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# **Policy Directions**

# **Environmental Plan Package**

Anticipating a time 30 years in the future, in October 2020 MITSUBISHI MOTORS formulated the Environmental Plan Package, which defines the directions and targets of its environmental initiatives. This package establishes the foundation for our directions on environment-related management strategy, outlining our objectives for realizing a sustainable society, including one that is carbon-neutral, as we conduct our business activities. The Environmental Plan Package comprises the Environmental Policy, which we have revised to incorporate our medium- to long-term

### **Environmental Policy**

MITSUBISHI MOTORS recognizes that responding to environmental issues through its business activities is essential. Accordingly, we will engage proactively in specific and effective measures from a medium- to long-term perspective. (Directions of initiatives)

- We will face three specific environmental issues headon: climate change, resource depletion and environmental pollution.
- 2. Given that 2050 is an important landmark for climate change on a global scale, we have clarified levels to be achieved, in 10-year increments, and are pursuing initiatives to this end.
- 3. We will respond to environmental issues through the following activities.
- Unique environmental contributions through our products
- Initiatives at each stage of automobile production, sale and use
- Collaboration with business partners, affiliated institutions, governments and local authorities
- Initiatives targeting environmental issues rooted in the local community
- Initiatives to determine and reduce environmental impact of all related business activities

perspective; the Environmental Vision 2050, which sets out our vision for society to be achieved by 2050 and directions for our initiatives; and the Environmental Targets 2030, which clarifies specific initiatives to be achieved by 2030 in accordance with this vision.

# **Environmental Policy**

The Company has been acting in accordance with its Environmental Policy, which was formulated in 1999. However, in the 20 years that have passed since that time the operating environment has changed, prompting us to revise the policy in 2020 to reflect current social trends. We recognize that responding to environmental issues in our business activities is essential, and so have newly incorporated a mediumto long-term outlook into our policy.

Focusing specifically on climate change, resource depletion and environmental pollution, we aim to contribute to the preservation of water resources and biodiversity through initiatives in these areas.

# **Environmental Vision 2050**

Members of the Paris Agreement, adopted in 2015, agreed to limit the rise in average global temperatures to 2°C above levels before the Industrial Revolution and endeavor to keep the increase to 1.5°C. From this basis, we established initiatives to pursue from a long-term perspective, leading up to 2050. In 2018, the IPCC\* published the Special Report on Global Warming of 1.5°C, which calls for society as a whole to achieve a net-zero balance between human-caused greenhouse gas emissions and absorption.

As these measures illustrate, awareness of climate change and other environmental issues is rising each year. Companies are also being called upon to undertake more ambitious initiatives.

Against this backdrop, we formulated the Environmental Vision 2050, which sets out our vision for society to be achieved by 2050, as well as directions for our initiatives, with regard to climate change, resource circulation and preventing environmental pollution. \* Intergovernmental Panel on Climate Change

### **Environmental Vision 2050**

In December 2015, the Paris Agreement was adopted at COP21. Members of this accord agreed to curtail the rise in average global temperatures to 2°C above levels before the Industrial Revolution and to work to keep the rise to 1.5°C. Given such social demands, MITSUBISHI MOTORS believes it can contribute toward the realization of a sustainable society, achieving a balance between the progress of humankind and the global environment, through the proliferation of electric vehicles and the promotion of their use in society.

Action to Climate Change	Resource Circulation	Pollution Prevention
Through electric vehicles and the increased use of renewable ener- gy, we will contribute to net-zero CO <sub>2</sub> emissions and the realization of a society that is resilient to climate change.	We will contribute to a resource- recycling- oriented society by minimizing input resources and maximizing resource efficiency.	We will contribute toward a society free of environmental pollution affecting human health and the ecosystem by reducing the environmental impact of our products and the pollution result- ing from our business activities.

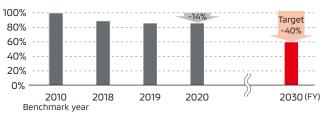
# **Environmental Targets 2030**

	Targets 2030	Main Initiatives		
Action to Climate Change	CO <sub>2</sub> emissions from new vehicles*1: -40% (compared with FY2010)	<ul> <li>Promotion of electric vehicles, centering on plug-in hybrid electric vehicles (PHEVs) (electric vehicles<sup>*2</sup> sales ratio: 50%)</li> <li>Improved fuel efficiency of ICE vehicles</li> </ul>		
	CO <sub>2</sub> emissions from business activities*3: -40% (compared with FY2014)	<ul> <li>Promotion of energy conservation</li> <li>Introduction of renewable energy</li> </ul>		
	Implementation of measures to address climate change	<ul> <li>Promotion of V2X*<sup>4</sup> (DENDO DRIVE STATION/HOUSE)</li> <li>Contribution to adaptation through agreements in times of disaster</li> </ul>		
Resource Circulation	Expanding adoption of plastic materials not derived from oil	<ul> <li>Development of material technologies</li> <li>Proactive use in parts</li> </ul>		
	Achievement of zero direct landfill waste (less than 0.5%)	<ul> <li>Reduction of waste generation and promotion of reuse as resources</li> <li>Appropriate waste treatment</li> </ul>		
	Reuse of batteries used in electric vehicles	<ul> <li>Promotion of recovery and use (BESS*<sup>5</sup>, etc.)</li> <li>Technology development with a view to reuse (battery packs, systems)</li> </ul>		
Pollution Prevention				
	Conformance to regulations on regulations on use of hazardous substances in products	<ul> <li>Obtaining information on laws and regulations, enhancing the internal management structure</li> <li>Collaboration with suppliers</li> </ul>		

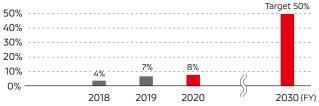
Environmental Vision 2050 sets out our vision for society in 30 years' time, as well as the directions for our initiatives. In line with this vision, we have formulated Environmental Targets 2030, which sets forth items to be addressed in the next 10 years.

Our principal targets and results for FY2020 are outlined below. The substantial reduction in CO<sub>2</sub> emissions from our business activities was affected by a downturn in the number of vehicles produced, due to the COVID-19 pandemic.

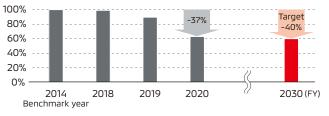
# Environmental Targets 2030: Principal Targets and Results CO<sub>2</sub> emissions from new vehicles



### Ratio of electric vehicles sold



### • CO<sub>2</sub> emissions from business activities



### **Environmental Management**

Promotion of LCA\*6

- Promotion of environmental management within the Group and at sales outlets
- Expanded environmental information disclosure Promotion of employee education and awareness activities Collaboration with suppliers
  - Promotion of grass-roots community environmental preservation activities

- \*1: CO2 emissions per new vehicle while driving \*2: Battery electric vehicles, plug-in hybrid electric vehicles (PHEVs), and hybrid electric vehicles \*3: Scope 1 (direct emissions) and Scope 2 (indirect emissions)
- \*4: A general term encompassing vehicle to home (V2H) and vehicle to grid (V2G), among others.
- \*5: BESS stands for Battery Energy Storage System.

\*6: LCA stands for life cycle assessment, which is a technique for calculating the environmental impact of a product from manufacturing to disposal.



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**Steps to Formulation** 

The Environmental Working Group we set up in FY2018 gathered data related to global social changes, such as economic growth and population increase, as well as environmental issues. In particular, the group looked for information on regions of importance to MITSUBISHI MOTORS' business, ascertaining the status of local communities and government environmental policies. We also looked at unit sales and the number of vehicles owned in each country, arranging this data to match the Company's business characteristics by looking at our business data and results of environmental initiatives. The group also summarized our efforts to date.

Using this data, we then verified each of the environmental issues and our relationship to them. We identified three environmental issues to face head-on: action to climate change, resource circulation and pollution prevention. We considered the long-term outlook for these environmental issues by studying external scenarios from the IEA\*<sup>2</sup> and IPCC, as well as by running our own simulations. We then arranged the issues to be addressed by thinking about how to contribute in a manner tailored to local communities while maximizing our strengths, looking at each market from a regional perspective and considering plug-in hybrid electric vehicles (PHEVs) and other business characteristics.

Based on this analysis, we clearly spelled out the directions for initiatives indicated in the Environmental Policy and Environmental Vision and set numerical targets for the items in the Environmental Targets. In this way, we formulated the New Environmental Plan Package, which provides an overall summary of our environmental strategies.

In addition, we had outside experts review the draft package we had formulated, looking at it from a stakeholder perspective. Going forward, we will continue to accumulate and analyze information on social trends and confirm the appropriateness of our Environmental Plan Package. \*2: International Energy Agency

Gathering of Information	<ul> <li>Social and economic conditions         Such as economic growth and population increases     </li> <li>Status of environmental issues         Climate change, resource depletion, environmental pollution, loss of biodiversity and shortage of water resources     </li> <li>Trends in key regions (Japan, ASEAN, Oceania, others)         GDP, changes in the population, government environmental policies, etc.     </li> <li>Automobile production and data related to the Company         Business&gt;         Unit sales and number of vehicles owned, globally and by region         Results of Environmental Initiatives&gt;         CO2 emissions (Scope 1, 2, 3), amount of waste generated, etc.     </li> </ul>
Analysis	<ul> <li>Verify relationships between environmental issues and the Company Identify environmental issues to face head-on</li> <li>Consider long-term outlook for environmen- tal issues Gather external scenarios on CO<sub>2</sub> emissions, run our own simulations</li> <li>Arrange initiatives to be taken, given our busi- ness characteristics (markets and products)</li> </ul>
Formulation	<ul> <li>Clearly spell out the Environmental Policy and Environmental Vision 2050</li> <li>Consider initiatives in the Environmental Tar- gets 2030, as well as numerical targets</li> </ul>
Rev	<ul> <li>Conduct review via outside experts</li> </ul>

# Framework for Consideration

MITSUBISHI MOTORS formed the Environmental Working Group, made up of members from across the Company, and proceeded with considerations.

After certain directions had been determined, a small circle chaired by the then-CEO moved forward to specifics. These were proposed to the Executive Committee and Board of Directors and approved.

#### <July 2018 to December 2019>

Sustainability Committee (Chair: CEO* <sup>1</sup> ; members: Division general managers of relevant divisions)					
(Chall. CEO <sup>m</sup> , I	(Chair: CEO"; members: Division general managers of relevant divisions)				
	Environmental Working Group				
Leader: Subleader: Secretariat: Members:	Technical advisor to the ch	airman*1 of the Development epartment • Asset management • Finance			

#### <January-October 2020>

•		
Board of Directors		
Executive C	ommittee	
Small	Circle	
Members: • CEO*1 • Co-COO (in charge of development • Director in charge of manufacturing • Director in charge of sustainability • Head of corporate strategy	Product Strategy Division	

\*1 Positions as of March 2020

#### MITSUBISHI MOTORS CORPORATION Sustainability Report 2021

# **Environmental Management**

# **Basic Approach**

Minimizing environmental impact is an essential element of MITSUBISHI MOTORS' sustainable growth. To this end, we recognize the importance of reinforcing our environmental management. We also believe that the costs of promoting related initiatives are an important investment from a long-term perspective.

In order to promote environmental initiatives reliably and efficiently, MITSUBISHI MOTORS has constructed a framework for environmental management. We are promote Group initiatives, including education and awareness activities for employees, and the acquisition of certifications for environment management systems among affiliated companies.

We also dissemination information about initiatives on our website and through our sustainability report. We value opportunities to receive feedback from our various stakeholders.

Please see page 112 for details on environmental accounting.

# **Management Structure**

Since 1993, we have been holding an Environmental Council, which is attended by the Executive Officer, President & CEO and officers from each division. The Sustainability Committee, chaired by the Executive Officer, President & CEO, has met since FY2017, and environmental initiatives have been positioned as key material issues for the Company. The committee discusses our environmental policies and targets and confirms the progress and results from the Environmental Targets 2030. Items of particular importance are reported to the Board of Directors.

# Management Target Companies (21 Companies)

### Production Affiliates (As of March 31, 2021)

Country	Company Name		
Japan	Pajero Manufacturing Co., Ltd.		
	Suiryo Plastics Co., Ltd.		
Thailand	Mitsubishi Motors (Thailand) Co., Ltd. (MMTh)		
	MMTh Engine Co., Ltd. (MEC)		
Philippines	Mitsubishi Motors Philippines Corporation (MMPC)		
	Asian Transmission Corporation (ATC)		
Indonesia	Mitsubishi Motors Krama Yudha Indonesia (MMKI)		
China	GAC Mitsubishi Motors Co., Ltd. (GMMC)		

### Non-Production Affiliates (As of March 31, 2021)

Country	Company Name		
Japan	Mitsubishi Automotive Engineering Co., Ltd.		
	Mitsubishi Automotive Logistics Technology Co., Ltd.		
	Higashi Kanto MMC Parts Sales Co., Ltd.		
	Higashi Nihon Mitsubishi Motor Sales Co., Ltd.		
	Nishi Nihon Mitsubishi Motor Sales Co., Ltd.		
United States	Mitsubishi Motors North America, Inc. (MMNA)		
	Mitsubishi Motors R&D of America, Inc. (MRDA)		
Puerto Rico	Mitsubishi Motor Sales of Caribbean, Inc. (MMSC)		
Netherlands	Mitsubishi Motors Europe B.V. (MME)		
Germany Mitsubishi Motor R&D Europe GmbH (MRDE)			
UAE Mitsubishi Motors Middle East and Africa FZE (MMMEA)			
Australia	Mitsubishi Motors Australia, Ltd. (MMAL)		
New Zealand	ew Zealand Mitsubishi Motors New Zealand Ltd. (MMNZ)		



# Promoting Life Cycle Assessment (LCA)

In FY2010, MITSUBISHI MOTORS acquired companywide integrated ISO 14001 certification. (Previously, sites in Japan had acquired this certification individually.) We are leveraging the ISO 14001 framework and engaging in ongoing initiatives to improve business activities.

**Environmental Management System** 

The ISO 14000 framework is proving helpful in the companywide promotion of the Environmental Plan Package we formulated in FY2020.

Affiliates in Japan and overseas are also being encouraged to acquire ISO 14001 and Eco-Action 21\*<sup>1</sup> certification, and they are engaging in environmental management.

\*1 Eco-Action 21 is a certification and registration system based on the Environmental Management Systems guidelines formulated by the Japanese Ministry of the Environment for medium-sized companies.

Please see page 37 for a list of the dealers that have received Eco-Action 37 certification.

### Status of ISO 14001 Certification (As of May 31, 2021)

Development Companies Mitsubishi Automotive Engineering Co., Ltd. Production Companies Pajero Manufacturing Co., Ltd. (Headquarters Plant, Yamamoto Plant, Takami Plant, Kuriyama Warehouse) Suiryo Plastics Co., Ltd. Mitsubishi Motors Corporation (MMPC) Asian Transmission Corporation (ATC) Mitsubishi Motors (Thailand) Co., Ltd. (MMTh) MMTh Engine Co., Ltd. (MEC) Mitsubishi Motors Krama Yudha Indonesia (MMKI) Distribution and After-Sales Service Companies Mitsubishi Automotive Logistics Technology Co., Ltd.

(Maintenance Service & Logistics Rectinology Co., Ed. (Maintenance Service & Logistics Business Division, Powertrain Department, Osaka Special Purpose Vehicle & Engineering Section of the Vehicle Business Department, Mizushima Maintenance Service Section of the Vehicle Business Department) We perform LCA to determine the environmental impact across a product's life cycle. We evaluate total emissions, mainly of CO<sub>2</sub>, from such processes as extracting the resources used in parts and materials, producing materials, manufacturing parts, assembling vehicles, producing fuel, driving and disposing of disused automobiles.

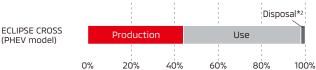
We use LCA to develop environment-friendly parts, electric vehicles and new-model vehicles, and compare their life cycle CO<sub>2</sub> emissions with those of conventional parts and vehicles.

### Examples of LCA Implementation in FY2020

	Examples of LCA Implementation	Objectives
Vehicles	ECLIPSE CROSS (PHEV model)	<ul> <li>Assessing the effect of improvement from the gasoline model</li> <li>Assessing the impact of components</li> </ul>
	New DELICA D:5 (Japan model)	• Comparing the effects of improvement against other vehicles in the same class

# LCA Results for the ECLIPSE CROSS (PHEV model)

# (CO<sub>2</sub> emissions)



\*2 Excluding items that have been removed prior to disposal: bumpers, tires, lead batteries, lithium-ion drive batteries, etc.

(LCA) Concern about environmental impact throughout the life cycle is mounting in individual countries and regions. We are putting in place systems and infrastructures to facilitate our response to regulations and incentives.

# Enhancing Disclosure of Environmental Information

We disclose information about our environmental initiatives through our website and sustainability report. We will continue to take leverage these initiatives to engage in dialogue with institutional investors and experts about environmental and other non-financial information.

# Release of Environmental Information on Website and in the Sustainability Report

The Company releases information on the concepts and details of its environmental initiatives on the Company website and in the sustainability report in order to make its environmental initiatives more widely known.

Sustainability website: "Environment"

WEB https://www.mitsubishi-motors.com/en/sustainability/ environment/

# **Communication with Investors**

We engage in dialogue with investors, exchanging opinions about environmental and other non-financial information.

In FY2020, we participated in dialogue with people in charge of stewardship at institutional investors in Japan and overseas. Our executives in charge of various areas of sustainability listened to opinions on such matters as climate change risks and opportunities, response to TCFD and our CO<sub>2</sub> emissions, among other topics.

# Promoting Employee Education and Awareness Activities

MITSUBISHI MOTORS conducts sustainability-related awareness activities throughout the year as part of its aims of deepening the understanding of sustainability among all executives and employees and contributing toward the realization of a sustainable society through routine business activities. Environmental education and awareness are one aspect of these activities.

In FY2020, we conducted rank-based training and e-learning to promote an understanding of our social responsibility for sustainability, the relationship between sustainability and the environment, and the relationship between environmental issues and our business activities.

Please see page 9 for details on our activities to promote an awareness of sustainability.

# **Collaborating with Suppliers**

Our business partners cooperate with us in various initiatives, including meeting the requirements of our Green Procurement Guidelines. We believe that ongoing communication is an important part of the steady implementation of initiatives by business partners. We explain the importance of environmental initiatives at our Suppliers Meetings, for example, which are attended by our business partners, and strive to engage in communications to reduce the environmental impact of our entire supply chain. Promoting Environmental Preservation Activities Rooted in the Local Community

Recognizing the rich characteristics of life on land and the importance of our connection to this life, the Company promotes environmental preservation activities that are rooted in the local community. Realizing that factory construction and other types of land use have a direct or indirect impact on biodiversity, we strive to preserve surrounding ecosystems. We do so by carefully maintaining connections between factories and the natural environments that surround them and by maintaining green spaces within factory sites. By participating in forest preservation projects in Japan and overseas, we strive to select species that are suitable to specific regions. In addition, employee volunteers work with local residents to plant and cultivate trees, engaging in activities connected to local communities.

Please see page 49 for details on our preservation of biodiversity.

# **Environmental Risk Management**

Having learned from past cases of failing to comply with environmental regulations such as those aimed at preventing pollution, we make every effort to comply with relevant regulations.

We sincerely respond to complaints from neighborhood residents after investigating the situation. In the event that environmental laws and regulations are violated or an environmental accident occurs (such as if regulatory values are exceeded), or if we receive a complaint, the corresponding division must submit a Legal Non-Conformity Report to the Compliance Department and take necessary measures against the cause. The report clarifies the details of the case, measures and more, and appropriate countermeasures are taken. Furthermore, in order to prevent recurrence, initiatives are in place to improve work processes, enhance the supervision system, and increase employee awareness.

In FY2020, we were subject to no fines or administrative orders stemming from violations of environmental laws and regulations\*. However, in three instances plants exceeded statutory values provided under the Water Pollution Prevention Act, and in one instance they exceeded statutory values provided under the Air Pollution Control Act.

Other than those cases mentioned above, voluntary internal checks and monitoring activities uncovered 15 cases of legal non-compliance (including delays in notification and inadequate inspections).

We responded to these incidents by swiftly taking corrective action, introducing measures to prevent recurrence and sharing information with other related divisions about the incidents and countermeasures.

Please see page 85 for details on the Green Procurement Guidelines.

<sup>\*</sup> Refers to 31 environment-related laws and regulations identified by the Company, including the Water Pollution Prevention Act and the Air Pollution Control Act.

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# Responding to Climate Change and Energy Issues

# Medium- to Long-Term Vision for Material Issues

	Risks	Opportunities	Direction of Responses
Long Term	<ul> <li>As regulations on fuel economy, CO<sub>2</sub> and ZEVs* are strengthened, failure to comply could make the Company susceptible to fines, credit costs or increasing costs for technology development to achieve regulatory compliance.</li> <li>The Company could incur higher procurement costs, such as for electricity and raw materials, due to the introduction of carbon taxees or other carbon pricing.</li> <li>More frequent and intense meteorological disasters that damage production facilities or supply chain interruptions could halt production.</li> </ul>	<ul> <li>We could increase sales by enhancing our lineup of electric vehicles (EVs) and other products that help reduce CO<sub>2</sub> emissions.</li> <li>We could meet new demand for emergency power sources for use during meteorological disasters.</li> </ul>	<ul> <li>We will contribute to the realization of a society more resilient to climate change as we move to- ward net-zero CO<sub>2</sub> emissions through the grow- ing proliferation of EVs and renewable energy.</li> </ul>

\* Zero emission vehicles (ZEVs) are BEVs and fuel cell vehicles that emit no exhaust gases. Automotive regulations in the US state of California state that for manufacturers that sell more than a certain number of units in the state, a certain percentage of those units must be ZEVs.

	External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
Medium Term	<ul> <li>More than 120 countries and regions pledging to be carbon neutral by 2050.</li> <li>Leading countries announcing higher 2030 targets moving toward COP26.</li> <li>Various national governments considering or announcing lower CO2 and higher fuel economy standards, making EVs mandatory, banning the sale of vehicles with internal combustion engines, strengthening regulations on life cycle assessments (LCA).</li> <li>Automakers in Japan and overseas raising electrification targets.</li> </ul>	mounts, growing expectation for carbon neutrali- ty across the supply chain.	<ul> <li>CO<sub>2</sub> emissions from new vehicles: -40%</li> <li>EVs sales ratio: 50%</li> <li>CO<sub>2</sub> emissions from business activities: -40%</li> <li>Promotion of initiatives to address climate change</li> </ul>





 $\bigcirc$ : As planned  $\triangle$ : Delayed

### FY2020 Materiality Targets and Results

Details of Main Initiatives	FY2020 Targets	Indicators	FY2020 Results	Self- Evaluation
By 2030, reduce CO2 emissions from new vehicles by 40% (compared with FY2010)	<ul> <li>Identify CO<sub>2</sub> emissions from new vehicles based on new business plan, and reflect in product plans for next fiscal year measures that will erase gaps between targets and identified results.</li> </ul>	Progress of initiative	<ul> <li>Identified CO<sup>2</sup> emissions from new vehicles based on new business plan, reflected in product plans for next fiscal year.</li> </ul>	0
	_	CO <sub>2</sub> emissions	-14%	-
Achieve an electric vehicle (EV) sales ratio of 50% by 2030	<ul> <li>Identify ratio of EV sales based on new business plan, and reflect in product plans for next fiscal year measures that will erase gaps between targets and identified results.</li> </ul>	Progress of initiative	<ul> <li>Identified ratio of EV sales based on new business plan, reflected in product plans for next fiscal year.</li> </ul>	0
	_	Ratio of EV sales	8%	-
By 2030, reduce CO <sup>2</sup> emissions from business activities by 40% (compared	<ul> <li>Identify and assess CO<sub>2</sub> emissions targets at each location.</li> </ul>	Progress of initiative	<ul> <li>After confirming targets and results for each location, identify and assess status of initiatives companywide.</li> </ul>	0
with FY2014)	_	CO <sub>2</sub> emissions	-37%	_
Enact measures in response to climate change	<ul> <li>Promote disaster countermeasures, such as electricity supply systems that use EVs.</li> </ul>	Progress of initiative	<ul> <li>Introduced various measures, including the DENDO DRIVE STAION/HOUSE, DENDO Community Support Program and V2X demonstration project.</li> </ul>	0

# **Basic Approach**

In recent years, extreme weather, such as heat waves, droughts and floods due to heavy rain, has caused disasters one after another around the world. The leading culprit behind these extreme-weather events is climate change, and global warming caused by CO<sub>2</sub> and other greenhouse gases is a major factor.

International frameworks for realizing a sustainable society, such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs) are making major progress. In particular, the Paris Agreement has set targets on climate change and fostered increased awareness toward corporate responsibility. Recently, Japan and more than 120 other countries have pledged to be carbon neutral by 2050. Japan, the United States and other countries have raised their targets for reducing greenhouse gas emissions by 2030. Thus, efforts to achieve a decarbonized society are rapidly gaining momentum.

Automobiles generate CO<sub>2</sub> throughout the life cycle, from production to driving and disposal. For this reason, MITSUBISHI MOTORS has identified "responding to climate change and energy issues" as a topmost material issue. In the Environmental Plan Package, this is also positioned as one of the material issues for the Company to address directly, and we are setting specific targets in this regard.

To reduce energy consumption and CO<sub>2</sub> emissions

MITSUBISHI MOTORS CORPORATION Sustainability Report 2021 Back **28** Next in all business activities, including development, production and distribution, as well as at and offices, we are promoting various initiatives, such as electric vehicle technologies, the development of fuel-economy-improving technologies, the introduction of low-energy equipment in production processes and the use of renewable energy in offices and dealers. In particular, the Company (which counts electrification technologies as one of its strengths) should be able to work simultaneously to realize a sustainable society and achieve sustainable growth for the Company.

Our electric vehicles have large-capacity batteries that can be used in energy management and as emergency power sources in times of disaster. Through these measures, we are also engaging in measures to adapt to climate change.



# Responding to the TCFD Recommendations

With the issue of climate change growing increasingly serious, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures (TCFD), which in June 2017 announced its recommendations. These recommendations encourage companies to disclose information related to climate change so that investors can appropriately assess climate-related risks and opportunities.

Recognizing the potential of climate change to present medium- to long-term risks and opportunities that affect its business domains, in July 2021 MITSUB-ISHI MOTORS expressed its support for the TCFD Recommendations. Accordingly, we are analyzing the impact of climate change on our businesses and finances (scenario analysis). Going forward, we will enhance our disclosure in line with the TCED Recommendations.

# TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL

### Scenario in Which Climate Change Countermeasures Are Successful

In the countries and regions that are the Company's target markets, electric vehicles (EVs) and zero emission vehicles (ZEVs) are expected to become more commonplace as regulations on fuel economy, CO<sub>2</sub> emissions and ZEVs are introduced or further strengthened. Failure to comply with these regulations could affect the Company by making it susceptible to fines or increasing costs for regulatory compliance. Also, the Company could incur higher costs at the production and procurement stages due to the introduction of carbon taxes and carbon pricing. At the same time, measures to counter regulations on fuel economy, CO2 emissions and ZEVs could present opportunities in the form of increased sales of EVs.

The Company will seek to respond to these conditions by lowering costs (by standardizing components through the alliance) and promoting the adoption of EVs, centered on plug-in hybrid electric vehicles (PHEVs). At the production and procurement stages, we will seek to reduce risks by promoting energy conservation activities and the introduction of renewable energy.

### Principal Risks and Opportunities the Company Recognizes, and their Response Measures

Global changes	Risks	Opportunities	Principal response measures
Strengthening of	<ul> <li>Fines for failing to meet</li> </ul>	Increased sales of EVs	<ul> <li>Promote EVs, centering on PHEVs<sup>*2</sup></li> </ul>
requirements for fuel	fuel economy requirements		<ul> <li>Reduce costs by taking advantage of</li> </ul>
economy and ze-	<ul> <li>Additional costs to respond</li> </ul>		the alliance, such as by standardizing
ro-emission vehicles	to requirements		components
Introduction of car-	<ul> <li>Higher costs to procure</li> </ul>	_	<ul> <li>Promotion of energy conservation</li> </ul>
bon taxes and carbon	electricity and raw materials		activities and the introduction of renew-
pricing			able energy
Increasing frequency	<ul> <li>Production stoppages due</li> </ul>	Increased sales of EVs	<ul> <li>Implementation of BCM-related sys-</li> </ul>
and intensity of me-	to damage to production	in line with a growing	tems and operating procedures
teorological disasters	facilities and disruption of	need to secure emer-	<ul> <li>Promotion of EVs, centered on PHEVs</li> </ul>
	supply chains	gency power sources	Promotion of V2X

\*2 Please see page 30-31 for details on developing electric vehicles

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### Scenario in Which Climate Change Countermeasures Are Not Successful

Typhoons, flooding and other meteorological disasters are forecast to become more frequent and intense. Accordingly, the Company faces the growing risk that damage to production facilities or supply chain interruptions could halt production. On the other hand, increasingly frequent and intense meteorological disasters could present an opportunity in the form of higher sales of EVs as demand rises for emergency power sources that can be used in times of disaster.

The Company's BCM (Business Continuity Management) Committee has formulated a business continuity plan and is seeking to mitigate risk by putting in place systems and operating procedures in anticipation of natural disasters. In addition, we are responding to the opportunity to increase sales by promoting EVs, centering on PHEVs, which can serve as V2X\*1 units.

\*1 A general term encompassing vehicle to home (V2H) and vehicle to grid (V2G), among others

Given the circumstances outlined above, the Company is promoting climate change countermeasures based on its Environmental Plan Package. We are currently moving forward with vehicle development employing plug-in hybrid technology, which is at the core of our electrification technology. Among our efforts to achieve a decarbonized society, we will work to address the so-called "last mile problem" in logistics with the MINICAB-MiEV, a Kei-car segment commercial battery electric vehicle, which we believe is ideally suited to this application. This combination of options based on alliance and proprietary technologies should enable us to respond flexibly to uncertain future scenarios and the differing needs of individual countries and regions.



# Responding to Greenhouse Gas (GHG) Across the Supply Chain

In its Environmental Targets 2030, MITSUBISHI MOTORS has set targets for reducing CO<sub>2</sub> emissions from new vehicles and business activities. We are also working to decrease GHG emissions across the supply chain in relation to corporate activities.

To calculate GHG emissions across the supply chain, in addition to emissions resulting from our own business activities (such as from our fuel use and from the generation of electricity we use), we determined emissions from the procurement and transport of raw materials, vehicle travel times, and at the disposal stage. In FY2020, across the supply chain our GHG emissions were 20,656 thousand tons of CO<sub>2</sub> equivalent.

Data (pp. 109–110): CO<sub>2</sub> emissions, Scope 3 breakdown, energy input (primary, secondary energy)

# **Developing Electric Vehicles**

Automobiles emit CO<sub>2</sub> throughout their life cycle, during production, driving and disposal. Emissions are particularly high during the driving phase.

In our Environmental Targets 2030, we set the target of achieving a 40% reduction in CO<sub>2</sub> emissions from new vehicles by 2030 (compared with FY2010 levels). To meet this target, we have raised our target ratio of electric vehicle (EV) sales to 50% by 2030. This change focuses our core technologies on responding to climate change and energy issues through EVs, which emit little CO<sub>2</sub> while driving, and concentrates on their development. Centering on our strength in plug-in hybrid electric vehicles (PHEVs), we will expand our lineup of EVs, thereby promoting their popularization and use in society and contributing toward the realization of a sustainable society.

### **Battery Electric Vehicles**

Battery electric vehicles are driven by electricity in battery, so they emit no exhaust gases such as  $CO_2$  while driving.

The Company released the i-MiEV as the world's first mass-produced battery electric vehicle (BEV) in 2009. In addition to its environmental performance, the i-MiEV performed better than conventional gasoline engine vehicles on acceleration starting from maximum torque. In 2011, we launched the MINI-CAB-MiEV, a Kei-car segment commercial BEV. In 2012, we began offering the MINICAB-MiEV TRUCK, also a BEV in the Kei-car segment. These technologies are the foundation of next-generation EVs, such as PHEVs. TOPICS

# Launch of Partially Improved MINICAB-MiEV, a Kei-car segment Commercial BEV



After having made partial improvements, we launched the MINICAB-MiEV, a Kei-car segment commercial BEV, in September 2020.

The MINICAB-MiEV is equipped with the battery and motor used on the i-MiEV. In addition to the superior environmental performance inherent to a BEV, it excels in power, silence, comfort and more. The MINICAB-MiEV is highly effective as a delivery vehicle due to its driving range and payload capacity. We have delivered more than 9,000 of these vehicles to more than 40 companies, as well as municipalities throughout Japan.



### TOPICS

Japan Post Continuing to Introduce MITSUBISHI MOTORS' Battery Electric Vehicles (BEVs) as Delivery Vehicles



Since FY2019, MITSUBISHI MOTORS has been providing Japan Post Co., Ltd. with the MINICAB-MiEV, a Kei-car segment commercial BEVs, for use as delivery vehicles. By the end of FY2020, the total number of vehicles delivered reached 1,500. These vehicles are well suited for deliveries in large metropolitan areas, where travel distances are relatively short. By using vehicles that emit no CO<sub>2</sub> or other exhaust gas while driving, it is helping to promote environmental management by Japan Post, which aims to reduce the emission of greenhouse gases.

### Plug-in Hybrid Electric Vehicles (PHEVs)

PHEVs are powered by electricity stored in batteries and by the motor, using the engine to generate electric power when the battery level is low. Concern over the driving range is no longer an issue as it offers the advantages of BEVs: powerful driving, superb quietness and high stability.

We released the OUTLANDER PHEV in 2013. At low to medium speeds, the PHEV system uses electric power from the battery, but when the battery level is low, it generates electric power during operation using the engine while also supplying power to the motor and battery. Furthermore, during high-speed driving, the vehicle is driven by the engine and simultaneously assisted by the battery-powered motor. In this way, the drive mode is automatically selected according to the situation. CO<sub>2</sub> emissions are substantially lower than conventional gasoline engine vehicles, delivering outstanding environmental performance.

Please see for details, refer to the section of the Feature on page 17 entitled "The Values Plug-in Hybrid Electric Vehicles (PHEVs) Provide."

### TOPICS

### Launch of the ECLIPSE CROSS (PHEV model), a Crossover SUV



The Company has introduced a PHEV variant of the ECLIPSE CROSS, a crossover SUV, which launched in December 2020.

The ECLIPSE CROSS (PHEV model) apply twin-motor 4WD PHEV system from the OUTLANDER PHEV. The architecture consists of one front and one rear high-power electric motor, a large-capacity battery and a 2.4 L MIVEC engine, allowing for the smooth and powerful acceleration unique to electric vehicles along with nimble yet stable handling.

The battery is 13.8 kWh with an all-electric range of 57.3 km (WLTC Mode), allowing pure electric driving for most of daily commute. There are three driving modes: EV Mode drives with the electric motors using power from the battery, Series Hybrid Mode uses gasoline engine to generate power for the electric motors which drive the vehicle, and Parallel Hybrid Mode uses gasoline engine to drive the vehicle assisted by the electric motors. Automatic switching between these modes according to driving conditions allows drivers to feel the driving pleasure of motor drive in a variety of environments.

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### TOPICS

### OUTLANDER PHEV Becomes Europe's Top-Selling SUV-Type Plug-in Hybrid Electric Vehicle (PHEV) in 2020



The OUTLANDER PHEV was the top-selling SUV-type PHEV in the European market in 2020, and the second highest among all PHEVs of all, with 26,673 vehicles\*1 sold during the year.

The OUTLANDER PHEV combines electrification and 4WD control technologies to produce the powerful yet silent driving performance unique to electric vehicles (EVs), while delivering superior environmental performance. The world's first SUV-type PHEV, the OUTLAND-ER PHEV launched in Japan in January 2013. Since then, the model has been sold in more than 60 countries. \*1 According to a study by JATO Dynamics Limited

# Promoting the Use of Electric Vehicles as a Way of Adopting to Climate Change

By leveraging the large-capacity batteries on its battery electric vehicles (BEVs) and PHEVs to supply electricity, MITSUBISHI MOTORS is contributing to measures in various countries and industries to adapt to climate change and energy issues. We are applying these to such areas as areas as energy management, V2X<sup>\*2</sup> and use as emergency power sources in times of disaster.

\*2 A general term encompassing vehicle to home (V2H) and vehicle to grid (V2G), among others

### TOPICS

# Implementation of V2G Demonstration Project by Using Electric Vehicles

The Company took part in the Fiscal 2020 V2G Aggregator Project, promoted and endorsed by the Ministry of Economy, Trade and Industry, providing an employee parking lot at the Okazaki Plant as a demonstration site.

Under the vehicle-to-grid (V2G) scheme, the high-capacity batteries of EVs are used to regulate the demand and supply of the power grid through an IoT aggregation system. We used 50 EVs to build one of the largest demonstration sites in Japan.

In FY2020, the project's third year, we made progress on considering the V2G business model and backup methods, such as transferring power between sites in the event of a change in the number of vehicles or other unforeseen mobility needs.

Further effort is needed to stabilize the power grid and facilitate the expansion of renewable energy resources. We believe V2G could increase the value of electric vehicles and help to address environmental problems, such as climate change and energy issues.

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### TOPICS

# Start of a Demonstration Project to Adjust Charging toward EVs with a View to Realizing Dynamic Pricing

We were selected to participate in the Fiscal 2020 Demonstration Project on Using Dynamic Pricing to Shift the Charging of EVs. This project took place in October 2020.

The ministry is concerned that the growing popularity of EVs could result in an increased load on the power grid if charging periods are concentrated. Dynamic pricing is an arrangement in which electricity rates vary depending on supply and demand. When demand for electricity increases, rates rise. Conversely, rates fall when excess supply exists, encouraging people to charge vehicles during off-peak times and reducing the load on the power grid.

In this demonstration project, we invited customers who own their EVs to act as monitors. We emailed monitors a day in advance about four-hour windows during which electricity rates on the Japan Electric Power Exchange (JEPX) were lowest. We encouraged them to charge their EVs for free during these periods. This project enabled electricity retailers to consider the viability of this arrangement, encouraged a shift in behavior among EV owners and provided a chance to study the impact on the power grid.



By using EVs to build an efficient electricity system that allows for adjustment, we aim to lower the cost to society by avoiding the need to expand the power grid.



# Development of Improving Fuel Economy Technologies

MITSUBISHI MOTORS develops technologies to boost the fuel efficiency of vehicles powered by conventional engines. We are developing engine and vehicle body technologies to reduce fuel and energy waste.

### Idle-Stop "AS&G"

AS&G is an idling stop function that automatically stops and starts the engine when the vehicle stops or moves off. This has a major effect on improving the fuel economy because no fuel is consumed when at a stop. When fitted with a coasting stop function, AS&G stops the engine while decelerating.



### Hybrid System

Some models in the eK series employ a hybrid system, using the energy produced during deceleration to efficiently charge their lithium-ion batteries. The electric motor assists the engine during acceleration, providing a torquey yet fuel-efficient drive. Variable Valve Timing Mechanism Mitsubishi Innovative Value timing Electronic Control System (MIVEC)



The MIVEC is a variable valve timing mechanism for minimizing fuel consumption. The intake valve lift is continuously varied according to the operating condition to reduce intake resistance. This minimizes air intake energy loss, resulting in improved fuel efficiency.

### Gasoline Direct-Injection Turbo Engine

The ECLIPSE CROSS is equipped with a 1.5L downsized direct-injection turbo engine. By precisely controlling in-cylinder injection and intake port injection based on driving circumstances, this engine delivers superior fuel economy and a clean exhaust gas. By combining an exhaust manifold integrated with the cylinder head, intake and exhaust MIVEC, and a compact turbocharger with an electric wastegate actuator, the engine optimizes supercharging pressure control to respond as the driver wishes, avoiding unnecessary accelerator operation and helping to increase fuel economy.



# Deceleration Energy Recovery (Power Generation Control)

This technology controls power generation under various driving conditions such as idling, accelerating, and cruising by conducting intensive charging of the battery using electric power generated while decelerating. We are improving fuel consumption by reducing the load on the engine during charging and power generation.



# **Efforts in Production**

MITSUBISHI MOTORS is upgrading its production facilities, introducing new equipment and improving operations in an effort to conserve energy and reduce CO<sub>2</sub> emissions from production activities.

In FY2020, at our facilities we consolidated our steam piping and upgraded the transformers at a special high-voltage substation. People involved with production sites, production technologies and power supply are also taking part in energy-conservation activities. By reviewing startup timing and operating conditions, we are improving the operation of production facilities by focusing on energy-intensive processes, such as painting, casting and forging. We are improving the operation of boilers, compressors and other equipment that supplies power. Also, we are working to optimize the operation of various types of motor. In these ways, we are introducing measures, starting from areas where we expect results to be greatest. The COVID-19 pandemic had a significantly effect on production volumes in FY2020. We strove to reduce energy losses by concentrating production and shutting off equipment when not in operation.

# Introduction of Renewable Energy

To reduce the amount of CO<sup>2</sup> emitted from our business activities, we are setting up rooftop solar power system at plants in Japan and overseas. In FY2020, we increased generating capacity at the Okazaki Plant and started operating a charging system built from used OUTLANDER PHEV batteries. We also began operating a large-scale rooftop solar power system at Mitsubishi Motors (Thailand) Co., Ltd. (MMTh), our production and sales company in Thailand. In FY2021,

#### TOPICS

### Saving Energy by Concentrating Production at a High-Frequency Induction Furnace in the Casting process (Mizushima Plant)

In the first half of FY2020, we tackled to keep our production efficiency responding to lower production volumes stemming from the COVID-19 pandemic. In the casting process at the Mizushima Plant, we consolidated production days to reduce energy losses from our high-requency induction furnace.

High-frequency induction furnaces are used in the casting process to melt steel so it can be flowed into dies and made into engine parts and other components. This process requires high levels of heating, which needs to be maintained. Therefore production waiting time and frequent furnace startups and shutdowns will result in substantial energy losses.



Casting process at Mizushima Plant

We adopted the emergency measure of concentrating production into the first half of the week and shutting down the furnace during the remaining days. This approach minimized wait times and startup frequency, preventing energy losses. As a result, we saved the equivalent of around 500t-CO<sub>2</sub> compared with the energy that would have been lost if we had not concentrated production in this way.

we plan to commence operations of additional largescale rooftop solar power system at other plants in the ASEAN.

### TOPICS

### Operational Start of a Large-Scale Rooftop Solar Power System (MMTh)

Operation of a 5.0MW rooftop solar power system has commenced at the Laem Chabang Plant of Mitsubishi Motors (Thailand) Co., Ltd. (MMTh), our production and sales company in Thailand.

MMTh, which has a production and engine plant in Laem Chabang, Chonburi Province, is our largest overseas manufacturing facility. In addition to the newly operational rooftop solar power system, we are planning a 2.0MW rooftop solar power system upgrade at a new paint plant that is currently under construction. These two systems combined will reduce the amount of CO<sub>2</sub> emitted per year from production by more than 6,100 tons.



Large-scale rooftop solar power system that commenced operation at MMTh

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### TOPICS

### Expansion of a Rooftop Solar Power System and Commencement of a Power Storage System Built from Used Batteries (Okazaki Plant)

At the Okazaki Plant, we have installed a rooftop solar power system that makes use of an energy solution service provided by Mitsubishi Corporation and Mitsubishi Corporation Energy Solutions. In FY2020, we expanded the plant's generation capacity by 0.3MW, to 3.3MW. This plant has reduced our CO<sub>2</sub> emissions by more than 1,500 tons (FY2020 results). We have also begun operating a 0.6MWh power storage system built from reused batteries from the OUTLANDER PHEV, which the Okazaki Plant manufactures. This power storage system is used in normal times to reduce maximum power demand of Okazaki Plant. It can also be used in times of disaster or during power outages to provide power to our gymnasium (which serves as an evacuation center for the surrounding area). The power storage system supplies electricity produced by our rooftop solar power system, so it can be used for disaster response by the people in the community. We are also studying how the power storage system might be used in multiple ways, such as commercial use in the electricity supply and demand adjustment market.



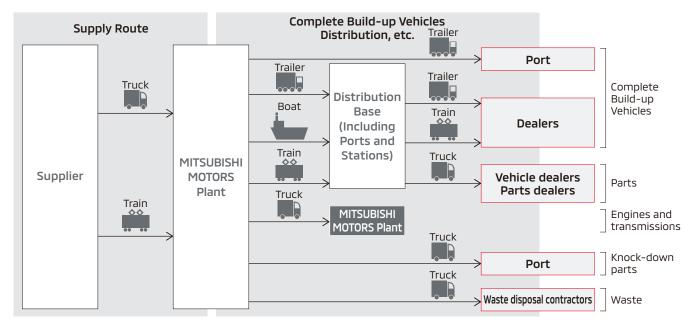
# **Efforts in Distribution**

MITSUBISHI MOTORS sets reduction targets for unit CO<sub>2</sub> emissions (kg-CO<sub>2</sub>/1,000t km) during the transport of production parts, spare parts and vehicles to promote initiatives for achieving these targets.

In each distribution area, we strive to shorten transport distances through the relocation of sourcing

### Focused Distribution Routes for Reducing CO<sub>2</sub> Emissions

points and increasing direct deliveries. We also work to decrease the number of transport trips by improving of packing specification for high load factor, and consolidating transport routes, reducing the number of trucks. We are also working more closely with our transport subcontractors to introduce eco-cars and promote eco-driving.



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# Collecting CO<sub>2</sub> Emissions Data in Distribution among Overseas Affiliates

MITSUBISHI MOTORS understands the importance of collecting and disclosing CO<sub>2</sub> emissions volumes throughout the supply chain, including overseas, and we are promoting initiatives in this regard.

Since starting in 2018, overseas plants at Mitsubishi Motors (Thailand) Co., Ltd. (MMTh) and Mitsubishi Motors Krama Yudha Indonesia (MMKI) have been moving ahead steadily with efforts to collect and calculate CO<sub>2</sub> emissions from distribution, including land, sea and air transportation.



Transportation of vehicles (Thailand)



Sea transport

# **Office Initiatives**

We are also promoting the use of renewable energy and introducing various types of energy-saving equipment in areas other than manufacturing, such as at research and head office locations.

Part of the electric power used at the Research and Development Building (Okazaki, Aichi Prefecture) and our head office (Minato-ku, Tokyo) is supplied by renewable energy, thanks to the erection of rooftop solar power system and making use of the Tradable Green Certificates System\*. Also, CO<sub>2</sub> emissions are being reduced by using energy-saving electrical equipment and air conditioners.

In July 2020, we began tracking electricity use and power generation per capita at our Research and Development Building, comparing these figures with other offices, and using digital signage to show year-on-year comparisons by month. In these ways, we are working to increase employee awareness about saving energy.



Digital signage at our Research and Development Building (Okazaki)

\* This system is used to trade environmental added value of renewable energy generated from natural energy sources using renewable energy certificates issued by a certificate issuer and confirmed by a third party organization.

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# **Dealer Initiatives**

We encourage our dealers in Japan to acquire Eco-Action 21 certification and carry out activities such as reducing the amount of energy and water they use, lowering the amount of waste they produce, and promoting the widespread use of electric vehicles.

Eco-Action 21 is an environmental management certification and registration system based on guidelines recommended by Japan's Ministry of the Environment. Eco-Action 21 has the following three features.

- The environmental management framework is easy for small and medium-sized businesses to configure and operate.
- The system enables organizations to track and manage their CO<sub>2</sub> emissions, working toward zero CO<sub>2</sub>.
- The system facilitates thorough management of compliance with environmental laws and regulations.

For details on Eco-Action 21, see the website of the system's central secretariat (Japanese only). (WEB) https://www.ea21.jp/



# **Dealers That Have Acquired Eco-Action 21 Certification** (As of June 1, 2021)

#### Company

Hokkaido Mitsubishi Motor Sales Co., Ltd. Aomori Mitsubishi Motor Sales Co., Ltd. Yamagata Mitsubishi Motor Sales Co., Ltd. Higashi Nihon Mitsubishi Motor Sales Co., Ltd. Ibaraki Mitsubishi Motor Sales Co., Ltd. Sawara Mitsubishi Motor Sales Co., Ltd. Sobu Mitsubishi Motor Sales Co., Ltd. Tokai Mitsubishi Motor Sales Co., Ltd. Sunen Mitsubishi Motor Sales Co., Ltd. Nishiowari Mitsubishi Motor Sales Co., Ltd. Toyama Mitsubishi Motor Sales Co., Ltd. Toyama Diamond Motors Co., Ltd. Fukui Mitsubishi Motor Sales Co., Ltd. Kanazawa Mitsubishi Motor Sales Co., Ltd. Kyoto Mitsubishi Motor Sales Co., Ltd. Nishi Nihon Mitsubishi Motor Sales Co., Ltd. Shiga Mitsubishi Motor Sales Co., Ltd. Fukuyama Mitsubishi Motor Sales Co., Ltd. Kyushu Mitsubishi Motor Sales Co., Ltd. Oita Mitsubishi Motor Sales Co., Ltd. Kumamoto Mitsubishi Motor Sales Co., Ltd. Nagasaki Mitsubishi Motor Sales Co., Ltd. Kagoshima Mitsubishi Motor Sales Co., Ltd. Ishikawa Chuo Mitsubishi Motor Sales Co., Ltd. Mie Mitsubishi Motor Sales Co., Ltd. Gunma Mitsubishi Motor Sales Co., Ltd.

### Rolling out the DENDO DRIVE STATION across Japan's Prefectures

MITSUBISHI MOTORS seeks to put DENDO DRIVE STATION into operation in prefectures across Japan.

In FY2020, we opened 6 DENDO DRIVE STATION branches, bringing the nationwide total to 89. The new DENDO DRIVE STATION branches, in order of opening, are the Sendai Branch (Kagoshima Prefecture), the Tamana Branch (Kumamoto Prefecture), the Auto Mall Takeo Branch (Saga Prefecture), the Yakuin Branch (Fukuoka Prefecture), the Auto Mall Norimatsu Branch (Fukuoka Prefecture) and the Ichinomiya Suehiro Branch (Aichi Prefecture).

TOPICS

By deploying DENDO DRIVE STATION branches across Japan, we will increase the significance of electric vehicles by diversifying their energy sources and communicating their value as sources of electric power in times of disaster.





Tamana Branch Kumamoto Mitsubishi Motor Sales Co., Ltd.



Auto Mall Takeo Branch Kyushu Mitsubishi Motor Sales Co., Ltd.



Kita Kagoshima Mitsubishi Motor Sales

Co., Ltd.

Yakuin Branch Kyushu Mitsubishi Motor Sales Co., Ltd.



Auto Mall Norimatsu Branch Kyushu Mitsubishi Motor Sales Co., Ltd.



Ichinomiya Suehiro Branch Nishiowari Mitsubishi Motor Sales Co., Ltd.

# **Resource Recycling Initiatives**

# Medium- to Long-Term Vision for Material Issues

	Risks	Opportunities	Direction of Responses
Long Term	<ul> <li>The cost of procuring raw materials could increase due to resource constraints, such as the depletion of precious metals or other natural resources.</li> <li>The Company could face increasingly stringent regulations, such as on the use of recycled materials and recycling, and rising costs to respond to them.</li> <li>The corporate image could suffer from a delayed response to resource recycling.</li> </ul>	<ul> <li>We could stabilize procurement costs by reducing our dependence on depleted resources.</li> <li>It might be possible to reduce costs by using resources more efficiently and reusing waste.</li> <li>We could heighten competitiveness through 3R design and more advanced recycling technologies.</li> <li>We could find more opportunities to make use of used batteries.</li> <li>The corporate image could be enhanced by appealing to our efforts to contribute toward a recycling-oriented society.</li> </ul>	<ul> <li>We will contribute to a resource-recycling- ori- ented society by minimizing input resources and maximizing resource efficiency.</li> </ul>

		External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
			<ul> <li>Mounting demands for environmental consideration</li> </ul>	
	dium erm	<ul> <li>The manifestation of waste-related issues in Japan and overseas (such as emerging markets limiting imports)</li> </ul>	<ul> <li>Growing ESG investment (investors promoting changes in corporate activities)</li> </ul>	rived from oil Achievement of zero direct landfill waste (less than
	CIIII	<ul> <li>The increasingly strict EU Batteries Regulation (calls for disclo- sure of amounts of reused materials, among other items)</li> </ul>		0.5%) Reuse of batteries used in electric vehicles (EVs)
		<ul> <li>Plastics causing the marine pollution problem</li> </ul>		

# FY2020 Materiality Targets and Results

 $\bigcirc$ : As planned  $\triangle$ : Delayed Self-Details of Main Initiatives FY2020 Targets Indicators FY2020 Results Evaluation Expanding adoption of plastic materials • Create a roadmap for expanding the percentage of plas-Progress Clarified the types of vehicles and components to contic materials not derived from oil used in vehicles not derived from oil sider expanding the use of plastic materials not derived of initia-Ο tive from oil; created a roadmap clarifying FY2025 targets and measures Achievement of zero direct landfill waste Plants in Japan: Achieve zero direct landfill waste (less Progress Plants in Japan: Achieved (less than 0.5%) by FY2030 than 0.5%) of initia-• Overseas plants: Have begun managed operations of Ο tive • Overseas plants: Have begun gathering data data on waste using an environmental performance management system Reuse of batteries used in EVs Install an energy storage system (BESS\*1) at the Okazaki Progress Installed equipment for verification testing of BESS, and Plant and begin considering issues related to utilizing of initiaare implementation a VPP\*<sup>2</sup> verification test Ο reused batteries tive

\*1: BESS stands for battery energy storage system.

\*2: VPP stands for virtual power plant, which involves using information and communication technology for the integrated control of dispersed energy resources, creating a virtual plant that operates as if it were a single power plant.





# **Basic Approach**

The rise in populations and economic growth in emerging markets is leading to a rise in the consumption of minerals, fossil fuels and other resources.

Against this backdrop, MITSUBISHI MOTORS is working to use fewer resources and use them more effectively. We believe we can add more value to vehicles in manufacturing process. This believe underpins our belief that effective resource use is an important priority. The Environmental Plan Package positions resource recycling as an environmental issue to engage in directly, and we are contributing to a resource-recycling-oriented society by minimizing input resources and maximizing resource efficiency.

Countries and industry groups are formulating various initiatives in order to promote automobile recycling and correct processing. In response, the Company set targets to improve the ease of recycling, reduce the use of lead, and introduce recycled parts for new vehicles when the MITSUBISHI MOTORS Recycling Initiative was established in 1998. We have continued to engage in this initiative.

At production plants, with the aim of realizing a recycling-oriented society that gives consideration to the environment and resources, we are promoting the effective use of resources. We are achieving a landfill waste disposal rate of zero (less than 0.5%) at every plant by converting industrial waste materials generated from production processes into reusable resources and reducing the volume of waste discharged.

Data (p. 111): Generated waste, generated waste and externally disposed waste (MITSUBISHI MOTORS along), raw material inputs

# **Recycling-Based Design and Development**

Under vehicle recycling legislation in Japan, Europe and China, automobile manufacturers are obligated to consider recycling when developing products.

We conduct design and development that actively incorporates not just recycling, but all aspects of the 3Rs including reduction and reuse. Since 1999, we have implemented the 3Rs in the stage starting with conceptual design in accordance with our unique Recycling Plan Guidelines.

With regard to wires and harnesses, and motors, we have improved detachability and ease of recycling in accordance with the Harness Design Guidelines.

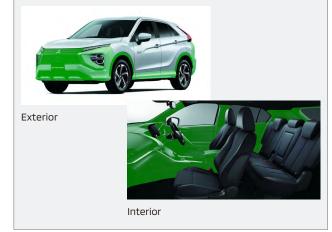
At dealers, bumpers replaced during repairs are recycled for undercovers and battery trays. We are also promoting the increased use in other parts of recycled materials and plastic materials not derived from oil used in vehicles, such as biomass plastics.

### TOPICS

#### Using Thermoplastic Resin

The ECLIPSE CROSS (PHEV model), which was launched in 2020, uses easily recyclable thermoplastic resin for exterior and interior parts.

# Main parts (indicated in green) that use thermoplastic resin



# End-of-Life Vehicle Recycling

We encourage the recycling of end-of-life vehicles to reduce the environmental impact of waste from these vehicles. In Japan, the European Union and other regions, we promote recycling in accordance with the automobile recycling laws of each country. We comply carefully with the evolving automobile recycling laws that are being introduced in emerging countries in Asia.

MITSUBISHI MOTORS CORPORATION Sustainability Report 2021 Back **39** Next Commitment of Top Management



The Environmental Targets 2030 identify the reuse of batteries used in electric vehicles as one item to be addressed. From the perspective of conserving resources, we are undertaking initiatives to utilize used batteries.

### Reuse of Batteries Used in Electric Vehicles (EVs)

Used EV batteries retain sufficient storge capacity to make them useful for other applications, so from the perspective of conserving resources we are working to effectively reuse EV batteries. To ensure these batteries can be effectively used for storage, we are conducting verification using a large-scale rooftop solar power system at the Okazaki Plant and built a power storage system that employs used batteries from the OUTLANDER PHEV.

In Japan, Europe and North America, we have begun creating a system for collecting used batteries. The aim is to develop recycling technologies for and properly dispose of batteries for battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

### **Response to Automobile Recycling Laws in Japan**

Since the End-of-Life Vehicle Recycling Law was enacted in Japan in 2005, the company has been accepting used automobile shredder residue (ASR), airbags, and fluorocarbons for recycling.

Regarding ASR recycling, we participate in ART<sup>\*1</sup> in order to jointly process ASR. As a result of the creation of new processing facilities and other measures, the ASR recycling rate in FY2020 was 96.4%, substantially above the statutory standard of 70% in effect since 2015. We will continue to develop new recycling facilities to ensure the stable processing of ASR. The company outsources the treatment of airbags and fluorocarbons to the Japan Auto Recycling Partnership (JARP).

In addition, for the effective use of recycling fees deposited from customers, we proactively work on increasing the recycling rate by conducting efficient recycling and proper processing of these three items.

\*1 Automobile Shredder Residue Recycling Promotion Team established by Nissan Motor Co., Ltd., Mazda Motor Corporation, MITSUBISHI MOTORS and others.

### **Recycling Promotion in the EU**

### Response to the EU's Directive on the Recycling of End-of-Life Vehicles

In the EU, in accordance with the End-of-Life Vehicles Directive<sup>\*2</sup> established in 2000, automobile manufacturers or importers must accept and recycle end-of-life vehicles. Also, in 2003, the ELV Directive<sup>\*3</sup> was enacted, specifying ease of recycling as a certification requirement.

The company built a system of acceptance and recycling in line with the actual situation of EU member countries centering on our European subsidiary Mitsubishi Motors Europe B.V. (MME).

\*2 "Directive of the European Parliament and of the Council on End-of- Life Vehicles"

\*3 Abbreviation of End-of-Life Vehicles.

#### **Provision of Dismantling Information**

In the EU, automobile manufacturers must provide dismantling information for new model vehicles to treatment operators. The company provides such information on a timely basis by using the International Dismantling Information System (IDIS) jointly developed by automobile manufacturers.

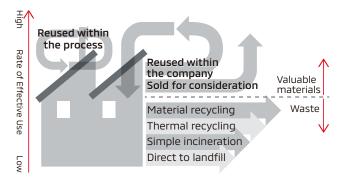
# Response to the EU's Directives on Approval for Vehicle Models for Recyclability

In the EU, satisfying the minimum 95% recyclability rate is a requirement for type approval of vehicle models, and the company established a system that satisfies the requirements of this directive. Our vehicles sold in the EU meet the requirements of the directive under this system. We will continue to acquire recyclability approval for all new models sold in the EU.

# Initiatives to Reduce Waste Generation and Reuse Resources in Production Activities

By improving its production processes, the Company is working to reduce the amount of waste it generates through manufacturing. For the waste we do generate, while curtailing treatment costs we continue to improve the ways in which we sort and treat waste, using it more effectively as resources. As we continue working toward the achievement of zero direct landfill waste (less than 0.5%), a goal raised in the Environmental Targets 2030, we are endeavoring to reduce waste generation, reuse waste as resources and dispose of waste properly.

### Effective Use of Resources and Recycling



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ESG Data

# **Prevention of Pollution**

# Medium- to Long-Term Vision for Material Issues

	Risks	Opportunities	Direction of Responses
Long Term	<ul> <li>The cost of managing hazardous substances could rise if regulations are become more stringent in response to increased damage to human health and the loss of ecosystems.</li> <li>The company could become subject to fines or sanctions in the event of a serious leak into the air or water.</li> <li>Environmental problems at a supplier could disrupt the supplier's operation and halt our parts procurement.</li> <li>The Company's image could suffer in the event of a delayed response to initiatives.</li> </ul>	<ul> <li>We could reduce costs through more efficient management, including of the supply chain.</li> <li>By reinforcing management, including of the supply chain, we could supply products that deliver reassurance and safety, as well as maintaining competitiveness.</li> <li>Managing in accordance with standards more rigorous than those imposed by regulations could enhance the corporate image.</li> </ul>	<ul> <li>We will contribute toward a society free of envi- ronmental pollution by reducing the environmental impact of our products and the pollution resulting from our business activities.</li> </ul>

	External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
Medium Term	tries and regions	<ul> <li>Growing interest in environmental consideration</li> <li>Growing ESG investment (investors promoting changes in corporate activities)</li> </ul>	<ul> <li>Conformance to regulations on hazardous sub- stances in products</li> </ul>

# FY2020 Materiality Targets and Results

 $\bigcirc$ : As planned  $\triangle$ : Delayed

Details of Main Initiatives	FY2020 Targets	Indicators	FY2020 Results	Self- Evaluation
Properly manage hazardous substances in products	Properly manage hazardous substances		We are obtaining information on regulated substances, up- grading our internal management system and conducting content surveys on newly regulated substances	0



### **Basic Approach**

Vehicles are products that can affect human health and biodiversity through the emission of environmental pollutants and chemical substances during business activities or product use.

In order to contribute to the realization of a sustainable society, MITSUBISHI MOTORS considers the prevention of pollution to be one of the material issues for the Company. Our Environmental Plan Package positions this issue as one for the Company to address directly. To help realize a society free of environmental pollution, we are working to reduce the environmental impact of our products and pollution resulting from our business activities. In the stage of product development, along with promoting the development of fuel economy improving technologies and electric vehicle technologies, we strive to manage to hazardous substances. In production processes, we are endeavoring to reduce air pollutants emitted from out plants by voluntarily enacting activity standards that are stricter than legal requirements. In order to reduce the impact on the environment from air pollutants and chemical substances, we engage in the prevention of pollution throughout all our business activities.

# Purifying Exhaust Gas while Driving

Vehicles powered by gasoline and diesel engines inevitably emit combustion gases from the engine while driving. These exhaust gases contain hazardous substances that can cause air pollution.

In addition to developing and popularizing electric vehicles, which emit little exhaust while driving, we are endeavoring to develop and encourage the use of gasoline and diesel vehicles that have emissions containing fewer hazardous substances.

### **Improving Gasoline Engine Vehicles**

Since the 1960s, emissions of carbon monoxide, hydrocarbons, and nitrogen oxides (NOx) have been steadily restricted by regulations.

We have taken various measures since such regulations were first introduced. We currently comply with these regulations by applying electronically controlled fuel injectors and advanced catalyst technologies to the combustion control system.

### **Improving Diesel Engine Vehicles**

For diesel engine vehicles, carbon monoxide, hydrocarbons, NOx, and particulate matter have been regulated in some countries, such as Japan, United States and European countries, since the 1970s.

Since such regulations were first introduced, we have taken measures including improving the combustion technology. To comply with these regulations, we have developed and produced clean diesel engines by systemizing technology such as VG turbochargers, controlling combustion with a common rail fuel injection system, introducing after-treatment using NOx trap catalysts, diesel particulate filters and a urea selective catalytic reduction (SCR) system.



# Clean Diesel Engine Systems

### VG Turbocharger

The VG turbocharger helps to improve fuel economy and suppress emissions of particulate matter through optimum supercharging across the engine's operating range.



### **Common Rail Fuel Injection System**

Particulate matter and NOx can be generated due to incomplete combustion. In our vehicles, this is suppressed using a high-pressure fuel pump, common rail accumulator that stores highly pressurized fuel, and electronically controlled fuel injectors.



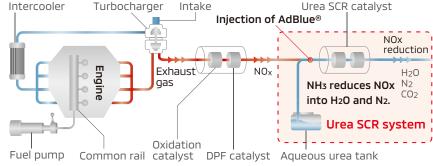
### **Diesel Particulate Filter (DPF)** This substantially reduces particulate matter.



### Urea Selective Catalyst Reduction (SCR) System

Nitrous oxides (NOx) from diesel engines' emissions are purified using an aqueous urea solution (Ad-Blue®\*1), breaking them down into non-polluting nitrogen and water.

# [The 4N14 Engine System]



\*1 A registered trademark of Germany's Verband der Automobilindustrie (VDA)

### TOPICS

# 2.5L Naturally Aspirated Engine on the New OUTLANDER

The new OUT-LANDER, which launched in North America in April 2021, is equipped with an inline direct



injection four-cylinder DOHC 2.5L engine. The engine is designed for low fuel consumption, smooth driving and enjoyably agile acceleration.

This newly developed engine, which was developed through the alliance, clears emission gas level LEV III-SU-LEV30<sup>\*2</sup>. By using the items described right column, the engine performs on both the output and fuel economy fronts.

\*2: SULEV stands for Super Ultra Low-Emission Vehicles in the classification for emission in California, U.S.

1. Mirror bore coating

A mirror bore coating is used on the surface of the cylinder wall. The mirror-like finish helps to reduce friction loss.

2. Variable tumble control valve

A variable tumble control valve is used to optimize the flow of air drawn into the combustion chamber. In-cylinder flow is increased as a result, promoting rapid combustion, thereby reducing emissions and improving fuel economy, while enhancing acceleration response.

3. Electric variable valve timing (VVT) mechanism

An electric intake VVT is used to optimally control intake valve timing and provide superior responsiveness. On the exhaust side, a VVT with an intermediate lock is used, with individual valve timing optimized to achieve low emissions and improved fuel economy.

4. Variable capacity oil pump

A variable capacity oil pump optimizes the control of oil pressure according to driving conditions, thereby reducing friction loss and helping to improve fuel economy.

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# **Reduction of Hazardous Substances**

In accordance with the reduction targets of the Japan Automobile Manufacturers Association, Inc. (JAMA) and the EU's end-of-life vehicles directive (a recycling law), MITSUBISHI MOTORS is working to reduce the use of four substances (lead, mercury, cadmium, and hexavalent chromium). We have established internal technical standards to voluntarily reduce hazardous substances. We are also taking measures to comply with regulations on the use of hazardous substances in each country in compliance with the REACH regulation<sup>\*1</sup> concerning substances and the Convention on POPs\*<sup>2</sup>. At present, in addition to four substances and other heavy metals, the use of VOCs (volatile organic compounds), bromine-based flame retardants and various other substances is regulated. Regulations similar to European ones are being enforced in developing countries in Asia as well.

We are working to voluntarily reduce hazardous substances by setting internal technical standards.

\*1 REACH stands for "Registration, Evaluation, Authorisation and Restriction of Chemicals." Enacted on June 1, 2007, the REACH regulation is a general system to register, evaluate, authorize and restrict the use of substances

\*2 Persistent Organic Pollutants

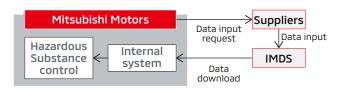
- Data (p. 110): Emissions of Sulfur Oxide, Nitrogen Oxide, VOC (Volatile Organic Compounds) and Ozone-Depleting Substances
- Data (p. 113, pp. 116–118): Atmospheric pollutants and PRTR-designated pollutants

# Material Data Control by the International Material Data System (IMDS)

Data on the hazardous substances contained in vehicle parts delivered by suppliers are collected by the International Material Data System (IMDS), an international system for collecting such data. Together with overseas plants such as Mitsubishi Motors (Thailand) Co., Ltd. (MMTh), we utilize the collected data under a globally centralized internal system for reducing hazardous substances.

In cooperation with suppliers, we are complying with the REACH regulation, a general system for the registration, evaluation, authorization, and restriction of substances used in the EU.

### Flow of Data Collection through IMDS



# **Reduction of In-Cabin VOCs**

To provide customers with a healthy and safe cabin space, we work to reduce volatile organic compounds (VOCs) inside the cabin.

VOCs are organic compounds that are easily volatilized at room temperature such as formaldehyde and toluene. These compounds are thought to cause sick building syndrome, and may irritate the eyes, nose, and throat. In an automobile cabin, they are mainly generated by adhesives and paint used in interior parts.

Please see the JAMA website for details regarding the Voluntary Guidelines.

WEB) http://www.jama-english.jp/release/release/2005/050214.html

### Progress

We are working to reduce in-cabin VOCs by developing materials with low VOC emissions and technologies to reduce VOCs generated inside the cabin.

#### **Example of Measures to Reduce VOCs**

Carpet	Reduced aldehydes in pile adhesives
Seat	Reduced organic solvents in fabric adhesives
Ornaments	Reduced VOCs by using spun-dyed high- gloss interior parts
Air-	Reduces VOCs with clean air filter with
conditioner	deodorizing function



### **Preventing Air Pollution**

# Reduction of VOC Emissions from Production Processes

MITSUBISHI MOTORS is applying the waterborne 3WET paint method<sup>\*1</sup> to its painting process to reduce VOC emissions. In Japan, we use this method at the Mizushima Plant and the Okazaki Plant. Overseas, the system is used on the No. 3 paint line at Mitsubishi Motors (Thailand) Co., Ltd. (MMTh). MMTh also plans to use this approach at a new paint plant it is constructing.

We are also upgrading our robotic and other painting systems, reducing the amount of paint used by adjusting production lots and increasing the amount of used thinner we recover. Through these moves, we are reducing VOC emissions from vehicle production.

\*1 With this method, water-soluble paints are used for the middle and top coats. Solvent-based paint is used only for the clear overcoat.

► Data (p. 110): VOCs (volatile organic compounds)



New paint plant under construction in Thailand (MMTh)

### Management of Air Pollutants

We follow laws and regulations to manage the concentrations and amounts of such air pollutants as Nitrogen oxides (NOx), Sulfur oxides (SOx) and soot emitted in production processes.

To lower NOx emissions, we introduce low-NOxcontent boilers and burners when upgrading or installing new equipment. To reduce Sox emissions, we are using lower-sulfur boiler fuels, such as kerosene or natural gas.

Data (p. 113): Atmospheric pollutants

# Management of Chemical Substances

### **Appropriate Management of Chemical Substances**

We have introduced a chemical substance management system for using chemical substances. Before deploying substances, we examine their physical and chemical properties and the details of usage plans, as well as legal requirements, conduct risk assessments, judge whether they can be used and educate workers. We also use this system to conduct centralized management of the most recent Safety Data Sheet (SDS) information. In addition, we use data from this system to ascertain the quantity of PRTR\*<sup>2</sup> substances used and report on their usage and emissions, as well as other aspects of legal compliance. We will continue to manage chemical substances appropriately to ensure both occupational health and safety and pollution prevention.

\*2 PRTR is short for Pollutant Release and Transfer Register.

### Appropriate Management of Hazardous Waste

We manage hazardous waste to avoid importing or exporting hazardous waste that is restricted by the Basel Convention on the Control of Transboundary Movements of Hazardous and Their Disposal<sup>\*3</sup>.

We also transport and treat waste produced in Ja-

pan appropriately, based on various legal requirements.

\*3 This convention stipulates international frameworks and procedures related to restrictions on the movement of certain types of waste across national boundaries.

# Appropriate Management of Waste Containing PCBs

Harmful polychlorinated biphenyls (PCBs) are contained as insulation oil in transformers and condensers that were manufactured a long time ago. We process waste containing PCBs appropriately, in accordance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Waste.



Feature

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6 CLEAN WATER AND SAMULTON

# **Conservation of Water Resources**

# Medium- to Long-Term Vision for Material Issues

<ul> <li>Water shortages and water pollution could raise the uncertainty and cost of securing water resources.</li> <li>Flooding and other damage arising from climate change could halt operations and reduce earnings.</li> <li>We could face higher costs in response to increasingly stringent regulations on water withdrawal and discharge.</li> <li>Water shortages and water pollution could raise the uncertainty and cost of securing water resources.</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in resp</li></ul>		Risks	Opportunities	Direction of Responses
<ul> <li>Flooding and other damage arising from climate change could halt operations and reduce earnings.</li> <li>We could face higher costs in response to increasingly stringent</li> <li>We could face higher costs in response to increasingly stringent</li> </ul>	Len	and cost of securing water resources.		
• We could lace higher costs in response to increasingly stringent		Flooding and other damage arising from climate change could		and water shortages), we will address these issues,

	External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
Medium Term	<ul> <li>Climate change resulting in extreme weather events, resulting in environmental changes and increasingly severe water shortages</li> <li>Growing populations and urban development in emerging markets exacerbating water pollution</li> <li>Plastics causing marine pollution</li> </ul>	<ul> <li>Growing ESG investment (investors promoting changes in corporate activities)</li> </ul>	<ul> <li>Promote climate change countermeasures and initiatives targeting resource recycling and pollu- tion prevention</li> <li>Manage the amount of water used based on water risks at each production facility, and monitor the quality of discharged water</li> </ul>

# FY2020 Materiality Targets and Results

 $\bigcirc$ : As planned  $\triangle$ : Delayed

Details of Main Initiatives	FY2020 Targets	Indicators	FY2020 Results	Self- Evaluation
	Increase the number of locations where we under- stand the amount of water used	Number of locations where we understand the amount of water used	Understand the amount of water used at over- seas locations	0



# **Basic Approach**

Due to the increasing population and changes in the natural environment caused by climate change, the demand for water in specific areas is expected to grow tighter, and social concern for the preservation of water resources are increasing.

MITSUBISHI MOTORS requires a large amount of industrial water, city water, and groundwater, etc., for the automobile production process and discharge of water into sewage lines and rivers, etc. In regions where water risk is high, it is essential to consider the impact that water withdrawal and discharge from our business activities have on the surrounding environment.

At business sites, we comply with various legal requirements, such as on the quality of discharged water. In addition, we work to reduce water withdrawal amounts and introduce water recycling technologies based on the status of water resource management in individual countries and regions.

Also, as water is required for the operations of our business partners. We are aware of the importance of water risk management throughout the entire value chain.

#### Water Withdrawal Source and Drainage of Each Plant

Plant	Water Withdrawal Source	Drainage
Okazaki Plant (Okazaki, Aichi Pref.)	Yahagi River	Kanda River Tributary → Kanori River
Kyoto Plant –Kyoto (Kyoto, Kyoto Pref.)	Lake Biwa	Sewage line
Kyoto Plant –Shiga (Konan, Shiga Pref.)	Lake Biwa	Sewage line
Mizushima Plant (Kurashiki, Okayama Pref.)	Takahashi River	Hakken River → Mizushima Port
Pajero Manufacturing Co., Ltd. (Sakahogi-cho, Gifu Pref.)	Kiso River	Kiso River
Mitsubishi Motors (Thai- land) Co., Ltd. (MMTh)	Nong Pla Lai Reservoir, etc.	Sewage line
Mitsubishi Motors Krama Yudha Indonesia (MMKI)	Lake Jatiluhur	Sewage line

# **Reduction of Water Withdrawal Volume**

We are striving to reduce water withdrawal volumes by reusing washing water used in production processes for pre-washing and by circulating cooling water and temperature control water.

At the Okazaki Plant, rainwater storage tanks have been set up in order to reuse rainwater. We have also set up equipment to filter groundwater so that it can be used to supply drinking water during disasters to people nearby the plant.

Data (p. 111): Withdrawn water volume





Rainwater storage tanks (Okazaki Plant)

Groundwater membrane filtration equipment (Okazaki Plant)



# **Reuse of Discharged Water**

Mitsubishi Motors Krama Yudha Indonesia (MMKI) is making efforts to recycle wastewater and reuse rainwater in order to reduce water withdrawal. In FY2020, roughly 47% of the water processed in its wastewater treatment plant is reused within MMKI.

We are upgrading our discharged water recycling plant in preparation for the start of operations in FY2021 of a new paint plant under construction at Mitsubishi Motors (Thailand) Co., Ltd. (MMTh). At this plant, we plan to introduce a system that will recycle up to 75% of water internally.

▶Data (p. 111): Wastewater volume



Discharged water recycling plant under construction (Thailand)

# **Prevention of Water Pollution**

To prevent water pollution in areas surrounding plants, we measure and manage the quality of discharged water based on legal requirements. We also conduct surveys and confirmations regarding the quality of groundwater and soil pollution. In this way, we confirm that no toxic substances are being discharged to the outside area. In order to quickly detect abnormalities in discharge water quality due to such factors as rainfall, we set up a surface oil detector\* in front of outlets leading from the plant to public water and continuously monitor discharge water conditions. We carry out continuous monitoring so that water discharged from the plant does not affect the environment outside the site. In the event of an accident, we respond quickly to prevent pollution from spreading, report to the local authorities and disclose information to the community.

At the Mizushima Plant, we are stepwise up grading equipment for processing discharged water that had deteriorated over time. In FY2021, we plan to complete and commence operations at a communi-

ty plant for processing domestic waste water emitted from offices.

 Detects the presence of oil by capturing changes in reflectance as the reflectance of oil is greater than that of water.
 Data (pp. 114–115): Water pollutants



Observation well (Okazaki Plant)



General effluent treatment facilities (Okazaki Plant)



Surface oil detector (Okazaki Plant)



# Completion of Construction to Separate Piping for Rainwater and Plant Discharge (Kyoto Plant)

In old sewer systems, rainwater and domestic wastewater flow together and are eliminated through the same pipes as "combined sewerage." During typhoons and heavy rains, water volumes can exceed the capacity of downpipes and water treatment facilities. In such cases, water is diverted into rivers and other public waterways. There is continuous needs to reduce this pollution load.

Remnants of this old sort of combined sewerage system were intact at the Kyoto Plant (established in 1944). To completely separate piping for factory wastewater and rainwater, we have moved forward with phased construction to install new wastewater-specific piping. Construction began in FY2019, and in FY2020 we completed the work, separating the water flows completely. As a result, we are reducing rainwater flows into the public sewerage system and preventing the flow of factory wastewater into public water supplies.



Underground construction to install wastewater piping for factory water discharge (Kyoto Plant)

For details on the issues with combined sewerage, see the City of Kyoto website (Japanese only).
(WEB) https://www.city.kyoto.lg.jp/suido/page/0000008679.
html

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# 15 🖏

# Preservation of Biodiversity

# Medium- to Long-Term Vision for Material Issues

	Risks	Opportunities	Direction of Responses
Long Term	<ul> <li>The loss of ecosystems could lead to environmental changes that raise the uncertainty and cost of procuring resources.</li> <li>Land use for business operations could cause ecosystem losses, reducing our corporate image.</li> </ul>	<ul> <li>Prevent resource procurement uncertainties and rising procurement costs</li> <li>Prevent a decline in the corporate image by allevi- ating and recovering from the impact on ecosys- tems due to land use for business operations</li> </ul>	<ul> <li>Based on the impact climate change, resource extraction and pollution have on the ecosystem (species extinction and change, reductions and disappearance of habitat and migratory regions), we will address these issues to help reduce eco- system losses.</li> <li>Enact measures that are in harmony with local biodiversity.</li> </ul>

	External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
dium erm	2019 assessment report by the Intergovernmental Science-Policy	<ul> <li>Growing ESG investment (investors promoting changes in corporate activities)</li> </ul>	<ul> <li>Promote climate change countermeasures and initiatives targeting resource recycling and the prevention of pollution</li> <li>Promote community-based initiatives to address environmental issues</li> </ul>

# FY2020 Materiality Targets and Results

 $\bigcirc$ : As planned  $\triangle$ : Delayed Self-FY2020 Targets Details of Main Initiatives Indicators FY2020 Results Evaluation Created a biotope\* at the Kyoto Plant • Nurture and protect indigenous species at business Promote preservation activities that Initiatives leverage the results of ecosystem sites in Japan Conducted Planted and cultivated trees at Pajero Forest surveys at locations in Japan Ο • Conduct tree-planting and cultivation activities in (Yamanashi Prefecture) Japan and overseas • Launched an afforestation project in Thailand

\* A biotope is a space where organisms can live in natural surroundings.





# **Basic Approach**

All living things are intricately connected in various relationships and live in balance. We benefit from this biodiversity in our lives.

MITSUBISHI MOTORS both directly and indirectly impacts on biodiversity due to land use (including the construction of plants), the release of chemical substances from plants, and the greenhouse gas emitted from the use of the company's products and business activities. Meanwhile, climate change is transforming regional environments, which has a major direct impact on ecosystems. We believe it is a priority to enact climate change countermeasures, protecting biodiversity so that we can continue to enjoy its blessings.

The company formulated the "MITSUBISHI MOTORS Group Guidelines for the Preservation of Biodiversity" in August 2010 and promotes conservation activities.

None of our business sites in Japan are located in or adjacent to protected areas according to the Nature Conservation Act and prefectural codes. However, we conducted surveys on ecosystems in order to understand the impact our business activities have on biodiversity.

We are collaborating with OISCA to preserve forests in Hayakawa-cho, Yamanashi Prefecture, while interacting with the local community through volunteer employee activities. These activities aim to protect metropolitan water sources and spread awareness of the environment among our employees.

We are also promoting preservation activities at affiliated companies overseas.

▶Data (p. 119): Biodiversity data

# MITSUBISHI MOTORS Group Guidelines for the Preservation of Biodiversity

The MITSUBISHI MOTORS Group will continue to track and reduce its impact on biodiversity, recognizing that the activities of humankind can both benefit from and affect the diversity of living organisms. To this end, the entire Group will take on initiatives for preventing global warming and environmental contamination, and promote the recycling and efficient use of resources, while engaging in activities that pay consideration to biodiversity.

1. Consideration to biodiversity in business activities

We will track and reduce the impact of business activities on biodiversity by conserving energy, reducing the generation of waste, and curtailing the release of chemicals. At the same time, we will also pay consideration to neighboring communities when making use of land for factory construction and other purposes.

2. Consideration to biodiversity in products

We will promote fuel efficiency, exhaust gas countermeasures and recycling-friendly design of our products, while striving to select and use materials that pay consideration to the environment.

### **3. Education, understanding and self-awareness** We will continue to educate the entire Group from management to employees on the front lines to share a common understanding and develop a self-awareness of the relationship between business activity and biodiversity.

4. Cooperation and collaboration with society

These activities will be promoted in cooperation with all stakeholders including the supply chain, stockholders, local governments, local communities, non-profit organizations (NPOs) and non-governmental organizations (NGOs).

#### 5. Information disclosure

We will strive to disclose and disseminate the content and results of these activities to customers and local communities. Promoting Preservation Activities by Utilizing Ecosystem Surveys at Domestic Business Sites

Ecosystem Surveys at Business Sites in Japan

Production of vehicles requires largescale plants. We believe that assessing the impact that the use of land in company business has on local biosystems is important to our biodiversity protection initiatives.

Based on this concept, we conducted ecosystem surveys at our domestic business sites with largescale land, such as our factories with support from consultancies related to biodiversity. Ascertaining biosystems not only in domestic business sites but also in the surrounding environment by means of field surveys and documentary research leads to maintenance measures that are in harmony with local biodiversity.

#### Locations Where Ecosystem Surveys Were Conducted

Fiscal Year	Location	
2013	Kyoto Plant-Shiga	
2015 Okazaki Plant		
2017	Mizushima Plant/Kyoto Plant-Shiga*	
2018	Tokachi Research & Development Center	
2019	Kyoto Plant-Kyoto	
2018	Tokachi Research & Development Center	

\* A monitoring survey was conducted to confirm the preservation effects of the measures.

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### Creating a Biotope at the Kyoto Plant

Based on an ecosystem survey conducted in FY2019, we learned that the Kyoto Plant serves as a refuge where certain plants and insects can survive locally, and we found that this area was an important environment in terms of preserving regional diversity. Within the plant, we found a diverse profusion of plant and insect varieties, compared with the greenery surrounding the plant. At a pond in the square, we found four types of dragonfly larvae, including the Sympetrum eroticum eroticum.

Unusual Flora Discovered in the City during Our Survey



Ranunculus japonicus

Carex doniana



Sympetrum eroticum eroticum dragonfly larvae

In FY2020, we turned a pond within an area of the plant called Relaxation Plaza into a biotope. We worked on the pond and grasslands to cultivate indigenous species such as the prickly water lily, floating

hearts and bulrushes, creating a habitat for dragonflies, locusts and other insects.

Aquatic plant seedlings were separated out by "Sustainable Kyoto," an environmental education center within the Kyoto City Southern Clean Center.





**Relaxation Plaza** 



Floating heart

Bulrushes

Prickly water lily

The prickly water lilies we cultivated at the pond in

the Relaxation Plaza have steadily grown to the point where seeds can be collected. Some seeds that were grown into seedlings at the Sustainable Kyoto facility were returned to their original location. Through Sustainable Kyoto, we plan to provide seeds to companies and schools in Kyoto so they can cooperate in growing and breeding rare aquatic plants.





Seeds collected from the prickly water lily

On the site of the Kyoto Plant, we work to preserve the region's biodiversity through such efforts as cultivating Asarum caulescens, a native species that is deeply rooted in the culture of Kyoto. Going forward, we will also nurture the connections between the Kyoto Plant and the natural surroundings we discovered during this ecosystem survey. Through ongoing maintenance of the site's greenery, we will maintain biodiversity and strive to preserve the regional ecosystem.

# **Overseas Preservation Activities**

Mitsubishi Motors (Thailand) Co., Ltd. (MMTh) has established a non-profit organization, the Mitsubishi Motors Thailand Foundation (MMTF). The company announced in January 2021 that as the first phase of its activities, the foundation would promote the "60 Rai Reforestation" Project to commemorate MMTh's 60th anniversary. Working with Thailand's Royal Forest Department and the Thailand Greenhouse Gas Management Organization, in FY2021 the foundation will endeavor to revitalize an area of forest covering 60 rai (9.6 hectares) in eastern Chonburi and Sa Kaeo

provinces. Employees from MMTh and people from the local community will work together to cultivate an awareness of regional environmental preservation.



Planting trees in Thailand (Chonburi Province)

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