


Environmental Performance

2015 Environmental Initiatives Plan (Fiscal 2014 Targets and Achievements)

■ Environment Initiative Plan

Frame	Field	Item	Specific Action Items/Targets, etc.	Fiscal 2014 Achievements													
Building a Low-carbon Society	Development & Design	Develop and promote next-generation vehicle based on energy diversity	<p>Electrical Energy</p> <ul style="list-style-type: none"> Hybrid vehicle (HV): Develop and market new HV Inductive Power Transfer System (IPS): Develop IPS bus for commercialization Fuel cell (FC): Research and develop fuel-cell automobile <p>Alternative Fuels</p> <ul style="list-style-type: none"> New fuels: Research and develop vehicle that will run on GTL(Gas to Liquids) fuel Biofuels: Research and develop vehicle that will run on biofuel 	<p>Electrical Eneegy</p> <ul style="list-style-type: none"> Hino Motors' Poncho small electric buses continued running on regular routes in Sumida Ward and the city of Hamura in Tokyo, and in the city of Komatsu in Ishikawa Prefecture Developed the Hino Melpha plug-in hybrid bus with external power supply capabilities, enabling it to provide electricity to evacuation centers and other facilities during times of disaster <p>Alternative Fuels</p> <ul style="list-style-type: none"> Provided a Hino Blue Ribbon bus to the city of Kyoto for a bio-diesel fuel project and tested the bus's performance 													
		Develop top-class fuel efficiency performance in each country/region, and meet standards in each country	<ul style="list-style-type: none"> Develop technologies to meet world's top-class fuel efficiency standards <ul style="list-style-type: none"> Japan: Achieve FY 2015 fuel-efficiency standard United States: Meet 2014 new standards for fuel efficiency and greenhouse gases in heavy vehicles Europe: Develop technologies to improve fuel efficiency to meet next round of regulations China: Consistently meet new fuel-efficiency standards Other regions: Promote technologies to meet fuel-efficiency regulations 	<ul style="list-style-type: none"> Improved fuel efficiency of heavy-duty trucks to comply with Japan's fiscal 2015 fuel-efficiency standards requiring an additional 5% improvement (some models did not comply) Achieved lower fuel consumption for the Hino Profia electric refrigeration truck by using the hybrid vehicle system for the refrigeration system All long-body models of Hino Selega trucks complied with Japan's fiscal 2015 fuel-efficiency standards requiring an additional 10% improvement 													
	Production & logistics	Thoroughly conserve energy and reduce greenhouse gas emissions in production activities	<ul style="list-style-type: none"> Act throughout the company to build low-carbon production system Actively Introduce low-CO₂ production technologies, and reduce CO₂ through daily improvements Consider to exploit renewable energy <p>■ Energy Derived CO₂</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2015 Target</th> </tr> </thead> <tbody> <tr> <td>Global</td> <td></td> <td>20% less than FY 2008</td> </tr> <tr> <td rowspan="2">Japan Group</td> <td rowspan="2">Emissions per unit yield</td> <td>28% less than FY 2008</td> </tr> <tr> <td>24% less than FY 2008</td> </tr> <tr> <td>Hino</td> <td>Emissions</td> <td>Fiscal 2015 output target X active mass</td> </tr> </tbody> </table>	Region	Item	FY 2015 Target	Global		20% less than FY 2008	Japan Group	Emissions per unit yield	28% less than FY 2008	24% less than FY 2008	Hino	Emissions	Fiscal 2015 output target X active mass	<ul style="list-style-type: none"> Global Operations <ul style="list-style-type: none"> Reduced emissions per unit by 22% compared to FY2008 Consolidated Companies in Japan <ul style="list-style-type: none"> Reduced emissions per unit by 25% compared to FY2008 Hino Motors, Ltd <ul style="list-style-type: none"> Reduced emissions per unit by 23% compared to FY2008 Emissions of fiscal 2014 were 204 thousand tons
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Make transportation more efficient and reduce CO ₂ emissions in logistics	<ul style="list-style-type: none"> Promote initiatives to reduce CO₂ emissions in logistics by improving efficiency of transportation. <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2015 Target</th> </tr> </thead> <tbody> <tr> <td>Japan Group</td> <td>Emission per unit of transport*</td> <td>15% 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> <p>*Definition of "unit of transport": multiply freight(in ton) by distance(km)</p>	Region	Item	FY 2015 Target	Japan Group	Emission per unit of transport*	15% less than FY 2008	International	Set target and promote reduction measures according to the highest standards in each country		<ul style="list-style-type: none"> Consolidated Companies in Japan <ul style="list-style-type: none"> Reduced emissions per unit of transport volume by 19% compared to FY2008 Overseas Operations <ul style="list-style-type: none"> Promoting reduction activities in each country 						
Region	Item	FY 2015 Target															
Japan Group	Emission per unit of transport*	15% less than FY 2008															
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Sales	Thoroughly conserve energy and reduce CO ₂ emissions in sales activities	<ul style="list-style-type: none"> Continual improvement at Japanese and international sales offices; thoroughly conserve energy through lateral deployment of case studies ⇒ Create and execute plan to reduce energy consumption per unit by at least 1% per year 	<ul style="list-style-type: none"> Achieved reductions by installing low-energy-consumption lighting and placing restrictions on air conditioning usage ⇒ Decreased total energy consumption per unit by 5.4% compared to the previous fiscal year 														
	Active communication and	<ul style="list-style-type: none"> Promote initiatives to build low-carbon society through Japan Business Federation, Japan Automobile Manufacturers Association, etc. 	<ul style="list-style-type: none"> Worked with the Japan Automobile Manufacturers Association and participated in its committees, 														

 Collaboration with society	contribution to climate change mitigation policies	<ul style="list-style-type: none"> • Participate in environmental policy debate and framework creation • Integrated initiatives in partnership with JAMA, etc. 	including a safe environmental technologies committee and an environment committee
	Integrated CO ₂ reduction initiatives in road traffic sector (transportation division)	<ul style="list-style-type: none"> • Contribute to initiatives to improve transportation using IT and ITS technologies • Promote initiatives to raise awareness of environmentally friendly driving <ul style="list-style-type: none"> • Provide workshops on fuel-efficient driving at Customer Technical Center at Hamura plant, Japan. • Provide workshops at sales companies in Japan and internationally • Expand issuance of environmentally friendly driving certifications to customers • Develop vehicles that perform logistics efficiently, in accordance with customer usage 	<ul style="list-style-type: none"> • Held eco-driving seminars for customers Participants in FY 2014 numbered 2,204 in Japan and 15,673 outside Japan • Proceeded to develop vehicles that realize more efficient transport

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Creation of Closed Loop Economy	Development & design	Further promote recycling design with awareness of effective use of resources	<ul style="list-style-type: none"> Initiatives to create assembled structures that are easy to disassemble Use more parts made using recycled materials 	<ul style="list-style-type: none"> Proactively adopted recycled materials and easily recyclable materials Incorporated considerations for recycling and disassembly in the design of vehicle structural components and created manuals explaining disassembly 																																
	Production & logistics	Reduce discharges from production and logistics, and use resources effectively	<p>Amount of Discharges & Final Disposal</p> <ul style="list-style-type: none"> Reduce external emissions by raising in-house recycling rates for cutting scraps and discarded soil Reduce final disposal volume to zero at consolidated subsidiaries in Japan <table border="1"> <thead> <tr> <th>Region</th> <th>Object</th> <th>Item</th> <th>FY 2015 Target</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Japan Group</td> <td rowspan="2">Discharges *1</td> <td>Generated per unit yield</td> <td>18% less than FY 2008</td> </tr> <tr> <td>Final disposal</td> <td>Zero *2</td> </tr> <tr> <td>International</td> <td>Waste</td> <td colspan="2">Promote reduction measures according to the highest standards in each country</td> </tr> </tbody> </table> <p>*1: Definition: Discharges to outside company including salable waste. *2: Definition of Zero: Landfill amount including ash after incineration is not more than 0.5%, compared with total waste including recyclable.</p> <p>Packaging Materials</p> <ul style="list-style-type: none"> Enable use of returnable racks in more countries Expand use of returnable racks for spare parts <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2015 Target</th> </tr> </thead> <tbody> <tr> <td>Japan Group</td> <td>Use per unit of shipment volume</td> <td>48% 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> <p>Water Usage</p> <ul style="list-style-type: none"> Actively introduce water-saving technologies Conserve water through continual improvement <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2015 Target</th> </tr> </thead> <tbody> <tr> <td>Japan Group</td> <td>Water use per unit yield</td> <td>22% less than FY 2008</td> </tr> <tr> <td>International</td> <td colspan="2">Promote reductions and manage objectives in each country</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Reduce usage of paints and paint thinner in painting processes, etc. promote reduction of VOCs through constant improvement 	Region	Object	Item	FY 2015 Target	Japan Group	Discharges *1	Generated per unit yield	18% less than FY 2008	Final disposal	Zero *2	International	Waste	Promote reduction measures according to the highest standards in each country		Region	Item	FY 2015 Target	Japan Group	Use per unit of shipment volume	48% less than FY 2008	International	Calculate the amount of packaging materials used and expand activities to reduce them		Region	Item	FY 2015 Target	Japan Group	Water use per unit yield	22% less than FY 2008	International	Promote reductions and manage objectives in each country		<p>Waste Generated and Final Disposal</p> <ul style="list-style-type: none"> Consolidated Companies in Japan <ul style="list-style-type: none"> Reduced amount of waste generated per unit by 27% compared to FY2008 Achieved a final disposal rate of 0.15% Overseas operations <ul style="list-style-type: none"> Set targets for waste matter in each country and proceeded to make reductions <p>Packaging Materials</p> <ul style="list-style-type: none"> Consolidated Companies in Japan <ul style="list-style-type: none"> Reduced amount of packaging materials used per unit of shipment volume by 53% compared to FY2008 Overseas operations <ul style="list-style-type: none"> Promoting reduction activities in each country <p>Water Usage</p> <ul style="list-style-type: none"> Consolidated Companies in Japan <ul style="list-style-type: none"> Reduced water usage per unit by 35% compared to FY2008 Overseas operations <ul style="list-style-type: none"> Set targets in each country and proceeded to make reductions
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Sales & recycling	<p>Enhance global promotion of effective use of resources</p> <p>Promote global compliance with automobile recycling laws</p>	<ul style="list-style-type: none"> Develop tools and offer information globally on efficient disassembly methods Promote initiatives within group to expand use of used parts Japan: Maintain top recycling level, and respond appropriately to revisions to law China & emerging economies: Respond appropriately to regulations of each country 	<ul style="list-style-type: none"> Japan: Achieved a 97% recycling rate for automotive shredder residue (ASR) in fiscal 2014 Overseas: Promoted compliance with end-of-life vehicle (ELV) regulations 																																	

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Environmental Conservation & Creation of Society Coexisting in Harmony with Nature	Development & design	Reduce gas emissions to help improve urban air quality in each country and region	<ul style="list-style-type: none"> Introduce vehicles with lower gas emissions to help improve urban air quality in each country and region <ul style="list-style-type: none"> Japan: Continue to bring vehicles to market that comply with Post New Long-term Regulations Research and develop new technologies to comply with new exhaust regulations starting in 2016 United States: Bring vehicles to market that comply with US10 Europe: Research, development, and compliance with new EURO6 regulations China: Promote introduction of EURO5 level In general: Introduce low-emission vehicles (EURO3 or 4 level) 	<ul style="list-style-type: none"> Researched technologies for reducing exhaust emissions and developed component technologies for future engines in preparation for the next period of stricter exhaust regulations in Japan, effective from 2016 Developed a fuel cell bus equipped with a new fuel system in collaboration with Toyota Motor Corporation and provided it to the city of Toyota for regular bus service 											
		Expand and enhance management of chemicals contained in products	<ul style="list-style-type: none"> Promote global management of chemicals in products <ul style="list-style-type: none"> Thoroughly manage multiple chemical substances contained in products Develop technologies to substitute substances with lower environmental impact, and promote substitution 	<ul style="list-style-type: none"> Enhanced information management of chemical substances contained in vehicles and complied with substance regulations at an early stage 											
	Production	Reduce substances that impact the environment in production activities	<ul style="list-style-type: none"> promote reduction of VOCs through constant improvement <p>Body Painting</p> <table border="1"> <thead> <tr> <th>Region</th> <th>Item</th> <th>FY 2015 Target</th> </tr> </thead> <tbody> <tr> <td>Hino</td> <td>VOC Emissions per surface area painted</td> <td>Less than FY 2012</td> </tr> <tr> <td>International</td> <td colspan="2">Develop initiatives to reduce the amount of VOC output according to the highest standards in each country</td> </tr> </tbody> </table> <p>Other Paintings</p> <table border="1"> <tbody> <tr> <td>Japan/Intl.</td> <td>Activities to reduce VOC emissions</td> </tr> </tbody> </table>	Region	Item	FY 2015 Target	Hino	VOC Emissions per surface area painted	Less than FY 2012	International	Develop initiatives to reduce the amount of VOC output according to the highest standards in each country		Japan/Intl.	Activities to reduce VOC emissions	<p>Body painting</p> <ul style="list-style-type: none"> Hino Motors, Inc. <ul style="list-style-type: none"> Achieved 19 grams of VOCs per square meter of painted surface area Overseas Operations <ul style="list-style-type: none"> Currently compiling results <p>Other Painting-related Initiatives</p> <ul style="list-style-type: none"> Carrying out activities to reduce emissions of VOCs
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Collaboration with society	<p>Commitment to biodiversity</p> <p>Promote contributions to society that help create society coexisting in harmony with nature</p>	<ul style="list-style-type: none"> Give consideration to local ecosystems in each country and region Raise employees' awareness of protecting ecosystems, and encourage volunteering (Promote activities based on Japan Business Federation Declaration of Biodiversity) 	<ul style="list-style-type: none"> Carried out initiatives in consideration of ecosystems surrounding workplaces incountries worldwide <ul style="list-style-type: none"> Weeded areas surrounding the Hino Plant in the city of Ome, Japan Weeded fields around the Koga Plant using goats Helped protect coral reefs in Indonesia in cooperation with the WWF Held a clean-up of river banks in Ohio, U.S. 												

Frame	Field	Item	Specific Action Items/Targets, etc.	Fiscal 2014 Achievements
Environmental Management	Management	Strengthen and promote group environmental management	<ul style="list-style-type: none"> Activities to ensure top level of environmental performance in each country and region Comply with environmental laws in each country and region, and enhance activities to prevent environmental risk Introduce area management organizations at production sites outside Japan, and promote rational initiatives Improve level of environmental management through mutual audits by each company at production sites in Japan 	<ul style="list-style-type: none"> Issued periodic reports on environmental performance and improvement initiatives at group companies in and outside Japan Made progress in eco-factory initiatives at group companies in and outside Japan Set requirements and created diagnostic tools for factories outside Japan to commence assessments of environmental management systems newly put in place from fiscal 2015 Held interactive seminars and workshops at factories in Japan to provide opportunities for employees to improve their capabilities by teaching and learning from each other
		Promote environmental activities in collaboration with business partners	<ul style="list-style-type: none"> 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 Sales in Japan: Promote environmental activities by sales companies via each Environmental Management System. Sales outside Japan: Act continually to raise awareness of the environment 	<ul style="list-style-type: none"> Suppliers <ul style="list-style-type: none"> Began improving and employing in-house chemical management systems to account for stricter global chemical substance regulations Consolidated subsidiaries in Japan <ul style="list-style-type: none"> Implemented environmental activities at 217 dealers across Japan to facilitate related improvements and upgrades Certified two more dealers as Eco-Management Dealers, bringing the total to 214 nationwide Overseas Sales Operations <ul style="list-style-type: none"> Shared environment-related data monthly with overseas sales offices Held events to promote environmental awareness during World EnvironmentMonth in June
		Promote global CO ₂ management	<ul style="list-style-type: none"> Plan and promote CO₂ management in all business activities 	Carried out activities according to reduction scenarios at all business sites in Japan and overseas, and made improvements on a total unit output basis
		Promote environmental management ECO-VAS in product development	<ul style="list-style-type: none"> Ensure management of environmental targets during development using vehicle environmental assessment system (ECO-VAS) 	<ul style="list-style-type: none"> Promoted life-cycle assessments according to vehicle types
		Promote "sustainable-plant" activities	<ul style="list-style-type: none"> Plant designs in harmony with nature. ⇒ Actively introduce low CO₂ production technologies, and promote continual improvement, exploit renewable energy, and forest creation in and around plants. 	<ul style="list-style-type: none"> Increased bus models subject to life cycle assessment
		Enhance and promote environmental education	<ul style="list-style-type: none"> Systematic environmental education that raises employees' awareness of the environment Continually survey employees' environmental awareness, and raise awareness in accordance with results Roll out group activities for Environment Month in partnership with Toyota Group 	<ul style="list-style-type: none"> Implemented online environmental education, carried out graded training programs, and provided education and tests on ISO internal environmental audits Designed graded training courses Conducted an environmental awareness survey Distribution of president message to employee and affiliated companies. Held environmental exhibitions and presented various awards Implemented an in-house eco-point system and presented related awards
			<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 	<ul style="list-style-type: none"> Exhibited electric vehicles, plug-in hybrid vehicles, and environmental technologies at the Automotive Engineering Exposition held in Yokohama and

		<p>Actively disclose environmental information and enhance communication</p>	<p>documents in each country and region, and publish at more sites</p> <ul style="list-style-type: none"> • Enhance environmental communication in each country and region 	<p>Nagoya</p> <ul style="list-style-type: none"> • Received a technology development award from the Society of Automotive Engineers of Japan for a carbamide-free NOx and PM post-processing system designed for small- and mid-sized diesel engine vehicles • Four subsidiaries worldwide issued CSR reports • Carried out interactive events with community residents at subsidiaries around the world
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