>	Consolidated <sup>(Note 1)</sup>
		104,615,169	108,164,976	89,026,326	218,665,120	227,229,887 ✓

#### Goals for reducing labour-related accidents<sup>(Note 1)</sup>

Number of fatal accidents / serious incidents	2015	2016	2017	2018	2019
Goal	0	0	0	0	0
Result	0	2	2	0	

(Note1) Data is for MHI on a non-consolidated basis and 23 Group companies in Japan.

#### Status of activities, training, and awareness regarding to occupational health and safety

As a means to realize our health and safety policies, we have developed an occupational health and safety management system that is capable of both systematically and continuously implement mechanisms related to health and safety. In order to reduce the risk of occupational accidents, an occupational safety risk assessment is carried out during planning for new projects and on a regular basis for existing projects. As part of this effort, MHI makes improvements based on the results of risk assessments implemented in each domain. These assessments are related to tasks and equipment, and are mainly focused on the safety and manufacturing sectors. We are also implementing safety education for entry-level employees and other employees. This education utilizes visual learning materials and hands-on equipment that make it possible to actually experience accidents simulations. This hands-on equipment has been installed at each works, including the Nagasaki Shipyard & Machinery Works and Kobe Shipyard & Machinery Works.

#### Response to emergencies

To prepare for possible disasters and accidents, prescribed measures for dealing with emergency situations have been determined for each domain, with consideration given to the characteristics of the Group's business in order to minimize damage and bring any situation that may arise under prompt control. In addition to conducting an investigation and analysis of the situation surrounding an incident and its cause, we are taking measures to prevent similar accidents from recurring.

## Health Management

#### Programs and initiatives for promoting health

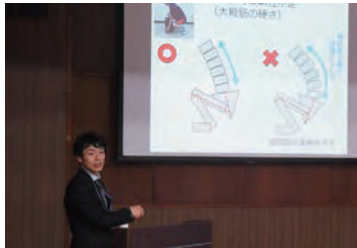
- Health management plans are being implemented due to trends in the number of cases of work absence and the number of days of work absence due to illness.
- Initiative for improving the completion rate for participating in specific health guidance, covering everything from initial interview until the end of guidance.
- Promotion of continuous the use of the health management promotion tool (KENPO) in collaboration with MHI's health insurance union and administration of health promotion activities for the prevention of lifestyle diseases such as the visceral fat measurement meeting, blood vessel refresh program, and provision of healthy food menus.
- MHI Group engages in preventative efforts on second-hand smoking. We also offer an online program for smokers and organize the "Quit Smoking Marathon," a program for providing assistance to quit smoking.
- As part of our approach to combat mental health, we engage in efforts to provide our employees with a comfortable workplace environment. Such efforts include conducting individual follow-ups on stress checks and analyzing workplace groups and undertaking activities for improving the conditions of high-stress workplaces. We also provide mental health education to new employees, employees dispatched overseas, young employees, and managers and supervisors.
- We strive to establish a work environment that enables our employees to receive consultation from industrial physicians and nurses at the workplace and from expert counselors, as well as through an employee assistance program set up outside the Company.
- As an indicator for health management, we are expanding our health support initiatives based on health examination records and lifestyle- and stress-related items on medical questionnaires.



Lifestyle disease prevention seminar



An example of a healthy food menu



Chronic back pain prevention seminar



Visceral fat measurement meeting

**For Employees  
Traveling Overseas**

- We provide information to employees traveling overseas from Japan regarding prevailing illnesses at their destination, including globally prevalent illnesses, such as HIV/AIDS, tuberculosis, and malaria.
- Health checks are conducted by industrial physicians to permit overseas travels before departing for long-term visits and according to the circumstances of the destination.
- Industrial physicians and nurses visit the destinations to conduct evaluations on medical facilities as well as one-on-one interviews based on health check results and local information, and provide training and guidance on lifestyle conditions according to the needs of the area. We also post letters periodically concerning health management and provide personal consultations to those in poor physical or mental condition through telephone and other venues.
- When diseases can be prevented through vaccination, the Company bears the cost as a preventative measure.

**Overseas site maintenance: Outreach program conducted by industrial health staff**



Morning meeting



Workplace discussion

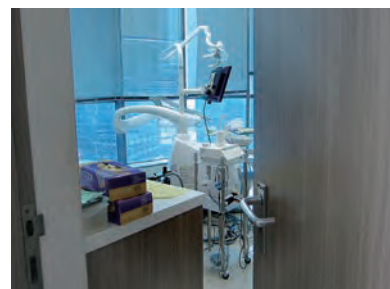
**Visits to areas near medical facilities by industrial physicians**



Examination room



Emergency room



Dental clinic

Health education provided by industrial physicians



Health education for dispatched employees



Health education for family members accompanying dispatched employees

## ▶ Human Resources Development

As part of its basic policy concerning human resources, MHI is working to provide a variety of training programs and place a greater emphasis on promoting self-driven career-building among its employees. MHI is taking steps to improve its training programs with the aim of improving employee capabilities. Through these actions, we aim to become a global corporation that is capable of responding to changes in the rapidly transforming market.

Based on on-the-job training (OJT) in workplaces, we are implementing various educational programs starting immediately after hiring according to job level and function. The main themes of the education according to job level include leadership and management.

As core measures for human resources development, we are concentrating on education to strengthen global responsiveness, development of MHI Group employees and of junior technicians on the forefront of manufacturing, and training activities for Group company employees.

Training hours per employee

FY2018

14.8 hours

Education and training costs per employee

FY2018

29,816 yen

### Performance Data

#### Human Resources Development

##### Human resources management

Focus area on human resources management

Amid its efforts to accelerate globalization and revise its business model, MHI recognizes that diversity in human resources is core to its business activities. Accordingly, we are reinforcing diversity management, centering on enhancing readiness for global business, and promoting the active participation of women.

##### Human resources development programs

Program (1)

###### Education to strengthen global responsiveness

To further strengthen global responsiveness, in fiscal 2011 MHI established a system for dispatching young employees overseas (MGT: MHI Global Training).

■ Benefits

The program develops an early awareness of global human resources and enhances global response capabilities throughout the organization.

Attendance

7 employees (FY2018)

## Program (2)

**Development of MHI Group employees at overseas Group companies**

To accelerate globalization and diversity, it is essential to augment the capabilities and skills of a variety of employees, including those located at Group companies overseas. In order to cultivate human resources supporting Group companies and reinforce regional management of MHI Group, we are enhancing training for future regional and local candidates. In fiscal 2017, we completely revamped our training program contents and target groups. As part of our new selection process, we gather exceptional human resources who are recommended by Group companies in Bangalore, India and mix them with nominators from Japan. In addition to training contents linked to one of India's top business schools, these prospects participate in fieldwork in Bangalore, a city leader in both the market and among ICT start-ups. This combination makes for a diverse and exciting program. Furthermore, we are building and upgrading the contents of an e-learning platform that can be used by overseas Group companies as well as working to create an environment that facilitates the provision of necessary training accessible at any location when required.

■ **Benefits**

To support the management of Group companies overseas, the program aims to provide the knowledge that management personnel require, and cultivate leadership and membership of MHI Group awareness.

## Attendance

20 employees (FY2018)

## Program (3)

**Development of junior technicians on the forefront of manufacturing**

MHI has prepared textbooks that are standardized for the entire company to ensure the commonality and uniformity of education. We have also made DVDs to create digital versions of Skills of the Master manuals developed by veteran technicians. These and other efforts seek to ensure the steady succession of techniques and the rapid training of junior technicians. In addition, with the aim of improving the level of expertise and energizing our junior technicians, we hold company-wide skills contests in machine assembly, lathing, welding, and other fields. MHI is also working to improve the leadership skills of employees who serve as instructors.

■ **Benefits**

At MHI Group, the number of junior technicians is increasing as more senior technicians retire. For that reason, there is an urgent need to train technicians who can maintain the front line of manufacturing. This organizational education program aims to ensure that the techniques of the senior technicians are passed on to the junior technicians.

## Program (4)

**Training activities for Group company employees**

To promote human resource development that is unified throughout MHI Group, we conduct rank-based management training and business skills training as consistent programs across the Group. Since fiscal 2017, we began conducting this training for the entire MHI Group and increasing educational opportunities throughout Group. At the same time, we are promoting interaction among participants that goes beyond companies and divisions, as we work to foster a sense of unity throughout the Group.

■ **Benefits**

This program aims to strengthen the management and business quality of the entire MHI Group.



## ► Talent Attraction and Retention

In order to create an environment that makes it is easy for employees to work and also have a family, MHI is making efforts to expand its various support systems that give consideration to childcare and family care.

In November 2011, MHI established a child-planning leave system, which can be used for infertility treatment, and hourly paid leave, whereby employees can use their leave in increments of one to two hours according to their circumstances for purposes such as childcare and family care. We also expanded the periods for family-care leave and family-care work shifts, so that employees can take up to one year of total family-care leave and take advantage of family-care work shifts for up to when family care will no longer be necessary. In order to provide more flexibility to our employees for their workstyles, we introduced a telework system for employees raising children, providing nursing care, or who are pregnant, in April 2016 and expanded its application to all employees in August 2019.

Furthermore, the periods for family-care leave and family-care work have been expanded; and each can be used for a total of up to one year.

In addition, the systems for childcare leave, childcare work, family-care leave, and family-care work all now exceed statutory minimums.

Information about the systems and procedures regarding childcare and family care are available on our intranet so that employees can access it easily.

Our effort extends beyond the introduction of new support systems. With the goal of facilitating a smooth transition back to work, we also engage in activities such as regularly holding roundtable talks regarding the transition from childcare leave back to work with previously returned individuals to support members of the Group returning to work from childcare leave. We also hold seminars regarding nursing care to prevent employee resignation for elderly care.

We hold regular committee meetings regarding working hours in order to reduce overwork. Moreover, we promote improved worker productivity by aiming for efficient workstyles through means such as the introduction of telework and flextime systems. In addition to ensuring work–life balance for our employees, we are expanding our set of employee benefits to facilitate a diverse variety of lifestyles. To help our employees to feel more settled at our Company, we have introduced a variety of employee benefits, including measures to support housing in company residences and dormitories, property accumulation savings and employee stock ownership plans, and retirement payouts and pension plans.

As the driving force behind sustainable development and growth for MHI Group, it is crucial that, as a business, we enable all of the diverse human resources who support us to work actively. To this end, we will promote Group employee engagement and improve organizational strength. We will also concentrate on 1) internal sharing of strategies, visions, and goals, 2) reform of work practices, including more flexible delegation of authority, review of rules, and improvement of work processes and content, and 3) review of our HR systems and their operation.

Through making active use of employee awareness surveys, we will implement these measures throughout the Company on a continuous basis.

### Returning to work after childcare leave

2018 **98.0%**

### Remaining in work after childcare leave

2018 **98.8%**

## Pick Up

## Nursery Operated

In April 2010, the Nagasaki Shipyard & Machinery Works opened the first MHI in-house nursery, MHI Kira Kids Nursery. All MHI Group employees in Nagasaki with pre-school-aged children can use the facility at any time between 7 a.m. and 8 p.m. Since opening its doors, the nursery has held various events such as parent & child picnics and Christmas parties as well as English, gymnastics, and art classes.

In January 2014, a childcare facility called Sun Marina Kids, operated by the Nichii Gakkan Company, opened within our Yokohama Building. MHI has reserved all spaces at the center, which caters to children up to three years old, so that MHI Group employees can have their children cared for from 7 a.m. through 8 p.m. Sun Marina Kids reduces the number of items parents need to bring with them to the center and has also introduced educational courses including English, gymnastics, and eurhythmics.



Cooking lesson carried out in Nagasaki



Popular slide in Yokohama

## Performance Data

## Talent Attraction and Retention

## Employee Performance Appraisal

	Unit	2014	2015	2016	2017	2018	Coverage
Management by objectives	%	57	58	63	60	60.9	MHI
Multidimensional performance appraisal	%	43	42	37	40	39.1	MHI

## Employment

	Unit	2014	2015	2016	2017	2018	Coverage	
New hired	Total	536	484	589	469	316	MHI	
	Male	495	441	518	416	277	MHI	
		%	92.4	91.1	87.9	88.7	87.7	MHI
	Female	41	43	71	53	39	MHI	
		%	7.6	8.9	12.1	11.3	12.3	MHI
Total turnover rate		4.0	5.6	3.3	2.5	3.1	MHI	
	Male					2.7	MHI	
	Female					7.3	MHI	
Voluntary turnover rate		0.6	0.7	0.7	0.8	1.1	MHI	
	Male					0.9	MHI	
	Female					2.5	MHI	

Average length of service		2014	2015	2016	2017	2018	Coverage
	years	16.3	16.1	16.2	16.4	17.1	MHI
Male	years			16.2	16.4	17.0	MHI
Female	years			16.6	16.6	17.2	MHI

### Employee Engagement

As the driving force that will enable our sustained growth and development, MHI must become a company where the diverse people, who support Group activities, all work with confidence. To achieve this goal, we will focus on promoting Group member engagement and enhancing our organizational strengths. Specifically, we will concentrate on 1) internal sharing of strategies, visions, and goals, 2) reform of work practices, including more flexible delegation of authority, review of rules, and improvement of work processes and content, and 3) review of our HR systems and their operation. Through making active use of employee awareness surveys, we will implement these measures throughout the Company on a continuous basis.

### Employee awareness surveys

MHI Group has been conducting employee awareness surveys since fiscal 2017.

(Example) Ratio of highly engaged employees		2017 <sup>(Note 1)</sup>	2018 <sup>(Note 2)</sup>
Average	%	57	55
Response rate	%	82	87

(Note 1) Data is for MHI on a non-consolidated basis and 18 Group companies in Japan.

(Note 2) Data is for MHI on a non-consolidated basis and 78 Group companies.

### Work-life balance

Number of employees	Number of individuals	Unit	2014	2015	2016	2017	2018	Coverage
using programs that focus on work-life balance	Childcare leave		205	219	182	203	199	MHI
	of which are men		17	20	17	36	43	MHI
	Childcare workshift		456	465	444	459	532	MHI
	of which are men		61	72	99	134	192	MHI
People using child planning leave	Family-care leave		1	3	4	2	1	MHI
	Family-care work shift		5	5	2	7	18	MHI
	Family-care work shift		13	14	13	19	29	MHI
Returning to work after childcare leave	%	94.3	98.2	99.1	97.2	98.0	MHI	
Remaining in work after childcare leave	%	95.5	96.0	98.1	98.5	98.8	MHI	
Percent of employees taking annual paid leave	%	75.5	76.8	77.7	81.4	80.9	MHI	

## ► Human Rights

MHI Group is firmly committed to respecting human rights and workers' rights of employees as per international treaties of human rights.

In May 2015, we established the MHI Group Global Code of Conduct as the common standard for our Group with reference to the UN Guiding Principles on Business and Human Rights. Through this, we believe we will cultivate a single, shared corporate culture. One that is rooted in mutual trust and affords dignity and respect to all employees. The MHI Group values the individual contribution of people irrespective of race, colour, religion, political convictions, gender, age, nationality, sexual orientation, marital status, or disability.

Discrimination will not be tolerated by MHI Group. In addition, we have formulated our Basic Policy on Human Rights in order to respect the human rights of the stakeholders with whom we do business, and contribute to the development of a sustainable society. Our policy stipulates that we act in line with the UN Guiding Principles on Business and Human Rights in order to avoid any acts that lead to human rights violations or promote any similar effect.

Each year, we conduct training to promote human rights awareness at the workplace. It covers the fundamentals of human rights and harassment. This training targets new recruits and newly appointed managers such as deputy managers and section managers. In fiscal 2018, we rolled this training out across 260 new recruits and 1,230 newly appointed managers and supervisors. Furthermore, in an effort to heighten awareness of and prevent power harassment (workplace bullying and harassment), we introduced an e-learning course in fiscal 2010 that continues to be taken to this day. Harassment counselors placed at each Company location attend lectures once a year to increase their skills for handling harassment situations when they occur in an appropriate manner.

Furthermore, to work toward resolving human rights issues, a multi-faceted subject, each company of the Mitsubishi Group takes part in subcommittee activities of the Mitsubishi Human Rights Enlightenment Council, launched in 1983, to allow for mutual exchange between Mitsubishi Group companies, to learn about the foremost examples of human rights issues, and to upgrade our human rights efforts.

Moreover, in fiscal 2018 we took part in Global Compact Network Japan's Human Rights Due Diligence Subcommittee together with other companies to discuss the issue of human rights among businesses and ways in which to engage in human rights due diligence according to the United Nations' Guiding Principles on Business and Human Rights such as being committed to the company policy of protecting human rights, assessing the possibility and impact of human rights violations on the company and the supply chain, establishing measures on preventing, reducing, resolving, and mitigating human rights violations, and disclosing the progress of human rights related initiatives. Specifically, the subcommittee involves lectures held by experts, assessments on the progress of initiatives by companies, workshops, and group work on themes of interest.

People undergoing human rights awareness training

2018

Approximately **1,490**

### Basic Policy on Human Rights

MHI Group formulated the MHI Basic Policy on Human Rights in 2013 in order to respect the human rights of stakeholders involved in our business activities and contribute to the development of a sustainable society.

#### ■ MHI Basic Policy on Human Rights

The Mitsubishi Heavy Industries Group endeavors to fulfill its responsibilities for the protection of human rights in order to continue contributing to social progress in accordance with the MHI creed. We act in line with the Guiding Principles on Business and Human Rights adopted by the U.N. Human Rights Council and endeavor to never act in ways that elicit or facilitate human rights violations by others or other negative actions or effects.

Performance Data

Respect for Human Rights

Management structure related human rights

Chief Executive	Junichiro Kakihara (Senior Vice President, in charge of HR)	
Committee	Name	Committee for Raising Awareness of Human Rights
	Members	Chaired by the Senior Vice President, who is in charge of HR, and composed of 25 members.
	Number of meetings	As many as necessary

Grievance mechanism

Grievance mechanism	<ul style="list-style-type: none"> <li>Internal and external hotline for Corporate Compliance that employees, including contract employees, of MHI and all Group companies and business clients can use.</li> <li>Internal and external Hotlines has been established to report power harassment, workplace bullying and harassment, in 2012.</li> </ul>	
Coverage	Employees, including contract employees, of MHI and all Group companies and business clients	

## ► Corporate Philanthropy

In accordance with its CSR Action Guidelines, MHI Group promotes philanthropic activities with such focus areas as local contributions that are highly related to business activities, upbringing of the next generation, and the environmental preservation. These focus areas consider the Company's business strategy, strengths, and trends in Japan and overseas, and were determined with the goal of contributing to both corporate and social value.

With regard to local contribution, we realize that living together with local communities where MHI Group business facilities are located and building strong relationships based on mutual trust are two essential factors to sustainable business growth. With this in mind, we undertake various activities suitable for local cultures and contribute to the local development and stimulation both in Japan and overseas. With regard to upbringing of the next generation, our basic policy is to communicate "the heart of Japanese manufacturing" and "the arts of science and technology" to the next generation.

We have likewise made cultivating talent one of the priority measures of the 2018 Medium-Term Business Plan. Each of our social contribution activities center on cultivating the next generation, which in turn cultivates those involved in our initiatives to become our next generation or human resources. In addition, the 2018 Medium-Term Business Plan is aimed toward realizing the MHI FUTURE STREAM for a sustainable society, where people all over the world can live with peace of mind. Within this initiative, we will solve the complex and difficult problems faced by society both in the present and in the future by exploring areas of opportunity, retooling existing businesses, and discovering innovative technologies. To face this future head on, we will continue to transform our company to adjust to an ever-changing society.

Expenditure on social contribution activities ✓  
 2018 **1,611** million yen ✓

### Our Policy on Social Contribution Activities

#### Local contribution

##### Live together with communities and contribute to their development

Our basic policy is to live together with local communities of our branch offices, overseas offices, and Group companies in foreign countries and to build strong relationships based on mutual trust. With this in mind, we undertake various activities suitable for local cultures and contribute to the local development and stimulation of the communities both in Japan and overseas.

#### Upbringing of the next generation

##### Transfer "the heart of Japanese manufacturing" as well as "the arts of science and technology" to the next generation

MHI has developed and produced many types of products in its long history. With the goal of passing on both knowledge and skills of "the heart of Japanese manufacturing" and "the arts of science and technology" onto succeeding generations, MHI has a tradition of organizing educational activities such as science classes with experiments for children.

### Pick Up

#### Results of principal philanthropic activities in fiscal 2018

##### Upbringing of the next generation: Inspire the future

Name of activity	Overview	Related SDGs
Science classes	MHI conducts science classes for students at elementary schools located nearby our business facilities during which the MHI Group products and technologies found at the Mitsubishi Minatomirai Industrial Museum are used as teaching materials.	Target 4

Name of activity	Overview	Related SDGs
MHI Tanegashima Space School	We accept applications from elementary school students around Japan to visit Tanegashima, a rocket launch site. During the visit, we conduct science classes and observe rocket launches.	Target 4
The Shiki Theatre Company's Kokoro no Gekijo	The Company is working through musicals to cultivate a richness of spirit among the children Company's Kokoro no Gekijo ("Theater of the Heart") productions. Group employees and their families have participated as volunteers in performances held near our plants. of the next generation. Accordingly, from fiscal 2013 we have supported the Shiki Theatre.	Target 4

#### Local contribution: Create a more harmonious society

Name of activity	Overview	Related SDGs
MHI Miyagi Fukushima Mini-Fund	This support fund set up in fiscal 2012 backs activities at locations that connect people who moved into temporary housing or public housing for disaster recovery following the Great East Japan Earthquake, as well as other relevant local community members.	Target 11
Table For Two	Table For Two (TFT) is a social contribution initiative from Japan aimed simultaneously at alleviating poverty in developing countries and addressing obesity and lifestyle diseases in advanced countries. MHI Group upholds the initiative's philosophy and has incorporated TFT programs in its cafeterias and vending machines within its headquarters and bases of operation.	Target 1 and 2

#### Environment: Care for the planet

Name of activity	Overview	Related SDGs
Tanegashima Loggerhead Turtle Survey	MHI Group offered its support for the Tanegashima Loggerhead Turtle Survey, an event sponsored by the authorized NPO EarthWatch Japan. Tanegashima is a key location for our rocket launch business, and the launch market is expected to expand as demand for satellite use grows around the world. In this activity, employee volunteers participate in local surveys. Although Tanegashima, which is home to an important MHI Group business site, is a spawning ground for the loggerhead turtle, few individual identification surveys have been conducted to date. We anticipate that conducting such surveys in Tanegashima beach areas will help to clarify the ecology of the loggerhead turtles and contribute to the preservation of the species as it faces extinction.	Target 14 and 15
Forest Conservation Programs (forest preservation activities)	MHI Group employees and their families participate in various forest conservation programs led by individual Japanese prefectures to address the many problems affecting forests in locations around Japan and contribute to the development of ecologically diverse forests, in addition to forest preservation activities led by governmental and non-profit organizations.	Target 15
Environmental Action Furusato Cleanup	Each year throughout Japan, we conduct the Furusato Cleanup events as a cleanup activity in regions where we are active on a daily basis. For our cleanup activity in Shiga Prefecture, we conduct activities aimed at eliminating invasive fish species in Lake Biwa. Such cleanup activities are aimed at enhancing awareness among individual Group employees and family members of environmental preservation and local conservation. In fiscal 2018, 128 of these activities were conducted, and 4,300 people have participated.	Target 14 and 15

More detailed information about philanthropic activities is available on our website and CSR Facebook.

■ CSR News <https://www.mhi.com/news//kind/csr.html>

■ CSR Facebook <https://www.facebook.com/mhi.csr.en/>

## Performance Data

## Corporate Philanthropy

## Corporate Philanthropy policy and focus areas

## Focus area (1)

## Relevance to business

## Upbringing of the next generation

MHI regards scientific technology as a source of growth; therefore issues such as children's loss of interest in and capacity for understanding science and a reluctance engage in science may become challenges to the Company's ability to secure and cultivate human resources for the future. Because of this danger, creating activities that spark children's interest in science and promote it as a field of study comprises an important part of maintaining a sustainable business.

## Focus area (2)

## Relevance to business

## Local contribution

As MHI executes business all over the world. It is a critical aspect for business continuity to live in harmony and establish high confidence with every local communities where we operate.

## Focus area (3)

## Relevance to business

## Environment

As MHI business activities are global and encompasses developing/emerging economies, environmental consideration in business operation is critical for our business continuity.

## Social contribution input

Social contribution input		Unit	2014	2015	2016	2017	2018
	Coverage		Group	Group	Group	Group	Group
Total amount		Millions of yen	1,899	2,053	2,542	1,668	1,611 ✓
Category	Academic research	Millions of yen	428	452	491	438	379 ✓
	Education	Millions of yen	596	636	1,115	627	608 ✓
	Community	Millions of yen	135	295	108	94	89 ✓
	Health, medicine, sports	Millions of yen	177	100	134	90	70 ✓
	Others	Millions of yen	563	570	693	419	391 ✓
Type	Cash contributions	Millions of yen	770	1,027	856	783	678
	Time contributions	Millions of yen	490	819	1,126	283	405
	In-kind giving	Millions of yen	105	40	22	31	14
	Management overheads	Millions of yen	534	167	538	571	669

## Social contribution benefit

KPIs-Focus area (1)			2014	2015	2016	2017	2018
Cumulative total number of science classes	Number of participants		4,864	9,350	58,578	62,898	111,523 ✓
	Coverage		MHI	Group	Group	Group	Group
KPIs-Focus area (2)		Unit	2014	2015	2016	2017	2018
Records of natural disaster affected area assistance programs	Number of disasters		1	2	6	5	4 ✓
	Donation / support amount	Millions of yen	10	6	45	43	35 ✓
	Coverage		MHI	Group	Group	Group	Group



KPIs-Focus area (3)		2015	2016	2017	2018
Record of Supporting conservation survey for loggerhead turtles in Tanegashima	Number of applicants for volunteer by employees (Number of participants)	33(12)	159(26)	81(24)	68(36) ✓
	Number of loggerhead turtle individual identification surveys during egg laying	23	42	52	18 ✓
	Contributed amounts				
	Number of hatched baby loggerhead turtle individual identification surveys <sup>(Note)</sup>	-	12	-	123 ✓

(Note) Surveys on incubation were not conducted in 2015 and 2017 due to inclement weather.

#### Benefits to business

- Experience of teaching science classes facilitates employees to develop their presentation and communication capacity and motivates them.
- Early recovery of business regions critical to MHI Group through assistance to areas affected by natural disasters.

#### Contributing to society through business

To promote sustainable business practices, MHI Group believes that it is important to contribute to the development of the countries and regions where we operate and to build good relationships founded on mutual trust. At each overseas location, we promote management that is respectful of the culture and practices of each region of operation. At the same time, we create employment by expanding our business while actively recruiting suppliers and working toward better procurement.

## ► Recognition from Society

The MHI Group practices management with a focus on CSR and conducts a wide range of activities, including corporate governance and risk management, to enhance its business, the environment, and society. Thanks to efforts such as these, MHI has been selected for the third consecutive year for inclusion in the Asia Pacific Index of the Dow Jones Sustainability Indices (DJSI), a representative environmental, social, and governance (ESG) index. We are also included in the FTSE Blossom Japan Index, a stock index for ESG investments adopted by the Government Pension Investment Fund (GPIF), the MSCI Japan ESG Select Leaders Index, the MSCI Japan Empowering Women (WIN) index, and the S&P/JPX Carbon Efficient Index since 2018.

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## INDEPENDENT ASSURANCE STATEMENT

To: Mitsubishi Heavy Industries, Ltd.



Bureau Veritas Japan Co., Ltd. (Bureau Veritas) has been engaged by Mitsubishi Heavy Industries, Ltd. (MHI) to provide limited assurance over its sustainability information selected by MHI. This Assurance Statement applies to the related information included within the scope of work described below.

### Selected information

The scope of our work was limited to assurance over the following information included within MHI Group's ESG DATA BOOK 2019 (the 'DATA BOOK') for the period of April 1, 2018 through March 31, 2019 (the 'Selected Information'):

- Greenhouse gas emissions (Scope 1 and Scope 2): CO<sub>2</sub> emissions from energy use through business operations of MHI and MHI Group's 16 companies within Japan (17 companies in total)
- Energy use through business operations of MHI and MHI Group's 16 companies within Japan (17 companies in total)
- Water usage by source through business operations of MHI and MHI Group's 15 companies within Japan (16 companies in total)
- Waste generation through business operations of MHI and MHI Group's 14 companies within Japan (15 companies in total)

### Reporting criteria

The Selected Information included within the DATA BOOK needs to be read and understood together with the reporting criteria stated in the DATA BOOK.

### Limitations and Exclusions

Excluded from the scope of our work is any verification of information relating to:

- Activities outside the defined verification period;
- Any other information within the DATA BOOK, which is not listed as the 'Selected Information'.

This limited assurance engagement relies on a risk based selected sample of sustainability data and the associated limitations that this entails. This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist.

### Responsibilities

This preparation and presentation of the Selected Information in the DATA BOOK are the sole responsibility of the management of MHI.

Bureau Veritas was not involved in the drafting of the DATA BOOK or of the Reporting Criteria. Our responsibilities were to:

- obtain limited assurance about whether the Selected Information has been prepared in accordance with the Reporting Criteria;
- form an independent conclusion based on the assurance procedures performed and evidence obtained; and



- report our conclusions to the Directors of MHI.

**Assessment Standard**

We performed our work in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information (Effective for assurance reports dated on or after December 15, 2015) issued by the International Auditing and Assurance Standards Board.

For the greenhouse gas emissions data, we undertook verification in accordance with the requirements of ISO14064-3 (2006): Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions.

**Summary of work performed**

As part of our independent verification, our work included:

1. Conducting interviews with relevant personnel of MHI;
2. Reviewing the data collection and consolidation processes used to compile Selected Information, including assessing assumptions made, and the data scope and reporting boundaries;
3. Reviewing documentary evidence provided by MHI;
4. Reviewing MHI systems for quantitative data aggregation and analysis;
5. Verification of sample of data back to source by carrying out three physical site visits, selected on a risk based bases at the following locations:
  - MHI Hiroshima Machinery Works Eba Plant
  - MHI Nagoya Aerospace Systems Works Komaki South Plant
  - Mitsubishi Heavy Industries Thermal Systems, Ltd. Biwajima Works
6. Reperforming a selection of aggregation calculations of the Selected Information;
7. Comparing the Selected Information to the prior year amounts taking into consideration changes in business activities, acquisitions and disposals.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement.

Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

**Verified greenhouse gas emissions**

We performed our verification work on greenhouse gas emissions data in accordance with the requirements of ISO14064-3(2006).

Verified data in greenhouse gas assertion made by MHI are as follows.

	Greenhouse gas emissions [t-CO <sub>2</sub> e]	Boundary
Scope 1	135,570	CO <sub>2</sub> emissions from energy use through business operations of MHI and MHI Group's 16 companies within Japan (17 companies in total) for the period of April 1, 2018 through March 31, 2019
Scope 2 (market-based)	358,250	



**Conclusion**

On the basis of our methodology and the activities described above:

- Nothing has come to our attention to indicate that the Selected Information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria;
- It is our opinion that MHI has established appropriate systems for the collection, aggregation and analysis of quantitative data within the scope of our work.

**Statement of Independence, Integrity and Competence**

Bureau Veritas is an independent professional services company that specialises in quality, environmental, health, safety and social accountability with over 190 years history. Its assurance team has extensive experience in conducting verification over environmental, social, ethical and health and safety information, systems and processes.

Bureau Veritas operates a certified Quality Management System which complies with the requirements of ISO 9001:2015, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Bureau Veritas has implemented and applies a Code of Ethics, which meets the requirements of the International Federation of Inspections Agencies (IFIA), across the business to ensure that its employees maintain integrity, objectivity, professional competence and due care, confidentiality, professional behavior and high ethical standards in their day-to-day business activities.

Bureau Veritas Japan Co., Ltd.  
Yokohama, Japan  
July 8, 2020





# LR Independent Assurance Statement

## Relating to Mitsubishi Heavy Industries, Ltd.'s Social Indicators of FY2018 within ESG DATA BOOK 2019

This Assurance Statement has been prepared for Mitsubishi Heavy Industries, Ltd. in accordance with our contract but is intended for the readers of this report.

### Terms of engagement

Lloyd's Register Quality Assurance Limited (LR) was commissioned by Mitsubishi Heavy Industries, Ltd. ("the Company") to provide independent assurance on its social data in fiscal year 2018 starting from 1 April 2018 to ending at 31 March 2019 reported in ESG DATA BOOK 2019 ("the report"), against the assurance criteria below to a limited level of assurance and at the materiality of the professional judgement of the verifier using ISAE3000.

Our assurance engagement covered the operations and activities of the Company and its subsidiaries in Japan and overseas and specifically the following requirements:

- Verifying conformance with the Company's reporting methodologies
- Evaluating the accuracy and reliability of the data for the selected indicators listed below:<sup>1</sup>
  - <Social contribution data>
    - Social contribution input
    - Cumulative total number of the science class participants
    - Records of natural disaster affected area assistance programs
    - Tanegashima Island Loggerhead Sea Turtle Survey
  - <Occupational health and safety data>
    - Fatalities<sup>2</sup>
    - LTIFR (Lost time injury frequency rates)<sup>2</sup>
    - OIFR (Occupational Illness Frequency Rate)<sup>3</sup>
    - Number of Industrial accidents requiring leave<sup>2</sup>
    - Working hours<sup>2</sup>

Our assurance engagement excluded the data and information of the Company's suppliers, contractors and any third-parties mentioned in the report.

LR's responsibility is only to the Company. LR disclaims any liability or responsibility to others as explained in the end footnote. The Company's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of the Company.

### LR's Opinion

Based on LR's approach nothing has come to our attention that would cause us to believe that the Company has not, in all material respects:

- Met the requirements above
- Disclosed accurate and reliable performance data

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

<sup>1</sup> LR undertook a limited assurance engagement of the social data marked with ✓ within the ESG DATA BOOK 2019 and MHI website.

<sup>2</sup> The scope covers Mitsubishi Heavy Industries, Ltd. and its 23 consolidated subsidiaries companies in Japan. And the performance data includes the employees of subcontractors who work within the scope. LTIFR is the number of casualties resulting from the occupational accidents in the boundary divided by total working hours (in the unit of million hours)

<sup>3</sup> The scope covers only Mitsubishi Heavy Industries, Ltd. OIFR is the number of casualties resulting from the recorded occupational diseases in the boundary divided by total working hours (in the unit of million hours)



**Note:** The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

### LR's approach

LR's assurance engagements are carried out in accordance with ISAE3000. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Auditing the Company's data management systems to confirm that there were no significant errors, omissions or mis-statements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification;
- Interviewing with key people responsible for compiling the data and drafting the report;
- Sampling datasets and tracing activity data back to aggregated levels; and
- Verifying the historical Social data and records for the fiscal year 2018;

### Observations

Further observations and findings, made during the assurance engagement, are:

The Company should continue improving data accuracy by maintaining the control systems with internal self-verification, and should further demonstrate the accuracy and reliability of its future reports.

### LR's standards, competence and independence

LR implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 *Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition* and ISO/IEC 17021-1 *Conformity assessment – Requirements for bodies providing audit and certification of management systems – Part 1: Requirements* that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants.

LR ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

This is the only work undertaken by LR for the Company and as such does not compromise our independence or impartiality.

Signed

Dated: 21 December 2019

Norihiko Kinoshita

LR Lead Verifier

On behalf of Lloyd's Register Quality Assurance Limited

10th Floor, Queen's Tower A, 2-3-1, Minatomirai, Nishi-ku, Yokohama, Japan

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## **Mitsubishi Heavy Industries, Ltd.**

**Address all inquiries about this report to:**

**Business Strategy Office  
Corporate Communication Department**

Marunouchi-Nijubashi Bldg., 2-3 Marunouchi 3-chome,  
Chiyoda-ku, Tokyo, 100-8332, Japan

Telephone: 81-3-6275-6200 Facsimile: 81-3-6275-6474