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# **Environmental Plan Package**

# Structure of the 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 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**

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.
- 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

# **Environmental Policy**

We have 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 medium- to 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 Intergovernmental Panel on Climate Change (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 pollution prevention.

# Aiming to Become Carbon Neutral by 2050

Regarding "action to climate change," we have stated our commitment toward helping to shape a society resilient to the impact of climate change by achieving net-zero CO<sub>2</sub> emissions. In September 2022, we revised Environmental Vision 2050, incorporating the goal of achieving carbon neutrality.

# **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 electrified vehicles and the promotion of their use in society.

# Action to Climate Change

Through electrified vehicles and the increased use of renewable energy, we aim to become carbon neutral and contribute to the realization of a society that is resilient to climate change.

#### **Resource Circulation**

We will contribute to a resourcerecycling-oriented society by minimizing input resources and maximizing resource efficiency.

#### **Pollution Prevention**

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 resulting from our business activities.

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# Environmental Targets 2030

In 2020, Environmental Vision 2050 set out our vision for society in 30 years' time, as well as the directions for our initiatives. In line with this vision, MITSUBISHI MOTORS formulated Environmental Targets 2030, which sets forth items to be addressed in the next 10 years. When setting these targets, we referred to various external scenarios and international frameworks.

We revised the Environmental Targets 2030 in February 2023, setting even higher targets in our "action to climate change" to demonstrate our commitment to achieving carbon neutrality. For Scope 1\*1 and Scope 2\*2, we raised our target for reducing CO<sub>2</sub> emissions from business activities to the SBT\*3 target equivalent to a 1.5°C level. For Scope 3\*4, in addition of an electrified vehicles sales ratio of "50% by FY2030" we added" 100% by FY2035." We also added qualitative targets related to procurement and distribution. These revisions were approved by the Board of Directors.

\*1 Scope 1: A company's direct emissions (such as from burning fuel)

- \*2 Scope 2: Indirect emissions, resulting from electricity, heat or steam provided by another company
- \*3 SBT: Short for Science Based Targets, which are greenhouse gas emission reduction targets set by companies consistent with the Paris Agreement levels
- \*4 Scope 3: Indirect emissions other than Scope 1 and Scope 2 (emissions from other companies and other sources related to the company's activities)

#### **Environmental Targets 2030**

		Underlines indic	ate revised items.
lssues	Targets 2030 (	(after revision)	Targets 2030 (before revi- sion)
Climate Change	Average CO2 emissions from new vehicles*5	-40% (compared with FY2010)	-40% (compared with FY2010)
	Electrified vehi- cles* <sup>6</sup> sales ratio	50% FY2035 100%	50%
	CO <sub>2</sub> emissions from business activities* <sup>7</sup>	-50% (compared with FY2018)	-40% (compared with FY2014)
	Promoting CO <sub>2</sub> r ties with major s	eduction activi- suppliers	_
	Promoting CO <sub>2</sub> r activities in coo logistics compa	eduction peration with nies	-
	Providing energ services utilizing vehicles and use	y management g electrified ed batteries	_
	Implementing me	asures to adapt to	climate change
Resource	Expanding adop	il-based plastic	
Circula- tion	Achievement of (less than 0.5%)	zero direct landi	fill waste
	Reuse of batteri	es used in electr	ified vehicles
Pollution Prevention	Conformance to stances of conc	regulations on u ern in products	ise of sub-
Environ- mental Manage- ment	<ul> <li>Promotion of LCA*<sup>8</sup></li> <li>Promotion of environmental management within the Group and at sales outlets</li> <li>Enhancing disclosure of environmental infor- mation</li> <li>Promotion of employee education and aware- ness activities</li> <li>Collaboration with suppliers</li> <li>Promotion of grass-roots community environmental</li> </ul>		
	ronmental pres	servation activiti	

\*5 CO<sup>2</sup> emissions per new vehicle while driving. Tank to Wheel

- \*6 Battery Electric vehicles, plug-in hybrid electric vehicles (PHEV), and hybrid electric vehicles
- \*7 Total of Scope 1 Scope 2
- \*8 LCA stands for life cycle assessment, which is a technique for calculating and evaluating the environmental impact of a product from manufacturing to disposal.

Our principal targets and results for FY2022 are outlined below.

The decrease in CO<sub>2</sub> emissions from business activities is attributable to the reduction effects of energy conservation activities and the installation of a solar power system, as well as to the decrease in production volume due to the spread of COVID-19, which continued on from FY2020.

#### Average CO<sub>2</sub> emissions from new vehicles



#### Ratio of electrified vehicles sold\*9



brand products only.

#### CO<sub>2</sub> emissions from business activities\*<sup>10</sup>



\*10 Scope 1 and Scope 2

\*11 The officially reported emission volume of FY2018 (the benchmark year), was 588 thousand t-C0<sup>2</sup>. This volume includes 43 thousand t-C0<sup>2</sup> emissions from some equity-method associates. For the purposes of target setting, we have revised our base figure to 545 thousand t-C0<sup>2</sup>, as our current method of selecting environmental management target companies excludes these equity-method associates.

Formulation

Review

# Structure for Consideration in Formulation

MITSUBISHI MOTORS established the Environmental Working Group, made up of members from across the Company, and proceeded with considerations toward the formulation of the Environmental Plan Package.

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*1; members: Division general managers of relevant divisions)

	Environmental Working	Group
.eader:	Technical advisor to the cha	irman*1
Subleader:	Division general manager of Management Division*1	the Development
Secretariat:	Sustainability Promotion De	partment
1embers:	Corporate departments  • Strategy management  • Human resources  • Public and investor relations  Product and business activit  • Technology strategy  • Manufacturing  • EV business • Development management	Asset managemer     Finance      ties departments     Logistics     Procurement     Overseas sales     Domestic sales
	• Materials technology	Arter Sales Service

#### <January-October 2020>



# **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 our 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 (PHEV) 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, envi-         ronmental 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>         Unit sales and number of vehicles owned, globally         and by region         <results environmental="" initiatives="" of="">         CO2 emissions (Scope 1, 2, 3), amount of waste         generated, etc.</results></business></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>

- Clearly spell out the Environmental Policy and **Environmental Vision 2050**
- Consider and formulate initiatives in the Environmental Targets 2030, as well as numerical targets

Conduct review via outside experts

\*1 Positions as of March 2020

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# **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, we have constructed a framework for environmental management. We are promoting Group initiatives, including education and awareness activities for employees, and the acquisition of certifications for environment management systems among affiliated companies.

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

Please see page 121 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 us. 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.

For the management of target companies, we have established selection criteria as a framework for the scope of environmental targets and the collection and publication of environmental data, and we review these criteria on a regular basis.

#### Non-Production Affiliates

Country	Company Name	
Japan Mitsubishi Automotive Engineering Co., Ltd.		
	Mitsubishi Automotive Logistics Technology Co., Ltd.	
	Higashi Nihon Mitsubishi Motor Sales Co., Ltd.	
	Nishi Nihon Mitsubishi Motor Sales Co., Ltd.	
United States	United States Mitsubishi Motors North America, Inc. (MMNA)	
Netherlands	Mitsubishi Motors Europe B.V. (MME)	
UAE	Mitsubishi Motors Middle East and Africa FZE (MMMEA)	
Australia	Mitsubishi Motors Australia, Ltd. (MMAL)	
New Zealand	Mitsubishi Motors New Zealand Ltd. (MMNZ)	
Canada	Mitsubishi Motor Sales of Canada, Inc. (MMSCAN)	
Mexico	Mitsubishi Motors de México S.A. de C.V. (MMDM)	

# Management Target Companies (20 Companies)

	As of March 31, 2023
Country	Company Name
Japan	MITSUBISHI MOTORS CORPORATION

#### **Production Affiliates**

Country	Company Name			
Japan	Suiryo Plastics Co., Ltd.			
Thailand	Mitsubishi Motors (Thailand) Co., Ltd. (MMTh)			
	MMTh Engine Co., Ltd. (MEC)			
Philippines	hilippines Mitsubishi Motors Philippines Corporation (MMPC)			
	Asian Transmission Corporation (ATC)			
Indonesia	Mitsubishi Motors Krama Yudha Indonesia (MMKI)			
Vietnam	Mitsubishi Motors Vietnam Co., Ltd. (MMV)			
Malaysia	MMC Manufacturing Malaysia Sdn. Bhd, (MMCMM)			

# **Environmental Management System**

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. The ISO 14001 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.

#### Status of ISO 14001 Certification (As of May 31, 2023)

Development Companies
Mitsubishi Automotive Engineering Co., Ltd.
Production Companies
Suiryo Plastics Co., Ltd.
Mitsubishi Motors Philippines 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 Automotiva Logistics Tochpology Co. 1td

Mitsubishi Automotive Logistics Technology Co., Ltd. (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)

Please see page 52 for a list of the dealers that have received Eco-Action 21 certification.

# Promoting Life Cycle Assessment (LCA)

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 advanced parts, electrified vehicles and new-model vehicles that help address the issues related to climate change and energy. We compare life cycle CO<sub>2</sub> emissions with those of previous parts and vehicles.

#### Examples of LCA Implementation in FY2022

Model	Objective
eK X EV	<ul> <li>Assessing the effect of reductions from the gasoline model</li> <li>Assessing the ratios for production, use and disposal</li> </ul>
	Assessing the impact of components

#### LCA Results for the eK X EV (CO<sub>2</sub> emissions ratio)

			Mai	Disposa ntenance 3%	al 2%*2
Production 49%		Production o	f electricity 46	5%	
0%	20%	40%	60%	80%	100%

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

In light of growing interest in the environmental impact across the entire life cycle in individual countries and regions, we will continue to strengthen our systems and build the foundations to ensure we remain abreast of developments related 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

We release information on the concepts and details of its environmental initiatives on our website and in the sustainability report in order to make its environmental initiatives more widely known. For details, see the "Environment" section of our website. (WEB) https://www.mitsubishi-motors.com/en/sustainability/

#### **Communication with Investors**

environment/

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

In FY2022, we announced our new mid-term business plan from FY2023, "Challenge 2025." For the new Environmental Targets 2030 included in this plan, we held dialogues and exchanged opinions with many domestic and foreign institutional investors and others.

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# 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 FY2022, we conducted rank-based training and distributed videos to employees. In these ways, we sought to promote an understanding of our social responsibility for realizing a sustainable society, the relationship between sustainability and the environment, and the relationship between environmental issues and our business activities.

Please see page 11 for details on our activities to promote an awareness of sustainability.

# **Collaborating with Suppliers**

Our suppliers 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 suppliers. We explain the importance of environmental initiatives at our Suppliers Meetings, for example, which are attended by our suppliers, and strive to engage in communications to reduce the environmental impact of our entire supply chain.

Please see page 97 for details on the Green Procurement Guidelines.

# 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, we promote 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, employees work with local residents to plant and cultivate trees, engaging in activities connected to local communities.

Please see page 63 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 FY2022, we were subject to no fines or administrative orders stemming from violations of environmental laws and regulations<sup>\*1</sup>. However, in two instances they exceeded statutory values provided under the Air Pollution Control Act.

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

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 to stop the occurrence of similar cases.

\*1 Refers to 31 environment-related laws and regulations identified by us, including the Water Pollution Prevention Act and the Air Pollution Control Act.

# Participation in External Associations and Initiatives

We are working with external organizations and initiatives to achieve carbon neutrality in 2050.

In April 2023, we joined the GX\*<sup>2</sup> League, based on the GX League Basic Concept, announced by the Ministry of Economy, Trade and Industry in FY2021.

In addition, in May 2023 we joined the Japan Climate Initiative (JCI), a network to disseminate information and strengthen collaboration among companies and others working to combat climate change toward the realization of a decarbonized society. \*2 GX: Green transformation

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# **Responding to Climate Change and Energy Issues**

# Progress in FY2022



# **Basic Approach**

Environment

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 largest cause of these extreme-weather events is climate change, and global warming caused by increases in CO<sub>2</sub> and other greenhouse gases is a major factor.

International frameworks for realizing a sustainable society, such as the Paris Agreement adopted in 2015 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. Furthermore, following the United Nations Climate Change Conference (COP26), held in the United Kingdom from October to November 2021, over 140 countries, including Japan, declared their intent to reach "carbon neutrality" by 2050. As a result, countries like Japan and the United States have raised their greenhouse gas reduction targets for 2030. Momentum is now growing rapidly toward achieving a decarbonized society. The Sixth Assessment Report of the IPCC\*<sup>2</sup>, released in March 2023, highlights the need to reduce global CO<sub>2</sub> emissions, including other greenhouse gases, by at least 60% (CO<sub>2</sub> by 65%) compared to 2019 levels by 2035 in order to limit the temperature rise to 1.5°C from pre-industrial levels. This suggests that global efforts to reduce CO<sub>2</sub> emissions will likely accelerate in the future.

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 material issue, taking into account its impact on the economy, environment and people. Furthermore, in the Environmental Plan Package, we position this as one of the important challenges to address directly, and are working to achieve carbon neutrality throughout its supply chain by 2050. We have set specific targets, and efforts are underway to achieve this goal.

• 7.2 • 7.3

To reduce energy consumption and CO<sub>2</sub> emissions in all business activities, including development, production and distribution, as well as offices, we are promoting various initiatives, such as electrification 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, we which count electrification technologies as one of its strengths should be able to work simultaneously to realize a sustainable society and achieve sustainable growth for us.

Our electrified 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.

Going forward, we will strengthen our efforts to further reduce CO<sub>2</sub> emissions with the aim of becoming carbon neutral throughout the supply chain by 2050. \*2 Intergovernmental Panel on Climate Change

9.4

Targets

• 13.1

• 13.2

# **Disclosure Based on** the TCFD Recommendations

With the issue of climate change growing increasingly serious, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD), which in 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). We will reflect the results of scenario analysis in our management strategies to enhance the resilience of our strategies and improve information disclosure in accordance with the TCFD Recommendations.

#### Governance

# a. Board's oversight of climate-related risks and opportunities

We recognize "responding to climate change and energy issues" as an important management issue and identified this as one of our material issues. The Board of Directors serves as a forum for the deliberation and oversight of strategies, business plans and approaches. When important matters related to environmental initiatives arise, such as climate change, these matters are supervised through deliberation and reporting at the Board of Directors. When we revised our Environmental Vision 2050 and Environmental Targets 2030 in

FY2022, we also went through the process of deliberation and reporting at Board of Directors meetings.

Examples of climate change-related issues discussed or reported by the Board of Directors

- Endorsement of TCFD recommendations
- Disclosure in line with TCED recommendations
- Declaration of intent to achieve carbon neutrality by 2050 and revision of Environmental Vision 2050
- Revision of Environmental Targets 2030

# b. Management's role in assessing and managing climate-related risks and opportunities

To address climate change and energy issues, we

#### Structure of Promoting Carbon Neutrality

Board of Directors		Chair	Mambara	Deles	Meeting		
Deliber	Deliberation Supervision		Chair			frequency	
Executive Committee		Executive Officer, President & CEO	Executive Officer, Executive Vice President/senior executive officer/	Monitoring Progress toward the Environmental Targets 2030	Three times a vear		
Sust	tainahility	/ Committee		general managers of relevant divisions		,	
eliberation and reporting		arbon Neutral	Executive Officer, Executive Vice President (responsible for Engineering/ Product Strate-	Relevant executive officers/general managers of rele- vant divisions	Formulate medium- and long-term policies and targets based on the as- sessment of climate-relat- ed risks and opportunities toward the realization of	Four times a year (Newly established in FY2023)	
		Subcommittee for Promote the Reduction of CO <sub>2</sub> – from Business Activities	gy/rcs/Design) Senior Executive Officer respon- sible for Produc- tion/Procure- ment	General managers of relevant divisions/ plant managers/ representatives of affiliated companies/ Sustainability Pro- motion Department	Draft action plans for re- ducing CO <sup>2</sup> in areas of busi- ness activity, promotion of specific measures, etc.	Twice a year	
	LT	CFD Consideration – Team		People in the general manager class at relevant divisions	Identify and assess cli- mate-related risks and opportunities, consider sce- nario analysis, etc.	Meets as necessary (Five times in FY2022)	

have established the Sustainability Committee,

chaired by the executive officer, president & CEO, who

measures, and reviews progress and achievements in

Sustainability Committee, we have established a body

consisting of executives responsible for management

strategy, products, manufacturing, procurement and

These policies, goals, and their progress are reported

by the respective heads of each area at the Sustain-

ability Committee for review and deliberation. The

organization generally meets three times per year,

logistics. This organization formulates medium- to

long-term policies and goals based on the assess-

ment of climate-related risks and opportunities.

line with the Environmental Targets 2030. Under the

also holds top responsibility for initiatives related to climate change. The committee evaluates climate-re-

lated risks and opportunities, discusses response





Top Management



and particularly important matters are deliberated and decided by the Board of Directors.

In recognition that addressing sustainability is a high priority management issue, in FY2022, the MIT-SUBISHI MOTORS Group added ESG-related items as an indicator for determining medium- to long-term performance-linked compensation for Executive Officers. Specifically, in relation to the environment, we introduced "CO<sub>2</sub> emissions from business activities" as an indicator to measure progress in addressing the escalating climate change issue.

#### Strategies

a. Short-, medium- and long-term climate-related risks and opportunities the organization has identified

We consider climate-related risks and opportunities to be an important perspective in the formulation of our business strategy. We are identifying and evaluating short-term, medium-term, and long-term risks and opportunities, as well as analyzing the impact on our business based on multiple climate scenarios. We are also considering countermeasures in response to these risks and opportunities. As particularly high-impact migration risks, we identified the "strengthening of regulations for fuel economy/CO<sub>2</sub> and zero-emission vehicles" and the "introduction and expansion of carbon pricing." We identified "increasing frequency and intensity of meteorological disasters" as a physical risk. While these risks may affect our business in various ways, we recognize that responding appropriately to these risks will lead to greater sales of electrified vehicles and new business opportunities.

Governance

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Category		ltem	Assumed Impact on MITSUBISHI MOTOR'S Business Activities	Timing of the Impact*	Degree of impact
Transition risks	Policies and	Strengthening of regulations for fuel economy/CO <sub>2</sub> and zero-emission vehicles	<ul> <li>Increased development/procurement/production costs to comply with stricter regulations</li> <li>Increase in fines and credit purchase costs due to non-fulfillment of regulations</li> </ul>	Medium/long term	Large
	regulations	Introduction and expansion of carbon pricing	<ul> <li>An increasing tax burden on our emissions due to the introduction and expansion of carbon taxes and other sorts of carbon pricing, as well as higher prices on carbon, and higher costs due to a price shift toward the procurement, production and logistics stages</li> </ul>	Medium/long term	Large
	Markets	Changes in the energy mix	<ul> <li>Higher energy costs due to a rise in electricity prices resulting from the increased introduction of renewable energy and carbon-neutral sources of electricity, such as hydrogen</li> </ul>	Medium/long term	Medium
		Tight supply and demand for raw materials (rare metals)	<ul> <li>Rise in the cost of raw materials (such as rare metals) and components due to growing demand for storage batteries</li> </ul>	Medium/long term	Medium
		Changes in user awareness and behavior	• Decrease in sales volume due to the development of public transportation infrastructure and the proliferation of sharing in urban areas	Medium/long term	Medium
	Reputation	Increasingly stringent assessment by ESG institutions and stakeholders	Decline in our social image and share price	Short/medi- um term	Medium
Dhysical	Acute	Increasing frequency and intensity of meteorological disasters	<ul> <li>Damage to buildings and facilities caused by typhoons and torrential rains, and the suspension of operations at production facilities due to supply chain disruptions (delays in the supply of parts stemming from damage to suppliers and the disruption of transportation routes)</li> </ul>	Short/medi- um/long term	Large
risks	Chronic	Rise in average temperatures	• Rising (energy) cost of air conditioning to maintain the work environment and employee health	Short/medi- um/long term	Small
		Chronic	Rise in ocean levels	<ul> <li>Increased flooding and surge in the instance of storms due to rising sea levels, resulting in operational shutdowns at manufacturing facilities and increased investment in disaster countermeasures</li> </ul>	Short/medi- um/long term
Opportunities	Products and ties services		<ul> <li>Expand sales of electrified vehicles by improving product capabilities and taking advantage of government and municipal measures to promote electrified vehicles</li> <li>Increase sales of electrified vehicles and V2X-related equipment/services in line with the growing value of electrified vehicles as energy infrastructure</li> <li>Boost sales of electrified vehicles that can help supply power in response to growing demand to securing sources of emergency power in times of disaster</li> </ul>	Medium/long term	Large
-	Energy sources	Advancement in energy technologies	• Reduce energy costs by promoting energy conservation activities and the introduction of renewable energy	Medium/long term	Medium

\* Timing of the impact

Short term: Up to three years; medium term: three to 10 years; long-term: more than 10 years. Some issues impacts have already occurred as a result of the recent international situation.



Governance

# b. Impact of climate-related risks and opportunities on the organization's business, strategic, and financial plans

Feature

MITSUBISHI MOTORS recognizes that climate-related issues may affect its business, strategies, and financial plans, and reviews its strategies and plans from time to time in light of climate-related risks and opportunities.

# Impact on strategies and plans

Business area	Recognized impact	Incorporation into strategies and plans
Products and services	To realize a carbon-neutral society, various countries and regions are strengthening regulations for fuel economy/CO <sub>2</sub> and zero-emission vehicles. These will affect our product development, production and procurement strategies.	Our Environmental Targets 2030 set the goals of "a 40% reduction in CO <sub>2</sub> emissions from new vehicles (compared to FY2010)" and an "electrified vehicle sales ratio of 50% (100% by FY2035)." In line with these objectives, looking to 2030 we are promoting efforts to develop electrified vehicles and improve the fuel efficiency of internal combustion engine vehicles. In the five years to 2027, we plan to introduce nine electrified vehicle models.
Supply chain, value chain	In the automobile manufacturing and sales business, greenhouse gases such as CO <sub>2</sub> are emitted not only during the manufacture of products, but throughout the entire value chain. As climate change advances, the worldwide risk of increasingly frequent and severe occurrences, such as typhoons and floods, is mounting. If our supply chain or value chain is affected by such events, our plants' operations could be affected.	The Environmental Targets 2030 call for us to cooperate with major suppliers and logistics companies to promote efforts to reduce CO <sub>2</sub> throughout the supply chain. In response to the risk of supply chain disruption, we are working with key parts suppliers to formulate BCPs* so suppliers can quickly restore operations in the event of a disaster.
Investment in R&D	We are promoting investment in R&D to address increasingly stringent and new regu- lations for fuel economy/CO <sub>2</sub> and zero-emission vehicles in the countries and regions where we operate. These moves will affect our R&D costs for electrified vehicles and other products.	The Environmental Targets 2030 set a target of an "electrified vehicle sales ratio of 50% (100% by FY2035)." To meet this objective, looking to 2030 we will promote R&D to develop electrified vehicles and improve the fuel efficiency of internal combustion engine vehicles. We are budgeting ¥70 billion in R&D expenses related to electrification in FY2025. We have also earmarked ¥55 billion in capital expenditures related to electrification in FY2025.
Adaptation and miti- gation measures	Our business could be affected by countries and regions introducing or expanding car- bon taxes and emissions trading systems, as well as by rising energy costs.	The Environmental Targets 2030 set the goal of "reducing CO <sub>2</sub> emissions from our business activities by 50% (compared to FY2018)." To reach this objective by 2030, we will promote energy conservation activities and the introduction and expansion of renewable energy.

\* BCP: Business continuity plan



# c. Resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

Based on climate scenarios and future information from organizations such as the International Energy Agency (IEA) and the Network for Greening the Financial System (NGFS), we considered the "less than 2°C scenario\*1," which assumes actions by society to avoid climate change as of 2030 and 2050. We also looked at a "growth scenario\*2," which assumes national policies continue to grow more stringent. Under these scenarios, we examined the risks and opportunities, focusing on areas with significant impact on MITSUBISHI MOTORS' business activities.

In FY2022, we conducted an analysis that expanded the scope beyond our own operations and the product usage stage to include the procurement stage. The results of analysis related to the impact on our business of the associated risks and opportunities are as described below.

\*1 Set with reference to the IEA's "Announced Pledges Scenario (APS)" and the NGFS's "Net Zero 2050" \*2 Set with reference to the IEA's "Stated Policies Scenario (STEPS)" and the NGFS's "Current Policies"

## Impact of Risks and Opportunities on MITSUBISHI MOTOR'S Business Activities

	Scenario	Pisks (Opportunities		Impact on MITCURICUI MOTOR'S business	Kov countermoscures	
	Item		Risks/opportunities		Key countermedsures	
	Strengthening of regulations for	Risks	<ul> <li>Need for both developed countries and emerging markets to comply with stricter regulations</li> <li>Increasing likelihood of noncompliance</li> </ul>	<ul> <li>Higher development/procurement/production costs</li> <li>Fines and credit purchase costs increase if regulations are not met</li> </ul>	<ul> <li>Reduce costs by taking advantage of the alliance, such as by standardizing compo- nents</li> </ul>	
Less than 2°C	tuel economy/ CO <sub>2</sub> and ze- ro-emission vehicles	Opportunities	<ul> <li>Growing demand for electrified vehicles</li> </ul>	<ul> <li>Increased sales of electrified vehicles and expansion of the value chain related to electrified vehicles</li> </ul>	<ul> <li>Promote electrification, including PHEV and EV</li> <li>Promote new mobility businesses such as energy management using electrified vehicles and used batteries</li> </ul>	
	Introduction and expansion of carbon pricing	Risks	<ul> <li>Introduction and expansion of carbon taxes, causing carbon prices to rise</li> </ul>	<ul> <li>Increased direct and indirect tax burdens and higher costs at the procurement, production and logistics stages</li> <li>Promote energy conservation a introduce renewable energy</li> </ul>		
C		Opportunities	<ul> <li>Promotion of energy-saving technologies</li> <li>Increasing use of renewable energy</li> </ul>	• Lower energy costs	<ul> <li>Promote reduction efforts in cooperation with suppliers</li> </ul>	
	Increasing	Risks	<ul> <li>Increased possibility of factory damage and supply chain disruptions due to frequent and severe heavy rain and flooding</li> </ul>	<ul> <li>Damage to production and development facilities</li> <li>Lower earnings due to operational shutdowns due to damage to our own factories and suppliers</li> </ul>	<ul> <li>Review BCP, assuming such factors as heavy rain and flooding</li> <li>Promote risk mitigation initiatives in collabo- ration with suppliers</li> </ul>	
Growth fre dist dis	intensity of meteorological disasters (flood- ing, inundation)	Opportunities	<ul> <li>Greater demand for electrified vehicles, owing to growing need to secure emergency power sources</li> </ul>	<ul> <li>Increased use of electrified vehicles that can help supply emergency power</li> </ul>	<ul> <li>Reduce costs by taking advantage of the alliance, such as by standardizing components</li> <li>Promote electrification of PHEV/EV</li> <li>Promote new mobility businesses such as energy management using electrified vehicles and used batteries</li> </ul>	

Top Management



# MITSUBISHI MOTORS' Response Measures Based on Risks and Opportunities

MITSUBISHI MOTORS will incorporate measures to address climate-related risks and opportunities into our Environmental Plan Package<sup>\*1</sup> and business strategies, which set forth the direction and goals of our environmental initiatives. In this way, we are promoting initiatives to reduce future risks, ensure sustainable business growth and enhance our resilience as a company.

In September 2022, we stated our aim of achieving carbon neutrality throughout our supply chain by 2050. In February 2023, we revised the Environmental Targets 2030 to serve as a milestone along the path to achieving carbon neutrality by 2050.

On the product front, we will take our own plugin hybrid electric vehicles (PHEV) and commercial electric vehicle in the Kei-car segment as a starting point. To meet various needs in the global market, we will leverage the Alliance's technology and introduce optimal electrified vehicles\*2 at the appropriate timing, taking into consideration the energy situation and infrastructure development status in each country and region. Working toward carbon neutrality is one of the key challenges stated in Challenge 2025, the new mid-term business plan we announced in March 2023. We will develop electrified vehicles and step up our efforts in the Alliance as we work toward the second phase of our plan to reinforce electrified vehicles (FY2026-2028). Over the next five years, we plan to introduce nine electrified vehicle models.

In our business activities, we will seek to minimize energy use and transition to renewable sources of energy to reduce CO<sub>2</sub> emissions. Across the supply chain, we will collaborate with business partners, related companies and organizations, and governments and municipalities to reduce CO<sub>2</sub> emissions at the production stage (through raw materials and parts) and in logistics (including products). We will also promote renewable energy and charging infrastructure, utilize carbon-neutral fuel and promote V2X\*<sup>3</sup>.

We believe the spread of electrified vehicles represents a chance to do new business in the form of reuse of used batteries, energy management, and data business using vehicle driving and battery data, and in collaboration with our partners and municipalities we will grow a mobility business that contributes to carbon neutrality, which represents a unique opportunity for us as an automotive maker, into a fourth pillar of revenue after vehicle sales, financing (leasing), and after sales<sup>\*4</sup>. \*1 Please see page 30 for details on the Environmental Plan Package.

\*2 Electrified vehicles: Battery-powered electric vehicles, plug-in hybrid electric vehicles (PHEV), and hybrid electric vehicles (HEV)

\*3 V2X: A general term encompassing vehicle to home (V2H) and vehicle to grid (V2G), among others

\*4 Please see page 26 for details on the mobility business.

#### **Risk Management**

## a. Organization's processes for identifying and assessing climate-related risks

We have established a cross-functional team under the Sustainability Committee to conduct scenario analysis based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We have identified and assessed climate-related risks and opportunities that could affect our business, considering their potential occurrence and impact levels. We have incorporated goals and action plans for addressing climate-related risks and opportunities that have a particularly significant impact, and are monitoring progress through the Sustainability Committee.

## b. Organization's processes for managing climate-related risks

The climate-related risks, opportunities, and corresponding measures identified by the Sustainability Committee have been assigned to responsible executives at the executive officer level. We have set KPIs and are implementing a PDCA cycle. Additionally, reports on critical risks and opportunities requiring prompt action are provided to the Board of Directors, which decides on appropriate responses.

In FY2018, MITSUBISHI MOTORS identified material issues<sup>\*5</sup> as the important issue that we should wrestle from various challenges in the environmental, social, and governance fields. "Responding to climate change and energy issues" is recognized as one of the most critical issues. During the identification process, we conducted repeated examinations from the perspective of stakeholders' concern and the impact on us and conducted hearings with experts. Based on this, we had extensive discussions within the Sustainability Committee and made the final decision in the Executive Committee.

\*5 Please see page 15 for details on materiality.

#### Metrics and Targets

 a. Metrics used by the organization to assess climate-related risks and opportunities in line with its strategies and risk management processes

We formulated the Environmental Plan Package in 2020. Through electrified vehicles and the increased use of renewable energy, we aim to become carbon neutral by 2050 and contribute to the realization of a society that is resilient to climate change. We also formulated the Environmental Targets 2030, which

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clarifies specific initiatives to be achieved by 2030 in accordance with this vision. As major indices to be monitored and evaluated under "Action to Climate Change," which MITSUBIHI MOTORS positioned as a topmost issue, we set a target for Scope 1 and 2\*<sup>1</sup> in the category of "CO<sub>2</sub> emissions from our business activities." We also set a target of reducing emissions under Scope 3\*<sup>1</sup>, Category 11 (Use of sold products), which accounts for around 70% of total emissions throughout our supply chain, as well as "reduction in CO<sub>2</sub> emissions from new vehicles" and "ratio of electrified vehicles sales."

 \*1 Scope 1: A company's direct emissions (such as from burning fuel) Scope 2: Indirect emissions, resulting from electricity, heat or steam provided by another company
 Scope 3: Indirect emissions other than Scope 1 and Scope 2 (Such as emissions due to the use of sold products)

#### b. Scope 1, 2 and 3 GHG emissions and related risks

MITSUBISHI MOTORS calculates  $CO_2$  emissions based on a GHG protocol. The table below shows actual  $CO_2$ emissions in Scope 1, 2, and 3 for the period from FY2018 to FY2022.

To ensure our information is reliable and transparent, we have obtained independent third-party certification for our Scope 1 and 2 emissions.

#### <Scope 1, 2 and 3 Emissions >

	Unit	FY2018	FY2019	FY2020	FY2021	FY2022
Scope 1	x10 <sup>3</sup> t-CO <sub>2</sub>	119	110	80	92	95
Scope 2	x10 <sup>3</sup> t-CO <sub>2</sub>	469	416	285	319	271
Scope 3	x10 <sup>3</sup> t-CO <sub>2</sub> eq	42,580	35,429	20,286	28,294	28,710
Total	x10 <sup>3</sup> t-CO <sub>2</sub> eq	43,168	35,955	20,651	28,705	29,076

# c. Targets used to manage climate-related risks and opportunities, and performance against those targets

We are promoting a host of measures based on the Environmental Plan Package, which we formulated in 2020. We are developing electrified vehicles and technologies to improve fuel efficiency, introducing energy-saving equipment in production processes and using renewable energy in factories, offices and dealerships.

The Environmental Plan Package comprises the Environmental Policy, which incorporates our medium- to long-term 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 FY2030 in accordance with this vision. We have positioned the actions for climate change, resource circulation and pollution prevention as three environmental issues that we will directly address and have set specific targets for these themes.

As we position "action to climate change" as a topmost priority, in September 2022 we stated our aim of achieving carbon neutrality throughout the supply chain by 2050, and we revised the Environmental Vision 2050 accordingly. In March 2023, we announced revised Environmental Targets 2030 to serve as a milestone along the path to achieving carbon neutrality by 2050.

#### Major FY2030 Targets and Progress

Indicators	FY2030 Target	FY2035 Target	FY2022 Result
Average CO <sub>2</sub> emissions from new vehicles (Tank to Wheel, Compared to FY2010)	-40%		-18%
Ratio of electrified vehicles sales	50%	100%	11%
CO <sub>2</sub> emissions from business activities (Total Scope1 and 2, compared to FY2018)	-50%		-33%*2

\*2 Until FY2020, we included some equity-method associates in our environmental management target companies. However, these equity-method associates have been excluded since FY2021, as we organized a method of selecting environmental management target companies. We set the base value 545 thousand t-CO<sub>z</sub>, which is calculated

We set the base value 545 thousand  $t-CO_2$ , which is calculated by subtracting 43 thousand  $t-CO_2$ , the emission amount made by the equity-method associates, from 588 thousand  $t-CO_2$ , the officially reported volume of FY2018 (the benchmark year).

# Reducing CO<sub>2</sub> Emissions across the Supply Chain

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

To calculate  $CO_2$  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 during driving, and at the disposal stage. In FY2022, across the supply chain our  $CO_2$  emissions were 29,076 thousand tons of  $CO_2$  equivalent.

Data (pp. 118–119): CO<sub>2</sub> emissions, Scope 3 breakdown, energy input (primary, secondary energy)



# Development and Spread of Electrified Vehicles

In our Environmental Targets 2030, MITSUBISHI MOTORS set the target of achieving a 40% reduction in average 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 electrified vehicle sales to 50% by 2030 and to 100% by FY2035. This change focuses our core technologies on responding to climate change and energy issues through electrified vehicles, which emit low CO<sub>2</sub> while driving, and concentrates on their development. Centering on our strength in plug-in hybrid electric vehicles (PHEV), we will expand our lineup of electrified vehicles, thereby promoting their popularization and use in society and contributing toward the realization of a sustainable society.

#### **Electric Vehicles (EV)**

Electric vehicles (EV) are driven by electricity in battery, so they emit no exhaust gases such as CO<sub>2</sub> while driving.

We released the "i-MiEV" as the world's first mass-produced Electric Vehicle (EV) 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 "MINICAB-MiEV," a Kei-car segment commercial electric vehicle (EV). In 2012, we began offering the "MINICAB-MiEV TRUCK," also an electric vehicle (EV) in the Kei-car segment. These technologies are the foundation of next-generation electrified vehicles, such as PHEV.

We believe that expanding the lineup of Kei-car EV, which are expected to be used in more everyday situations, will be the key to the spread of electrified vehicles. Accordingly, in June 2022 we launched the "eK X EV," a new EV in the Kei-car segment, and in November 2022 we have reopened general sales of the "MINICAB-MiEV," a commercial battery-powered vehicle in the Kei-car segment. We will continue to focus on the development of EV to contribute toward the realization of a carbon neutral society.



#### TOPICS

Reopened General Sales of the "MINICAB-MiEV," a Kei-Car Segment Commercial Electric Vehicle (EV).



The "MINICAB-MiEV" is a one-box-type vehicle that incorporates the EV systems of the "i-MiEV," which has a proven track record in the world's first mass-produced electric vehicle. This system includes a drive battery and a small, lightweight and highly efficient motor. We have paid careful attention to the layout of the EV components, such as the drive battery, resulting in a spacious cargo area, as well as excellent driving stability and comfort thanks to a low center of gravity.

Sales of the only domestically produced commercial Kei-car segment electric vehicle, the "MINICAB-MiEV," began in December 2011, primarily targeting the domestic delivery industry. After temporarily ceasing production at the end of March 2021, we continued offering the model to some corporate customers. However, with the increasing focus on carbon neutrality and the acceleration of decarbonization efforts in various sectors, such as logistics and local governments, demand for Kei-car segment commercial EV has grown. In response, in November 2022 we resumed general sales to meet the demand for sustainable business activities and carbon reduction initiatives.

In 2024, we plan to begin producing the "MINI-CAB-MiEV" overseas for the first time, at PT. Mitsubishi Motors Krama Yudha Indonesia (MMKI).

# Our History of Developing Electrified Vehicles

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## Plug-in Hybrid Electric Vehicles (PHEV)

PHEV 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 electric vehicles (EV): powerful driving, superb quietness and high stability.

Our journey in PHEV began with the "OUTLAND-ER PHEV" in 2013, followed by the "ECLIPSE CROSS PHEV model" in 2020 and the launch of the All-New "OUTLANDER PHEV model" in 2021. 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.

#### TOPICS

Launching the New "OUTLANDER PHEV model" in Australia and North America



Following its initial launch in Japan in December 2021, we launched the new "OUTLANDER PHEV model" in August 2022 in Australia, in Canada and the United States in November, and in Puerto Rico in December. The All-New "OUTLANDER PHEV model" is a flagship model that brings together the essence of our electrification and four-wheel control technologies Based on the "majestic" concept, the body, chassis, power train, etc. have all been redesigned and evolved. As a result, both the attractive features of a SUV such as powerful driving performance on roads and all manner of terrain, comfort and livability, and versatile usability, as well as attractive features of an electrified vehicle, such as powerful and smooth acceleration and safe and secure driving in all driving situations, have been greatly enhanced.

# TOPICS

# "OUTLANDER PHEV" Tops Vehicle Sales in the PHEV Category in Japan in FY2022



Governance



OUTLANDER PHEV

ECLIPSE CROSS PHEV model

Sales in Japan of the "OUTLANDER PHEV," our crossover SUV, reached 17,059 units\* in FY2022, topping the PHEV category for the second straight year.

Another crossover SUV model, the "ECLIPSE CROSS PHEV model," came second in this category, with sales of 4,485 units. Together totaling 21,544 units, these sales put us at the top of Japan's PHEV category for the second consecutive year, with a market share of approximately 54%.

\* Including previous models



The Values Plug-in Hybrid Electric Vehicles (PHEV) Provide:





It is possible to use only the electric motor without consuming gasoline for short trips, such as for everyday commuting and shopping. The motor and engine can also be used in combination to extend the driving range, using the engine to generate the electricity when battery levels run low.



Via a bi directional (V2H\*5) charger, the electricity in the battery and the engine's generating capabilities can be used in combination to supply electricity for up to 12 days\*6. It can also be used as an emergency power source in times of disaster.

- \*5 Short for "vehicle to home," V2H is a system that enables electricity stored in a car's battery to be supplied to the home.
- \*6 For the All-New "OUTLANDER PHEV model" Potential supply capacity is calculated by MITSUBISHI MOTORS (calculations assume approximately 10 kWh per day for general household power consumption and do not include the conversion efficiency of the V2H equipment and/or similar device).



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

By leveraging the large-capacity batteries on its electric vehicles (EV) and PHEV 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\* and use as emergency power sources in times of disaster.

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

# We are implementing a joint demonstration project involving DeNA, Ricoh Japan, and Kei-car electric vehicles to achieve efficient operations and energy management in our respective companies.

TOPICS

MITSUBISHI MOTORS, along with DeNA Co., Ltd. and Ricoh Japan Co., Ltd., conducted a joint demonstration project from September 2022 to the end of January 2023 to promote the adoption of electric vehicles by businesses. The project aimed to achieve efficient operation of Keicar electric vehicles and energy management.

To achieve carbon neutrality by 2050, companies in Japan face the pressing need to convert their fleets of business vehicles to Kei-car electric vehicles and other similar options. Kei-car electric vehicles, both for passenger and commercial use, offer cost advantages over larger vehicles, but they have smaller battery capacities. To meet the diverse operational needs of businesses, vehicles need to incorporate efficient charging strategies and operational plans that take into account charging timing, among other factors. In this demonstration project, three "MINICAB-MiEV"s, which are the only Kei-car segment commercial electric vehicle in Japan, were used as sales vehicles at Ricoh's Saitama branch. We collected vehicle information such as operational and charging data, as well as power usage data at the office, in order to analyze the operation of electric vehicles at the branch. Based on this analysis, we proposed an appropriate number of vehicles for the branch and developed an optimal operational plan that

incorporates smart charging and shifts charging to off-peak times, to achieve efficient utilization of Kei-car electric vehicles and reduce the branch's peak power consumption (energy management).



<Flow of the joint demonstration project >



"MINICAB-MiEV" used in the demonstration project



# Development of Improving Fuel Economy Technologies

MITSUBISHI MOTORS is continuously promoting the development of powertrain technologies to reduce fuel consumption and improve energy efficiency.

## Idle-Stop "AS&G"

AS&G is an idling stop function that automatically stops and starts the engine. 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

The new "OUTLANDER" model for China employs a new 48V BSG hybrid system, which is also employed in the eK series (excluding the "eK WAGON") with 12V system. The power generated from deceleration efficiently charges the lithium-ion battery, and the motor assists the engine during acceleration, resulting in a torquey, fuel-efficient ride and smooth engine stopping and starting.

\* Short for "belt-driven starter generator," the BSG adds motor functionality to the generator, using a belt drive to assist engine startup and providing power assistance.



Hybrid system on the "eK X"

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 minimize air intake energy loss, resulting in improved fuel efficiency.

#### Gasoline Direct-Injection Turbo Engine

The "ECLIPS CROSS" adopts a 1.5L downsized directinjection turbo engine (4B40). 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 demands, thus delivering a comfortable and powerful driving.

The "OUTLANDER" for the Chinese market is equipped with a next-generation 1.5L downsized direct injection turbocharged gasoline engine, which is an improved version of the 4B40 engine. Additionally, it is combined with a hybrid system that incorporates a 48V BSG. This system assists during start-up and acceleration with the motor, achieving a high level of performance and fuel efficiency.



Direct injection turbocharged gasoline engine (4B40)

TOPICS



## **Diesel Turbo Engines**

The new "TRITON" model we unveiled in Thailand in July 2023 is equipped with a new 2.4L diesel turbo engine. The weight and friction losses of the engine are reduced due to the optimally designed key components such as the cylinder block, piston and connecting rods. Additionally, the fuel injection system has been upgraded to the next generation, providing high performance while achieving excellent fuel efficiency and clean exhaust gas characteristics.

# Deceleration Energy Recovery (Power Generation Control)

By using the energy generated during deceleration to centrally charge the battery, we aim to reduce the engine's power generation during driving conditions such as idling, acceleration and cruising, resulting in improved fuel efficiency.

#### Employing a 1.5L Downsized Gasoline Direct Injection Turbo Engine

The new "OUTLANDER" we launched for the Chinese market in November 2022 is equipped with an improved 1.5L downsized gasoline direct injection turbo engine and a 48V BSG hybrid system.

The enhanced engine uses the following items to

meet the b class (National 6b) of China's National 6 emission standards and improve output and fuel efficiency, achieving torquey yet fuel-efficient driving performance.



#### 1. 48V belt-driven starter generator (BSG) hybrid system

The 48V BSG (generator with motor functionality) offers excellent power generation efficiency, utilizing energy from deceleration to generate electricity and charge a dedicated battery. During acceleration, it assists the engine with the power generated, helping to reduce gasoline consumption and improve fuel efficiency. Additionally, this motor can restart the engine quickly and quietly.

2. Low-pressure exhaust gas recirculation (EGR) system with water-cooled intercooler

To address the issues of falling fuel efficiency while climbing and when accelerated powerfully common to downsized turbo engines, we have adopted a low-pressure EGR system. This system recirculates EGR gases, which have passed through a catalyst, back to the air intake in front of the intercooler. After passing through the intercooler, the cooled EGR gases flow into the combustion chamber. This improves combustion efficiency and helps to improve fuel efficiency during high power output. In low-pressure EGR systems, the intake path becomes longer as EGR gas passes through the intercooler, which can lead to a delayed engine response. To address this issue, we used a water-cooled intercooler to significantly shorten the distance the EGR travels to reach the combustion chamber. This enhances the engine's responsiveness, avoiding unnecessary accelerator operation and helping to improve fuel efficiency.

#### 3. High-pressure fuel injection system

Governance

We use newly developed high-pressure fuel pumps and injectors to improve combustion by better mixing fuel and air, lowering emissions and contributing to fuel efficiency.

#### 4. Gasoline particulate filter system (GPF)

We have developed a system that uses a filter to capture particulate matter from the exhaust gas of gasoline engines. Once a certain amount has built up, the system combusts the particulate matter to remove it. This system helps to purify exhaust emissions.

# 5. Switching valve to control the flow route of cooling water (multi control valve)

To enhance engine heat management, we have introduced an electromagnetic valve that controls the coolant flow flexibly, thereby optimizing water temperature. This helps the engine warm up quickly, reduces friction losses, and improves fuel efficiency.

#### 6. Variable capacity oil pump

By continuously adjusting the oil discharge rate to the required volume and maintaining an optimal hydraulic pressure, we minimize the oil pump's workload, improving fuel efficiency.





# Taking the Initiative in Business Activities Toward Carbon Neutrality

To become carbon neutral, MITSUBISHI MOTORS will approach the issue from both the "demand side" (energy consumption) and the "supply side" (energy generation and procurement). To clarify our activities, we have formulated a medium- to long-term roadmap toward carbon neutrality. Following this plan, we are working to develop future technologies, improve production processes and expand the introduction of renewable energy.

We have established the CO<sub>2</sub> Reduction Promotion Subcommittee as an infrastructure of the Sustainability Committee. The subcommittee, which has members from production, development and sales companies in Japan and overseas, aims to help the entire MITSUBISHI MOTORS Group achieve carbon neutrality in its business activities. The subcommittee shares information on the progress of action plans, actual CO<sub>2</sub> emissions, and other pertinent data. It also drafts reduction measures, considers future technologies, and deliberates the future energy mix.

#### "Seven Approaches" to Become Carbon Neutral







# Introduction of Renewable Energy

MITSUBISHI MOTORS is actively seeking to use renewable energy in its operations, taking into consideration the energy situation at each site. To do so, we are introducing in-house renewable energy generation and purchasing renewable energy from energy suppliers.

We believe solar power offers us an important way to achieve carbon neutrality, and we are proactively introducing solar power generation at our locations. In FY2022, we installed 1.75MW of solar panels at Mitsubishi Motors Krama Yudha Indonesia (MMKI) and began generating power there. We also added 0.3MW of panels at the Okazaki Plant. In total, these panels should reduce emissions by 1,900t of CO<sub>2</sub> annually. Furthermore, we are preparing to install solar power generation capacity at Asian Transmission Corporation (ATC), Mitsubishi Motors Philippines Corporation (MMPC), and the Mizushima Plant. We also have plans to expand the installation areas at sites where solar power generation is already utilized.

# TOPICS

# Starting to Use Solar Power Generation Equipment (Rooftop of the Paint Plant) (MMKI)

We set up a 1.75MW solar power system on the roof of a paint plant at Mitsubishi Motors Krama Yudha Indonesia (MMKI), and the system began generating electricity in February 2023. The system is expected to generate 2,400MWh of power per year, reducing annual CO<sub>2</sub> emissions by 1,800t.

Following the paint plant, MMKI is planning to gradually install solar panels at its vehicle assembly and welding plants, as well.



Solar power generation equipment on MMKI's paint plant

# Initiatives at Manufacturing Plants

To reduce CO<sub>2</sub> emissions from production activities, we have established a medium- to long-term roadmap to achieve carbon neutrality in each area of production technology–pressing, welding, painting, assembly and powertrain–and we are developing future technologies and improving production processes to this end.

We are incorporating a variety of plans into our annual capital investment plans and implementing them. We are improving the efficiency of production equipment, using electric equipment instead of the use of fuels, steam or compressed air, and upgrading general equipment to more energy-saving models.

In energy-saving activities involving participants from production sites and production technology and motive power departments, we are working to improve the operation of energy-intensive processes such as painting and casting. We also review the operation and management of power supply equipment such as boilers and compressors, and strive to prevent air leaks and other losses. These activities focus on operational improvements following the introduction of new facilities.



#### TOPICS

# Reusing Waste Heat from the Exhaust of (RTO\*1) Equipment (MMTh)

Mitsubishi Motors (Thailand) Co., Ltd. (MMTh) has implemented various measures at its new paint plant to optimize the thermal balance in the painting process. One measure involves a heat exchanger that utilizes waste heat from RTO exhaust gas, which began operating in January 2023, resulting in significant energy savings.

In the painting process, we had been using the heat from RTO exhaust gas from the drying process in a gas-to-gas heat exchange. Now, we have also installed a gas-to-liquid heat exchanger in the process following the drying process to utilize the heat from the exhaust gas at around 100°C to reheat the water used in the painting facility from 50°C to 70°C. As a result, we expect to reduce the amount of gas used to heat water by more than 30%, lowering annual CO<sub>2</sub> emissions by 550 tons. \*1 RTO: regenerative thermal oxidizer



#### TOPICS

# Reducing the Use of Compressed Air by Introducing a Rotary Drainage System (Kyoto Plant)

The compressors used to produce compressed air account for about 20% of the energy used by the Kyoto Plant. Accordingly, decreasing the plant's consumption of compressed air is a priority for reducing CO<sub>2</sub> emissions.

In FY2022, we introduced a centrifugal device to drain water in the process of cleaning engine cylinder heads, instead of the compressed air we had used previously. This change significantly reduced the use of compressed air. We expect to eventually achieve 95% reduction in energy consumption, lowering annual CO<sub>2</sub> emissions by 40 tons. We plan to gradually roll out this improved process to other lines and facilities.



# **Office Initiatives**

MITSUBISHI MOTORS is also promoting the use of renewable energy and introducing various types of energy-saving equipment in areas other than manufacturing, such as at R&D and head office locations.

Part of the electric power used at the Research and Development Building (Okazaki, Aichi Prefecture) and 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<sup>\*2</sup>. 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 Research and Development Building (Okazaki)

\*2 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.



## **Dealer Initiatives**

MITSUBISHI MOTORS encourages 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 electrified 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 (only in Japanese). (WEB) https://www.ea21.jp/ Dealers That Have Acquired "Eco-Action 21" Certification (As of July 1, 2023)

	Company	
Aomori Mitsubishi Motor Sales Co., Ltd.	Toyama Mitsubishi Motor Sales Co., Ltd.	Kyushu Mitsubishi Motor Sales Co., Ltd.
Higashi Nihon Mitsubishi Motor Sales Co., Ltd.	Toyama Diamond Motors Co., Ltd.	Oita Mitsubishi Motor Sales Co., Ltd.
Ibaraki Mitsubishi Motor Sales Co., Ltd.	Fukui Mitsubishi Motor Sales Co., Ltd.	Kumamoto Mitsubishi Motor Sales Co., Ltd.
Sobu Mitsubishi Motor Sales Co., Ltd.	Kyoto Mitsubishi Motor Sales Co., Ltd.	Nagasaki Mitsubishi Motor Sales Co., Ltd.
Tokai Mitsubishi Motor Sales Co., Ltd.	Nishi Nihon Mitsubishi Motor Sales Co., Ltd.	Ishikawa Chuo Mitsubishi Motor Sales Co., Ltd.
Sunen Mitsubishi Motor Sales Co., Ltd.	Shiga Mitsubishi Motor Sales Co., Ltd.*1	Mie Mitsubishi Motor Sales Co., Ltd.
Nishiowari Mitsubishi Motor Sales Co., Ltd.	Fukuyama Mitsubishi Motor Sales Co., Ltd.	Gunma Mitsubishi Motor Sales Co., Ltd.

\*1 Certification received for the Kyoto Mitsubishi Motor Sales Co., Ltd. Group

#### TOPICS

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

MITSUBISHI MOTORS seeks to put DENDO DRIVE STATIONs into operation in prefectures across Japan. DENDO DRIVE STATIONs are next-generation dealerships where visitors can experience the appeal of electrified vehicles, including their use as power sources in times of disaster and their contribution to the environment.

In FY2022, we opened up a location–Ageo (Saitama Prefecture)–bringing the number of locations in Japan to 93.

By deploying DENDO DRIVE STATION branches across Japan, we will increase the significance of electrified vehicles by diversifying their energy sources and communicating their value as sources of electric power in times of disaster. See our website for details on our next-generation dealerships, called DENDO DRIVE STA-TIONs. (only in Japanese)

WEB) https://www.mitsubishi-motors.co.jp/carlife/phev/dendo/index.html

Ageo Branch/Clean Car Ageo Ageo Mitsubishi Motor Sales Co., Ltd.



Exterior



Lifestyle Corner In a corner designed to look like a typical household dining area, we conduct a "1500W experience demonstration" to show how daily life can go one, even during disasters, by using just a 100V AC power supply (1500W) from an electrified vehicle.



Electrified Vehicle Charging Facilities Electricity generated by the solar power system is used to charge electrified vehicles through V2H\*<sup>2</sup> equipment.

\*2 V2H: Vehicle to home, V2H is a system that enables electricity stored in a car's battery to be supplied to the home.

Nationwide map of DENDO DRIVE STATIONs







# **Physical Distribution**

# Working to Reduce CO<sub>2</sub> Emissions from Logistics in Japan

MITSUBISHI MOTORS is actively promoting initiatives to reduce CO<sub>2</sub> emissions of production parts, accessories and transportation of vehicles. Key activities for improvement of logistics efficiency include packaging improvements, increasing of truck filling ratio, and consolidating cargoes to reduce weight and distance (ton-kilometers\*). In addition to these in-house efforts, we are collaborating with logistics partners to promote eco-driving, transportation equipment upgrades and modal shifts. We are also working with our alliance partners to shorten travel distances through joint transportation and sharing the use of logistics facilities. In addition to these proactive and comprehensive measures, we are considering collaborating more closely with logistics partners to encourage the introduction of vehicles that do not run on fossil fuels.

\* Ton-kilometer (t-km) is a measurement corresponding to the transport of one ton of cargo over a distance of one kilometer.

# Capturing CO<sub>2</sub> Emissions from Overseas Affiliates

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

We have already begun collecting data from our main overseas plants, Mitsubishi Motors (Thailand) Co., Ltd. (MMTh), Mitsubishi Motors Krama Yudha Indonesia (MMKI) and Mitsubishi Motors Vietnam Co., Ltd. (MMV), to make their CO<sub>2</sub> emissions from distribution visible. Going forward, we will continue working to confirm and improve the accuracy of the data collected. In addition to expanding the scope to include other overseas plants, we will start visualization efforts targeting overseas sales subsidiaries. As a result, we hope to expand our understanding of CO<sub>2</sub> emissions from distribution.





Vehicle transport in Thailand

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



# **Resource Recycling Initiatives**

# **Progress in FY2022**

Direct landfill waste (Management Target Companies: 20) [FY2021: less than 0.5%]



- Promoted strengthening adoption of non-fossilbased plastic
- Began development of autonomous street lighting by reusing batteries from electrified vehicles
- Installed energy storage facilities for the demonstration of two concepts employing used batteries in conjunction with quick chargers and bidirectional chargers at the Okazaki Plant's M-Tech Lab, which started the demonstration in January 2023

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# **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.

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.

With regard to waste generated by our business activities, to achieve the goal set in Environmental Targets 2030 of "zero direct landfill waste (less than 0.5%)," we are working to reduce waste generated outside the company and reuse resources. In FY2022, our management target companies achieved zero direct landfill waste (less than 0.5%).

Data (pp. 120): 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. 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 recovered or replaced during repairs are recycled for battery trays and other exterior parts. We are also promoting the increased use in other parts of recycled materials and non-fossil-based plastic used in vehicles, such as biomass plastics. Recycled materials such as clothing are used for silencer parts such as dashboards, and biomass plastics are used for interior parts such as steering wheel garnishes.



## TOPICS

#### Using Thermoplastic Resin

The "XPANDER CROSS," which was launched in 2019, uses easily recyclable thermoplastic resin for exterior and interior parts.

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





Interior

# Promote recycling of end-of-life vehicles

MITSUBISHI MOTORS encourages the recycling of endof-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.

The Environmental Targets 2030 identify the reuse of batteries used in electrified 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 Electrified Vehicles**

Used electrified vehicle batteries retain sufficient storage capacity to make them useful for other applications, so from the perspective of conserving resources we are working to effectively reuse electrified vehicle 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" (previous model).

In January 2023, we installed demonstration equipment for electrified vehicle quick chargers and bidirectional chargers at the Okazaki Plant, and the demonstration has begun. We intend to conduct effectiveness of the concept and technical verification, with the aim of introducing the system at our dealers and other locations in the future. (Please see page 27 for details.) In addition, with MIRAI-LABO Co., Ltd., we have begun the development of autonomous street lighting by reusing batteries from electrified vehicles. In April 2023, autonomous street lighting was installed in the Okazaki Plant and we began a demonstration experiment. These lights require no external power supplies, but use solar power, used batteries from electrified vehicles and recycled steel. In the event of disaster or power failure, such street lights continue to function and without having to be turned off. With the aim of commencing sales by in FY2024, the FY2023 demonstration experiment will obtain data on batteries and other items during use, and verify the practicality of the system, considering factors such as the number of days when the sun does not shine.

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 electric vehicles and plug-in hybrid electric vehicles.

#### Response to Automobile Recycling Laws in Japan

Since the End-of-Life Vehicle Recycling Law was enacted in Japan in 2005, we have been accepting used automobile shredder residue (ASR\*1), airbags, and fluorocarbons for recycling.

Regarding ASR recycling, we participate in ART\*<sup>2</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 FY2022 was 96.8%, 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.

\*1 Automobile shredder residue

\*2 Automobile Shredder Residue Recycling Promotion Team established by 13 companies, including Nissan Motor Co., Ltd., Mazda Motor Corporation and MITSUBISHI MOTORS.

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MITSUBISHI MOTORS 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.

We accept for recycling three items identified by Japan's End-of-Life Vehicle Recycling Laws (ASR, airbags and fluorocarbons). As part of a project to support the advancement of automobile recycling, we engaged in the following two R&D projects from August 2021 to March 2023.

- 1) Research to restore the physical properties of PP resin<sup>\*1</sup> recovered from ASR and expand the use of non-fossil-based plastic.
- 2) In the aim of realizing a low-carbon society, research to verify the applicability of technology to diagnose battery degradation, quickly and to a high degree of accuracy, that can facilitate the reuse and closed-loop utilization of drive batteries

We have joined the "LiB Joint Recovery System" established by the Japan Automobile Manufacturers Association and work to efficiency recovery lithium-ion batteries (LiBs). The system started operating in October 2018 to properly dispose of used LiBs with the Japan Auto Recycling Partnership as a contact point. \*1 Polypropylene resin, a general-purpose polymer composed of

carbon and hydrogen

#### 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\*3 was enacted, specifying ease of recycling as a certification requirement.

We 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 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.

Going forward, 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**

We are working to reduce the amount of waste generated through manufacturing by improving its production processes. As for the generated waste, we reduce treatment costs and continue to improve the sorting and treating methods to utilize it as resources.

#### Effective Use of Resources and Recycling



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# **Prevention of Pollution**

# **Progress in FY2022**

- Eliminated the use of kerosene by electrifying air conditioners (Mizushima Plant)
- Obtained information on GADSL\*1 regulated substances, upgraded our management system, and switched parts and made design changes in accordance with the ELV\*2 directive in order to properly manage hazardous substances in products.
- \*1 Global Automotive Declarable Substance List, a list to facilitate the exchange of information on environmentally hazardous substances, created by consensus of a group of automotive manufacturers in various countries
- \*2 End-of-life vehicles

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(WEB) Atmosphere/Wastewater Quality/PRTR-designated
Pollutants Data (FY2022 Results)
https://www.mitsubishi-motors.com/en/sustainability/esg/
factory\_archive2023.html

# **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.

MITSUBISHI MOTORS aims to contribute to the realization of a pollution-free society and has positioned it as one of the key challenges in its Environmental Plan Package. We are working to reduce the environmental impact of our products and the pollution resulting from our business activities.

In the stage of product development, along with reducing noxious components of exhaust gases and promoting the development of fuel economy improving technologies and electrification technologies, we strive to manage 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

In addition to developing and popularizing electrified vehicles, which emit little exhaust while driving, we are endeavoring to develop and improve gasoline and diesel vehicles that emit fewer hazardous substances.

# **Improving Gasoline Engine Vehicles**

In the 1960s, emissions of carbon monoxide (CO), hydrocarbons (HC) and nitrogen oxides (NOx) were restricted by regulations, and those restrictions have gradually been tightened since.

We have taken various measures since such regulations were first introduced. Currently, our products are compliant with stricted emission regulations, thanks to the advanced technologies such as electronically controlled fuel injectors for combustion control, gasoline particulate filter (GPF) systems, and improved catalyst technologies.

#### Improving Diesel Engine Vehicles

For diesel engine vehicles, emissions of CO, HC, NOx, and particulate matter have been regulated in some countries and regions, 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 combustion control technologies such as variable geometry turbocharger and high pressure fuel injection system, as well as after-treatment technologies such as NOx trap catalyst, diesel particulate filter, and urea selective catalytic reduction system.





# **Clean Diesel Engine Systems**

# VG\*1 Turbocharger

Continuously controlling the variable nozzle of the turbine optimally boosts power to the engine throughout its full operating range, improving fuel efficiency and reducing PM emissions. \*1 Variable geometry



#### **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)**

A DPF, a filter that removes particulate matter by collecting and burning it, substantially reduces emissions of particulate matter.



#### Urea Selective Catalyst Reduction (SCR) System

Nitrous oxides (NOx) from diesel engines' emissions are reduced and purified using an aqueous urea solution (AdBlue<sup>®\*2</sup>), breaking them down into non-polluting nitrogen and water.

\*2 Registered trademark of the Verband der Automobilindustrie (VDA)

# [Clean Diesel Engine System (4N14 Engine)]





# **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 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<sup>\*3</sup>, 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
- \*3 Volatile Organic Compounds
- Data (p. 119): Emissions of Sulfur Oxide, Nitrogen Oxide, VOC (Volatile Organic Compounds) and Ozone-Depleting Substances

#### Management of Material Data by IMDS

Data on the hazardous substances contained in vehicle parts delivered by suppliers are collected by the IMDS\*<sup>4</sup>, an international system for collecting such data. Together with overseas, 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.

In FY2022, we renovated our internal management system to properly manage hazardous substances in products by incorporating information on GADSL-regulated substances. We collect IMDS data inputted by suppliers and utilize the system to automatically determine the compliance status with regulations if any newly regulated substances are found in components, based on the content and materials used. We also implemented component replacement and design changes in accordance with the ELV Directive. \*4 International Material Data System

#### 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 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 https://www.jama.or.jp/english/news/past/release/2005/ 050214.html

#### Progress

We are working to develop materials with low VOC emissions to reduce in-cabin VOCs.

#### 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



# **Preventing Air Pollution**

# Reduction of VOC Emissions from Production Processes

MITSUBISHI MOTORS is applying the waterborne 3WET paint method<sup>\*1</sup> to the 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).

We are also upgrading our robotic and other painting systems, reducing the amount of paint used by adjusting production lots and collecting more used thinner. 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. 119): VOCs



New paint plant (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.

In addition, we are promoting the replacement of equipment that uses fossil fuels such as kerosene with electric devices, including electric heat pumps, to simultaneously reduce air pollutants and CO<sub>2</sub> emissions.

#### TOPICS

# Eliminating the Use of Kerosene through Electrification (Mizushima Plant)

At the Mizushima Plant, in FY2022 we replaced the air conditioners in the main building and PR Center with electric air conditioners, transitioning from kerosene-powered absorption chiller-heaters to fully electrified systems.

This move reduced kerosene use within the plant to zero, lowering atmospheric pollutants such as NOx and particulate matter, as well as achieving an annual reduction of 50 tons of CO<sub>2</sub> emissions due to energy-saving effects.

# 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. Finally, we judge whether they can be introduced and educate workers well. 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 to Ministry of Economy, Trade and Industry, as well as other aspects of legal compliance. \*2 PRTR: 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 Japan appropriately, based on various legal requirements.

\*3 This convention stipulates international frameworks and procedures related to restrictions on international transfer of a certain types of waste.

# 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.



Conservation of Water Resources

# **Progress in FY2022**

- Put in operation and improve of operation at a discharged water recycling plant at Mitsubishi Motors (Thailand) Co., Ltd. (MMTh)
- Completed an effluent treatment facility and associated sludge dewatering equipment to treat emissions from the Mizushima Plant's paint plant, sheet metal plant, and in other production processes.

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- P33 Environmental Management
- P118 Environmental Data Related to Products and Business Activities

(WEB) Atmosphere/Wastewater Quality/PRTR-designated Pollutants Data (FY2022 Results)

https://www.mitsubishi-motors.com/en/sustainability/esg/ factory\_archive2023.html

# **Basic Approach**

Due to the increasing population and changes in the natural environment caused by climate change, water supply and demand are becoming tighter in more regions, 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 each plant , we comply with various legal requirements, such as the one on the quality of discharged water. In addition, we work to reduce water withdrawal amounts and introduce water recycling

#### 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
Mitsubishi Motors (Thailand) Co., Ltd. (MMTh)	Nong Pla Lai Reservoir, etc.	Sewage line
Mitsubishi Motors Krama Yudha Indonesia (MMKI)	Lake Jatiluhur	Sewage line

technologies based on the status of water resource management in individual countries and regions.

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.

# 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 and at PT. Mitsubishi Motors Krama Yudha Indonesia (MMKI), we have set up rainwater storage tanks in order to reuse rainwater.

At the Okazaki Plant, we have also set up equipment to filter groundwater so that it can be used to supply drinking water to employees and those who live nearby, in case any disasters occur. > Data (p. 120): Withdrawn water volume



Rainwater storage tanks (Okazaki Plant)



Groundwater membrane filtration equipment (Okazaki Plant)



# **Reuse of Discharged Water**

The MITSUBISHI MOTORS Group has introduced wastewater recycling technologies, taking into consideration the situation regarding water resource management at each facility location. Currently, discharged water recycling plants are operational at PT. Mitsubishi Motors Krama Yudha Indonesia (MMKI) and Mitsubishi Motors (Thailand) Co., Ltd. (MMTh).

MMKI has been utilizing a water recycling plant since its establishment in 2017. In FY2022, its wastewater recycling rate reached 67%.

In addition, in January 2022 MMTh began operating its first discharged water recycling plant, in conjunction with the start of operations of a new paint plant. By starting and improving operations in FY2022, in January–March 2023 the wastewater recycling rate rose to 83%.

Data (p. 120): Withdrawn water volume



Wastewater recycling plant (MMTh)

# Prevention of Water Pollution

To prevent water pollution in areas surrounding plants, we measure and manage the guality of discharged water based on legal requirements. We also conduct surveys and confirmations regarding the guality of groundwater and soil pollution. In this way, we confirm that no toxic substances are being discharged to the outside area. In order to guickly 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.

\* Detects the presence of oil by capturing changes in reflectance as the reflectance of oil is greater than that of water.



Observation well (Okazaki Plant) Sur



Surface oil detector (Okazaki Plant)

#### TOPICS

#### Upgrading Industrial Wastewater Treatment Facilities and Sludge Dewatering Equipment (Mizushima Plant)

At the Mizushima Plant, we are gradually upgrading waste water treatment facilities that have deteriorated over time. After upgrading urine and domestic wastewater treatment facilities in FY2021, in FY2022 we updated wastewater treatment facilities, including those for the paint plant and sheet metal factory, along with the accompanying sludge dewatering equipment. The upgraded facilities began operating in March 2023.

We have installed a high-speed coagulation and sedimentation device in our wastewater treatment facility, allowing us to reduce processing time, optimize space utilization, and stabilize the quality of treated water. Additionally, by utilizing natural gradients for water transfer and reducing the number of pumps, we have increased energy efficiency, reducing annual CO<sub>2</sub> emissions by an estimated 50 tons.

By updating the filter press dewatering equipment to improve the dewatering performance of our sludge dewatering equipment, we expect to reduce the amount of sludge treated as industrial waste by approximately 15%, or 70 tons per year.



Industrial wastewater treatment facilities and the green site of the former treatment plant (Mizushima Plant)



# **Preservation of Biodiversity**

# **Progress in FY2022**

- Promoted preservation activities that leverage the results of ecosystem surveys at locations in Japan
  - At the Kyoto Plant, continued to manage a biotope\* and cultivated rare aquatic plants
- At Kyoto Plant-Shiga, engaged in wetland conservation and cultivation of rare white egret flower
- Conducted tree-planting and cultivation activities in Japan and overseas
- Planted and cultivated trees at Pajero Forest (Yamanashi Prefecture)
- In FY2023, signed a forest preservation activities collaboration agreement with the city of Okazaki, Aichi Prefecture, ahead of the start of operations of the Okazaki Outlander Forest
- Conducted tree-planting projects in the Philippines
   and Thailand
- \* A biotope is a space where organisms can live in natural surroundings.

<Related pages> P15 MITSUBISHI MOTORS' Materiality P20 Materiality P33 Environmental Management (WEB) Biodiversity Data https://www.mitsubishi-motors.com/en/sustainability/esg/ biodiversity-related\_data/

# **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 our 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.

We formulated the "MITSUBISHI MOTORS Group Guidelines for the Preservation of Biodiversity" in August 2010 and promote conservation activities.

Our business sites in Japan are not 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.

To protect water sources and fostering environmental awareness among our employees, we conduct forest preservation and interact with the local community through volunteer employee activities in Japan and overseas.

# 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.

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# **Promoting Preservation Activities**

# Ecosystem Surveys at Business Sites in Japan

Production of vehicles requires large-scale plants. MITSUBISHI MOTORS believes 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
2021/2022	Kyoto Plant-Kyoto*

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

# Kyoto Plant-Kyoto Cultivating Rare Plants in Cooperation with the Local Community

Based on an ecosystem survey conducted, 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. To create a habitat for dragonflies and other insects, we built a biotope in the "Relaxation Plaza," a green space on the campus, and rare aquatic plants such as Pricky water-lilies and water hollyhock are being cultivated in a pond within the plaza.

The seedlings of the rare aquatic plants were separated out by "SUSTAINA KYOTO," an environmental education center within the Kyoto City Southern Clean Center. Seeds of pricky water-lilies and water hollyhock that grew well in the pond were collected, and some of them were returned to "SUSTAINA KYOTO" in November 2022.





**Relaxation Plaza** 

Pricky water-lilies 45cm in diameter

# Kyoto Plant-Shiga Preservation of Wetlands Where White Egret Flowers Bloom

We are working to protect the rare white egret flower by preserving wetlands located within the plant. Employees regularly remove invasive herbaceous plants such as broomsedge bluestem and maintain the wetland environment, which gives the white egret flower room to bloom every summer.



Employees clearing away invasive herbaceous plants

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White egret flower blooming

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# Forest Preservation Activities in Japan and Overseas

Since 2006, the Company has been conducting forest preservation activities in the "Pajero Forest" (approximately 7.23 hectares) located in Hayakawa-cho, Yamanashi Prefecture, in collaboration with the town of Hayakawa and OISCA. In March 2023, we also signed a forest preservation activity collaboration agreement with the city of Okazaki, Aichi Prefecture, where our manufacturing plant is located. We have named the forests in the Nukata area of Okazaki (approximately 50.7 hectares) as the "Okazaki Outlander Forest" and will engage in activities such as afforestation, undergrowth clearing, thinning, removal, pruning, and maintenance of walking trails and work paths.

In collaboration with the Philippines Department of Environment and Natural Resources (DENR), Mitsubishi Motors Philippines Corporation (MMPC) initiated a reforestation project in March 2018, with a plan to plant a cumulative total of 100 hectares over a period of approximately five years. So far, MMPC has planted trees on 62.2 hectares. In the final year, 2023, the we aim to complete the plan by planting mangroves and other trees on 37.8 hectares in Infanta, Quezon Province.

Mitsubishi Motors (Thailand) Co., Ltd. (MMTh) and a non-profit organization, the Mitsubishi Motors Thailand Foundation (MMTF), began a reforestation project in FY2021. In 2022, as part of the "Root for Sustainability" project, we planted trees on 40 rai (6.4 hectares) of land in Nakhon Ratchasima province.



Signboard unveiling ceremony at "Okazaki Outlander Forest" (Okazaki, Aichi Prefecture)



Planting trees in Thailand