

#### **ESG Initiatives**

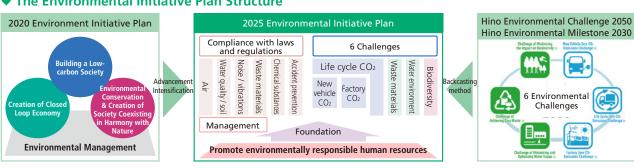
# **Environment**

# **Environmental Initiative Plan (5-year action plan)**

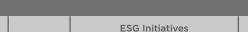
Hino Motors drew up the Environment Initiative Plan, an initiative for realizing its long-term vision based on the Company's "Hino Credo," top policies such as the Hino Global Environment Charter and societal trends. The Company is endeavoring to carry out activities that reduce its environmental footprint. Since the first Environment Initiative Plan was formulated in 1993, its targets have been implemented and reassessed every five years.

This year Hino Motors drew up a new 5-year action plan, the 2025 Environmental Initiative Plan. Based on the backcasting of Hino Environmental Challenge 2050 and Hino Environmental Milestone 2030, and the PDCA cycle of the 2020 Environmental Initiative Plan, this plan has three pillars: "Six Environmental Challenges", "Compliance with laws and regulations" and "Management". Team HINO is united in tackling global issues such as carbon neutrality to contribute to the realization of a sustainable society.

#### **◆ The Environmental Initiative Plan Structure**



	2020 Enviro	nment Initiative Plan		202	5 Environmental Initiative Plan		
	Product development	Improve CO <sub>2</sub> emissions and fuel consumption performance of vehicles     Promote the development of vehicles		Life Cycle Zero CO <sub>2</sub> Emissions Challenge	Target: Reduce 12% (per unit transportation volume) compared to FY2013		
		that run on clean energy		Challerige	<ul> <li>Reduce CO<sub>2</sub> emissions in all processes: manufacturing, transport, use, disposal (collaborate with each country and industry)</li> </ul>		
Building Low-carbon Society	Production and logistics	in production activities  Make transportation more efficient		New Vehicle Zero CO <sub>2</sub> Emissions	Target: Reduce 15% (per unit transportation volume) compared to FY2013		
	Sales and	and reduce CO <sub>2</sub> emissions in logistics  • Initiatives for reducing CO <sub>2</sub> emissions		Challenge	Develop and bring electric vehicles to market     Improve diesel consumption		
	after-sales service	in sales activities		Factory Zero	Improve transportation efficiency  Target: Reduce 30% (total global emissions) compared to FY2013		
	Product development	Develop technologies that enable elimination of the use of scarce resources     Develop new vehicles with a higher ratio of recyclable components	6 Environmental	CO <sub>2</sub> Emissions Challenge	Introduce innovative technologies     Implement daily improvements     Introduce renewable energy		
Creation of	Production	Reduce waste from production and	Challenges	Challenge of Mi	finimizing and Optimizing Water Usage		
Closed Loop Economy	and logistics	logistics, and use resources effectively Initiatives for reducing water usage in			Use small amounts of water     Return purified water to nature		
		production activities Initiatives for reducing usage of		Challenge of Achieving Zero	Target: Reduce 12% (total global emissions) compared to FY2018		
		packaging materials and use resources effectively		Waste	Reduce to reach zero waste     Use resources from discarded vehicles in newly manufactured vehicles (Car to car)		
	Product development	Reduce gas emissions to help improve urban air quality in each country and			Reduce packaging materials and plastic packaging materials		
Environmental Conservation		region  Further reduce the use of		Challenge of Mi	finimizing the Impact on Biodiversity		
& Creation of	Production	environmentally harmful materials  • Reduce substances that impact the			Create plants that conserve greenery and water, and coexist in harmony with nature		
	and logistics	environment in production activities (VOC)		Air	Take measures to prevent air pollution in products and production		
	Social contribution	Implement biodiversity preservation activities locally at factories in every region where the Group operates		Water quality / Soil quality	Manage wastewater and prevent underground seepage in production     Prevent the spread of pollution during modifications and land transactions		
	Management	Strengthen and promote group	Compliance with laws	Noise / Vibrations	Reduce noise and vibrations in products and production		
	Ivianagement	environmental management	and regulations	Waste materials	Properly manage waste materials		
Environmental		Promote environmental activities in collaboration with business partners (our suppliers)	regulations	Chemical substances	Manage chemical substances and reduce hazardous substances in products and production		
Management		Improve global human resources development and training programs		Accident prevention	<ul> <li>Prevent environmental accidents (goal of zero violations and complaints, defects and reports)</li> </ul>		
		Actively disclose environmental information and enhance communication	Management		Create environmentally responsible human resources (communicate environmental management and conduct inhouse education)		



Hino's Strategies and Initiatives and the Sustainable The HINO Realizing a **ESG** Initiatives CSR Corporate Environmental Top Message Credo & Course Sustainable World Topic Management Information Management Environment Social Governance ESG data Development Goals (SDGs) of Action

Environmental Initiative Plan (5-year action plan) 2020 Environment Initiative Plan 2025 Environmental Initiative Plan Compliance Six Challenges (Initiatives) **Environmental Management** Various Environmental Data Other Activities

2020 Environment Initiative Plan

**Building Low-carbon Society** 







Initiative	Fiaii		
I	tem	Specific Action Items/Targets, etc.	Fiscal 2016–2020 Achievements and Challenges for the future
Product development	Improve CO <sub>2</sub> emissions and fuel consumption performance of vehicles	Develop technologies to meet world's top-class fuel efficiency standards  [Japan] Develop technologies to improve fuel efficiency to meet next round of regulations Improve the performance of hybrid vehicles  [United States] Develop technologies for enabling compliance with greenhouse gas emission regulations in 2020  [Europe] Develop technologies to improve fuel efficiency to meet the next round of regulations	<ul> <li>Improved fuel efficiency and reduced CO<sub>2</sub> emissions over earlie Hino Profia models by equipping the Hino Profia with the world's first hybrid system with AI</li> <li>Improved mass transport efficiency by jointly developing with Isuzu Motors the first hybrid articulated bus in Japan, a highly fuel efficient HEV.</li> <li>Launched the Connected service, HINO CONNECT to support eco-friendly driving by customers using the Eco Tree Report, a support tool for fuel saving</li> </ul>
	Promote the development of vehicles that run on clean energy	Conduct R&D on electric vehicles [FCEV] Develop and conduct limited sales of FCEV [BEV] Conduct R&D on practical implementation for trucks and buses Conduct research on technologies for enabling the use of alternative fuels Develop technologies that enable a switchover to biofuels and other alternative fuels	<ul> <li>Released onto the market SORA, an FCEV fixed-route bus developed with Toyota Motors, and began operations in Tokyo Future Challenge:</li> <li>Accelerate electric vehicle development through alliances with other parties in the same and different industries that have similar ambitions to quickly introduce and spread BEV and FCEV in the market</li> </ul>
Production and logistics	Initiatives for reducing CO <sub>2</sub> emissions in production activities	<ul> <li>Carry out initiatives for reducing CO<sub>2</sub> emissions on both a total and per-vehicle basis by introducing low-CO<sub>2</sub> production technologies, and reducing CO<sub>2</sub> through daily improvements</li> <li>Consider exploiting new energy-saving technology and renewable energy</li> <li>Targets:         <ul> <li>[Global]</li> <li>26% reduction in emissions per unit compared to FY2008</li> <li>[Consolidated Companies in Japan]</li> <li>24% reduction in emissions per unit compared to FY2008</li> <li>[Hino Motors, Ltd.]</li> <li>30% reduction in emissions per unit compared to FY2008</li> <li>Reduction in emissions: Fiscal 2020 output target x active mass</li> </ul> </li> <li>Control emissions of other greenhouse gases besides CO<sub>2</sub></li> </ul>	<ul> <li>Reduced CO<sub>2</sub> emissions by introducing energy-saving innovative technologies Improved efficiency of equipment motors, enabled inverter control for circulating water pumps, introduced ultrasonic cleaning machines, applied thermal insulation paint to heating furnaces</li> <li>Installed solar power equipment (Nitta Plant, Koga Plant)</li> <li>Results*:         <ul> <li>[Global]</li> <li>Reduced emissions per unit by 27% compared to FY2008</li> <li>[Consolidated Companies in Japan]</li> <li>Reduced emissions per unit by 28% compared to FY2008</li> <li>[Hino Motors, Ltd.]</li> <li>Reduced emissions per unit by 37% compared to FY2008</li> <li>Emissions of fiscal 2020 were 158 thousand tons</li> </ul> </li> <li>Future Challenge:</li> <li>Further establish technologies for achieving medium-and-long-term targets to reduce CO<sub>2</sub> and promote purchase of outside renewable energy</li> </ul>
	Make transportation more efficient and reduce CO <sub>2</sub> emissions in logistics	<ul> <li>Promote initiatives to reduce CO<sub>2</sub> emissions in logistics by improving efficiency of transportation</li> <li>Shorten distribution routes between factories and improve shipping efficiency by using tractor-trailers and increasing transport loading rates</li> <li>Use more fuel-efficient vehicles</li> <li>Improve efficiency of vehicle parts shipments</li> <li>Targets:         <ul> <li>[Consolidated Companies in Japan]</li> <li>26% reduction in emissions per unit of transport volume compared to FY 2008</li> <li>[Overseas Operations]</li> <li>Set targets and promote reduction measures according to the highest standards in each country</li> </ul> </li> </ul>	Improved distribution efficiency between plants:  Achieved efficient transport of shipped vehicles (completed vehicle) Reduced transport between bases using container loading at production sites Promoted continued use of marine containers Results: [Consolidated Companies in Japan] Reduced emissions per unit of transport volume by 28% compared to FY2008 Assessed impact of plant relocation and continued emissions reduction activities [Overseas Operations] Continued promoting emissions reduction activities in each country. Improved transport efficiency in logistics industry: Started commercialization of optimal mixed load patterns and cargo matching that exceeds barriers in shippers and transport vehicle manufacturers at NEXT Logistics Japan in December 2019 to reduce CO2 emissions through improved transport efficiency (awarded the Special Prize for the 22 <sup>nd</sup> Logistics Environment Award)
Sales and after-sales service	Initiatives for reducing CO <sub>2</sub> emissions in sales activities	<ul> <li>Create and execute plan to reduce energy consumption per unit by at least 1% per year at Japanese sales offices</li> <li>Assist customers in reducing CO<sub>2</sub> emissions</li> </ul>	<ul> <li>Reduced energy consumption rate per unit by 9.6% compared to FY2015 by installing energy-saving lighting, etc.</li> </ul>

<sup>\*</sup>Estimates are calculated from reported or derived values and available data. Actual emissions may vary.



Corporate	T M	The HINO	Realizing a		Hino's Strategies and Initiatives	CSR	T:-		ESG In	itiatives		
Information	rop message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	ı

# 2020 Environment Initiative Plan Creation of Closed Loop Economy





		Specific Action Items/Targets, etc.	Fiscal 2016–2020 Achievements and Challenges for the future
Product development	Develop technologies that enable elimination of the use of scarce resources	Reduce the amount of precious metals used in exhaust-cutting catalytic converters	<ul> <li>Developed a diesel exhaust purification system using NOx selective reduction reaction with light oil         → Won the FY2020 Catalysis Society of Japan Award for Technological Progress</li> <li>Reason for winning:         Improved the air environment by reducing diesel exhaust gas and contributed to technological development in the field through long-term research and development     </li> </ul>
	Develop new vehicles with a higher ratio of recyclable components	Initiatives to create assembled structures that are easy to disassemble	<ul> <li>Incorporated considerations for recycling and disassembly in the design of vehicle structural components</li> <li>Contributed to effective use of resources by reducing vehicle body weight.</li> </ul>
Production and logistics	Reduce waste from production and logistics, and use resources effectively	Adopt waste reduction technologies and promote waste reduction in daily improvement activities Facilitate more effective usage of resources by improving yield rates and managing the sources of waste Promote the usage of resources within the Hino Motors Group Targets: [Consolidated Companies in Japan] 43% reduction of amount of waste generated per unit compared to FY 2008 Zero for final disposal amount* [Overseas Operations] Implement management that leads to reduced emissions (manage amounts)  *Definition of Zero: Landfill amount including ash after incineration is not more than 0.5% compared with total waste including recyclable waste	<ul> <li>Implemented thorough waste separation and recovered valuable materials from plastic waste</li> <li>Introduced automatic device for collecting paint gas (Hamura Plant)</li> <li>Reduced defective product rate and number of retests (Nitta Plant)</li> <li>Sold reclaimed sand to Group companies in Japan (Nitta Plant)</li> <li>Results:         <ul> <li>[Consolidated Companies in Japan]</li> <li>Reduced amount of waste generated per unit by 41% compared to FY2008</li> <li>Achieved a final disposal rate of 0.11%</li> <li>In the past, market changes resulted in valuable resources becoming waste and a reduction of per unit value. Targets were not reached for recovered waste by FY2020, but going forward Hino Motors will quickly reassess plans and continue carrying out waste-reduction activities through action such as promoting a greater recycling rate.</li> <li>[Overseas Operations]</li> <li>Waste Materials: Set targets and promoted reduction activities in each country</li> </ul> </li> </ul>
	Initiatives for reducing water usage in production activities	<ul> <li>Promote activities for reducing water consumption in consideration of water supply conditions in each country and region where the Group operates</li> <li>Conserve water through actively introduce watersaving technologies and daily improvements</li> <li>Targets:         <ul> <li>[Consolidated Companies in Japan]</li> <li>40% reduction of water usage per unit compared to FY 2008</li> <li>[Overseas Operations]</li> <li>Management of water usage reduction</li> </ul> </li> </ul>	<ul> <li>Improved underground piping and took measures against water leaks</li> <li>Introduced a dry booth (Koga Plant)</li> <li>Reused wastewater from cleaning on the paint line (Koga Plant)</li> <li>Results:         [Consolidated Companies in Japan]         <ul> <li>Reduced water usage per unit by 38% compared to FY2008</li> <li>In fiscal 2020, the consumption rate per unit worsened due to a drop in production volume and targets were not achieved. Looking ahead, Hino Motors will work toward efficient process planning not easily affected by fluctuations in production to promote water recycling and other water conservation actions.         </li> </ul> <li>[Overseas Operations]</li> <ul> <li>Set targets and promoted reduction activities in each country</li> </ul> </li></ul>
	Initiatives for reducing usage of packaging materials and use resources effectively	Reduce usage of packing and shipping materials by making them returnable and more lightweight  Enable use of returnable racks in more countries Improve methods of packing vehicle parts  Targets:  [Consolidated Companies in Japan]  57% reduction of shipment volume per unit compared to FY 2008  [Overseas Operations]  Ascertain use of packaging materials and expand reduction activities	<ul> <li>Shifted from wooden materials to cardboard</li> <li>Changed cardboard to returnable boxes</li> <li>Increased packing ratio to reduce cardboard usage</li> <li>Results:         <ul> <li>[Consolidated Companies in Japan]</li> <li>Reduced amount of packaging materials used per unit of shipment volume by 72% compared to FY2008</li> <li>→ Promote greater reduction activities going forward</li> <li>[Overseas Operations]</li> <li>Continued promotion of reduction activities in each country</li> </ul> </li> </ul>



Corporate	Ton Massage	The HINO	Realizing a		Hino's Strategies and Initiatives	CSR	Tania		ESG In	itiatives		l
Information	rop message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	

2020 Environment Initiative Plan

**Environmental Conservation & Creation of Society Coexisting in Harmony with Nature** 



	Item	Specific Action Items/Targets, etc.	Fiscal 2016–2020 Achievements and Challenges for the future
Product development	Reduce gas emissions to help improve urban air quality in each country and region	<ul> <li>Introduce vehicles with lower gas emissions to help improve urban air quality in each country and region     [Japan]         <ul> <li>Bring vehicles to market that comply with Japan's 2016 exhaust emission regulations</li> <li>Research and develop new technologies to comply with new exhaust regulations starting in 2016</li> </ul> </li> <li>[United States]         <ul> <li>Bring vehicles to market that comply with US13, and develop vehicles that comply with U.S. exhaust emission standards effective from 2016</li> </ul> </li> <li>[Europe and developed countries]         <ul> <li>Develop and bring vehicles to market that comply with EURO 6 exhaust emission standards</li> <li>[General]</li> <li>Introduce low-emission vehicles (close to EURO 4 or 5)</li> </ul> </li> </ul>	Made partial improvements to Hino Dutro (light-duty truck), Hino Liesse II (mini bus), and Hino Profia (heavy-duty truck) tractor series.
	Further reduce the use of environmentally harmful materials	Collect and manage information on increasing regulations in each country where the Group operates, and take the lead in switching to alternative materials	Collected information on chemical substances contained in parts to quickly address the growing number of regulated substances     Enhanced and promoted global chemical substance management
Production and logistics	Reduce substances that impact the environment in production activities (VOC)	Promote reduction of VOCs through daily improvements Reduce the use of painting materials and thinners in vehicle painting work  Targets in Body Painting Reduction: [Hino Motors, Ltd.] Reduction of VOC emissions by 22 grams per square meter of painted surface area [Overseas Operations] Broaden initiatives for VOC emissions reductions  Other Painting Work Targets: [Hino Motors, Ltd.] Set annual reduction targets on a per-vehicle basis every year [Overseas Operations] Implement management that leads to reduced emissions (manage amounts)	<ul> <li>Improved paint fixing efficiency when spraying paint</li> <li>Collected cleaning thinner when recoloring and cleaning</li> <li>Optimized painting range during automated painting</li> <li>Results:         <ul> <li>[Hino Motors, Ltd.]</li> <li>Achieved 15 grams of VOCs per square meter of painted surface area</li> <li>→ Promote initiatives relating to renovation plan for painting equipment and facilities and continued efforts to reduce volatile organic compounds (VOC) through daily improvements</li> <li>[Overseas Operations]</li> <li>Conducted research analysis to identify the cause of VOC volume change using constant volume and the trend management method</li> </ul> </li> </ul>
Social contribution	Implement biodiversity preservation activities locally at factories in every region where the Group operates	<ul> <li>Promote initiatives based on biodiversity guidelines</li> <li>Carry out regular activities in consideration of the unique ecosystems surrounding the factories in each country and region (including forest conservation and protection of local habitats)</li> <li>Undertake environmental conservation initiatives together with local residents and children</li> </ul>	<ul> <li>Implemented initiatives that take the surrounding ecosystem into account in each country and region [Japan]</li> <li>Maintained the cliff line in cooperation with local groups and municipalities (Hamura Plant)</li> <li>Cleared weeds using goats (Koga Plant)</li> <li>Conducted forest management and nature tour for the 70<sup>th</sup> anniversary of Hino Motors [Overseas Operations]</li> <li>Planted trees on plant grounds, etc. (Thailand, Indonesia, Pakistan, Philippines, etc.)</li> <li>Held classes at nearby schools (Pakistan)</li> </ul>



Corporate	Ton Massage	The HINO	Realizing a		Hino's Strategies and Initiatives	CSR	Tania		ESG In	itiatives		l
Information	rop message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	

2020 Environment Initiative Plan

# **Environmental Management**

	Item	Specific Action Items/Targets, etc.	Fiscal 2016–2020 Achievements and Challenges for the future
Management	Strengthen and promote group environmental management	[Japan and overseas companies]  Activities to ensure No.1 of environmental performance in each country and region  Comply with environmental laws in each country and region, and enhance activities to prevent environmental risks	<ul> <li>Issued periodic reports on environmental performance and improvement initiatives at group companies in and outside Japan</li> <li>Conducted environmental management that considers the entire life cycle of Hino products and required activities to reduce environmental risks</li> <li>Managed activity examples, data, etc. for overseas Group companies and used a self-assessment tool for activity levels</li> <li>Continued to hold seminars and workshops with the aim of further boosting capabilities going forward</li> </ul>
	Promote environmental activities in collaboration with business partners (Our suppliers)	<ul> <li>[Suppliers]</li> <li>Compliance with laws by suppliers, and enhance management of substances that impact the environment contained in parts, raw materials, secondary materials, production equipment, etc.</li> </ul>	<ul> <li>Managed environmentally hazardous substances throughout the life cycle and tackled improving environmental performance, especially implementing measures for achieving carbon neutrality in light of climate change</li> <li>Administered environmental questionnaires in each company to manage environmentally hazardous substances and share the current state of endeavors</li> <li>Took into account global trends in environmental laws and began strengthening and operating internal management systems for environmentally hazardous substances</li> <li>Revised the Green Purchasing Guidelines</li> <li>Periodically confirmed supplier compliance with requests for environmental considerations and cooperation, environmental performance, etc.</li> </ul>
	Promote environmental activities in collaboration with business partners (Dealers and distributors)	[Sales in Japan] Promote environmental activities by sales companies via each Environmental Management System. [Sales outside Japan] Grasping the burden on the environment and act continually to raise awareness of the environment	[Consolidated subsidiaries in Japan] Conducted environmental improvement activities at 223 dealers nationwide, including 2 new dealers Supported improvements and upgrades to conclude EMD certification at 223 dealers nationwide [Overseas Sales Operations] Shared environment-related data monthly with overseas sales offices Held events to promote environmental awareness during JAPAN Environment Month in June
	Improve global human resources development and training programs	Systematically implement environmental education     Further enhance awareness training programs for every employee	<ul> <li>Conducted ISO internal environmental audit education</li> <li>President delivered a message for environmental month (June)</li> <li>The Company will continue actively taking initiatives to improve the environment, including planning events featuring employee participation.</li> </ul>
	Actively disclose environmental information and enhance communication	<ul> <li>Enhance provision of information on product environmental technologies in each country and region (e.g. exhibiting at expos)</li> <li>Continually publish sustainability reports and other documents in each country and region, and publish at more sites to enhance environmental communication in each country and region</li> </ul>	<ul> <li>Actively communicated topics on environmental initiatives and new technologies in news releases</li> <li>Hino USA announced Project Z—The road to zero emissions in the USA</li> <li>Launched demonstration tests for heavy-duty fuel cell trucks from around spring 2022</li> <li>Participated in the Japan Hydrogen Association</li> <li>Toyota and Hino began efforts aiming to introduce light-duty fuel cell trucks</li> <li>Hino Profia Hybrid won the "Minister Prize of Economic, Trade and Industry" (transportation field)</li> <li>Published a sustainability report every year on the official website to disclose information and outcomes of environmental promotional activities</li> </ul>



	Corporate	T M	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	T:-	E	ESG In	nitiatives		ı
ı	Information	rop message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	ı

# **2025 Environmental Initiative Plan**

Majo	r Item	Initiative	Action plan, targets, etc.					
			Target: Reduced 12% (per unit transportation volume*) compared to FY2013  *CO2 emissions during transport per kilometer for a 1-ton load or per kilometer for 1 person					
	Life Cycle Zero CO <sub>2</sub> Emissions Challenge	Reduce CO <sub>2</sub> emissions in all processes: manufacturing, transport, use, disposal (collaborate with each country and industry)	<ul> <li>Manufacturing (materials, components, fuel manufacturing)        Initiatives for plant-related CO<sub>2</sub> in vehicle production         <ul> <li>Reduce amount of materials used and number of components</li> <li>Develop and expand use of low-CO<sub>2</sub> materials</li> <li>Expand use of recycling materials</li> <li>Implement reduction activities conducted with cooperation from stakeholders, including suppliers</li> <li>Implement activities to spread renewable energy and green hydrogen in collaboration with governments in each country and the fuel industry</li> </ul> </li> <li>Transport (components distribution)         <ul> <li>Reassess distribution between plants and transport routes for completed vehicle and improve shipping efficiency</li> <li>Improve efficiency by using tractor-trailers and conduct a modal shift</li> <li>Improve efficiency of vehicle components shipments</li> </ul> </li> <li>UseInitiatives for new vehicle CO<sub>2</sub></li> <li>Disposal (including maintenance)</li> <li>Reduce CO<sub>2</sub> by using LED lights, and HEV and BEV as company cars at sales companies</li> <li>Introduce renewable energy power facilities at sales companies and purchase renewable energy</li> <li>Implement environmentally conscientious design (easy-to-disassemble, easy-to-recycle designs)</li> </ul>					
			Target: Reduced 15% (per unit transportation volume) compared to FY2013					
6 Environmental Challenges	New Vehicle Zero CO <sub>2</sub> Emissions Challenge	Develop and bring electric vehicles to market	Conduct technical development of electric vehicles and bring to market  FCEV: Develop FCEV and run verification tests for heavy-duty FCEV trucks, etc.  BEV: Develop BEV and bring to market the Hino Dutro Z EV (light-duty BEV truck), Hino Poncho Z EV (light-duty BEV bus), etc.					
		Improve diesel consumption	Conduct technological development to comply with new fuel economy standards in each country and bring to market Japan: Conduct technological development to comply with JH25 and bring to market  United States: Conduct technological development to comply with EPA and CARB2024 and bring to market  Europe: Promote development of technologies to improve fuel efficiency to meet the next round of regulations  Promote research on technologies for alternative fuels  Develop technologies for carbon neutral fuels					
		Initiatives for improved transport efficiency	<ul> <li>Maximize transport efficiency in the logistics industry</li> <li>Improve shipping efficiency by mixing various loads that exceed industry types</li> <li>Achieve mass transport by utilizing double trailer-trucks</li> <li>Improve distribution efficiency by utilizing information on vehicles, loads, and drivers</li> </ul>					
			Target: Reduced 30% (total global emissions) compared to FY2013					
	Factory Zero CO <sub>2</sub> Emissions Challenge	Introduce innovative technologies	<ul> <li>Introduce new low-carbon technologies when upgrading and for new vehicle types         Ex.: Airless painting, dry booth, etc.     </li> <li>Research new technology trends outside the company and consider introducing</li> </ul>					
		Promote daily improvements	<ul> <li>Maximize CO<sub>2</sub> emissions reduction through repeated, daily improvements         Ex.: Shorten work hours, concentrate equipment, consolidate processes, etc.     </li> <li>Reduce CO<sub>2</sub> by introducing high-efficiency equipment         Ex.: LED lights, motors, air conditioning, etc.     </li> </ul>					
		Introduce renewable energy	<ul> <li>Accelerate solar panel installation on company grounds (onsite)</li> <li>Shift to optimal renewable energy power (solar and hydroelectric power generation) that considers the power circumstances in each country and region</li> </ul>					

Corporate	T M	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	Tauria	ESG Init	iatives	
Information	Top Message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment Social G	Sovernance and a	data others

# **2025 Environmental Initiative Plan**

Majo	or Item	Initiative	Action plan, targets, etc.
			Target: Implement initiatives for efficiently reducing water usage (all plants worldwide)
	Challenge of Minimizing and Optimizing Water Usage	Use small amounts of water	<ul> <li>Actively introduce new water-saving technologies, such as a dry booth for painting</li> <li>Promote water conservation through daily improvements such as repairing water leaks, and optimizing water sprinkling and shower volume</li> <li>Conduct water usage risk assessment and water reduction activities that consider water supply conditions in each country and region</li> </ul>
		Return purified water to nature	Conduct wastewater risks assessment at each site in each country
			Target: Reduced 12% (total global emissions) compared to FY2018
6 Environmental	Challenge of Achieving Zero Waste	Reduce to reach zero waste	Considering the introduction of innovative new technology Ex.: Waste sand recycling equipment, waste-to-fuel conversion equipment, etc. Promote activities for daily improvements Ex.: Measures for managing waste sources by improving yield rates, reducing evaporation, etc. Reduce waste by recovering valuable materials and recycling
Challenges	(4)	Use resources from discarded vehicles in newly manufactured vehicles (Car to car)	<ul> <li>Develop collection technologies for rare metals and natural resources</li> <li>Develop technologies for improving recycling ratio</li> </ul>
		Reduce packaging materials	Improve packaging methods to reduce usage and expand returnables     Switch to plastic alternatives in packaging materials     Target: In consolidated companies in Japan, packaging material per unit of volume that is below FY2018
			Target: Establish 2 model factories that coexist in harmony with nature
	Challenge of Minimizing the Impact on Biodiversity	Create factories that conserve greenery and water, and coexist in harmony with nature	<ul> <li>Plant trees inside and outside office grounds that aim to conserve greenery and water, secure rare species, and promote river cleanup activities</li> <li>Promote conservation activities that employees and local schools, etc. tackle together</li> <li>Ex.: Employee education, environmental classes with nearby schools, etc.</li> </ul>



	Corporate	T M	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	T:-	E	ESG In	nitiatives		ı
ı	Information	rop message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	ı

# 2025 Environmental Initiative Plan

Majo	or Item	Initiative	Action plan, targets, etc.
	Air	Take measures to prevent air pollution in products	<ul> <li>Comply with legal standards for gas emissions in products such as NOx, PM, VOC, etc.</li> <li>Introduce vehicles with lower gas emissions to help improve air quality in each country and region</li> <li>Japan: Bring vehicles to market that comply with the Future Policy for Motor Vehicle Emission Reduction (Fourteenth Report) (PN standards)</li> <li>United States: Bring vehicles to market that comply with EPA and CARB 2024</li> <li>General: Promote introduction of low-emission vehicles (EURO 4, 5 or 6 level)</li> <li>Promote R&amp;D to meet the next round of regulations, etc.</li> </ul>
		Take measures to prevent air pollution in production	<ul> <li>Comply with legal standards for gas emissions in equipment such as NOx, PM, VOC, etc.</li> <li>Reduce VOC emissions by improving painting efficiency and collecting thinner in the painting process</li> <li>Target: Emissions volume per unit area that is below FY2018</li> </ul>
	Water quality / Soil quality	Manage wastewater and prevent underground seepage in production	Establish independent standard values for wastewater and improve wastewater quality through very frequent monitoring
Compliance with laws and		Prevent the spread of pollution during modifications and land transactions	<ul> <li>Confirm based on regulations when buying new land, selling, and leasing</li> <li>Ascertain degree of contamination when modifying land on property and issue report</li> </ul>
regulations	Noise / Vibrations	Reduce noise and vibrations in products	Comply with vehicle noise laws in each country and region
		Reduce noise and vibrations in production	<ul> <li>Reduce noise and vibrations of plant equipment and on property borders, and implement initiatives to comply with standards</li> <li>Conduct review in advance when purchasing new plants and equipment, and confirm outcomes after purchase</li> </ul>
	Waste materials	Properly manage waste materials	<ul> <li>Conclude contracts for general waste and industrial waste, and appropriately outsource disposal</li> </ul>
	Chemical substances	Manage chemical substances and reduce hazardous substances in products	<ul> <li>Implement total management through data on chemical substances contained in products</li> <li>Implement solid transition for regulated substances used in materials and components</li> </ul>
		Manage chemical substances and reduce hazardous substances in production	<ul> <li>Manage prohibited substances in subsidiary and secondary materials used at production plants</li> <li>Reduce use of subsidiary and auxiliary materials, and reduce environmental load by switching to alternatives</li> </ul>
	Accident prevention	Prevent environmental accidents (zero violations and complaints, defects and reports)	<ul> <li>Spread throughout plants and offices in the Hino Group by analyzing causes of past incidents</li> <li>Standardize work handling liquids, etc. by creating environmentally responsible human resources</li> </ul>
Management		Promote the creation of environmentally responsible human resources	<ul> <li>Make rules for environmentally responsible human resources and roll out at each plant</li> <li>Implement environmental education for employees at each level and promote human resource cultivation</li> <li>Systematically implement awareness-raising activities</li> </ul>

Corporate	Ton Mossago	The HINO Credo & Course	Realizing a	Environmental	Hino's Strategies and Initiatives and the Sustainable	CSR	Topic		ESG In	itiatives		ı
Information	Top Message	of Action	World	Management	Development Goals (SDGs)	Management	ТОРІС	Environment	Social	Governance	ESG data and others	ı



# CHALLENGE! 1 New Vehicle Zero CO<sub>2</sub> Emissions Challenge

### Hino Motors' Environmental Technologies

**Existing technologies** 

Trucks and buses are made to transport large numbers of people or goods over relatively long distances, and fuel and energy are needed to do that. As a result, emission of CO<sub>2</sub>, a greenhouse gas, is inevitable.

Unique aspects of trucks and buses include their comparatively large size and loading capacities, the long distances they travel, and their wide array of uses and places where they are used. Taking into account these varying conditions, Hino Motors considers what types of environmental technologies are most suitable. By providing users with optimally equipped vehicles, the Company hopes to help curb global warming.

### Initiatives for Next-generation Vehicles

Next-generation vehicle Existing technologies More efficient

Hino Motors capitalizes on the unique benefits of electric vehicles such as clean exhaust gas emissions and quietness of ride to create next-generation vehicles that meet customers' and society's needs.

Hino primarily pursues development for applications in urban areas such as light-duty trucks and buses and route buses.

Hino will continue to develop vehicles along with related technologies including batteries, while seeking to reinforce social infrastructure, such as charging facilities and hydrogen stations, in cooperation with relevant organizations. The ultimate goal is to offer electric or hydrogen power options on all models.



Travel distance







# Hino Motors' Highly Promising Technologies

(technologies scheduled for practical implementation, technologies scheduled for trial experiments)

#### ◆ BEV (electric vehicles)

#### Light-duty BEV truck

Hino Motors is developing an ultra-low-floor, front-wheel-drive BEV. It achieves an ultra-low floor measuring approximately 400 mm, which is half the ground clearance of conventional rear-wheel drive vehicles. This dramatically improves cargo handling and accessibility.

The design also succeeds in making deliveries easy with a walk-through structure.



The Hino Poncho has been equipped with an electric motor to achieve green transportation while retaining its user-friendly universal design and optimum form for community buses. The model succeeds in being considerate of people and the environment, while contributing to sustainable community transportation for the future.





#### ◆ FCEV (fuel cell vehicles)

#### Heavy-duty FCEV truck

Heavy-duty trucks used for highway transport are required to have sufficient driving range, load capacity, and fuel supply for short periods. Hino Motors believes fuel cell systems using high-energy-dense hydrogen are effective. The heavy-duty FC truck being developed has a target driving range of approximately 600 km and aims for both environmental performance and advanced-level commercial vehicle practicality.

• Heavy-duty FCEV truck (for North America)
Hino Motors is developing a high-performance, heavy-duty truck that operates without emitting CO<sub>2</sub> by using the chassis of the new model HINO XL Series in combination with fuel cell technology from Toyota.



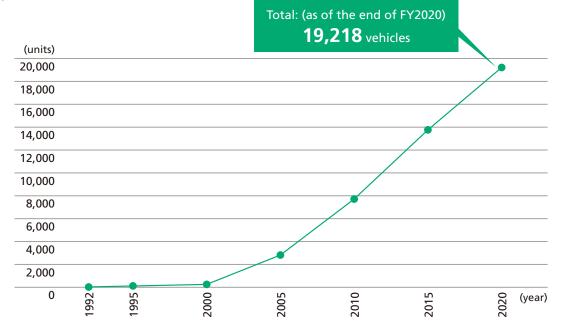


Corporate	T M	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	T:-	E	ESG In	itiatives		
Information	rop message	Credo & Course of Action	Sustainable World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	

# Evolution of the Hybrid Vehicle Next-generation vehicle Existing technologies More efficient

Ever since Hino Motors commercialized and sold the world's first hybrid bus in 1991, cumulative global sales of hybrid vehicles surpassed 19,000 as of the end of fiscal 2020.







Hino 300 Series (for overseas market)



Hino Blue-Ribbon Hybrid Articulated Bus



The heavy-duty Hino Profia Hybrid truck





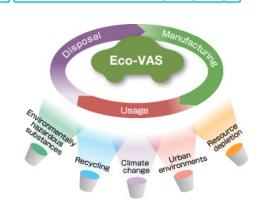
# CHALLENGE! 2 Life Cycle Zero CO<sub>2</sub> Emissions

# Environmental Load Reduction Activities Based on Life Cycle Assessment (LCA)

At Materials manufacturing stage At the Distribution stage At the Disposal and recycling stage

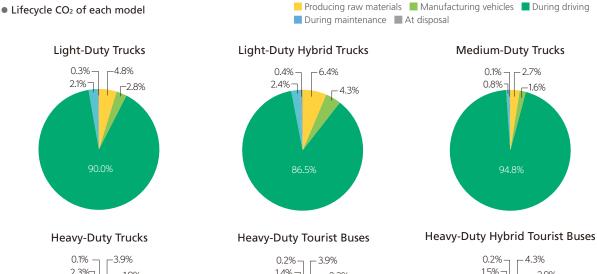
Factors such as measures for new regulations, vehicle performance enhancement efforts, and others can increase environmental burden during the process of manufacturing. Hino Motors is aiming to further reduce its environmental load by employing the Eco-Vehicle Assessment System (Eco-VAS\*), an environmental product management system that incorporates a lifecycle approach during product development.

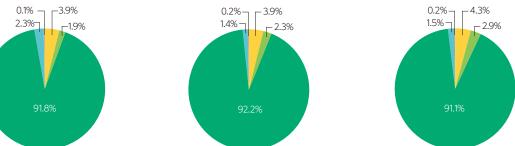
<sup>\*</sup>Eco-VAS is a framework for setting targets to reduce the environmental burden from the products from the early vehicle development stage and for making steady reduction of environmental burden based on LCA methods.



#### **♦ LCA Initiative**

Life Cycle Assessment (LCA) is an analysis method that quantitatively measures environmental impact throughout the life cycle of products such as trucks and other vehicles, from manufacturing to use and eventual disposal. Hino Motors has been employing LCA since 2008 to track CO<sub>2</sub> emissions over the life cycle of its truck and bus models. The results for each type of vehicle are shown in the charts below.





<sup>\*</sup>The graphs are results computed by Hino's proprietary calculation conditions, and may not reflect actual emissions measurements. Fuel efficiency uses the heavy-duty vehicle mode's fuel-efficiency value. Evaluation results show the entire lifecycle of each as a percentage of 100%



### Reducing CO<sub>2</sub> Emissions in Distribution Operations

Logistics

#### ♦ Initiatives to reduce CO₂ emissions from distribution

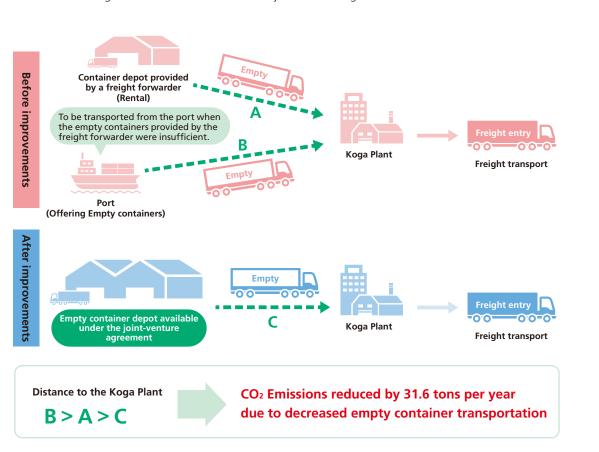
Under the guidance of the Logistics Improvement Council, Hino Motors is carrying out the following initiatives aimed at reducing  $CO_2$  emissions from distribution-related operations:

- 1. Improving loading rates by integrating transportation routes and conducting joint shipments
- 2. Shortening transportation distances by packaging at the point of production to enable direct shipments
- 3. Increasing shipment volume using vehicles with higher tonnage (load volume) and utilizing different types of vehicles such as trailers
- 4. Promoting a modal shift to ships and other forms of transportation

#### | Example | Improving CO2 Emissions by effectively using other companies' containers

We used to take empty containers from a container depot provided by a freight forwarder for the freight transport from the Koga Plant, but additional containers had to be transported from a port far away from the plant when empty containers were insufficient.

However, empty container transportation needs decreased and CO<sub>2</sub> Emissions were reduced by 31.6 tons per year since we started taking empty containers from the empty container depot that is close to the Koga Plant. These new logistics became available under a joint-venture agreement.



Corporate	T M	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	T:-	E	ESG In	itiatives		
Information	rop message	Credo & Course of Action	Sustainable World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	

### **Eco-Driving Support**

Logistics

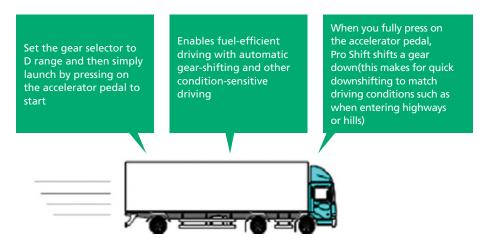
Hino Motors will continue to support customers' eco-driving capacities as it strives to remain a company trusted worldwide.

#### ◆ Pro Shift (mechanical automatic transmission): Support for gear shifting

To support eco-driving, the engine has to stay in the rpm range best suited to each situation by changing gears in a suitable manner.

Pro Shift shifts gears automatically to ensure that the truck stays in the green zone on the fuel economy meter. This enables even truck drivers with little experience to drive like good eco-driving professionals.

#### • Example of main features of Pro Shift



#### **◆** Eco-driving Seminars for Overseas Customers

Hino Motors holds "Eco-driving" classes in Japan and overseas as a part of its endeavors to contribute to the environment and customers. In fiscal 2020, a total of 11,780 students (171 in Japan and 11,609 in 28 countries overseas) took these classes. The classes are popular because students can learn eco-friendly driving and they improve corporate profitability.

As of March 2021, the Customer Technical Center in the Hamura Plant had welcomed a total of 101,000 visitors since it was established in 2005.

Overseas, the Hino Total Support Customer Center (HTSCC) at Hino Motors Sales (Malaysia) Sdn. Bhd. completely renovated its facility in 2017 to enable visitors to experience various driving conditions in response to the increasing number of visitors and to meet the varied demands of customers.



Hino Total Support Customer Center in Malaysia



Educational training (Above photo is taken before the COVID-19 pandemic)



#### **♦** Hino Eco Tree Report

In order to provide eco-driving support to customers, Hino Motors products feature an "Eco Tree" display function. A tree icon grows more leaves as the level of eco-driving increases.

Furthermore, by providing complementary Eco Tree reports that contain automated analysis of each individual customer's driving status and serve as a useful source of information for eco-driving and drive management, Hino Motors supports customers in terms of environmental awareness.

Standard feature for Profia, Ranger, and S'elega models released in 2010 and later (exhaust emission symbols LKG and LDG onward). Standard feature for Dutro Hybrid models released in 2014 and later.



Eco Tree Report

#### Customer Assistance Programs

In collaboration with its dealers in Japan, Hino Motors carries out customer assistance programs that go beyond the scope of selling Hino vehicles. Hino Motors believes in providing total support that maintains a strong, long-term relationship with customers. The Company not only utilizes knowledge linked to fuel efficiency and environmental measures such as driving methods, it also contemplates customer troubles and supports problem-solving while utilizing the expertise of each company, including ensuring safety and fostering human resources.



A scene from training programs for customers (Above photo is taken before the COVID-19 pandemic)

# Propose improvements based on Hino Eco Tree Report utilization



Reveal driving condition details unknown to the digital tachograph and propose safety and fuel efficiency improvements

#### **Eco-driving Seminars**



Learn practical driving skills and gain a better understanding about how to improve fuel efficiency

# Guidance on subsidies and financing of low-emission vehicles



Guidance on various subsidy and financing programs when considering the purchase of a vehicle

# Assistance in obtaining green management certification



Suggestions on obtaining certification as a means of calling attention to one's approach to environmental initiatives and assistance in obtaining certification

# Assistance in reducing CO<sub>2</sub> emissions



Advice provided on  $CO_2$  reduction (vehicle selection, eco-driving, and transportation efficiency



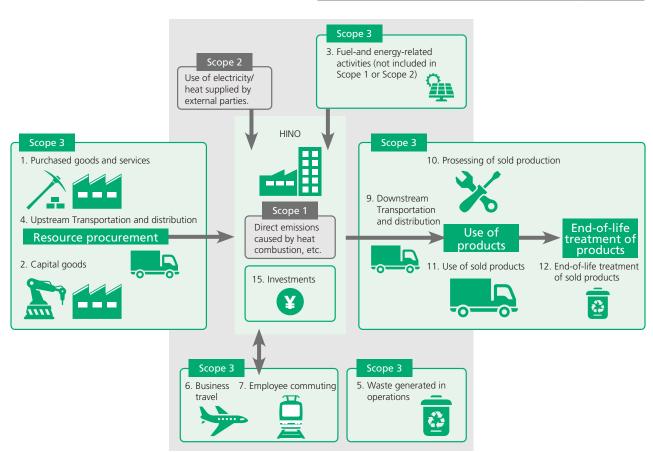
### **Handling Scope 3 Emissions**

#### At Materials manufacturing stage At the Distribution stage At the Disposal and recycling stage

Companies are expected to calculate and disclose the greenhouse gas (GHG) emitted along the entire supply chain. Hino Motors calculates Scope 3 emissions, as well as Scope 1 and 2 emissions, based on GHG reporting guidelines and estimates are calculated from reported or derived values and available data. Actual emissions may vary.

Ratios of calculated emissions show that the combined percentages for Category 1 (Purchased Products and Services), Category 10 (Processing of Products Sold), and Category 11 (Use of Products Sold) account for approximately 99% of the total, with the remaining categories accounting for less than 1% each. Hino Motors will continue to strengthen management of CO<sub>2</sub> emissions along its entire supply chain, while also focusing on CO<sub>2</sub> reduction activities.

	Category	Emissions (1,000 t-CO <sub>2</sub> )
Scope 1	Direct emissions caused by heat combustion, etc.	120
Scope 2	Use of electricity/heat supplied by external parties.	180
Scope 3	1. Purchased goods and services	1,780
	2. Capital goods	150
	Fuel-and energy-related activities (not included in Scope 1 or Scope 2)	60
	4. Upstream Transportation and distribution	10
	5. Waste generated in operations	10
	6. Business travel	10
	7. Employee commuting	20
	8. Upstream leased assets	0
	9. Downstream Transportation and distribution	10
	10. Processing of sold production	770
	11. Use of sold products	37,770
	12. End-of-life treatment of sold products	50
	13. Downstream leased assets	0
	14. Franchises	0
	15. Investments	20





# **Green Purchasing Guidelines**

To further promote environmental initiatives associated with business activities, in 2021 Hino Motors revised the Green Purchasing Guidelines on environmental endeavors for its business partners, based on the Hino Environmental Challenge 2050 and Hino Environmental Milestone 2030. The guidelines have been provided to clients in various countries worldwide.

Going forward, the Company will strengthen environmental endeavors throughout the supply chain and earnestly take action.



Green Purchasing Guidelines







# CHALLENGE! 3 Factory with Zero CO<sub>2</sub> Emissions

### **Daily Improvement Initiatives**

**Daily improvement** 

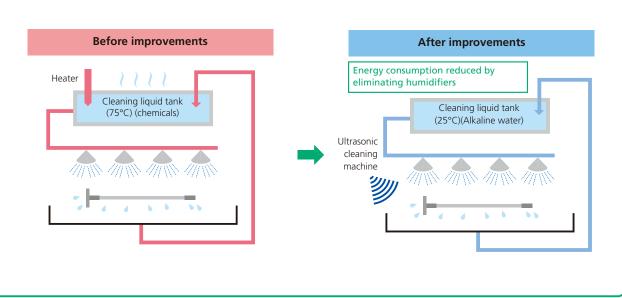
Recognizing climate change as one of the major challenges facing humanity, Hino Motors is working hard to reduce CO<sub>2</sub> emissions. In its continuing endeavors to reduce CO<sub>2</sub> emissions, the Company is carrying out regular activities with the participation of all employees to improve efficiency at all of its production sites, while also striving to reduce wasted energy. Based on the Hino Environmental Challenge 2050, a long-term environmental vision formulated in fiscal 2017, In fiscal 2020, Hino Motors continued to implement a wide range of daily energy-saving activities including the Factory Zero CO<sub>2</sub> Emissions Challenge aiming to completely eliminate CO<sub>2</sub> emissions due to production activities.

#### **Major Initiatives**

- Adopting electric booster pump systems
- Replacing fluorescent lighting with LEDs
- Applying thermal insulation paint to furnaces (see below)
- Switching to electric transport vehicles inside plants

#### | Example | Using room-temperature rinse water by installing an ultrasonic cleaning machine

A parts washer is used during the machining process to clean off oil and other debris that adhere to products. Until now, this was done by heating a cleaning agent containing chemicals, but an ultrasonic cleaning machine was installed that can achieve the same cleaning effect using room-temperature rinse water (alkaline water). This resulted in reducing CO<sub>2</sub> emissions from the heater that had been used to heat water by 5.7 t-CO<sub>2</sub> per unit, while simultaneously eliminating use of a cleaning agent containing chemicals.



Corporate	Ton Massace	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	T:-		ESG In	nitiatives		ı
Information	rop Message	Credo & Course of Action	Sustainable World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	ı

### Initiatives Related Renewable Energy

Hino Motors is installing solar power equipment as an initiative to make use of renewable energy. Electricity generated by the equipment is used for production activities, lighting inside its factories and offices, as well as outside lights on the premises. In the future, Hino Motors plans to pursue initiatives that not only save energy at its existing business facilities but also incorporate the broader perspective of combating climate change.

### Renewable Energy



Solar panels installed at the Nitta Plant around 160 kW

#### | Example | Hino Motors Manufacturing Thailand: Solar power generation panels installed on roof of its plant

Solar power generation panels with an output of approximately 500 kW were newly installed on the roof of the Plant 3 of the Hino Motors Manufacturing Thailand. The generated electric power is being used for production activities, the office, and streetlights on the premises. In the future, the Company will not only improve the energy conservation of existing facilities, but also work to reduce CO<sub>2</sub> while incorporating renewable energy.



Solar power generation panels installed on the plant roof

#### | Example | Purchasing electricity produced by hydroelectric power generation

Meiyu Kiko Co., Ltd., a consolidated subsidiary of Hino Motors, concluded a contract for the "Furusato Hydropower Plan" offered by Yamanashi Power Plus, which is a power supply brand jointly operated by Yamanashi Prefecture and TEPCO Energy Partner, Incorporated.

The plan provides electric power generated at a hydropower plant operated by Yamanashi Prefecture that does not emit CO<sub>2</sub>. The electric power will be used by two sites, the Meiyu Kiko Head Office and the Isawa Office. Converting this into plant CO<sub>2</sub> emissions based on fiscal 2018 performance results in an annual reduction of approximately 260 tons, which is around 89% of overall plant CO<sub>2</sub> emissions.

Meiyu Kiko was named an environmentally friendly company by the governor of Yamanashi Prefecture to enable a portion of electricity charges to be used for programs such as environmental conservation projects in Yamanashi Prefecture. In

addition, utilization has continued with the renewal of the contract in fiscal 2020.

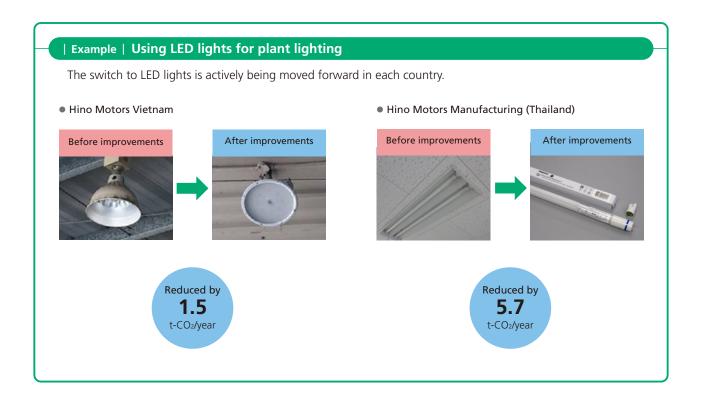
Going forward, the company aims to motorize forklifts and reduce other fuel consumption to further curtail CO<sub>2</sub> in order to promote activities for "Factory with Zero CO<sub>2</sub> Emissions" that was announced in the Hino Environmental Challenge 2050.



Receiving the award











# CHALLENGE! 4 Challenge of Minimizing and Optimizing Water Usage

### **Initiatives for Conserving Water at Factories**

Small amounts of water purified

Water is essential to the manufacturing of trucks and buses. To make effective use of precious water resources, Hino Motors has established the Hino Environmental Challenge 2050, its long-term environmental vision, and is working to reduce water usage every day. Hino will continue to work on water-saving activities with the aim of fulfilling the Challenge of Minimizing and Optimizing Water Usage.

#### **Major Initiatives**

- Eradication of wasteful use with a water-saving patrol (leakage/overflow [effluent])
- Water-saving educational activities (using posters and other materials to communicate)
- Effective use of rainwater and wastewater treatment plant's treated water

#### | Example | Employing paint mist-collecting technology, which uses no water

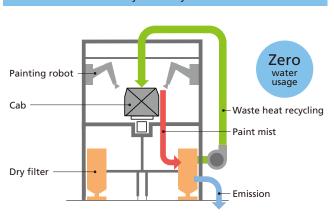
A dry booth system that reduces environmental impact in the cab painting process was introduced at the Koga Plant.

In the conventional method, the paint mist was removed with a water film and the paint was recovered using chemicals. This year, we employed a new, chemical-free system that uses filtering and calcium carbonate but no water.

#### Dry booth mechanism



#### Dry booth system







# CHALLENGE! 5 Challenge of Achieving Zero Waste

### **Recycling Initiatives at Production Plants**

Zero waste

Hino Motors is also working to reduce waste as one activity targeting the Hino Environmental Challenge 2050, its long-term environmental vision. In recent years, Hino has thoroughly re-examined materials which it has not been able to recycle and is working to recycle them internally.

#### **Major Initiatives**

- Reducing the volume of wastewater treatment plant sludge
- Reducing the amount of sand used during molding
- Extending the life of waste liquid processing machinery by installing filtration filters
- Comprehensive implementation of waste separation rules

#### **Example | Waste separation training**

Hino Motors Manufacturing Colombia, S. A. trains employees by using real waste so that they can gain a greater understanding of the types of waste.



Training



The HINO Realizing a **ESG** Initiatives Hino's Strategies and Initiatives Corporate CSR **Environmental** Credo & Course Top Message and the Sustainable Sustainable Topic Information Management Management Environment Social Governance and others **Development Goals (SDGs)** of Action World

Environmental Initiative Plan (5-year action plan) 2020 Environment Initiative Plan 2025 Environmental Initiative Plan Six Challenges (Initiatives) Compliance Environmental Management Various Environmental Data Other Activities

#### | Example | Activities to reduce plastic (1)

Given current societal issues, actions to eliminate plastic are underway in each country. Hino Motors Manufacturing (Thailand) Ltd. is spurring employees to take action under the slogan, "Say No to Plastic" by asking them to refuse shopping bags and refrain from using disposable cups and containers at mealtimes. To encourage the outcomes of these actions, the company is promoting the activities by giving away reusable shopping bags and reusable cups. In addition, ordinary actions that can be taken such as reducing plastic bags are being steadily fostered in each country as a part of efforts to get away from packaging.



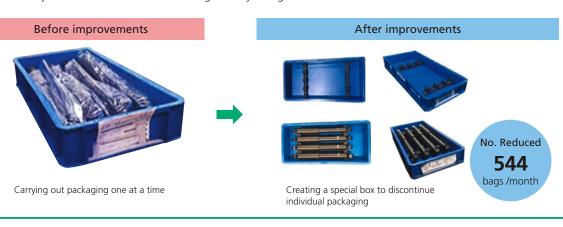
Taking action



Root Out Plastic Waste activity poster

#### | Example | Activities to reduce plastic (2)

Hino Motors Manufacturing (Thailand) Ltd. has stopped plastic packaging for undercarriage components (shock absorbers) and is instead creating a special box as a part of efforts to get away from plastic packaging. Ordinary actions that can be taken are gradually being carried out.



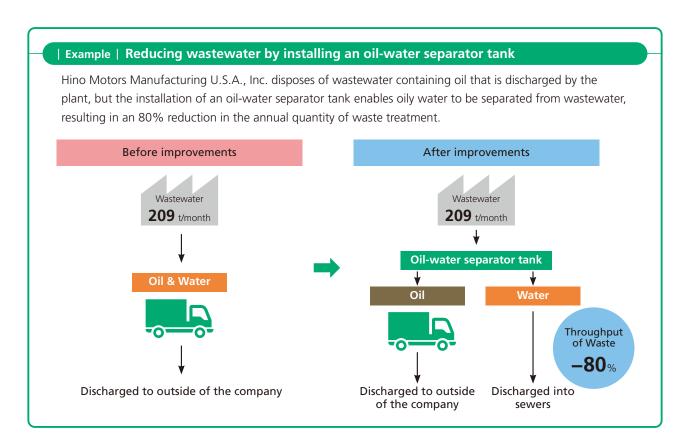
### VOICE



# All employees work together to eliminate plastic

Plant Manager Hino Motors Manufacturing (Thailand) Ltd. **Paradorn Siripunt**  As a part of CSR activities, our employees and their families are partnering with local residents and various groups such as NPOs to carry out environmental conservation activities. Efforts were carried out in daily life together with all employees to combat the global issue of plastic under the slogan, "Say No to Plastic." As a leader in Thailand, we are striving to improve the global environment.

Corporate	Ton Mossage	The HINO Credo & Course	Realizing a	Environmental	Hino's Strategies and Initiatives and the Sustainable	CSR	Topic		ESG In	nitiatives	
Information	10p Message	of Action	World	Management	Development Goals (SDGs)	Management		Environment	Social	Governance	ESG data and others



# Design with Recycling in Mind

Zero waste Newly manufactured vehicles

Since 1990, Hino Motors has been involved in product development and design initiatives with recycling in mind. It established a Voluntary Action Plan in 1998, listing specific values for recycling rates with the goal of enhancing recycling activities. In recent years the Company has also engaged in efforts to comply with regulations on environmentally hazardous substances by reducing them at an early stage.

Hino Motors has pursued the challenge of enhancing recyclability based on a variety of perspectives. These include adopting easily recyclable materials from the product development stage, using identification marking for materials, and preparing disassembly manuals.

Also, Hino Motors is endeavoring to gather information on chemical substances contained in all components and reducing them at an early stage in response to recent regulations on environmentally hazardous substances in and outside of Japan.

# 

To comply with the Automobile Recycling Law, which came into effect in Japan in 2005, Hino Motors has implemented a process of recovery, processing, and recycling of three materials designated by the law from end-of-life vehicles, namely automobile shredder residue (ASR), airbags, and chlorofluorocarbons (CFCs), with the help of a great many related businesses.

The ASR recycling ratio for fiscal 2020 was 95%, surpassing the legal standard of 70%. In addition, Hino Motors strives to promote eco-friendly manufacturing as early as the development stage by using recyclable materials and, where possible, easy-to-disassemble vehicle designs, thereby fostering the effective utilization of resources and contributing to the development of a recycling society.







and are now being advanced.

# CHALLENGE! 6 Challenge of Minimizing the Impact on Biodiversity

### **Considerations toward Biodiversity**

Protection

Hino Motors has endorsed the Japan Business Federation's Declaration on Biodiversity, and after having also incorporated individual targets into the Company's five-year Environment Initiative Plan, in fiscal 2015 the Hino Motors Biodiversity Guidelines were formulated and the direction for Company activities and specific initiatives on biodiversity were set out

Going forward, the Company will promote various initiatives in consideration of biodiversity in accordance with the Biodiversity Guidelines in order to ensure coexistence with the ecosystems around Hino Motors and to continue to grow as a company. At the same time, Hino Motors plans to actively incorporate participation-based activities for employees as a means of tackling the issue of raising awareness and environmental consciousness among employees.

#### **Biodiversity Initiatives**

- Further pursuit of environmental technologies in products
- Consideration for regional water resources
- Contribution to biodiversity through steady promotion of environmental initiatives (CO<sub>2</sub> reduction, resource conservation, etc.)
- Collaboration and cooperation with communities
- Active information disclosure

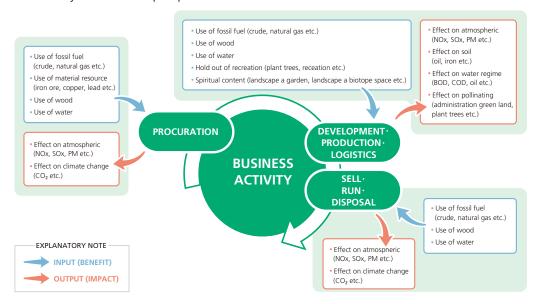
# Categorizing the Interrelationship of Business Activities and Biodiversity

**Protection** 

Referring to the Business & Biodiversity Interrelationship Map (see diagram below) devised by the Japan Business Initiative for Biodiversity (JBIB), Hino Motors has categorized benefits and impacts at each stage of the product life cycle. In this way, in the course of its business activities, Hino Motors simultaneously benefits from and impacts nature in the product life cycle as a whole. Hino Motors recognizes that every action counts, no matter how small. The Company is committed to reducing its environmental impact on biodiversity and ensuring that its business does not adversely affect surrounding ecosystems.



#### Business & Biodiversity Interrelationship Map





# **Examples of Initiatives**

Protection

The event was not held in fiscal 2020 to prevent the spread of COVID-19, but initiatives implemented to date are introduced here.

#### **♦** Biodiversity public awareness and education activities

Hino's headquarters and plants collaborated with Hino City's Kingfisher House to familiarize people with the creatures that inhabit the area by holding exhibits of stuffed birds and reptiles living nearby, as well as displaying insect and plant specimens.

In addition, the Hamura Plant invited an instructor from the Hamura City Environmental Conservation Division, who presented local strategies for protecting the city's precious living creatures and local initiatives from a biodiversity perspective.

To ensure the future spread of these activities, we will continue exchanges with the government and expand them to other business offices.



Exhibition (Hino Plant)



Presentation of Hamura City's initiatives (Hamura Plant)

#### **◆** Participation in local conservation activities

In Commemoration of the 70th anniversary of Hino Motor's founding, we mowed the undergrowth to help the planted trees grow and held and observation session th the children. In the Tachikawa Cliff Line (Total length of about 40 km) designated by the TOKYO Metropolitan Government, we carried on tree planting, green road maintenance, etc. with Hamura city and citizen groups at Inari Green Space area near the Hamaura Plant. We are engaged in green conservation activities as a habitat for various creatures in order to protect the precious nature left in Tokyo.



Inari Green Space Area activities



Mowing activities



Corporate	Ton Massace	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	T:-		ESG In	nitiatives		ı
Information	rop Message	Credo & Course of Action	Sustainable World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others	ı

# **Examples of Initiatives**

#### ♦ Holding of environmental study classes for a neighborhood elementary school

At the Koga Plant, employees planted aquatic plants and conducted biological surveys with neighboring elementary school students in the retention basin that directly connects to the nearby river.

We explained that many indigenous species have been identified this year and are surrounded by a rich ecosystem. The class also served to reaffirm that we must not forget to consider the surrounding ecosystem amid our ongoing business activities.



Retention basin survey

#### **♦** Cleanup Events in Areas Surrounding Business Sites

Cleanup events are held in areas surrounding business sites including the Hino Plant, Hamura Plant, and Nitta Plant, as well as at group companies both in and outside of Japan, contributing to communities, raising environmental awareness and commuting etiquette.



Ome Parts Center



Hinopak Motors, Ltd.



# **Compliance**

### **Environmental Risk Management**

In various facets of its operational activities, the Hino Motors Group is addressing environmental risk management through awareness of the environment-related regulatory compliance across each of the countries and regions in which the Hino Motors Group operates, and incorporation of environmental risk countermeasures into environmental management system targets. In this manner, Hino Motors is continuously enhancing its environmental risk management capabilities while diversifying and promoting the quality of its initiatives. All of Hino Motors' activities involve certain environmental risks, from truck and bus design and development to procurement, production, distribution, and sales.

With the leadership of the Hino Environment Committee, Hino Motors has analyzed and assessed risks and opportunities related to environmental issues at seven different division meetings, consulted with the executives in charge who chair each Environment Division Meeting, decided long-and short-term countermeasures, and implemented them in the relevant divisions. Hino Motors gives the highest priority to risks and opportunities related to laws and regulations. In the case of product marketability and productivity improvements, the Company decides based on cost-effectiveness subject to compliance with environmental regulations and all other legal requirements. The results of these efforts are reported to the relevant Environmental Division Meetings and then reported to the Hino Environmental Committee, the top deliberative body.

#### **♦ Moving Forward with Initiatives to Lower Environmental Risks**

The Hino Motors Group identifies risks and implements countermeasures using an environmental risk assessment manual used throughout the Group.

This time, because of concerns that the Hamura Plant could exceed the regulatory standards for noise due to a change in the land use zone around the plant, we made changes to the work area and installed soundproof sheets to reduce environmental risk.

As part of all these efforts, the Company is taking measures to further reduce environmental risk identified under various scenarios.



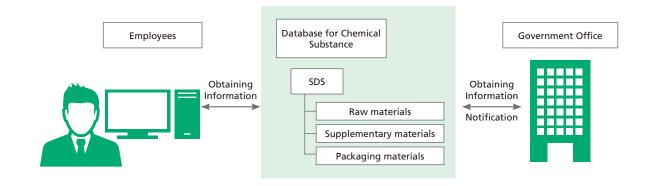
Soundproof sheets installed in the plant



### **Chemical Substance Management**

Hino Motors employs Safety Data Sheets (SDS) to collect data and maintains a database for all paint and related materials used in-house. Information is accessible by employees via PCs, enabling them to identify chemical substances contained in the materials and undertake environmental and safety measures when required.

With the growing adoption of regulations for environmentally hazardous substances around the world, Hino Motors is enhancing the chemical substance management of raw materials used in its products, supplementary materials in manufacturing equipment, and packaging materials. Through these efforts, the Company is reducing the amount of environmentally hazardous substances used in its operations.





Corporate	Ton Massage	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR	Topic		ESG In	itiatives		
Information	Top Message	Credo & Course of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management		Environment	Social	Governance	ESG data and others	ı

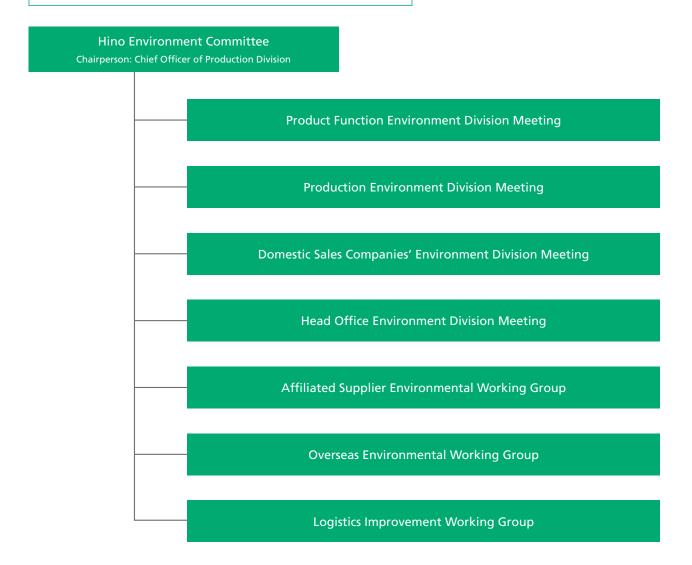
# **Environmental Management**

### **Environmental Conservation Promotion Structure**

In March 1993, Hino Motors established the Hino Environment Committee, an overarching Company-wide organization chaired by the Hino Motors' president. At the same time, Hino Motors formulated the Hino Global Environment Charter, which underpins various facets of Hino Motors environmental conservation activities. Currently, the General Manager of the Production Division is serving as chairperson in order to further strengthen oversight and execution.

The distinctive feature of Hino Motors' environmental conservation activities is that it deploys an environmental management system in each area, including product development and production activities. In subordinate organizations of the Hino Environmental Committee, we have set up individual councils with an executive in charge who serves as council chairperson, and the councils pursue specific environmental conservation activities.

#### **Environmental Conservation Promotion Structure**





### **Environmental Management Systems**

Hino Motors has developed environmental management systems (EMS) for all operational functions in Japan, and is effectively managing them in a manner that links each division's business operations to environmental conservation. At EMS-certified companies, these systems are periodically subjected to stringent environmental audits to ensure their effectiveness.

Hino Motors has acquired ISO 14001 certification for the Hino Group as whole. In fiscal 2020, an external audit found no nonconformities that could affect certification. Hino Motors will continue to promote environmental initiatives with an even stronger policy of reinforcing links between its core business operations and environmental management systems.

#### Acquisition of ISO 14001 Certification

Organization/Entity	Date of acquisition
Headquarters & Hino Plant	March 24, 2001
Hamura Plant	March 10, 1999
Nitta Plant	March 27, 2000
Koga Plant	March 24, 2019
Ome Parts Center	January 11, 2002
Hidaka Delivery Center	January 11, 2002
Azuma Plant of Fukushima Steel Work Co., Ltd.	November 28, 2003
Sagami Plant of Fukushima Steel Work Co., Ltd.	September 15, 2005
Riken Forge Co., Ltd.	March 22, 2002
Sohshin Co., Ltd.	March 14, 2003
Takebe Tekkosho Co., Ltd.	April 17, 2001
Trantechs, Ltd.	March 8, 2002
Meiyu Kiko Co., Ltd.	July 5, 2002
Hino Motors Manufacturing (Thailand) Ltd.	March 1, 2001
Hinopak Motors, Ltd. (Pakistan)	June 17, 2001
PT. Hino Motors Manufacturing Indonesia	April 4, 2005
Shanghai Hino Engine Co., Ltd.	December 28, 2008
Hino Motors Vietnam, Ltd.	February 28, 2011
Hino Motors Canada, Ltd.	December 1, 2011
Arkansas Plant of Hino Motors Manufacturing U.S.A. Inc.	April 13, 2011
West Virginia Plant of Hino Motors Manufacturing U.S.A. Inc.	March 15, 2012
Hino Motors Philippines Corporation	August 8, 2017
Hino Motors Manufacturing (Malaysia) Sdn. Bhd.	January 18, 2019
J. Filter Co., Ltd. (Thailand)	April 29, 2016



Corpora	e	The HINO	Realizing a	Environmental	Hino's Strategies and Initiatives	CSR		E:	SG In	itiatives	
Informati	n Top Message	Credo & Course of Action	Sustainable World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment	Social	Governance	ESG data and others

### **Environmental Education**

In Japan, Hino Motors promotes environment-related educational and awareness activities in an effort to raise the environmental consciousness of employees. In this manner, Hino Motors strives to enhance the overall efficacy of environmental conservation initiatives.

Hino Motors believes that environmental activities extend beyond the domain of the corporate sector. It also recognizes the important role that each employee plays both in the workplace and at home. Therefore, as a part of the Company's employee training program, individual responsibilities and actions in the overall context of environmental issues as well as in global behavior and initiatives are emphasized.

In specific terms, Hino Motors has continued to incorporate environmental education in its training programs for managers and new employees. Looking ahead, the Company will continue its endeavors to implement even broader-based, more systematic environmental education in its efforts to consistently raise environmental awareness in Japan.

#### **Conservation biodiversity**



Environmental education class (2019) The environmental education class was held online in 2020 to curb the spread of COVID-19.

#### • Number of students who received environmental training in FY2020

	Administrative/ Technical positions	Technical positions	Total
Number of students who received training	154	203	357



### **Environment-Related Communication with Stakeholders**

**Conservation biodiversity** 

Hino Motors recognizes the importance of communicating with its stakeholders. Accordingly, it proactively provides information to customers, members of local communities where it operates, and other stakeholders with the aim of being a trusted company.

The event was not held in fiscal 2020 to prevent the spread of COVID-19, but initiatives implemented to date are introduced here. Currently, information is being shared through endeavors such as online events.

#### **◆** Exhibiting environmental technologies and products at public exhibits

At the Automotive Engineering Exposition 2019, held in Yokohama/Nagoya, Japan under the theme of "People and Automotive Technology," Hino exhibited. We also presented Hino's advanced technology development and total support initiatives including our safety and environmental technologies.

The exhibition was a valuable opportunity for Hino engineers to deepen their understanding of Hino Motors through exchanges of information and views with visitors, and to understand their expectations.



Exhibition booth crowded with visitors

#### Presenting environmental initiatives at local events

Hino Motors also presented its wide array of environmental initiatives at an environmental festival held in the city of Hamura, Tokyo and an ecological festival for Industry held in the city of Ota, Gunma. At other environmental events in the communities surrounding its factories, Hino Motors carried out a broad range of public relations activities to present its approach to the environment and its related initiatives to local residents.



The environmental festival held in the city of Hamura

#### ◆ Visiting class held at a neighborhood elementary school

In Pakistan, we visited a neighborhood school and introduced global environmental issues with a class entitled "Beat Plastic Pollution."

We also held an exhibition of solicited works of arts & crafts and provided opportunities to learn about local environmental issues.



Environmental education at neighborhood elementary school

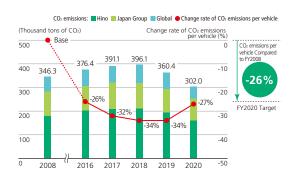


# Various Environmental Data

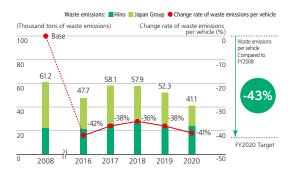
# **Key Performance Data**

In the Hino Environmental Initiatives Plan, Hino Motors sets specific targets for reductions in the environmental impact of its production activities and works to reduce CO<sub>2</sub> emissions, resource use, and water use through many detailed policy measures. The following performance data shows the progress and outcomes of the 2020 Environmental Initiatives Plan, which is the action plan implemented from fiscal 2016 to 2020. The consumption rate per unit worsened because of an increase in waste volume associated with the transformation of valuable resources to waste materials and a decrease in production caused by COVID-19. This meant that targets for waste materials and water were not reached. However, Hino Motors will continue to make improvements outlined in the 2025 Environmental Initiatives Plan.

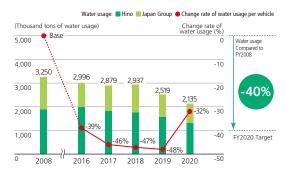
#### CO₂ emissions per vehicle\*¹ by company and region\*⁴ \*6



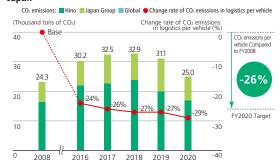
#### Waste emissions\*1 from consolidated companies in Japan\*5



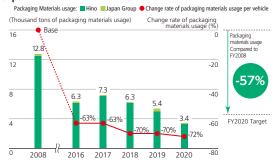
#### Water usage\*1 by consolidated companies in Japan\*5



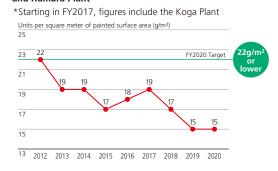
# • CO<sub>2</sub> emissions in logistics\*<sup>2</sup> from consolidated\*<sup>5</sup> companies in Japan\*<sup>5</sup>



#### Packaging Materials usage\*3 by consolidated companies in Japan\*5



#### Volatile organic compound (VOC) emissions from the Hino Plant and Hamura Plant



Note: Last year's figures have been corrected to improve accuracy.

1. Unit: Per vehicle 2. Unit: Per volume transported Since the base year figures were revised, the unit change rate of previous years has been retroactively revised. 3. Unit: Per unit of shipment volume 4. Global: Hino (Four plants: Hino, Hamura, Nitta, and Koga), six domestic affiliated companies and nine overseas affiliated companies. 5. Consolidated companies in Japan (Four plants: Hino, Hamura, Nitta, and Koga), six domestic affiliated companies. 6. Estimates are calculated from reported or derived values and available data. Actual emissions may vary.



Corporate	T M	The HINO	Realizing a E	Environmental Management	Hino's Strategies and Initiatives	CSR Management	Topic	ESG Initiatives			
Information	lop Message	Credo & Course of Action	World		and the Sustainable Development Goals (SDGs)			Environment	Social Governance Social Governance		

### **Environmental Accounting**

Hino Motors tabulates the costs and results of environmental conservation activities based on the Environmental Accounting Guidelines of Japan's Ministry of the Environment. This enables the Company to contribute to environmental conservation through effective environmental investment and ongoing reductions in its environmental impact.

In fiscal 2020, the total cost of environmental conservation was ¥33.4 billion (down 4% from the previous year), and the economic effect was ¥1.1 billion (down 28% from the previous year).

#### Environmental Conservation Costs

Unit: millions of yen

Environmental Conservation Costs	FY2	019	FY2	020	
Item	Invest ments	Costs	Invest ments	Costs	Description of major initiatives
(1) Costs in operational areas	496	714	0	255	
① Pollution prevention costs	93	171	0	0	Expenses for environmental risk countermeasures, drainage water treatment, and other activities
<ul><li>② Global environmental conservation costs</li></ul>	341	186	0	0	Installation of energy-saving equipment
③ Resource recycling costs	62	357	0	255	3R promotional activities, waste disposal, and other activities
(2) Upstream and downstream costs	0	59	0	56	Additional costs for reducing environmental load
(3) Management activity costs	0	393	0	432	Ongoing implementation of environmental management systems, and information disclosure
(4) Research & development costs	0	33,023	2,850	29,837	R&D expenses for reducing environmental load
(5) Social activity costs	0	5	0	0	Costs for environmental improvements, including off-site environmental conservation, tree planting, and beautification projects.
(6) Environmental remediation costs	0	0	0	0	
Total	496	34,194	2,850	30,580	

<sup>\*</sup> For items such as capital expenditures that are difficult to distinguish whether they deal with the environment or have another purpose, only those items that can be clearly understood as dealing with the environment are recorded.

#### • (1) Economic results

Unit: millions of yen

	Details of results	FY2019	FY2020
Profits	Operational income from recycling	1,376	1,086
FIORIS	Others	0	0
	Reduction in energy costs due to energy conservation	117	3
Reduced costs	Reduction in waste treatment costs due to resource conservation and recycling	22	6
	Others	0	0
Total		1,515	1,095

Note: The results of environmental conservation are calculated only for those items that can be definitely identified as having an effect over a single year.

#### • (2) Quantitative results

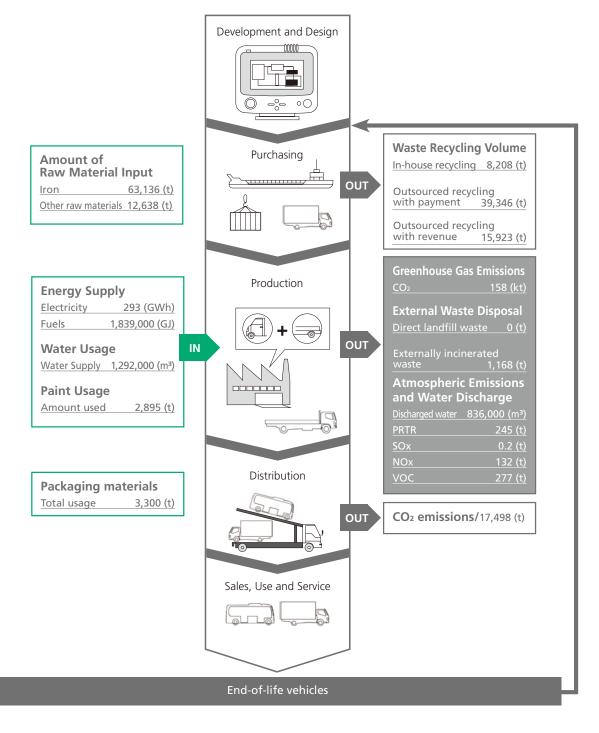
	FY2019	FY2020
CO <sub>2</sub> reduction (tons-CO <sub>2</sub> )	2,104	75
Waste reduction (tons)	490	1,527

Note: The results of environmental conservation are calculated only for those items that can be definitely identified as having an effect over a single year.

	Corporate	T M	The HINO	Realizing a		Hino's Strategies and Initiatives	CSR	<b>-</b>	ESG Initiatives			
Information	Top Message	of Action	World	Management	and the Sustainable Development Goals (SDGs)	Management	Topic	Environment Social	Governance	ESG data and others	ı	

#### **Material Balance**

At each and every stage of the product lifecycle, from development through design to use and disposal, Hino Motors seeks to identify the impact of its business activities on the environment. Hino Motors is making every effort to reduce environmental load while working to clarify the processes where it is particularly evident.



Note: The information provided represents aggregate data for the Company's Hino, Hamura, Koga, and Nitta plants. Estimates are calculated from reported or derived values and available data. Actual emissions may vary.

	Corporate	Ton Massage	The HINO	Realizing a Envi	Environmental	Hino's Strategies and Initiatives	CSR	Tauia	ESG Initiatives				ı
Information	Top Message	of Action	Sustainable World	Management	and the Sustainable Development Goals (SDGs)	Management Topic	Environment	Social	Governance	ESG data and others	ı		

# **Other Activities**

#### **◆** Participation in the Lights Down Campaign

Since 2007, Hino Motors has been participating in the Lights Down Campaign, an activity in Japan in which companies across the country turn off their lights to save energy. Hino Motors main business sites turn off their illuminated signboards and other lights for the campaign. A large number of Group companies also participate in the campaign, including domestic dealers.



### The Hino Green Fund Foundation

The Hino Green Fund was established in 1991 to promote and foster environmental activities in Japan. Each year, the fund provides about 15 organizations with grants. Recognized for its dedication to addressing environmental issues, the Hino Green Fund received Japan's Environment Minister's Award in fiscal 2005. On April 1, 2011, the fund became a public interest incorporated foundation in Japan. Going forward, the Hino Green Fund plans to continue providing steady and reliable assistance to various programs and activities and to conduct events.





HGF Insect collecting event (Above photo is taken before the COVID-19 pandemic)