

Voluntary Plan

Overall Achievements of the Third Voluntary Plan for the Environment

FHI has been conducting company-wide environmental conservation activities under FHI's Third Environmental Conservation Program (fiscal 2002 through fiscal 2006: the Third Voluntary Plan for the Environment) established in 2002. Here is our report on overall achievements for the past five years. Although we were not able to reach all our targets, we will continue working toward our goals by setting new targets under the Fourth Voluntary Plan for the Environment, which comes into effect in fiscal 2007.

[The Third Voluntary Plan for the Environment] FHI Environmental Conservation Program (fiscal 2002 through fiscal 2006)

1. Green Products

○:Achieved, ×:Not Achieved, -:N/A

Items	Goal(s) under the Third Voluntary Plan for the Environment (fiscal 2002 thru fiscal 2006)	Results in fiscal 2006	Evaluation
Improving fuel economy	[Automobiles] a. Continue to improve fuel economy for every full model change and annual model change. b. Achieve fiscal 2010 fuel economy standards for all weight ranks by fiscal 2006.	- Targets could not be achieved in two out of the five ranks of passenger cars with gasoline-powered engines. However, the achievement rates for these two classes were 95% and 99%, for the 1250 kg and 1500 kg classes, respectively. The standards were considered to have been met when the credit system was applied. Targets are projected to be achieved for all classes in fiscal 2007. - For gas-powered mini-sized trucks, targets for all applicable classes were met in fiscal 2001, and the targets for all truck types have been consistently met since fiscal 2002.	×
	[General-purpose engines] a. Aim to improve the average fuel economy of general-purpose engines by 15% (compared with the 1995 level) by 2005.	- Achieved a 15% improvement (in fiscal 2005).	○
Cleaner exhaust emissions	[Automobiles] a. Produce excellent low emission vehicles (E-LEV) or good low emission vehicles (G-LEV) for all models, except for a few, by autumn 2002.	- Except for those few vehicle types, all models have become E-LEV or G-LEV.	○
	a. The goal is to have the exhaust emissions of 80% of the cars sold be either 50% or 75% reduced beyond 2005 standards (out of this 80% figure, half should be vehicles with emissions reduced 75% beyond 2005 standards) by fiscal 2006.	- The target was achieved, in that starting in June 2006 and thereafter, the average ratio of vehicles with emissions reduced by 75% (compared to 2005 standards) was 50% per month. - The 80% of vehicles target was not achieved, in that the total ratio of vehicles with emissions reduced 50% and 75% (compared to fiscal 2005 standards) averaged 74% per month. This target is projected to be achieved in fiscal 2007.	×
	[General-purpose engines] a. Aim to reduce the average emissions of HC and NOx from general-purpose engines by 30% (compared with the 1995 levels) by 2005.	- Emissions were reduced by 56% (in fiscal 2005).	○
Developing products using clean energy	[Automobiles] a. Hybrid vehicles: Continue development for market launch, and aim at limited introduction to the market in fiscal 2007.	-The plan for market release was discontinued due to changes in product strategy. Development of hybrid systems and so forth proceeded through use of alliances.	-
	a. Natural gas vehicles: Continue market expansion of NGVs based on the new Legacy. b. Fuel cell vehicles: Continue developing towards the next generation of vehicles.	-The Legacy B4 2.0CNG, a natural gas vehicle, is now available on the market. -We are continuing to develop next generation cells for hybrid and fuel cell vehicles.	○
	[General-purpose engines] a. Introduced general-purpose engines compatible with CNG and LPG fuel during fiscal 2002.	-Although the products were developed, their market release was postponed.	×
Improving recyclability	a. Improve recyclable design for new models, and contribute to a recycling rate of 95% in 2015. - Improve the disassembly process for the benefit of marketing for re-use and recycling. - Use easy-to-recycle plastic materials more extensively.	-In fiscal 2006, the recycling ratio for shredder residue was 75% and for air bags, 94.2%, satisfying the relevant legal standards. -We are currently working to improve the dismantlability of wiring harnesses and so forth. -Olefin resin, which is extremely recyclable, is now being used for most plastic parts in new models. The same material will continue to be used in fiscal 2007 and thereafter.	○
Reducing substances with environmental impact	[Automobiles] a. Promote development of technologies which replace substances with environmental impact, aiming at faster application to developing vehicles. - Further reduce the amount of lead to 1/10 or less compared with 1996 levels from January 2006. - Stop using mercury from January 2005 except in the following parts: Liquid crystal displays, combination lamps, discharge head lamps, and room fluorescent lighting. - Stop using cadmium from January 2007. - Stop using hexavalent chromium from January 2008.	-Lead: The amount of used lead was reduced to less than 1/10 compared to fiscal 1996. -Mercury: The use of mercury has been prohibited, except in those four parts. -Cadmium: The use of cadmium has been prohibited. -Hexavalent chromium: The use of hexavalent chromium was prohibited in April 2007 (achieved earlier than expected).	○
	[General-purpose engines] a. Promote reducing the amounts of substances with environmental impact, such as lead and hexavalent chromium, used for general-purpose engines.	-Lead is no longer used in coatings. Hexavalent chromium is being replaced by trivalent chromium.	○
Reducing exterior noise	a. Promote development of technology to reduce noise that is compatible with both fuel economy improvement and exhaust emissions reduction	-Noise was reduced by realizing two goals; improving fuel economy and switching emissions reduction devices.	○
Curbing global warming regarding air conditioning refrigerants	a. Promote further reduction in the amount of refrigerant (HFC134a) per vehicle.	-The volume of HFCs used in the new Legacy, R1, R2, and Stella has been reduced by 11% compared to conventional vehicles. (450g→400g)	○
Research on traffic environments	a. Work further on Intelligent Transport Systems (ITS) that realize a safe and comfortable motorized society.	-Conducted trial tests on a remote information control system for electric vehicles. -Provided a system that uses probe technology to the test program of the Safe Driving Support Project.	○
Developing environment-related products and businesses	a. Promote environment-related businesses, such as wind turbine systems and environmental equipment and devices.	-Completed the commercial production design for a 2,000kW class large-scale wind turbine system, and commenced production of pre-commercial production turbines.	○

2. Clean Plants

Items	Goal(s) under the Third Voluntary Plan for the Environment (fiscal 2002 thru fiscal 2006)	Results in fiscal 2006	Evaluation
Curbing global warming	a. Aim to reduce energy consumption per production cost by 28% compared to the fiscal 1990 level by fiscal 2006. b. Aim to reduce CO ₂ emissions by 6% from manufacturing plants compared to the fiscal 1990 level by fiscal 2006.	- Reduced energy consumption per production cost by 35% compared to fiscal 1990 levels. - Cut CO ₂ emissions by 17% compared to fiscal 1990 levels.	○
Control and reduction of substances with environmental impact at manufacturing plants	a. Establish stricter standards than the current voluntary standards for newly established and remodeled environmental facilities in order to reduce the environmental burden on the air and water.	- Some of our renovated facilities are now operating under severer control targets than those in the current voluntary standards.	○
	a. Reduce emissions of PRTR chemical substances into the environment.	- Reduced emissions by 41% compared to fiscal 2001 levels.	
Reducing wastes generated at manufacturing plants	a. Reduce Volatile Organic Compound (VOC) in vehicle production lines to the level of 45 g/m ² or less on average by the end of fiscal 2006	- Reduced VOC emissions (per surface area) in coating processes to 43.8 g/m ² , 20% less than fiscal 2001 levels.	○
	a. Aim at further advances in zero emissions and zero levels of waste landfilled both directly and indirectly. b. Promote recycling of waste materials and using them as parts of products, as well as curbing their generation.	- Achieved "zero waste" that was directly or indirectly bound for landfills (including ash after thermal recycling). SIA, a vehicle manufacturing site in North America, also reached zero tons of waste bound directly for landfills in May 2004. - Reduced waste by 24% compared to fiscal 2001 levels.	
Saving water resources	a. Reduce the amount of water used in the manufacturing plants.	- Cut water consumption by 33% compared to fiscal 2001 levels.	○
Green procurement activities	a. Request a research report from suppliers on the contents of substances with environmental impact, and establishment of Environmental Management System (EMS). The following are the target dates for establishing the EMS:		○
	- Automotive Business Unit: 95% or more of the suppliers, including overseas ones, should have established a system by March 2005.	- 100% (316 out of 316) of their suppliers have established an EMS.	
	- Industrial Products Company: by the end of March 2004.	- 100% (98 out of 98) of their suppliers are now in the process of establishing an EMS.	
	- Promote green procurement activities in other departments, including the Aerospace Company.	- 78% (47 out of 60) of the suppliers of the Aerospace Company and 95% (38 out of 40) of the Eco Technology Company's suppliers have established an EMS.	
	a. Develop green procurement activities with overseas suppliers as well (Automotive Business Unit). - Research started in fiscal 2002 on the status of introducing the EMS and the contents of substances with environmental impact	- 100% (12 out of 12) of overseas suppliers have established an EMS.	

3. Green Logistics

Items	Goal(s) under the Third Voluntary Plan for the Environment (fiscal 2002 thru fiscal 2006)	Results in fiscal 2006	Evaluation
Reducing the environmental burden caused by logistics	a. Streamline transportation and reduce packaging materials.	- Increased the number of vehicles carried via joint transportation by 2.4 times compared to fiscal 2001. - Began using returnable (reusable) packaging materials and reduced the number of trips where containers are empty.	○

4. Green Dealers

Items	Goal(s) under the Third Voluntary Plan for the Environment (fiscal 2002 thru fiscal 2006)	Results in fiscal 2006	Evaluation
Promoting environmental conservation activities at dealers	a. Support the environmental conservation activities by dealers. b. Promote recycling and proper disposal during the distribution and disposal stages. - Collect and destroy specific chlorofluorocarbon (CFC 12), collect CFC 12's substitute (HFC 134a), collect and dispose of air bags, and collect warning flares. c. Continue to collect used bumpers (ongoing). d. Work to comply with the End-of-Life Vehicles Recycling Law (ELVs Recycling Law).	- Confirmed the current status of all dealer outlets through the "Inspections of Environmental Compliance" and carried out the necessary improvements. - Vehicles were recycled in fiscal 2006, to comply with the ELVs Recycling Law. - Achieved a 75% recycling rate of shredder residue. - Achieved a 94.2% recycling rate of air bags and so forth. - Properly disposed of CFCs after recovering 136,059 vehicles. - Warning flares at dealers are continuing to be recovered. - 44,200 used bumpers were recovered.	○

5. Improving Environmental Management

Items	Goal(s) under the Third Voluntary Plan for the Environment (fiscal 2002 thru fiscal 2006)	Results in fiscal 2006	Evaluation
Implementing actions contributing to society	a. Continue to participate in environmental events, communicate with local residents at plants, and welcome visitors to plant tours. b. Continue to participate in cleaning and tree-planting activities in local communities in the vicinity of our plants.	- We welcomed approximately 90,000 visitors on plant tours, and continued to hold Eco Classes by visiting local elementary schools (28 schools in the Gunma area and five schools in the Utsunomiya area); we also continued to conduct cleaning activities in local communities near plants.	○
Disclosing environment-related information	a. Continue to publish environmental reports and release environmental information through publicity channels from time to time. b. Improve and upgrade the contents of environmental report (e.g., compliance with guidelines, and reports including group businesses).	- The 2006 Environmental & Social Report was published in August. - We continued to improve the contents of the Report and released the Supplementary Volume for Data related to the 2006 Environmental & Social Report on the website.	○
Implementing environmental education and educational campaigns	a. Incorporate environmental education into the company education system and put it into practice. Implement educational campaigns through company newsletters and various media. b. Continue to implement lectures and presentations of operation improvement case studies (ongoing).	- Implemented environmental education organized for each level of employee and worksite. - Promoted environmental education activities through use of company newsletters. - Continued to conduct presentations of operation improvement case studies and so forth.	○
Establishing Environmental Management Systems	a. Establish an EMS at any business sites that have not yet established one, and continue improving the EMS at all business sites with ISO 14001 certification. b. Implement internal environmental audits and environmental facility risk assessments. c. Strengthen our relationship with affiliated companies and establish a consolidated EMS.	- Continued to make improvements at all business sites by acquiring or maintaining their ISO 14001 certification. - Conducted an internal audit at all business sites and continued to make improvements. - Held regular meetings of the Domestic Affiliated Company Subcommittee on Environment twice a year and continued to make improvements in environmental activities at affiliated manufacturing companies in Japan. - Two U.S. manufacturing companies (SIA and RMI) and the U.S. sales company (SOA) acquired the integrated ISO14001 certification. Two additional U.S. companies also acquired certification.	○

Voluntary Plan

The Fourth Voluntary Plan for the Environment

We created the Fourth Voluntary Plan for the Environment for fiscal 2007 to 2011.

In this plan, in addition to setting higher environmental conservation goals, we set targets to make contributions to society through our products by offering our customers greener products through a system of environmentally clean plants, logistics networks and dealers and by carrying out appropriate environmental activities including compliance with laws, regulations and agreements and cooperation with the automotive industry.

Outline of the Fourth Voluntary Plan for the Environment

We are making every effort to prevent global warming

- We will continue working to improve fuel economy with every full vehicle model change and annual model change.
- We will reduce CO₂ emissions at manufacturing plants by 15% compared to fiscal 1990 levels by fiscal 2010.
- Regarding logistics, we will reduce energy consumption per sales by 5% compared to fiscal 2006 levels by the end of fiscal 2011.
- We will promote the development and marketing of products that use clean energy, such as electric vehicles and wind turbine systems.

We will address various environmental issues by making continuous improvements throughout all stages

- We will make further progress in reducing emissions produced by our automobile lineup and promote popularization of low emissions vehicles.
- We aim to achieve a 95% recycling ratio in 2015 by taking recyclability into account in new car designs.
- We will reduce emissions of volatile organic compounds (VOCs) per painted surface area of bodies (g/m²) in vehicle production lines by 30% compared to fiscal 2000 levels by the end of fiscal 2010.
- We will reduce the amount of waste materials by controlling sources of waste and continuing zero emissions at all manufacturing plants.
- We will promote green procurement, which requires suppliers in and out of Japan to establish Environmental Management Systems and reduce substances with environmental impact.
- We will support the environmental activities of dealers.
- We will conduct social action programs and disclose environment-related information.

Reference [The Fourth Voluntary Plan for the Environment] FHI Environmental Conservation Program (fiscal 2007 through fiscal 2011)

1. Green Products

Items	Goals and Actions
Improving fuel economy	[Automobiles] a. Continue to improve fuel economy for every full model change and annual model change. b. Increase models that achieve fiscal 2010 fuel standard. c. Promote improvement of fuel economy toward for fiscal 2015 fuel standard.
Cleaner exhaust emission	[Automobiles] a. Improve on technology which has already achieved a 75% reduction on the 2005 standard for exhaust emissions in order to further reduce exhaust emissions and promote the use of low exhaust emission vehicles.
Developing products using clean energy	a. Hybrid vehicles: Develop a new hybrid system etc. in collaboration with new alliance partner. *1 b. Electric vehicles: Develop vehicles for launch on the market in addition to business use. *1 c. Continue development of wind turbine systems and market expansion. *2 d. Expand market for applied products which use LPG/CNG engines. *3
Improving recyclability	a. Improve design to increase recyclability in new car models to achieve a recycling rate of 95% in 2015.
Reducing substances with environmental impact	[Automobiles] a. Enhance management of substances with environmental impact and further reduce the use of such substances.
Reducing exterior noise	a. Continue to promote development of technology to reduce noise that is compatible with both fuel economy improvement and exhaust emissions reduction.
Curbing global warming regarding air conditioning refrigerants	a. Promote further reduction in the amount of refrigerant (HFC134a) per vehicle. b. Advance the development of air conditioner with low GWP refrigerant.
Research on traffic environments	a. Work further on Intelligent Transport Systems (ITS) that realize a safe and comfortable motorized society.
Developing environment-related products and businesses	a. Advance environment-related businesses such as development of refuse collection vehicles and environmental equipment and devices. *2 b. Advance robot-related businesses for conservation of power, labor and energy. *4

*1:Subaru Automotive Business

*2:Eco Technologies Company

*3:Industrial Products Company

*4:Robot Dept. Strategy Development Div.



Impreza S-GT

2. Clean Plants

Items	Goals and Actions
Curbing global warming	a. Aim to reduce CO ₂ emissions by 15% from manufacturing plants compared to the fiscal 1990 level by fiscal 2010.
Control and reduction of substances with environmental impact at manufacturing plants	a. Continue reducing emissions of PRTR chemical substances to the environment. b. Reduce volatile organic compound (VOC) emissions (g/m ²) in vehicle production lines by 30% compared to the fiscal 2000 level by the end of fiscal 2010. c. Reduce environmental risks through Environmental Risk Assessment and totally eliminate the occurrence of incidents, claims and cases where voluntary standards are exceeded.
Reducing wastes generated at manufacturing plants	a. Reduce the amount of waste materials by controlling sources of waste including increasing yield ratio, reducing removal stock, increasing coating efficiency and improving packaging.
Saving water resources	a. Aim to reduce amount of water used at manufacturing plants by 45% compared to the fiscal 1999 level by fiscal 2011.
Green procurement activities	a. Request domestic and overseas suppliers to reduce substances with environmental impact and to establish an Environmental Management System (EMS). The following are the targets for establishing EMS. - Automotive Business Unit, Industrial Products Company: Maintain the completed system. - Eco Technologies Company and Aerospace Company: Aiming to complete establishment of the system. To reduce substances with environmental impact, adhere to the schedule of laws, regulations and agreements such as the EU directive. b. For CSR procurement, set the guideline to develop for the suppliers.

3. Green Logistics

Reducing the environmental burden caused by logistics	a. Be certain of meeting the Revised Energy Saving Law. - Try to reduce energy used per sales by 5% compared to fiscal 2006 by the end of fiscal 2011. b. Try to reduce substances with environmental impact by promoting reuse of packaging materials and returnable boxes.
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4. Green Dealers

Items	Goals and Actions
Promoting environmental conservation activities at dealers	a. Support environmental conservation activities by dealers. b. Promote recycling and proper disposal during the distribution and disposal stages. - Destroy specific chlorofluorocarbons (CFC 12), and collect CFC 12's substitute (HFC 134a). - Collect and dispose of airbags, and collect warning flares. c. Continue to collect used bumpers. d. Continue to comply with the ELVs Recycling Law.

5. Improving Environmental Management

Items	Goals and Actions
Implementing actions contributing to society	a. Continue to participate in environmental events, communicate with local residents at plants, and welcome visitors to plant tours. b. Continue to participate in cleaning and tree-planting activities in local communities in the vicinity of our plants. c. Offer support and cooperation to environmental activity groups.
Disclosing environment-related information	a. Continue to publish social and environmental reports, and aim at releasing social and environmental information through publicity channels from time to time. b. Improve and upgrade the contents of social and environmental reports (e.g., compliance with guidelines, and reports including group businesses)
Implementing environmental education and educational campaigns	a. Continue to incorporate social and environmental education into the company education system and put it into practice. b. Continue to implement educational campaigns through company newsletters and various media. c. Continue to implement lectures and presentations of operation improvement case studies at worksites
Establishing Environmental Management System	a. Continue to improve the Environmental Management System at all business sites with ISO14001.