

Environmental Performance

2020 Environment Initiative Plan

Hino Motors has formulated its 2020 Environment Initiative Plan, comprised of goals and measures to implement over the period covering fiscal 2016 through 2020.

Under the plan, Hino Motors intends to carry out environmental management and measures to help promote low-carbon and recycling-oriented societies as priority tasks over the medium term, based on considerations of social trends and its main policies, including the Hino Credo and its CSR Policy.

As a manufacturer of commercial vehicles which supporting people's lives, Hino Motors hopes to help society develop more sustainably by supplying vehicles that it has designed with the environment in mind over the entire product lifecycle.

Special Feature : Aiming to be a Company that Can Help Society Develop Sustainably ~Hino Motors Establishes its 2020 Environment Initiative Plan~

Designates priority tasks	Field	Item	Specific Action Items/Targets, etc.																
Building Low-carbon Society	Product development	Improve CO ₂ emissions and fuel consumption performance of vehicles	Develop technologies to meet world's top-class fuel efficiency standards <ul style="list-style-type: none"> 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 next round of regulations 																
		Promote the development of vehicles that run on clean energy	Conduct R&D on electric vehicles <ul style="list-style-type: none"> Plug-in hybrid vehicles: Conduct R&D intended for making the technology feasible Fuel cell vehicles: Develop fuel cell vehicles and sell a limited number Electric vehicles: Conduct R&D intended for commercializing electric trucks and buses Conduct research on technologies for enabling the use of alternative fuels <ul style="list-style-type: none"> Develop technologies that enable a switchover to biofuels and other alternative fuels 																
	Production and logistics	Initiatives for reducing CO ₂ emissions in production activities		Carry out initiatives for reducing CO₂emissions on both a total and per-vehicle basis by introduce low-CO₂ production technologies, and reduce CO₂ through daily improvements <ul style="list-style-type: none"> Consider to exploit renewable energy and renewable energy ■ Energy Derived CO₂ <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Region</th> <th style="width: 40%;">Item</th> <th style="width: 40%;">FY 2020 Target</th> </tr> </thead> <tbody> <tr> <td>Global</td> <td></td> <td>26% less than FY 2008</td> </tr> <tr> <td style="padding-left: 20px;">Japan Group</td> <td>Emissions per unit yield</td> <td>24% less than FY 2008</td> </tr> <tr> <td style="padding-left: 40px;">Hino</td> <td></td> <td>30% less than FY 2008</td> </tr> <tr> <td style="padding-left: 40px;"></td> <td>Emissions</td> <td>Fiscal 2020 output target X active mass</td> </tr> </tbody> </table>	Region	Item	FY 2020 Target	Global		26% less than FY 2008	Japan Group	Emissions per unit yield	24% less than FY 2008	Hino		30% less than FY 2008		Emissions	Fiscal 2020 output target X active mass
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Control emissions of other greenhouse gases besides CO₂																			
Make transportation more efficient and reduce CO ₂ emissions in logistics		Promote initiatives to reduce CO₂ emissions in logistics by improving efficiency of transportation. <ul style="list-style-type: none"> Shorten distribution routes between factories and improve shipping efficiency by using tractor-trailers and increasing transport loading rates Use more fuel-efficient vehicles Improve efficiency of vehicle parts shipments <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Region</th> <th style="width: 40%;">Item</th> <th style="width: 40%;">FY 2020 Target</th> </tr> </thead> <tbody> <tr> <td>Japan Group</td> <td>Emission per unit of transport</td> <td>26% less than FY 2008</td> </tr> <tr> <td>International</td> <td colspan="2">Set target and promote reduction measures according to the highest standards in each country</td> </tr> </tbody> </table>	Region	Item	FY 2020 Target	Japan Group	Emission per unit of transport	26% less than FY 2008	International	Set target and promote reduction measures according to the highest standards in each country									
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Sales and after-sales service	Initiatives for reducing CO ₂ emissions in sales activities		<ul style="list-style-type: none"> Create and execute plan to reduce energy consumption per unit by at least 1% per year at Japanese sales offices; Assist customers in reducing CO₂ emissions during driving through eco-driving seminars and other initiatives 																

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Creation of Closed Loop Economy	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															
		Develop new vehicles with a higher ratio of recyclable components	Initiatives to create assembled structures that are easy to disassemble															
	Production and logistics	Reduce waste from production and logistics, and use resources effectively	<p>Adopt waste reduction technologies and promote waste reduction in regular improvement activities</p> <ul style="list-style-type: none"> Facilitate more effective usage of resources by improving yield rates and managing the sources of waste Promote the usage of the Hino Motors Group's resource <p>■ Waste</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Object</th> <th>Item</th> <th>FY 2020 Target</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Japan Group</td> <td rowspan="2">waste</td> <td>Generated per unit yield</td> <td>43% less than FY 2008</td> </tr> <tr> <td>Final disposal</td> <td>Zero *</td> </tr> <tr> <td>International</td> <td colspan="3">Integrate waste reduction performance in management</td> </tr> </tbody> </table> <p>* Definition of Zero: Landfill amount including ash after incineration is not more than 0.5%, compared with total waste including recyclable.</p>	Region	Object	Item	FY 2020 Target	Japan Group	waste	Generated per unit yield	43% less than FY 2008	Final disposal	Zero *	International	Integrate waste reduction performance in management			
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Initiatives for reducing water usage in production activities	<p>Promote activities for reducing water consumption in consideration of water supply conditions in each country and region where the Group operates</p> <ul style="list-style-type: none"> Conserve water through actively introduce water-saving technologies and continual improvement <p>■ Water usage</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2020 Target</th> </tr> </thead> <tbody> <tr> <td>Japan Group</td> <td>Water use per unit yield</td> <td>40% less than FY 2008</td> </tr> <tr> <td>International</td> <td colspan="2">Integrate water usage reduction performance in management</td> </tr> </tbody> </table>	Region	Item	FY 2020 Target	Japan Group	Water use per unit yield	40% less than FY 2008	International	Integrate water usage reduction performance in management									
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Initiatives for reducing usage of packaging materials and use resources effectively	<p>Reduce usage of packing and shipping materials by making them returnable and more lightweight</p> <ul style="list-style-type: none"> Enable use of returnable racks in more countries Improve methods of packing vehicle parts <p>■ Packaging Materials</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2020 Target</th> </tr> </thead> <tbody> <tr> <td>Japan Group</td> <td>Use per unit of shipment volume</td> <td>57% less than FY 2008</td> </tr> <tr> <td>International</td> <td colspan="2">Calculate the amount of packaging materials used and expand activities to reduce them</td> </tr> </tbody> </table>	Region	Item	FY 2020 Target	Japan Group	Use per unit of shipment volume	57% less than FY 2008	International	Calculate the amount of packaging materials used and expand activities to reduce them									
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Environmental Conservation & Creation of Society Coexisting in Harmony with Nature	Product development	Reduce gas emissions to help improve urban air quality in each country and region	<p>Introduce vehicles with lower gas emissions to help improve urban air quality in each country and region</p> <ul style="list-style-type: none"> Japan: Release vehicles to the market that comply with Japan's 2016 exhaust emission regulations Research and develop new technologies to comply with new exhaust regulations starting in 2016 United States: Bring vehicles to market that comply with US13, and Develop vehicles that comply with U.S. exhaust emission standards effective from 2016 Europe and developed countries: Develop and release vehicles to the market that comply with EURO 6 exhaust emission standardsIn general: Introduce low-emission vehicles (EURO4 or 5 level) 													
		Further reduce the use of environmentally harmful materials	<p>Collect and manage information on increasing regulations in each country where the Group operates, and take the lead in switching to alternative materials</p>													
	Production and logistics	Reduce substances that impact the environment in production activities (VOC)	<p>Promote reduction of VOCs through constant improvement</p> <ul style="list-style-type: none"> Reduce the use of painting materials and thinners in vehicle painting work <p>■ Body Painting</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2020 Target</th> </tr> </thead> <tbody> <tr> <td>Hino</td> <td>VOC Emissions per surface area painted</td> <td>Less than 22 grams of VOCs per square meter of painted surface area</td> </tr> <tr> <td>International</td> <td colspan="2">Broaden initiatives for reducing emissions of VOCs</td> </tr> </tbody> </table> <p>■ Other Paintings</p> <table border="1"> <tbody> <tr> <td>Hino</td> <td>Set annual reduction targets on a per-vehicle basis every year</td> </tr> <tr> <td>Japan/Intl.</td> <td>Integrate VOCs reduction performance in management</td> </tr> </tbody> </table>	Region	Item	FY 2020 Target	Hino	VOC Emissions per surface area painted	Less than 22 grams of VOCs per square meter of painted surface area	International	Broaden initiatives for reducing emissions of VOCs		Hino	Set annual reduction targets on a per-vehicle basis every year	Japan/Intl.	Integrate VOCs reduction performance in management
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Social contribution	Implement biodiversity preservation activities locally at factories in every region where the Group operates	<p>Promote initiatives based on biodiversity guidelines</p> <ul style="list-style-type: none"> 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) Undertake environmental conservation initiatives together with local residents and children 														

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Environmental Management	Management	Strengthen and promote group environmental management	Japan/Intel.: 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 risk
		Promote environmental activities in collaboration with business partners (Our suppliers)	Suppliers: Compliance with laws by suppliers, and enhance management of substances that impact the environment contained in parts, raw materials, secondary materials, production equipment, etc. Request for environmental performance activities
		Promote environmental activities in collaboration with business partners (Dealers and distributors)	<ul style="list-style-type: none"> • 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
		Improve global human resources development and training programs	Systematically implement environmental education and awareness training programs for every employee
		Actively disclose environmental information and enhance communication	<ul style="list-style-type: none"> • Enhance provision of information on product environmental technologies in each country and region (e.g. exhibiting at expos) • Continually publish CSR reports and other documents in each country and region, and publish at more sites • Enhance environmental communication in each country and region