

# 1 : Environmental Management

Mazda established a new Corporate Vision in 1999, setting clear targets for the company, and prescribing the roles and responsibilities of Mazda employees as well as the value systems for achieving them. Through this, Mazda intends to demonstrate a willingness to work positively for solutions to environmental problems.

In terms of internal and external environmental policy, Mazda instituted the Environmental Principles and Guidelines for Actions in 1992, and established these as the Mazda Basic Policy for the Global Environment (also known as the "Mazda Global Environmental Charter"). To promote specific activities in accordance with basic policies, Mazda also formulated the "Environmental Action Plan" and is continuing to make solid efforts.

## Corporate Vision

### Vision

**To create new value, excite and delight our customers through the best automotive products and services.**

### Mission

**With passion, pride, and speed, we actively communicate with our customers to deliver insightful automotive products and services that exceed their expectations.**

### Value

**We value integrity, customer focus, creativity, efficient and nimble actions and respect highly motivated people and team spirit. We positively support environmental matters, safety and society. Guided by these values, we provide superior rewards to all people associated with Mazda.**

# Mazda Global Environmental Charter

## Environmental Principles

"We aim to promote environmental protection and contribute to a better society, while maintaining harmony with nature in our business activities."

### Environmental Principles

1. We will contribute to society by creating environmentally friendly technologies and products.
2. We will use the Earth's resources and energy sparingly, and never overlook environmental considerations when conducting our business.
3. Hand in hand with local communities and society at large, we will play our part in improving the environment.

## Guidelines for Action

### Creation of environmentally sound technologies and products

#### Guidelines for Action : 1

1. We are committed to the challenge of creating clean technologies, including those for purification of exhaust emissions, reduction of CO<sub>2</sub>, development of clean-energy vehicles, alternative-fuel vehicles, and protection of the ozone layer.
2. We will encourage the creation of products that are environmentally sound throughout their lifespan, from the planning and development stages through to manufacturing, use, and recycling.

### Corporate activities for conserving resources and energy

#### Guidelines for Action : 2

1. In order to conserve limited resources, we will actively promote resource-conservation and recycling activities.
2. We will strive to achieve diversified and efficient use of energy.

### Corporate activities in pursuit of a clean environment

#### Guidelines for Action : 3

1. We will not merely comply with environmental laws and regulations, but will also impose voluntary clean control standards and implement self-regulated control.
2. In our pursuit for a clean environment, we will promote the development of new technologies and the introduction of new systems which will contribute to a cleaner environment.

### Working with others in the car-making industry to create a better environment

#### Guidelines for Action : 4

1. We will actively provide our employees with in-house education about and information on environmental conservation to enhance their awareness of the global environment.
2. We will work in close cooperation with other car manufacturers in Japan and overseas to achieve better environmental protection.

### Creating a better environment in cooperation with local communities and society

#### Guidelines for Action : 5

1. We will actively solicit society's requirements for the environment and reflect them in our business activities.
2. We will disclose and publicize environment-related technologies, systems, and information.
3. We will not only conduct our own environmental activities, but also will cooperate with and take an active part in other social activities for the conservation of the environment.

## Environmental Targets and FY2000 Performance

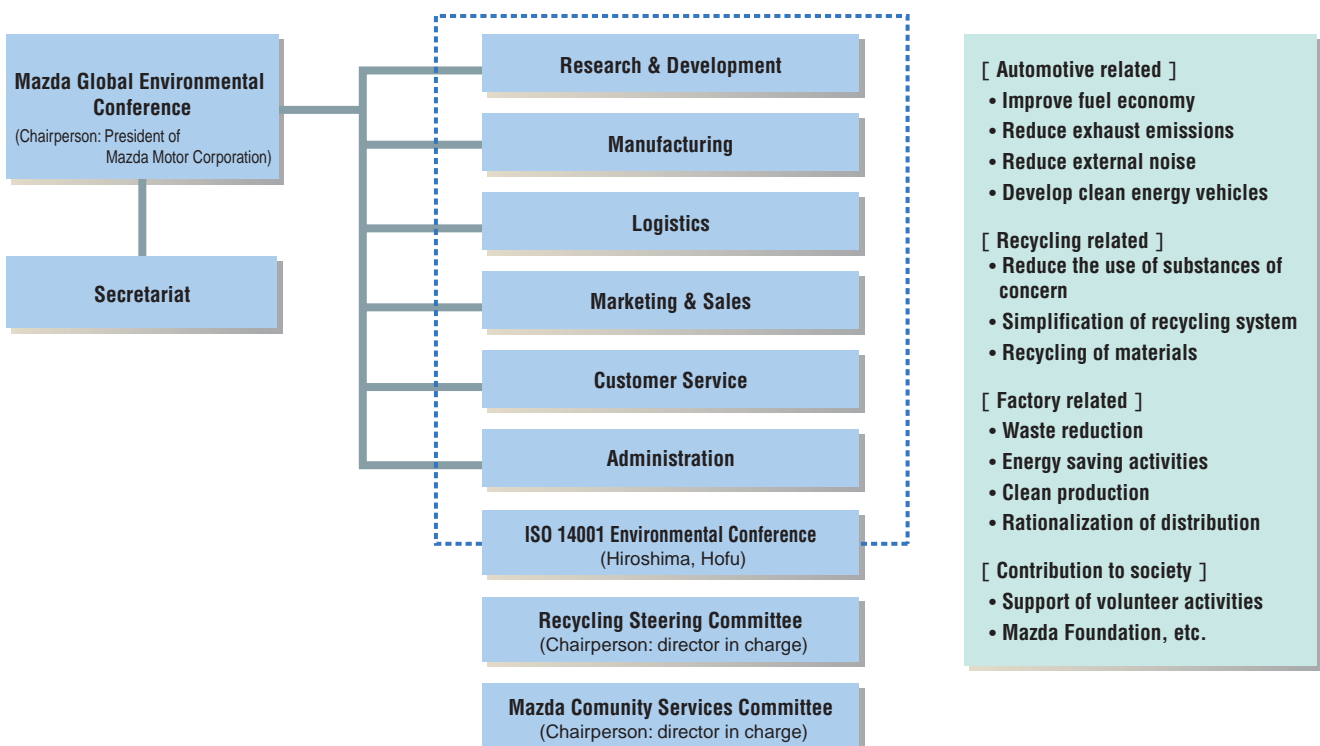
Subject		Environmental target	FY2000 Performance	
Products / Development	Fuel efficiency	meet the new 2010 fuel economy standards	Introduced the vehicles meet the new 2010 fuel economy standards. (Demio, Familia Sedan / Familia S-Wagon, Capella, AZ-Wagon, Carol, Raputa, Familia Van)	
	Emission gas	launch low-emission vehicles	Introduced Low-emission vehicles: (Excellent-Low Emissions Vehicle) Carol, AZ-Wagon, Raputa, Demio, Familia Sedan, Familia S-Wagon, Tribute (Good-Low Emissions Vehicle) AZ-Wagon, Raputa, Tribute, Familia Van	
	Noise	meet latest external noise regulations	Implement of latest regulations into all passenger cars	
	Clean energy vehicles	Development of natural gas, LPG and Fuel cell electric vehicles	Development of Premacy fuel cell electric vehicle (FC-EV), start of road testing Introduction of vehicle powered by natural gas: Demio CNG, new Titan CNG, Titan Dash CNG Introduction of LPG vehicles: new Titan, Titan Dash	
	Recycling		Improve recyclability of new cars Recycling rate of new cars beyond 2002 to be 90% or above	Used thermo plastic resin in major plastic parts such as bumpers, trims etc.
			Push ahead with recycling of damaged bumpers collected from market	Expanded use of recycled materials: Footrests, rear splash shields Bumper reinforcement parts made from material developed from paint-removed recycled bumpers. This material is as strong as new material.
Proceed with attainment of targets for reduction of use of substances of concern (lead): Half or less the amount used in 1996 by 2000, 1/3 or less the amount used in 1996 by 2005			All vehicles achieved target set for 2000	
Production / Logistics	Energy saving	Stabilizing consumption level of crude oil to that of 1990 by 2000	Reduced by 19.5% over 1990 levels, through review of operating procedures and careful energy saving activities	
	Reduction in waste product	Reduce volume of waste product by 66% compared to 1990 levels by 2000	Reduced by 69% over 1990 levels, through recycling of casting sand and other measures	
	Improvements of logistical efficiency	Reduce CO <sub>2</sub> emissions by distribution efficiency improvements	Reduced by 3,740 tons of CO <sub>2</sub> was achieved over 1998 levels, through modal shift implementation, truck capacity increases and overseas shipping route reviews.	
		Reduce materials use through simplification of packaging	Reduced by 1,663 tons of materials over 1998 levels, through use of returnable packaging and shipping containers instead of wooden crates.	
Management	ISO14001	All domestic sites to have ISO14001 accreditation by the end of FY2000	Achieved in June 2000, when the Hiroshima plant was given certification.	

# Organizational Structure

Concurrently with the formulation of the 1992 Environment-Related Activity Promotion Plan, we established a company-wide environmental structure with the Mazda Global Environmental Conference as the decision-making body. The Mazda Global Environmental Conference establishes environmental policies and plans for promoting environmental activities. The departments that receive these policies and plans implement them in systems to roll out environmental-management activities.

The Hiroshima District and Hofu Plant Environmental Committees provide a framework for follow-up for environmental-management activities on production lines. For issues that require company-wide response, Mazda set up specific projects to address the issues. At present Mazda is promoting activities through the Recycling Steering Committee and the Community Services Committee. The Ford Group works together in regard to each separate issue involved in the areas of development, production and distribution.

## Organizational chart



## ISO14001

To conduct activities geared toward protecting the environment systematically and continuously, and to ensure transparency for our actions, Mazda is actively promoting the establishment of an environmental management system in accord with ISO14001, the international standard for environmental management. At our domestic Japanese production sites, Hiroshima Plant (including Miyoshi Plant) obtained certification in June 2000, completing the process of accreditation for our domestic plants. Among Mazda's overseas production sites, AAT (Thailand) and AAI (USA) respectively obtained certification in May and June 2000, completing the certification process for our major overseas production sites.

### Domestic Production Sites

Name	Area	Items Produced (as of May 1, 2001)	Accredited
Hiroshima Plant	Head Office	Bongo Friendee / Freda, Bongo (Truck / Van), Bongo Brawny (Van), Titan, Titan Dash	June 2000
		Gasoline piston engines, transmission	
	Ujina	RX-7, Roadster, Familia / Laser Lidea, MPV, Demio / Festiva Mini Wagon	
		Gasoline piston engines, diesel engines, rotary engines	
Miyoshi Plant		Diesel engines	
Hofu Plant	Nishinoura	Familia S-Wagon, Laser Lidea Wagon, Capella, Capella Wagon, Millenia, Premacy / Ixion, Tribute / Escape	September 1998
	Nakanoseki	Transmissions	September 1999

### Major Overseas Production Sites

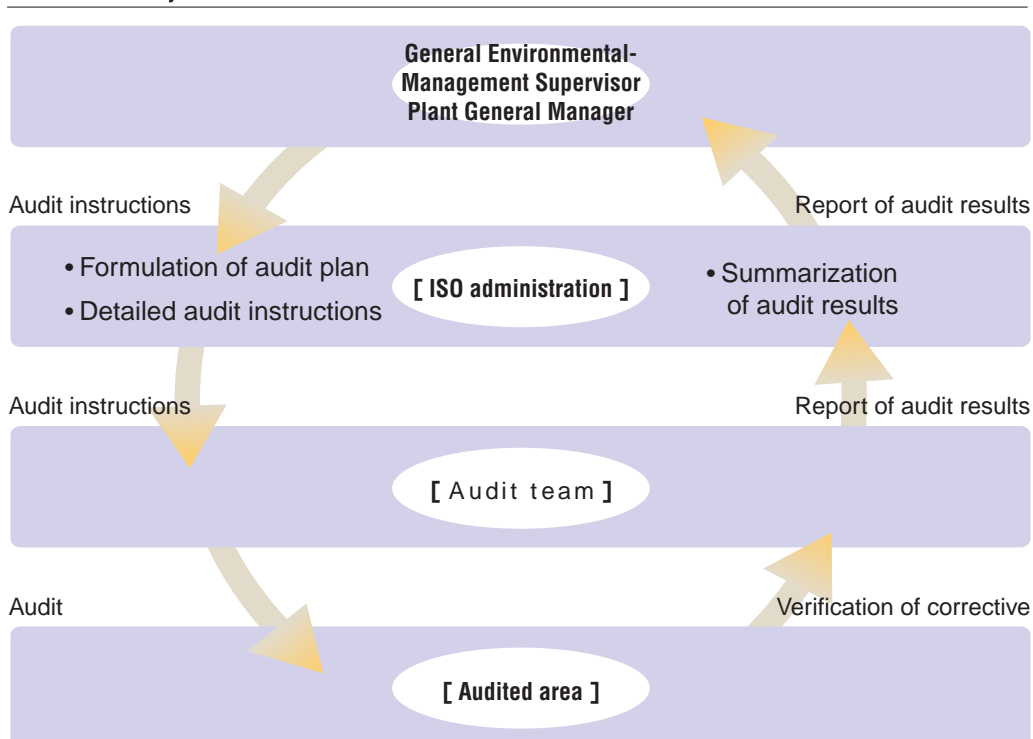
Company name	Location	Products	Accredited
Auto Alliance International, Inc. (AAI)	USA Flat Rock	Mazda 626	June 2000
Auto Alliance (Thailand) Co., Ltd. (AAT)	Thailand, Rayong Province	Mazda B-Series Mazda 323	May 2000

(current as of June 30, 2000)

## Environmental Audits

In order to determine if the environmental management system is functioning correctly, internal audits and external audits by an outside certification organization are conducted annually, and the results of these audits are reported to company management. The auditors who carry out the internal audits are selected primarily from among core employees who have received training from an external educational organization and have been certified as having obtained a certain level of qualification. The FY2000 external audit involved an expanded audit for the Hiroshima District and a periodic audit of the Hofu Plant. Both audits revealed no problems, either major or minor.

### Internal Audit System for Production Sites



## Legal Compliance and Emergency Response

There were no incidences of contravention of environmental laws or regulations during FY2000. Mazda is committed to the continued strict observance of all laws and regulations, as well as to the implementation of self-regulation management indexes, and to the strict control of standards, in order to reduce the environmental impact of their work. At production sites, periodic inspections and emergency measures procedures are carried out at facilities, or in regard to processes, which are considered to be in particular danger of causing environmental pollution, in order to prevent incidents and reduce the environmental impact should an incident occur. Alongside the provision of these necessary response measures, we also carry out periodic response drills, in which the procedures are learned and improved upon.



An audit. Section 1E practices an accident response drill.

### [ Environmental Complaints Arising in FY2000 ]

Two concerning noise and one complaint concerning paint mist dispersal, giving a total of three complaints. All these complaints arose due to problems in the control of facilities operations, and the problems were prevented from recurring by adjustments made to the relevant facilities. Changes were also made to the Procedural Manual, which exists to ensure that problems do not recur. There is currently one environment-related legal action under way, dealing with automobile exhaust gas in Tokyo. There were no recalls for environmental reasons.

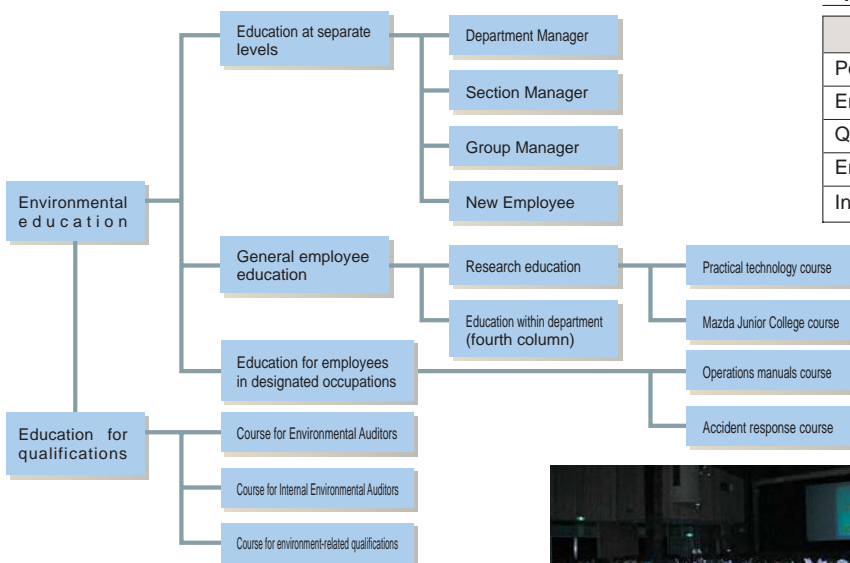
# Education and Awareness

Recognizing that the starting point for any environmental initiative is improving the awareness of employees of environmental issues, Mazda is deeply involved in environmental education and promoting self-improvement.

## Education

During FY1999, Mazda provided the necessary training for employees to be able to introduce, maintain and operate the environmental management system required for ISO14001. During FY2000, in order to improve the environmental awareness of our employees even further, we introduced structural environmental education throughout all levels of the company. We also encouraged employees to acquire qualifications as necessary for the work in which they are engaged.

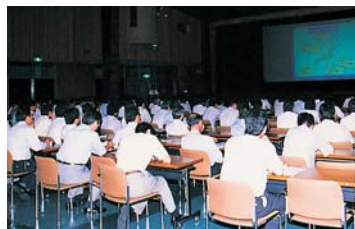
### Environmental Education Structure



### Numbers of employees holding public qualifications in environmental issues

Name of public qualification	Number of employees
Pollution prevention management	134
Energy management	27
Qualification in waste processing	5
Environmental auditing assistance	9
Internal environmental auditing	261

(As of May 10, 2001)



Management level environmental training



## Awareness

We are promoting awareness among both employees and their families through the Intranet and in-house magazine, by means of exhibitions during Global Environment Month and on other occasions, as well as through volunteer activities.

### [ Major items implemented during FY2000 "Global Environment Month" ]

<b>Broadcast of President's Speech</b>	A call for Mazda employees to take seriously their responsibility to meet the challenges posed by environmental problems. • A speech by Mazda's President was broadcast throughout the company.
<b>Mazda Global Environmental Exhibition</b>	In-house exhibition dealing with current challenges faced regarding the environment, and introducing environmentally friendly technology and products. • Fuel cell electric vehicles and electric vehicles on display • Introduction of products made from recycled waste, etc.
<b>Contribution of Display Items to "ECO-CAR WORLD 2000"</b>	The Demio EV, Demio CNG and Titan LPG were loaned for display at the 'ECO-CAR WORLD 2000', sponsored by the Ministry.
<b>Involvement in Local Community Clean-up Activities</b>	Participation in community clean-ups hosted by nearby city and town authorities.
<b>Environmental Patrolling by Plant Managers</b>	The Manager of the Hiroshima Plant visited the main factory and other facilities.



ECO-CAR WORLD 2000(Tokyo)

## Expanded Information Disclosure Policy

Environment information for individual Mazda vehicles is listed on the company web page (see partial list on page 50). The web page also lists vehicles eligible for special tax incentives under the Green Purchasing Law. The address is: "<http://www.mazda.co.jp>"

### [ List of Vehicles complying with Green Purchasing Law ] ( as of September 3, 2001 )

#### Clean energy vehicles

Model	Model	Engine type	Displacement (liter)	Drive	Transmission	Emission level (see note)	Fuel economy level	Remarks
Demio CNG	GF-DW5W (derivative)	B5	1.498	2WD	AT	-	-	CNG (compressed natural gas) vehicle
Titan Dash CNG	GE-SYE6T (derivative)	FE	1.998	2WD	MT	-	-	CNG (compressed natural gas) vehicle
Titan CNG	KK-WHF5T (derivative)	TF	4.021	2WD	MT	-	-	CNG (compressed natural gas) vehicle
	KK-WHF5G (derivative)	TF	4.021	2WD	MT	-	-	CNG (compressed natural gas) vehicle

#### Vehicles other than clean energy vehicles (gasoline and diesel)

Model	Model No.	Engine type	Displacement (liter)	Drive	Transmission	Emission level (see note)	Fuel economy level	Remarks
Carol	LA-HB23S	K6A	0.658	2WD 4WD	MT,AT	Excellent	2010 fuel economy standards	Not all models comply
	TA-HB23S	K6A	0.658	2WD	MT,CVT	Good	2010 fuel economy standards	
AZ-wagon	LA-MD22S	K6A	0.658	2WD 4WD	MT,AT	Excellent	2010 fuel economy standards	Not all models comply
	TA-MD22S	K6A	0.658	2WD 4WD	MT	Good	2010 fuel economy standards	
Laputa	LA-HP22S	K6A	0.658	2WD	MT,AT	Excellent	2010 fuel economy standards	
	TA-HP12S	F6A	0.657	2WD 4WD	MT	Good	2010 fuel economy standards	
Demio	LA-DW3W	B3	1.323	2WD	MT	Excellent	2010 fuel economy standards	
Familia Sedan	LA-BJ5P	ZL	1.498	2WD	MT	Excellent	2010 fuel economy standards	
Familia S-wagon	LA-BJ5W	ZL	1.498	2WD	MT	Excellent	2010 fuel economy standards	
Familia Van	B-BVY11	QG13DE	1.295	2WD	MT,AT	Good	2010 fuel economy standards	
	TB-BV FY11	QG15DE	1.497	2WD	MT,AT	Good	2010 fuel economy standards	
	TC-BV HNY11	QG18DE	1.769	4WD	AT	Good	2010 fuel economy standards	

Notes:

Emission level

Good: 25% reduction from 2000 emission standards

Excellent: 50% reduction from 2000 emission standards

Ultra: 75% reduction from 2000 emission standards

## Environmental Accounting

Mazda is now implementing an environmental accounting system, in order to more accurately grasp the costs and benefits of our environmental protection activities, and to use this understanding in making our activities more efficient. We also hope to be able to gain the understanding of society in regard to our environmental efforts, through the disclosure of our environmental accounts.

The environmental conservation costs and benefits for FY2000 are as shown below. This is the second time we have published our environmental accounting results, but due to some changes in the accounting procedure, a simplified comparison with the previous year's figures is not available. For this reason, the results published below are for FY2000 only.

### Future considerations

Improvements to the accuracy of cost data collection, and expansion of the scope of effective evaluation, must be dealt with in the future.

#### [ Cost of Environmental Conservation ]

(unit: millions of yen)

Category		Major activities	Cost
Cost in business area	Pollution prevention cost	Compliance with regulations, installation of reduced-odor furnace, installation of combustion system for paint-booth exhaust	3,114
	Global environment protection cost	Activity to help prevent global warming, such as reduced energy consumption	424
	Resource recycling cost	Recycling, waste processing, etc.	1,701
Upstream/downstream cost		Switch to returnable distribution containers, etc.	31
Management activity cost		Education, environmental management implementation, etc.	663
R&D cost		Research into reducing environmental loading of Mazda products	26,590
Social activity cost		Green space management, support of external organizations, disclosure of environmental information, etc.	160
Environmental damage cost		Cost of repair after environmental accident	4
Total			32,687

#### [ Environmental Conservation Benefits ]

Category	Major activities	
Global environment protection	Amount of energy saved (crude equivalent): (represents a 1.9% reduction in energy consumption from the total for FY1999)	6,000kL
Resource recycling	Reduction in processed waste: (represents a 9.5% reduction from the total for FY1999)	2,300t

Note 1: Scope of data compiled: Mazda Motor Corporation, non-consolidated base

Note 2: Period covered: April 2000 to March 2001

Note 3: Categories: Set by Mazda with reference to the guidelines for 2000 issued by the Ministry of Environment. However, depreciation is not included because a cash-flow basis was used.

Note 4: Evaluation of benefits: The annual reduction in energy consumption was used in the implementation of energy savings.