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This report is compiled using the Computer to Plate (CTP) system, resulting in the total elimination of film, an intermediate material, during the plate making process.

Toyota has participated in activities of the WBCSD (World Business Council for Sustainable Development) as a member of this organization.
WBCSD engages in advocacy activities aimed at realizing sustainable development based on the three pillars of economic growth, environmental protection and social development.

World Business Council for Sustainable Development

Toyota is a supporter of Education for Sustainable Development (ESD).
ESD activities are aimed at creating a sustainable society.

United Nations Educational, Scientific and Cultural Organization

+ Education for Sustainable Development

TOYOTA MOTOR CORPORATION
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Web version URL http://www.toyota-global.com/sustainability/report/er/

Company Outline

Name:	TOYOTA MOTOR CORPORATION
Date of establishment:	August 28, 1937
Principal operations:	Manufacturing and sales of automobiles, etc.
Capital:	397.0 billion yen
Number of shareholders:	613,646
Total number of shares issued:	3,447,997 thousand
Stock exchanges on which the shares are listed:	Japan: Tokyo, Nagoya, Osaka, Fukuoka and Sapporo Overseas: New York and London

Note: Capital amounts and number of shareholders are as of the end of March 2014.
Capital less than 0.1 billion yen is rounded off.

Head Office: 1, Toyota-cho, Toyota City, Aichi Prefecture, Japan 471-8571 TEL +81-565-28-2121
Tokyo Head Office: 1-4-18, Koraku, Bunkyo-ku, Tokyo, Japan 112-8701 TEL +81-3-3817-7111
Nagoya Office: 4-7-1 Meieki, Nakamura-ku, Nagoya City, Aichi Prefecture, Japan 450-8711 TEL +81-52-552-2111

Major production bases in Japan

Automobiles: Honsha Plant, Motomachi Plant, Kamigo Plant, Takaoka Plant, Miyoshi Plant, Tsutsumi Plant, Myochi Plant, Shimoyama Plant, Kinuura Plant, Tahara Plant, Teiho Plant, Hirose Plant

EA-1410

TOYOTA MOTOR CORPORATION

Respect for the Planet

—Toyota's Environmental Initiatives—

2014

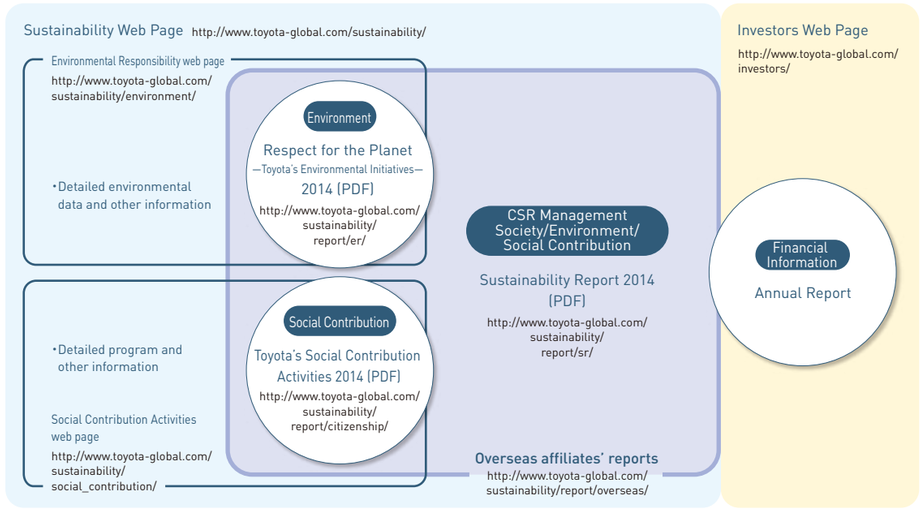
Respect for the Planet —Toyota's Environmental Initiatives— 2014

Editorial Policy

The Sustainability Report 2014 summarizes and reports on Toyota's CSR management and initiatives with a focus on initiatives undertaken mainly in FY2013 in a PDF format (booklet form). Information on CSR initiatives is divided into three chapters: Society (Traffic Safety, Quality, Creating the Future Society, Human Rights, Collaboration with Business Partners, Employees, etc.), Environment, and Social Contribution Activities.

We have also made available "Respect for the Planet—Toyota's Environmental Initiatives—2014 (in PDF format)," and "Toyota's Social Contribution Activities 2014 (in PDF format)," excerpted from the Sustainability Report 2014. Detailed data concerning the environment and further information on social contribution activities are available on the Sustainability page of Toyota Motor Corporation's global website.

Financial information is available on the investor pages of the corporate global website and in Annual Reports.



Period Covered

The period covered in the report's data is from April 2013 to March 2014. For major ongoing initiatives, the most recent status update in 2014 has been included.

Scope of Report

Toyota Motor Corporation's own initiatives and examples of those of its overseas consolidated affiliates, and so on.

Overseas Affiliates' Reports

Reports are being issued in a total of 16 countries and regions (including Japan) in which Toyota overseas affiliates and other companies operate. The information disclosed globally by these reports will cover about 88 percent of Toyota vehicles sold worldwide.


Argentina


Australia


Brazil


China


Europe


India


Indonesia


Malaysia
* Issued in the UMW Holding Report


New Zealand


North America


South Africa


The Philippines


Taiwan (Kuozui)


Taiwan (Hotai)


Thailand


Vietnam

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Special Feature

Always Better Cars

Making always better cars in order to exceed customer expectations

Fuel Cell Vehicles to Play Important Role in Sustainable Societies

Hydrogen-based energy will play a major role in creating the sustainable society that Toyota seeks.

Supplies of oil and other fossil fuels are limited, but it is expected that demand will continue to grow in conjunction with the economic development and rising standards of living in emerging nations. In light of this social backdrop, reducing carbon dioxide emissions and diversifying fuels will become increasingly important and the effective use of secondary energy sources such as electricity and hydrogen will be necessary.

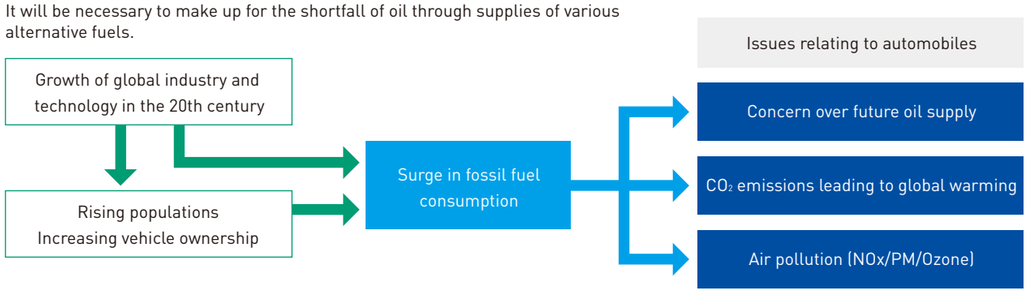
Hydrogen, which is present everywhere in the world, holds significant potential not only as a fuel for automobiles, but in the development of a sustainable society. If carbon dioxide-free hydrogen becomes more common throughout society, it will be possible to create a clean society. If the use of fuel cell vehicles supported by this type of infrastructure becomes widespread, They can make significant contributions to the development of a low-carbon society and even play an important role in supplying electricity during disasters.

Cars are starting to become a bigger part of society—

The presence and value of fuel cell vehicles that expand ties with society are rising as we move towards a comfortable next-generation society that we will build with stakeholders.

Issues Concerning Automobiles

Supply of oil will be unable to keep up with demand as populations and standards of living rise.
It will be necessary to make up for the shortfall of oil through supplies of various alternative fuels.



Toyota believes that fuel cell vehicles have great potential as the ideal eco-car that can contribute to the development of a sustainable mobility society.

Why FCVs?

FCVs operate with a motor that runs on electricity generated by a fuel cell.

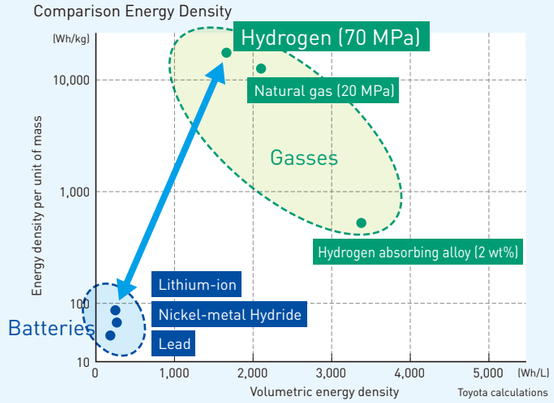
A fuel cell is a generating device that chemically produces electricity during the process of making water from hydrogen and oxygen. Fuel cells offer high generating efficiency, but do not release carbon dioxide or other substances of environmental concern during operation like gasoline and other internal combustion engines.

In addition, they have higher energy density than the batteries used in electric vehicles, allowing the cruising range on a full tank to be set higher than the 100 km to 200 km of most commercially available electric vehicles on a full charge. Rapid charging of an electric vehicle takes about 30 minutes, but an FCV can be fueled more quickly. During an emergency, an FCV can be expected to provide electricity for a longer time.

Characteristics of Alternative Fuels

	Electricity (EV)	Hydrogen (FCV)	Biofuel (Internal combustion engines)	Natural gas (Internal combustion engines)
Well-to-wheel CO_2	Poor to Excellent	Poor to Excellent	Poor to Excellent	Good
Supply volume	Excellent	Excellent	Poor	Good
Cruising range	Poor	Excellent	Excellent	Good
Fueling/ charging time	Poor	Excellent	Excellent	Excellent
Dedicated infrastructure	Good	Poor	Excellent	Good

Comparison Energy Density



Features of the FCV Sedan to Be Launched in FY2014

The FCVs that Toyota is developing seek to be vehicles that can provide previously unseen value. To do this, they are equipped with a compact, high-efficiency fuel cell system and pursue a sedan package that many different people can enjoy and an advanced design that indicates the vehicle is an FCV at a glance. In addition to environmental performance, we conducted development with the aim of creating a car that is exciting and fun to drive.

Advantages of FCVs

Energy diversification

- Hydrogen can be produced from a variety of primary energy sources

Zero emissions

- Zero CO_2 emissions during driving

Driving pleasure

- Smooth and quiet operation
- Smooth start and good acceleration at low and medium speeds

Performance

- High cruising range
- Low refueling time

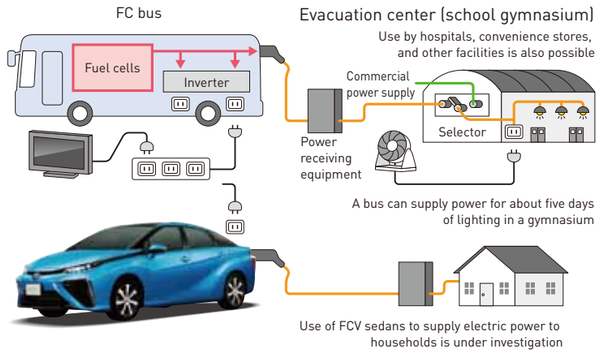
Large power supply capability for emergencies

External Electric Power Supply System

In addition to a sedan-type, Toyota is also conducting development and trials of FC buses and FC forklifts.

When an FC bus is fueled with approximately 20 kg of high-pressure hydrogen gas, it can supply a maximum of approximately 10 kW of power continuously for approximately 50 hours. If the power used to light a gymnasium is about 100 kWh (lighting for 12 hours per day), this would be the equivalent of about 5 days' of power (a route bus can operate for 2 days on 20 kg of high-pressure hydrogen gas). We are also looking into using FCV sedans to supply electric power to households.

Maximum output of approximately 10 kW under development



Toyota's FCV Development to Date

Toyota's FCV development started in 1992

1992 Start of development

1996 Parade in Osaka

The vehicle featured a fuel cell stack and metal hydride hydrogen tank.

2002 World-first limited sale in the U.S. and Japan

2005 Achieves vehicle type certification from the Japanese government

2008 Range and cold start capabilities improved

Toyota has leased over 100 fuel cell vehicles to date, and these have driven over 2 million km in the U.S. and Japan

* The 13th International Electric Vehicle Symposium and Exposition

Parade in Osaka during EVS13* (Oct.1996)

Toyota FCHV-adv (2008)

Max speed	155 km/h
Occupancy	5
Max pressure of tank	70 MPa
Fuel cell output	90 kW

Providing Advanced Technology from Japan

The Tokyo Metropolitan Government held the Tokyo Strategic Conference in 2014 to investigate the development of a hydrogen-based society using hydrogen as the key to a low-carbon society. FCVs will be used to transport athletes during the 2020 Tokyo Olympics, and Japan's technological prowess will be put on display.

If technology and products for the effective use of hydrogen can be developed not just for the Olympics, but for various applications, this will lead to significant economic growth in Japan.

Hydrogen Stations—Essential Infrastructure for Widespread FCV Use

Fuel cell vehicles (FCVs) use hydrogen as an energy source, unlike gasoline vehicles, and development of hydrogen stations to supply hydrogen will be essential for the widespread use of FCVs. The first steps towards such widespread use of FCVs are to be taken in Japan during FY2014. There are three issues relating to the nationwide development of hydrogen stations.

The first issue concerns the number of hydrogen stations. Establishment of about 100 stations, primarily in 4 major metropolitan areas, is expected. With regard to the development of hydrogen stations, the number is important, but the location is believed to be the most significant issue. If hydrogen stations are located in places where people gather by car rather than simply places that people will go to fuel their vehicles with hydrogen, it will speed up the spread of FCVs that much more.

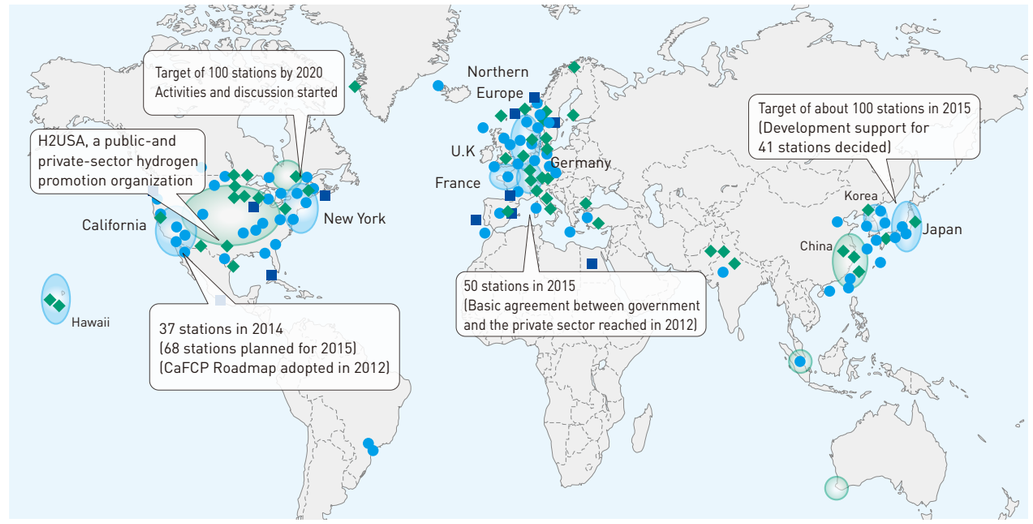
The second issue is the development of hydrogen station technology. This includes the materials used in hydrogen stations, the structure of accumulator tanks, and other topics, and aspects concerning the development of technology are also closely related to the review of regulations, the third issue. The High-Pressure Gas Safety Law and other related laws are currently being reviewed to encourage the widespread adoption of FCVs.

Review of Regulations to Support FCV Use

A process chart for regulatory review was announced in December 2010.

1. Material standards
2. Pressure resistance standards
3. Accumulator tank structure
4. Multi-purpose stations
5. Periodic inspection methods
6. Self-service fueling etc.

Recent Developments in Hydrogen Infrastructure Development around the World (as of July 2014)



Development of several hundred hydrogen stations worldwide is expected between 2015 and 2020

Comments from an FCV Developer

FCVs Can Exhibit Japan's Technological Strengths

Yoshikazu Tanaka, Deputy Chief Engineer
Product Planning Group

Transferred to the Product Planning Group in 2006 and worked on PHV development. Since 2012, has been a planning and development leader for FCVs.

Deputy Chief Engineer Yoshikazu Tanaka of the Product Planning Group has been in charge of development of the Prius plug-in hybrid (PHV) since 2006. Tanaka, who has been involved in developing new technologies for many years, speaks enthusiastically about the benefits of FCVs, which are to be launched during FY2014.

"FCV is a next-generation technology. In addition to advanced technology development capabilities, advanced materials technologies and processing technologies are required. It is for this reason that FCVs can exhibit Japan's technological strengths. Hybrid vehicles, exemplified by the Prius, have had a major impact on the direction of high fuel efficiency, but FCVs will have world-changing impact. Hybrid vehicles do not require any special infrastructure, but FCVs will require major innovations including infrastructure before they can enter widespread use, and they will give rise to major changes in the structure of energy demand. I believe that spreading these technologies from Japan to other parts of the world will also be highly significant."

Focus

The Safety of Hydrogen

As is commonly known from use in balloons and blimps, hydrogen is an extremely light gas. Even if a fuel tank were to leak, as long as the hydrogen is not enclosed in a sealed space, it will immediately dissipate, resulting in a very low chance of explosion. When viewed from the perspective of the vehicle, even in the event of a collision that causes a fire, the tank has a metal valve with a low melting point that will immediately release and disperse the hydrogen before the temperature and pressure can build up. Before electricity, hydrogen was used as a fuel in gas lamps for lighting up the world's streets, and hydrogen has been in close use continuously.

Artist's rendering

Focus

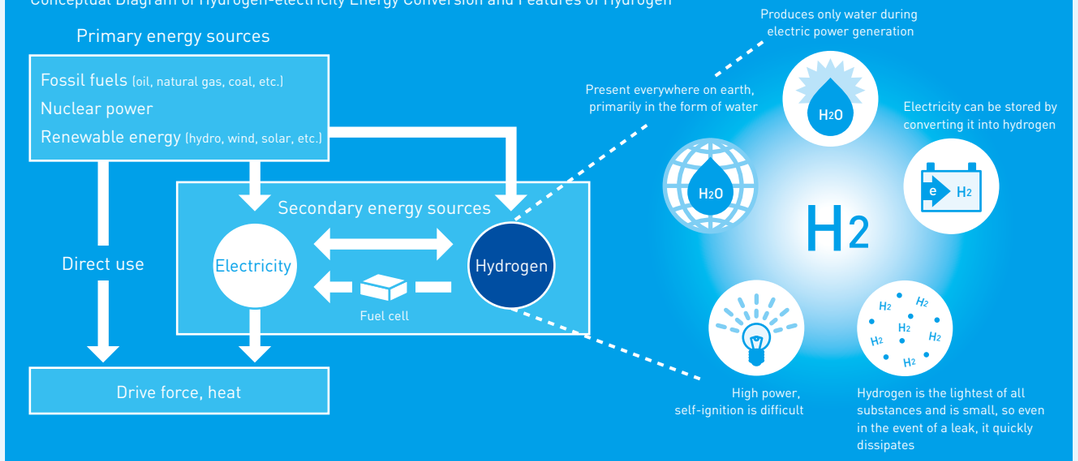
Features of Hydrogen Energy, a Promising Energy Source for the Future

Hydrogen does not contain carbon, making it a clean energy that does not generate carbon dioxide, a cause of global warming, during use and it has outstanding properties compared to other energy sources. Hydrogen, which is present everywhere on earth, can be produced from a variety of primary energy sources using diverse methods according to local conditions. For these reasons, expectations are high for hydrogen as a future energy source.

It can also play a major role in the spread of renewable energy.

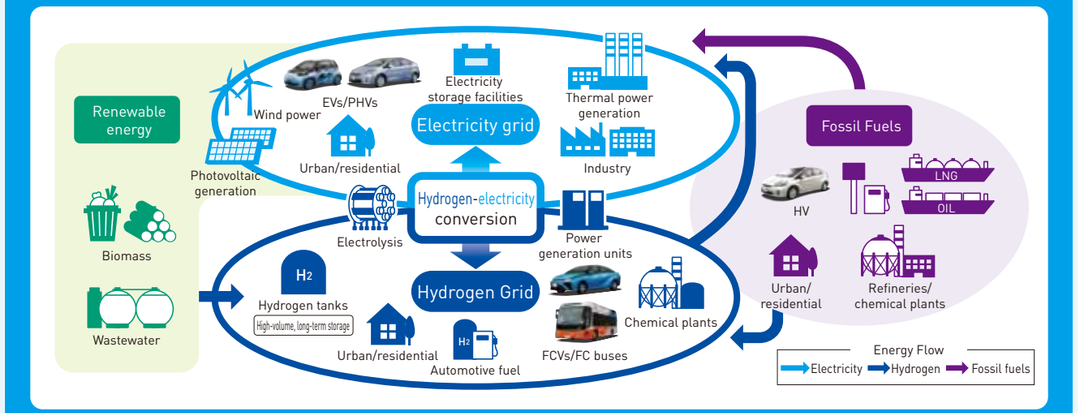
Solar and wind power are affected by weather conditions, resulting in unstable generation—generating costs are high, and the power that is generated is naturally discharged, which makes indefinite storage impossible. One means of making it possible to use these types of natural energy when people want to use them is to convert the energy to hydrogen, which has higher volumetric energy density than batteries, for storage. To give an example, in the northern region of Germany, an advanced renewable energy country, electricity generated using solar and wind power is converted to hydrogen, stored in old salt mines, and transported to the cities in the south using existing pipelines.

Conceptual Diagram of Hydrogen-electricity Energy Conversion and Features of Hydrogen



Concept of a Society that Uses Electricity and Hydrogen and Is Based on Diverse Energy

Batteries and other grid components are suitable for short-term storage of small amounts of electricity. In contrast, a hydrogen grid that stores hydrogen produced from electricity is suitable for storing large amounts of electric power for extended periods and for transporting it. The society of the future must utilize renewable energy, which is expected to increase in the coming years, and optimally integrate the electricity grid with the hydrogen grid for effective use. The use of hydrogen has high added value for smart energy concepts.

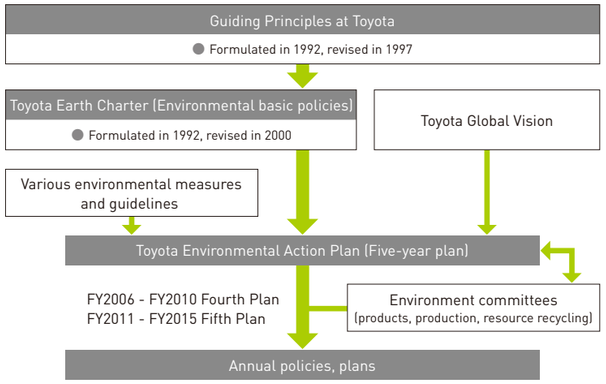


Environmental Management

Environmental Philosophy, Policies and the Toyota Environmental Action Plan

Toyota's philosophy and policies on the environment are based on the Guiding Principles at Toyota, which were established in 1992 and revised in 1997. Policies for environmental initiatives were formulated as the Toyota Earth Charter in 1992 and then revised in 2000. This Charter is shared among 558 Toyota consolidated affiliates around the world. The Toyota Global Vision announced in 2011 stresses the importance of "respect for the planet." Based on the above philosophy and policies, Toyota will aim to realize a 25 percent improvement in global average fuel efficiency by FY2015, compared to FY2005, as well as launch new and fully redesigned hybrid vehicle models in 21 vehicle series by the end of 2015. Toyota will also concurrently proceed with the development of a wide range of technologies, including plug-in hybrids (PHVs), electric vehicles (EVs) and fuel cell vehicles (FCVs), so that customers can choose the type of eco-car best suited to their applications.

Toyota Environmental Action Plan System



Toyota Earth Charter

I. Basic Policy

1. Contribution toward a prosperous 21st century society
   Contribute toward a prosperous 21st century society. Aim for growth that is in harmony with the environment and set as a challenge the achievement of zero emissions throughout all areas of business activities.
2. Pursuit of environmental technologies
   Pursue all possible environmental technologies, developing and establishing new technologies to enable the environment and economy to coexist harmoniously.
3. Voluntary actions
   Develop a voluntary improvement plan, based on thorough preventive measures and compliance with laws, which addresses environmental issues on the global, national and regional scales and promotes continuous implementation.
4. Working in cooperation with society
   Build close and cooperative relationships with a wide spectrum of individuals and organizations involved in environmental preservation, including governments, local municipalities, related companies and industries.

II. Action Guidelines

1. Always be concerned about the environment
   Take on the challenge of achieving zero emissions at all stages, i.e., production, utilization and disposal.
   (1) Develop and provide products with top-level environmental performance
   (2) Pursue production activities that do not generate waste
   (3) Implement thorough preventive measures
   (4) Promote businesses that contribute toward environmental improvement
2. Business partners are partners in creating a better environment
   Cooperate with associated companies.
3. As a member of society
   Actively participate in social actions.
   (1) Participate in the creation of a recycling-based society
   (2) Support government environmental policies
   (3) Contribute also to non-profit activities
4. Toward better understanding
   Actively disclose information and promote environmental awareness.

III. Organization in Charge

Promotion by the CSR Committee which consists of top management.

The Fifth Toyota Environmental Action Plan

The Fifth Toyota Environmental Action Plan sets the future direction of Toyota's environmental activities, outlines the company's ideal form and defines the action plan and goals for the five-year period starting in FY2011. In developing the plan, Toyota streamlined actions from two points of view: environmental risks and business opportunities (such as penetration of eco-cars) in corporate operations and environmental initiatives expected of a company toward the decade between 2020 and 2030. The company positioned these issues under the three priority themes: of (1) contribution to a low-carbon society, (2) contribution to a recycling-based society and (3) environmental protection and contribution to a harmony with nature society. Embracing these themes, Toyota will contribute to the sustainable development of society and the world through *monozukuri* (manufacturing), *kurumazukuri* (car-making), and products and services that are in harmony with the global environment.

For the 24 targeted items, actions were pursued almost as planned and goals were achieved with the following results.
For further information on the FY2013 Review, please visit the following webpage.

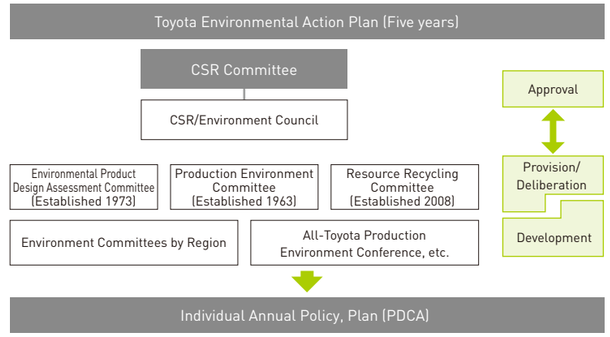
WEB http://www.toyota-global.com/sustainability/environment/data/data19.html

Promotion Structure and Framework

From April 2014, the existing CSR Committee and Toyota Environment Committee were integrated into the CSR Committee, headed by the Toyota Chairman. This enables thorough discussion and monitoring of planning in the lower committees.

Through the following three existing committees—the Environmental Product Design Assessment Committee, the Production Environment Committee, and the Resource Recycling Committee—issues and response policies in all areas are investigated, and all relevant divisions are liaised with to promote companywide initiatives.

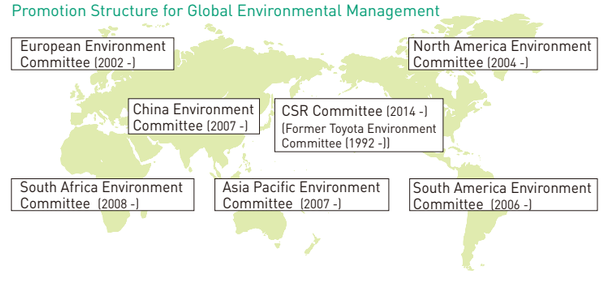
Organization Framework
(As of June 30, 2014)



Promotion of Global Environmental Management

Toyota positions the environment as a key management issue and has formed and promoted activities through a promotion structure for global environment management. From the standpoint of "more Toyota people should take the initiative in concern for the environment," the scope of our programs covers not only consolidated subsidiaries, but also voluntarily participating non-consolidated affiliate companies and production companies, for a total of 558 firms. This total covers 99 percent of the number of vehicles produced and 89 percent of the number of vehicles sold.

Promotion Structure for Global Environmental Management



Scope of Companies Subject to Consolidated EMS

Toyota's consolidated environmental management system (EMS) covers a total of 558 companies. This includes not only all financially consolidated subsidiaries, but also major production companies, overseas distributors and other companies not subject to consolidated accounting.

Specifically, companies subject to consolidated EMS fall into the following four major categories: (1) 164 subsidiaries which are financially consolidated and under the direct control of TMC; (2) 51 major production companies and overseas distributors that are not subject to consolidated accounting; (3) one organization from other types of businesses; (4) 342 subsidiaries that are financially consolidated and under the indirect control of TMC (managed via consolidated subsidiaries).

Organization/Structure

1. Jointly adopt the Toyota Earth Charter and draft individual environmental policies
2. In production, set quantitative goals and follow up on those goals
3. In sales, create an environmental management system, carry out environmental communication and other initiatives
4. Implement top level environmental responses based on actual conditions in each country and region

* TMC's requirements to companies not subject to consolidated accounting may vary according to region and the nature of business

Main Companies Subject to Consolidated EMS

European affiliates that have voluntarily participated

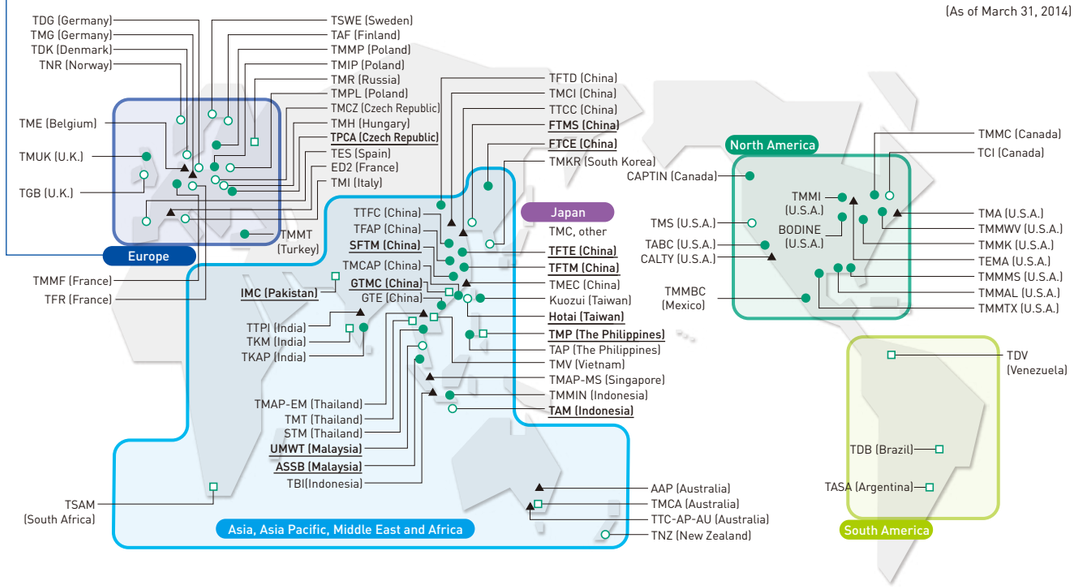
Toyota Hellas (Greece) / Toyota Ireland (Ireland) / Louwman&Parqui (The Netherlands)
Toyota AG (Switzerland) / Toyota SA (Turkey) / Other 10 companies

15 non-consolidated distributors in Europe are voluntarily implementing EMS, including acquisition of ISO certification, with TME support

● Production companies ○ Sales companies
□ Production/Sales companies ▲ Other types of businesses (regional manufacturing headquarters, etc.)

* Companies whose names are not underlined are financially consolidated subsidiaries
Companies whose names are underlined and are indicated in bold are not subject to accounting

(As of March 31, 2014)



Main Companies Subject to Consolidated Environmental Management System (EMS) in Japan (alphabetical order)

(As of March 31, 2014)

Production companies					Sales companies	Other businesses
Group 1	Group 2	Group 3	Group 4	Group 5		
・Consolidated subsidiaries ・Automotive production companies and others ・Toyota secondary companies	・Companies not subject to consolidated accounting ・Main parts manufacturers ・Body manufacturers, etc.	・Consolidated subsidiaries ・Parts manufacturers	・Consolidated subsidiaries ・Various other products production companies	・Companies not subject to consolidated accounting ・Parts manufacturers		
Daihatsu Motor Co., Ltd. Gifu Auto Body Industry Co., Ltd. Hino Motors, Ltd. Toyota Auto Body Co., Ltd. Toyota Motor East Japan, Inc. Toyota Motor Hokkaido, Inc. Toyota Motor Kyushu, Inc.	Aichi Steel Corporation Aisan Industry Co., Ltd. Aisin AI Co., Ltd. Aisin AW Co., Ltd. Aisin Seiki Co., Ltd. Aisin Takaoka Co., Ltd. Denso Corporation JTEKT Corporation Tokai Rika Co., Ltd. Toyoda Gosei Co., Ltd. Toyota Boshoku Corporation Toyota Industries Corporation Toyota Tsusho Corporation	Cataler Corporation Central Motor Wheel Co., Ltd. Kyoho Machine Works, Ltd. Primearth EV Energy Co., Ltd. Toyota Housing Corporation Yutaka Seimitsu Kogyo, Ltd.	Admatechs Co., Ltd. Japan Chemical Industries Co., Ltd. Shintec Hozumi Co., Ltd. Toyota Turbine and Systems Inc.	Chuoh Pack Industry Co., Ltd. Chuo Spring Co., Ltd. Fine Sinter Co., Ltd. FTS Co., Ltd. Koito Manufacturing Co., Ltd. Kyowa Leather Cloth Co., Ltd. Taiho Kogyo Co., Ltd. Toyoda Iron Works Co., Ltd. Trinity Industrial Corporation Tsuda Industries Co., Ltd.	Tokyo Toyopet Motor Sales Co., Ltd. Toyota Tokyo Parts Distributor Co., Ltd. Toyota Tokyo Rental & Leasing Co., Ltd. Total 32 companies	Aichi Rikuun Co. Tacti Corporation Toyofuji Shipping Co., Ltd. Toyota Central R&D Labs, Inc. Toyota Enterprises Inc. Toyota Modellista International Corporation Toyota Technocraft Co. Toyota Transportation, and others Total 50 companies *Includes one company not subject to consolidated accounting
All-Toyota Production Environment Conference Members	All-Toyota Production Environment Meeting Members					

Main Initiatives during FY2013

Management: Strengthen and Further Promote Consolidated Environmental Management

Action Policies and Results of Action Taken by Major Affiliates Implementing Consolidate Environmental Management in FY2013

		FY2013 Action Policies and Activity Results			FY2014 Action Policies	
		Action Policy	Goals	Activity Results	Action Policy	Goals
Overall		• Promote environmental management through strengthened cooperation with each region	• Achieve goals in all areas	• Strengthened consolidated environmental management • Held environment meetings in Japan and overseas • Held Global Environmental Awards • Distributed collections of improvement activities and environmental near misses to Toyota affiliates • Promoted activities under the Fifth Toyota Environmental Action Plan	• Continue to promote environmental management through strengthened cooperation with each region • Promoted activities under the Fifth Toyota Environmental Action Plan • Establish goals for 2020 (Sixth Toyota Environmental Action Plan)	• Achieve goals in all areas
Production (84 companies)	Japan (40 companies)	• All companies to implement initiatives toward achieving FY2013 goals • Strengthen activities to prevent recurrence of non-compliance and complaints	• Achieve goals in Japan and in all regions • Zero non-compliance and complaints	• All companies implemented systematic measures and almost all goals were achieved • Proactive preventive measures were implemented, but there were cases of minor non-compliance (7[2] instances of non-compliance and 0 complaints)	• Promote initiatives to achieve FY2014 goals • Continue to strengthen proactive measures to prevent recurrence	• Achieve FY2013 goals in Japan and in all regions • Zero non-compliance and complaints
	Overseas (44 companies[1])					
Sales (79 companies)	Japan (32 companies)	• Provide support to the Toyota National Dealers' Advisory Council for acquisition of third-party certification of its environmental management system	• Increase the number of dealers that acquire EMS[3] certification	• Provided support for the acquisition EMS certification; increased the number of dealers that acquired EMS certification	• Continue providing support for the acquisition of EMS certification	• Increase the number of dealers that acquire EMS certification
	Overseas (47 companies[1])	• Overseas dealers to promote environmental risk audits through DERAP[4]	• Achieve goals Percentage of dealers 80% or more	• Achieved goals Percentage of dealers: 87%	• Continue implementation	• Achieve goals Percentage of dealers: 80% or more (including new participating distributors and dealers)

The 65 other Toyota Group companies in Japan and overseas are implementing individual activities on their own initiative.

1 Includes the 12 production/sales companies
2 7 in Japan and 0 overseas.
3 Environmental Management System
4 Dealer Environmental Risk Audit Program

Global Environmental Awards

Background and Purpose

The Global Environmental Awards began in 2006 for the purpose of promoting improvement activities of overseas affiliates and encouraging the sharing (*yokoten*) of the best improvement practices among affiliates worldwide. The process originally consisted of each affiliate selecting their best improvement practices for recognition by Toyota.

In 2011, to make the Global Environmental Awards even better and to increase interest in the activities, the process was changed to screening of teams selected in each region in order to select teams with excellent practices, and then those teams present their practices in Japan for selection of the final winners.

At the same time, the Award for Affiliates with the Best Performance was established to recognize the affiliate with the greatest outcomes from the improvement activities. This award was presented for the second time in 2013.

Award Categories

Category	Award for On-site *Kaizen* Activity	Award for Affiliates with the Best Performance
Field	・Production/Production Affiliate (Plant) ・Logistics/Administration, Production and Logistics Affiliate	・Production/ Production Affiliate (Plant)

FY2013 Initiatives

Award for On-site *Kaizen* Activity

From thirteen teams chosen in six regions around the world, the top four presented their practices in Japan. In a very close race, the Siam Toyota Manufacturing (STM) Thailand team took out the top award. From STM's removal of core sand from the casting process to lessen the defect rate, to Toyota Motor Manufacturing Canada's (TMMC) and Toyota Argentina's (TASA) reduced usage of water in the painting pre-treatment process, and Toyota Kirloskar Motor (TKM) India's reduced usage of paint and cleaning solvents in the painting process to reduce VOCs, each team's initiatives were extremely difficult but extremely important areas of concern for each of the affiliates. Although it was difficult, they worked hard and persevered to help solve these issues. At the awards ceremony, Shigeki Terashi, Senior Managing Officer and Executive in charge of the Environmental Affairs Division, expressed his respect and encouragement to the teams, saying that in addition to continuing their initiatives as *kaizen* leaders, he would also like them to help foster the growth of their junior colleagues.

On-site *Kaizen* Recipients	
Platinum Award	STM (Thailand)
Gold Award	TMMC (Canada) TKM (India) TASA (Argentina)

Affiliate Award Recipients	
Platinum Award	TSAM (South Africa) GTMC (China)

Award for On-site *Kaizen* Activity – Toyota representatives with members of four teams chosen for excellence awards

Senior Managing Officer Shigeki Terashi with STM members, winners of the Platinum Award

Status of ISO 14001 Certification

The merger between an ISO 14001 certified overseas production company and sales company received ISO 14001 certification as a new production/sales company. Additionally, one Japanese sales company changed to an environmental management system for medium and small-sized companies.

Number of ISO Certified Toyota Group Companies in Japan and Overseas

	Production companies	Production/ Sales companies	Sales companies/ Other businesses
Japan	39	—	13
Overseas	32	12*	19

* Note: Omissions in previous years' totals have been corrected

Management: Promote Environmental Management in Product Development through Eco-VAS

LCA of New and Fully Redesigned Models in All Eight Vehicle Series

Purpose

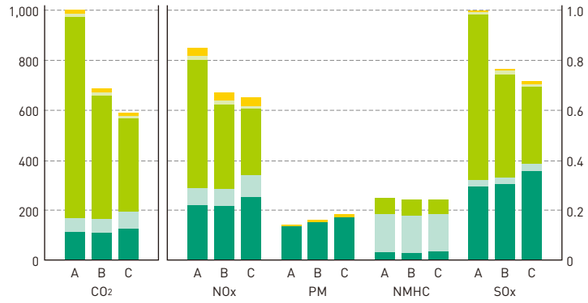
The Eco-Vehicle Assessment System (Eco-VAS) is a comprehensive environmental impact assessment system that allows systematic assessment of a vehicle's impact on the environment over the entire lifecycle from vehicle production and use to disposal stages. Toyota uses Eco-VAS to conduct lifecycle assessment (LCA) of a vehicle's total environmental impact from the materials manufacturing, vehicle manufacturing, driving and maintenance stages through to the disposal stage.

Since the system allows targets to be set from the initial stages of development to achieve steady improvements in environmental performance, Toyota's chief engineer establishes targets and scenarios to achieve them in relation to environmental performance criteria in the planning and development stage, and then follows up at points throughout the development process to ensure that targets are steadily being met.

Progress in FY2013

Toyota conducted LCA on new and fully redesigned models of eight vehicle series (Corolla Axio HV, Corolla Fielder HV, Crown Majesta, Harrier, Voxy/Noah, IS300h, GS300h).

LCA of the Harrier



A: Conventional vehicles in the same class (2.4-liter gasoline engine, front-wheel-drive vehicles)
B: Harrier (2.0-liter gasoline engine, front-wheel-drive vehicles)
C: Harrier (hybrid)

Disposal, Maintenance, Driving, Vehicle manufacturing, Materials manufacturing

NOx : Nitrogen Oxide
PM : Particulate Matter
NMHC : Non Methane Hydrocarbons
SOx : Sulfur Oxide

- These results are based on the JC08 test mode, assuming a lifetime driving distance of 100,000 km over 10 years.
- Since Toyota uses LCA to verify the relative environmental benefits of its vehicles, the evaluation results are expressed as indexes. CO_2 emissions are measured in tons while the emissions of other substances are measured in kilograms, hence different indexes are used.

Management: Promote Sustainable Plant Activities

Continue Activities Focusing on Planting Trees at Plants

Purpose

Since 2007, Toyota has been pursuing sustainable plant activities, positioning the Prius-producing Tsutsumi Plant as a model plant, to bring the concept of sustainability into *monozukuri*. With the concept of "a plant that fully utilizes natural resources while operating in harmony with the natural environment," efforts are underway towards reducing energy consumption, switching energy sources, enhancing communication with local communities, and protecting ecosystems.

Concept Underlying Sustainable Plant Activities

Aiming to become a plant that fully utilizes natural resources while operating in harmony with the natural environment

Reducing energy consumption:
Development and introduction of low CO_2-emitting production technologies and *kaizen* activities
Switching energy sources:
Utilization of renewable energy (solar, etc.)
Community involvement and ecosystem conservation:
"Green for Tomorrow"--tree planting activity at plants

Activities to increase employee environmental awareness

Progress in FY2013

In FY2013, Japanese vehicle assembly plants promoted to develop and introduce low CO_2-emitting production technologies and to conduct energy conservation activities in production areas, as well as introducing renewable energy (photovoltaic power generation) systems in regions such as North America and Asia. As part of its afforestation activities at plant sites, Toyota held tree-planting events at the Myochi Plant, the Kamigo Plant, the Hirose Plant, the Tajimi Service Center, and the Tsutsumi Plant with approximately 1,700 people, including employees, their families and local residents, planting approximately 11,000 seedlings. This brings the accumulated total number of trees planted at Japanese and overseas sites to approximately 840,000.


Tree planting at Myochi Plant

Management: Promote Environmental Activities in Cooperation with Business Partners

Promoting Dealer Environmental Initiatives

At CSR workshops held by the Toyota National Dealers' Advisory Council (TNDAC), all Toyota dealers have come together to promote voluntary activities based on the Toyota Dealer CSR Guidelines set forth in 2005. To further promote these initiatives, they called for increased acquisition of third-party certification of environmental management systems to accelerate the development of people and the creation of environmentally-friendly dealerships, and to bolster the level of trust from customers. All Toyota dealers are implementing power-saving initiatives, including adopting a Cool Biz/Warm Biz policy (whereby associates can work comfortably in offices even when A/C and heating temperatures are adjusted to reduce the greenhouse gas effect), and participating in the Light-Down Campaign of the Ministry of the Environment.


Green curtain at Toyota Corolla dealership at Iwakura Eki-nishi, Nagoya

Number of Overseas Dealers Who Achieved DERAP Goals Increases

Toyota continues to carry out the Dealer Environmental Risk Audit Program (DERAP) to reduce environmental risks at overseas dealer service shops. These audits are aimed at establishing a framework to deal with five fundamental environmental requirements including the proper management of waste and treatment of wastewater.

In FY2013, 55 distributors and 3,338 dealers from 51 countries worldwide participated in the program, representing an increase of 9 distributors and 238 dealers compared to FY2012. Of that total number, 87 percent of participating dealers satisfied the five requirements.

From the global perspective, there are still many Toyota distributors and dealers not participating, so Toyota will continue to encourage even greater participation going forward, and to support those participating companies in their activities.

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Management: Legal Compliance Activities

Achieving Zero Non-compliance and Complaints

In FY2013, an incident occurred at a vehicle test ground in an area of heavy snowfall where the weight of snow on a pipe, which ran from an outside kerosene tank used for heating, caused a joint to break and allowed kerosene to flow into a river. Toyota immediately reported the incident to the relevant governmental agency and recovered the leaked kerosene.

Toyota is taking measures to prevent any similar recurrence with this equipment or any other similar types of equipment, with the aim of developing systems with alarms and automatic shutoff if leaks should occur. It is also continuing other preventive measures already being undertaken for non-compliance near misses* and other issues.

* Non-compliance near misses: Cases that pose high potential risks although they did not result in incidents.

Reporting and Storing Electrical Devices Containing PCBs

Since FY2005, Toyota has been using outside subcontractors to process electrical devices containing polychlorinated biphenyl (PCB). To date, 4,401 transformers and condensers have already been processed. The remaining 846 units will continue to be handled on an outsourcing basis in FY2014 and beyond.

Soil and Groundwater-related Measures

In 1997, Toyota completed the implementation of measures to prevent outflow of groundwater at six production plants. Toyota is continuing groundwater remediation using pump and aeration treatment and reports on the levels of trichloroethylene to the government as well as to local councils in the surrounding communities.

Trichloroethylene Levels

Plant	Levels in groundwater
Head Office	Less than 0.002 -1.73
Motomachi	Less than 0.002 - 0.19
Kamigo	Less than 0.002 - 0.17
Takaoka	Less than 0.002 - 0.43
Miyoshi	Less than 0.002 - 0.11
Tsutsumi	Less than 0.002 - 0.38

Environmental standards: 0.03
Unit: mg/liter

Note 1: Measurements are taken at all plants
Note 2: Has not been detected in plants other than those listed
Note 3: The level has a range since each plant includes multiple measurement points

Management: Eco-factory Activities

Eco-factory Activities Implemented at Nine Plants

Toyota continues with Eco-factory activities for plants being newly constructed and converted or expanded on a large scale to ensure that its factories set the highest worldwide standards for environmental consideration and sustainability. Activities include on-site verification of environmental solutions incorporated into each phase—namely planning, engineering, trial production and full-scale operation—and, should a failure be discovered, corrective actions are taken, and the process is re-examined.

Progress in FY2013

Eco-factory activities were continued at a total of nine plants in North America, India, Indonesia, Thailand, Brazil, China and Europe.

Eco-factory Activities

	North America		India	Indonesia	Thailand			Brazil	China			Europe
	TMMMS	TMMAL	TKM No. 2 Plant	TMMIN	TMT Gateway Plant	STM	STM No. 2 Plant	TDB Sorocaba	SFTM Changchun New Plant	TMCAP	GTE	TMMR
Planning stage												
Audits of facility specifications												
On-site audit							14			14	14	
Compliance and risk evaluation		14					15			14	15	
Performance evaluation (CO_2, VOC, etc.)	14								14	15		14

: Performance enhancement projects (from FY2012)
: Implementation completed in FY2013
: Implementation completed by FY2012
Numbers indicate planned year of implementation

Focus: Examples of Plant Environmental Protection Activities

Efforts to Reduce Waste Volume at Honsha Plant

Toyota's Honsha Plant is taking measures at the source to help reduce waste volumes. One of those measures was having another look at the component materials of waste products that were previously difficult to recycle, and asking whether recycling by selling was an option. As a result, the following five items were able to be sold to reduce the volume of waste.

Waste products eligible for recycling by selling

- End-of-life batteries from USPs (Fig. 1)
- Metal scrap deposited in dust collectors (Fig. 2)
- End-of-life small lead acid storage batteries
- Old plastic pallets
- Hydraulic oil discarded when decommissioning production lines

USPs (uninterruptible power supplies) used with computer servers have until now been treated as waste because the batteries and attachments were integrated into a single unit. With the cooperation of recyclers, recycling by selling has been made possible by removing the external case, thereby creating a waste with value. In FY2013, Toyota was able to reduce waste volume by 6.6 tons through this initiative.

Through a similar initiative, the small lead acid storage batteries used in automatic guided vehicles and other equipment were also able to be sold, which also succeeded in reducing waste volume.

Fig. 1. Saleable end-of-life UPS power supplies

Fig. 2. Metal scrap deposited in dust collectors

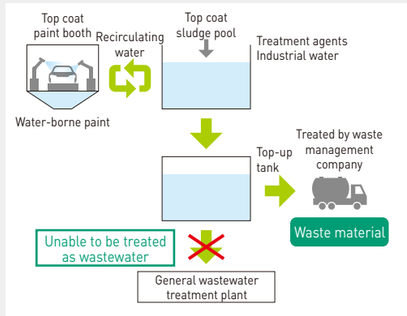
Efforts to Reduce Waste Volume at Motomachi Plant

Toyota's Motomachi Plant produces models such as the Crown and Mark X. The plant has been using water-borne paints in the top coat painting process to help reduce emissions of volatile organic compounds (VOCs), but has now made further improvements to the process as part of its efforts to reduce waste.

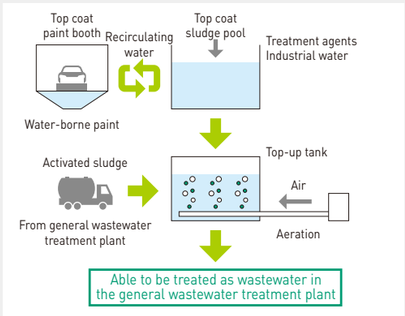
In the top coat paint booth, paint mist that does not adhere to the vehicle body is carried away in recirculating water to be deposited in a top coat sludge pool, which must be periodically cleaned. The waste fluid from cleaning the sludge pool was too concentrated to be treated at the plant's general wastewater treatment plant, so until now treatment was outsourced to waste management companies.

The Motomachi Plant now treats the waste from the top coat sludge pool in a top-up tank containing activated sludge (aerobic microorganisms), which is able to reduce the concentration of contamination by aerating the mixture over an extended period. In this way, the resulting fluid can be treated as wastewater in the plant's general wastewater treatment plant, which has enabled the Motomachi Plant to reduce waste volume from the sediment tank by approximately 500 tons in FY2013.

Before



After



Contribution to a Low Carbon Society

Basic Approach to a Low Carbon Society

The Intergovernmental Panel on Climate Change (IPCC) published its latest Fifth Assessment Report in installments between September 2013 and April 2014, covering scientific assessments, climate change-related impacts, adaptation and vulnerability, and measures to mitigate climate change.

The report states that (1) warming of the climate system is unequivocal, (2) it is virtually certain that the upper ocean has warmed, and (3) it is extremely likely that human activities have been the main cause of the observed warming since the mid-20th century. The impact of global warming is not limited to increases in average temperatures but, as shown in the diagrams, also includes a range of potential risks associated with climate change globally.

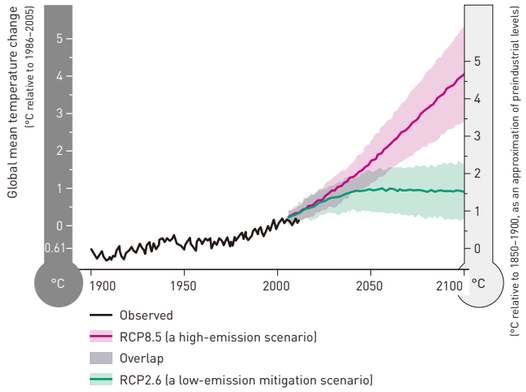
Examples of such weather events are increased frequency of heavy precipitation events and increased maximum wind velocity associated with tropical cyclone activity. Evidence of change is already being felt in Japan, such as sudden downpours causing extensive damage, and record amounts of heavy precipitation.

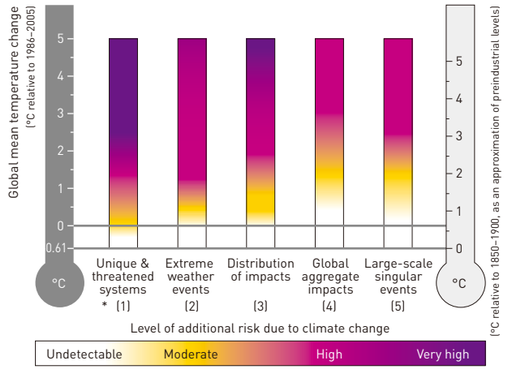
When floods and other natural disasters occur, caused by typhoons and heavy rain thought to be the result of climate change, they have the potential to cause damage or delays to Toyota's business operations, including the procurement of raw materials, parts and other materials for the manufacture of Toyota products in the main markets where Toyota manufactures, distributes and sells products.

Climate change also increases the occurrence of droughts and it impacts biological diversity and agricultural production. To prevent such a situation, the entire world must commit to building a low carbon society with a lower level of CO_2 emissions.

Toyota positions taking action to reduce further global warming as a top priority management issue, and is working to reduce greenhouse gas emissions at all stages of the vehicle lifecycle, including development, design, production, logistics, and sales, as well as in all of Toyota's business areas.

Impacts of Climate Change





* Example of potential risks
(1) Impacts on vulnerable systems (Arctic-sea-ice and coral-reef systems)
(2) Events such as extreme precipitation, extreme heat and coastal flooding
(3) Uneven distribution of impacts in each country and region
(4) Impacts on biodiversity and the overall global economy
(5) Large-scale and irreversible changes (sea level rises due to loss of the Greenland ice sheet, and ecosystem changes)

Source: (Ministry of the Environment, Japan) IPCC, 2014: Summary for Policymakers.
In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*

Toyota's Basic Stance Regarding Issues Related to Energy, Climate Change and Global Warming

Development and Design

- Development of next-generation vehicles focusing on fuel efficiency improvements, and hybrid and plug-in hybrid vehicles

Production

- Promote activities to reduce CO_2 emissions through development and introduction of innovative low CO_2-emitting production technologies, and daily improvement activities
- Utilize renewable energies considering characteristics of each country and/or region
- Management of GHG emissions from sources other than energy sources

Logistics

- Promote CO_2 reduction activities by further improving transport efficiency

Sales

- Conform to the Energy Savings Act and reduce per-unit energy at the annual rate of 1%

Main Initiatives during FY2013

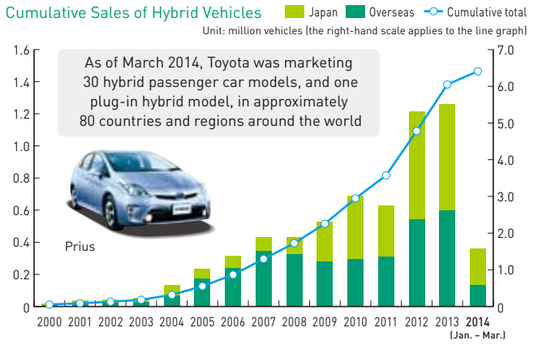
Promoting Development of Next-Generation Cars and Widespread Use of Their Features

Worldwide Sales of Toyota Hybrids Top 6 Million Units

Since launching the Prius—the world's first mass-produced hybrid passenger vehicle—in December 1997, Toyota has received tremendous support from consumers, with cumulative global sales reaching 6.43 million units as of March 31, 2014.

Toyota calculates that as of that date, Toyota hybrid vehicles have resulted in approximately 43 million fewer tons of CO_2 emissions than would have been emitted by gasoline-powered vehicles of similar size and driving performance, and have saved approximately 16 million kiloliters of gasoline compared to the amount used by gasoline-powered vehicles of similar size.

Cumulative Sales of Hybrid Vehicles



Hybrid Vehicle Lineup (as of March 2014)

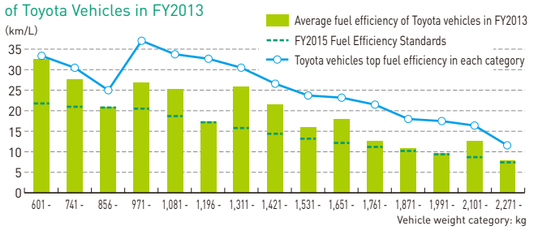
Toyota Brand	
Sedan	Camry Hybrid, Crown Athlete hybrid model, Crown Royal hybrid model, SAI, Prius, Prius PHV, Avalon Hybrid (for overseas markets only), Corolla Axio hybrid model, Crown Majesta
Wagon	Prius α, Corolla Fielder hybrid model
Minivan	Alphard hybrid model, Vellfire hybrid model, Estima Hybrid, Voxy hybrid model, Noah hybrid model
Hatchback/Station wagon	Aqua, Auris Hybrid (for overseas markets only), Yaris Hybrid (for overseas markets only)
SUV	Highlander Hybrid (for overseas markets only), Harrier hybrid model
Commercial	Dyna/Toyoace hybrid models
Lexus Brand	
Sedan	LS600h/LS600hL, GS300h, GS450h, HS250h, IS300h, ES300h (for overseas markets only)
Hatchback/Station wagon	CT200h
SUV	RX450h

Development and Design: Develop Technologies to Achieve the Best Fuel Efficiency Performance and Meet Standards in Each Country and Region

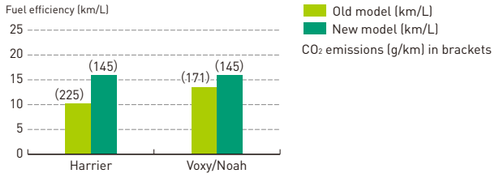
FY2015 Fuel Efficiency Standards Cleared by All 15 Vehicle Weight Categories

- In FY2013, vehicles met the FY2015 fuel efficiency standards in all 15 vehicle weight categories
- In FY2013, new vehicles and fully redesigned models of eight vehicle series met the FY2015 fuel efficiency standards
- Of the vehicles manufactured by Toyota in FY2013, 86 percent achieved the fuel efficiency standards for gasoline-powered passenger vehicles

Achievement of Fuel Efficiency Standards and Actual Fuel Efficiency of Toyota Vehicles in FY2013



Fuel Efficiency Comparison between Selected Old and New Models



Achievement of FY2015 Fuel Efficiency Standards in FY2013

Weight category (vehicle weight: kg)	Fuel efficiency standards (km/L)	FY2013 average fuel efficiency (km/L)	New vehicles and fully redesigned models that met the standards in FY2013
601 - 740	21.8	32.4	
741 - 855	21.0	27.7	
856 - 970	20.8	20.9	
971 - 1,080	20.5	26.9	
1,081 - 1,195	18.7	25.1	Corolla Axio HV, Corolla Fielder HV
1,196 - 1,310	17.2	17.2	
1,311 - 1,420	15.8	25.9	
1,421 - 1,530	14.4	21.4	
1,531 - 1,650	13.2	16.0	Harrier, Voxy/Noah, Voxy/Noah hybrids
1,651 - 1,760	12.2	18.0	IS300h, GS300h, Voxy/Noah, Harrier, Harrier hybrid
1,761 - 1,870	11.1	12.8	GS300h, Crown Majesta, Harrier hybrid
1,871 - 1,990	10.2	10.7	
1,991 - 2,100	9.4	9.8	
2,101 - 2,270	8.7	12.5	
2,271 -	7.4	7.9	

Note 1: ▭ indicates a category that has achieved the Fuel Efficiency Standards
Note 2: Vehicles that achieved the efficiency standards before FY2012 are not included
Note 3: All fuel efficiency values are the average for vehicles that have specification values under the Japanese Ministry of Land, Infrastructure, Transport and Tourism's JC08 test cycle (vehicles that do not have specification values under the JC08 test cycle are not included).

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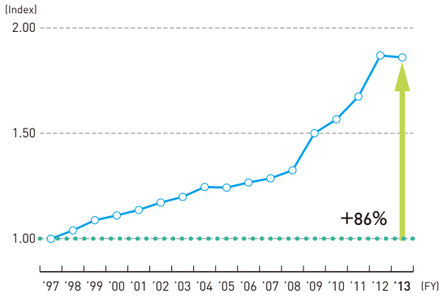
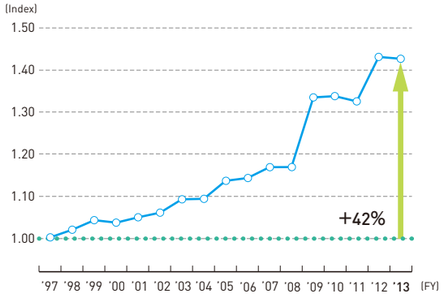
Increase in Average Fuel Efficiency

In FY2013, Toyota worked to promote its hybrid technologies, positioning them as the core technologies necessary for developing various types of eco-cars. In Japan, Toyota launched hybrid versions of the Corolla Axio, Corolla Fielder, and Harrier, as well as the Voxy and Noah, both of which achieved overwhelmingly superior fuel efficiency levels within their class. As of the end of March 2014, Toyota was selling 30 hybrid models in 80 countries and regions around the world, and the number of hybrid vehicles as a percentage of all Toyota vehicles has been increasing, greatly contributing to improvements in its average fuel efficiency. Toyota also took other fuel efficiency improvement measures, such as improving the powertrain efficiency of vehicles equipped with conventional engines. As a result, the average fuel efficiency index of passenger cars in Japan, the United States, and Europe combined reached nearly the same levels as in FY2012, which saw a major improvement in fuel efficiency.

Average Fuel Efficiency of Toyota Vehicles in Japan



Average Fuel Efficiency of Toyota Vehicles in Japan, US, and Europe



Focus

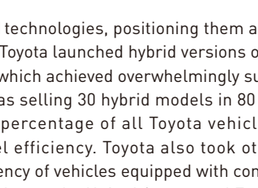
Expanding Hybrid Vehicle Lineup and Developing a Series of Fuel Efficient, High Thermal Efficiency Engines to Promote More Widespread Use of Eco-cars

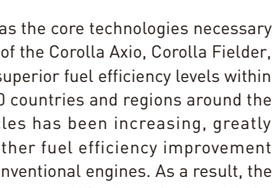
Toyota has been working to promote widespread use of hybrid vehicles because we believe that environment-friendly vehicles can only truly have a positive impact if they are used widely. With the addition of the following six hybrid models launched in FY2013, Toyota was marketing 30 hybrid passenger car models, and one plug-in hybrid model, in approximately 80 countries and regions around the world as of March 2014.

Within the next two years, Toyota will launch a total of 15 new hybrid vehicles worldwide, and will continue augmenting its product lineup even further and increasing the number of countries and regions where it sells hybrid vehicles.

Hybrid Models Launched in FY2013

May 2013	IS300h
Aug. 2013	Corolla Axio/Fielder hybrids
Sep. 2013	Crown Majesta hybrid
Oct. 2013	GS300h
Dec. 2013	Harrier hybrid
Jan. 2014	Voxy/Noah hybrids


Harrier hybrid


Voxy hybrid

Toyota is positioning its hybrid technologies, which contain all the component technologies necessary for development of various eco-cars and which enable the use of different fuel combinations, as core environmental technologies for the 21st century, and is also working to develop other non-hybrid eco-cars.

Specifically, Toyota has employed its Atkinson-cycle engine technology, which had been exclusively used in hybrid models, in its current 1.3-liter engine. It has also boosted the compression ratio from 11.5 to 13.5, while pursuing improved combustion and reduced power loss through electric-powered Variable Valve Timing-intelligent (VVT-i) technology, a cooled Exhaust Gas Recirculation (EGR) system, and a combination of its other accumulated technologies to achieve world-class maximum thermal efficiency for mass-produced gasoline engines of 38 percent. With the new engine installed, the Vitz couples the idling-stop function with other technologies to achieve 15 percent better fuel efficiency than the previous model.

The 1.0-liter gasoline engine incorporates such developments as a new intake port shape to generate tumble flow, a cooled EGR system and a higher compression ratio to achieve maximum thermal efficiency of 37 percent. With the new engine installed, the Passo also couples the idling-stop function with a range of fuel-efficient technologies to achieve up to 30 percent better fuel efficiency than the previous model.

Focus: Example of Toyota Dealer's Environmental Activities

Toyota dealers are also committed to protecting the environment. Yokohama Toyopet is one of those dealers conducting companywide environmental protection activities.

Energy Saving, Energy Generation and Energy Storage—Eco-friendly Showrooms Achieved through Energy Management

Having adopted the environmental policy of "Active participation and contribution to environmental protection activities in the local community," all 80 of Yokohama Toyopet's showrooms acquired ISO 14001 certification in 2007. The company's Shinomiya-Gingaohashi Showroom, opened in Hiratsuka City, Kanagawa Prefecture in September 2008, has been actively involved in environmental initiatives from early on, with CO_2 emission reductions and other environmental effects achieved through plant-covered exterior walls and roof, heat-shielding film applied to the large glass area of the showroom to improve heat insulation, and the resulting improved air-conditioning effect.


Sagamihara-Chuo Showroom opened in January 2014

Yokohama Toyopet is expanding these energy saving measures to its other sales outlets as well, with the Sagamihara-Chuo Showroom opening as its main total eco-friendly showroom in January 2014.

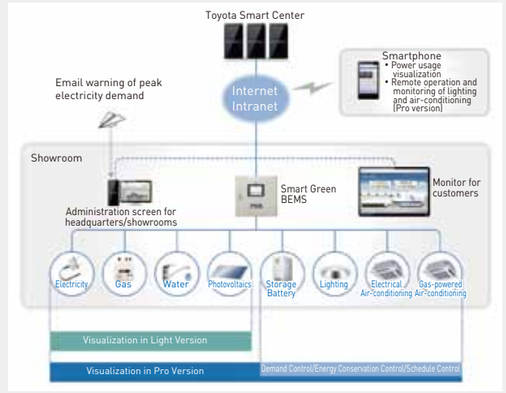
Energy Management Employing Storage Battery System that Recycles End-of-life Nickel-metal Hydride Batteries from Hybrid Vehicles

With photovoltaic panels lining the front wall of the showroom, this sales outlet has a very eye-catching facade that uses a stationary storage battery system, called Smart Green Batteries, that recycles end-of-life batteries from hybrid vehicles. End-of-life batteries from 10 Prius vehicles are used in the storage battery system, with electricity from the system being supplied during periods of peak electricity demand to reduce energy costs.

Electrical usage is made more efficient when combining this system with BEMS (Building Energy Management System), energy efficient air-conditioning and LED lighting, while providing easy-to-understand visualization of power usage inside the showroom also contributes to improving energy efficiency through such things as improved staff awareness and consideration of other measures.

Yokohama Toyopet is helping to create showrooms in harmony with the environment and the community by consuming renewable energy generated locally to reduce CO_2 emissions, and by using Smart Green Batteries to provide an emergency power supply during disasters.

System Overview



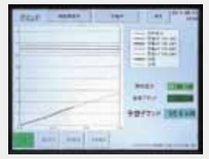
Environmental Considerations

Energy saving	All-LED lighting and energy efficient air-conditioning used at showrooms
Energy generation	Electricity generation through photovoltaic power generation and other renewable energies Use of solar carports for recharging by photovoltaic power (for recharging Prius PHV and electric vehicles)
Energy storage	Generated electricity is stored in Smart Green Batteries for recharging PHVs and EVs and for use as an emergency power supply during disasters
Management	BEMS (Building Energy Management System) enables efficient control of the electrical supply through an understanding and control of the power situation
Greening	Green parking lot using waste bumpers and other materials



Smart Green Batteries recycling end-of-life Prius batteries


Smart Green carport and green parking lot


BEMS system monitor


Monitor for customers

Focus

Responses to Scope 3

Scope 3 is a new standard established to encourage corporations to visualize and account for indirect greenhouse gas emissions from the value chain that occur outside their own company and consolidated companies (purchased goods and services, transportation, business travel, employee commuting, use of sold products, etc.).

Toyota has assessed emissions from 12 of the 15 categories.

Upstream	1	Purchased goods and services	X
	2	Capital goods	√
	3	Fuel- and energy-related activities (not included in scope 1 or scope 2)	√
	4	Upstream transportation and distribution	√
	5	Waste generated in operations	√
	6	Business travel	√
	7	Employee commuting	√
	8	Upstream leased assets	√
Downstream	9	Downstream transportation and distribution	√
	10	Processing of sold products	√
	11	Use of sold products	X
	12	End-of-life treatment of sold products	√
	13	Downstream leased assets	√
	14	Franchises	-
	15	Investments	√

Note: Currently investigating "Purchased goods and services" and "Use of sold products." "Franchises" is not applicable.

Focus

CO_2 Emission Reduction Activities (Energy Saving) of Toyota Motor Hokkaido, Inc.

Aiming to become a leading environmental company, the production, administration and engineering divisions of Toyota Motor Hokkaido, Inc. have united to promote *dantotsu* (overwhelmingly no.1) activities for improving quality and operation rates.

As a result, they have succeeded in reducing CO_2 emissions per unit in FY2013 by 5.3 percent compared with FY2012.

Of particular concern in the north, heating in the winter months generates considerable CO_2 emissions. As one measure to combat this tendency, the company installed its third cogeneration system in FY2013. This enabled them to achieve considerable reductions in CO_2 by reducing the load on boilers that use A-type heavy oil. This has lifted the company's electricity self-sufficiency rate to about 50 percent (Fig. 1), thereby reducing the risk of power supply shortages in both summer and winter. The no-waste system also uses excess steam in summer to generate electricity.

Holding an energy saving month in February each year, the company conducts various awareness activities and events (Fig. 2). The Companywide Energy Saving Presentation is held, whereby selected examples of activities from each division are presented. Employees are able to report the outcomes of their day-to-day improvements to executives, and to share this information across the whole company.

Going forward, everyone will continue to actively participate in activities aimed at becoming a leading environmental company as they work to create the "top local company" trusted by their local community.

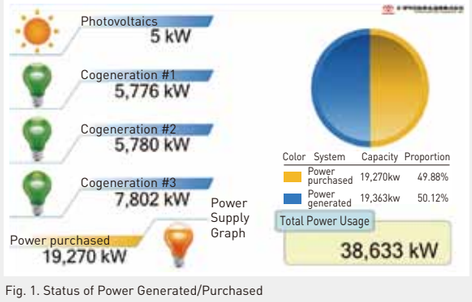


Fig. 1. Status of Power Generated/Purchased

Fig. 2. Companywide Energy Saving Presentation

Production and Logistics: Thoroughly Conduct Activities Aimed at Saving Energy and Reduce the Volume of GHG Emissions in Production Activities

Continuing to Conduct Activities Aimed at Reducing CO_2 Emissions in Production Activities

FY2013 CO_2 emissions reduction goal in the domestic production area: Reduce total CO_2 emissions to 1.29 million tons or less

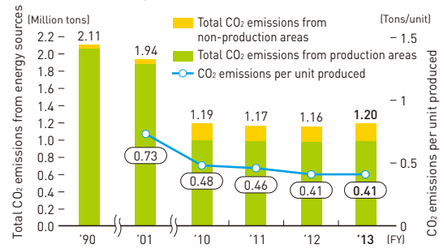
TMC has set CO_2 emissions reduction goals that include both production bases and non-production bases such as offices.

In FY2013, production line consolidation (mainly through process merging and discontinuance of casting and forging lines) and installation of efficient air-conditioning units and chillers produced annual CO_2 emissions of 1.20 million tons (43 percent lower than the FY1990 level), and CO_2 emissions of 0.41 tons per unit produced.

To achieve Toyota's global 5-year plan targets, the latest low-CO_2 production technologies have been adopted in new plants and production lines, while daily activities to reduce CO_2 emissions have been implemented in existing plants.

As a result, in FY2013, CO_2 emissions per unit produced decreased to 0.76 tons (1.6 percent lower than the FY2012 level), however 7.84 million tons of CO_2 emissions were produced from increased production volumes (3.3 percent higher than the FY2012 level).

Trends in Total CO_2 Emissions from Energy Sources and CO_2 Emissions per Unit Produced at TMC*



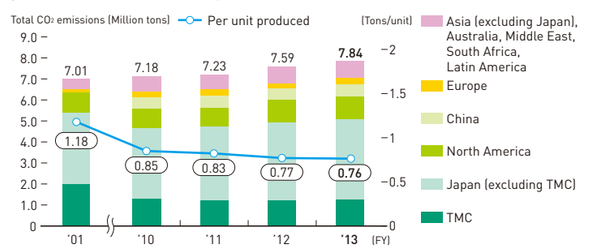
* Toyota Motor Corporation

Note 1: For facilities in non-production areas for which FY1990 emissions data is not available, the oldest subsequent data available is used for the graph.

Note 2: Until FY2011, the total CO_2 emissions volume included emissions from production and non-production divisions (excluding the Toyota Biotechnology & Afforestation Laboratory and employee benefit facilities). Beginning in FY2012, the Laboratory was included as a non-production division.

Note 3: The CO_2 emissions were calculated using the Nippon Keidanren's FY1990 CO_2 conversion coefficient.
For more information on the conversion coefficient, please visit the webpage below: http://www.toyota-global.com/sustainability/environment/data/data28.html (information scheduled to be posted in October)

Trends in Global CO_2 Emissions (from Energy Sources) and CO_2 Emissions per Unit Produced (Stationary Sources such as Plants and Offices)

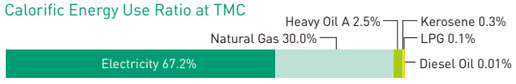


* 120 companies (TMC, consolidated subsidiaries and other companies in Japan and overseas)
Japan: Companies listed in Groups 1-5 on page 11 (including sub-subsidiaries; excluding Toyota Tsusho)
Overseas: Production companies and production/sales companies listed on page 11 (excluding TMCAP in China)

Note 1: Companies for which FY2001 emissions volumes could not be determined, the oldest subsequent data is used

Note 2: The CO_2 emissions were calculated using the Greenhouse Gas (GHG) Protocol CO_2 conversion coefficient. Please visit the webpage below: http://www.toyota-global.com/sustainability/environment/data/data28.html (information scheduled to be posted in October)

Calorific Energy Use Ratio at TMC



Promoting the Use of Renewable Energy

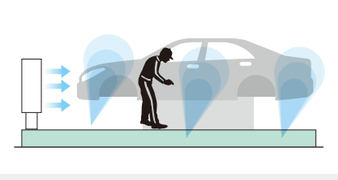
In March 2008, the Toyota Tsutsumi Plant installed a photovoltaic system rated at 2,000 kW (sufficient to provide power for some 500 households). During FY2013, the system generated 2,120 MWh of electricity.

Focus: Example of Plant Energy Saving Activities

CO_2 Emissions Reduced through Energy Saving Activities Reviewing Air-conditioning Methods

In the automobile production process, air-conditioning of the automobile assembly line accounts for as much as 50 percent of energy usage because of the many workers manually assembling parts. Plants are normally air-conditioned through ceiling ducts, but this time a more efficient air-conditioning method using stratified air conditioning with floor-level ducting was used to blow cool or warm air from close to the workers and thereby reduce the energy needed for air-conditioning. A production line with electric air-conditioning, instead of the steam air-conditioning system that suffers from high energy loss, was also installed to save energy, which is projected to result in approximately 40 percent lower CO_2 emissions than the previous production line. These changes will continue being implemented in-house as needed to pursue further reductions in CO_2 emissions.

Illustration of stratified air conditioning with floor-level ducting



Production and Logistics: Pursue Increased Transport Efficiency and Reduce CO_2 Emissions in Logistics Activities

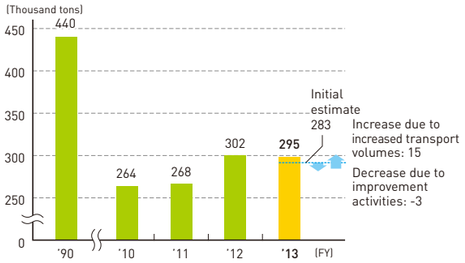
Continuing to Conduct Activities Aimed at Reducing CO_2 Emissions

FY2013 CO_2 emissions reduction goal in the logistics area: Reduce CO_2 emissions to 280,000 tons or less

In FY2013, TMC implemented various initiatives, including activities to increase the loading efficiency of trucks, modal shifts, and ongoing fuel-efficiency improvement activities with logistics partners.

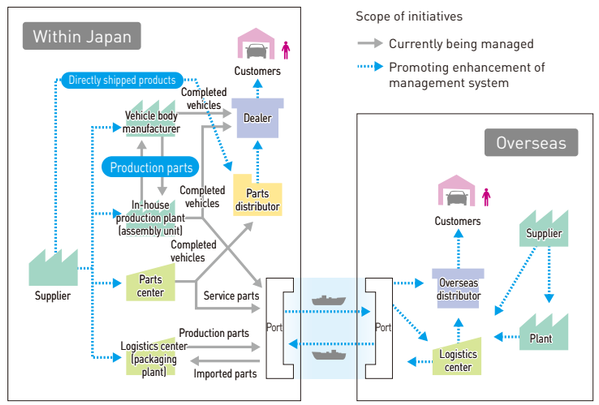
Through these activities, CO_2 emissions from logistics operations were reduced by 3,000 tons, but an increase in production volume from the initial plan contributed to total CO_2 emissions of 295,000 tons. CO_2 emissions per ton-kilometer (the transport of one ton of goods over a distance of one kilometer) were 105.0g- CO_2/tkm.

Trends in CO_2 Emissions from TMC Logistics Operations (Japan)

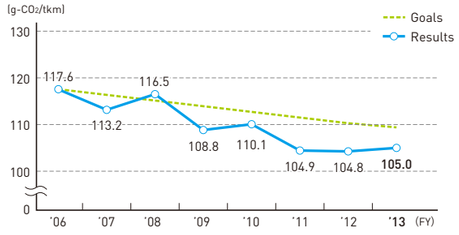


Note: The CO_2 conversion coefficient was calculated based on the "Guidelines on Disclosure of CO_2 Emissions from Transportation & Distribution (version 3.0)" issued by the Japanese Ministry of Economy, Trade and Industry and the Ministry of Land, Infrastructure, Transport and Tourism, etc. For more information on the conversion coefficient, please visit the webpage below:
http://www.toyota-global.com/sustainability/environment/data/data28.html (information scheduled to be posted in October)

Scope of CO_2 Emissions Calculations from TMC Logistics Operations



Trends in CO_2 Emissions per Ton-kilometer from TMC Logistics Operations (Japan)



Results of Activities to Reduce CO_2 Emissions

Improvement item	Product	Details of activity	Reduction volume (thousand tons)
Reduction in total transport distance	Completed vehicles	Reviewed shipping routes, increased the number of vehicles loaded	2.1
	Production parts	Enhanced the loading efficiency of trucks, increased container filling rate, etc.	0.7
	Service parts	Reviewed allocation of vehicles and delivery routes, increased loading efficiency, etc.	0.3
Total			3.1

Assessment of CO_2 Emissions and Implementation of Reduction Activities Worldwide

In FY2007, Toyota began activities to assess CO_2 emissions from worksites worldwide. Reduction targets were set for each country and region based on global guidelines disclosed in FY2013, and activities are being implemented.

Focus: Example of Reductions in CO_2 Emissions in the Logistics Area

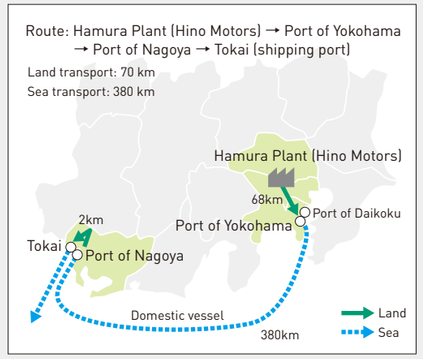
Change of Shipping Port (Tokai to Daikoku) for Hamura Automobiles Bound for Saudi Arabia

Automobiles produced at the Hamura Plant that are bound for Saudi Arabia were previously exported from the Port of Tokai in the Tokai area, but following the approach of shipping directly from the place of manufacture, the shipping port was changed to Daikoku Pier in Yokohama. Without having to transport the vehicles to the Port of Tokai, lead time is reduced by 2.4 days and transshipment requirements are reduced, which reduces the number of times the cars are handled by five times each and also contributes to overall quality.

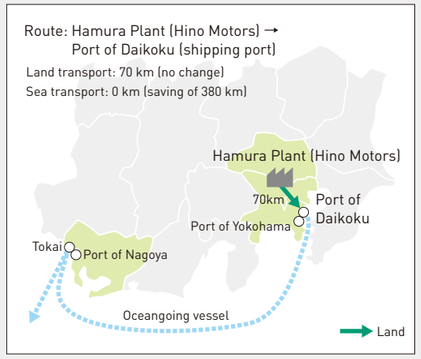
One secondary effect of this change is that the shipments do not have to pass through the busy ports of Yokohama and Nagoya, so space at those ports can be used for other purposes. The result is a benefit to the environment of 346 tons fewer CO_2 emissions during FY2013. From the risk management perspective as well, this is expected to achieve change from overconcentration of exports from the one area of Central Japan to a more decentralized approach, which Toyota will expand upon going forward.

(Refer to the maps below)

Before improvement



After improvement



Review of Kyushu ⇔ Chubu ⇔ Kanto Shipping Routes

Located centrally on the coast of the Seto Inland Sea, the Port of Mizushima acts as the port for Okayama. Only small vessels are able to call into this port, so the Port of Tamashima was constructed nearby for access by large vessels. Toyota took this opportunity to review its Kyushu/Chubu/Kanto shipping routes centered on the Seto Inland Sea.

As a result, the route between Kyushu and Chubu in particular was simplified and ports-of-call reduced, at the same time as consolidating freight from other shipping routes onto this route. This improvement allowed the Pacific shipping routes to be avoided and enabled greater use of Toyota's own ships, which reduced CO_2 emissions by 1,070 tons in FY2013.

(Refer to the results below)

Before improvement

1. Port of Mizushima used (access by small vessels only)
2. Motomachi Plant → Port of Jinno → Mizushima (Okayama)
3. Non-Toyota ships used for Toyota Motor Kyushu production bound for Kansai
4. Use of ocean shipping routes south of Shikoku

After improvement

1. Port of Mizushima changed to Port of Tamashima allowing use of large vessels
   Simplification of ship allocation patterns
2. Motomachi Plant → Port of Nagoya → Port of Tamashima (reduced land transport)
3. Toyota ships used for Toyota Motor Kyushu production bound for Kansai
4. Avoiding ocean shipping routes and moving back-and-forth through the Seto Inland Sea enabled improved fuel efficiency

Fun to Eco-Drive Project Encourages People to Enjoy Driving in Environmentally Considerate Ways

The majority of total energy use and CO_2 emissions in the vehicle lifecycle occur during the use stage. There are big differences in the degree to which vehicles achieve their inherent environmental performance because of the way each person drives those vehicles, so awareness of "eco-driving" is an important issue. Eco-driving has the effect of reducing CO_2 emissions through improved fuel efficiency, while it also contributes to fewer traffic accidents.

Against this background, the Eco-Drive Promotion Liaison Committee (National Police Agency, Ministry of Land, Infrastructure, Transport and Tourism, and Ministry of Environment) put forward ten concrete action goals to enable anyone to quickly begin driving in environmentally considerate ways.

10 Tips for Fuel-Conserving Eco-Driving

1 Accelerate gently.	2 Maintain a steady speed and keep your distance.
3 Slow down by releasing the accelerator.	4 Make appropriate use of your air conditioner.
5 Don't warm up or idle your engine.	6 Plan your itinerary to avoid congested routes.
7 Check your tire pressure regularly.	8 Reduce your load.
9 Respect parking rules and regulations.	10 Check the readings on your fuel efficiency-monitoring equipment.

In October 2013, Toyota launched the Fun to Eco-Drive project to encourage people to enjoy driving in environmentally considerate ways. Implementation is based on an ongoing, medium- to long-term perspective.

Overview

In October 2013, Toyota started the Fun to Eco-drive Project, designed as a fun way to help customers learn eco-driving techniques. The Project, which is also linked to the eco-driving initiatives being promoted by the Ministry of the Environment and the Japan Automobile Manufacturers Association, began offering eco test drives in FY2014 in preparation for a full-scale nationwide debut. Held simultaneously with fun, hands-on events such as the Driving Kids Festival and GAZOO Racing, the Fun to Eco-drive Project aims to widely promote eco driving throughout society. The Project hired racer Kazuki Nakajima as the eco-driving navigator, who works together with the media to help participating customers experience the joy of eco driving.

Eco test drives are also positioned as a platform for training dealer staff and improve their skill levels by teaching them eco-driving techniques. Eco Drive Advice, a "Hybrid e Service" for Toyota hybrid vehicles, contains know-how unique to Toyota that customers can experience at Toyota dealers nationwide (excluding some dealers and outlets).

Future Initiatives

Through joint initiatives designed for its dealers, such as the experience of eco-driving at the Prius Cup, Toyota aims to firmly establish activities that will support them in continuously communicating the fun and joy of eco-driving to customers. Toyota is also planning to hold other eco drive events under various themes such as *waku-doki*, Safety, Security, and PHV.

Comments from Eco Test Drive Participants

- "The EV-only acceleration was unexpectedly excellent."
- "I had thought that driving a hybrid car would be difficult, but it turned out to be surprisingly simple."
- "Driving a hybrid is a lot of fun once you learn the eco-driving tricks. I want to master them!"
- "I want to test-drive a hybrid again and get a higher score than last time."
- "I already drive an eco car, but this was my first time learning eco-driving techniques. I'm happy to improve the fuel efficiency of my car."

エコドラ
FUN TO ECO-DRIVE.

Defining the Future Mobility Society through WBCSD

The World Business Council for Sustainable Development (WBCSD), headquartered in Geneva, is made up of approximately 200 member companies from a wide range of industries all over the world. It carries out surveys and offers advice based on the three pillars of economic growth, environmental protection and social development in its aim of sustainable development. Following its founding in linkage with the Rio de Janeiro Earth Summit of 1992, the WBCSD has devised an environmental management system (ISO 14000) and the concept of Eco-efficiency, and is considered to be a leading business advocate on sustainable development. As a member since the establishment of the organization, Toyota has taken part in a variety of projects such as the Sustainable Mobility Project. Fifteen participating companies including Toyota launched the WBCSD Sustainable Mobility Project 2.0 (SMP 2.0) in 2013. Six model cities from around the world including a city in Thailand were selected, and roadmaps for the cities based on long-term visions looking ahead to 2050 are being created.

World Business Council for Sustainable Development

Focus

Example of Traffic Congestion Mitigation Measures in Bangkok, Thailand Implemented through the WBCSD

WBCSD Sustainable Mobility Project 2.0 (SMP2.0), of which Toyota serves as a co-chair, divided the world's cities into six categories and in 2014 began drawing up sustainable mobility roadmaps for six cities around the world as demonstrator cities in cooperation with the city governments and related stakeholders in each city.

Toyota served as the lead company for Bangkok, one of the 6 cities, and cooperated with the Thai Ministry of Transport, the Bangkok Metropolitan Administration, police, Thai businesses and other stakeholders, and SMP 2.0 member companies to launch a project with the aim of alleviating traffic congestion by building a multi-modal society, which will link public transportation, cars, and people 5 years and 15 years in the future when Bangkok's elevated railway will be greatly expanded. In 2015, a large-scale social experiment concerning reforming the behavior patterns of municipal residents will be conducted with the aim of formulating a feasible roadmap.

Working in cooperation with Group companies, Toyota is developing a traffic simulation model for Bangkok and will make prior assessments of various measures, playing a leading role in the discussion concerning overall optimization of Bangkok's traffic measures.

WBCSD SMP 2.0 Memorandum of Understanding signing ceremony in Bangkok

Focus

Towards a Next-generation Mobility Society that Will Link Cars, Homes and People

Next-generation mobility society that will lead to greater freedom and happiness for people

The future mobility society, where people will be more connected, will see new transport means and smart centers and networks that provide services anytime, anywhere, enabling people to lead more convenient and efficient lives. Toyota's goal is to help build such a mobility society that will skillfully utilize renewable natural energy, and that will be comfortable for people and environmentally considerate.

EDMS* Optimize Energy Use throughout the Overall Living Area: Linking Cars and Communities with Energy

Overview

As the use of plug-in hybrid vehicles (PHVs), electric vehicles (EVs), and other next-generation eco-cars increases, the need for infrastructure to properly control demand for electric power in conjunction with charging those vehicles will also rise. Toyota is conducting demonstration tests of energy data management systems (EDMS) that supplement electric power with clean energy, limit peak demand, and evening out demand across all times to the greatest extent possible. EDMS forecast solar power generation and regional electricity demand based on projected weather and consumer behavior patterns, and if a shortage of electric power is forecast, recommends that residents limit their energy consumption and provides advice and gives points for their day-to-day activities. This type of flexible power use within the community avoids concentrations of electric usage and reduces carbon emissions from the use of electricity throughout the community.

Progress in FY2013

Toyota conducted development of EDMS as well as peripheral facilities such as home energy management systems (HEMS) and building energy management systems (BEMS) and systems that support collaboration among the various systems, completed installation at the demonstration site, and began demonstration tests intended to achieve optimization of energy used throughout the community. In July 2013, Toyota began conducting demonstration tests of low carbon support systems for PHV use as EDMS services including a game-like application that ranks users on fuel efficiency and electricity consumption and encourages charging.

Ha:mo Low-carbon Transport System: Linking Short Range Transport and Carbon Reductions in Cities

Overview

Starting in October 2013, Toyota expanded the Ha:mo RIDE service to all of Toyota City as planned. In conjunction with the expansion, improvements were made to enhance use including collaboration between multi-modal route guidance and Ha:mo RIDE. Ha:mo RIDE was changed to a fee-based system, the number of stations was increased to 25, and use of 100 vehicles started. As of May 2014, the system has approximately 2,000 members. To address a wide range of mobility needs, Toyota will also introduce four Toyota i-ROAD prototype vehicles that are under development and three prototype "T- COMS" vehicles manufactured by Toyota Auto Body Co., Ltd. that are subject to the Ministry of Land, Infrastructure, Transport and Tourism's ultra-compact mobility certification system.

Progress in FY2013

For further details, see Special Feature 02 (p 03-10) in Sustainability Report 2014.

Vehicle to Home Provides Bidirectional Energy Supply between PHVs and Homes: Linking Cars and Homes with Energy

Overview

Systems that supply electricity from the storage batteries of PHVs and EVs to the home are referred to as vehicle to home (V2H) systems. Vehicle batteries serve as the power source necessary for vehicle operation, but can also be used as a buffer for excess solar power in the home with the aim of supporting maximum utilization of excess power in the home and the community. Another objective is to enable vehicle batteries to serve as emergency power supplies during a disaster, supplying alternating current electricity to household illumination and outlets through the charging stand.

Progress in FY2013

In FY2013, in addition to V2H using PHVs and EVs, Toyota conducted demonstration tests of the Toyota Ecoful Town PR pavilion as an evacuation site by using the external electric power supply system of a fuel cell bus and confirmed maximum supply capacity of 9.8 kW.

section 3

Contribution to a Recycling-based Society

Basic Approach to a Recycling-based Society

The Earth's resources are limited, yet consumption continues to grow as populations increase, emerging nations grow economically and living standards improve.

Of the mineral resources required to produce industrial products, there are concerns in particular about the potential near-future depletion of some of the unevenly distributed rare metals and other resources essential for the production of auto parts, with price volatility linked to social trends. Additionally, the increasing production of agricultural produce accompanying population growth is driving up water usage, which some say is the No. 1 strategic resource of the twenty-first century. In developing nations, population growth in particular is causing shortages of safe water supplies.

The other side of the resources problem is the issue of waste. Proceeding with source reduction measures to make more effective use of resources can reduce waste. Currently however, there is a shortage of treatment plants, while illegal dumping, transboundary movement of hazardous waste and other issues are occurring, and countries around the world are therefore facing a range of problems. Various initiatives are required to solve this waste problem, including the 3Rs (Reduce, Reuse, and Recycle) initiative for resources, and appropriate disposal of waste.

Since the 1970s, Toyota has been taking initiatives toward developing methods of effectively recycling the earth's limited resources embedded in end-of-life vehicles, rather than simply discarding them. These initiatives have now expanded to include not only the disposal stage, but also the vehicle design stage and the entire vehicle lifecycle, and have resulted in the building of a vehicle-to-vehicle recycling value chain, a model recycling-based social system in Japan. Furthermore, in response to the recent expansion in sales of its hybrid vehicles, Toyota has already developed several world-first initiatives, including establishing a battery-to-battery recycling network for end-of-life batteries—which are expected to increase in volume in the future—and a vehicle-to-vehicle recycling system and efficient dismantling technologies for the magnets containing neodymium, dysprosium and other rare-earth metals. In this way, Toyota will continue promoting cutting-edge initiatives in the field of resource recycling as well.

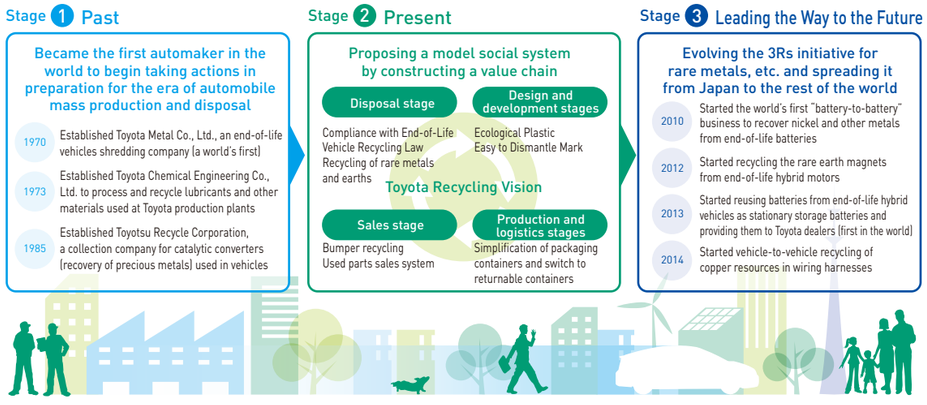
Reserves of Non-Ferrous Metals and Major Producing Countries

Resource	Major resource producing countries (2009)						Total share of top 3 countries
	1st		2nd		3rd		
Rare Earth	China	97%	India	2%	Brazil	0.5%	99%
Vanadium	China	37%	South Africa	35%	Russia	26%	98%
Platinum	South Africa	79%	Russia	11%	Zimbabwe	3%	93%
Tungsten	China	81%	Russia	4%	Canada	3%	88%
Molybdenum	China	39%	United States	25%	Chile	16%	80%
Lithium	Chile	41%	Australia	24%	China	13%	78%
Indium*	China	50%	Korea	14%	Japan	10%	74%
Cobalt	DR Congo	40%	Australia	10%	China	10%	60%
Manganese	China	25%	Australia	17%	South Africa	14%	56%
Nickel	Russia	19%	Canada	13%	Indonesia	13%	45%

* Indium is not measured as the amount of mineral ore production, but as the amount of unprocessed indium produced as a by-product.

Source: Annual Report on the Environment, the Sound Material-Cycle society and the Biodiversity in Japan 2012

Medium- to Long-term 3Rs (Reduce, Reuse, and Recycle) Initiative Focused on End-of-life Vehicles



Main Initiatives during FY2013

Design and Development: Further Promotion of Design for Recycling to Encourage Effective Use of Resources

Incorporating Initiatives to Improve Vehicle Dismantlability into Designs

To promote resource recycling for end-of-life vehicles, Toyota has developed structural designs that make it easy to dismantle and separate parts, based on surveys of actual conditions at dismantling companies, and is actively adopting these designs for new models.

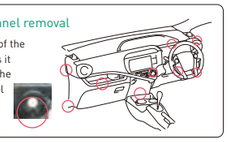
Examples of Easy to Dismantle Vehicle Parts

Use of the Easy to Dismantle Mark

Easy to Dismantle marks are added to show key points for dismantling tasks.

Instrument panel removal

The installation of the V grooves makes it easy to remove the instrument panel by pulling it strongly.

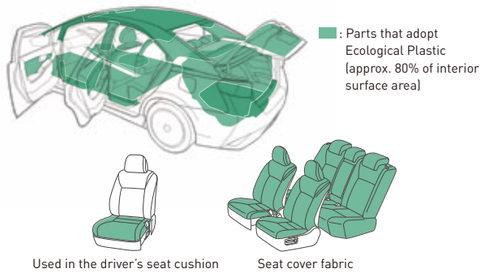


Development and Utilization of Plant-derived Ecological Plastic

Toyota has developed Ecological Plastic*, a plastic derived from plant material, for the world's first automotive application.

As a result, Toyota successfully used Ecological Plastic to cover 80 percent of the total interior surface area of the new SAI model launched in August 2013. Toyota also used recycled plastic materials extensively in the SAI, thereby achieving the goal of its Toyota Recycle Vision—establish a technology that enables 20 percent usage of ecological plastics and recycled resin materials in resin parts by 2015—ahead of schedule.

* This type of plastic is derived from plants that absorb CO_2 while growing. Its usage eliminates the CO_2 emitted during petroleum resource drilling and helps reduce the usage of petroleum resources.



Production and Logistics: Reduce the Waste Volume and Use Resources Effectively in Production and Logistics Stages

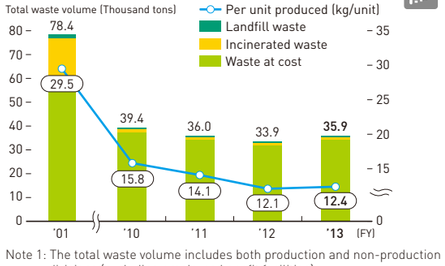
Continuing to Conduct Activities Aimed at Reducing Waste Volume

FY2013 goal in the domestic production area: Reduce waste volume to 43,000 tons or less

In FY2013, TMC continued implementing waste reduction measures such as sludge volume reduction, but because of increased production, new production lines and other factors, the total waste volume was 36,000 tons, for a 5.9 percent increase from the previous fiscal year. The waste volume per unit produced was 12.4 kg, up by 2.6 percent compared to FY2012.

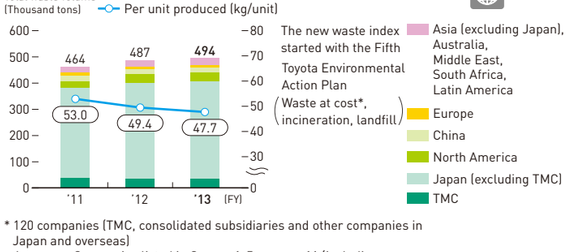
On the global level, Toyota is engaging in waste reduction activities, including reuse of materials within processes and the introduction of recycling by selling, at plants throughout the world. In FY2013, waste volume per unit produced was 47.7 kg (3.4 percent lower than the FY2012 level), however, as a result of increased production and other factors, 494,000 tons of waste volume were produced (1.4 percent higher than the FY2012 level).

Total Waste Volume and Waste Volume Per Unit Produced at TMC



Note 1: The total waste volume includes both production and non-production divisions (excluding employee benefit facilities)
Note 2: The total waste volume in production divisions covers the waste generated as a result of production activities
Note 3: Waste at cost: Waste that is recycled for a fee
Note 4: Errors in the figures disclosed in FY2012 have been corrected

Global Waste Volumes and Waste Volume per Unit Produced



* 120 companies (TMC, consolidated subsidiaries and other companies in Japan and overseas)
Japan: Companies listed in Groups 1-5 on page 11 (including sub-subsidiaries; excluding Toyota Tsusho)
Overseas: Production companies and production/sales companies listed on page 11 (excluding TMCAP in China)

* Waste that is recycled for a fee

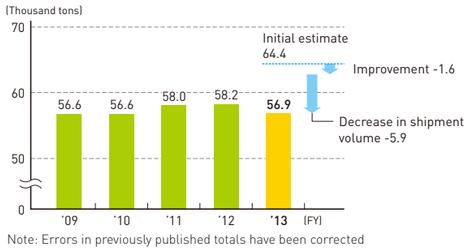
Continuing to Conduct Activities Aimed at Reducing Packaging and Wrapping Material Use

FY2013 goals in the logistics area: Reduce usage of packaging and wrapping materials to 63,100 tons or less

In order to reduce the use of packaging and wrapping materials, TMC continued implementing measures that included simplifying wrapping specifications and expanding the use of returnable shipping containers. As a result of these measures, usage decreased by 1,600 tons. Together with the impact of a decrease in shipment volume and other factors, total usage was reduced to 56,900 tons. Usage of packaging and wrapping material per shipment unit was 7.03 kg/m³.

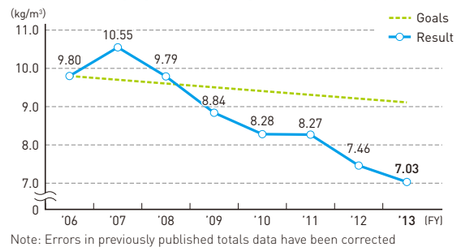
In FY2008, TMC began implementing measures to grasp the usage volume of packaging and wrapping material at affiliates worldwide. Assessments for all regions, excluding North America, have almost been completed. Because it has been difficult to assess the usage at suppliers in North America, TMC is currently reviewing the assessment method.

Usage of Packaging and Wrapping Materials by TMC (Japan)



Note: Errors in previously published totals have been corrected

Usage of Packaging and Wrapping Material per Shipment Unit by TMC (Japan)



Note: Errors in previously published totals data have been corrected

Results of Activities to Reduce Usage of Packaging and Wrapping Material

Improvement item	Products	Main details of activity	Reduction volume (thousand tons)
Simplification of specifications	Service parts	Changing packaging specifications, reuse etc.	0.8
		Increasing lean specifications for wrapping	0.2
	Production parts	Improvement of parts quantity per box, simplification of packaging specifications	0.1
Use of returnable containers	Service parts	Expanding the use of returnable containers (increased number of items)	0.5
Total			1.6

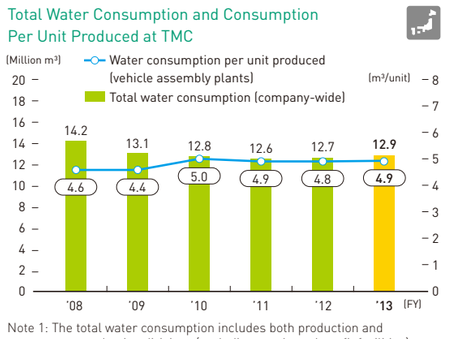
Continuing to Conduct Activities Aimed at Reducing Water Consumption

TMC continued activities to reduce water consumption in FY2013, but because of increased production, the launch of a new production line, and other factors, the total water consumption was 12.9 million m³ (an increase of 1.6 percent from FY2012). Water consumption per unit produced was 4.9 m³, an increase of 1.9 percent from FY2012.

On the global level, Toyota is setting individual goals for affiliates worldwide, taking into account the situation with the water environment in each region. In FY2013, Toyota continued efforts to reduce water consumption in line with the actual conditions at each company, employing initiatives from steady water-saving measures to reuse of wastewater.

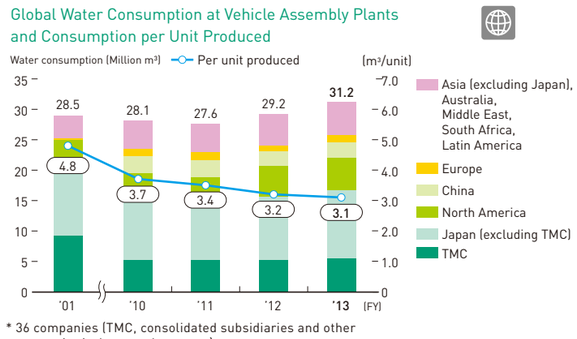
As a result, water consumption per unit produced was 3.1 m³ (a decrease of 3.7 percent from FY2012), however, because of increased production and the addition of companies to the scope of calculation, total water consumption was 31.2 million m³ (an increase of 6.9 percent from FY2012).

Total Water Consumption and Consumption Per Unit Produced at TMC



Note 1: The total water consumption includes both production and non-production divisions (excluding employee benefit facilities)
Note 2: Water consumption per unit produced indicates the consumption per unit produced at vehicle assembly plants

Global Water Consumption at Vehicle Assembly Plants and Consumption per Unit Produced



* 36 companies (TMC, consolidated subsidiaries and other companies in Japan and overseas)
* Companies added to the scope of calculation in FY2013

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Focus

Promotion of Water Savings, Forming a North American Water Group

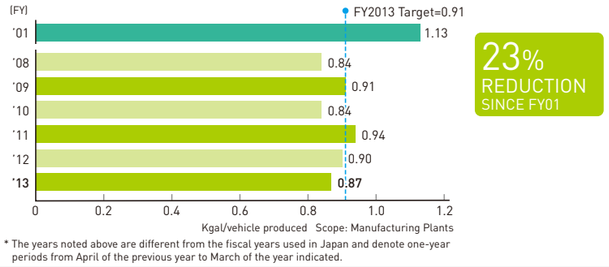
There is growing concern about the availability of sufficient fresh water to meet people's needs in the coming decades. In North America, we are concerned with the declining quality of fresh water sources and scarcity during droughts. Water issues concern a growing number of communities, and many of our North American manufacturing sites have experienced water-related stresses firsthand. For example, at our Georgetown, Kentucky, assembly plant, drought conditions have led to restrictions on water use.

Toyota globally considers water to be a high-priority environmental issue. Effective water management requires consideration of many factors, such as the volume of water used, discharged, recycled and reused, the quality of the water we discharge, and stormwater management. To help us manage these issues, we formed a North American Water Group to develop a water strategy and set targets.

Our water management strategy addresses each level in the water conservation pyramid—Reduce, Reuse and Recycle. Reduce is the foundation, providing the most opportunities for improvement at the lowest cost. It is the fundamental first step in water management. The middle level, Reuse, maximizes the value of the water used. At the top of pyramid is Recycling, the most costly and difficult to implement. Innovation is needed to make recycling a more viable option than it currently is.

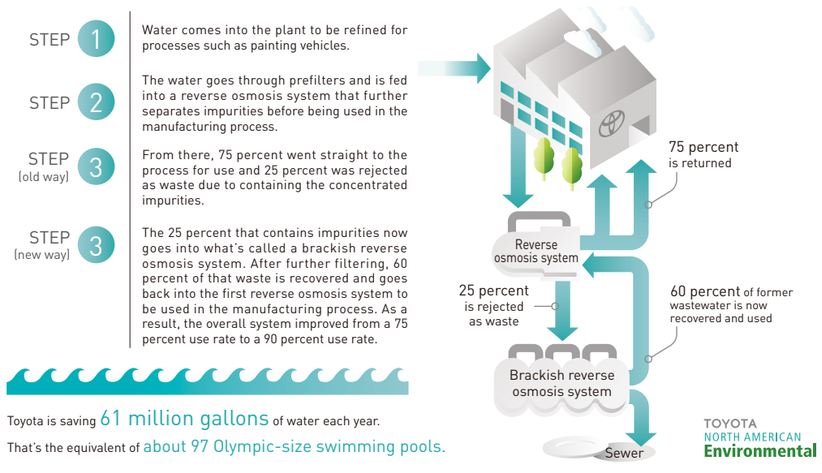
Toyota's manufacturing plants had a fiscal year 2013 target to reduce water usage from our 2012 target level of 0.92 kilogallons/vehicle, to 0.91 kilogallons per vehicle. We achieved this target and reduced water usage by three percent, to 0.87 kilogallons per vehicle. At Toyota, we are saving over 61 million gallons of water each year by implementing reverse osmosis concentrate recovery systems. That's the equivalent of about 97 Olympic-size swimming pools, 61 million gallons that we don't have to withdraw from an aquifer or buy from a utility. These systems are being shared and transferred through *yokoten* from one plant to the next, and each time, it gets better and better. They are in place at our plants in Cambridge, Ontario; Princeton, Indiana; Georgetown, Kentucky; and Tecate, Mexico.

Trends in Water Consumption Per Unit Produced at North American Manufacturing Plants



* The years noted above are different from the fiscal years used in Japan and denote one-year periods from April of the previous year to March of the year indicated.

How the Reverse Osmosis Concentration Recovery System Works



Focus

Reduction of Wastewater Discharge into the Environment (Toyota Samrong Plant)

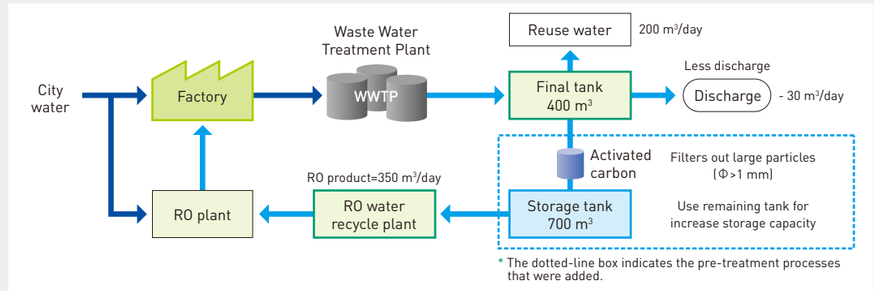
The Samrong Plant of Toyota Motor Thailand Co., Ltd. (TMT) is aware of environmental problems and cooperated with the Marine Department in an effort to reduce wastewater discharge into the environment through the project called "Zero Discharge."

This was accomplished through treatment of the wastewater, which can then be reused in the plant. As a result, effects on the environment have been lessened and water resource has been consumed less. Therefore, the company has established this as a policy in order to achieve the target systematically from the beginning of the project to present as well as the future to achieve "Zero Discharge"

In November 2012, Maintenance and Utility sections improved on the process of water recycling by increasing steps in the pre-treatment process before the water goes to RO (Reverse Osmosis) Recycle machine to filter out the particles of suspended matters. Consequently, the membrane is less burdened before the water enters the RO recycle. Moreover, there has been an increase in the 700 m^3 water drums to prepare water for the RO recycle system in order to increase the period of microbes killing by chlorine and enhance water capacity, thereby maximizing the water recycling capacity.

As a result, wastewater discharge was reduced from approximately 13,596 m^3 per month (Apr.-Oct.2012) to approximately 1,235 m^3 per month (Nov.2012-Mar. 2013), or a decline of 91%. In addition, tap water consumption for RO production was reduced from approximately 16,195 m^3 per month (Apr.-Oct. 2012) to approximately 7,934 m^3 per month (Nov. 2012-Mar. 2013), or a decline of 51%.

Waste Water Treatment Plant (WWTP) System Improvement at RO Recycle (Install Pretreatment System by Carbon Filtration & Storage Tank)



Focus

Reducing Water Consumption by Proactively Promoting Reuse and Optimal Use

Toyota Kirloskar Motor (TKM)'s manufacturing units get their supply of water from Karnataka Industrial Area Development Board (KIADB), catered by River Kaveri. TKM does not depend on any other source for its water demand.

Water and wastewater handling systems, take utmost care in conserving the precious natural resource—water. We are proactively promoting reuse and optimal use of water.

The state-of-the-art Combined Effluent Treatment Plant (CEPT) is equipped with MBR (Membrane Bio-Reactor) and Reverse Osmosis for enhancing the re-usability of the water. Thus, TKM has been able to recycle 60 percent of the treated wastewater back to the process, at the same time reducing its freshwater consumption by 60 percent.

Reverse osmosis unit

Steps Taken to Strengthen Water Management:

- Establishment of water and wastewater *Ohbeya* to enhance the water management
- Pursuing *Kaizen*-led ideas & enhancing Team Members skill through establishment of Energy & resources *doujou* [*kaizen* idea demonstration centre]
- Affiliate benchmarking to gather best practices in water reduction
- Review involving cross functional teams and top management

Water Consumption

Sales and Recycling: Strengthen Measures to Promote the Effective Use of Resources

Steady Progress in Recycling at Dealers and Parts Distributors

Promoting the collection and recycling of damaged and removed parts

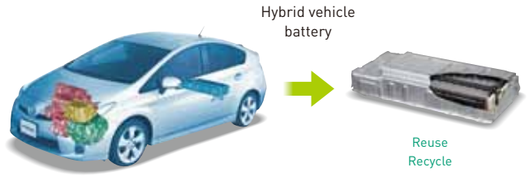
Toyota dealers and parts distributors nationwide are promoting recycling as much as possible in their use stage of vehicles through initiatives including the collection of damaged and removed parts such as bumpers and lead from wheel balance weights, using tanker trucks in order to reduce drums for transporting oil and promoting the sales of used parts.

Damaged and removed bumpers collected by parts distributors

Promoting the Recycling of End-of-life Batteries

Since launching the Prius—the world's first mass-produced hybrid passenger vehicle—in December 1997, Toyota has built its own recovery network to collect end-of-life hybrid vehicle (HV) batteries to be recycled. As of March 31, 2014, Toyota has collected approximately 32,000 end-of-life HV batteries and is recycling all of them. HV batteries contain precious resources such as nickel, cobalt, and rare earth elements. Toyota is developing the world's first vehicle-to-vehicle recycling technologies to enable these precious resources to be reused in new batteries.

Because it is expected that tens of thousands of end-of-life HV batteries will be generated by the middle of the 2020s, Toyota has also developed the world's first technologies for reusing those HV batteries. The batteries are reused as replacement batteries or as stationary storage batteries in photovoltaic power generation systems. Toyota further plans to promote the skillful reuse of batteries from end-of-life vehicles as part of measures to utilize renewable energy in an environmentally considerate manner. When even these reused batteries finally reach the end of their use cycle, their metal parts are recycled into new batteries again.



STEP1
Reusing HV batteries as replacement Prius batteries

STEP2
Reusing HV batteries as batteries in photovoltaic power generation systems

* See "Focus: Example of Toyota Dealer's Environmental Activities" on page 20 for more information

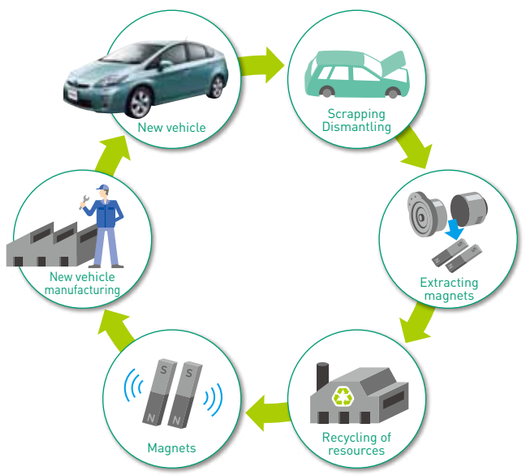
STEP3
Recycling of rare metals and rare earth elements

Recovery of Neodymium and Dysprosium from HV Motors

Neodymium and dysprosium, two types of rare-earth elements, are used to make magnets. Toyota is working on the research and development of a motor that uses as little as possible of these rare-earth elements and is also developing vehicle-to-vehicle recycling technologies. It is collaborating with magnet manufacturers to launch a world-first recycling system for extracting neodymium and dysprosium from end-of-life HV motors to be reprocessed back into new magnets.

In FY2012 and FY2013, Toyota affiliates Toyota Metal Co., Ltd. and Toyotsu Recycle Corporation received support from the New Energy and Industrial Technology Development Organization to conduct a verification project. It has now installed equipment for separating magnets from motors and has developed related recycling technologies.

Toyota's Goal of Magnets Vehicle-to-Vehicle Recycling



Vehicle-to-vehicle Recycling of Copper Resources in Wiring Harnesses

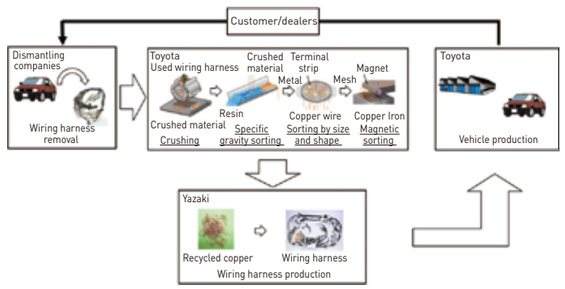
Copper is used in power transmission and other wiring, but roughly 40 years' worth of mineable copper resources remain worldwide and demand for wiring in emerging nations is increasing. In addition, large amounts of copper are used in the motors of hybrid and other next-generation vehicles, which are expected to become increasingly popular going forward. For these reasons, recycling the copper used in wiring harnesses has become a critical issue for the automotive industry. Toyota has therefore collaborated with Yazaki Corporation, Toyota Tsusho Corporation and eight of Toyota Tsusho's dismantling partners in the Chubu region of Japan to develop vehicle-to-vehicle recycling technologies.

Wiring harnesses removed from end-of-life vehicles contain impurities such as fuse boxes and other components, so it has not previously been possible to recycle them into new wire harnesses using mechanical sorting methods. By collaborating with dismantling companies, in 2011 Toyota developed the world's first mechanical sorting method that can prevent contamination from minute impurities. Trial production involving small amounts of recycled copper began at Toyota's Honsha Plant in 2013, with the prospect of being able to stably produce copper with a purity of 99.96 percent being evident in March 2014.

The Eight Dismantling Companies in the Chubu Region of Japan (in random order)

Company name	Location
New Iwata Corporation	Ichinomiya City, Aichi Prefecture
Johoku Jidosya Kogyo Co., Ltd.	Kasugai City, Aichi Prefecture
Auto Recycle Sanri	Toyota City, Aichi Prefecture
Morita Sharyo Corporation	Handa City, Aichi Prefecture
Yamauchi Shouten Co., Ltd.	Inazawa City, Aichi Prefecture
Kawaguchi Shouten Co., Ltd.	Okazaki City, Aichi Prefecture
Kobayashi-shouten Inc.	Tsu City, Mie Prefecture
Marudai Sangyo Corporation	Ina City, Nagano Prefecture

Vehicle-to-vehicle Copper Recycling for Wiring Harnesses



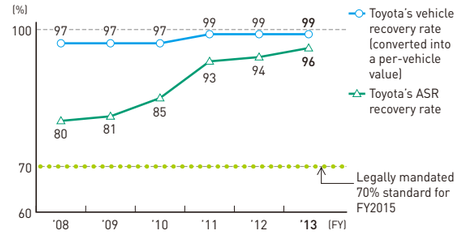
Sales and Recycling: Promote Compliance with End-of-life Vehicle Recycling Laws and Regulations Worldwide

Ensuring Compliance with the End-of-life Vehicle Recycling Law in Japan

Toyota has been steadily working with dismantling and recycling companies to ensure compliance with the Japanese End-of-life Vehicle (ELV) Recycling Law that went into effect in January 2005. Toyota collects and treats CFCs/HFCs, recycles/recovers airbags and automobile shredder residue (ASR[1]) from end-of-life vehicles.

In FY2013, the ASR recycling rate was 96 percent, and the vehicle recycling rate, converted into a per-vehicle value, reached 99 percent[2] exceeding the Toyota Recycling Vision goal of 95 percent.

Toyota's Vehicle Recovery Rate[2] and ASR Recovery Rate in Japan



1 Residue after vehicles are shredded
2 Calculated by adding to the percentage recycled and recovered up to the dismantling and shredding processes (approximately 83%, quoted from the April 2003 joint council report) the remaining ASR rate of 17% × ASR recovering rate of 96%

Compliance with End-of-life Vehicle Recycling Laws Overseas

All EU member states have established vehicle recycling laws based on the EU ELV Directive enacted in 2000, and as of January 2007 automakers started to take back end-of-life vehicles (ELVs) in most member states. In cooperation with Toyota Motor Europe (TME) and distributors in Europe, Toyota completed the construction of ELV collection networks in 28 EU member states.

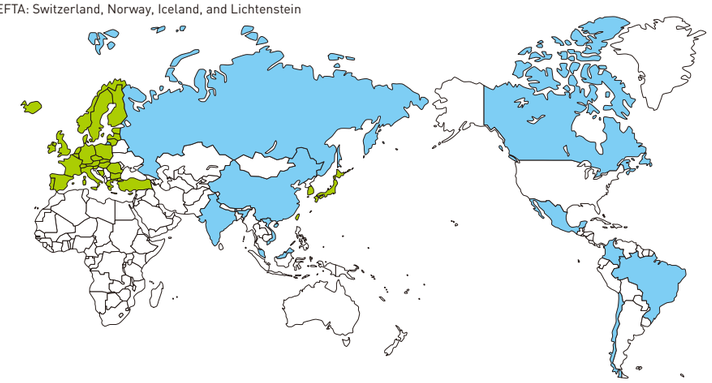
In China, the Recycling Working Group, under the Toyota China Environment Committee, is working closely with local affiliates to promote compliance activities with local automobile recycling laws through measures such as ascertaining regulatory trends and surveying local infrastructure conditions. At the end of February 2014, a plant that received 32 percent of its capital from Toyota Tsusho Group opened in Beijing, with the goal of becoming a model dismantling plant for ELVs in China. This plant receives support such as technical guidance from the Automobile Recycle Technical Center established within Toyota Metal Co., Ltd.

In other countries that are currently considering the introduction of automobile recycling laws, Toyota is implementing necessary responses, including the collection and analysis of relevant information.

Legislation status

Status	Country/region	Legend
Enacted	EU, EFTA*, Japan, Taiwan, South Korea, and Turkey	
Under study	Russia, India, Malaysia, Singapore, Vietnam, China, Canada, Mexico, Brazil, Chile, and Columbia	

* EFTA: Switzerland, Norway, Iceland, and Lichtenstein



Focus

Toyota Honored with Two Awards from the Japanese Government for Reducing, Reusing, and Recycling

In October 2013, Toyota Motor Corporation was honored for its ongoing efforts to promote a sustainable society by reducing, reusing and recycling resources. At the 3Rs (Reduce, Reuse, and Recycle) Awards hosted by the 3Rs Promotion Council, which is supported by the Japanese government, Toyota and Toyota Tsusho Corporation shared the 2013 Prime Minister's Prize. Toyota was one of the first automakers to respond to the implications of mass production and disposal of vehicles. In 1970, Toyota and Toyota Tsusho Corporation founded Toyota Metal Co., Ltd., the first end-of-life vehicle (ELV) shredding plant established by an automaker, with the goal of reducing the impact of ELVs on the global environment. The Toyota Group has remained committed to the responsible disposal of ELVs, and has developed a wide variety of world-first recycling technologies and systems to recover materials.

Collected battery pack

Recovered nickel

As for recycling the hybrid vehicles that have recently been given high priority at Toyota, we are working on developing a world-first technology for recycling the nickel metal hydride batteries as well as motor magnets and other components from end-of-life hybrid vehicles.

Additionally, in an effort to recycle rare metals used in products other than hybrid vehicles, Toyota through collaboration with Sumitomo Electric Industries, Ltd. in 2010 established a business venture involving a system for recycling tungsten, which is used in cemented carbide tools, etc. By applying a new world-first recycling technology to sorted and collected cemented carbide tools generated at Toyota plants, the venture has recovered for re-use 100 percent of the tungsten they contained. By the end of March 2014, approximately 93 tons of tungsten had been recycled.

In the same year, Toyota and Sumitomo Electric Industries, Ltd. were honored for these efforts with a Rare Metal Recycling Award at the 2013 Awards for Resources Recirculation Technologies and Systems, hosted by the Japan Environmental Management Association for Industry, which is supported by Japan's Ministry of Economy, Trade, and Industry.

Award ceremony for the Prime Minister's Prize

Focus

Waste Reduction Based on Two Founding Principles of the Toyota Production System: Eliminate *Muda* and *Kaizen*

As the sales and logistics arm of Toyota in the USA, Toyota Motor Sales operates vehicle and parts distribution operations, bringing vehicles from our assembly plants (our sister company) to the dealerships (independent franchise companies), as well as parts from our suppliers to dealerships to service customers' vehicles. Toyota owes the integration of waste reduction as part of its corporate culture to two founding principles of the Toyota Production System: eliminate *muda* and *kaizen*.

Some bullet points to summarize the big efforts in TMS waste reduction:

- Our largest effort at waste reduction is the packaging reduction from the use of returnable shipping modules. This includes several logistics routes including the Japan-US service parts shipments and many different NA routes
- Our most prominent partnership with the US Zero Waste Business Council. This is the most forward-thinking group in North America and we are working together to shift the focus of waste from landfill avoidance to eliminating waste through design and *kaizen*. They have been a very supportive partner and have both helped us understand the future of the issue as well as provided third-party validation that we are on the right track
- We have been recognized by the US Environmental Protection Agency in their WasteWise* award for four years now (2010-2013).

* WasteWise is a free, voluntary EPA partnership program assisting and recognizing businesses, governments and organizations that reduce or eliminate costly municipal solid waste and select industrial wastes, benefiting both the environment and their bottom line

2000
TMC begins using returnable containers to ship parts from Japan to California

2002
North American central parts centers begin using returnable containers to ship service parts to regional parts distribution centers

2013
Returnables are now used by more than 1850 dealers, 150 suppliers and all 22 North American parts and vehicle distribution centers

Overall savings

308 million lbs of wood*

185 million lbs of cardboard

* 1lb=0.454 kg

That's the equivalent of

2.5 million trees*

in packaging costs savings

$445 million

* Environmental impact estimates for cardboard only were made using the Environmental Paper Network Paper Calculator Version 3.2

Last year we were presented our award by the head administrator for our EPA Region who was appointed by the president of the US

TOYOTA
NORTH AMERICAN
Environmental

Environmental Protection and Contribution to a Harmony with Nature Society

Basic Approach to Environmental Protection and Contribution to a Harmony with Nature Society

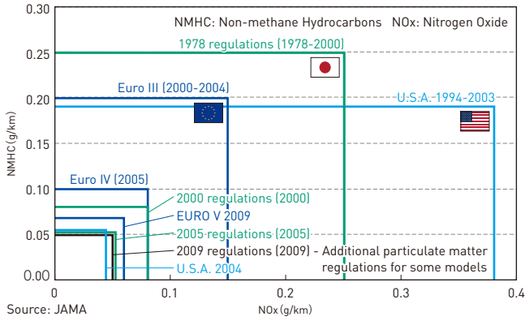
Modern society is built upon the bedrock of our natural environment, cultivated by and inherited from our ancestors. To be able to pass this beautiful, rich natural environment along to our future children, we must do all we can to solve air pollution and other issues. We must also protect the biodiversity cultivated in our natural environment, formed and evolved over our long history, so that we can pass it along to the next generation.

Toyota is implementing various environmental protection measures, such as measures to reduce exhaust gas emissions and manage the usage of chemical substances. At the same time, it is also aware of the critical need for nature and biodiversity conservation, and is engaged in contributing to a society in harmony with nature through its automotive business and social contribution activities.

Although it has continued to improve the air pollution situation in Japan and has greatly reduced exhaust gas emissions from vehicles, Toyota is still working hard to develop low-emission technologies, which it is expanding globally, and to reduce volatile organic compounds (VOCs).

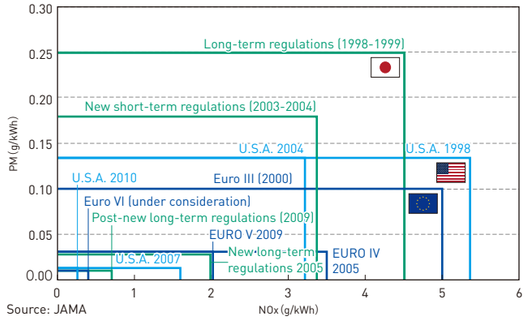
In relation to substances of concern (SOCs) Toyota is continuing to reduce the release of chemical substances, covered by the PRTR Law, from its plants. Additionally, in cooperation with its supply chain, Toyota is working to reduce the amount of SOCs contained in its products. In line with guidelines compiled in 2008, Toyota is implementing concrete initiatives for biodiversity. With full awareness of the history of local residents, communities and nature, and with their interaction with businesses, Toyota is promoting community contribution activities in order to help build prosperous local communities.

Emission Regulations for Gasoline-Powered Passenger Cars: Japan/U.S.A./EU Comparisons



Source: JAMA

Heavy-Duty Diesel Vehicle Emission Regulations: Japan/U.S.A./EU Comparisons



Source: JAMA

Toyota's basic stance toward managing usage of chemical substances

Production

Primary and secondary materials used in vehicle production

- Air Pollution Control Law
- Water Pollution Control Law
- PRTR Law, etc.

Products

Substances in products and parts

- European ELV Directive and REACH Regulation (SOC standards)
- JAMA voluntary commitments (Four SOCs: lead, mercury, cadmium and hexavalent chrome) etc.

Sales

Substances related to after-sales service

- Body paint
- Long-life Coolant (LLC), etc.

Main Initiatives during FY2013

Development and Design: Reducing Vehicle Exhaust Emissions to Improve Urban Air Quality

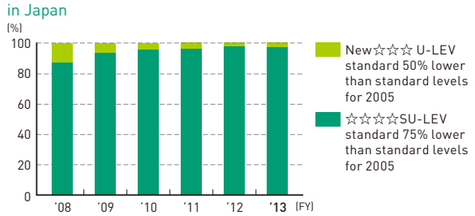
Vehicles that Meet Japanese LEV Emission Standards

In FY2013, almost 100 percent of Toyota vehicles produced were certified as meeting the Ultra-Low Emission Vehicle (U-LEV) or higher standards by the Japanese Ministry of Land, Infrastructure, Transport and Tourism.

Percentage of Total Production in FY2013 that Qualifies as LEVs Based on 2005 Exhaust Emissions Standards

Classification	Reduction level	Percentage of total production
New☆☆☆ U-LEV standard	50% lower than standard levels for 2005	2.4%
☆☆☆☆ SU-LEV standard	75% lower than standard levels for 2005	97.2%

Low-Emission Vehicles as a Percentage of Total Production in Japan



FY2013 Vehicles that Meet Japanese LEV Emissions Standards

Low-emissions level	★★★★ SU-LEV	★★★ U-LEV
Vehicle series	No. of models	No. of models
GS300h	1	0
IS300h	1	0
Crown Majesta	1	0
Harrier	3	0
Noah	5	0
Voxy	5	0
Corolla Axio	1	0
Corolla Fielder	1	0
Total	18	0

Development and Design: Strengthen the Management of Chemical Substances Contained in Products

Management and Reduction of 4 Key SOCs

All of Toyota's production affiliates in Japan and overseas are completely eliminating the use of the four key substances of concern (lead, mercury, cadmium, and hexavalent chrome). In October 2013, the United Nations adopted the Minamata Convention on Mercury, which bans the manufacture and import/export of products containing mercury as a rule beginning in 2020. However, mercury has already been eliminated from automobiles.

In FY2013, hexabromocyclododecane (HBCD), named as a substance for restriction and elimination under the Stockholm Convention on Persistent Organic Pollutants, better known as the POPs treaty, became a Class 1 Specified Chemical Substance, banning its manufacture and use, under the Japanese Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (Chemical Substances Control Law). Toyota has already ceased use of HBCD as a flame retardant for car fabric.

Status of Initiatives to Eliminate the Usage of the 4 Key SOCs

4 key SOCs	All production affiliates in Japan	Major overseas plants
Lead, mercury, cadmium and hexavalent chrome	Eliminated*	Eliminated*

* Excluding uses exempt under laws and regulations in each location

Ensuring Compliance with REACH and Other Global Regulations on Chemical Substances

Following the World Summit on Sustainable Development, held in Johannesburg in 2002, and adoption of the Strategic Approach to International Chemicals Management (SAICM), there have been an increasing number of chemical substance management regulations being implemented globally. The international trend in regulations on chemical substances is changing from one of hazard management, which focuses only on the toxicity of individual substances, to one of risk management, which takes into consideration the degree of impact on people, plants and animals. For this reason, it is now necessary to also consider in what sort of situation the chemical substances are being used. In addition to the Japanese Chemical Substances Control Law, and the European ELV Directive[1] and REACH Regulation[2], North America and Asia are introducing their own regulations on chemical substances.

These regulations require corporations to collect information on the chemical substance content of their products and manage their supply chains. Toyota has built and is operating a chemical substance management framework in cooperation with its suppliers.

In FY2013, Toyota standardized compliance with the European REACH Regulation and other chemical substance management regulations, and has propagated the framework globally. To promote compliance, it is sharing the Toyota Green Purchasing Guidelines with suppliers through each Toyota affiliate.

1 ELV Directive: European directive on end-of-life vehicles
2 REACH Regulation: European regulation on registration, evaluation, authorization and restriction of chemicals

Toyota Green Purchasing Guidelines published around the world

Production and Logistics: Reduce Substances of Concern (SOC) in Production Activities

VOC* Emissions from Paint Reduced to an Average of 19g/m² in Body Painting Processes

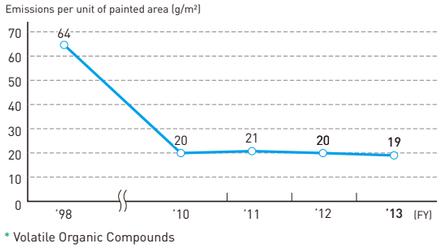
Purpose of Activities

Volatile organic compounds (VOCs) are one of the causes of photochemical oxidation, the cause of photochemical smog. TMC is promoting initiatives to reduce VOCs emitted in the painting process.

Progress in FY2013

TMC has continued efforts to limit use of solvents in washing processes and recapture a larger percentage of solvent, and as a result has reduced total VOC emissions from TMC body paint lines to 19g/m².

Trends in VOC Emissions Volume in TMC Vehicle Body Painting Processes (Average for All Lines)



* Volatile Organic Compounds

Working Together with Society: Initiatives Related to Biodiversity Conservation

Promoting Measures in Accordance with the Toyota Biodiversity Guidelines

Purpose of Activities

Biodiversity delivers many benefits in the way of blessings from nature. However, overhunting and overfishing of rare species and destruction of forests and other ecological systems is causing the extinction of approximately 40,000 different species every year, so biodiversity is facing a real crisis.

In 1992, the United Nations Conference on Environment and Development, informally known as The Earth Summit, was held in Rio de Janeiro, Brazil, where they adopted two conventions addressing important global environmental issues; The Convention on Biological Diversity and The United Nations Framework Convention on Climate Change. In 2010, the Conference of the Parties to the Convention on Biological Diversity (COP10) was held in Nagoya, Japan, where they reached agreement on a number of matters including the Aichi Biodiversity Targets, common targets to halt the loss of biodiversity, and the Nagoya Protocol, providing a framework for access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the Convention on Biological Diversity.

Ahead of the COP10 conference, as part of activities aimed at realizing a sustainable global environment and a sustainable society, Toyota formulated the Biodiversity Guidelines based on the Toyota's Guiding Principles in March 2008. The Guidelines describe our fundamental approach to biodiversity-related activities and specify three areas of activity: contribution through technology, collaboration and cooperation with society, and information disclosure. Based on the guidelines, we conduct concrete activities in the area of biodiversity.

Progress in FY2013

In FY2013, Toyota continued to steadily implement these initiatives with a focus on full communication with stakeholders and enhancement of environmental education (developing human resources).

May 2013	In May 2013, the Toyota Environmental Activities Grant Program held its first meeting for reporting activity results and promoting information exchange. Eight environmental organizations in Japan and overseas, from among the projects supported by the program, presented their results at the meeting.
July 2013	As a result of increased environmental awareness, the Toyota Shirakawa-Go Eco-Institute revised its basic principles and launched new programs from FY2014 for the purpose of further enhancing its environmental education activities, and contributing to and building trust with local communities.
December 2013	At the Eco-Products Exhibition, an area of the Toyota booth was set up for presentations, and personnel from the Forest of Toyota and the Toyota Shirakawa-Go Eco-Institute explained Toyota's environmental education programs and held quizzes and other activities for approximately 500 visitors in a total of 21 sessions.
March 2014	Toyota co-sponsored the Junior Eco-clubs' All-Japan Festival with the Japan Environment Association, where the Toyota Shirakawa-Go Eco-Institute was introduced and information on the hands-on nature programs conducted at the institute were explained to approximately 200 children and their guardians using videos and pamphlets.


Meeting to report activity results for the Toyota Environmental Activities Grant Program


Environmental education for visitors to the Eco-Products Exhibition

Main Examples of Toyota's Biodiversity Conservation Activities

Classification	Action Item	Details
Contribution through technology	Measures to help prevent further global warming	• Improved fuel efficiency on a global scale • Reduced CO_2 emissions in production and logistics activities
	Measures to reduce atmospheric pollution	• Reduced emissions of vehicle exhaust gases • Reduced VOC emissions
	Promotion of resources recycling	• Recycling of rare metals and rare earth elements • Expanded the use of recyclable materials
	Afforestation activities at plant sites	• Planted native vegetation types in Toyota plants in Japan and overseas
	Reforestation	• Conducted forest thinning in Mie Prefecture to restore undergrowth
	Initiatives for new Toyota R&D Center (lot)	• Engaged in preservation of habitats for rare animals and plants • Undertook environmental improvements around *yatsuda* rice paddies • Conducted maintenance of *satoyama*
Collaboration and cooperation with society	Human resource development and the protection of rare species	• Education for Sustainable Development at Toyota Shirakawa-Go Eco-Institute and Forest of Toyota
	Global afforestation	• Conducted afforestation in the Philippines using indigenous plant species
	Toyota Environmental Activities Grant Program	• Provided support to environmental programs, focusing on the issues of biodiversity and global warming • Created pamphlet introducing Grant Program
	Initiatives for new Toyota R&D Center	• Provided information on local governments' environmental measures
Information disclosure	Reports and website	• Disclosed information regarding Toyota's environmental initiatives in the report "Respect for the Planet—Toyota's Environmental Initiatives" and on the Toyota website
	Strengthened communication with relevant organizations	• Explained Toyota's environmental education programs and other activities at the Eco-Products Exhibition • Provided information on hands-on nature programs at the Junior Eco-clubs' All-Japan Festival
	Initiatives for new Toyota R&D Center	• Published booklets for children introducing creatures representative of satoyama environments • Compiled and published findings from survey in academic journals

Focus: Initiative for Conserving Biodiversity

Initiatives at the New Toyota R&D Center Promoting Harmony with the Natural Environment and Local Communities

In order to develop sustainable next-generation mobility, Toyota is proceeding with plans to construct a new R&D facility in Toyota City and Okazaki City. In pursuing this project, Toyota set out to build a technical center that operates in harmony with both the natural environment and local communities. About 60 percent of the total project site will be preserved as areas for the regeneration of forest and restoration of *yatsuda* rice paddies, and their management. Toyota is also actively sharing information that includes the status of these initiatives and the knowledge gained through them.

Site map of the new R&D Center

Progress in FY2013: Conserving biodiversity through conservation of the grey-faced buzzard, the apex predator in *satoyama*

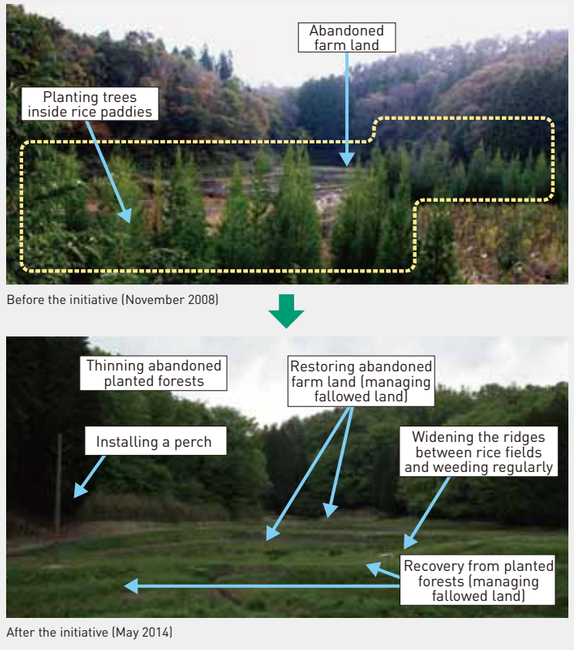
The grey-faced buzzard is a rare migratory raptor that has been classified as "vulnerable" on the Ministry of the Environment's Red List. When spring arrives, this bird migrates to Japan to build nests in *satoyama* consisting of forests and *yatsuda* rice paddies, feeding on the frogs and snakes that inhabit the rice paddies and surrounding areas. However, due to the aging of farmers and the lack of successors in recent years, increasing farmland is being abandoned and forests are being left unmanaged, gradually reducing the habitat suitable to the grey-faced buzzard.

Therefore, in this project, we are doing our best to avoid altering areas the grey-faced buzzard has been confirmed to inhabit and to preserve the remaining forests and *yatsuda* rice paddies as new habitat for the bird. Specifically, we are thinning the forests and restoring the abandoned rice paddies to improve the biodiversity of the areas that the buzzard's prey inhabit, installing hunting perches, and widening the ridges between rice paddies to make them hunting-friendly. We are also managing fallowed fields and keeping them under water throughout the year to make them better habitat for prey. Thanks to these initiatives, a grey-faced buzzard was observed using the installed perch in April 2014, marking the first step toward conservation of this species.

Grey-faced buzzard (photographed by Aichi Public Enterprise Bureau in May 2012)

Grey-faced buzzard utilizing an installed perch (photographed by Aichi Public Enterprise Bureau in April 2014)

Status of initiatives



Before the initiative (November 2008)

After the initiative (May 2014)

Focus

Toyota Forges Ground-breaking, Long-term Partnership with Kew Gardens to Foster Biodiversity at Its UK Operations

Toyota has established a partnership with the Royal Botanic Gardens at Kew to strengthen the environmental quality of its UK operations, supporting Toyota's global principle of working in harmony with the environment. The aim is to demonstrate how an industrial site can support biodiversity and secure a green legacy for the future, without compromising the cost or efficiency of its core business.

Toyota's UK vehicle plant site covers 235 hectares and is home to more than 400 recorded plant and animal species, some of them rare and protected. Toyota plans to restore more than 230,000 m^2 by 2020 with Kew providing expert advice in horticulture, land restoration, seed quality and project implementation.

The project has already revealed an area of ancient meadowland on the site, from which large quantities of grass seed have been harvested, dried and stored in Kew's Millennium Seed Bank, ready for planting in other locations.

The Derbyshire Wildlife Trust is also collaborating in the project which is also being used to teach employees the importance of biodiversity and sustainability.

At Toyota's UK Sales headquarters in Surrey, new landscaping and planting has been undertaken restoring natural habitats using native plant species from the surrounding countryside to create an Eco-HQ.

Further afield, Kew experts have also been engaged to help biodiversity projects at Toyota's European headquarters in Brussels, technical centre in Zaventem and parts logistics centre in Diest, in Belgium.

On the Planting at Toyota photo names left to right are: Andy Jackson, Director of Wakehurst Place, Royal Botanic Gardens, Kew, Tony Walker, Deputy Managing Director, Toyota Manufacturing UK and Heather Wheeler, South Derbyshire MP planting the County flower of Derbyshire the Jacob's Ladder

Toyota Shirakawa-Go Eco-Institute Widely Promotes Locally Rooted Environmental Education Programs that Value Nature's Wisdom

The Toyota Shirakawa-Go Eco-Institute, located in the World Heritage site Shirakawa-Go, was opened in April 2005 with the goal of promoting environmental education. The institute is managed in collaboration with the Village of Shirakawa and environmental NGOs. With the aim of promoting harmonious coexistence with nature and local communities, the institute is enhancing and widely promoting locally rooted environmental programs.

Progress in FY2013

Rebuilding Basic Principles Centered on Activities to Provide First-Class Education and Emotional Experiences

The Toyota Shirakawa-Go Eco-Institute is a three-way integration of government, non-profit and business, built on the slogan of "Aiming to be Japan's Finest Nature School, Located in the Country's Most Beautiful Village." For the many visitors to the village of Shirakawa, and for the children who will play an important role in achieving sustainable development in the future, it provides an opportunity to experience nature and offers hands-on environmental education. With increasing environmental awareness and a greater level of expectation from local communities these days, the Eco-Institute understands the necessity of enhancing environmental education and nature experiences, and therefore established its basic principles in July 2013 centered on activities to provide "first-class education and emotional experiences." Consequently, the Eco-Institute launched new programs from FY2014, largely involving the expansion of its hands-on nature programs.

Basic Principles of the Toyota Shirakawa-Go Eco-Institute (excerpt)

> To contribute to the creation of a society in coexistence with nature, to provide "first-class education" and emotional experiences in the natural environment of the village of Shirakawa, and to increase "Putting Respect for Nature into Action," the Toyota Shirakawa-Go Eco-Institute will spread the message of the social benefits of hands-on nature experiences and outdoor activities.

Comments from program participants

- "It was an opportunity to think about coexistence with the environment and nature."
- "Humans happily throw garbage away and pollute the rivers, but I will take more care of nature in the future."
- "They maintain the stance of nature protection throughout, and carefully explain the concept even to people who are not interested in nature, which will help them understand and come again."
- "This was the perfect experience for children who play mainly in parks with little nature."
- "It has been a truly memorable trip, from watching the sun climb in a gradually lightening sky, to sensing the sounds of animals and the wind moving quietly through the dark forest."
- "Age-specific programs of hands-on learning would definitely bring people back."

Hands-on nature program: Shower Climbing

Forest regeneration project: Tree-Planting Experience to Cultivate Forests

Coexistence Projects Introduce Many People to the Importance of Coexistence with Nature

In addition to hands-on nature programs aimed primarily at providing "first-class emotional experiences," the Eco-Institute is also conducting Coexistence Projects focused on environmental protection and education aspects. Projects include initiatives to develop the landscape with a long-term perspective for the purpose of developing an environment suited to environmental education activities and the conservation of biodiversity, including ecological wildlife surveys and forest conservation activities.

In FY2013, one of the main projects was aimed at forest regeneration targeting Japanese oak wilt and other issues. Through the project, it became clear that, rather than just seeding an area, the rate of successful forest regeneration in grassland environments increased if seedlings were collected from a current forest and allowed to mature for two or three years in pots before transplanting. Going forward, the project will work toward creating an illustrated reference book for raising seedlings and developing a seedling cultivation environment, and toward seedling production of local plant species for tree-planting activities.

Another project was a collaborative initiative with villages to carry on the tradition of silviculture (forest culture), with the goal of creating a commercial venture providing *kogaya*—the reeds traditionally used as the material to construct thatched roofs. Previous initiatives to develop meadows for thatch roofing material enabled this project to achieve recognition of the value of good quality *kogaya*, and enabled constant production of the material.

These activities in turn become the subject matter of environmental education programs delivered to visitors at the Eco-Institute, introducing them to the importance of coexistence with nature.

Toyota Environmental Activities Grant Program

Outline and Purpose of Program

The Toyota Environmental Activities Grant Program was inaugurated in 2000, commemorating Toyota's receipt of the prestigious Global 500 Award, to further demonstrate Toyota's responsibility for the environment and sustainable development. Since then, as part of its social contribution activities, Toyota has been conducting the Grant Program to support environmental activities implemented by NPOs and other non-profit private groups.

Scope of Grant Projects

In the belief that "*monozukuri* is about developing people," Toyota is supporting the activities of non-profit organizations that promote projects to foster individuals seeking solutions of environmental issues, and to contribute to practical problem-solving for those issues (grant themes: biodiversity conservation and global warming).

In October 2013, 24 projects were selected for support under the grant program in FY2013. Including the project titled "Development of Sustainable Rural Communities based on Conservation and Responsible Use of Biological Diversity," conducted by the Japan Council on the UN Decade of Education for Sustainable Development (ESD-J), a number of the projects selected were related to education for sustainable development and helping with Tohoku Revitalization.

Examples of Grant Recipient Projects in FY2013

Indonesia

Promotion of Environmental Education in Indonesia through Oral Tradition Project

Kyouzonnomori Network (Network for Coexistence with Nature)

Oral tradition interview

For Indonesia, the problem of forest loss has become a serious problem, so there is a pressing need to promote environmental education to the next generation.

This project aims to promote environmental education programs using an oral tradition technique that involves high school children visiting local experts on the forests, seas and rivers, asking them about their knowledge, technologies, thoughts and personalities, and recording that information. They listen to the experts again and again and the speech is written down so that the values and feelings of those experts can be understood. In multiracial Indonesia, listening to the speech of experts, who speak languages other than the official language, is providing local high school children with opportunities to reflect on the traditional culture of the region and ethnic groups.

Comments from participating students

- "I felt that life is long. The experts overcame difficulties and survived."
- "I live in a city, but this has enabled me to feel closer to life in rural communities."
- "I would like to try this oral tradition technique in my own local area to discover the beauty of my area."

Japan

Planting of Trees to Cultivate New Plant Life in Tohoku

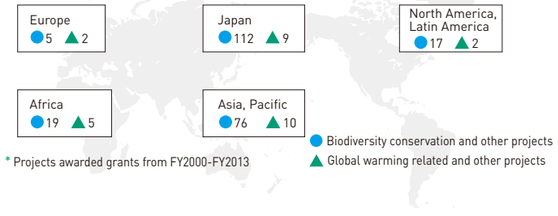
NPO Donguri-Mongori

City of Iwanuma children planting trees raised by children in the Tokai Region

The City of Iwanuma in Miyagi Prefecture suffered severe damage through the Great East Japan Earthquake, and entire coastal villages were forced into mass migrations due to the tsunami. This project is constructing a park area called the "Millennium Hope Hills" to provide a safe area to escape to if a tsunami comes again. The hills are being built on the flooded areas from the rubble left in the wake of the tsunami, and participants are planting trees together to create new forests.

This project involves children in the Tokai Region receiving seeds from the Tohoku Region, from trees that can withstand tsunamis, and raising them into seedlings. The practical activity then involves the group of children sending the seedlings back as a present of nature to the Millennium Hope Hills. The project aims to foster sympathetic minds among the children who will one day lead the century of the environment, enabling them to learn about the symbiosis between oak forests, rivers and seas, the wonders of nature, and diverse ecosystems, and providing them with actual experience in raising seedlings and creating forests in river catchment areas.

Breakdown of Toyota Environmental Activities Grant Program Grant Recipient Projects (Totals*)



* Projects awarded grants from FY2000-FY2013

Assistance Provided to Date

Over the 14 years since the Grant Program was established in 2000, it has provided support to 257 projects in 51 countries and regions worldwide.

Country/region of implementation	Asia (excluding Japan), Pacific	North America Latin America	Africa	Europe	Japan	Total
FY2013	8	0	2	0	14	24
Cumulative total*	86	19	24	7	121	257

* FY2000-FY2013

Appendix

Status of Major Environmental Data in Japan for FY2013

Area	Item	Key indicator (unit)		FY1990	FY1995	FY1998	FY2001	FY2011	FY2012	FY2013	Related pages
Product	Exhaust gases	Percentage of total production that achieves emission levels 50% lower than 2005 gasoline standards		—	—	—	—	4.0%	2.3%	2.4%	38
		Percentage of total production that achieves emission levels 75% lower than 2005 gasoline standards		—	—	—	—	95.5%	97.4%	97.2%	
	Clean-energy vehicles	Number of units sold	[units]	—	—	—	—	456,936	658,585	718,541	—
		Electric vehicles	[units]	—	—	—	—	0	19	0	
		Hybrid vehicles	[units]	—	—	—	—	456,873	658,517	718,497	
		CNG vehicles	[units]	—	—	—	—	63	49	44	
	Average fuel efficiency by weight category [km/L] (gasoline-powered passenger vehicles)	10·15 test-drive mode (Note 1)	703 - 827kg	17.6	17.6	—	—	—	—	—	—
			828 - 1,015kg	12.3 (average)	12.3 (average)	—	—	23.2	—	—	
			1,016 - 1,265kg					21.5	—	—	
			1,266 - 1,515kg					27.0	—	—	
			1,516 - 1,765kg	8.5 (average)	8.0 (average)	—	—	14.1	—	—	
			1,766 - 2,015kg					11.5	—	—	
			2,016 - 2,265kg					11.3	—	—	
			2,266kg -					8.0	—	—	
		JC08 test-drive mode	601 - 740kg	—	—	—	—	—	30.0	32.4	18
			741 - 855kg					—	26.2	27.7	
			856 - 970kg					—	20.9	20.9	
			971 - 1,080kg					—	27.1	26.9	
			1,081 - 1,195kg					—	24.4	25.1	
			1,196 - 1,310kg					—	16.7	17.2	
			1,311 - 1,420kg					—	25.9	25.9	
			1,421 - 1,530kg					—	21.6	21.4	
			1,531 - 1,650kg					—	14.7	16.0	
			1,651 - 1,760kg					—	14.4	18.0	
			1,761 - 1,870kg					—	11.7	12.8	
			1,871 - 1,990kg					—	10.9	10.7	
			1,991 - 2,100kg					—	10.7	9.8	
			2,101 - 2,270kg					—	14.0	12.5	
			2,271kg -					—	8.2	7.9	
Production	CO_2 (Note 2)	Total emissions volume	[calculated in CO_2 equivalent in million tons]	2.11 (Note 4)	—	—	—	1.17	1.16	1.20	22
		Emissions volume per unit produced	[calculated in CO_2 equivalent in tons/unit]	—	—	—	—	0.46	0.41	0.41	
	Substances of concern	VOC emissions volume per body area	[g/m²]	—	—	64	—	21	20	19	39
	Waste (Note 3)	Volume of waste per unit produced	[kg/unit]	—	—	—	29.5	14.1	12.1	12.4	29
Recycling	Recycling rate	Vehicle recycling/recovery rate	[%]	—	—	—	—	99	99	99	34

Note 1: The fuel efficiency figures for FY1990 were calculated by converting the figures obtained in the Japanese 10 test-drive mode to the 10-15 test-drive mode
Note 2: Since non-production bases were also brought under the scope of the reduction goals in FY2005, figures include company-wide emissions from FY1990
Note 3: Zero landfill waste was achieved in FY2000 and has been maintained ever since
Note 4: Total figure for the period from January to December 1990

For information on indices other than in the environmental data listed above, please visit the following webpage

WEB http://www.toyota-global.com/sustainability/environment/data/

Environmental Accounting

Environmental accounting at Toyota is based on a classification of environmental costs into "environmental investments[1]" and "maintenance costs[2]." Toyota also calculates the economic effects and eco-efficiency of its activities. For details on the effects of measures implemented to reduce environmental impact, please see the section "Status of Major Environmental Data in Japan for FY2013" on p. 45.

1 Environmental costs, such as those for research and development of environmentally considerate products, whose effects are judged to extend beyond the current term into the future
2 Environmental costs other than environmental investments

Environmental Costs

Calculation scope: Toyota Motor Corporation (unconsolidated)

Actual Results Based on Toyota's Format

(Unit: billion yen)

Classification	Item	Details	FY2011	FY2012	FY2013
Environmental investments	Research and development		262.4	270.6	303.2
	Recycling-related		0.7	0.7	0.7
	Other (social contribution, ISO certification, education and training, etc.)		1.1	0.8	0.3
	Plant and equipment investment[3]	Plant and equipment investment primarily for environmental action — Prevention of global warming	0.4	0.2	0.2
		Plant and equipment investment primarily for environmental action — Waste processing	0.1	0.0	0.1
		Plant and equipment investment primarily for environmental action — Pollution prevention, etc.	1.1	0.8	0.6
		Plant and equipment investment primarily for environmental action	1.6	1.0	0.9
		Expenses for environmental action included in normal plant and equipment investment	6.8	7.9	7.2
	Subtotal for environmental investments		272.6	281.0	312.3
Maintenance costs	Expenses related to environmental measures	Waste processing	1.9	1.9	2.0
		Waste water treatment	0.3	0.3	0.5
		Atmospheric pollution and odor abatement	0.8	0.9	1.0
		Global environmental preservation	0.8	0.7	0.6
	Awareness-building	Advertising, public relations, etc.	10.3	16.9	27.2
	Professional environmental staff	Personnel[4]	1.9	2.0	2.1
	Environmental restoration	Vehicle recalls	0.0	4.6	0.0
		Soil and groundwater remediation	0.3	0.3	0.2
	Subtotal for maintenance costs		16.3	27.6	33.6
Total (as a percentage of net sales)			288.9 (3.5%)	308.6 (3.2%)	345.9 (3.1%)

FY2013 Actual Results Based on the Ministry of the Environment's Format

(Unit: billion yen)

Classification		Toyota Investment	Toyota Costs	5 body manufacturers[5] Investment	5 body manufacturers[5] Costs
1. Business area costs	(1) Pollution prevention	0.3	1.5	0.5	2.4
	(2) Global environmental conservation	7.6	0.6	2.9	0.4
	(3) Resource circulation	0.1	2.0	0.3	1.8
2. Upstream/downstream costs	Amount allocated to recycling related and industry organizations	0.0	0.7	0.1	0.1
3. Administration costs	Environmental advertisements, environmental report publication, professional environmental staff, etc.	0.0	29.4	0.3	2.1
4. Research and development costs	R&D for reducing substances of concern	0.0	303.2	0.4	35.4
5. Social activity costs	Contribution to environmental preservation organizations, etc.	0.0	0.2	0.0	0.0
6. Environmental remediation costs	Soil and groundwater remediation, etc.	0.1	0.2	0.0	0.3
Total		8.1	337.8	4.5	42.5
		345.9		47.0	

3 Depreciation expenses of investments in plant and equipment are not included in these costs. Reference: FY2013 total R&D expenses: 796.1 billion yen; total investment in plant and equipment: 179.3 billion yen
4 The figures for FY2011 and FY2012 have been revised due to errors in the totals
5 Five body manufacturers: Toyota Motor East Japan, Inc., Daihatsu Motor, Toyota Auto Body, Hino Motors, and Toyota Motor Kyushu (Calculations made on the basis of standards used by each company)

FY2013 Actual Results for Overseas Affiliates

(Unit: billion yen)

	Investment	Costs	Total
TMT (Thailand)	0.7	0.4	1.1
Kuozui Motors (Taiwan)	0.4	0.6	1.0

Economic Effects

Actual Effects

(Unit: billion yen)

	FY2011	FY2012	FY2013	FY2013 results for the 5 body manufacturers
Reduction in energy costs through energy saving measures	0.8	1.3	1.0	1.7
Reduction in waste processing costs	0.2	0.0	-0.2	0.0
Sales of recyclable goods	6.5	4.4	5.8	8.4
Other (income from environment related technologies, etc.)	0.2	9.5	9.8	0.0
Total	7.7	15.2	16.4	10.1

Customer Benefits: reduction in gasoline consumption due to a switch to hybrid vehicles

(Unit: billion yen)

	FY2012[6]	FY2013	Cumulative reduction since the launch of the first generation Prius in December 1997[8]
Japan	158.1	233.5	802.9
Worldwide	469.5	685.6	2,590.2

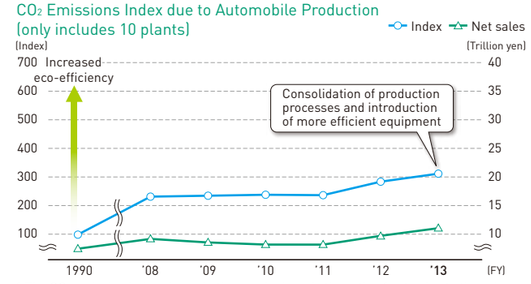
Calculation Method for Customer Benefits in Japan in FY2013

- Cumulative: Difference in average annual fuel efficiency[7] x number of vehicles owned in the particular fiscal year[8] x average annual distance traveled[9] x average gasoline price in FY2013[10]
- Fiscal year: (Difference in average annual fuel efficiency x number of vehicles owned in the particular fiscal year x average annual distance traveled x average gasoline price in FY2013)—customer benefits to FY2012

6 The figures for FY2012 have been revised due to errors in the totals
7 Difference in fuel efficiency between hybrid vehicles on the road in the particular fiscal year and corresponding models of gasoline-powered vehicles. Fuel efficiency converted into actual fuel efficiency based on the 10-15 Japanese test mode until 2012, and on the JC08 Japanese test mode from January 2013
8 Of the total number of hybrid vehicles sold each year, the number of vehicles owned by each customer as estimated by Toyota based on the average vehicle age
9 Average annual distance traveled by passenger cars according to the Japanese Ministry of Land, Infrastructure, Transport and Tourism's "Automobile Transportation Statistics": 10,000 km
10 National average gasoline price (including consumption tax) in FY2013, according to the Oil Information Center of The Institute of Energy Economics, Japan: 157.1 yen

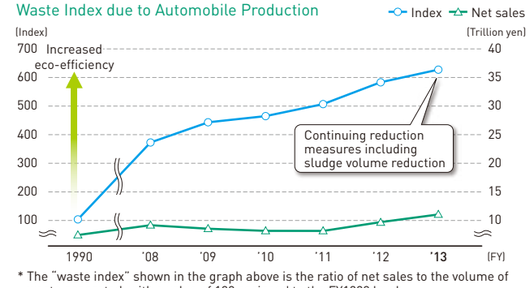
Eco-efficiency (Net Sales/Environmental Impact)

CO_2 Emissions Index due to Automobile Production (only includes 10 plants)



* The CO_2 emission index shown in the graph above is the ratio of net sales to the volume of CO_2 emissions, with a value of 100 assigned to the FY1990 level

Waste Index due to Automobile Production



* The "waste index" shown in the graph above is the ratio of net sales to the volume of waste generated, with a value of 100 assigned to the FY1990 level