TOYOTA MOTOR CORPORATION

# Sustainability Report 2010



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## **Editorial Policy**

In FY2009, during the economic doldrums caused by the Lehman Shock, issues concerning product quality surfaced, causing great concern to certain Toyota stakeholders. In the resulting circumstances, the Sustainability Report 2010 focused on three main points: (1) proper disclosure of information pertinent to the quality issue; (2) clarifying mid- and long-term environmental actions for CO2 reduction and other programs, despite the severe business climate; (3) showing how Toyota contributes to society, including emerging countries, through making cars. In addition, the black-and-white portions of the report as well as

In addition, the black-and-white portions of the report as well as its binding were done at Toyota Loops, a company that provides employment to the severely disabled.

A questionnaire is included at the back of the book, which will help us determine whether our editorial focus was properly communicated. Your comments and ideas would be greatly appreciated.

Cover Design: Expresses the corporate stance of Toyota Motor Corporation, which aims at mobility in harmony with nature and society through expansion of the next-generation vehicles. Photography cooperation: Toyota Home Tokyo Co., Ltd., Kohoku Inter model house

## [Key Issues (Materiality)]

Policies	Key Issues	Pages
Quality	The quality issue: background and future prospects     Response to quality issues in each area     Promotion of TQM for improvement of working quality     Briefing sessions for dealers to explain safety, quality Issues     Internal/external quality communication	04~07 54~57 61 70 84~85
Mid- and long-term environmental actions	Development and expansion of next-generation environment-considering vehicles     Fifth (next FY) Toyota Environmental Action Plan     Outlines of activities for CO <sub>2</sub> reduction in each area	08~09 17~19 24~25
Contribution to society through making cars	Contribution to society and economy in emerging countries by making cars     Employment initiatives in response to economic activities and production changes     Contribution to social and economic growth in countries and regions through global expansion	10~11 66~67 88~89

Yamanashi Housing Works

## Links to Online Information

At the end of each item in this printed report is a URL address for more detailed information on the given topic.

An online edition of the report has also been created as an abridged version to be used along with the printed version (available at: http://www.toyota.co.jp/SR/en10repo/).

Please visit <http://www.toyota.co.jp/en/csr/report/10/index.html> for the color version.

## Period Covered

The period covered in the report's data is from April 2009 to March 2010.

For major ongoing initiatives, the most recent status update in 2010 has been included.

## Scope of Report

**Environmental Aspects:** Includes Toyota Motor Corporation's (TMC) own initiatives and examples of those of its overseas consolidated subsidiaries, as well as the progress of consolidated environmental management in Japan and overseas. **Social Aspects:** Includes Toyota Motor Corporation's (TMC) own initiatives and examples of those of its overseas consolidated affiliates, and so on.

Economic Aspects: Includes financial results and global expansion.

## TMC's Main Information Disclosure Tools

In addition to sustainability reports, TMC uses the following tools to disclose information concerning its activities, data, and approaches. Please make use of these information sources as well.

Annual Report 2010

Toyota In the World 2010 Databook

http://www.toyota.co.jp/en/ ir/library/annual/index.html http://www2.toyota.co.jp/en/ about\_toyota/in\_the\_world/index.html

## **Company Outline**

Name:	ame: TOYOTA MOTOR CORPORATION		olders:	660,922	
Date of establishmen	t: August 28, 1937	Total number of shares issued: 3,447,997,000			
Principal operations: Manufacturing and sales of automobiles and housing				Japan: Tokyo, Nagoya, Osaka,	
Capital:	397.0 billion yen	the shares are listed:		Fukuoka and Sapporo Overseas: New York and Londor	
		Note: Capital am	ounts and nur	nber of shareholders are as of the end of March 2010 Capital less than 0.1 billion yen is rounded off	
Head Office: 1, Toy	ota-cho, Toyota City, Aichi Prefecture, Japan 471-8571	TEL: +81-565-28-2121	Major p	roduction bases in Japan	
Tokyo Head Office: 4-18, H	oraku 1-chome, Bunkyo-ku, Tokyo, Japan 112-8701	TEL: +81-3-3817-7111	Automobil	es: Honsha Plant, Motomachi Plant, Kamigo Plant, Takaoka Plant, Miyoshi Plant, Tsutsumi Plant,	
Nagoya Office: 4-7-1	Aeieki, Nakamura-ku, Nagoya City, Aichi Prefecture 450-8711	-8711 TEL: +81-52-552-2111 Myochi Plant, Shimoyama Tahara Plant, Teiho Plant,		Myochi Plant, Shimoyama Plant, Kinuura Plant, Tahara Plant, Teiho Plant, Hirose Plant Kasugai Housing Works, Tochigi Housing Works.	

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## A Fresh Start for Toyota — Contributing to Society through the Production of Safe and Reliable Vehicles

I would like to express my heartfelt thanks for the warm, ongoing support of our stakeholders worldwide.

Looking back on the past year, I am reminded of when I was appointed as president in June 2009; at the time, it felt like we were setting sail in stormy economic conditions. It was an extremely severe operating environment in which we were unable to relax for even one moment all year long.

From our withdrawal from F1 racing to the shutdown of production at New United Motor Manufacturing Inc. (NUMMI), our former joint venture with GM, there were many hard choices to make. Furthermore, I have been involved in a variety of meetings to explain our ongoing commitment to safety and customer satisfaction. These included public hearings in the United States and explanatory meetings in Japan and other countries with the support of related personnel from across the company. During this time, I received constructive suggestions for improvement as well as words of encouragement and support from many people. I am very grateful to those who took the time to help us through this difficult time.

Fully leveraging the challenging experience of the past year as an asset, I have defined fiscal year 2010 as the year when Toyota makes a fresh start, and I intend to steer the company toward a new growth strategy.

Since its foundation, Toyota's unchanging mission has been to contribute to society by making safe and reliable vehicles. This will continue to be our priority. In addition, Toyota has always been a dynamic company. As the individual needs of our customers evolve, I consider the response to ever-changing times as growth. I look forward to personal growth for myself and ongoing growth of our company. To this end, it is important that our customers, shareholders, regional communities, dealers, suppliers, employees and all other stakeholders support the idea of Toyota's continuing growth as being a good thing.

The growth I want to pursue is not simply expansion to achieve a greater market share. Instead, I envision sustainable growth driven by each employee and based on delivering high quality and safety at an affordable price — as demanded by our customers all over the world.

In today's world, it is imperative that we "develop and promote the next-generation ecocar" to continue to serve people and society over the next 100 years as resources become more constrained.

It is considered inevitable that the day of "peak oil" will come in the not-too-distant distant future as the global oil production curve reaches its peak and turns downward. We must accelerate the development of alternative-fuel cars while ensuring efficient use of precious oil resources.

To meet such challenges, we will not only continue to refine existing hybrid technology but also launch a home rechargeable plug-in hybrid vehicle (PHV) and an electric vehicle (EV) in 2012 and will push ahead in all possible directions beyond that.

Regarding EV development, in May 2010, we announced a business partnership with Tesla Motors for the development of an electric vehicle. In the spring of 2010, during a visit to the United States, I had an opportunity to test drive one of Tesla Motors' electric vehicles, an experience that I can only describe as feeling the wind of the future. Not only was I impressed by Tesla's technological capabilities, but I also sensed the energy that will enable them to produce the vehicle efficiently to meet market demands.

To capitalize on technological transitions that occur once every 100 years, I think the can-do spirit, quick decision-making and flexibility of venture businesses are as necessary as the methods of big corporations like Toyota. Toyota was also born as a venture business and that spirit has contributed to its growth over the years. By working with Tesla, I strongly believe we can reawaken the creative spirit in our own employees and accept the challenges of facing a new future.

Also, as a new move toward achieving a lowcarbon society, Toyota is actively involved in a large-scale PHV pilot project in Strasbourg, France, and in installing and conducting pilot tests of nextgeneration power grids, which are currently called Smart Grids, in Boulder, Colorado, USA, and in Toyota City and Rokkasho Mura village, Aomori Prefecture, Japan.

Respond to society's changing needs and enrich people's lives by making safe and reliable vehicles. Never forget to appreciate our customers and all other stakeholders. Embracing these principles, the hearts of all Toyota associates are united in an effort to make better vehicles. I hope Toyota will receive your continued support.



At the press conference to announce a business partnership with Tesla Motors, Inc. on May 21, 2010, from left: Governor of California Arnold Schwarzenegger, TMC President Akio Toyoda and Tesla Motors CEO Elon Musk

September 2010

Akio Tovoda President, Toyota Motor Corporation

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## Seeing the Quality Issue as an Opportunity for Renewal and Improvement, Firm Action Throughout Its Operations in Each Field

## Product Quality — How Toyota's Mainstay Became an Issue and How It Will Be Addressed Moving Forward

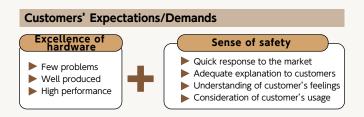
Toyota has been able to achieve strong growth, positioning product quality as its corporate mainstay and earning acceptance in markets throughout the world, based on the reliability of its products. However, as Toyota grew, its customer base expanded and diversified, and customer expectations increased. At some point, we believe that the company was not sufficiently aware of these elevated customer expectations. These factors form the backdrop for the recent problems related to safety and confidence. Toyota views these issues as an opportunity for renewal and improvement and every single employee will participate proactively in meeting the challenge of redressing the problems.

## **Background on Quality Issues**

During the last decade, Toyota expanded its production and made advances in order to satisfy the needs of worldwide customers buying Toyota vehicles. As the business grew, the company contributed jobs and trade to the local economies in each country and region it entered, enabling it to reinvest the profits earned from growth into green technologies and other development initiatives for the future. However, it appears that the company's growth at times outflanked the available management skills, as seen in the company's overstretched logistics and imperfect human resource development.

As Toyota grew, its customer base expanded and diversified, and customer expectations increased. As an automaker, Toyota has made continued efforts to understand safety and confidence objectives from a technological and professional standpoint and was able to achieve them in material terms. However, because of a disconnect between the manner in which the company and its customers defined these requirements, Toyota was not always able to fully respond to customer expectations.

With regard to the recent issues, efforts to ascertain the accuracy of customer opinions, which were at odds with results in past cases, were forestalled by the company's initial engineering-oriented approach. As an automotive company focused on engineering, this initial focus was understandable and typical. Nonetheless, there was an unrecognized gap in perspectives between the automaker and its customers. We believe this gap was caused by a lack of systematic efforts to share information by staying close to the customer; it was an adverse effect of business globalization. The inertia and bureaucracy that characterize many big firms impeded internal and external communications and resulted in slow responses to emerging customer concerns. We believe these obstacles all came to a head as we were preparing to address the recent safety issues. As a result, the company failed to meet its customers' expectations for safety and confidence. Toyota views this issue as an opportunity for renewal and improvement; we will encourage every employee to address the issues proactively by re-examining and recommitting to principles such as Customer First, the Customer's Perspective and genchi genbutsu (on-site, hands-on experience). Specific actions are outlined by segment in the chart at right. People have grown older and society has changed over the last decade, and the demands we make of each employee must be adjusted accordingly. All employees will continuously reaffirm their commitment to pursue the best practices in their daily work. When there are problems, it's important to keep asking "why"? in pursuit of the root causes. It's the Toyota way, and it's part of what makes us the company behind the Toyota name. In our efforts to recover the trust and confidence of our customers, we will continue to issue reports disclosing newly found facts and other information over the next year and beyond.



## Overview of a Recent Series of Quality Management Issues

Following the floor mat issue in the U.S. in November 2009, Toyota announced a voluntary safety recall on January 21, 2010 on some Toyota-brand vehicle models sold in the U.S. for the accelerator pedal problem. On February 9, Toyota announced a recall in Japan, the U.S. and Europe on four models, including the new Prius, for a brake problem. Details of the problems and remedies for these markets are as follows:

Problems	Incidents	Remedies
Floor mat	If improperly secured in the vehicle, some floor mats used in the U.S. may move forward and hold the accelerator pedal down in a fully or partially open position.	Exchange for the proper floor mat.     Reconfigure the shape of the accelerator pedal.     Change the shape of the driver's side footwell on some models.
Accelerator pedal	In the accelerator-pedal assembly of affected vehicles, condensation resulting from cold-weather use of the heater or other causes may form on the worn surface of what is known as a friction device. If this occurs, there is a possibility that, in the worst case, the accelerator pedal returns slowly, or does not return, to its idle position.	<ul> <li>Install a precision-cut steel reinforcement bar into the accelerator-pedal assembly that creates a space to reduce the surface tension between the friction device and a component called the pedal arm.</li> <li>The bar also strengthens the reaction force of the spring that returns the accelerator pedal to its non-pressed position.</li> </ul>
Anti-lock Braking System (ABS)	Braking performance may be reduced, resulting in increased braking distance (compared to performance before ABS activation) when vehicles switch at low speed to hydraulic braking-only to activate ABS, which is used to stabilize handling on slippery surfaces, such as snowy and icy roads.	<ul> <li>Correct ABS software program to prevent a reduction in braking performance.</li> </ul>

## Special Committee for Global Quality Launched to Achieve a More Safety- and Confidence-based Customer Interface

Any time a problem should occur, it is Toyota's practice to thoroughly determine the root cause, take corrective actions and press ahead with further improvements. This is an article of faith that has been firmly embraced since the foundation of the company. In response to the recent series of problems, the Special Committee for Global Quality, chaired by President Akio Toyoda, was formed on March 30, 2010. The purpose of the Committee is to listen more respectfully than ever to customers from every region, demonstrating the company's concerted commitment to a fundamental review of our operational attitudes and establishing a customer interface across Toyota's entities worldwide, in every business sector. Improvement plans worked out by the Committee will be verified and assessed by four external advisors as well. Assessment results of the latest meeting will be released to the public in good faith and in a timely and appropriate manner.

## Establishment of the Special Committee for Global Quality

Toyota formed the Special Committee for Global Quality chaired by President Akio Toyoda and, thereby implemented a series of approaches to address a deterioration in information gathering and inconsistencies that arose in information sharing practices between headquarters and the regional offices. These problems are seen to be the harmful side effects of the rapid globalization. The committee aims to reconstruct quality management procedures thoroughly, region by region, and this should eventually reinforce the global quality management system substantially. In addition to examination of the procedures and systems by the Quality Function Board, an additional executive-director-level meeting, the Special Committee for Global Quality, will be held.

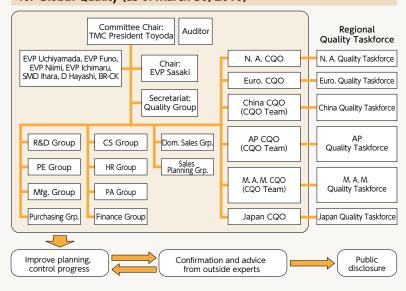
## Objective for Establishment of the Special Committee for Global Quality

Review all the working steps from the customer's perspective, through the new interface, and reinforce the quality control system: Development, procurement (suppliers), production, engineering, sales and service

Toyota's internal functions, including newly appointed Chief Quality Officers (CQO), represent customer voices from North America, Europe, China, Asia, Oceania, the Middle East, Africa and Latin America. As they looked into the factors that had caused the recent recall and other quality issues, attendees carried out retroactive studies on all the work processes, including Design Quality, Manufacturing Quality, Sales Quality and Service Quality. Recovery plans were worked out toward their solutions in light of customer perspectives from each region, stressing the need to reinforce global information sharing procedures while preserving the visibility of activities. The meeting process and the guality analyses were disclosed to the press on the same day at a press conference where President Toyoda said, "It has been my belief that, in order to regain their trust, nothing should be more important than sincerely listening to our customers' voices. We are fully committed to executing the plans set out by the Special Committee for Global Quality, including a concerted effort by dealers, suppliers and manufacturers to regain the trust of our customers." Toyota will continue to improve its working procedures in every region of the world, pressing forward with the plans of the Special Committee for Global Quality and other joint activities that closely involve all of our overseas entities and dealers.

## Key Objectives Identified by the Special Committee for Global Quality

- Genchi genbutsu Early Detection and Early Resolution (EDER)
   based on customers' voices
- Human resource development that reinforces our Customer First approach
- Assessment by outside experts
- Product development focused on customer safety and confidence
  Independence of quality management activities in each region of the world
- Organizational Position of the TMC Special Committee for Global Quality (as of March 30, 2010)



## Chief Quality Officer (CQO) Teams

North America	Steve St. Angelo, TMC Managing Officer			
Europe	Didier Leroy, TMC Managing Officer			
China	Masahiro Kato, TMC Managing Officer			
	Tian Congming,			
	Senior Vice President of FAW Toyota Motor Sales Co., Ltd. (FTMS)			
	Han Xinliang,			
	Senior Vice President of Tianjin FAW Toyota Motor Co., Ltd. (TFTM)			
	Feng Xingya			
	Senior Vice President of Guangzhou Toyota Motor Co., Ltd. (GTMC)			
	Godfrey Tsang			
	Vice President of Toyota Motor (China) Investment Co., Ltd. (TMCI)			
Asia and Oceania	Mitsuhiro Sonoda, TMC Managing Officer			
	Surapong Tinnangwatana, Senior Vice President of Toyota Motor			
	Asia Pacific-Engineering and Manufacturing Co., Ltd. (TMAP-EM)			
	Vince S. Socco,			
	Senior Vice President of Toyota Motor Asia Pacific Pte Ltd. (TMAP-MS)			
Middle East, Africa,	Hisayuki Inoue, TMC Managing Officer			
Latin America	Katsutada Masumoto, TMC Managing Officer			
Japan	Katsutada Masumoto, TMC Managing Officer			

## **Specific Measures to Improve Safety and Quality**

## Strengthened Monitoring Function: The Early Detection and Resolution of Problems

We will improve the safety decision-making process and speed of implementation by strengthening quality information gathering systems near customers in each region and rapidly and accurately analyzing collected information. Furthermore, we will take the following measures to prevent safety issues before they occur.

## (1) Strengthening the Information Gathering Function

Responding to customer concerns regarding unintended acceleration: In the United States, the Swift Market Analysis Response Team (SMART) strives to respond to customer voices/concerns about unintended acceleration within 24 hours of notification, in principle, by the customer. If requested by the customer or otherwise necessary, an appointment is made to inspect a vehicle for concerns relating to unintended acceleration. These inspections are conducted by trained technical staff and include an analysis of safety-related information gathered from the customer and the dealer as appropriate. In addition to investigating the phenomenon reported by the customer, vehicle control data is gathered and parts are collected as necessary. In May 2010, the Design Quality Innovation Division was established within the technical divisions to reflect customer feedback in vehicle design, improve the quality of design drawings, and develop human resources. Also, we will take thorough preventative measures that include gathering Japanese and overseas market information by SMART members as well as the inclusion of any necessary countermeasures in the development of each design.

## (2) Increasing the Number of Technical Offices

Comprised of several experts in the service, R&D and quality control areas, technical offices are established in each region to enhance our gathering and communication of technical information that is used to determine the necessity of recalls and to improve quality. We are increasing the number of technical offices in North America from one to seven, and are establishing new technical offices in other regions, including seven in Europe and six in China.

## (3) Using EDRs and Remote Communications Functions to Assist Root Cause Analysis

Onboard event data recorders\* (EDRs) record driver operation and vehicle performance data before and after an impact for use, if the customer agrees to such an investigation, in investigating the cause of an accident. Many models in Japan and the United States already have an onboard EDR, and by the end of 2010, they will be included in all Toyota vehicles in the United States. In addition, we will expand deployment of read out tools.

\*Event data recorder (EDR): A device that records acceleration, braking and other vehicle performance conditions for analysis when an impact occurs.

## (4) Strengthening Information Analysis and Improving the Safety Decision-Making Process

We created an Integrated Quality Information System for the uniform management of customer complaint information from dealers and distributors, as well as warranty repair and market-specific technical information from a variety of sources. This was done to strengthen our ability to target the early detection and resolution of problem areas. In the safety decision-making process, customer representatives from each region participate in recall review meetings to improve the mechanism for accurately reflecting customer feedback and regional concerns.

## Early Detection and Early Resolution Based on Reinforced, Information Gathering and Genchi Genbutsu

Customer Distributor/Dealer		ТМС		
Technical flaw	Market-specific info. Warranty info.         Customer complaint info.         Customer complaint info.         Reinforce investigation of customers' vehicles         •Team aiming to investigate certain vehicles within 24 hours (SMART team)         •Technical branch office (NA: 7, Euro: 6, China: 6)         •Event Data Recorders (EDRs)         •Read out tool	Expand intake of info. such as incidents Integrated Quality Information System Strengthen analysis of information (Integrated IT system of variety quality info.) Gather info.		
	Auth	orities Information from authorities		

## Strengthening Information Disclosure: Regaining Trust through Comprehensive Communication

Toyota is enhancing the effectiveness of our quality improvement activities. To this end, Toyota will release the results of third-party expert reviews and assessments of the improvement measures adopted by the Special Committee for Global Quality. Also, Toyota will work closely with dealers to promote safer driving by providing customers with comprehensive information regarding safety technology, safe driving methods and other awareness tools that contribute to the safe use of vehicles.

## **Human Resource Development**

In July 2010, we established five Customer First Training Centers (CFTCs) to maintain quality, Toyota's lifeline, and further develop our human resources, in Japan, North America, Europe, Asia and Oceania, and China. The training program specializes in the cultivation of quality control experts and location-specific problems, employing people who have been trained for specific regional programs. The programs include Basic Training, which focuses on the essence of the customer first philosophy, the importance of quality and the Toyota way, and Expert Training, which cultivates expertise based on quality case studies. The first training center, set up in Japan in May 2009, is already developing additional programs to be conducted at new centers as they are established.

## Five Quality Professional Training Centers (CFTCs) Are Established Around the World

## **Actions by Segment**

Segment	Relevant Page	Action
Governance	15	Committee for Global Quality was formed in a concerted effort to fundamentally review the corporate approach toward reinforcement of the customer's perspective.
Safety-related Briefing Tools, etc.		The Safety Guide Book, a manual for safety education, was revised.
Toyota ASCA* Society	55	An internal discussion session was carried out to discuss the Quality /Recall Issue.
Development /Design		13 issues were extracted and counteractions were developed. New organizations, the Design Quality Innovation Div. and the Product Audit Dept., were formed.
Procurement		Joint activities with suppliers were pushed forward to achieve a comprehensive high-quality standard.
Production	56	More complete "customer's perspective" shop floor (monozukuri) work practices are under way to strengthen the design-based production activities aimed at eliminating defects.
After-sales service		A variety of safety/security-related briefing tools were created and distributed, reflecting the recent issue. In overseas markets, the group's technical offices were reinforced with new work practices to ensure a prompt response to quality issue information and the development of effective solutions.
Example of dealers' initiatives	57	An initiative of Tokyo Toyopet Motor Sales Co., Ltd. to New Prius recall with the top priority on confidence of customers.
Example of overseas initiatives (N. America)	5/	An initiative on accelerator-pedal related recall for prompt response.
Customer Satisfaction Improvement	61	A directors' meeting was held to discuss what we can learn from the quality issue and how to utilize that knowledge, the subject brought up by the TQM Promotion Division.
Dealer Support	70	Briefing sessions were carried out for local dealers in China, where engineers reinforced Toyota's commitment to quality, safety and security.
Communication	84	Tools were created to explain the safety of Prius and SAI.

\*Advisory Specialist for Consumer's Affairs

## The Third-Party Evaluation Report

Toyota received an assessment — of our quality-assurance review-and-improvement measures — prepared by the Union of Japanese Scientists and Engineers (JUSE), which is a non-TMC-affiliated organization specializing in quality control, and four JUSE-recommended experts.

The assessment focused on the measures adopted at the first meeting of our Special Committee for Global Quality, held on March 30, 2010 and chaired by President Akio Toyoda.

At the second meeting of the Special Committee for Global Quality, which is scheduled for October, Toyota plans to review the status of the quality-assurance-improvement measures it has undertaken, including those based on the assessment.

## Making Sustainable Mobility a Reality

## Encouraging Development and Expansion of Next-generation Sustainable Mobility for an Age of Energy Source Diversity, with a Focus on Hybrid Vehicles

Energy source development for automobiles has centered on fossil fuels. However, in anticipation of the coming oil peak, it is essential to find multiple sources of energy generation. Electric power is considered one of the most promising options for the future. So far, Toyota has sold more than 2 million hybrid vehicles worldwide, driving ahead with hybrid technology as the most realistic electric car solution. Moving forward, Toyota will make continued efforts to increase annual sales volume beyond the 1 million mark and, from a future vantage point, will positively address the development and promotion of plug-in hybrid and electric vehicles by utilizing hybrid technology.

## Challenges in Sustainable Mobility and Encouraging Energy Source Diversity

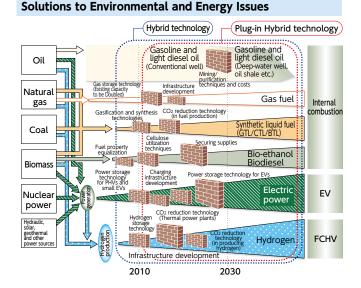
After the beginning of the 21st Century, about 100 years have passed since the start of motorization. Automobiles have become indispensable tools for transportation in industrialized countries; for developing regions, their importance is expected to increase in step with economic growth. Under these circumstances, Toyota is pursuing efforts to realize sustainable mobility — that is, a mobile society in which automobiles can co-exist with communities and the global environment. In general, the automobile faces these challenges in adapting to the global environment:

- 1) Reducing CO<sub>2</sub> emissions to help prevent global warming
- 2) Encouraging the need for energy source diversity

3) Preventing air pollution.

With regard to energy source diversity, oil is expected to remain the primary resource for the time being. Accordingly, for gasoline and diesel powered vehicles, solutions are under way that focus on improving fuel efficiency, including reducing vehicle size and weight, redesigning powertrains and introducing hybrid technologies.

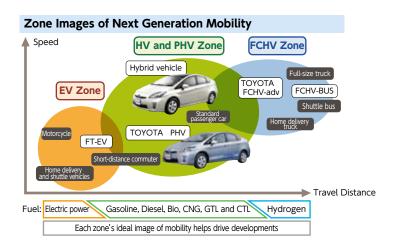
Fossil fuels are expected to remain dominant for the present, but their production will inevitably reach a peak at



some point and then decline. It is therefore necessary to respond to the need for alternative fuels in parallel with efforts to conserve existing oil resources, such as improving fuel efficiency. There are a variety of alternative fuel candidates, including biofuels, natural gas, electric power and hydrogen. To determine which source to choose, it is necessary to take a range of factors into account, including the amount of CO<sub>2</sub> reduction from mining to consumption (well-to-wheel), compatibility with automotive applications and the local energy situation in each country and region.

Electric power is a promising energy source among many alternatives. It can be generated from various primary energy sources — sunlight, hydraulic power and other renewable and clean energies — and can easily be supplied for automotive use. There are, however, a number of hurdles for putting it into practical use, which Toyota is making constant R&D efforts to overcome as it launches its Battery Research Division.

Among these activities, electric power offers some critical technologies for alternative fuel development. For example, adding a battery-charging feature facilitates plug-in hybrid vehicles. If an internal combustion engine is replaced with an electric motor, for the vehicle becomes an electric vehicle. And, if a conventional gasoline engine is replaced with a fuel cell, the electricity it produces can be used as fuel-cell hybrid power. For this reason, Toyota positions the hybrid system as "the 21st Century's core environmental technology" in its R&D approaches to sustainable mobility.



# Expanding HVs, Introducing Plug-in HVs and Developing EVs

With regard to development of sustainable mobility, there are various possibilities and, at the same time, a number of hurdles to overcome. In light of such circumstances, it is necessary, when creating environment-considering vehicles, to continue development and refinement of the technology that appears most promising at the point when far-sighted development work is undertaken. At the center of these technologies are hybrid vehicles that adopt hybrid systems, and plug-in hybrid vehicles that have now evolved closer to the realm of pure electric vehicles. Ever since it launched the Prius, the world's first hybrid production model, in 1997, Toyota has made constant efforts to refine the technology and reinforce the product lineup. Consequently, the cumulative production of 12 Toyota hybrid passenger car models worldwide reached the 2.5 million mark at the end of April 2010. The lineup now consists of 15 models including 3 commercial vehicle models. Approaching the future, Toyota has set a goal for annual sales volume at 1 million units in the early 2010's. Accordingly, its overseas manufacturing bases will be increased and the models will eventually be produced in the U.S., China, Thailand, Australia and the U.K. Meanwhile, about 600 plug-in hybrid vehicles, which can be charged at home and used as EVs for short-distance travel, were made available for leasing in Japan, the U.S. and Europe at the end of 2009. The introduction of these plug-in hybrid vehicles offers an opportunity to gather customer feedback on their performance, which will aid in refining their marketability. A plan to introduce fuel cell vehicles around 2015 is also under way, but will be pursued in association with governments and other entities engaged in activities such as infrastructure building. It is expected that expansion of these hybrid and plug-in hybrid vehicles will be a firm step forward toward sustainable mobility. In May 2010, Toyota announced an agreement with a U.S. EV venture, Tesla Motors, Inc., to jointly develop electric vehicles.

## Infrastructure Development and Demonstration Tests toward Sustainable Mobility

In realizing sustainable mobility for many years to come, it would not be sufficient to devote R&D to vehicle technologies alone. Examples of other critical factors include the expansion of power charging stands for electric vehicles, innovations in traffic systems in conjunction with upgrades to public transportation and other social preparations necessary to gain acceptance. Toyota is pressing ahead with domestic and international demonstrator tests and programs for infrastructure development initiatives to realize sustainable mobility. A "'Family and Community Model' Low-carbon City-building Demonstration Project" commenced in April 2010, where the tests are carried out to reduce automobile-based CO2 emissions, achieve effective utilization of car batteries and prepare for the introduction and promotion of next-generation vehicles, including those for public transportation. Furthermore, in an effort to promote the installation of fast chargers and standardize charging methods, two factors that are indispensable in EV expansion, the CHAdeMO association\* was formed in March 2010 by the companies involved. Internationally, an extensive experimental program was initiated jointly with the French utility firm EDF, for which about 100 plug-in hybrid vehicles were delivered to the city of Strasbourg, France. EDF has placed some 150 power charging stands within the city to verify the effects of charging facilities as it continues vehicle R&D efforts in preparation for future expansion of Plug-in Hybrid technology. Along with its vehicle-based R&D efforts, Toyota hopes to make sustainable mobility a reality as soon as possible through socially involved demonstrator tests and infrastructure building like these.

\* CHAdeMO is a trade name of the fast charger that the association is working to standardize.

 Please see pages 24 and 27 for unit sales data on hybrid vehicles.

 Please see page 27 for the status of PHV introduction.

 Please see Page 27 for local production of hybrid vehicles.

## Column

## Plug-in Hybrid Sightseeing Taxicabs Introduced, Making Low-carbon Next-generation Sightseeing a Reality

In the major international sightseeing spot of Kyoto, the Yasaka Group (known as "Yasaka Taxi") deployed the first model of Prius in its taxi fleet in 1998, which was a world first. Yasaka's commercial fleet of approximately 1,400 vehicles includes 10 Prius cars. A taxicab travels hundreds of kilometers a day; the fuel efficiency offered by hybrid systems leads to a reduced environmental impact and lower fuel costs, driving the selection process for an increasing number of

environment-oriented customers. At the first opportunity, when plug-in hybrid vehicles were launched on the market in December 2009, five were added to the fleet. Customers have come to appreciate the next-generation vehicle's impressive properties, including the quiet operation of the electric motor.

The city of Kyoto, whose major sightseeing areas are concentrated within a radius of approximately 20 kilometers, provides ideal driving conditions for plug-in hybrid vehicles. Its temples and shrines are well equipped with power chargers, making it possible to charge the vehicle's batteries during a tour. The group's special tour program to visit Kamigamo-jinja Shrine and other world cultural heritage sites by plug-in hybrid vehicle, "Kyo no Eco Tabi (Eco Tour in Kyoto)," has been available since April. Yasaka Taxi is making a contribution to local communities and reducing the impact on the global environment by operating as an eco-responsible sightseeing transportation firm.



Plug-in hybrid car charging batteries at Kamigamo-jinja, a World Heritage site

# Toyota Contributes to Growth of India's Economy and Society through the Etios

# Etios – Tangible Evidence of Contribution to Society through Making Cars

Contributing to society through making cars is Toyota's guiding principle. Automobiles not only help people achieve freedom of movement; by contributing to industrialization and human resource development, they also make a tremendous impact on societies and economies throughout the regions and countries of the world. Today, Toyota sees its mission as providing sustainable cars at affordable prices to consumers in China, India and other emerging economies, while doing our utmost to protect the environment and offer safe cars that our customers can drive with confidence. The Etios launch recently announced in India is a specific example of how Toyota fulfills its mission as cars like the Etios benefit suppliers, dealers and employees and help them grow. This is a car that will contribute to the growth of both the economy and society of India.

## Contributing to Society through Making Cars

The Toyota principle is as simple as this: Contribute to society by making products that are useful to society. Years ago Toyota grasped the future of motorization and how it would contribute to and change society, so we invested in the manufacturing of automobiles. Since then, we have lived and breathed our principles in making cars.

In Japan's recent history, as motorization grew exponentially, a great many people took advantage of the convenience of automobiles, enjoying the freedom to go where they wanted, when they wanted, in complete comfort.

At the same time, Toyota cannot deny that motorization brought pressing issues like increased traffic accidents and negative impact on the environment. In the process, the public became more concerned about the environment and began to focus on sustainable mobility.

Toyota has always sought to contribute to society through the monozukuri philosophy — an all-encompassing approach to manufacturing. In its application of monozukuri to the production of automobiles, Toyota has pursued a sustainable method of making its cars ever more safe, environmentfriendly, reliable and comfortable. From this perspective, one of the most urgent tasks is how to address increasing automobile use in emerging countries. India, whose economy has enjoyed phenomenal growth in recent years, is one of the best examples of an emerging country and is especially noteworthy for the tremendous growth of its middle class. In 2005, only 8% of Indian household income was between 200,000 and 1 million rupees (400,000-2 million JPY/US\$4,500-22,500). In 2009, that percentage had risen to 13%. Academics say that when household income reaches about \$5,000 a year, motorization begins to expand, so automobile sales in India are expected to rise 70% to about

2.5 million units in 2010. Contributing to society through making the right cars in such a rapidly growing emerging economy is one example of Toyota's principles.



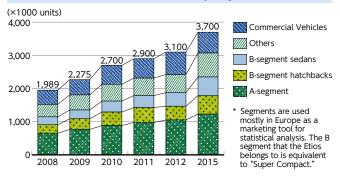
The Etios is announced at the Delhi Auto Expo

# Challenges in Making Sustainable Cars for Emerging Countries

In January 2010, at the Delhi Auto Expo in New Delhi, India, Toyota upstaged the world with its new Etios concept car. In recent years, the automotive market's B segment\* has shown rapid growth, particularly in emerging markets. India is no exception, and demand for a convenient automobile at an affordable price has grown significantly. During development of the Etios, Chief Engineer Yoshinori Noritake visited India many times to see the conditions, for himself. He observed some places with summer heat in excess of 50°C and others with winter temperatures far below freezing. Throughout the broad range of climate zones, he also saw narrow streets, perennially crowded conditions, rough road surfaces, and the scarcity of parking space. His experience with the operating environment made him realize the indispensability of a B-segment car with excellent basic performance characteristics. So Toyota's key objective became a combination of excellent engineering, design and features that are true to the basics. For the engineering part of the equation, Toyota had to maintain and expand upon traditional Toyota quality, durability and reliability (QDR) while providing an end product at a price that was affordable across a broad segment of the market.

The new engine had to have excellent features and simple construction. From the outset, all materials and components were sourced locally wherever possible, and production and engineering were aligned with local production technology and capabilities. As a result, Toyota achieved excellent

#### Indian Auto Market Share Trends by Segment



reliability, superior maintainability and significant reductions in overall running costs. Simple design and construction kept the engine weight to a minimum, which resulted in much lower overall vehicle weight, and contributed to the exceptional fuel efficiency. In addition, the Etios meets EURO 4 exhaust emission standards, and is produced in a local eco-factory (see page 46). At the transport and distribution stage, new packing systems add to transport efficiency, reduce exhaust emissions and incur a much lower impact on the environment. In India, more people tend to ride in one vehicle, so special attention was paid to interior appointments like the headliner and door trim, and the suspension was moved outside the cabin to create a very space-efficient interior and luggage area. Toyota focused on both active and passive safety measures that surpass competitors so customers could use the car with a complete sense of confidence. Thus was born the Etios, a car with polished performance and ample features, but with nothing superfluous. This strategy helped to hold costs down while offering an excellent balance of performance and quality.

## How Emerging Countries will Benefit Economically and Socially from Etios Market Expansion

The automotive industry is a far-reaching one. Many people are involved in the production and sales of cars, ranging from suppliers to employees of Toyota Kirloskar Motor (TKM), dealers and logistics companies. Such an undertaking can have a significant effect on both the society and the economy. It's a real-world example of how Toyota contributes to society through monozukuri, the making of cars. Along with the launch preparation of the Etios in India, Toyota also had to find local suppliers, organize a dealer network, put together a servicing system, and much more.

Toyota set standards for quality, delivery dates, prices and management policies, and engaged about 82 supplier companies, including new suppliers. Of those, some 20 companies will establish new operations in or near Bangalore. Currently, our suppliers are working with Toyota hand in hand for the smooth launch. For the TKM employees, production of the Etios and experience came as a package, and now it has some of the first graduates of the Toyota Technical Training Institute (TTTI) working for TKM. A second plant was constructed for Etios production, which creates additional jobs for another 2,000 people. In addition, in the development area, TKM conducted on-site optimum product planning and design assessment from the start of the operation. There are currently 100 Toyota dealers in 69 cities across India, but by the end of 2010 TKM plans to have 150 dealers in operation. The criteria in selecting the dealer network are a sound management base and Customer First principles, based on Toyota's 3S (Sales, Service, Spare parts) dealer standards. Toyota is committed to working with TKM to continually increase customer satisfaction.

In July 2010, Toyota announced the start of Etios engine and transmission production at Toyota Kirloskar Auto Parts (TKAP), a unit production company in India. TKAP will produce about 100,000 engines and 240,000 transmissions starting in early 2013. Toyota expects to invest some 9 billion yen in the company, which will employ another 500 people. With this move, Toyota positions a key production center for core parts in India.

The socioeconomic benefits of the Etios go far beyond the job creation and economic activity. They also include human resource development and the building of an industrial base from the point of our contribution to the local economy. Although the Etios was unveiled in India, the same model will be produced and marketed in other emerging economies such as Brazil. Toyota believes that promotion of the Etios

and expanding into new markets will lead to more social contributions in regions all over the world.



TKM staff inspects Etios components

#### Column

## July Sees First Graduates of Toyota Technical Training Institute

In the city of Bangalore on the Deccan Plateau in southern India, TKM established TTTI, an Indian version of the Toyota Production Technical Skills Academy in 2007. Based on the concept that making cars means human resource development, the company set out to train the best candidates in production and quality improvement on-site, and to offer educational opportunities to people who could not afford traditional educational methods. The institute offers a three-year course with scholarships that cover tuition and living expenses. It is open to anyone in the region who has graduated from middle school, and each year the number of applicants exceeds the number of openings by a factor

of 10 (15 for FY2010). In addition to specialist technologies, students also learn painting, welding, automobile assembly and maintenance servicing and specialty technologies such as mechatronics. Not only do the students gain technical knowledge and skills, they also learn the Toyota Way and the Toyota method of doing things as they receive their practical handson experience at TKM. In July 2010, the Toyota Production Technical Skills Academy sent its first 63 graduates out into the world. One graduate said, "To me, a person who was unable to continue in school, the things I learned here are very important. Of course, I learned many things about making cars. I also gained many colleagues and was able to grow immensely as a human being."



One of the first graduates

## Seeking Harmony among People, Society and the Global Environment, and Sustainable Development of Society through Manufacturing

Since its foundation, Toyota has continuously strived to contribute to the sustainable development of society through the manufacturing and provision of innovative and quality products and services that lead the times. The foundations of these endeavors are the Guiding Principles at Toyota and an explanation paper entitled "CSR Policy: Contribution towards Sustainable Development" that interprets the Guiding Principles at Toyota. The CSR Policy has been compiled based on the Guiding Principles at Toyota and takes into consideration Toyota's relations with stakeholders. By having all employees implement this policy, Toyota aims to become a company that is admired and trusted by society.

# The Spirit of the Toyoda Precepts Passed on since Toyota's Foundation

The Toyoda Precepts, passed on from the time of Toyota's foundation up to the present day, have acted as the core of Toyota management. The Precepts capture the thinking of the founder of the Toyota Group, Sakichi Toyoda, and have played the role of a spiritual support for employees as the principles of the company, and continue that role today in the form of the Guiding Principles at Toyota.

## Five Main Principles of Toyoda

- 1. Always be faithful to your duties, thereby contributing to the Company and to the overall good.
- 2. Always be studious and creative, striving to stay ahead of the times.
- 3. Always be practical and avoid frivolousness.
- 4. Always strive to build a homelike atmosphere at work that is warm and friendly.
- 5. Always have respect for God, and remember to be grateful at all times.

## **Guiding Principles at Toyota**

The Guiding Principles at Toyota (adopted in 1992 and revised in 1997) reflect the kind of company that Toyota seeks to be in light of the unique management philosophy, values, and methods that it has embraced since its foundation. TMC, together with its consolidated subsidiaries, hopes to contribute to sustainable development through its corporate activities based on understanding and sharing of the

## Guiding Principles at Toyota

- Honor the language and spirit of the law of every nation and undertake open and fair corporate activities to be a good corporate citizen of the world
- Respect the culture and customs of every nation and contribute to economic and social development through corporate activities in the communities
- 3. Dedicate ourselves to providing clean and safe products and to enhancing the quality of life everywhere through all our activities
- 4. Create and develop advanced technologies and provide outstanding products and services that fulfill the needs of customers worldwide
- Foster a corporate culture that enhances individual creativity and teamwork value, while honoring mutual trust and respect between labor and management
- Pursue growth in harmony with the global community through innovative management
- Work with business partners in research and creation to achieve stable, long-term growth and mutual benefits, while keeping ourselves open to new partnerships

## Guiding Principles at Toyota.

Toyota also participated in the formulation of and observes the standards outlined in the Charter of Corporate Behavior of the Nippon Keidanren (Japan Business Federation), an alliance of Japanese leading corporations.

For details on the Nippon Keidanren CSR Policy, please visit the following Web site

http://www.keidanren.or.jp/english/policy/csr.html

## CSR Policy: Contribution towards Sustainable Development

In January 2005, Toyota drafted and announced "Contribution towards Sustainable Development," an

interpretation of the "Guiding Principles at Toyota" that takes into consideration Toyota's relations with stakeholders. This was revised in July 2008 to become the CSR Policy: Contribution toward Sustainable Development to take into account subsequent environmental changes and heightened societal interest in CSR. TMC has shared the statement with its consolidated subsidiaries and is taking relevant action. Toyota also expects business partners to support this initiative and act in accordance with it.



## Positioning of the CSR Policy



## CSR POLICY: Contribution towards Sustainable Development

## Preamble

## 

We, Toyota Motor Corporation and our subsidiaries, take initiative to contribute to harmonious and sustainable development of society and the earth through all business activities that we carry out in each country and region, based on our Guiding Principles.

We comply with local, national and international laws and regulations as well as the spirit thereof and we conduct our business operations with honesty and integrity.

In order to contribute to sustainable development, we believe that management interacting with its stakeholders as described below is of considerable importance, and we will endeavor to build and maintain sound relationships with our stakeholders through open and fair communication.

We expect our business partners to support this initiative and act in accordance with it.

#### Customers

#### 

Based on our philosophy of "Customer First", we develop and provide innovative, safe and outstanding high quality products and services that meet a wide variety of customers' demands to enrich the lives of people around the world.(Guiding Principles 3 and 4)

■ We will endeavor to protect the personal information of customers and everyone else we are engaged in business with, in accordance with the letter and spirit of each country's privacy laws. (Guiding Principles 1)

## **Employees**

■ We respect our employees and believe that the success of our business is led by each individual's creativity and good teamwork. We stimulate personal growth for our employees. (Guiding Principles 5)

We support equal employment opportunities, diversity and inclusion for our employees and do not discriminate against them.(Guiding Principles 5)

■ We strive to provide fair working conditions and to maintain a safe and healthy working environment for all our employees.(Guiding Principles 5)

■ We respect and honor the human rights of people involved in our business and, in particular, do not use or tolerate any form of forced or child labor.(Guiding Principles 5)

■ Through communication and dialogue with our employees, we build and share the value "Mutual Trust and Mutual Responsibility" and work together for the success of our employees and the company. We recognize our employees' right to freely associate, or not to associate, complying with the laws of the countries in which we operate.(Guiding Principles 5)

■ Management of each company takes leadership in fostering a corporate culture, and implementing policies, that promote ethical behavior.(Guiding Principles 1 and 5)

#### **Business Partners**

■ We respect our business partners such as suppliers and dealers and work with them through long-term relationships to realize mutual growth based on mutual trust.(Guiding Principles 7)

Whenever we seek a new business partner, we are open to any and all candidates, regardless of nationality or size, and evaluate them based on their overall strengths. (Guiding Principles 7)

■ We maintain fair and free competition in accordance with the letter and spirit of each country's competition laws. (Guiding Principles 1 and 7)

## Shareholders

We strive to enhance corporate value while achieving a stable and long-term growth for the benefit of our shareholders.(Guiding Principles 6)

■ We provide our shareholders and investors with timely and fair disclosure on our operating results and financial condition.(Guiding Principles 1 and 6)

## Global Society/Local Communities

## Environment

■ We aim for growth that is in harmony with the environment by seeking to minimize the environmental impact of our business operations, such as by working to reduce the effect of our vehicles and operations on climate change and biodiversity. We strive to develop, establish and promote technologies enabling the environment and economy to coexist harmoniously, and to build close and cooperative relationships with a wide spectrum of individuals and organizations involved in environmental preservation.(Guiding Principles 3)

### Community

 $\blacksquare$  We implement our philosophy of "respect for people" by honoring the culture, customs, history and laws of each country.(Guiding Principles 2)

■ We constantly search for safer, cleaner and superior technology that satisfy the evolving needs of society for sustainable mobility.(Guiding Principles 3 and 4)

■ We do not tolerate bribery of or by any business partner, government agency or public authority and maintain honest and fair relationships with government agencies and public authorities. (Guiding Principles 1)

## Social contribution

Wherever we do business, We actively promote and engage, both individually and with partners, in social contribution activities that help strengthen communities and contribute to the enrichment of society.(Guiding Principles 2)

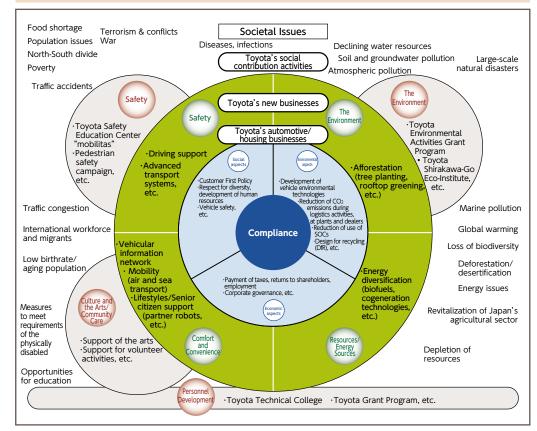
## **Toyota's CSR Structures**

TMC established the CSR Department as a specialized organization within the CSR & Environmental Affairs Division in January 2007. The CSR Department is responsible for drafting CSR policies; responding to CSR issues across divisions; raising awareness of CSR internally and externally; distributing CSR-related information; and communicating with stakeholders. Subsequently, in October 2007, TMC established the CSR Committee, whose membership includes directors at the vice president and higher level and a representative of the corporate auditor. The CSR Committee, the Corporate Citizenship Activity Subcommittee and the CSR Planning Subcommittee.

In FY2009, the committee met twice to discuss such topics as verification of CSR implementation status, checking for legal compliance, internal controls, social contribution activity policies and responses to biodiversity issues.

In June 2010, the Risk Management Committee was formed under the CSR Committee in response to recent quality issues, and will be chaired by a CSR Committee member responsible for risk management at the vice president level. Originally organized under the CSR & Environmental Affairs Division, the CSR Office was transferred to the Corporate Planning Division to achieve deeper company-wide expansion of CSR initiatives.

## **Overview of Toyota's CSR Activities**



## Toyota Global Vision 2020

The environment surrounding the automotive industry is undergoing drastic changes, with economic development accelerating in a number of regions throughout the world and environmental and energy-related issues having an impact on a global scale. Amid these changes, Toyota endeavors to remain a useful member of the global and local communities and toward this end has formulated its "Global Vision 2020," which provides a future vision for Toyota's place in the world.

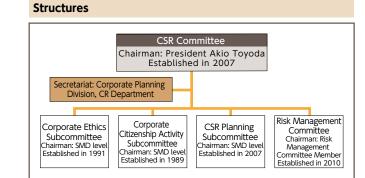
Slogan

## TOYOTA GLOBAL VISION 2020 Open the Frontiers of Tomorrow through the energy of people and technology

Currently, Toyota is employing "Open the Frontiers of Tomorrow" as the slogan for Global Vision 2020. This slogan expresses the commitment of Toyota and each and every employee to never be satisfied with the status quo, to create a path to a new world and to work steadily towards the realization of society's dreams. This progress is to be achieved "through the energy of people and technology."



As it looks ahead to 2020, Toyota believes that re-examining the relationship between nature and industry and pursuing harmony among monozukuri, people, society in general, and nature is extremely important. Also, by seeking harmony between monozukuri and the cycles of nature, Toyota is helping promote efforts toward finding a harmonious balance between the cycles of nature and the cycles of industry. We believe that it is our mission to tackle challenges in new fields in order to achieve this.



## [Corporate Governance]

## Toyota's Basic Approach to Corporate Governance

Specifically, Toyota has introduced a unique management system focused on prompt decision making for developing our global strategy and speeding up operations. Furthermore, Toyota has a range of long-standing in-house committees and councils responsible for monitoring and discussing management and corporate activities from the viewpoints of various stakeholders to ensure heightened transparency and the fulfillment of social obligations. Toyota has a unique corporate culture that places emphasis on problem solving and preventative measures. Toyota's approach is to build in quality through manufacturing processes, enhancing the quality of everyday operations and consequently strengthening corporate governance. Toyota's management team and employees conduct operations and make decisions founded on that common system of checks and balances and on high ethical standards.

## Systems for Ensuring Appropriate Management and Basic Approach to Internal Controls

Regarding the current managerial system, the Senior Managing Directors, who are directors, serve as the highest authorities of their specific operational functions while non-board Managing Officers implement the actual operations. To monitor the management, Toyota has adopted an auditor system that is based on the Japanese Corporation Act. In order to increase transparency of corporate activities, four of Toyota's seven corporate auditors are external auditors. As a system to ensure appropriate management, Toyota has convened meetings of its "International Advisory Board (IAB)" annually since 1996. The IAB consists of approximately 10 distinguished advisors from overseas with backgrounds in a wide range of fields, including politics and economics. Through the IAB, Toyota receives advice on diverse business issues from a global perspective. Under the following basic policies established in May 2006, Toyota implements an internal control system while conducting necessary enhancements. Responding specifically to a series of quality issues that caused anxiety for Toyota customers, it established the "Toyota Special Committee for Global Quality" in March 2010, and the "Risk Management Committee" in June 2010.

#### **Toyota's Corporate Governance**



The CSR Committee deliberates on and makes decisions concerning new CSR related, plans corporate ethics, legal compliance, risk management, social contribution activities, and environmental management policies.

## Basic Approach to Internal Controls

#### **Fundamental Approach**

- Draw out the goodwill, enthusiasm, and autonomous decision making abilities of the people who perform work, based on the idea of "respect for people"; Establish structures within the work performance processes carried out by people and organizations that incorporate internal controls and make possible checks and
- balances as well as management and oversight by directors; Establish inter-departmental organizations to supplement internal controls.

[Compliance]

## **Basic Concepts of Compliance**

The Guiding Principles at Toyota state that Toyota will "honor the language and spirit of the law of every nation and undertake open and fair corporate activities to be a good corporate citizen of the world." It is in this process that Toyota seeks to maintain compliance.

In accordance with the Basic Approach to Internal Controls, Toyota is promoting initiatives centered on the construction of frameworks such as for adopting and putting into practice the Code of Conduct and human resource development through education and other means. Toyota has also established consultation hotlines so no issues are overlooked and precise responses can be made.

## Checking Activities to Enhance Compliance

Toyota started checking activities on enhancing its compliance structure in FY2008. In FY2009, it implemented checking of subsidiaries in addition to internal checking. The results of the activities were reported to the CSR Committee, and Toyota continues to push ahead with improvements based on the results.

## Education and Training to Ensure Thorough Compliance

To ensure that awareness of compliance extends from senior managers to all other employees, TMC conducts education and training programs, including for directors, newly appointed departmental general managers and newly recruited employees; company-wide e-learning programs; and seminars on business law. Toyota will work to further ensure thorough compliance.

## Toyota Code of Conduct

The Toyota Code of Conduct (adopted in 1998 as the Code of Conduct for Toyota Employees and revised in March 2006) organizes the basic attitudes necessary for people working at Toyota to put the Guiding Principles at Toyota into practice and to fulfill social responsibilities, and indicates specific points to keep in mind.

## The Compliance Hotline and Other Hotlines

Toyota has established a number of hotlines for swift and appropriate resolution of issues related to compliance, gender harassment, working conditions, and mental and physical health. The Compliance Hotline in the chart below allows employees to consult concerning compliance-related issues and has been set up in an outside law firm (subcontracted). Upon request, the content of consultations is conveyed anonymously to a secretariat within TMC and the details are investigated with scrupulous care to ensure that the identity of the consulting employee is not revealed. If the results of the investigation indicate a compliance-related issue, a response is immediately implemented.

#### **Different Hotlines Established at Toyota**

	Compliance Hotline Heartful Net e-club	Gender Harassment Prevention Hotline Mental and Physical Health Hotline
Basic Po	<b>licy</b> Impliance by Directors	Appropriateness of the business operations of the group

- Legal compliance by Directors Retention and management of information relating to the execution of responsibilities by Directors Regulations and other systems related to the management of risk of losses Efficiency of execution of responsibilities by Directors
- Legal compliance by employees

1 2

3

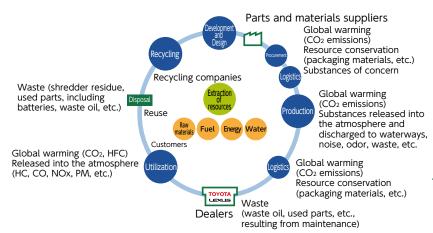
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- operations of the group
   Temployees assisting the Corporate Auditors
   Independence of employees described in the preceding item 
   Report to Corporate Auditors
   Ensure the efficient execution of audits by the Auditore
- by the Auditors

## Sustainability Report 2010 | Environmental Aspects **Environmental Philosophy**

## Based on the 5-year Medium-term Plan **Toyota Moves Forward on Consolidated Environmental** Management with Consolidated Affiliates around the World

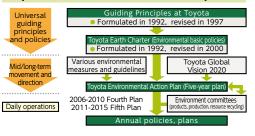
The environment surrounding manufacturing industries changed significantly as a crisis in the finance industry last year brought on a worldwide recession, and global environmental and energy issues continued unabated. FY2010 is the final year of the fourth Toyota Environmental Action Plan, and Toyota expects virtually all the objectives in the five-year plan to be achieved. In FY2011, it will begin its Fifth Toyota Environmental Action Plan, which will set the directions for the years 2020-2030. The new plan will cover three key themes: "Establishing a low-carbon society," "Establishing a recycling-based society" and "Environmental protection and establishing a society in harmony with nature." In Toyota's environmental actions, not only TMC but also all subsidiaries in Japan and overseas work together to move forward on consolidated environmental management.



## Principles, Policies and the Toyota **Environmental Action Plan**

The Toyota Earth Charter (formulated in 1992, revised in 2000) is based on the Guiding Principles at Toyota formulated in 1992 (revised in 1997), and embodies Toyota's comprehensive approach to environmental issues. The Toyota Earth

## Toyota Environmental Action Plan System



Charter has been adopted by about 530 affiliates worldwide to date. In accordance with the Toyota Earth Charter, Toyota Motor Corporation (TMC) has formulated the fourth Toyota Environmental Action Plan, a five-year plan with mediumterm goals covering the period from FY2006 to FY2010 to facilitate the promotion of environmental initiatives by each company.

## **Promotion of Consolidated Environmental Management**

As Toyota's business expands on a global scale, TMC introduced a consolidated environmental management system (consolidated EMS) in FY2000 to promote environmental action in concert with consolidated subsidiaries. TMC presents its environmental policies and guidelines to all companies subject to consolidated EMS, and requests that all companies adopt and implement five-year environmental action plans, create environmental management systems and undertake environmental activities at the highest levels in their each country or region. TMC also supports environmental management by affiliates through the sharing of best practices and exchanges of information to mutually strengthen relationships, as well as audit training, etc. The percentage of vehicles produced and sold by companies subject to consolidated EMS worldwide was 99% and 93% respectively.

## 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, that addresses environmental issues on the global, national, and regional scales, and promotes continuous implementation. 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 activities (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

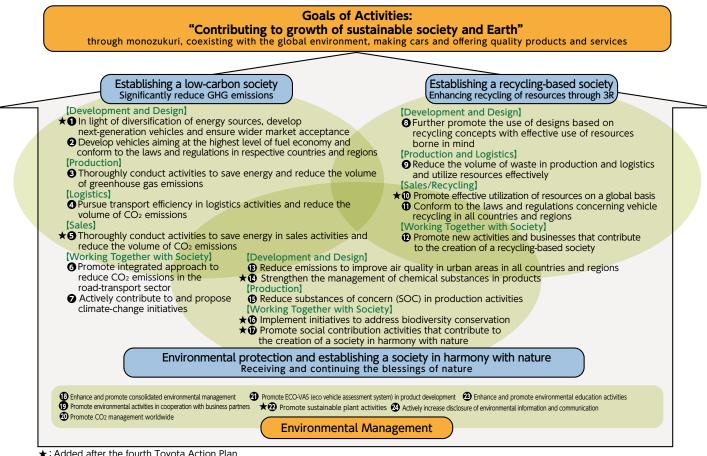
Promotion by the Toyota Environment Committee which consists of top management (chaired by the president)

(As of March 31, 2010)

## The Fifth Toyota Environmental Action Plan

Toyota formulated its Fifth Environmental Action Plan specifying the activities which must be implemented between FY2011 and FY2015 in order to realize the corporate vision and direction of Toyota environmental activities, "Contributing to growth of sustainable society and the earth," through "Monozukuri (manufacturing) in harmony with the global environment, making cars and offering products and services."

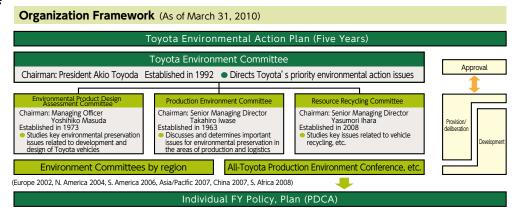
In establishing the new action plan, Toyota organized its activities according to two viewpoints: the risk the activity has of becoming an environmental issue, and its business opportunities (promoting market expansion of environment-considering vehicles, etc.). Toyota will categorize directions of the environmental activities requiring to companies toward 2020 to 2030 in three key themes: "Establishing a low-carbon society," "Establishing a recycling-based society" and "Environmental protection and establishing a society in harmony with nature," formulate programs, specific actions and objectives in the Toyota's corporate activity fields of development and design, procurement, production, logistics, sales and recycling, and promote environmental management.



★ : Added after the fourth Toyota Action Plan

## Implementation Structure

The "Environmental Product Design Assessment Committee," "Production Environment Committee" and the "Resource Recycling Commit-tee" were established under the Toyota Environment Committee, which is chaired by the president, to investigate issues and response policies in their respective areas of responsibility. Each committee collaborates with all relevant divisions to promote companywide action.



## The Fifth Toyota Environmental Action Plan (FY2011 - FY2015)

## — Contributing to Sustainable Growth of Society and the Earth —

through 'monozukuri in harmony with the global environment , making cars and offering products and services'

The Fifth Toyota Environmental Action Plan shows the corporate vision and the direction of Toyota's environmental activities and defines a five-year action plan that begins in FY2011 and the goals.

In drawing up the plan, Toyota categorized the environmental actions a corporation is expected to do in 2020-2030, into three key themes: "establishing a low-carbon society," "establishing a recycling-based society" and "environmental protection and establishing a society in harmony with nature," and contributes to sustainable growth of society and the earth through monozukuri in harmony with the global environment, making cars and offering products and services.

	Action Items		Specific Actions ar	nd Goals			
Develop- ment and Design	• Develop next-generation vehicles that use electricity for propulsion, and ensure wider market acceptance of the vehicles based on their characteristics	<ul> <li>HV: Aim to achieve annual sales volume of 1 million units and total accumulated sales volume of 5 million units in the early 2010s.</li> <li>Further develop HV technologies and stimulate the HV market by introducing new models and expand field</li> <li>PHV: Promote as HV with EV drive for daily use; launch in 2012 and aim for annual sales in the tens of thousands</li> <li>EV:Promote as vehicle for short-distance use; launch in 2012</li> <li>FC: Develop a next generation FC vehicle and market it for mid-long distance use</li> </ul>					
	• Develop technologies to achieve the best fuel-efficiency performance and conform to the laws and regulations in each country and region	of 2005 (Passenger vehicles	in Japan, U.S., Europe and China are	e included. In the U.S., L			
		- Japan: Steadily - U.S.: Meet new - Europe: Promo - China: Meet th	r meet the FY2015 fuel efficier CAFE standards in passenger te initiatives and meet next sta e new fuel-efficiency standard	ncy standard vehicle and LDT ca andards and long-te	rm goal		
Production and Logistics	and energy and reducing the volume of GHG emissions		CO2-emitting production tech vity improvement, promotion of e energies considering characte	nologies, and daily improvement activiti ristics of each countr	improvement activities es, including at offices) y and or region		
		Region	Item	Base year	Target (FY2012)		
		Global	Emissons per unit produced	2001	29% reduction		
		TMC	Emissons per unit produced	2001	37% reduction		
			Total emissons volume	1990	25% reduction*		
		Overseas	Promote reduction activities	that are the highes	t level in each country		
		* Average value from FY2008 to FY2012					
	<ul> <li>Pursue transport efficiency and reduce the volume of CO<sub>2</sub> emissions in logistics activities</li> </ul>		duction activities by further im	proving transport eff	ficiency		
		Region	Item	Base year	Target (FY2012)		
		Japan	Emissons per unit produced	2006	6%reduction		
			Total emissons volume	1990	15% reduction		
		Overseas	Promote reduction activities	that are the highes	t level in each country		
Sales	Thoroughly conduct activities to save energy and reduce the volume of CO <sub>2</sub> emissions in sales activities			per-unit energy at th	ne annual rate of 1%		
Working Together with	<b>G</b> Actively contribute to and propose climate change initiatives	<ul> <li>Promote environmental measures to contribute to the low carbon society proposed by Nippon Keidanren, WBCSD, and industry organizations</li> <li>Participate in debates, both in Japan and overseas, concerning governmental environmental policies and fr</li> </ul>					
Society	Promote integrated approach to reduce CO <sub>2</sub> emissions in the road transport sector	Promote integrated approach with JAMA and other groups     Implement initiatives to contribute to traffic-flow improvement using IT & ITS technologies     Implement initiatives to promote eco-driving					
Develop- ment and Design	OF Further promote the use of designs based on the recycling concept with effective utilization of resources borne in mind	<ul> <li>initiatives to imp</li> <li>Establish a techr</li> </ul>	rove separation and the sortin hology that enables 20% usage	ng of materials e of Ecological Plasti	ic and recycled resin		
	ment and Design Production and Logistics Sales Vorking Together with Society Develop- ment and	Development and Design              • Develop next-generation vehicles that use electricity for propulsion, and ensure wider market acceptance of the vehicles based on their characteristics           • Develop technologies to achieve the best fuel-efficiency performance and conform to the laws and regulations in each country and region           Production and Logistics         • Thoroughly conduct activities aimed at saving energy and reducing the volume of GHG emissions in production activities           • Pursue transport efficiency and reduce the volume of CO <sub>2</sub> emissions in logistics activities         • Pursue transport efficiency and reduce the volume of CO <sub>2</sub> emissions in logistics activities           Sales         • Thoroughly conduct activities to save energy and reduce the volume of CO <sub>2</sub> emissions in sales activities           Vorking Together with Society         • Actively contribute to and propose climate change initiatives           • Promote integrated approach to reduce CO <sub>2</sub> emissions in the road transport sector           • Peuropment and         • Further promote the use of designs based on the recycling concept with effective utilization of resources borne in mind	Development and Design              • Develop next-generation vehicles that use electricity for propulsion, and ensure wider market acceptance of the vehicles based on their characteristics              • W.Y. Alm to achiev million units in their develop the expand field              • W.Y. Alm to achiev million units in their develop the expand field              • W.Y. Alm to achiev million units in their develop the expand field              • W.Y. Alm to achiev million units in their develop expand field              • W.Y. Alm to achiev million units in the develop expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. Alm to achiev million units in the expand field              • W.Y. 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Finance as the with EV drive for daily use, launch thus and regulations in each country and region                • Develop technologies to achieve the best fuelefficiency performance and conform to the laws and regulations in each country and region              • With EV drive for daily use, launch thus and the sole of 2005. • Promote as vehicle for short-distance use, launch thus and regulations in each country and region                • Develop technologies to achieve the best fuelefficiency performance and conform to the laws and regulations in each country and region              • Py 2015, improve average fuel efficiency—in a data the fuelefficiency standards in each country and region              • Promote activities in Japan. Us, Europe and China an -User the new fuelefficiency standards in each country and region              • Promote activities to reduce CO2 emissions in production activities                • Production and Logistics               • Thoroughly conduct activities and reduce the volume of CO2 emissions in logistics activities               • Promote reduction activities by further im • Promote CO2 reduction activities by further im • Promote reduction activities                 • Pursue transport efficiency and reduce the volume of CO2 emissions in logistics activities               • Promote cO2 reduction activities • Promote reduction	Development and Design         © Develop next-generation vehicles that use electricity for propulsion, and ensure wider market acceptance of the vehicles based on their characteristics         • HV. Am to achieve annual tales volume of 1 million units and total accur propulsion of the safe 2005. England field           • Develop technologies to achieve the best fuel-efficiency performance and contorm to the laws and regulations in each country and region         • HV. Am to achieve annual tales volume of 1 million units and total accur period field           • Develop technologies to achieve the best fuel-efficiency performance and contorm to the laws and regulations in each country and region         • HV. Environe average fuel efficiency—Lin 28 set of 2005           • Develop technologies to achieve the best fuel-efficiency standards in passenger vehicle and LDT ca - 2 pars. Steadily metotuce standards in passenger vehicle and LDT ca - 2 pars. Steadily introduce technologies to improve fuel efficiency - 0 pars. Steadily introduce technologies to any and - 0 ther regions: Steadily introduce technologies to area your - 0 pars. The passen your - 0 pars. Steadily introduce technologies to area your - 0 pars. Steadily introduce activities to a set year - 0 for a million units and reduce the your - 0 for a million units and reduce the your - 0 for a million units and reduce the your - 0 for a million your pars 0 for your - 0 for a million your pa		

		Action Items			Sp	ecific A	ctions a	and Goals	
	Production and Logistics	• Reduce the volume of discarded materials and use resources effectively in production and logistics	<ul> <li>And promote a <ul> <li>Promote a and waster</li> </ul> </li> </ul>	te effective u activities to re	se of resourc educe total re	es esource loss	such as the		proving yields and other measures, e of reclaimed valuable materials
			Region		Target			Target (	FY2012)
			Japan	Materials	Valuable	Japan	Pror		the volume of scrap metal,
₹				discarded	materials	-		etc., and efficient use of	resources in all Toyota
ocie					Waste	Japan		Volume per vehicle	Cut by 31% from 2001 level
N N							TMC	Volume per vehicle Zero landfill wa	Cut by 45% from 2001 level
ase			Overseas	Waste		Promote re	eduction act	ivities that are the highes	
ц ф в			Logistics:	1	reduce pack			Ū.	of returnable containers
			Packagir	ng and wr	apping m	aterials			
Rec				gion	11 0	Item		Base year	Target (FY2012)
o a			Ja	pan	Volume	e per packa	ging unit	2006	6% reduction
Contribution to a Recycling-based Society				rseas nsumption: Se irr	t goals acco	rding to the	water envir		est level in each country
Contri	Sales and Recycling	Promote effective use of resources on a global basis	Develop     Promote     Enhance	methods an activities to initiatives to	d tools for e develop and expand the	ffective disr d establish a use of used	mantling ar a system fo d parts at c	dealerships	tion worldwide ing resources on a global scale
		Conform to the laws and regulations concerning vehicle recycling in all countries and regions	Japan: Maintain the highest level of recycling rate and establish technologies to achieve higher recycling rates     Europe: Achieve early by formulating a scenario to achieve a vehicle recycling/recovery rate target of 95% by 20     and an implementation plan by country and region     •China, emerging countries: Continue conforming to laws and regulations concerning vehicle recycling in close co     with regional holding companies according to the circumstances in each country and					y rate target of 95% by 2015 chicle recycling in close collaboration	
	Working Together with Society						, .		
nd ure Society	Develop- ment and Design	Preduce emissions to improve air quality in urban areas in each country and region	<ul> <li>Introduce low-emission vehicles that contribute to the improvement of air quality in urban areas in each country and region</li> <li>Japan: Continuously introduce vehicles that achieve or surpass U-LEV levels(3☆4☆)</li> <li>U.S.: Take initiatives to conform to new regulations (LEVII, SFTPII)</li> <li>Europe: Appropriately conform to EURO5, take initiatives to quickly conform to new regulations EURO6</li> <li>China: Promote introduction of countrywide regulations equivalent to EURO5</li> <li>Other countries: Promote introduction of a low emission vehicle (to level of EURO3 or EURO4)</li> </ul>						
Environmental protection and tribution to a Harmony with Nature Society		Strengthen the management of chemical substances in products	<ul> <li>Promote the management of chemical substances in products on a global basis</li> <li>Transition to the management of various chemical substances in products in addition to total abolition of the use of regulated heavy metals</li> <li>Develop technology enabling a switch to substances with less environmental impact and promote the switch to those substances</li> <li>Develop and introduce a coolant with a lower global warming coefficient</li> </ul>					is in addition to total abolition ental impact and promote the	
nor	Production	Reduce substances of concern (SOC) in production activities	<ul> <li>Continuously promote VOC reduction activities through improvement of daily operations including the reduction of the volume of paint materials and cleaning solvent used in the painting process</li> </ul>						
ente Hari		activities		cess	Regi	-	· · ·	Target (F	Y2012)
a F				<sup>,</sup> paint	Japa			32g/m² or less (av	
to						TMC		24g/m² or less (av	verage of all lines)
Envi					Overs			Highest level ir	
ibu			Othe	r paint	Japan & C	overseas	PI	romote activities to redu	ice VOC emisson volume
contr	Working Together	Implement initiatives to address biodiversity conservation	• Promote	environmen	tal activities	s based on	the Toyota	a Biodiversity Guidelir	es
0	with Society	Promote social contribution activities that contribute to a society in harmony with nature	Utilize th     Enhance	e Toyota En environmen	vironmenta tal educatio	l Activities on at Fores	Grant Prog t of Toyota	ram to support activit a and TOYOTA Shiraka	ies in Japan and overseas awa-Go Eco-Institute
	Manage- ment	Enhance and promote consolidated environmental management	<ul> <li>Implement activities to ensure the best environmental performance in each coun through enhancement of environmental-committee activities in Japan and overse</li> <li>Conform to environmental laws and regulations in all countries and regions, and activities to prevent environmental risks</li> </ul>			erseas nd enhance			
Environmental Management		Promote environmental activities in cooperation with business partners		<ul> <li>Suppliers: Promote compliance from suppliers, enhance management of SOCs in parts, raw materials, and other items supplied to Toyota and request and or support voluntary initiatives to impre environmental performance</li> <li>Dealerships in Japan: Promote and enhance environmental initiatives by thoroughly following the Toyo (Environment) Guidelines</li> <li>Dealerships overseas: Promote and enhance dealer environmental initiatives led by regional distributo</li> <li>Promote and enhance the Dealer Environmental Risk Audit Program (DERAP)</li> </ul>				r initiatives to improve following the Toyota Dealer CSR	
Ma		Promote CO <sub>2</sub> management worldwide	Plan and	promote tot	al CO2 man	agement in	global bus	siness operations	
ntal		Promote ECO-VAS (Eco Vehicle Assessment System) in product development						ning environmental imp velopment stage	pact of vehicles by using
ironmei		<ul> <li>Promote sustainable plant activities</li> </ul>	<ul> <li>Establish</li> </ul>	a plant that	fully utilize	s natural re	sources a	nd operates in harmo	ny with the natural environment, vement of daily operations, use
Env		$oldsymbol{\Phi}$ Enhance and promote environmental education activities	or renewable energy and tree-planting activities at production plants  • Raise employee environmental awareness, formulate and implement a systematic environmental education program that contributes to operational improvements  • Promote environmentAl education globally in cooperation with consolidated companies  • Independent Toyota Environment Month events on a global scale					natic environmental education	
		Actively increase disclosure of environmental information and communication	<ul> <li>Continuo</li> </ul>	usly issue su	stainability i	reports and	improve th	on environmental pro heir content in each co countries and regions	ducts in all countries and regions untry and region

 $\ast$  FY2015 target of production and logistics areas will be established by FY2012

## The Fourth Toyota Environmental Action Plan

The Fourth Toyota Environmental Action Plan specified activities to be implemented between FY2006 and FY2010 to realize the corporate image that Toyota seeks to pursue — a leader and driving force in global regeneration by implementing the most advanced environmental technologies. In drawing up the Fourth Toyota Environmental Action Plan, Toyota reconfirmed the environmental issues that are projected to intensify between 2020 and 2030, and addressed four key themes, namely, ① energy/global warming, ② recycling of resources, ③ substances of concern, and ④ atmospheric quality. For each of these four themes, Toyota formulates programs, specific actions and goals in its corporate activity fields of development and design, procurement, production, logistics, sales and recycling, and promotes environmental management.

## The Fourth Toyota Environmental Action Plan FY2009 Review (All Goals Achieved)

In FY 2009, Toyota took action on 22 items, implementing the action virtually according to plan. All goals were achieved. Actions taken in each field are detailed below.

## ①Energy/Global Warming

As of the end of March 2010, sales of Toyota hybrids topped 2.44 million vehicles, and sales of Plug-in Hybrids in Japan, the U.S. and Europe had begun. Further improvements in the fuel efficiency of conventional products were achieved. Toyota vehicles not only met standards in every country, but also achieved the highest levels of fuel efficiency in their respective classes in Japan, the

## The Fourth Toyota Environmental Action Plan (FY2006-FY2010) FY2009 Review

	Action Items	Specific Actions and Goals
Energy/ Global	• Reduce CO2 emissions in Toyota's global operations	<ul> <li>Adopt and steadily implement medium- and long-term scenarios</li> </ul>
Warming	<ul> <li>Promote the development of technologies to achieve the best fuel efficiency performance in each country and region</li> </ul>	<ul> <li>Japan: Steadily promote improvements in fuel efficiency to surpass the 2010 Fuel Efficiency Standards</li> <li>Europe: Steadily implement initiatives to realize the Japan Automobile Manufacturers Association's commitment to reduce CO2 emissions to 140g/km by 2009</li> <li>North America: Steadily promote the development of technologies aiming to achieve the best fuel efficiency among competing vehicles of the same class</li> <li>China: Achieve the new fuel efficiency standards in the short-term and realize leading fuel efficiency levels by vehicle class</li> </ul>
	Promote the development of clean-energy vehicles, encourage their effective introduction and ensure wider market acceptance	<ul> <li>Further improve the performance of hybrid systems, increase the number of hybrid vehicle series and introduce them in more markets</li> <li>Develop and quickly introduce next-generation fuel cell vehicles in light of the diversification of energy sources</li> </ul>
	<ul> <li>Develop technologies to respond to the diversification of energy and fuel sources</li> </ul>	<ul> <li>Assess and develop corresponding technologies for various types of bio fuels and synthetic fuels that will contribute to reductions in CO2 emissions and energy security</li> </ul>
	<ul> <li>Promote initiatives to improve traffic flow using a variety of networking technologies</li> </ul>	<ul> <li>Promote initiatives to improve traffic flow in cooperation with relevant organizations, aiming to introduce to society traffic systems that use ITS from the three-fold perspective of "cars," "traffic infrastructure" and "people"</li> </ul>
	<ul> <li>Reduce CO2 emissions in the production and logistics activities of each country and region</li> </ul>	<ul> <li>(Production)</li> <li>Dramatically increase productivity through measures such as the development of innovative production technologies, thus reducing CO2 emissions</li> <li>Develop technologies that will enable the use of "new energy" and study their introduction</li> <li>(Logistics)</li> <li>Promote CO2 emissions reduction activities through improvements in transportation efficiency</li> </ul>
Recycling of Resources	Promote the effective use of resources to further contribute to the realization of a recycling-based society	<ul> <li>(Production)     <li>Reduce the volume of materials discarded by taking action at the source, such as improving yields and other measures (reduce the volume of valuable materials such as scrap metal and waste and maintain zero landfill waste generation)     <li>(Logistics)     </li> </li></li></ul>
		<ul> <li>Reduce packaging and wrapping material usage by keeping packaging to a minimum and increasing the use of returnable containers</li> </ul>
	Reduce water consumption	<ul> <li>Set separate goals for each country and region and continue implementing measures to reduce water consumption</li> </ul>
	Steadily implement recycling systems in Japan and Europe	Steadily implement measures to achieve a vehicle recycling/recovery rate of 95% in 2015
		<ul> <li>Develop recycling technologies for newly developed parts (FC and HV parts, etc.) and create collection networks</li> </ul>
	Further promote and expand the use of designs based on the design for recycling (DfR) concept	<ul> <li>Promote and expand the development of vehicles that are easy to dismantle and recycle</li> <li>Expand the usage of renewable resources such as Ecological Plastic*, and of recycled materials (establish technologies that enable use of 15% resin parts by FY2010)</li> <li>Develop and increase use of designs based on the DfR concept for newly developed parts</li> </ul>

\* Ecological Plastic: A type of plastic developed by Toyota for use in automobiles that contains plant-derived materials, featuring improved heat resistance and shock resistance as compared to general bio-plastics

U.S., Europe and China. In addition, Toyota prepared scenarios aimed at reducing CO<sub>2</sub> emissions at plants and from vehicles, and reflected them in production technologies and vehicle development. Toyota will move forward to realize those scenarios in the future.

#### ② Production/Logistics

As the result of global implementation of energy conservation actions, etc., FY2010 goals were achieved ahead of schedule. Through its Environment Committees in Japan and overseas, Toyota will continue to enhance its actions.

## ③ Recycling of Resources

Improvement of materials discarded per unit in the production process in the production process and using less packaging and cushioning materials in logistics moved ahead and achieved the goals set for FY2010. In October 2009, Toyota introduced a new system for the collection of the batteries used in hybrid vehicles, and will soon organize a battery collection system while studying the possibility of recycling battery materials.

#### (4) Substances of Concern

In product design and production processes, Toyota moved forward according to plan in managing and reducing use of materials that place a impact on the environment, and dealt with new regulations such as REACH in the process.

#### **(5)** Consolidated Environmental Management

Toyota has organized Environment Committees in each of the six international regions outside Japan. In cooperation with business partners such as distributors, dealers and suppliers, Toyota moved ahead to reducing the environmental impact. By enhancing social contribution and environmental protection and disclosure of environmental information, Toyota built deeper ties with society. Toyota continues further ties with each region for actions to the environment and advance the level of its actions on the environment worldwide.

		Status of A	ction	Actions to Be Undertaken in FY2010 and Beyond	
		narios for CO2 emissions redu an (vehicles, production tech		Review regional CO2 reduction scenarios that considers each region's global warming policies, and formulate policies for regional approaches <vehicle plant=""></vehicle>	
– Japa – Euro – Nort – Chin	an: Fuel efficie ope: Introduce th America: A a: Compliance	fuel efficiency in Japan, North ency standards met in all cate ed Low-CO2 emissions vehicle verage fuel efficiency for pass e with phase 2 fuel efficiency efficiency retained	gories. Exceeded industry a es and 140g/km goal could l enger vehicles maintained a	Steadily achieve, maintain and exceed the standards of each country	
Japan,	North America	ched 2.44 million. Introduced 1 a and Europe (from December 2 , an improved fuel cell vehicle, v	009)	•	<ul> <li>Promote hybrid car development to further promote their popularization</li> <li>Further enhance development of fuel cell systems with the aim of lower costs higher reliability</li> </ul>
private	companies for	0 fuel achieved for all vehicles s the development of bio-ethanc ent of technologies for the prod	l technology		Encourage the adoption of standards on fuel properties in preparation for the diversification of fuels
telemai Continue system Cooper the "Hy Carried	tic service bega ued developme that uses traffi rated with Toya /brid City" basi l out initiatives	nication traffic information servic an in April 2007) ent of systems that work in colla c signal information to prevent in to da City for its development as a c concept to verify the operation of new the cirg an employee parking zone	aboration with infrastructure to delayed startup at traffic signal a low-carbon society ("Eco-Mo ypes of mobility (e.g., plug-in hy	improve traffic flow, such as a s del City" concept), based on ybrids) and to reduce traffic	<ul> <li>Promote efforts towards more substantial volume and quality of traffic information available</li> <li>Enhance commercialization based on effects of various systems that contribute to improve traffic flow</li> <li>Collaborate and cooperate on action plans to support low-carbon programs</li> </ul>
	Region	Item	FY2010 goal	FY2009 results	(Production)
Production	Worldwide	Emissions volume/sales unit	20% reduction from FY2001	25% reduction from FY2001	<ul> <li>Strengthen efforts through domestic environmental councils and regional environmental committees towards achieving FY2010 targets of affiliates</li> </ul>
	TMC	Emissions volume/sales unit	35% reduction from FY1990	51% reduction from FY1990	
		Emissions volume	20% reduction from FY1990	42% reduction from FY1990	<ul> <li>(Logistics)</li> <li>Begin management by objectives in all overseas affiliates</li> </ul>
Logistics	Japan	Emissions volume	10% reduction from FY1990	37% reduction from FY1990	• Degit management by objectives in all overseas anitiates
	Overseas	Grasp actual figures by FY2007 and ma	ke a shift to management by objectives	Shift almost completed	
					-
	Region	Item	FY2010 goal	FY2009 results	
Production	Japan	Volume of materials discarded/sales unit	3% reduction from FY2003	29% reduction from FY2003	
	TMC	Volume of materials discarded/sales unit	20% reduction from FY2000	44% reduction from FY2000	
	Overseas	Waste (promote reduction activities that	are at the highest level in each country)	Promoted at regional committee	
Logistics	Japan	Usage volume of packaging material	43% reduction from FY1995	45% reduction from FY1995	
	Overseas	Grasp usage volumes and e	expand reduction activities	Now systematically promoting expansion	
Each co in FY20	ompany impleme 08 and 3.6 in FY	ented voluntary reduction activities (2009)	(global per-unit consumption m³/	vehicle: 4.8 in FY2001, 3.8	Continue activities to reduce water consumption in each country and region
• Europe	FY2007 rate Built an ence remaining 4 countries' g	cling/recovery rate target for e: 96%: FY2008 rate: 97% an J-of-life vehicle collection ne c countries along with the au overnments. battery (Ni-MH) collection s	d FY2009 rate: 97% ) twork in 23 of the 27 EU cc thorization of dismantling c	<ul> <li>Japan: Maintain and stabilize the vehicle recycling/recovery rate Europe: Consider the approach towards 2015</li> <li>Build a global collection system</li> </ul>	
dismar	ntling marks fo	p-dismantle designs, such as p or new models starting with t materials (Ecological Plastic) in	he Raum launched in 2003	Proactively promote technological development and commercial use leadir to broader applicable sites	
	0 /	ded up the removal of hybrid	,		Continue improvements in hybrid vehicle battery recovery

	Action Items	Specific Actions and Goals
Substances of Concern	<ul> <li>Promote management and further reductions in the use of substances of concern (SOCs)</li> <li>Eliminate use of four SOCs (lead, mercury, cadmium and hexavalent chromium) globally</li> </ul>	<ul> <li>Introduce vehicles in Japan and Europe that use zero amounts of the four banned substances starting in FY2006; complete elimination, with some exemptions, by 2007)</li> <li>Eliminate worldwide usage of the four banned substances in accordance with Toyota's global standards in the short term</li> <li>Reduce cabin VOC levels in all new vehicles launched globally by 2010</li> <li>Develop air conditioners that use coolants with a small global warming potential</li> </ul>
	$oldsymbol{ heta}$ Reduce the discharge of substances subject to the PRTR Law	Reduce the discharge of substances subject to the PRTR Law, focusing on vehicle painting processes
Atmospheric Quality	B Reduce emissions to improve air quality in urban areas in all countries and regions	<ul> <li>Promote the development of ultra-low emissions technologies and introduce the best-performing low-emissions vehicles according to conditions in each country</li> <li>Continue development of high-efficiency clean diesel vehicles</li> </ul>
	Implement initiatives to reduce VOC emissions	<ul> <li>Implement measures to further reduce the volume of cleaning solvents used in vehicle painting processes and expand the use of waterborne paints</li> </ul>
Environmental Management	$oldsymbol{ ilde{ heta}}$ Strengthen consolidated environmental management	<ul> <li>(Production affiliates)</li> <li>Implement global Eco-Factory activities that ensure the incorporation of environmental measures from the planning stages</li> <li>Zero instances of non-compliance and complaints, minimizing environmental risks, and achieving leading levels of environmental performance in each country and region)</li> <li>(Non-production affiliates)</li> <li>Manage and enhance affiliates' environmental performance (CO2 emissions, etc.) on a global scale</li> </ul>
	Further promote environmental management to business partners	<ul> <li>(Suppliers)</li> <li>Management of SOCs contained in parts, raw materials, production facilities and other items supplied to Toyota</li> <li>Request voluntary initiatives by suppliers to improve environmental performance (Japanese dealers)</li> <li>In addition to proper disposal of waste and treatment of wastewater, undertake active steps to address a broad range of issues such as reducing CO<sub>2</sub> emissions</li> <li>Support dealer initiatives to reinforce and enhance their environmental management functions (Overseas distributors)</li> <li>Create support and monitoring systems to assess, manage and reduce CO<sub>2</sub> and other emissions of overseas distributors</li> <li>Support initiatives to ensure appropriate disposal of waste, wastewater and air conditioner coolants at overseas dealers</li> </ul>
	Enhance environmental education	<ul> <li>In addition to raising employee environmental awareness, continue conducting environmental training that contributes to improvement in actual work activities</li> <li>Enhance global environmental education and include consolidated affiliates</li> </ul>
	$oldsymbol{\Phi}$ Promote new businesses that contribute to environmental improvement	<ul> <li>Expand existing new biotechnology and afforestation businesses and establish new ones</li> <li>Promote development and launch of stationary fuel cells</li> <li>Expand businesses that reduce environmental risk, such as management of SOCs, etc.</li> </ul>
	Steadily reduce environmental impact over the entire lifecycle of the product through full-scale implementation and establishment of Eco-Vehicle Assessment System (Eco-VAS)	<ul> <li>Implement on new and fully changed models in Japan and expand to all vehicles, including those produced in Europe and America</li> </ul>
	${f D}$ Contribute to the development of a recycling-based society	<ul> <li>Promote basic environmental research, such as development of technology to reduce CO2 emissions, and make proposals</li> <li>Implement philanthropic programs that contribute to development of environmental technologies, environmental education, and the preservation of biodiversity         <ul> <li>Continue implementing and further enhance the content of activities such as the Toyota Environmental Activities Grant Program (in commemoration of winning the Global 500 Award) and the establishment of the TOYOTA Shirakawa-Go Eco-Institute</li> </ul> </li> </ul>
	$oldsymbol{\vartheta}$ Increase disclosure of environmental information and two-way communication	<ul> <li>Increase the provision of information on environmental technologies</li> <li>Provide eco-drive information to consumers</li> <li>Enhance the environmental reports of each country and region</li> <li>Improve communication with each region</li> <li>Engage in dialogue and enhance mutual understanding with a wide range of stakeholders</li> </ul>
	Actively contribute to and propose environmental initiatives based on sustainable development	<ul> <li>Participate in debates concerning the creation of governmental environmental policies and frameworks both in Japan and overseas</li> <li>Promote environmental measures proposed by the World Business Council for Sustainable Development (WBCSD), Nippon Keidanren and JAMA</li> </ul>

## **TMC Environment-related Accidents**

During FY2009, Toyota implemented a review of complete reoccurrence prevention tactics for environment-related accidents that occurred during the previous four years, and an environmental risk management system for such construction resulting from environment-related accidents in FY2008. As a result, there were zero environment-related accidents in FY2009.

		Status of A	ction	Actions to Be Undertaken in FY2010 and Beyond		
<ul> <li>EU REA</li> <li>Efforts u change</li> </ul>	ĆH regulations under way to a d vehicles lau	he use of the 4 banned substan s: Made preparations and suppor (end of November 2010) Evaluated impact of regulation achieve goals for new vehicles a nched in Japan ioners that use new coolants w	orted suppliers in anticipation on ns on substances of concern an and to achieve voluntary industr	<ul> <li>Continue measures for complete elimination</li> <li>Support suppliers and prevent missed registrations towards the first registration deadline (end of November 2010)</li> <li>Establish alternative policy creation business for substances of concern ahead of regulations</li> <li>Steadily reduce VOCs in domestic new and fully changed models</li> <li>Continue development aiming at early commercialization</li> </ul>		
• Steadil	v reduced ar	nount of cleaning solvent use	ed by converting to waterbor	Continuously improve based on VOC reduction		
- Steading	Region	Item	FY2010 Goal			
Production	Japan	Emission volume	55% reduction from FY1998	FY2009 Results 77% reduction from FY1998		
rioducion	TMC	Emission volume	70% reduction from FY1998	86% reduction from FY1998		
	Overseas	Set goals that are stricter than each country's		Being implemented		
(Overs • Continu	eas: being ac ued developr	sed ultra-low emission vehicle Japted under each country's nent of high-efficiency clean o	regulations) Jiesel vehicles	Take actions in anticipation of new developments in regional regulations     Continue development of high-efficiency clean diesel vehicles		
Conver	rted waterbo	rne body paints and improve	ratio of recycling cleaning so	olveni	<ul> <li>Continue VOC reduction activities through daily management, such as reducing the volume of cleaning solvent used</li> </ul>	
_	Region	Item	FY2010 Goal (Average of All Line			
Body painting	Japan	Emissions/unit of painted area	35g/m <sup>2</sup> or less	29g/m <sup>2</sup>		
processes VOC			25g/m <sup>2</sup> or less	23g/m <sup>2</sup>		
100	Overseas	Conduct activities to reduce VOC em	issions at the highest levels in each cou	ntry Being implemented		
<ul> <li>FY2009</li> <li>Complementation</li> <li>Establis</li> </ul>	Incidents: No Co eted directly m ring is being co hed regional e	o-factory activities with plants ne n-compliances- All Toyota: 2, o mplaints - zero (worldwide) ianaged company <sup>-1</sup> CO2 conditi arried out) environmental committees in 6 g nes in Europe, China, Asia-Pasifi	verseas: 5 (5 decreased from 2 on monitoring system preparati global regions (other than Japa)	008) ons (EPI <sup>*2</sup> implemented, and	<ul> <li>Continue implementation of Eco-Factory activities (from planning to operational stages)</li> <li>Reinforce preventive activities to prevent recurrence</li> <li>Shift to early management by objectives</li> <li>Regional committee independence promotion, and further reinforcement of regional committee cooperation with TMC</li> </ul>	
<ul> <li>perform</li> <li>Complete the mage</li> <li>The nur</li> <li>Informir 2010</li> <li>Implem</li> <li>76% of</li> </ul>	nance improve ted building a jor consolidat nber of Japan ng outlet store ented EPI for r dealers met ti	oted environmental impact subsements reporting system within the EP ed dealers etc. ese dealers that declared CSR r so of energy saving methods on major consolidated overseas di he requirements for Dealer Envir is increase from FY2008)	of the environmental performations to 95 % the outlet store design navigations, and are currently mo	nce results for CO <sub>2</sub> , etc. of on (using intranet) in February nitoring the program	<ul> <li>Continue the determination of current conditions and shift to early management by objectives</li> <li>Continue to reach 100% of dealers CSR achievement</li> <li>Fully compliance with the revised Energy Saving Act.</li> <li>Appropriately revise energy saving methods and new facility and equipment information</li> <li>Investigate handling of small-scale consolidated distributors</li> <li>Continue improvements to reach 80% of DERAP achievement rate at dealers which participate in DERAP</li> </ul>	
<ul> <li>Implen</li> <li>Implen</li> <li>preside</li> </ul>	nented Coolk nented Toyot ent, posters,	nical environmental education biz and Warmbiz activities a Global Environment Month reduced lighting campaigns, e	activities worldwide (includi etc.)	ng a message from the	<ul> <li>Continue and enrich hierarchical environmental education (new employees new group managers, etc.)</li> <li>Continue Toyota Global Environment Month activities</li> </ul>	
<ul> <li>Toyota F Infrastru</li> <li>Contribu- livestoci</li> <li>Continue contribu</li> <li>Began d Osaka C business</li> <li>Promotes</li> </ul>	Roof Garden's g icture, Transpor ited to address k biomass busir ed appropriate uting to environ evelopment of 1 Gas, Kyocera, Ai Sas, Kyocera, Ai ese <sup>4</sup> ) implemen ed chemical sub	reening of the north building wall of t and Tourism ing environmental issues (odor cou less tree cultivation management and li mental improvement (preventing di Solid Oxide Fuel Cell (SOC) coger isin Seik, and Toyota. Participated ted by NEDO'3 in FY2009. stance management through the u	of Tressa Yokohama was awarded ntermeasures) in the livestock indi ogging for the Australian tree plan amage from salt etc.) ereation system (starting in March in the empirical research (provided se of the PRTR calculation system	the Prize of Minister of Land, ustry through the ing business, 2009), in cooperation with I 30 vehicles to five town gas of the subsidiary Eco Research	<ul> <li>Establish technologies for and commercialize green walls (cassette type), green parking areas, etc.</li> <li>Develop new products with strengthened anti-odor capabilities according to livestock type</li> <li>Continue logging, Carry out post-logging afforestation management.</li> <li>Continue joint development by the four companies</li> <li>Incorporate support for continued reduction activities and revised PRTR law</li> </ul>	
• Comple		S deployment to all vehicles.			<ul> <li>Continue LCA evaluation of newly developed vehicles, new mechanisms and new systems(batteries, etc.)</li> </ul>	
<ul> <li>Biodive</li> <li>Toyota four yes</li> <li>Toyota (14,49)</li> </ul>	rsity: Formula Environmenta ars from FY20 Shirakawa-G 5 people we	research activities of the Globa ated and announced the Toy I Activities Grant Program: Prov 06 to FY2009. Since FY2008, ti o6 tcc-Institute: Steadily expa re lodged and 15,017 people	ota Biodiversity Guïdelines ided support to 87 projects in he focus has been on biodivers unded hands-on environment participated in environment	Japan and overseas over ity and global warming issues. al education programs al programs in FY2009)	<ul> <li>Continue to support basic environmental research</li> <li>Implement activities to conserve biodiversity including cooperation with COP 10</li> <li>Consider continuation of the project and efficient operation</li> <li>Continue to improve and expand environmental education programs in the Toyota Shirakawa-Go Eco-Institute.</li> </ul>	
<ul> <li>purchas</li> <li>In addit</li> <li>Publishe</li> <li>Toyota sponso</li> </ul>	sing network ion to the eco- ed environmen City was selec red events.	al information on products and t driving pamphlet, launched a W tal report/sustainability report in ted as Eco Model City (transport I Stakeholder Dialogues are held ev	eb site (with e-learning) 15 countries and regions (newl ation, industry, forests). Support	y published in FY2009: Vietnam)	<ul> <li>Continue to provide environmental information on products</li> <li>Continue to provide ecc-driving enlightenment information</li> <li>Continue to issue even higher-quality reports through the mutual exchange of information</li> <li>Cooperate with city-sponsored steering committee planned events and lectures</li> <li>Continue dialogues with stakeholders responding to the interests in and outside the company</li> </ul>	
<ul> <li>expand</li> <li>Incorpo</li> </ul>	led global acti rated Toyota'	ties with the automobile manufa wities for the understanding of c s stance, such as integrated me ability for Development project	ombined efforts (held COP 15 asures, into WBCSD "Towards	side event, etc.) a Low-carbon Economy	<ul> <li>Enhance activities for the understanding of integrated measures</li> <li>Participate in activities to make proposals through the WBCSD concerning the post-Kyoto framework and to contribute to the realization of sustainable mobility</li> </ul>	

\*1: Excluding companies that have a minor environmental burden, such as tenant type,
\*2: EPI (Environmental Performance Indicators),
\*3: New Energy and Industrial Technology Development Organization,
\*4: Hokkaido Gas Co., Ltd., Tokyo Gas Co., Ltd., Toho Gas Co., Ltd., Osaka Gas, Ltd., Seibu Gas Co., Ltd.

## Top Priority Given to Activities to Lower CO<sub>2</sub> Emissions in Products, Production and Logistics, in Harmony with Society

The need to significantly reduce greenhouse gases, to slow the rise in average temperature and keep it within 2 degrees centigrade of pre-industrial era levels, was affirmed at COP 15 in December 2009. Recognizing that global warming is the most crucial issue facing humanity, Toyota continues its work to promote appropriate and steady countermeasures in products, production and logistics to address energy and global warming issues.



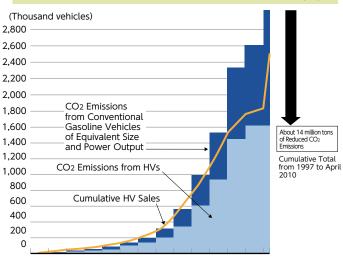
Further Reducing CO2 Emissions in Global Business Activities

## Implementing Measures Related to Energy and Global Warming Issues from Mid- to Long-term Standpoints

The need to significantly reduce greenhouse gases on a global basis, to slow the rise in average temperature and keep it within 2 degrees centigrade of pre-industrial era levels, was affirmed as a long-term goal (as set forth in the IPCC report) at COP 15 (the 15th Conference of the Parties to the United Nations Framework Convention on Climate Change) held in Copenhagen in December 2009. For the medium term, the convention released a statement that each country, developed or developing, will submit a reduction goal and an action plan to the United Nations and promote programs to reduce emissions from its own standpoint. Toyota will also continue to take appropriate and persistent action on energy and global warming issues for the medium to long term.

The accumulated total of Toyota hybrid vehicles (HV) sold in Japanese and international markets reached the 2.5 million mark (as of April 2010). Toyota now offers 12 HV passenger models, including the Prius, as of April 30, 2010<sup>\*1</sup>. Cumulatively, they are estimated to have reduced effective CO<sub>2</sub> emissions by about 14 million tons, compared to gasoline vehicles of equivalent size and

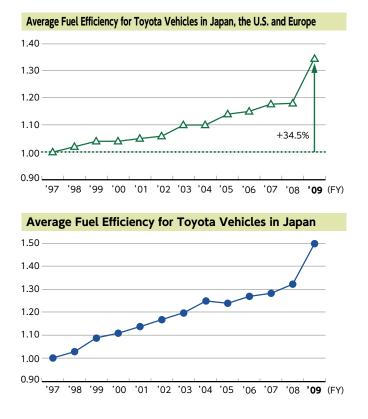
Accumulated CO<sub>2</sub> Reduction with 2.5 million HVs (Estimated by Toyota)



'97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 **'10(up to April)** 

power output\*<sup>2</sup>. The effect was achieved as a fruit of the company's 12-year-long efforts, from the introduction of the first Prius model to extensive worldwide HV launches. The FY2009 witnessed a significant improvement in average fuel consumption in Japan, North America and Europe, as a result of government programs to promote purchases of low-emission, fuel-efficient vehicles, along with an increase in sales of HVs, particularly the Prius as well as other fuel-efficient conventional engine models . Toyota will continue to improve the fuel efficiency of conventional gasoline-engine vehicles and, at the same time, to further develop and expansion of HV and plug-in hybrid technologies. The commitment to CO<sub>2</sub> reduction will be extended to affiliates in Japan and overseas, not only in monozukuri (manufacturing), but also in all other operational areas, including logistics and distribution.

- \*1 Coaster Hybrid EV, Dyna/Toyoace HV and Quick Delivery 200 are excluded.
- \*2 Number of Vehicles in Market x Driven Distance x Fuel Efficiency (Actual Value in Each Country) x CO<sub>2</sub> Conversion Factor



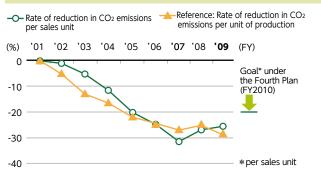
## Initiatives to Diversify Energy and Reduce CO<sub>2</sub> Emissions throughout the Vehicle Life Cycle

Fossil fuel is a limited resource and energy diversification is essential to the future. As EVs effectively reduce CO2 emissions by using nuclear power and renewable energy such as hydroelectric power, it is essential for Toyota to develop new vehicles in consideration of regional energy diversification. Toyota aims to reduce CO2 emissions at every stage of the vehicle life cycle, including energy production for next-generation automobiles. In the flow of energy diversification, infrastructure development is a key, while modification of conventionally powered vehicles and expansion of HVs are considered the immediate mainstream efforts. Looking at efforts to modify conventional vehicles, Toyota introduced high-efficiency gasoline engines in every class of vehicle until FY2008, and has moved steadily to improve average fuel efficiency. The company continues its efforts to make vehicles more compact and lightweight, while seeking ongoing improvements in the efficiency of engines and transmissions to reduce fuel consumption even further. The Toyota HV System, which uses not only fossil fuels, but also hydrogen, biofuel and electric power, is based on Toyota's assumptions for energy diversification and core technology for sustainable mobility in the future. In order to further increase HVs' contribution to CO2 reduction, Toyota plans to introduce the third-generation Prius, launched in 2009, in over 80 countries around the world double the former number.

## Promoting CO<sub>2</sub> Reduction Activities through Productivity Improvement and Further Energy Savings

In the area of production, breakthrough approaches to better productivity have been made throughout Toyota, including engineering innovations and daily improvement efforts to thoroughly eliminate energy waste to reduce per unit consumption. In recent years, however, per sales units have been adversely impacted by significant curtailment of production and decreased sales. In order to stop the downward trend, the Toyota Group has unified to take action, consolidating low-work load processes, reducing energy consumption and turning off power during non-operating hours.

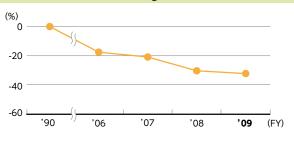
## Rate of Reduction in Global CO<sub>2</sub> Emissions Per Sales Unit



## CO<sub>2</sub> Reduction Activities through Logistics Rationalization and Fuel Efficiency Improvement, etc.

In the area of logistics, various improvements are under way intended to reduce CO<sub>2</sub> emissions. Three specific avenues are targeted, namely, total transportation distance reduction, modal shift and fuel efficiency improvement. In the international market, Toyota began to grasp the amount of CO<sub>2</sub> emissions in each country in FY2007, and has set specific target values for reduction activities since FY2008.

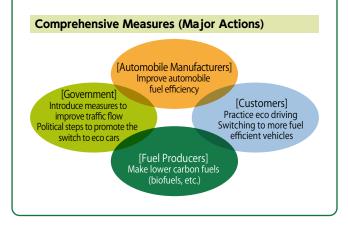
#### Rate of Reduction in TMC Logistics CO<sub>2</sub> Emissions (In Japan)



## Column

# Cooperation with Society for Comprehensive CO<sub>2</sub> Reduction

In reducing automobile CO<sub>2</sub> emissions, it is important that comprehensive countermeasures are advanced, demonstrating cooperation between automotive manufacturers and all stakeholders. For example, carmakers can improve automotive fuel efficiency, fuel suppliers can promote such low-carbon fuels as biofuel, customers can replace vehicles they own and observe eco-driving practices and the government can carry out traffic solutions and offer eco-car replacement incentives. These integrated efforts would constitute the most valid solution from the standpoints of both the effects of CO<sub>2</sub> reduction and cost efficiency.



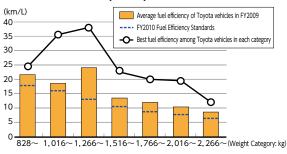
Development and Design

**Developing Technologies** to Achieve the Best Fuel **Efficiency Performance in Each Country and Region** 

## All Vehicle Weight Categories Have Cleared FY2010 Fuel Efficiency Standards Since 2005

All eight new or fully changed models for FY2009 continued to meet the FY2010 fuel efficiency standards, as they had done since FY2005. Toyota vehicles in all weight categories met the standards throughout the five consecutive years and 97.8% of Toyota's gasoline-powered passenger vehicles conformed to the FY2010 Fuel Efficiency Standards (an increase of 5.3 percentage points over the previous year).

## Conformity to FY2010 Fuel Efficiency Standards and Actual Fuel Efficiency of Toyota Vehicles in FY2010



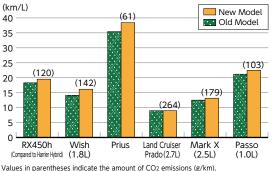
#### New and Fully Changed FY2009 Models that Meet FY2010 Fuel Efficiency Standards

Weight category (vehicle weight: kg)	2010 fuel efficiency standards (km/L)	FY2009 average fuel efficiency (km/L)	Qualifying new and fully changed FY2009-model vehicle series
828~1,015	17.9	21.7	Passo
1,016~1,265	16.0	18.5	
1,266~1,515	13.0	24.2	Wish, Prius and Mark X
1,516~1,765	10.5	13.5	HS250h, SAI and Mark X*
1,766~2,015	8.9	12.0	
2,016~2,265	7.8	10.3	RX450h and Land Cruiser Prado
2,266~	6.4	8.6	

 Note 1: Some vehicles of the qualifying vehicle series may not meet the standards depending on individual models and specifications

 Note 2: 0.00 indicates a category that has achieved the 2010 Fuel Efficiency Standards Note 3: Vehicles that achieved the efficiency standards before FY2008 are not included Note 4: All fuel efficiency values are based on the Kinistry of Land, Infrastructure, Transport and Tourism's Japanese 10-15 test drive mode

## Fuel Efficiency Comparison between Selected Old and New Models



\* CO2 emissions are calculated according to the 10-15 test drive mode

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## Fuel Efficiency Improvement Technologies with Hybrid Vehicles

New technologies, as well as refined versions of the conventional hybrid systems, were introduced with the four hybrid models launched in FY2009 (RX450h, Prius, HS250h and SAI).

THSII, the Toyota Hybrid System with a motor speed reduction device, is used on each of the four models, offering better start and acceleration performance and energy efficiency enhanced by the Atkinson Cycle engine, which improves heat efficiency by delaying the inlet valve closing to achieve higher expansion ratio with lower compression, and enhanced by a reduction gear that effectively transmits the driving force and increases torque. The technology that controls the system achieves excellent energy efficiency and low fuel consumption by driving the vehicle only with the motor, only with the engine or using both, depending on the situation.

In addition, the Prius adopts Japan's first electrically operated engine-cooling water pump which, because it is battery-powered, works only when necessary and thereby keeps the engine-cooling function nearly at the optimal state, and this is expected to improve vehicle fuel efficiency.

The Exhaust Heat Recirculation System installed in the Prius, HS250h and SAI warms engine coolant with heat energy recovered from exhaust gas to shorten the engine's warm-up time, benefiting fuel efficiency in daily use.





Engine-cooling water pump

## Lexus RX-450h, Prius, Lexus HS250h and SAI Conform to FY2015 Fuel Efficiency Standards

The hybrid models launched in FY2009 and shown below have met the FY2015 Fuel Efficiency Standards. In accordance with the establishment of the FY2015 standards, the fuel efficiency test methods were revised to employ the JC08 mode, which better reflects actual driving environments; product brochure descriptions will be changed accordingly from April 2011 onwards.

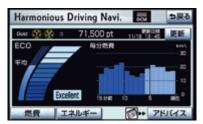
Model Name	Weight Category (vehicle weight: kg)	FY2015 Fuel Efficiency Standards (JC08 mode)	JC08 Mode (km/L)	10-15 Mode (km/L)
Passo (1.0L, 2WD)	856~970	20.8	20.8	22.5
Prius	1,196~1,310	17.2	32.6	38.0
HS250h	1,531~1,650	13.2	19.8	23.0
SAI	1,531~1,650	13.2	19.8	23.0
RX-450h	1,991~2,100	9.4	17.4	19.4

## Harmonious Driving Navigator and ESPO Facilitate and Promote Eco-driving

Launched at the same time as the new Corolla in October 2006, the Eco-Drive Indicator, a device to assist eco-driving, was adopted and spread gradually. It was installed on all eight models newly launched or fully changed in FY2009.

The HS250h, launched in July 2009, was equipped with the new "Harmonious Driving Navigator" eco-drive support system, which helps drivers continue eco-driving on a voluntary basis, providing them with a framework for of social contribution to fuel efficiency improvement. A similar system, ESPO (Eco Passport), has been installed on the SAI as well.

This is how these systems work: A driver sends his or her own eco-drive experience information to the G-BOOK Center and earns commensurate points in return. A list ranking drivers by their earned points (based on the earning frequency and fuel efficiency achievements) is issued every month so that car owners can compare the results with each other. Customers can donate earned points as a fund for the "Project Mirai Isan (Future Heritage)" of the National Federation of UNESCO Association and give back for afforestation activities of the "GAZOO Forest Project." Customers have posted comments such as, "I often find myself driving with eco-drive awareness, as the points provide a visible effect."



Harmonious Driving Navigator's monitor screen



# With 640,000 Hybrid Vehicles Sold in FY2009, the Cumulative Total Exceeds 2.44 Million

In Japan, 347,698 clean energy vehicles were sold in FY2009, equivalent to 22.6% of Toyota's domestic sales volume.

The number of hybrid vehicles sold worldwide in FY2009 was some 640,000; the cumulative total reached 2.44 million at the end of March 2010, and their cumulative CO<sub>2</sub> reduction effect is estimated to be 14 million tons.

Beyond that, a goal is set to achieve annual sales volume of one million at the earliest time possible in the early 2010s, with a view toward further expansion, spreading hybrid technology to all models during the 2020s.

See Page 24 for further information on the cumulative total of hybrid vehicles sold worldwide.

## The PHV Joins 'EV and PHV Town,' Entering the Japanese Market

In an effort to expedite market launches of plug-in hybrid vehicles (PHVs) and gain a broader understanding of their market expansion, about 600 PHVs have been introduced to the global market since December 2009, with fleet customers in Japan, the U.S. and Europe as primary targets.

In Japan, a decision was made to deliver some 230 PHVs primarily to local governments and utilities that were selected by the Ministry of Economy, Trade and Industry to participate in EV and PHV Town, a pilot project. In the United States, about 150 PHVs will be introduced to public offices, private businesses, universities and other academic institutions. Another 100 PHVs will be shipped to France, while others will be distributed in the United Kingdom and Portugal. Eventually,



conada, Australia and New Zealand will be added to those destinations.

Based upon various studies of these introduction programs and customer feedback, mass market availability in 2012 is targeted to achieve early expansion for the PHV.

Plug-in hybrid vehicle

Local HV Production

## Promoting Hybrid Vehicles (Licensing, Overseas Production and Model Line Expansion)

In March 2010, Toyota signed an agreement to license Prius hybrid technology to Mazda Motor Corporation. In addition, Toyota also licenses its hybrid technology to Nissan Motor Co., Ltd. and Ford Motor Company. Toyota and Fuji Heavy Industries Ltd. agreed to study the possibility using Toyota's hybrid system to produce Subaru hybrid vehicles. HV production is also expanding internationally, as shown below. In addition to the four models introduced in FY2009, Toyota has 15 hybrid models (12 passenger models and 3 commercial models) worldwide as of the end of March 2010.

# Auris in U.K. Prius and Camry in China Prius in Thailand Camry in Australia

Development and Design Using Network Technologies to Improve Traffic Flow

## Pilot Project for a Low-carbon Society Begun in Association with Toyota City

Toyota joined to plan a family- and community-based low-carbon city building demonstration project in Toyota City, Aichi Prefecture, in association with the city and 13 private companies including Chubu Electric Power Co., Inc. The city was selected by the Ministry of Economy, Trade and Industry in April 2010 as the demonstration site for "a model next-generation energy social system." Toyota started the project to explore the future direction of smart grid technology\* and create an actual social system that includes the smart grid network. The goal is to establish "a local municipal social system that is low-carbon" in energy utilization, both at home and in the community, as creating a system that meets the needs of diverse social environments would make it worthy of promotion to domestic and international cities.

The project starts with the premise of reducing CO2 emissions, then extends its application to the entire commu-

\* Smart grid: the next-generation power distribution network

nity, promoting reforms for everything from traffic systems to people's lifestyles. Studies of international standardization and promotion strategies are also carried out, reflecting the project's global perspective and goals for future development. With these steps, a local municipal low-carbon social system is being built, facilitating the reduction of CO<sub>2</sub> emissions in the targeted sectors, namely, home and traffic, by 20% and 40%, respectively.



Perspective of "a low-carbon society" (courtesy of Toyota City)

Please see Page 48 for HEMS Approaches.

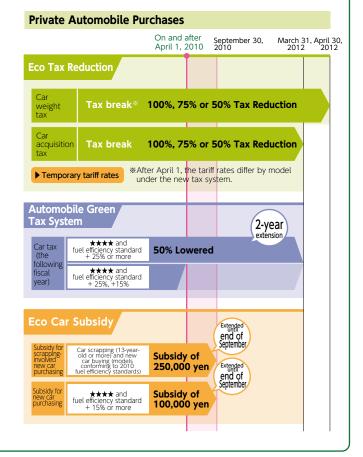
#### Column

## Incentive Program Continues with Tax Reductions and Subsidies (Until September 2010)

In addition to "tax reductions" and "subsidies for eco car purchases" that went into effect in April and June 2009, respectively, Automobile Green Taxation was extended by two years, offering still more incentive to eco car buyers.

The "Kodomotencho" Web site, launched in April 2009, continues to provide visitors with an easy-to-understand explanation of the preferential tax system, what taxes are levied on cars, and which models were eligible for tax reductions.

Eco Car Tax Reduction, designed to promote eco cars, exempts or partially reduces the tax on buyers of HV, EV or eligible low-emission models. The reduction applies to the car weight tax and the car acquisition tax effective April 1, 2009, for a limited three year-period. Eco Car Subsidy, another incentive program that subsidies eco car replacement, came into effect in June 2009 and was extended to the end of September 2010. They will be applied in combination where the respective requirements were met.



Subsidies for eco car purchases ended in early September as budgeted funds ran out.



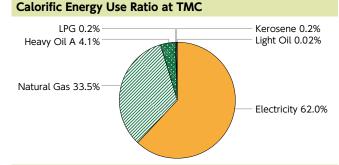
FY2009 CO<sub>2</sub> emissions reduction goal for production areas • Reduce total CO<sub>2</sub> emissions to 1.37 million tons per year or less

## Reducing Total Annual CO<sub>2</sub> Emissions to 1.22 Million Tons by Merging and Discontinuance of Processes and Consolidating Production Lines

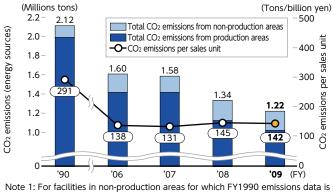
As part of the strategy to reduce CO<sub>2</sub> emissions, a new integrated goal was established for production bases and non-production bases such as offices. In FY2009, countermeasures were taken against volatility in production related to social changes; these included merging and discontinuance of processes, consolidating production lines, further energy-saving activities and fixed-portion reduction. The resulting annual CO<sub>2</sub> emissions were 1.22 million tons, or 42% lower than the FY1990 level, achieving the goal. CO<sub>2</sub> emissions per sales unit were 142 tons per billion yen.

## Key Measures that Were Effective in Reducing CO<sub>2</sub> Emissions

Theme to implement	Details	Reduction Volume (1,000 tons)
Merging and Discontinuance of Processes	Merging and discontinuance of processes	32
Consolidating Production Lines	Consolidating bumper painting lines	7
Improvements	Reducing energy use in fixed portion etc.	48



CO<sub>2</sub> Emissions from Energy Sources at TMC and CO<sub>2</sub> Emissions per Sales Unit

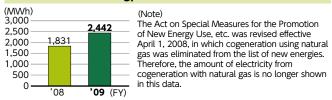


Note 2: CO<sub>2</sub> emissions volume covers both production and non-production divisions (excluding Biotechnology & Afforestation Lab and employee benefit facilities).

## Promoting the Use of New Energies

In March 2008, the Toyota Tsutsumi Plant installed a solar power generating system rated at 2,000 kW (sufficient to provide power for some 500 households). During FY2009, the system generated 2,442 MWh of electricity.

#### Amount of New Energy Generated (Solar Power)



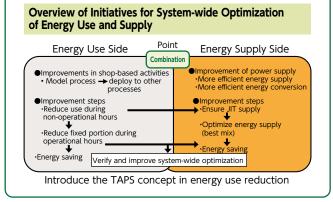
## **Cooperation on Green Power**

Toyota has concluded a Green Power Certification System agreement with Japan Natural Energy Company Limited, under which it supported 2 million kWh of wind-generated power in FY2009.

#### Column

# BR Group Launched to Achieve Fixed-portion CO2 Reduction

In a business environment where production slows and CO2 emissions per sales unit increase, lowering costs to reduce fixed-portion CO<sub>2</sub> emissions becomes especially important. To address this issue, defining the ideal power supply scenario is crucial, so the Business Reform (BR) Group was formed to optimize the entire operation, including initiatives on the energy use side. The group's roles on the energy use side included checking production equipment, jointly with the Manufacturing Group, during lunch breaks and on weekends, to help lower non-operational energy use, as well as addressing fixedportion energy reduction during operational hours. On the supply side, the group is making continued refinements to optimize energy supply (best mix). The Group helped reduce CO2 emissions by 48,000 tons during FY2009, in accordance with the decrease in energy use, and as a secondary effect, has made steady success in developing human resources capable of promoting system-wide optimization of energy supply and demand.



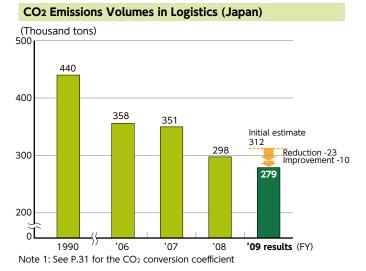
Production and Logistics

## Reduction of CO2 Emissions in the Logistics Activities of Each Country and Region

FY2009 CO<sub>2</sub> emissions reduction goal in logistics area • Reduce CO<sub>2</sub> emissions volume to 307,000 tons or less

# CO<sub>2</sub> Emissions Reduction Goal Achieved with Emissions of 279,000 Tons

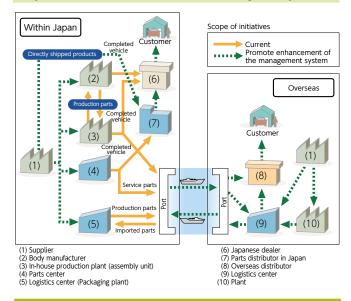
In FY2009, Toyota reduced CO<sub>2</sub> emissions from logistics operations by 10,000 tons through implementing various initiatives, including activities to increase the loading efficiency of trucks, promote the modal shift and continue fuel-efficiency improvement activities taken jointly with logistics partners. In addition, a decrease in production volume in the second half of FY2008 contributed to reduced emissions. The result was total emissions volume of 279,000 tons.



## Impact of CO<sub>2</sub> Emissions Reduction Activities

Topics	Products	Key improvements	Reduction in CO2 (Thousand tons/year)
	Production parts	Activities to increase loading efficiency (route reorganization, etc.)	▲2.1
	Completed vehicles	Decreased transport distance by integrating storage yard for dealers in Kanto Region	▲0.6
Reduction in total distance	Completed vehicles	Decreased transport distance by changing ports to load export vehicles and others for Fukuoka	▲0.5
transported	Service parts	Increased loading efficiency by simplifying bumper packaging specifications	▲0.3
	All products	Other	▲0.3
Modal	Completed vehicles	Changed to marine transport of vehicles for dealers in Kanto Region shipping from Inabe	▲0.7
Shift	Service parts	Partially changed to railroad transport for Okinawa	▲0.1
Fuel	All products	Switched to new truck models, enhancing eco driving	▲1.7
Efficiency Improvement	All products	Energy-saving operation by vessels, etc.	▲3.3
Total			▲9.6

#### Scope of CO<sub>2</sub> Emissions Calculations in TMC Logistics Operations



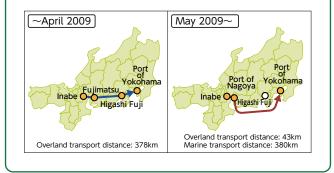
# Toyota Grasped CO<sub>2</sub> Emissions Volumes and Reduction Activities at Overseas Affiliates

Starting in FY2007, Toyota began to grasp  $CO_2$  emissions volumes at overseas affiliates and in FY2008 set targets and initiated activities to reduce emissions. In addition, Toyota is working to grasp the  $CO_2$  emissions volumes associated with marine transport to overseas regions.

#### Column

## Marine Transport of Vehicles for Dealers in Kanto Region Reduces CO<sub>2</sub> Emissions by 700 Tons

Conventionally, completed vehicles produced in plants in Inabe City, Mie Prefecture, for dealers in Kanto Region (Tokyo and Kanagawa Prefecture), had been stored temporarily in Higashi Fuji in Shizuoka Prefecture and transported on land to Port of Yokohama. From May 2009, Toyota shifted to marine transport by arranging domestic vessels and devising ways of vehicle yard operation at the Port of Yokohama its storage place, and achieved a 700 tons of CO<sub>2</sub> reduction.

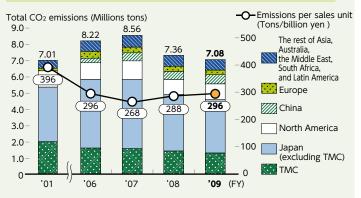


## **Global Production Environment Data**

Toyota is striving to conserve energy and raise productivity such as consolidating production lines at its plants worldwide, engaging in an ongoing effort to reduce CO2 emissions per sales unit. In FY2009, CO2 emissions volume decreased by 280,000 tons, so deterioration per unit could be minimized. Toyota continues working toward improvement in the future.

Comprised of 114 companies including TMC and consolidated companies in Japan and overseas. Japan: Consolidated subsidiaries listed in Groups 1-5 on P.52 (including sub-subsidiaries; excluding Toyota Tsusho) Overseas: Production companies and production/sales companies listed on P.52 excluding TMMR in Russia) Note 1: In the case of companies for which FY2001 could not be determined, the oldest subsequent data is used Note 2: Affiliates in China have been included since FY2005 Note 3: The CO2 conversion coefficient has been calculated with reference to the GHG Protocol (see below) Note 4: Corrected due to incorrect calculation in the past

## CO2 Emissions from Energy Sources and CO2 Emissions Per Sales Unit



## CO<sub>2</sub> Conversion Coefficients to Calculate CO<sub>2</sub> Emissions Volume

## (1) Environmental Data in Japan (excluding logistics)

Electricity	0.3817kg-CO2/kWh	Butane gas	3.0094kg-CO2/kg
Heavy oil A	2.7000kg-CO2/L	Natural gas	2.3576kg-CO <sub>2</sub> /m <sup>3</sup>
Heavy oil C	2.9419kg-CO2/L	Coke	3.2502kg-CO2/kg
Kerosene	2.5308kg-CO <sub>2</sub> /L	Coal	2.3536kg-CO <sub>2</sub> /kg

\*CO2 conversion coefficient source: Japan Automobile Manufacturers Association, Inc.

ReCoefficients from other sources have been used in some instances Please see "CO<sub>2</sub> Emissions from Energy Sources at TMC and CO<sub>2</sub> Emissions per Sales Unit" on P.29 and "Volume of Resources Input and Volume of Substances Discharged from Production Plants (10 plants) and Logistics Activities in FY2009" on P.50.

#### (2) Global Production Environmental Data

· IPCC 2006, 2006 IPCC Guidelines for National Greenhouse Gas Inventories,

PrC2 2006, 2006 the C Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston H.S., Buendia L., Miwa K., Ngara T. and Tanabe K. (eds). Published: IGES, Japan.
 The 2001 conversion coefficient in CO2 Emissions from Fuel Combustion, 2007 edition, IEA, Paris, France, was used.
 The conversion coefficients specified in the Act on Promotion of Global Warming Countermeasures was used with respect to natural gas, steam, hot water, cooling water and coke furnace gas.
 The Global Production Environment Data CO2 emissions volumes.

around the world.

## **Examples of Overseas Initiatives**

## (3) Logistics Data

	FY2006 and earlier	FY2007 and later	
Railway (Japan Railway Cargo)	21.7g-CO <sub>2</sub> /ton-kilometer	22g-CO2/ton-kilometer	
Diesel (truck)	2.62kg-CO <sub>2</sub> /L	2.62kg-CO <sub>2</sub> /L	

\* CO2 conversion coefficient source used for FY2006 and earlier: Railway (Japan Railways Cargo) transport: The Environment, Traffic and Transport, Institution For Transport Policy Studies (ton-kilometer method) Diesel (truck) and C-type heavy oil (ship): Japanese Ministry of the Environment (fuel method)

Corresponds to P.30: "CO2 Emissions Volumes in Logistics (Japan)" \* CO<sub>2</sub> conversion coefficient source used for FY2007 CO<sub>2</sub> Emissions Calculation Method for Logistics Operations — Joint Guidelines, Ver.3.0 (METI/MLIT) Corresponds to P.30 "CO2 Emissions Volumes in Logistics (Japan)," and P.50 "Volume of Resources Input and Volume of Substances Discharged from Production Plants (10 plants) and Logistics Activities in FY2009."

#### Corolla FFV Models Are Compatible with 0-100% Flex Fuels Brazil: Toyota do Brasil Ltda (TDB)

According to an Anfavea\* survey, Flex Fuel Vehicles (FFVs) compatible with biofuels, which have drawn attention as alternatives to gasoline as motor fuel, account for 80% of auto sales in the Brazilian market. In May 2007, TDB launched the Corolla Flex and Corolla Fielder Flex, Toyota's first FFV models. Then in March, 2008, it launched a second FFV model, the Corolla FFV. FFV sales volume for calendar year 2009 reached 53,445 (retail) units. TDB listens carefully to feedback from customers, who have said about the Toyota FFVs, "It is economical compared with the car I had before. It is fuel efficient, and that means fewer greenhouse gas emissions, so it's better for the environment, too." Toyota will continue to develop environmental technologies and introduce environment-considering vehicles to meet the needs of customers and to fit the state of the infrastructure in various countries and regions



\* Anfavea: Associação Nacional dos Fabricantes de Veículos Automotores

## China: Tong Fang Global Logistics Co., Ltd. (TFGL)

## Reducing CO<sub>2</sub> Emissions in Logistics through Cooperation with Trucking Companies

TFGL has been developing environmental protection activities in the logistics field since it started operation in October 2007. It formulated a system to determine total CO<sub>2</sub> emissions generated by the transport of vehicles, production parts and supply parts. In March 2008, TFGL set targets (refer to chart at right) and launched its CO2 reduction initiatives. In cooperation with its transport companies, TFGL improved fuel efficiency through the initiatives such as: reducing frequency of transport by increasing load rates, reducing transport distance through route optimization, reducing per-unit transport by utilizing the modal shift, increasing fuel efficiency by promoting eco driving, use of more fuel efficient vehicles and adoption of air spoilers. During FY2009, TFGL reduced CO<sub>2</sub> emissions by 211,000 tons, surpassing its target of 200,000 tons.

## Plan to Reduce CO<sub>2</sub> Emissions

Details of Item			Target		
		Improvement	Vehicle	Production Parts	Service Parts
	Increase of filling rate in equipment	Reduction of	-	0	0
-	Increasing truck load rate	frequency	-	0	0
TFGL	Route optimization	Reduction of transport distance	0	0	0
	Modal shift	Reduction of per-unit transport	0	-	-
Truck-	Promotion of eco driving		0	0	0
ing com-	Use of more fuel efficient vehicles	Increase of fuel efficiency	0	0	0
panies	Promoting adoption of air spoilers		0	0	0

## **Ensuring Recycling-based Utilization of Resources in Meeting** Medium- and Long-term Demand Growth

tion

yen, or

Recognizing that all resources are finite, Toyota is promoting initiatives to address issues including insufficient resource utilization, shortages of waste disposal sites, illegal dumping and cross-border transfers. With resource productivity and recycling-based initiatives in mind, Toyota is pursuing a comprehensive strategy of lean resource utilization in all aspects of development, production, use and disposal. In 2009, the economy was slow overall, still in a downturn following the previous year's financial crisis, yet demand for resources was steady. Reflecting these economic trends, resource prices stabilized but remained high as they recovered from the wild swings of the year before last. At the same time, from a medium- and long-term perspective, emerging countries are expected to see economic growth, improved living standards, population increases and other factors that will drive demand for resources. Accordingly, achieving leaner resource utilization stands as a key challenge in monozukuri.



TMC Initiatives to Further Promote the Effective Use of Resources and Contribute to the Realization of a Recycling-based Society

FY2009 Production Area Goals Reduction of the volume of materials discarded to 370,000 tons or less

## Efforts Continue to Reduce Volume of Materials Discarded

In order to realize effective resource utilization and thereby build a recycling-based society, it is necessary to promote comprehensive reduction of resource loss beyond recycling for profit and internal recycling. With regard to materials discarded in resource loss<sup>\*1</sup>, nearly zero landfill waste\*2 was achieved by FY2000 and at non-production sites by FY2003. Toyota has taken various measures, including recycling for profit\*3, to reduce materials discarded, introducing volume goals in FY2006. The volume of materials discarded in FY2009 was 342,000 tons, or 8.9% less than the previous fiscal year, even though chips increased as mechanical processing of hybrid components was brought in-house. Some contributing factors include reduced slag dust due to decommissioning of the cupola furnace at the Myochi Plant, and

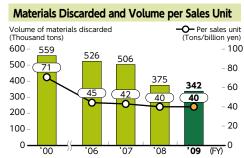


\*1 Resource loss: Internal recycling+Materials discarded (Waste not processed within Toyota)

\*2 Near zero landfill waste: FY2000 to FY2004: A reduction in direct landfill waste to less than 5% of the FY1995 level. Since FY2005: A reduction in direct landfill waste to less than 1% of the FY1995 level

\*3 Recycling for profit: Materials discarded that are sold for recycling

\*4 Money back recycling: Materials discarded that are recycled for a fee



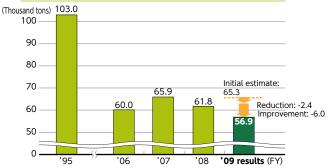
(Note) Volume of materials discarded covers both production and non-production divisions (excluding employee benefit facilities)

#### FY2009 Goals in Logistics Area Reduce usage of packaging and wrapping materials to 58,500 tons or less

## Goal Met through Activities to Reduce Usage of Packaging and Wrapping Materials

In order to reduce the use of packaging and wrapping materials, Toyota implemented measures that included simplifying wrapping specifications (e.g., reducing wrapping materials for bumpers) and expanding the use of returnable shipping containers. As a result of these measures, along with a reduction in shipment volume, total usage decreased to 56,900 tons, thus achieving the goal for FY2009. In FY2008, Toyota began assessing its global use of packaging and wrapping materials, and has already completed the assessments for all regions excluding North America and Europe. Toyota plans to expand the scope of its assessment to every part of the world in FY2010.

## Use of Packaging and Wrapping Materials by TMC (Japan)



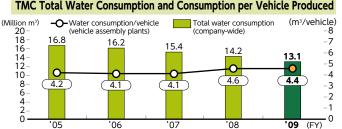
#### Results of Activities to Reduce Packaging and Wrapping Materials

Topics	Products	Details	Reduction (Thousand tons/year)
Increasing	Service	Increasing lean specifications for bumper wrapping (e.g., replacing corrugated cardboard with bubble sheets)	▲3.5
lean specifi- cations for	parts	Change in packaging formats (from palletized to non- palletized, change of padding materials etc.)	▲1.4
wrapping, etc.		Other daily improvements	▲0.2
	Production parts	Increasing lean specifications for wrapping (e.g. replacing cardboard compartments with wrapping paper)	▲0.2
Increasing returnable containers	Service parts	Expanding the use of returnable containers (expanding items and destinations - to Thailand)	▲0.4
Containers	Production parts	Expanding applications of returnable containers (diversifying container sizes, etc.)	▲0.3
Total			▲6.0

#### Production and Logistics Reduction of Water Consumption at TMC

# Efforts Continue to Reduce Water Consumption (7.1% Reduction over FY2008)

The total water consumption in FY2009 was 13.1 million m<sup>3</sup>, or 7.1% reduction over the previous fiscal year, due to continuous reduction activities. Meanwhile, water consumption per vehicle produced was 4.4m<sup>3</sup>, or 3.6% reduction over the previous fiscal year.



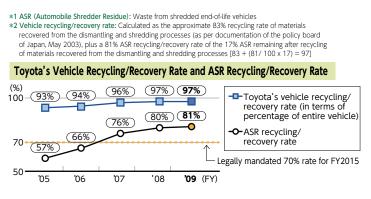
Note 1: Water consumption includes the volume consumed at both production and non-production divisions (excluding employee benefit facilities) Note 2: Water consumption per vehicle produced indicates the consumption per vehicle produced at vehicle assembly plants Note 3: See page 50 for the origin of water.



# Ensuring a Proper Response to the Automobile Recycling Law in Japan

Toyota has been steadily working with dismantling and recycling companies to ensure compliance with the Law Concerning Recycling Measures for End-of-Life Vehicles (Automobile Recycling Law: effective January 2005). The law mandates automotive manufacturers with collection and recycling/recovery of specified items generated from end-of-life vehicles: CFCs/HFCs, airbags and automobile shredder residue (ASR<sup>\*1</sup>). Toyota is duly carrying out its recycling duties.

The ASR recycling/recovery rate at Toyota reached 76% in FY2007, surpassing the legally mandated rate of 70% for FY2015, and rose to 81% in FY2009. In addition, the vehicle recycling/recovery rate<sup>\*2</sup>, converted into a per-vehicle value, reached 97%, exceeding the Toyota Recycling Vision's goal of 95%.



<b>Results of Recyclin</b>	ng and Re	covery	(FY2009)
	<b>D</b>		

п

		Results		Results	
No. of vehicle for ASR		1,044,000	Funds paid from	10.218	
No. of vehicles collected for airbag recovery		499,000	JAKC	mil. yen	
No. of vehicles collected for CFC/HFC recovery		855,000	Expense for recycling/	10.284	
Recycling/	ASR	81%	recovery and treatment	mil. yen	
recovery rate	Airbags	94%	Balance	-66 mil. yen	

For details on the Toyota Recycling Vision, please visit the following Web site:

# Compliance with Automobile Recycling Laws Overseas

All EU member states have enacted automobile recycling laws based on EU ELV Directive 2000, and as of January 2007 automakers started to take back end-of-life vehicles (ELVs) in most member states. In cooperation with TME and distributors in various countries, Toyota has completed construction of a network ELV collection in 23 of the 27 EU member states, and is proceeding with the necessary action in the remaining four member states in accordance with government certification of dismantling companies. In other countries around the world, Toyota is diligently pursuing similar responses, working closely with its local subsidiaries to ascertain local regulatory trends and studying local infrastructure in each country.

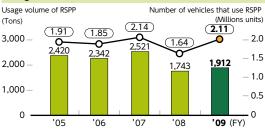
## Promotion of ASR Recycling and Further Advances

In 1998, Toyota, along with Toyota Metal Co., Ltd., constructed the world's first mass-production ASR recycling plant, which since that time has been performing ASR recycling/recovery\* with a recycling capacity of 15,000 ELVs per month. Toyota incorporated Recycled Sound-Proofing Products (RSPP), made of urethane and fibers recovered from ASR, into a cumulative total of 18.06 million vehicles as of the end of FY2009.

The recycling plant also recovers and recycles copper from ASR, and sorts out resins and rubber. In FY2009, 5,725 tons of resins and rubber were used as an alternative to kerosene fuel. In addition, by further advancing ASR recycling/recovery technologies, Toyota is expanding and refining the use of ASR as a source for fuel in electric furnaces and other applications.



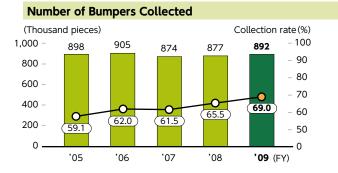
## Usage Volume of RSPP Materials (Urethane and Fibers)



# Steady Progress in Recycling at Dealers and Parts Distributors

## Promoting the Collection and Recycling of End-of-life Parts

Parts distributors and dealers nationwide have been collecting end-of-life parts. In FY2009, 892,000 end-of-life bumpers were collected and recycled (a recovery rate of 69%), along with 37.3 tons of lead wheel balance weights. Additionally, in order to reduce the number of oil drums used to transport engine oils, the amount of oil delivered to parts distributors using tanker trucks (in the bulk supply system) was 58.5% of the total.



## Supply of Used and Rebuilt Parts

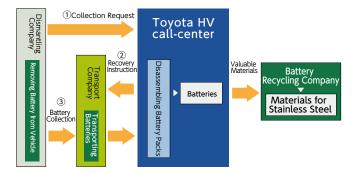
Used and rebuilt parts are sold at parts distributors throughout Japan. In FY2009, 67,000 used parts and 25,000 rebuilt parts were sold.

Supply of Rebuilt Parts () indicates supply of new parts					
Rebuilt parts	Number supplied				
Automatic transmissions	7,819(99)				
Power steering units	12,822(7,772)				
Torque converters	4,322(5,056)				

# Steady Promotion of Hybrid Vehicle Battery Collection and Recycling

Toyota has built and operated a nationwide battery collection and recycling system since the launch of the first-generation Prius in 1997 in order to ensure safe recovery and processing of hybrid-vehicle batteries and proper recycling of resources. Twelve years have passed since the launch and, as it was expected that the number of end-of-life vehicles and waste end-of-life batteries would increase, the Toyota HV call-center was established to collect them in October 2009. The collection systems have also been strengthened and refined, including a review of the conventional logistics network, and in FY2009 the Center recovered 4,071 battery units. Collected batteries are sent to Toyota Chemical Engineering Co., Ltd., where their nickel components are recycled as material for stainless steel after reduction treatment. In the United States and Europe, similar refinements and reinforcements are under way, helping battery recovery systems and their logistics networks evolve even further. Toyota is also promoting the proper processing technologies for lithium-ion batteries (installed in PHVs) to help meet future demand.

Hybrid Vehicle Battery Collection and Recycling Flow



Recycling

## Further Promotion and Widespread Application of the Design for Recycling Concept

# Development of Vehicles with Improved Dismantlability

In order to promote better resource recycling for end-of-life vehicles, it is necessary to make them easier to dismantle and recycle, with a primary focus on structural design and selection of materials. A wide range of studies on this topic have been generated and compiled. In FY2009, Toyota developed a system to simulate the removal of door trim, using a plastic component equivalent in bulk to bumpers and instrument panels. The system allowed Toyota to evaluate the removability of various door trim types more easily starting in the development phase, which had been difficult in the past. As a result,

it became possible to design an optimal structure that can reduce the force required to remove the trim by approximately 30% and apply the design broadly to future new models.



Door trim removal simulation

For details on Toyota's dismantling technologies, please visit the following Web site:

http://www2.toyota.co.jp/en/tech/environment/recycle/scrap/

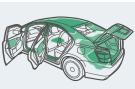
#### Column

# Additional Environmental Approaches Generates New Results in Ecological Plastic and Recycling

Toyota has developed new plant-derived Ecological Plastic materials for applications such as scuff plates, roof headliners and seat cushions. In a world first,<sup>\*1</sup> these items were introduced with the 2009 model-year Prius. The SAI was launched the same year with Ecological Plastic materials used for 60% of the interior components<sup>\*2</sup>. The use of Ecological Plastic leads to less dependence on petroleum resources, as well as a reduction in carbon neutral<sup>\*3</sup>.

Furthermore, in extension of the technology developed in recycling bumpers for repair services, a new recycled material based on end-of-life vehicles was created. Toyota applied it first to deflectors and so on after developing a process to assure the quality by eliminating foreign particles, such as dirt adhering to bumpers, and fine-tuning the compound.

- \*1 PP replacement injection material for cowl side trim (adopted on the Prius, in a world first), PET replacement surface material for luggage compartment trim (adopted on the HS250h, in a world first) and PET replacement surface material for the headliner trim. (adopted on the SAI, in a world first).
  \*2 Including dealer-installed floor mats.
- \*3 Carbon neutral: An argument that plants if burned do not contribute to the increase of CO<sub>2</sub> in the atmosphere in the life cycle because they absorb CO<sub>2</sub> by photosynthesis to grow.



Parts of the SAI where Ecological Plastic is used

#### **Production Environment Data (Japan)**

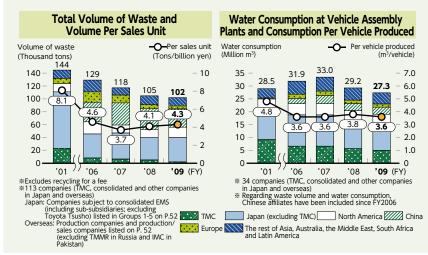
A reduction in the volume of materials discarded was achieved for consolidated and other companies in Japan including TMC through improvements in yield, reduction of discharged water sludge and other efforts. This has led to a reduction in the volume of materials discarded per sales unit.



#34 companies (TMC, consolidated and other companies in Japan excluding Toyota Tsusho) See P.52 for a list of consolidated subsidiaries in Japan

#### **Global Production Environment Data**

Toyota implemented activities to reduce the waste and water consumption (for vehicle assembly) at all its manufacturing plants worldwide. As a result, the volume of waste decreased by 3,000 tons from the previous year, minimizing the increase in volume per sales unit. Results of initiatives to reduce water consumption improved, with reductions both in the total amount and in the volume per vehicle produced, as a result of diligent conservation efforts.

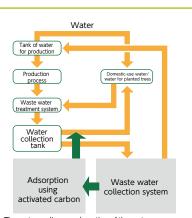


#### **Examples of Overseas Initiatives**

### Active Efforts to Address Water Shortage Continue with Achievement of 100% Water Recycling

#### China: Guangzhou Toyota Motor Company Limited (GTMC), Sichuan FAW Toyota Motor Co., Ltd. (SFTM)

In China, the water shortage problem has become more serious due to increases in water demand caused by rapid industrialization, advancement of urbanization and climate change in recent years. Toyota production affiliates in China have proactively worked on measures for water shortage. Among them, GTMC introduced a waste water recycling and treatment system in October 2008 and opened a second line in May 2009. The system relies on adsorption of the water for reverse osmosis (RO) treatment with activated carbon. This and other initiatives have helped GTMC reduce water consumption by 28% in three years since 2006, nearly reaching its 10-year target of a 32%. The GTMC plant collects 100% of the water used on production lines and domestic-use water, using the largest water recycling operation of any Toyota plant in the world. Thanks to the system's reliable performance, GTMC was able to reduce water used during production processes to 2 tons per vehicle in FY2009, the lowest level in China. Toyota production affiliates in China continue their activities to reduce water consumption in both production processes and domestic use, with all employees cooperating to conserve limited water resources and contribute to a sustainable society.



The system relies on adsorption of the water for reverse osmosis (RO) treatment with activated carbon.

### From Procurement to Manufacture, Toyota is Grasping and Assessing the Risks of Using Chemical Substances, and is Switching Towards the Use of Substances with a Smaller Environmental Impact

It is said that today there are approximately 100,000 varieties of chemical substances being manufactured and sold throughout the world. Amongst those are some that can impact the environment and human health, and these are called "substances of concern." In regard to these substances of concern, there are demands that corporations make voluntary efforts to reduce or eliminate their use. In FY2009, along with making sure to conform with the European chemical regulation REACH, based on the PRTR system we have reduced the amount of emissions of chemical substances during manufacture. Toyota will continue to cooperate with its suppliers and subsidiaries to track and evaluate risks in the use of substances of concern, and moving forward with the switch to substances with less impact.



#### Promote Management of and Further Reductions in the Use of Substances of Concern

- \*1 VOC (Volatile Organic Compounds)
- \*2 REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals)
- \*3 SVHC: Substance of Very High Concern Chemical substances listed by the European Chemicals Agency as being "carcinogenic" or having other hamful effects (30 of these substances were listed as of March 2010; additional substances will be listed in the future.)
- \*4 GADSL (Global Automotive Declarable Substance List) URL: http://www.gadsl.org
- \*5 IMDS (International Material Data System)

#### Complete Elimination of the Four Substances of Concern

With regard to the four substances of concern (lead, mercury, cadmium, and hexavalent chromium), Toyota has been taking action to achieve their early elimination based on the Toyota Global Standards. As a result, in August 2006, their usage was completely eliminated at all production affiliates in Japan. Overseas, the use of these substances was largely eliminated at major plants around the world by the end of 2007.

#### VOC Levels within Vehicle Cabins Reduced in All New and Fully Changed Models

It is generally accepted that, of the volatile organic compounds (VOC<sup>\*1</sup>) emitted by vehicle interior parts, toluene, xylene and formaldehyde may have a particularly detrimental effect on human health. In order to reduce the amount of VOCs generated, Toyota is continuing to review the materials, processing methods and adhesives used for interior parts. In all of 8 newly launched or fully changed models in FY2009, Toyota has achieved the voluntary goals set by the Japan Automobile Manufacturers Association.

# Certain Conformity to the Chemical Substance Regulation REACH

REACH<sup>2</sup>, which came into effect in Europe in June 2007, is a chemical substance regulation that clarifies corporate responsibility for managing chemical substances in order to minimize the impact of chemical substances on people and the environment. Under this regulation, businesses are required to identify the substances used and incorporated in their products, assess the risks, register and report to an administrative agency, and additionally prepare information that can be accessed by the public.

In December 2008, in order to conform to REACH, Toyota completed the pre-registration of all direct and indirect materials handled by its European operations, and collaborated with 57 Japanese parts manufacturers doing business in Europe regarding pre-registration. Also, in March 2009 Toyota held a briefing for suppliers, and explained the actions it is taking regarding substances of very high concern (SVHC\*3) contained in products and parts.

In FY2009, in preparation for the registration deadline of late 2010, Toyota discussed supply chain communication methods with the chemical industry and trading companies, and formulated the policy for the Japan automotive industry. Toyota also assessed its impact regarding SVHC, and formulated an action policy.

Together with its suppliers and subsidiaries, Toyota will continue efforts to satisfy the REACH regulation.

#### Column

### GADSL: A Managed Chemical Substance List Enacted Collaboratively by Global Automobile, Automotive Parts and Chemical Makers

The industry-wide managed chemical substance list enacted by the Japanese, U.S. and European automobile, automotive parts and chemical maker representatives who form the Global Automotive Stakeholders Group (GASG) in order to conform to global chemical substance regulations is called the GADSL<sup>\*4</sup>. Based on the regulated substances of each country, this list was created in 2005, and is updated according to chemical substance regulatory trends. (In the 6th edition of February 2010, there were 110 substance groups and 2,732 chemical compounds.) Each automobile maker uses this GADSL to designate to suppliers the substances that must be declared, and to advance the conformity of internal standards. Discussions are being held about utilizing it in future, along with the chemicals in products gathering system IMDS<sup>\*5</sup>, in conforming to REACH.

#### Production and Logistics

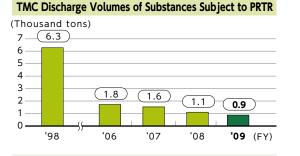
Reduction of the Discharge of Substances Subject to PRTR due to TMC Production Activities

FY2009 Goal • Reduce yearly discharge volumes of toluene, xylene and other substances subject to PRTR to 1,245 tons or less

#### Reduction of the Discharge Volume of Substances Subject to PRTR (19% Reduction over FY2008)

Toluene, xylene, ethyl benzene, and 1,3,5-trimethylbenzene account for 92% of all substances subject to the Pollutant Release and Transfer Register (PRTR). In order to reduce these four substances, Toyota has carried out PRTR substance discharge reduction activities in the main source of that discharge, the painting process.

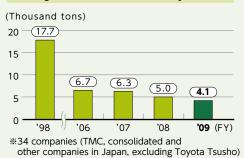
As measures for FY2009, Toyota reduced usage and improved recovery rates for cleaning solvent, and moved forward on water purification of cleaning solvent for waterborne paints. Through these activities, Toyota achieved its goals, and reduced the annual discharged volume to 900 tons (a 19% reduction over the previous fiscal year).



#### Production Environment Data (Japan)

By improving solvent recovery rates, Toyota also reduced PRTR discharge amounts at consolidated subsidiaries in Japan.

#### Discharge Volumes of Substances Subject to PRTR



#### **Examples of Overseas Initiatives**

Various R&D Initiatives on VOC Reduction in North America — Water Extraction Smell Test to Predict Smell of Parts in Vehicle Cabin USA: Toyota Motor Engineering & Manufacturing North America — Toyota Technical Center (TEMA-TTC)

Auto manufacturers in North America are working together to improve vehicle cabin air quality. Cabin air quality focuses on two main factors: volatile organic compounds (VOC) such as toluene and formaldehyde, and interior cabin odor. Currently, for VOCs, two standards are commonly used in North America - voluntary standards set by the Japan Automobile Manufacturers Association (JAMA) and a European ISO standard which is under development. Toyota has voluntarily worked to achieve the JAMA standards by 2011. At the TEMA-TTC in Michigan, research and development staff are working on low-VOC technology per the JAMA method as well as reduced odor technologies per internal standards. A newly developed odor prediction method, called the water extraction smell test, was developed based on Toyota's internal smell evaluations as well as customer feedback. The test predicts the smell of the cabin air passing through the HVAC system using a sample heated in a canister and ice water. After completing the heating and cooling cycle, the odor is evaluated by trained team members who decide if the odor of the sample is acceptable.

The TEMA-TTC staff also developed ways to reduce toluene emissions from tapes used as a secondary attachment method for several interior parts. They developed new tapes that reduce toluene emissions by more than 90%. Examples of these applications are ethylene propylene polymer seals used under the instrument panel and felt tape used for NVH\* reduction. The tape is now being used in some North American models.

\*NVH stands for noise, vibration and harshness, and the study and modification of noise and vibration characteristics—blind radio waves that create adverse effects on electronic devices, vibration generated by the engine and tires and vibration reaching the steering, seats, and floor due to uneven road surfaces.



A Senior Technician in the Materials Engineering Department at the Toyota Technical Center performs a water extraction smell test to predict odor in the vehicle cabin.

#### Sustainability Report 2010 | Environmental Aspects Atmospheric Quality

### Achieving Cleaner Emissions and Further Reducing VOCs to Improve Atmospheric Quality Both from Products and Monozukuri (Manufacturing)

There are two main sources of atmospheric pollution: stationary sources such as factories and businesses, and mobile sources such as automobiles. Domestically, significant steps in reduction of atmospheric pollution have been made, and pollutants in automotive exhausts have been reduced to approximately 1/100th of previous levels. Seeking to preserve a clean atmospheric environment, Toyota developed low emissions technologies at every level — development and design, production and logstics. In FY2009, as in the previous year, all Toyota automobiles achieved U-LEV (Ultra-Low Emission Vehicle) certification, or better, and VOC emissions in the production painting process were reduced even further. Toyota will continue to develop low emissions technology, implement that technology on a global level and reduce VOC emissions.



**Reduction of Emissions** to Improve Air Quality in Urban Areas in All **Countries and Regions** 

#### 100% of Toyota Vehicles Meet or Exceed the Ultra Low-Emission Vehicle Level (U-LEV)

In FY2009, Toyota increased the number of vehicles that meet the Super Ultra-Low Emission Vehicle (SU-LEV) level, with 75% less emissions than the 2005 Exhaust Emissions Standards in the Ministry of Land, Infrastructure, Transport and Tourism's Approval System for Low-Emission Vehicles. 93.3% of Toyota vehicles produced were certified as meeting the SU-LEV levels, and 100% of all Toyota vehicles produced have been certified U-LEV or better since FY2008.

Of gasoline-powered vehicles produced in FY2009, 18 vehicle series in seven of eight new or fully changed models gained new SU-LEV certification, while three vehicle series in one fully changed model were certified SU-LEV, which signify a 50% reduction in exhaust emissions over 2005 exhaust emissions standards.

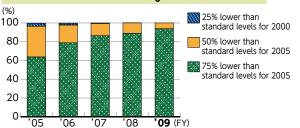
#### Percentage of Total Production in FY2009 that Meets the Approval System for Low-emission Vehicles Based on the 2005 Exhaust Emissions Standards

		() No. of models
Category	Reduction level	Percentage of total production
New☆☆☆ U-LEV	50% lower than standard levels for 2005	6.7% (35)
ጵጵጵጵ SU-LEV	75% lower than standard levels for 2005	93.3% (126)

#### FY2009 Vehicles that Meet the Approval System for Low-Emission Vehicles

Model	No. of models (SU-LEV)	No. of models (U-LEV)
RX450h	3	0
Wish	6	0
Prius	1	0
HS250h	1	0
Land Cruiser Prado	0	3
Mark X	3	0
SAI	1	0
Passo	3	0
Total	18	3

#### Low-Emission Vehicles as a Percentage of Total Production



#### TMC's VOC Emissions Production Reduction Activities

FY2009 Goal Body painting process: Reduce annual VOC emissions to an average of 26.0g/m<sup>2</sup> or less on all lines

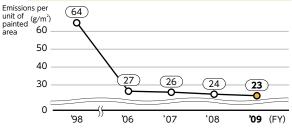
and

Logistics

#### **VOC Emissions from Paints Reduced** to an Average of 23g/m<sup>2</sup>

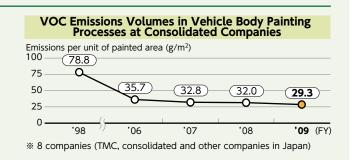
Volatile organic compounds (VOC) are considered to be one of the causes of photochemical oxidants which contribute photochemical smog. At Toyota, in order to reduce the amount of VOCs emitted during the painting process, less solvent is used in washing processes and a larger percentage is recaptured and deionized water (DI water) is used for washing instead of water borne cleaning solvent. As a result of these VOC reduction programs, total VOC emissions from Toyota body paint lines averaged 23 g/m<sup>2</sup> in FY2009 (a reduction of 4.7% from the previous fiscal year), which met Toyota's goals.

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



#### **Production Environment Data (Japan)**

Consolidated companies and other companies in Japan also implemented measures such as increasing cleaning solvent collection rates, decreasing the cleaning solvent, and improving its adherence rate, which decreased the emission volume in volatile compounds per unit of painted area.



#### Column

### More Domestic Dealers Use Water-based Paints, Which Have Now Reached about 40% of Target or 69 Companies (86 Body Shops)

While the amount is very small, VOCs are emitted in dealer body repair and paint processes. The original solution to VOC emissions was the use of activated carbon filters to capture the VOCs, post-emission. As an upstream countermeasure, Toyota started working with paint manufacturers in 2004 to develop water-based paints, which could possibly reduce VOC emissions by as much as 50%. The developed paints were tested at monitor dealer shops, and were put on sale as genuine Toyota products in 2007. In FY2009, the Toyota National Dealers' Advisory Council worked with its dealer association to raise the number of body shops using water-based paints to 69 companies (86 body shops) or about 40% of the total. At the 29th National Toyota Corolla Service Technology Contest, Toyota Tokyo Corolla Corp. and Toyota Corolla Sapporo Corp. entered the competition with water-based paints, and Toyota Corolla took first place. Toyota continues to work toward achieving expansion of the No.1 environmental-friendly Toyota Body Paint (BP) by holding competitions, education, certification of water-based paints and other programs.



team member in a toning competition

team member in a coating competition

#### **Examples of Overseas Initiatives**

### Initiative to Improve Air Quality in South America Receives Environmental Award in Brazil/Achieving VOC40 Plan in Argentina

#### South America: Toyota Mercosur [Toyota do Brasil Ltda (TDB)/ Toyota Argentina S.A. (TASA)]

Toyota Mercosur affiliates TDB and TASA have hosted several joint South America Environment Committee meetings since May 2006, with the objective of enhancing environmental management in a cooperative way. One element of this effort is reducing emissions of volatile organic compounds (VOCs). Every year, both companies set targets for VOC reduction per square meter of painted surface, and have persisted in their kaizen efforts.

In April 2008, TDB installed specific pumps for each color that makes up more than 10% of the production mix. This reduced the need to clean the equipment, which requires a solvent. The results showed a decrease in paint consumption and a drop of 2.55g/m<sup>2</sup> in VOC emissions. Thanks to these kaizen efforts, TDB received some awards, and one of them is the "FIESP\* Environmental Merit" award in June 2009.

On the other hand, TASA reached an average of 50mg/m<sup>2</sup> from its FY2007 target. Then it formulated the "VOC40 plan" for FY2008-2009, and set four initiatives: 1) incorporation of new parts into the automatic painting process; 2) control and daily follow-up of paint and solvent consumption; 3) daily control of solvent recovery; and 4) improved environmental awareness among personnel involved in the painting processes. In FY2008, TASA achieved 39.1g/m<sup>2</sup>, exceeding the 40mg/m<sup>2</sup> target by 0.9g/m<sup>2</sup>.





At the "Brazilian Environmental Award" ceremony

### Sustainability Report 2010 | Environmental Aspects Environmental Management

### Strengthen and Establish Environmental Management in 2010, the Final Year of the Fourth Toyota Environmental Action Plan

FY2010 is the final year of Toyota's Fourth Environmental Action Plan. Moving forward to that final year, Toyota further strengthened its consolidated environmental management in FY2009, and worked to establish (the environmental measures in the plan). Most of the objectives of the consolidated environmental management program were met. Further, Toyota continued to promote programs based on the "Toyota Biodiversity Guidelines." A new program was launched to systematize environmental education and implement environment-considering activities among administrative employees. FY2009 was the tenth year of Toyota's Bio-Greenery businesses, and each of the business is continuing. The LCA's Eco-VAS rating system evaluated and confirmed that all Toyota new models and full model change automobiles show reduced environmental impact.



#### Establishing Activities of Regional Environment Committee Structures

Since 2002, Toyota had established regional environment committees as part of efforts to promote concrete environmental initiatives by overseas affiliates and to enhance global structures. At committee meetings, managers confirm status of actions based on the fiscal year policies in procurement, production, logistics, sales and other areas in the presence of executives from each region, convey examples of the improvement across areas and discuss responses to the environmental issues in regions.

In FY2009, Toyota explained the TMC Fifth Toyota Environmental Action Plan (FY2011-FY2015) to each region, and requested them to make a plan. Toyota continues to further enhance global environmental actions in cooperation with Toyota and other regional environment committees.



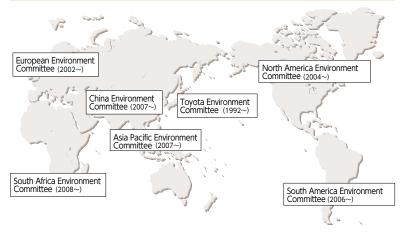
South America Environment Committee





South Africa Environment Committee

#### Major Issues Discussed at Committee Meetings



Environment Committee	Date Held	Major Issues Discussed	
European Environment Committee	April, July, and October 2009, January 2010	•Mid- and long-term environmental initiatives, such as energy/global warming measures •Initiatives to atmospheric quality measures •Wanagement status of substances of concern •Initiatives to sustainable plants •Formulation of the Fifth Environmental Action Plan	
China Environment Committee	April, November 2009	Examples of environmental initiatives in production and logistics areas •On-site confirmation at affiliate that held a committee meeting •Activity report for each area of operation •Formulation of the Fifth Environmental Action Plan	
Asia Pacific Environment Committee	November 2009, March 2010	•Activity report for each area of operation •Topics of actions in each area for prevention of global warming •Formulation of the Fifth Environmental Action Plan	
South America Environment Committee	May, December 2009	•Activity report for each area of operation •Formulation of the Fifth Environmental Action Plan	
South Africa Environment Committee	July 2009, January 2010	•Activity report for each area of operation •Formulation of the Fifth Environmental Action Plan	

#### Promotion Structure for Global Environmental Management

### FY2009 Consolidated Environmental Management Action Policies and Results

In FY2009, Toyota promoted initiatives to ensure the achievement of annual environmental goals in production, sales and other areas. In the area of production, systematic measures were implemented and almost all goals were achieved. With respect to sales and other areas, each company formulated annual environmental action plans and promoted initiatives based on these plans.

		FY2009 Action Policy And Results		FY2010 Action Policy		
A		committee activities and strengthen coordination with TMC     regional environment     meetings by region       • Ensure efficient and effective operation of regional environment committees     committee meetings     China Environment Committee: 4 China Environment Committee: 2 Asia Pacific Environment Committee: South America Environment Committee		Activity Results	Action Policy	Goals • Hold periodic regional environment committee meetings
Overall				European Environment Committee: 4	<ul> <li>Enhance independence of regional environmental committee, and further enhance cooperation between TMC and each regional committee</li> </ul>	
Production (79 companies)	Japan (35 companies) Overseas (*44 companies)	<ul> <li>Ensure thorough measures to prevent non-compliance and complaints at all companies and strengthen initiatives toward achieving the FY2010 goals</li> <li>Strengthen activities to prevent non-compliance and complaints and continue to implement relevant training</li> <li>Enhance follow-up measures to achieve goals by the All-Toyota Production Environment Conference and regional environment committee meetings</li> </ul>	<ul> <li>All companies to achieve FY2009 goals and eliminate cases of non-compliance and complaints</li> </ul>	<ul> <li>Proactive preventive measures were implemented, but there were cases of non-compliance (7 non-compliance cases and 0 complaints). All relevant response measures were completed.</li> <li>* Japan: 2, Overseas: 5</li> <li>Consolidated production companies in Japan and overseas implemented systematic measures to achieve FY2009 goals and almost all goals were achieved</li> </ul>	<ul> <li>Enhance activities to prevent non-compliance</li> <li>Strengthen measures through environmental meetings in Japan and environmental committee by region toward each affiliate's achievement of FY2010 goals</li> <li>Ensure creation of five-year plan (FY2011-FY2015)</li> </ul>	<ul> <li>Zero non-compliance and complaints</li> <li>All companies to achieve FY2010 goals</li> <li>Create by all relevant companie</li> </ul>
	Japan (36 companies)	<ol> <li>Ensure follow-up of FY2008 activity results and creation of FY2009 action plan</li> </ol>	<ul> <li>Achieve FY2009 plan goals</li> <li>Create by all relevant companies</li> </ul>	All companies created their respective annual action plans and are promoting implementation	Ensure follow-up of FY2009 activity results and creation of FY2010 action plan     Ensure creation of five-year plan (FY2011-FY2015)	<ul> <li>Achieve FY2010 plan goals</li> <li>Create by all relevant companie</li> </ul>
Sales (85 companies)		<ol> <li>Continue current actions</li> <li>Ensure checklists are up to date based on amendments to relevant laws and recent examples of best practices</li> </ol>	Measures based on the Toyota Dealer CSR Guidelines checklist are being steadily implemented	<ul> <li>Measures based on the Toyota Dealer CSR Guidelines checklist are being steadily implemented</li> <li>Explain about revised Act on the Rational Use of Energy to dealers at "CSR Workshop" organized by Toyota National Dealers' Advisory Council</li> </ul>	<ul> <li>Continue implementation of improvement initiatives using checklists (ensure details are up to date based on amendments to relevant laws and recent examples of best practices)</li> </ul>	Zero     environmental     accidents
companies		<ol> <li>Ensure management by unit, and year-on-year comparison management of quantitative data</li> </ol>	Establish EPI	<ul> <li>Data input by all relevant companies</li> <li>Feedback by unit data, etc. to dealers</li> </ul>	<ul> <li>Ensure management by unit, and year-on-year comparison management of quantitative data</li> </ul>	Continue management data feedback
	Overseas (*49 companies)	1) Continue implementation of the Dealer Environmental Risk Audit Program (DERAP)	<ul> <li>Goal achieved at 80% of dealers</li> </ul>	Goal achieved at 76% of dealers	Continue implementation of the Dealer Environmental Risk Audit Program (DERAP)	<ul> <li>Goal achieved at 80% of dealers</li> </ul>
Other (73	Japan (58 companies)	<ol> <li>Ensure follow-up of FY2008 activity results and creation of FY2009 action plan</li> </ol>	Achieve FY2009     plan goals	<ul> <li>All companies created their respective annual action plans and are promoting implementation</li> </ul>	<ul> <li>Ensure follow-up of FY2009 activity results and creation of FY2010 action plan</li> <li>Ensure creation of five-year plan (FY2011-FY2015)</li> </ul>	<ul> <li>Achieve FY2010 plan goals</li> <li>Create by all relevant companie</li> </ul>
companies)	Overseas (15 companies)	<ol> <li>Improve management of quantitative data</li> </ol>	Establish EPI	Data input by all relevant companies	<ul> <li>Improve management of quantitative data</li> </ul>	Establish EPI

\*Including 10 production/sales companies

# Promoting Measures in Accordance with the Toyota Biodiversity Guidelines

Along with climate change, conserving biodiversity is said to be one of the major environmental issues of global concern, and measures are being promoted on a global scale. The United Nations has designated 2010 as the International Year of Biological Diversity, and in October, they will hold COP 10 (the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity) in Nagoya City, Aichi Prefecture. Toyota is taking a variety of actions under the Toyota Biodiversity Guidelines announced in March 2008, such as the development of technology with a low biodiversity impact, the prevention of biomass depletion through the recycling of resources, and the contribution to the prevention of natural environment deterioration. The purport of these efforts aligns also with the Declaration of Biodiversity and Action Policy by Nippon Keidanren, drawn up in March 2009,

#### **Toyota Biodiversity Guidelines**

#### Fundamental Approach to Activities

TMC is aware of the importance of biodiversity and based on the Guiding Principles at Toyota, seeks the realization of a livable world, a prosperous society, and sustainable development, while taking action to support biodiversity through contributions to the automobile and housing businesses, engagement in new business enterprises, and the handling of social issues.

Main Activities

Contributions through technology	TMC is seeking to balance biological diversity with our corporate activities by pursuing the possibilities of bio- and afforestation technologies and environmental technologies.
Collaboration and cooperation with society	TMC aims to build collaborative and cooperative relationships with a wide range of organizations involved with biodiversity, including governments, international agencies, and NPOs.
Information disclosure	TMC aims to contribute to the development of a sustainable society by widely sharing with society its voluntary initiatives regarding biodiversity and the results of those activities.

and Toyota also joined at the time it was established "The Declaration of Biodiversity by Nippon Keidanren" Promotion Partners (December 2009), a gathering of companies agreeing with and putting into practice the content of that declaration. Taking into account the object of the guidelines, two items were incorporated in the new mediumterm Fifth Toyota Environmental Action Plan (FY2011-FY2015), namely "biodiversity actions" and "the promotion of social contribution activities conducive to the construction of a society coexisting with nature."

Category	Action Item	Details	Related pages
	Global warming countermeasures	<ul> <li>Improved global fuel efficiency</li> <li>CO<sub>2</sub> reduction in production and logistics activities</li> </ul>	24•25• 29•30
	Response to atmospheric environment problems	<ul> <li>Reduction in emissions gases</li> <li>Reduction of VOC emissions</li> </ul>	38•39
Automobile, Housing	Promotion of resource recycling	<ul> <li>Promotion of recyclable designs</li> <li>Expansion of recyclable material use</li> </ul>	32•33• 34•35
Businesses,	Afforestation activities at plant sites	Planting of trees native to the region	46
etc.	Reforestation	<ul> <li>Restoration of undergrowth through tree thinning (Mie Prefecture)</li> </ul>	77
	Consideration of a new R&D facility in harmony with community	Preservation of habitats for rare animals and plants Environmental improvements around Yatsuda Maintenance of mountain forest areas	*
Contributions to Social Issues	Human resource development and the protection of rare species	<ul> <li>Natural environment education at the Shirakawa-Go Eco-Institute and the Forest of Toyota</li> </ul>	77
	Global afforestation	<ul> <li>Afforestation using native species (China, Philippines)</li> </ul>	77
	Toyota Environmental Activities Grant Program	<ul> <li>Initiatives focusing on biodiversity and global warming</li> </ul>	77

#### Main Examples of Toyota's Biodiversity Conservation Activities

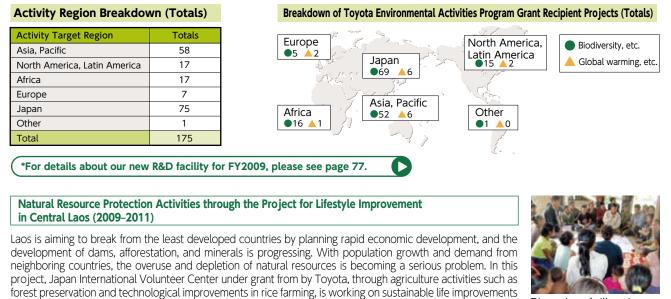
\*For details about our environmental conservation initiatives, please visit the following Web site:

http://www.toyota.co.jp/en/environment/preservation/

#### Column

### Toyota Environmental Activities Grant Program 'Biodiversity' Grant Recipients

As part of its social contribution activities, Toyota has been carrying out a grant program from FY2000 to support the environmental activities of non-profit organizations and others. Within the program Toyota has thus far supported many projects with the grant-focused theme of biodiversity. The chart below divides projects into two large categories, and shows the number of activities per region. Activities in Laos are introduced as a representative case.



Discussion of village issues

for local residents, and human resource development to protect the region's natural resources.



# Systematization and Enactment of Environmental Education

Every June, during the Toyota Global Environment Month that targets all employees, a variety of events are held, and in November Toyota works on raising environmental awareness through Eco Drive Month and e-learning about the global warming issue and eco driving.

Also, in order for employees to carry out their jobs with high environmental awareness, Toyota is putting into effect a variety of environmental education programs according to job description and level. Toyota is continuously carrying out such specialized education as Environmental Compliance Education for Appropriate Waste Management for production environmental protection leaders, ISO 14001 Environment Management Level-Up Education targeting internal environmental inspectors, and Key Facility Management Methods and Emergency Response Training targeting key environmental facility workers.

From FY2009, in accordance with level-specific environmental education carried out for production, Toyota began new employee education, manager education, and executive development program education factoring in environmental considerations for office workers.

Specialized education	Title				
Employee environmental awareness	Toyota Global Environment Month Events (every June) Toyota Eco Drive Month (every November)				
improvement education	•Environment e-Learning •Environment Handbook				
Education by level	New Employee Education Manager Education				
	Executive Development Program				
Specialized education	Environmental Protection Leader Education				
	Internal Environmental Auditor Education				
	Key Environmental Facility Worker Education				

#### **Environmental Education System**

#### Further Promotion of Environmental Management at Business Partners

#### Suppliers: Continuous Environmental Management Efforts with Suppliers

Management

Toyota places top priority on environmental issues, and to further enhance activities in coordination with suppliers, by May 2008 each global automotive production affiliate (8 companies in Japan and 23 overseas) published TOYOTA Green Purchasing Guidelines, and we are promoting the enhancement of supplier management of substances of concern (SOC) and voluntary environment performance improvements.

#### Japanese Dealers: Promotion with 'Toyota Dealer CSR Guidelines'

Toyota has been promoting environmental efforts, creating and rolling out "Toyota Dealer Environmental Guidelines" from 1999 and "Toyota Dealer CSR Guidelines" from 2005. These guidelines are in a self-check format that covers and divides the items that must be followed as dealers in relation to a variety of environmental aspects among headquarters and outlets so that dealers can take action on their own. Also, in October 2009, at the CSR lecture held by the Toyota National Dealers' Advisory Council, an explanation about revised Energy Saving Act was given to dealers.

## **Overseas Distributors:** Increase in the Percentage of Dealers Achieving DERAP from 70% to 76%

Toyota continued to implement the Dealer Environmental Risk Audit Program (DERAP), which audits the environmental risks of overseas dealers. In order to reduce risks and establish the basis for introducing an environmental management system, the audits assess dealers in terms of structures related to five fundamental requirements, including processing of hazardous waste and wastewater treatment. In FY2009, Toyota implemented the program at 2,470 dealers in 36 countries, resulting in an increase in the percentage of dealers meeting the five fundamental requirements from 70% to 76%.

#### Column

# Tokyo Toyopet — Environment-considering Outlet Building That Interacts with the Community

In February 2010, Tokyo Toyopet Motor Sales Co., Ltd. remodeled its Katsushika sales outlet into an environment-considering site. The Katsushika store is a large site with a body and paint shop building, and with 235 panel solar power generating system (50 kW) set up on its roof and walls, it has reduced CO<sub>2</sub> emissions by approximately 14,104 kg\* annually. The solar system covers the showroom's power consump-

tion, about 8% of the Katsushika outlet's total power consumption. At the entrance, 67 m<sup>2</sup> of the wall has been allocated to greening. In combination with the 600 m<sup>2</sup> green belt around the store, it estimates an annual absorption of approximately 1,446 kg of CO<sub>2</sub>. The service plant has been made an indoor airtight type, and by deploying solvent recovery and recycling equipment and water washing exhaust purifiers, Tokyo Toyopet Motor Sales is striving to reduce the environmental impact on the surrounding area. They received comments from their visiting customers and neighbors, "It is an environment-considering, very comfortable space." Trials such as the one conducted at the Toyopet Katsushika outlet will be conducted at other showrooms in turn.



\* As simulated by KYOCERA Corporation

Solar power system and wall greenery

# Management

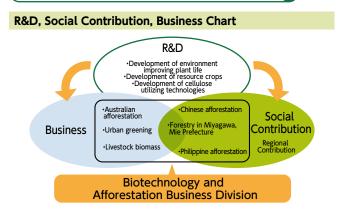
#### Promotion of New Businesses That Contribute to Environmental Improvements

[Promotion of new biotechnology and Afforestation Business]

#### The Biotechnology and Afforestation Businesses Are Driving New Agribusiness and Environment-Contribution Afforestation Business

Toyota's efforts in the agribusiness and biotechnology fields began in January 1998 with the setting up of the Biotechnology and Afforestation Business Office. The reasons for advancing into this field were, 1) population growth centered in Asia, 2) increase in per capita food consumption due to income level improvements, and 3) food and water shortages, and the deterioration of the global environment. Toyota is promoting two businesses as our mission, 1) the development of new agribusiness aiming to realize a resource recycling society, and 2) the development of environmentcontribution afforestation business through global environment improvements. Toyota is seizing environmental action as a good opportunity for company growth, and is working towards promoting business by aiming for the fusion of environmental preservation and economic growth. The range of action in the agribusiness and biotechnology fields is divided into three major parts: R&D, business and social contribution.

🕻 For details about Toyota's social contribution activities, please see page 77. 🌔



# Progress of Biotechnology and Afforestation Business

#### **Afforestation Business**

Affiliate	Business
Toyota Roof Garden Co., Ltd.	Developed the modular grass turf tile, the TM9 Turf Mat, which uses the easy-care, slow-growth zoysia grass TM9. By FY2009, cumulative sales of TM9 had reached 820,000 m <sup>2</sup> , with TM9 Turf Mats making up 11,000 m <sup>2</sup> of that.

#### **Livestock Biomass Business**

Affiliate	Business
Toyota Roof Garden Co., Ltd.	<ul> <li>Developed a manure composting process for the livestock industry called resQ45 in cooperation with Menicon Co., Ltd. As of March 2010, approximately 70 farms, mostly large scale ones, are using it continuously.</li> </ul>

#### **Overseas Afforestation Business**

Affiliate	Business
Australian Afforestation Pty. Ltd. (Australian afforestation affiliate)	Working towards the afforestation of eucalyptus trees, which grow extremely fast, and by the end of FY2008, 1,763 hectares of these trees had been planted. From 2009, harvesting began, and 24,000 tons have been shipped to Japan as paper pulp material.

#### [New Businesses]

#### In FY2009 Toyota Provided 30 Solid Oxide Fuel Cell (SOFC) Cogeneration System for Household Use to the Solid Oxide Fuel Cell Trial Research Business

Since March 2009, Toyota has provided 30 solid oxide fuel cell cogeneration systems for household use, developed jointly with Aisin Seiki Co., Ltd., Osaka Gas Co., Ltd. and Kyocera Corporation, to the five setup and operation companies participating in the FY2009 Solid Oxide Fuel Cell (SOFC) Trial Research Business — Hokkaido Gas Co., Ltd., Tokyo Gas Co.,



Solid Oxide Fuel Cell (SOFC) Cogeneration System for household use set up at a single unit home Ltd., Toho Gas, Ltd., Osaka Gas Co., Ltd., Seibu Gas Co., Ltd. This easy-to-install system offers high power-generation efficiency and a compact size, thus providing both environmental and economic benefits even in multidwelling housing complexes where space is limited. The five setup and operation companies installed this system as needed in average homes in their service area, Toyota aims to integrate and utilize the various data required for commercialization, and complete development in the first half of the 2010s.

#### Column

### Development of a Greening Method with a Low Cost and High Initial Level of Completion

The affiliate biotechnology and afforestation company Toyota Roof Garden Co., Ltd., in 2007, undertook the greening of the walls of Tressa Yokohama, a commercial establishment in Yokohama. In the greening of the walls of Tressa Yokohama, from the initial construction there was the development of a low cost method for covering the walls with plants, and a point was made to integrate the signage and give birth to a different look through pruning. This method was well received, and it was the recipient of the Minister of Land, Infrastructure, Transport and Tourism Award at the 8th rooftop, wall and special area greenery technology contest held by Organization for Landscape and Urban Green Technology Development. This purpose of this award is to strive for the promotion and popularization of greening technology through awarding private enterprises that are producing excellent results in their active efforts to bring greenery to places like roofs and walls that are difficult to make green with normal methods, and to contribute to the realization of a rich urban life.



Toyota Roof Garden will continue to contribute to urban heat-island alleviation and promote energy saving through the development of this kind of wall greening method.

Wall greenery of the north wing

# Sustainability Report 2010 | Environmental Aspects Environmental Management



Steady Reduction of Environmental Impact over the Entire Vehicle Lifecycle through Implementation of Eco-VAS

#### Application of LCA to New and Fully Changed Vehicles of Eight Vehicle Series

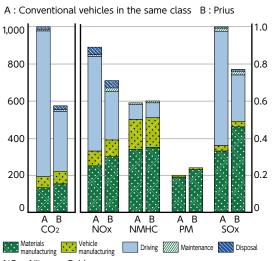
The Eco-Vehicle Assessment System (Eco-VAS) is a comprehensive environmental impact assessment system that allows systematic assessment of a vehicle's impact on the environment over the entire lifecycle — from vehicle production and use to disposal stages. Toyota uses Eco-VAS to conduct lifecycle assessment (LCA), which assesses a vehicle's total environmental impact — from materials production, vehicle manufacturing, driving and maintenance to disposal stages. In FY2009, Toyota used Eco-VAS to conduct LCA on eight vehicle series that were new or underwent a complete redesign (RX450h, Wish, Prius, HS250h, Land Cruiser Prado, Mark X, SAI, Passo). The system has enabled Toyota to reduce CO<sub>2</sub> emissions over the entire lifecycle of

the Prius by 43% (in Japan) or more compared with similar class vehicles. And Toyota's LCA conforms to international LCA standards ISO 14040 and 14044, and Toyota has acquired verification by the third-party assessment institution JEMAI regarding the evaluation of the Prius.



ISO 14040, 14044 certificate

#### **Prius LCA Results**



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

SOx : Sulfur Oxide

These results are based on 10-15 Japanese test mode, assuming a lifetime driving distance of 100,000km over 10 years

 Because Toyota uses LCA to verify the relative environmental benefits of its vehicles, it expresses the evaluation results as indexes. Since CO<sub>2</sub> emissions are measured in tons while the emissions of other substances are measured in kilograms, different indexes are used.

### Legal Compliance Activities

#### Achieving Zero Cases of Non-compliance and Complaints

In FY2009 Toyota carried out a comprehensive inspection of measures to prevent the recurrence of past cases of non-compliance, and continuing from FY2008, Toyota had thorough company-wide prevention activities by deploying near-miss accidents\*. Specifically, it inspected the structure of the environmental risk management system in construction, the activities to prevent waste water spillage into rain water systems and the status and effectiveness of non-compliance recurrence prevention measures deployed throughout Toyota over the past four years. Toyota will continue activities towards achieving zero cases of non-compliance and complaints.

# 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, 4,020 transformers and condensers have already been processed. The remaining 1,227 units will continue to be handled on an outsourcing basis in FY2010 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 has continued groundwater remediation using pump and aeration treatment and reports on the levels of trichloroethylene to the government and to local councils in the surrounding communities.

#### Trichloroethylene Measurement Values Environmental standard: 0.03 Unit: mg/L

Plant	Levels in groundwater	
Head Office	Less than 0.002-2.90	
Motomachi	Less than 0.002-0.28	
Kamigo	Less than 0.002-0.29	Note 1: Me all
Takaoka	Less than 0.002-0.45	Note 2: Ha
Miyoshi	Less than 0.002-0.21	pla Note 3: Th
Tsutsumi	Less than 0.002-0.45	ea

Note 1: Measurements are taken at all plants and business sites 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

#### Air and Water Quality Data

lt	em	'05	'06	'07	'08	'09
Air	NOx	526	419	416	367	391
All	SOx	111	68	32	25	20
	Total nitrogen	68.9	55.1	64.0	71.6	61.6
Water	Total phosphorus	5.6	4.7	4.6	4.6	4.4
	COD	104.3	96.8	91.3	84.5	76.7

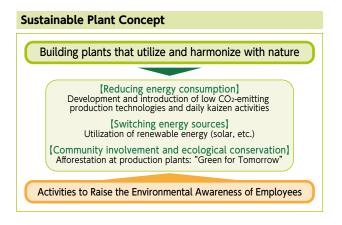
Note 1: The unit for air quality data is 1,000m<sup>3</sup> N/year and for water quality data tons/year Note 2: Water quality data was previously calculated based on the number of days plants were in operation. However, beginning in FY2008, Toyota switched to a calculation method that uses the annual total discharge volume. including the volume discharged during weekend. Figures from FY2004 have been recalculated accordingly.

\* Near-miss accidents: Potentially high-risk incidents that do not lead to actual accidents

#### Column

# Continuing Sustainable Plant Activities with an Emphasis of Afforestation at Plants

Toyota has been pursuing sustainable plant activities since 2007, with its Prius producing Tsutsumi Plant as a model plant, in order to bring the concept of sustainability into monozukuri. That concept is "building plants that utilize and harmonize with nature," and with the three basic approaches of "energy reduction, energy conversion, and regional interaction/ecosystem preservation" as pillars, Toyota is concentrating all its employ-



ees' ecological mindset, and is moving forward with positive activities. In FY2009, among the three pillar activities, Toyota has made particular efforts in afforestation activities at plants, and has held afforestation events with trees native to each area at the Motomachi, Kinuura and Tahara plants domestically, and at TKM and TKAP in India. Thus far through these activities, Toyota has planted more than 230,000 trees (as of March 2010). And in addition to afforestation events, Toyota has also carried out activities in each area for raising seedlings and making compost for the future afforestation activities. In October 2009 the Tsutsumi Plant received the 29th Green City Award and the Minister of Land, Infrastructure, Transport and Tourism Award. Toyota will continue to make these efforts, not only to raise ecological awareness, but also to conserve ecosystems.

#### **Tree Planting Events Summary**

			-		
	ткм	ТКАР	Motomachi Plant	Kinuura Plant	Tahara Plant
Date	June 2009	June 2009	May 2009	March 2010	March 2010
No. of Trees	32,500	7,500	6,000	1,400	2,100
No. of Participants	5,800	600	1,500	400	190

#### **Afforestation Activities Examples**

#### [Japan] Tahara Plant

With the basic philosophy of creating through afforestation an environment worthy of a Lexus production plant that continuously seeks substance even as the times change, afforestation events have been held five times to date at the Tahara Plant. About 750 employees and area residents participated in the first afforestation event in March 2009, planting 2,500 trees. Afforestation events held three times in November and December 2009 aimed at creating small forests within the plant, and 180 trees were planted in each manufacturing division. The 5th event in March 2010 was held independently amidst a difficult administrative environment. Every aspect of the event was handled by employees on their own initiative, including preparation and management, from soil enrichment to mound preparation, and all the way through provision of materials (straw). 23 varieties of trees native to the region were selected, and 2,100 seedlings were planted. And since 2009, Toyota has supported the "Atsumi Peninsula

Rape Blossom Scenic Highway Action Plan" by Tahara City, growing rape blossoms in part of the plant perimeter, and furthering relations with the local community. Toyota will continue to work at making seedlings with employees' own hands in its aim for a plant surrounded by woods.



The March 2010 tree planting event

#### [Overseas] India -TKM (Toyota Kirloskar Motor Private Limited)

In Asia there is concern about the rapidly diminishing tropical forests, and also from the perspective of flood control measures and the prevention of desertification and global warming, afforestation activities are effective. TKM created a plan to plant 40,000 m<sup>2</sup> of trees in three stages along its approximately 1.7 million m<sup>2</sup> site. In June 2009 the first afforestation event was held at the plant in Bidadi, Karnataka. More than 6,000 people including Karnataka state representatives, local students, suppliers, dealers, Professor Emeritus Miyawaki of Yokohama National University, TKM President Nakagawa, and employees and their families participated as volunteers in the afforestation event, planting 32,500 seedlings. 51 varieties of trees such as mango and margosa were selected to be planted based on a field study of the surrounding region. In August and December 2009 during the second event held, TKM planted 35,000 trees. Continuing into 2010, we have plans

to hold events again in August and December. With the goal of raising in the next 20–25 years a natural environment where a variety of creatures can live, Toyota will promote afforestation with a multi-tier structure of vegetation native to the region.



An employee and his family planting a seedling

#### Column

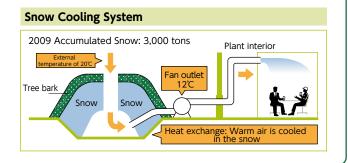
# Effective Use of Natural Energy Taking Advantage of Hokkaido's Regional Characteristics

Toyota Motor Hokkaido, Inc. is achieving low energy cooling during the summer with the installation of a snow and ice hybrid cooling system in their plant that produces automatic transmissions (FY2009 results for the plant break room).

This system incorporates air-snow heat exchange like that used at the Lake Toya Summit, creating cold air by taking the outside air from the crest of a snow covered mountain into the mountain, exchanging heat, and carrying that cool air into the plant with ventilation fans, thereby enabling a reduction in the load born by the existing air cooling facilities.

In FY2009 this reduced 10 tons of CO<sub>2</sub>. To produce the same cool air with air conditioners would cost close to 1 million yen. Also, work to plow and remove snow that occurs each winter becomes a beneficial energy gathering exercise. Further, ingenuity has been applied to insulating material, and by covering the surface of the snow with just 150 mm of natural wood chips finely crushed from thinned trees and bark, we are able to efficiently keep through summer the snow that falls in winter.

In the north country there is a wise practice from long ago of preserving vegetables in ice rooms. It is more efficient to effectively use energy existing in nature than to create electricity with natural energy to run a cooler, so we wanted to bring this ice room wisdom into our plant somehow. Thinking this way, the people in charge of the environmental technology section implemented the snow cooling system. And they are researching jointly with universities the simplification of artificial snowfall to avoid the weather risk of having no snowfall. This is something that utilizes the cold of the north country where artificial snowfall is created by just spraying water during winter. Toyota Hokkaido will continue to actively develop natural energy uses particular to the Hokkaido region.



#### **Examples of Overseas Initiatives**

#### Approach to the Environment—Life Cycle Approach Sustainable Retailer Project Europe: Toyota Motor Europe NV/SA (TME)

In May 2007 TME launched the Sustainable Retailer project for all 3,000 Toyota retailers in Europe, with the goal of selling "green" cars via a "green" retailer. Another aim is zero emissions. TME announced environmental guidelines for the

retailers at the European Retailer Meeting (ERM) in May 2008. The first new sustainable retailer, La Rochelle in France, was officially launched on June 17, 2010. It features solar panels covering the parking area, geothermal and other methods of using natural energy. Additionally it has a green roof to promote biodiversity and provide additional insulation, while a 150,000m<sup>3</sup> rainwater tank will provide the site with 70% of its water needs. The anticipated results are carbon neutral operation, a 67% reduction in water consumption, and a 50% reduction in energy usage.



A bird's-eye view of La Rochelle and its solar panels

# Eco Points Raise Awareness among Team Members and Families U.K.: Toyota Manufacturing U.K. Ltd. (TMUK)

TMUK uses "Eco points" as one of its enlightenment activities to boost environmental awareness among employees and their families. Employees collect points by coming up with improvement ideas related to environmental protection, attending eco tours around the

site, and taking part in other events. So far, employees have submitted 1,000 environmental improvement ideas, and more than 200 have been implemented. Individual employees, the facilities department, and the paint shop came up with the idea of switching off equipment and systems between shifts and during nonworking hours, which was done. The result is an annual CO<sub>2</sub> reduction of 300 tons. In addition, the Eco Plant family day expo on July 12, 2009, attracted some 3,000 Team Members and their families for tree-planting and an in-depth look at Toyota environmental activities.



Employees of the eco point system winner, the Welding Pilot Group

#### Sustainability Report 2010 | Environmental Aspects **Housing Business**

### Developed on the Concepts of Energy-saving and Long Lifespan, the Eco-Future Home Offers Truly Comfortable Living

The brand vision is expressed as "Sincerely for You," and in January 2010, Toyota Home decided on "Eco-Future Homes" as the label for its eco-friendly housing products. "Eco-Future Homes" offer long-term comfortable living that is also in harmony with the earth, and their greatest advantages are energy-saving/CO<sub>2</sub> reducing and long lifespan characteristics that help make these homes better for families, for the environment and for the family budget.

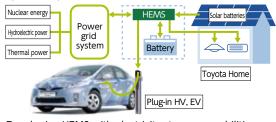
With HEMS, which stores electricity, and longer-lasting materials, homes based on these two concepts will see even further innovation and development.

#### [Initiatives in Product and Technology Development]

#### Development of HEMS, the Next-generation Method of Utilizing In-home Energy

Toyota Homes, which offer superior energy efficiency as well as basics such as aseismatic performance and long lifespans, also take advantage of the Japanese government's eco-point system to save new owners up to 300,000 yen, and because of their certification as" Superior Long-Lifespan House," Toyota Homes enable new owners to obtain home loan deductibles and attractive tax breaks.

In FY2009, in a program designed to further energysaving and CO2-reducing aspects, Toyota Home began development of a Home Energy Management System (HEMS) that will have electricity storage capabilities. The system reduces the home's light and power expenses and places a lower impact on the environment, and in the near future, it should be able to combine with PHVs or EVs to make Zero CO2 emission home and personal transportation a reality. At present, the plan is to make the system operative by 2011.

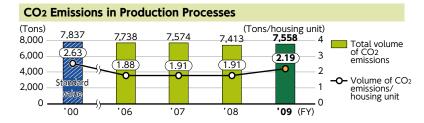


Developing HEMS with electricity storage capabilities, with solar power generation and vehicle charging included

#### [Initiatives at Production Plants]

#### **Reduction in CO<sub>2</sub> Emissions**

Although the production declined in FY2009, CO<sub>2</sub> emissions increased both in total volume and per housing unit produced. The main reason came from the fact that most of the production was done in winter when energy use is highest, and more energy was used by production equipment (ED drying kiln) as Toyota increased efforts to further improve product quality and performance. Changing plant heating to natural gas was a major CO2 reduction measure, along with energy-saving operations for the exterior wall-drying furnace, reducing time of operation and establishing morning, daytime, and furnace-specific schedules. Also among reduction measures was replacement of air-conditioning ducts, and using looping, etc., to improve the air-conditioning efficiency in the factories.



#### **Reduction of Materials Discarded**

During FY2009, 3,152 tons of materials discarded (18% less than in FY2000) was produced outside Toyota, a reduction over the previous fiscal year, but the per-housing-unit amount of 0.92 tons/unit (28% less than in FY2000) was an increase over the previous fiscal year. Increased use of paints with silica sand on exterior panels led to increased sludge, and more cleaning cycles meant an increase in sludge from the ED painting process as well, all of which contributed to volume per housing

#### Column

### 'House of the Year in Electric 2009 Special Award' **Recognizes Energy-saving and CO2 Reduction**

Toyota Home's Sincé Series home received a "House of the Year in Electric 2009 Special Award." The award came in the Japan Center for Area Development Research's annual competition for all-electric homes that contribute to CO2 reduction and energy-saving at an ever-increasing level. Toyota Home's Sincé Series was one of the top runners, and in the end, received a Special Award. The Sincé Series ranks at the top of energy-saving housing that uses superior insulation techniques and is certified "Class 4." The series also includes "Solar Control Air Regard" and "Original EcoCute" in its energy-saving equipment. Evaluations that came with the award said "The performance of the exterior panels and the balance of energy-saving appliances and equipment are excellent." The Special Awards are second only to the Grand Prize.



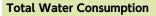
A Sincé Series home

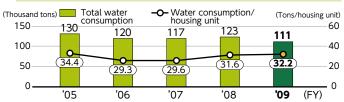
unit increase. The major reduction measures implemented were a water removal process to reduce the volume of waste sludge from the exterior wall panel painting booths, improvements in paint guns used for exterior wall panels to reduce sludge and reuse of gypsum scraps.



#### **Reduction in Water Consumption**

In FY2009, Toyota was able to reduce water use by 12,000 tons from the previous fiscal year, however, reduction in overall production resulted in an increase of per-unit water use over the previous fiscal year of 0.6 tons. Water consumption was reduced mainly by re-examining water treatment management at treatment plants and reducing the amount of water for diluting liquid retrieved from the exterior wall panel painting process.



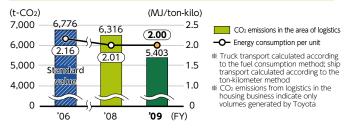


#### [Measures in Transportation Fields]

#### **Reduction of Energy Consumption in Logistics**

In FY2006, in accordance with the revised Energy Saving Act, Toyota measured the amount of energy consumed in transportation operations. Toyota then devised a CO2-reduction plan aimed at reducing those FY2006 figures to standard levels. In FY2009, energy use per unit measured 2.00MJ/ton-kilo (7.4% reduction from FY2006) and CO2 emissions were 5,403 tons-CO2. A major program to reduce energy consumption was driver instruction sessions that used the digital tachometers now installed in virtually every truck to teach eco-driving techniques.

### CO2 Emissions in the Area of Logistics in Response to the revised Energy Saving Act



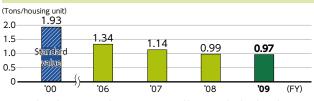
#### [Initiatives at Construction Sites]

#### Promotion of Zero Emissions at New Home Construction Sites

Toyota pressed forward with its Toyota Home Zero Emission project that aims to reduce landfill waste to zero (not including incinerated ash). As initiatives to recycling, waste generated on the building site is now separated into seven classifications. Further, Toyota is working on developing ways to recycle glass and ceramic scraps, waste plastic, and other recyclables; strengthening control processes through introduction of an electronic manifest, and active preferential treatment to sales companies that make zero emissions declarations. As a result, 12 sales companies achieved zero emissions by FY2009. Toyota programs now under way assume zero emissions in FY2010. In FY2009, per-unit waste reduced to 0.97 tons, 50% reduction less than FY2000.

\*Zero emissions: Reducing landfill waste excluding incinerated ash to zero

#### **Results of Waste Reduction Measures at Construction Sites**



\*Data is based on average of 1,110 average-sized house randomly selected in Japan.

#### Toyota's Housing Business Environmental Action Plan 2010 and Results of Initiatives in FY2009

Action Guideline	Item	2010 Environmental Scenario	FY2009 Result	s
		• By the and of EV2010, all buildings constructed will exceed the next-generation	Next-generation energy-saving standards achievement rate	93.5%
	Product and technology	<ul> <li>By the end of FY2010, all buildings constructed will exceed the next-generation, energy-saving performance standards</li> <li>The use of energy-conserving and energy-creating devices such as the EcoCute (a heat-pump hot-water supply unit) and photovoltaic power generators will be actively promoted</li> </ul>	EcoCute installation rate	62.2%
Realization of	development	hot-water supply unit) and photovoltaic power generators will be actively promoted	Solar power generators installation rate	24.0%
Factor 4: Achievement of	Establishment of CO2 emissions	• FY2010 total CO <sub>2</sub> emissions: 2% reduction from the FY2000 level 7,837 tons (3 housing works) $\rightarrow$ 7,692t	Total CO <sub>2</sub> emissions (compared to FY2000)	7,558 tons (3.6% reduction)
both fulfilling living for customers and	goals for production plants	• FY2010 CO <sub>2</sub> emissions per housing unit produced: 32% reduction from the FY2000 level 2.63 tons/housing unit (average of 3 housing works) $\rightarrow$ 1.77 tons/housing unit	CO <sub>2</sub> emissions per housing unit produced (compared to FY2000)	2.19 tons/housing unit (16% reduction)
environmental friendliness for	Establishment of goals for	• FY2010 total volume of materials discarded: 9% reduction from the FY2000 level 3,823 tons (3 housing works) $\rightarrow$ 3,481 tons	Total volume of materials discarded (compared to FY2000)	3,152 tons (18% reduction)
the earth	măterials discarded	• FY2010 volume of materials discarded per housing unit produced: 37% reduction from the FY2000 level 1.28 tons/housing unit (average of 3 housing works) $\rightarrow$ 0.80 tons/housing unit	Volume of materials discarded per housing unit produced (compared to FY2000)	0.92 tons/housing unit (28% reduction)
	Transportation         • FY2010 energy consumption per ton-kilo: 4% reduction from the FY2006 level 2.16 MJ/ton-kilo → 2.07 MJ/ton-kilo		Energy consumption per ton-kilo (compared to FY2006)	2.00 MJ/ton-kilos (7.4% reduction)
	Construction sites	• FY2010 zero emissions at construction sites for new homes (zero landfill waste excluding fly ash)	Action by sales companies: zero emissions a	chieved by 12 companies

Note: The goals for materials discarded have been modified due to transfer of production from a supplier \* The environmental action plan after FY2011 will be formulated in accordance with business integration in October 2010.

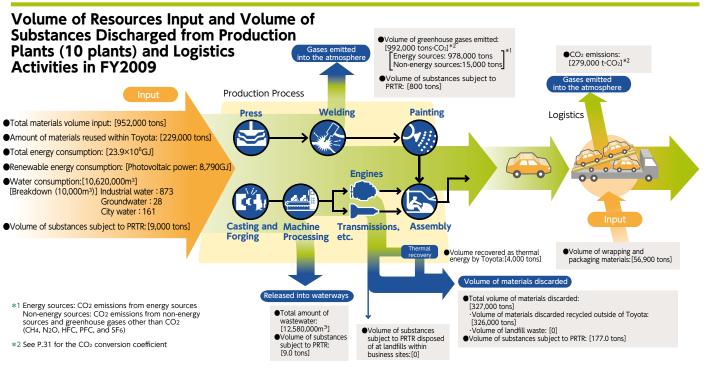
#### Status of Major Environmental Data for FY2009

Area	ltem	Key ind	icator (unit)	FY1990	FY1995	FY2007	FY2008	FY2009	Related pages in this report
	Exhaust gases	Percentage of total production 25% lower than 2000 gasoline			0.4% (14)				
		Percentage of total production 50% lower than 2000 gasoline							
		Percentage of total production 75% lower than 2000 gasoline	that achieves emission levels standards (No. of models)						38
		Percentage of total production 50% lower than 2005 gasoline				13.9% (54)	12.9% (39)	6.7% (35)	
t		Percentage of total production 75% lower than 2005 gasoline			85.7% (109)	87.1% (119)	93.3% (126)		
Product	Clean-energy	Number of units sold	[units]			85,268	98,137	347,698	27
P_	vehicles	Electric ve	hicles [units]			0	0	0	
		Hybrid vel	icles [units]			85,127	98,005	347,518	
		CNG vehi	les [units]			141	132	180	
	Fuel	Fuel	703~827kg	17.6	17.6				
			828~1,015kg			20.9	21.1	21.7	
	,	Average fuel	1,016 ~1,265kg	12.3 (average)	12.3 (average)	18.3	18.7	18.5	
		efficiency by weight	1,266 ~1,515kg	(average)	(average)	14.2	14.6	24.2	26
		category [km/L] 1,516 ~1,765kg			12.3	12.5	13.5	20	
		(Gasoline-powered passenger vehicle) (Note1)	1,766~2,015kg	8.5	8.0	10.1	11.5	12.0	
		passenger venicle) (voici)	2,016~2,265kg	(average)	(average)	10.0	9.1	10.3	
			2,266kg ~			8.2	7.9	8.6	
	CO2 <sup>(Note 2)</sup>	Total emissions volume	[calculated in CO <sub>2</sub> equivalent in 10 thousand tons/year]	212 (Note 4)	211	158	134	122	29
Production		Emissions volume per sales unit [calculated in CO <sub>2</sub> equivalent ir tons/100 million yen/year]		29.1 (Note 4)	31.2	13.1	14.5	14.2	25
rodu	Substances of VOC emissions volume p		ody area [g/m <sup>2</sup> ]			26	24	23	38
		Discharge volume of PRTR su	bstances [thousand tons/year]	—		1.6	1.1	0.9	37
	Waste <sup>(Note 3)</sup>	Volume of incineration waste	generated [thousand tons/year]	62	41	6.4	5.0	2.0	_
Recycling	Recycling rate	Vehicle recycling/recovery ra	te [%]			96	97	97	33

Note 1: The fuel efficiency figures for FY1990 were calculated by converting the figures obtained in the Japanese 10 to the 10-15 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



#### Environmental Data for New and Fully Changed Models (Passenger Vehicles) in Japan (FY2009)

	-		-						
	Name	RX450h	Wish	Prius	HS250h	Land Cruiser Prado	Mark X	SAI	Passo
Specifications	Vehicle model	DAA-GYL15W	DBA-ZGE20G	DAA-ZVW30	DAA-ANF10	CBA-GRJ151W	DBA-GRX130	DAA-AZK10	DBA-KGC30
	Engine model	2GR-FXE	2ZR-FAE	2ZR-FXE	2AZ-FXE	1GR-FE	4GR-FSE	2AZ-FXE	1KR-FE
	Transmission	*1	CVT	*1	<b>%</b> 1	5AT	6AT	*1	CVT
Start of sales		Apr. 2009	Apr. 2009	May 2009	Jul. 2009	Sept. 2009	Oct. 2009	Oct. 2009	Feb. 2010
Greenhouse gases	Amount of HFC134-a used (g) as air conditioning refrigerant	600	440	470	470	550	430	470	350
Fuel efficiency	CO2 emissions (g/km) (calculated from 10-15 Japanese test mode fuel efficiency values)	123	142	61	101	283	179	101	103
Tuet eniciency	Fuel efficiency (10-15 Japanese test mode) (km/L) (Figure reviewed by Ministry of Land, Infrastructure, Transport and Tourism)	18.8	16.4	38	23	8.2	13	23	22.5
External	Regulation figures for acceleration noise (dB-A)	76	76	76	76	76	76	76	76
vehicle noise	Specification figures for acceleration noise (dB-A)	75	75	74	73	75	75	73	73
Exhaust emission levels (2005	75% lower than standard levels (SU-LEV)	****	****	****	****	-	****	****	****
Exhaust Emissions Standards) (Note1)	50% lower than standard levels (U-LEV)	-	-	-	_	***	-	_	-
Substances of	Lead (compared to FY96)								
concern used	Mercury	JAMA goals achieved							
in parts	Cadmium Hexavalent chromium	achieveu							
	Parts that use easy-to	Bumpers and	Rumpers and						
	recycle materials (TSOP)	interior parts			interior parts				
Recycling	Natural materials	○(Kenaf)	_	0	0	_	0	0	_
Recyculty	Use of recycled resins	0	0	0	0	-	0	0	0
	Soundproofing material made from recycled shredder residue (RSPP)	_	0	0	0	0	0	0	-

#### Status of ISO 14001 Certification

In FY2009, there was no change in the number of production companies in Japan that had acquired ISO 14001 certification. Acquisition of certification was also expanded mainly to overseas new dealers and service shops in Argentina, India, Thailand and other countries. The number of Toyota bases that acquired certification increased by approximately 60, bringing the cumulative total in 16 countries to over 1,000.

#### Number of Companies in Japan and Overseas that Have Acquired ISO Certification

	Production companies	Production /Sales companies	Sales companies/ Other types of businesses
Japan	34	-	21
Overseas	32	10	23

\*1. Electronically controlled continuously variable transmission

ℜIn principle, the data above relates to the best-selling grade of each vehicle model Note 1: Refer to the chart below for levels of emission gases from passenger vehicles Exhaust Emissions Levels for Gasoline-powered Passenger Vehicles (2005 Standards)

*New mode Regulated substances	Regulation value	50% lower than 2005 standards (ನ್ನಡ್ಡನ್ನ)	75% lower than 2005 standards (යුයුස්
Carbon monoxide CO(g/km)	1.15	←	←
NMHC (g/km)	0.05	0.025	0.013
NOx(g/km)	0.05	0.025	0.013

%New mode: (10-15 mode measured value)  $\times$  0.88+ (11 mode measured value)  $\times$  0.12

#### **Continued Reporting**

Due to space limitations, some features included in the Sustainability Report 2009 could not be included in this year's report. Major developments in these areas are reported below.

	Area	Page no. in 2009 report	Details	Current status	
Appendix	Continued Reporting	47	Status of corrective measures related to asbestos (identified in new areas)	The initially planned measures regarding equipment were completed at the end of FY2007 New areas were, however, identified as a result of further surveys and plans call for corrective measures to be completed by the end of FY2010	
прренал	Continued Reporting		Continued Global Expansion of Eco-Factory Activities	In FY2009, Eco-Factory activities were conducted at 5 plants in Europe, Asia Oceania, Middle East and China	

### **Environmental Awards (FY2009)**

Organization	Award title	Award for	
The Energy Conservation Center, Japan (ECCJ)	FY2009 Energy Conservation Grand Prize Organization Category Industry Field Energy Conservation Center Chairman's Prize	Joint action by related divisions to effectively use cogeneration for engine equipment and in the manufacturing group	
14th Inverse Manufacturing System Symposium executive committee (Sponsors: City of Nagoya, Nagoya Urban	The 14th Recycling-based Monozukuri Symposium Chunichi Shimbun Award	Reduction of CO <sub>2</sub> emissions by developing simple-slim equipment that utilizes "clockwork mechanisms" and "low propulsion transport" for machinery-produced automotive parts	
Industries Promotion Corporation, Nagoya Chamber of Commerce & Industry etc.)	The 14th Recycling-based Monozukuri Symposium Integrated Organization Japan Science and Technology Agency JST Innovation Plaza Tokai Director General Award	Reduction of CO <sub>2</sub> emissions by changing from cupola dissolution to low frequency induction dissolution furnaces in a self-developed zinc removal system	
Urban Green Space Development Foundation	Minister of Land, Infrastructure, Transport and Tourism Award in the the 29th Green City Awards	Highly evaluated joint efforts by community and employees on greening plants such as tree planting toward the realization of "a plant that fully utilizes natural resources while operating in harmony with the natural environment" in sustainable plant activities of Tsutsumi Plant	
Organization for Landscape and Urban Green Technology Development	Minister of Land, Infrastructure, Transport and Tourism Award in the the 8th rooftop, wall and special area greenery technology contest	High evaluations received for the realization of expressive green wall at commercial establishment Tressa Yokohama, at relatively low costs, as a new plan to expand greenery	
Society of Automotive Engineers of Japan	FY2009 Technological Development Award	Development of advanced fuel cell hybrid system that offers increased cruising distance and superior sub-freezing temperature starting performance	
Society of Automotive Engineers of Japan	FY2009 Technological Contribution Award	Contributions to automotive technology and society across the board on automobile such as safety, environment and information	

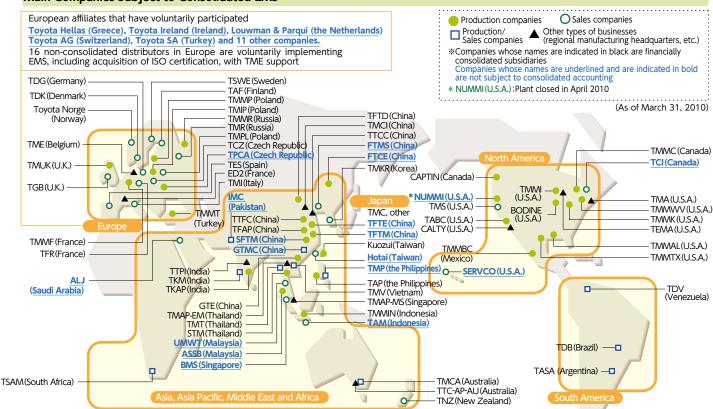
#### Scope of Companies Subject to Consolidated EMS

Toyota's consolidated EMS covers a total of 578 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: ① 170 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 6 organizations from other types of businesses, including academic institutions and cooperative societies; ④ 351 subsidiaries that are financially consolidated and under the indirect control of TMC (managed via consolidated subsidiaries).

#### Main Companies Subject to Consolidated EMS

#### **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; reduce environmental impact, make social contributions, and carry out environmental communication in line with the nature of business. In FY2006 begin quantitative management of environmental impact such as CO<sub>2</sub> emissions during logistics activities 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 Environmental Management System (EMS) in Japan (alphabetical order) (EMS=Environmental Management System)

		Sales Companies	Other Businesses			
Group 1 -Consolidated subsidiaries -Automotive production companies, and others -Toyota secondary companies	Group 2 -Companies not subject to consolidated accounting Main parts manufacturers -Body manufacturers, etc.	Group 3 ·Consolidated subsidiaries ·Parts manufacturers	Group 4 ·Consolidated subsidiaries ·Various other products production companies	Group 5 -Companies not subject to consolidated accounting -Parts manufacturers	Toyota Home Tokyo Co., Ltd. Toyota Tokyo Parts Distributor Co., Ltd. Toyota Tokyo Rental & Leasing Co., Ltd. Tokyo Toyopet Motor Sales Co., Ltd.	Aichi Rikuun Co. Tacti Corporation Toyofuji Shipping Co., Ltd. Toyota Central R&D Labs, Inc. Toyota Enterprises Inc. Toyota Modellista International Corporation
Central Motor Co., Ltd. Daihatsu Motor Co., Ltd. Gifu Auto Body Industry Co., Ltd. Hino Motors, Ltd. Kanto Auto Works, Ltd. Toyota Auto Body Co., Ltd. Toyota Motor Hokkaido, Inc. Toyota Motor Hokkaido, Inc. Toyota Motor Tohoku, Inc.	Aichi Steel Corporation Aisan Industry Co. Ltd. Aisin AI Co., Ltd. Aisin AW Co., Ltd. Aisin Takaoka Co., Ltd. Aisin Takaoka Co., Ltd. Denso Corporation JTEKT Corporation Tokal Rika Co., Ltd. Toyota Industries Corporation Toyota Industries Corporation Toyota Boshoku Corporation	Cataler Corporation Chuo Precision Industrial Co., Ltd. Kyoho Machine Works, Ltd. %Panasonic EV Energy Co., Ltd. Yutaka Seimitsu Kogyo, Ltd.	Admatechs Co., Ltd. Japan Chemical Industries Co., Ltd. Shintec Hozumi Co., Ltd. Toyota Turbine and Systems Inc.	FTS Co., Ltd. Taiho Kogyo Co., Ltd. Toyoda Iron Works Trinity Industrial Corporation	and others Total of 36 companies	Toyota Technocraft Co. Toyota Transportation, and others Total of 58 companies %Includes 6 companies that are not subject to consolidated accounting
All-Toyota Production Environment Conference Members		All-Toyota Proc	duction Environment M	eeting Members		

\*The 34 companies listed in Groups 1 to 5 above (excluding Toyota Tsusho Corporation) are included in the calculation scope for global production environment data (pages 31 and 35) and Japanese production environment data (pages 35 and 37). The information on CO<sub>2</sub> emissions volumes and waste volumes on pages 31 and 35 includes the 34 companies above and Toyota sub-subsidiaries.
 \*The name of Panasonic EV Energy Co., Ltd. was changed to Prime Earth EV Energy in June 2010.

### **Environmental Accounting**

#### **Basic Policy**

Environmental accounting at Toyota is based on a classification of environmental costs into "environmental investments"\*1 and "maintenance costs."\*2 Toyota also calculates economic effects and eco-efficiency. For details on the effects of measures to reduce environmental impact, please see "Status of Major Environmental Data for FY2009" on page 50.

- \*1 Environmental investments: Environmental costs whose effects are judged to extend
- \*2 Maintenance costs: Environmental costs other than environmental investments

#### Environmental Costs in FY2009

Total environmental costs in FY2009 were 215.5 billion yen, a decrease of 40.4 billion yen from the previous fiscal year and accounts for 2.5% of net sales. The decrease was the result of research and development as well as plant and equipment investment in general.

#### **Economic Effects**

① Actual Effects (FY2009) Toyota calculates actual effects by adding savings, such as from "reduction in energy costs" achieved through energy conservation, to income, such as that from "sales of recyclable goods." Income from "sales of recyclable goods" decreased due to a drop in unit price. Customer Effects

Economic Effects (actual effects) (Unit: Billion yen)							
	FY 07	FY 08	FY 09	*FY2009 results of 6 body manufacturers*			
Reduction in energy costs	1.9	2.3	1.3	0.7			
Reduction in waste processing costs	0	Note 0.3	1.0	0			
Sales of recyclable goods	14.5	12.4	4.4	5.1			
Other (income from environment-related technologies, etc.)	0.7	0.7	0.6	0			
Total	17.1	15.7	7.3	5.8			

Total customer effects resulting

- -

from replacement by hybrid vehicles were 30.3 billion yen in Japan and 125.6 billion yen worldwide, and cumulative effects since the launch of the first-generation Prius in December 1997 were 180.0 billion yen (Japan) and 657.9 billion yen (worldwide).

#### <Actual Results of Environmental Expenses>

Act	ual	Results Based	on Toyota's Format		(Unit: Bi	llion yen)
Classifi- cation			FY07	FY08	FY09	
	Resea	rch and development		245.3	212.9	192.5
ents	Recyc	ling-related		1.2	1.2	1.0
Environmental investments		expenses (social contri cation, education & trai		2.3	2.6	1.7
, i	ent	Plant and	Prevention of global warming	2.6	2.1	1.4
ntal	equipment ht ※	equipment	Waste processing	0.5	0.3	0
me	d equ	investment primarily for environmental	Pollution prevention, etc	2.6	1.3	0.4
ron	Plant and ec	action		5.7	3.7	1.8
ľ.	Plar	Expenses for environmer plant and equipment inv	19.6	19.7	6.3	
		Subtotal for environme	ental investments	274.1	240.1	203.3
		Waste processing		2.7	2.4	2.1
ţ	Exper	nses related to	Wastewater treatment	0.4	0.4	0.4
costs	enviro	onmental measures	Atmospheric pollution and odor abatement	1.2	1.1	0.8
G			Global environmental preservation	0.6	0.6	0.9
Maintenance	Awar	eness-building	Advertising, public relations, etc.	4.3	(Note) 5.2	5.9
nte	Profes	ssional environmental staff	Personnel	2.3	2.3	1.9
Mai			Vehicle recalls	0	3.5	0
	Environmental restoration Soil and groundwater remediation		0.3	0.3	0.2	
	Subtotal for maintenance costs				15.8	12.2
		To (As a percenta	285.9 (2.4%)	255.9 (2.8%)	215.5 (2.5%)	

\*\*Depreciation expenses of investments in plant and equipment are not included in these costs Reference: FY2009 Total R&D expense: 607.6 billion yen. FY2009 Total capital expenditure: 146.3 billion yen (Note) Figures in the past have been revised due to an error in calculation

#### **Customer Effects Calculation Method for Japan:**

(10,000 km\*1/gasoline-powered vehicle's fuel consumption\*2 - 10,000 km/hybrid vehicle's fuel consumption\*2) x 125 yen\*3 x FY2009 hybrid vehicle sales volume

\*1 Average annual distance traveled by passenger cars according to the Japanese Ministry of Land, Infrastructure, Transport and Tourism's "Automobile Transportation Statistics" \*2 10-15 Japanese test mode fuel consumption converted into actual fuel consumption \*3 National average gasoline price (including consumption tax) in FY2009, according to the Oil Information Center in Japan

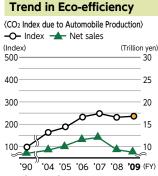
#### **Eco-efficiency**

Toyota calculates eco-efficiency using the formula below and monitors the results in the form of the eco-efficiency index. CO2 emissions volume and the volume of waste generated by the Production Group were used to determine the environmental impact starting with data from FY1990.

Over 19 years until FY2009, the CO2 index had increased by about 140%, and the waste index by approximately 340%. In the future, Toyota will continue to pursue production that minimizes environmental impact and to enhance eco-efficiency.

**Eco-efficiency Formula** 

Eco-efficiency = Net sales / Environmental impact





(Unit: Billion yen)

\*The "CO2 index" means the ratio of net sales to the volume of CO2 emissions, with a value of 100 assigned to the FY1990 level

#### FY2009 Actual Results Based on the Ministry of the Environment's Format

6 body Tovota Classification manufacturers \*\* Invest-Cost Cost 0.1 1.2 0.3 2.2 1 Pollution prevention ② Global environmental preservation (1) Business area 7.9 0.9 1.3 0.4 costs 0 1.0 1.9 ③ Resource circulation 2.1 (2) Upstream/ Amount allocated by recycling-related industry 0 1.0 0 downstream 0.4 organizations costs Environmental advertisements environmental report publication, professiona environmental staff, etc. (3) Administration 9.2 0 2.0 costs nal (4) Research and R&D for reducing substances of concern 192.5 1.0 32.4 development costs Contribution to (5) Social activity 0.3 0 0 environmental preservation costs organizations, etc (6) Environmental Soil and groundwater remediation, etc. 0.2 0 remediation costs 0.1 0.3 8.1 207.4 3.6 39.6 Total 215.5 43.2

%6 Body manufacturers: Kanto Auto Works. Daihatsu Motor. Toyota Auto Body. Hino Motors, Toyota Motor Kyushu, and Central Motor (Calculations made on the basis of standards used by each company)

#### (Figures for environmental accounting by overseas affiliates)

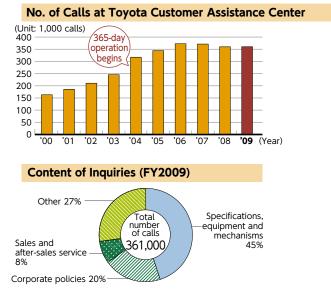
•TMT (Thailand): Environmental costs: 335 million yen; economic effects: 133 million yen •Kuozui Motors (Taiwan): Environmental costs: 441 million yen; economic effects: 14 million yen

# Embracing 'Customer First' and 'Genchi Genbutsu' Philosophies to Regain Trust and Correct Apparent Deviations

During the recent period of recalls relating to user safety and comfort, Toyota was not always able to fully live up to customer expectations, despite its strong "Customer First" tradition. In recognition of this fact, the company will thoroughly recommit itself to the "Customer First" ideal and the underlying genchi genbutsu philosophy for putting it into practice. Activities in every sector, from Development Design to Procurement, Production, and Servicing, will be reviewed for full compliance with our drive to orient our business to the customer's perspective.

#### The Customer Assistance Center Sets an Example for 'Customer First' in Products and in the Marketplace

The Customer Assistance Center was formed in 1982 to respond to customers' questions and complaints and to gather consumer opinions and requests that could be integrated into the company's product and service planning. With such services as toll-free dialing, a 24-hour catalog desk and 365-day operation, it has played key roles in establishing a framework for improving customer convenience. The Center has made continued efforts not only to provide swift, sure and friendly responses, but also to improve the way Toyota ascertain consumer needs as we address customer questions and complaints. During the recent series of recalls, we listened closely to customers' concerns and, in cooperation with dealers, made a concerted effort to provide satisfactory responses. In accordance with the customerperspective initiative, a deliberate effort has been made to treat the received opinions as potentially useful input in the company's efforts to manufacture safe and reliable products. Toyota's products are the very foundation of its customer care. To the company, customers' selection of the product, their purchases and their satisfaction are vitally important. From this perspective as well, the company must continue to take a more customer-oriented approach to product creation, and conscientiously consider each of the 350,000plus comments a year it receives from customers.



#### **Addressing Recall-related Inquiries**

Since the recent recall issues occurred in sequence, calls with inquiries and complaints increased, resulting in a triple increase roughly in February 2010. The contact window, the Customer Assistance Center, was reinforced with additional manpower for phone consulting, which quickly relayed customer concerns to relevant departments along with the number of calls received each day. Specifically, typical comments were "I am worried as a brake problem directly relates to safety" and "Tell me about symptoms of the failure more specifically." Q&A lists for consumers and dealers, respectively, were immediately created and distributed as part of strengthened initiative based on the customer needs. Also, the center gleaned consumer opinions toward the company's apology message posted in media advertisement and on the corporate website at the time the recalls were carried out, generating suggestions in terms of how the company should provide information to customers. In May, internally defined as Customer Month, the importance of customer-oriented product safety and changes in customer perspectives were emphasized in daily work in order to ensure the "Customer First" policy.



#### **Enhancing Customer Safety Enlightenment**

In Japan, the Safety Guide Book was published based on the content of inquiries to the Customer Assistance Center. Distributed to new vehicle customers, the book offers a range of information to help ensure safe vehicle use.



Column

### Toyota ASCA Society Holds Recallrelated Internal Discussion Session

In order to recover customers' trust after the recent series of recall issues, Toyota ASCA\* Society carried out an internal discussion session in March 2010, where 32 members monitored actual "customers' voices" in response to relevant news reports, in sequence. The meeting provided sessions to verify the factual basis of developments, review the quality assurance systems in the United States as described by former residents of North America, brief attendees on the current status of Customer Assistance Center and so on after which a group discussion was held. Attendees suggested strategy resolutions including "Foster a corporate culture that reports the worst news first," "Re-examine the term 'Customer Perspective' itself" and "Create opportunities for employees to listen to live customers' voices." They resolved to further advance the initiatives addressed in the meeting in such a way as to make the

strategies clear to consumers. Their participation in "Meeting to Read the Sustainability Report" was newly added to the FY2010 agenda.



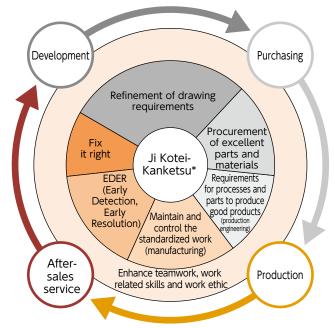
A scene of group discussion

\* Toyota Advisory Specialist for Consumer's Affairs (ASCA) Society is an organization consisting of Toyota employees who are certified as Advisory Specialist for Consumer's Affairs (government-certified qualification). The group was organized to help the company improve its customer-oriented practices.

### **Quality Improvement Activities by Field**

Quality is achieved through the integration of Development, Design, Procurement, Production and After-sales Service. Each is indispensable in the delivery of satisfactory quality to customers. In response to the recent series of recalls, it is essential that all sectors of the company refresh their awareness of quality issues, cooperate more closely with one another and commit themselves fully to making improvements.

#### Structure of Quality Improvement Activities in Customer First Program



\*Ji Kotei-Kanketsu: Built-in quality with ownership

#### Area of Development Ensuring a Prompt Response to Customers while Preventing Recurrences

Since 2006, constant efforts have been made in the development field to implement a quality improvement initiative that clearly defines "who, when and what" is essential in vehicle development. As part of the Customer First (CF) activities, the initiative is intended to establish a high level of quality, from vehicle development operations through to on-the-job practices of each worker. During the recent series of recall issues, however, it became clear that discipline had been neglected in the drive to orient development operations toward the customer's perspective. In the light of these circumstances, the development field is fully committed to pursuing sustainable CF initiatives, responding promptly to customer feedback and preventing the recurrence of problems. In addition, personnel will be directed to review structures and processes of the development field and optimize resource placement. One example of the initiatives underway is our recent upgrade of the function of the R&D Learning Center, designed to improve the skill-set of mid-career employees.

Please visit page 60 for details of the R&D Learning Center.

#### Purchasing An Integrated Approach to Promoting Built-in Quality with Suppliers

In April 2010, Toyota held "Quality Policy Presentation" with 530 members from 199 suppliers. We asked for their cooperation on Toyota programs formulated by the Special Committee for Global Quality and in the quality function policy.

We also explained five key activities to focus on during FY2010, including "Promote global quality assuarance activities for purchased parts by giving the top priority to the product safety."

Toyota will continue to work closely with suppliers to ensure built-in quality as we move to regain the trust of our customers.

#### Production Promoting Monozukuri with an Even More Thoroughgoing 'Customer's Perspective'

In the production area, to create products that better reflect their intended design, Toyota has made a concerted effort to establish "zero-defect conditions," such as temperature and speed optimization of machines. New inline measurements were introduced to reduce tolerance\* in production. Using these measurement data in the process, new steps were taken to achieve innovations through monozukuri, enhancing the thoroughgoing and exhaustive corrective measures that were taken to more effectively determine the causes of defects and eradicate those causes at the source. A "Team-Leader System" has been adopted that integrates the perspectives of both onsite technical guidance and human resource development. Established to promote conformity with standardized work practices and to detect problems, this new system has made gradual refinements to the Ji Kotei-Kanketsu, allowing for build-in quality into products through new initiatives including a joint effort between the engineering and design divisions to improve the work process right from the drawing phase. After having to face the recent series of recall and quality issues, Toyota learned once again that customers expect us to offer safe and reliable products produced from customers' perspectives so they can use them without worrying. Toyota will hold to the intention of its product's designs and start with the customer's perspective in addressing safety and confidence issues in monozukuri while creating products that meet customers' expectations.

\* Allowable difference between maximum and minimum sizes in a process of the production

#### After-sales Service Strengthening a Service Framework that Works from the Customer's Perspective

#### [Overseas Response]

Considering the overseas quality issue, we must accept the fact that the genchi genbutsu checking (field) function by TMC has lagged to some extent during our period of rapid growth, and we will send out more TMC field staff to instruct and nurture young Toyota people and local professionals. Further,

in order to gather information from as close to the genchi genbutsu as possible, we will expand our Product Quality Field Offices to seven in North America, six in China and seven in Europe. By the same token, we will strengthen our systems in other regions as well. Then, we will establish a new operation process to move quickly to remedy any quality issues identified by the technology offices.



The local staff at the opening of the New York service technology office

#### [Domestic Response]

Since 1977, Toyota and the Toyota National Dealers' Advisory Council have held discussions aimed at improving quality and enhancing product competitiveness. Toyota also operated techno-shops and recruited service staff, as well as training service staff to improve their skills and developing and adopting the most up-to-date equipment, machinery and tools. As an automaker, Toyota has worked with dealers to establish cordial relations and to raise customer confidence in Toyota products.

With the recent series of recall issues, dealers have been quick and efficient in accomplishing the required remedies, even to the point of rescheduling days off. Just one example: the recall action taken with the third-generation Prius was more than 90% complete by the end of March. In addition, we provided communications tools for providing a detailed explanation of the problems the ABS system, regenerative braking system and so on in order to restore our customers' trust, and distributed them in March. At the same time, Toyota offered a "Hybrid  $\mathcal{C}$  Service" that supplied technological remedies, responses, and products that only Toyota can do.

In order to learn and put into action lessons from the recent issues, we must see things from our customers' perspective and move forward toward rebuilding their trust. Specifically, we must quickly recognize the concerns of customers or dealers, strengthen our ability and systems for taking complete action to improve quality and revise our product development process to reflect customer perspectives in terms of product quality and performance.

#### Column

### Tokyo Toyopet Makes Customer Confidence its Top Priority

For the current new Prius recall, Tokyo Toyopet Sales Co., Ltd., immediately moved to contact new Prius owners the moment news of the recall hit the newspapers. Some 5,725 new Prius sedans were subject to the recall. After the recall was announced, the ABS system computer program on all new Priuses was rewritten and every car was road-tested. By moving quickly and rescheduling days off, the recall action was 99% finished by the end of March. Customers sincerely appreciate swift, courteous dealer responses like this. The current series of issues has resulted in a host of countermeasures taken at the dealer level. For example, salespeople used to spend a lot of time explaining the high-tech features of new car navigation systems when delivering the car, but in light of the current issues, explanations of the ABS system

and other basic performance features related to the car's ability to "move, stop and turn" take up much more time. Also, the salespeople realized anew the importance of carefully explaining every possible situation, saying, "If this kind of thing happens, here's how you should take care of it," or "Something like this could possibly happen." Then President Akio Kamiya ordered the preparation of a Safety Book to provide information on our vehicles' basic performance characteristics, which the salespeople use in their explanations to help customers drive with a feeling of safety and peace of mind. Customers have told Toyota Toyopet that they "Appreciated the way their dealer handled the recall," while others have been more severe toward Toyota, saying, "I don't feel good about the way the dealer reacted when I said the brakes felt funny. I wish they'd put more thought into customers' confidence."



Rewriting the ABS program on a customer's Prius

#### **Examples of Overseas Initiatives**

### Responding to the Recall Issue Based on 'Quality, Customer First'

#### U.S.A.: Toyota Motor Sales U.S.A., Inc. (TMS)

On January 21, 2010, TMS announced that, effective January 26, it was recalling eight models in the U.S. market, a total of 2.3 million units. The following day, calls to the TMS Customer Experience Center (CEC) increased 3,000% above the normal rate. To deal with this unprecedented challenge, TMS associates volunteered their time to talk directly with individual customers and address their concerns. Once the recall plan was announced, TMS's CEC advisors faced the difficult task of providing enough of the steel reinforcement bars to dealers so they could make the necessary repairs to the approximately 2.3 million vehicles that were recalled. Within 24 hours, TMS shipped out bars overnight to 908 dealer locations using an express delivery service.

Most dealers around the country added staff to ensure the accelerator repair could be completed within 45 minutes. Although the wait was relatively short for customers, dealers were going out of their way to make the experience an

enjoyable one. Many dealers offered various services for customers in their service lounges in addition to being on hand to answer any questions. Some service associates even used an actual accelerator pedal kit to present a "show and tell" for customers who wanted to know more about the repair.

Thanks to such dealers' efforts, one customer wrote a thank-you letter saying, "In spite of the increased traffic of phone calls and walk-in traffic with questions regarding the recall, they never failed to give me their complete, undivided attention. The service adviser remained concerned and courteous with me throughout our interactions and worked to ensure that I was inconvenienced as little as possible."

TMS always makes every effort to prevent reoccurrence of such incidents to restore our customers trust, and will maintain efforts to further increase quality.



CEC staff explains the accelerator pedal issue to a customer, showing the actual part involved in the recall.

### Universal Design (UD)

#### RX, HS250h and SAI Equipped with an Interactively Developed Remote Touch that 'Emphasizes Customer Opinions'

It is important that the vehicles our diverse customers use are easy to use by men and women of all ages. Toyota works towards "building people-friendly automobiles," developing easy-to-use vehicles based on the characteristics and movement of each part of the human body, while giving consideration to such things as how customers in every region and country will use them. Universal design based on ergonomics is a part of that, and we have carried out product development while paying close attention to ease of use and visibility according to users and situations, utilizing a "user interactive development" method in which the developers themselves listen directly to the voice of the customer. In recent years, based on this interactive development, a Remote Touch system tested by an evaluation panel of 101 users recruited publicly has been featured in the RX, HS250h and SAI. The Remote Touch allows the display to be placed higher and further away, enabling remote fingertip control of the navigation system, etc. without having to look at one's hands, achiev-

ing outstanding comfort and safety by reducing visibility issues while driving (amount of line-of-sight movement and changes in focus). Customers have praised it, saying such things as, "The display is easy to see and controlling it is enjoyable," and "It's very handy when you get used to it."



The HS250h interior design born from innovations in usability and visibility

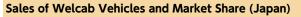
# Filling out the Lineup of Welcabs Help People to Move Comfortably

In recent years, the realization of a truly fulfilling society has been sought, where people with disabilities and the elderly can freely participate in society. With a philosophy of "providing comfortable freedom of movement to all people" as a response to that demand, Toyota has worked towards the development and popularization of the assisted-mobility vehicle, Welcab. In order to respond to the diversifying needs in assisted-mobility vehicles, we have filled out our lineup mainly through a development division dedicated to our Welcab assisted mobility vehicles, and in 2009, we expanded to a total of 30 models with 64 types, including a nursing care version used by caregivers to transport disabled persons, and a self-operated version that disabled persons themselves can drive. The nursing care version, which has sold the most, is a wheelchair accessible Hiace/Regius Ace with a remote controlled swing-arm lift that enables a person to board the vehicle while remaining in a wheelchair, and Toyota has received feedback from customers such as, "The time getting in and out is

quick, and because there is little vibration, I feel confident." Also, the company is endorsing the establishment of "Welcab Stations" in Toyota dealerships nationwide, and set up in a total of 104 dealers with 181 outlets (as of the end of March 2010).



Wheelchair accessible Hiace/Regius Ace





### Partner Robot

#### Development towards Commercialization of Partner Robots and Creation of a Social Environment and Safety Standards that Will Enable Their Coexistence with People

In the midst of such major societal fluctuations as an aging society with a low birth rate and changes in population dynamics, the need for robot development is rising. With the philosophy of contributing to the world and to its people by enriching society through manufacturing, Toyota marries cutting-edge technology from various disciplines including the automotive and IT industries in the development of partner robots with the goal of practical use at an early stage in the decade after 2010.

Intelligence and kindness take center stage in the Partner Robot concept, which is predicted on contributions to people and society. Specifically, Toyota is aiming for practical use in four areas: the support of personal mobility, nursing and medical care, domestic duties and manufacturing. The personal mobility robot Winglet is a small, lightweight personal EV that is the next generation in sustainable mobility friendly to people, society and the environment. Through inverted two-wheel control technology, a person can easily move by shifting his or her weight, and it can be used comfortably and safely by children, adults and even people with limited disabilities healthy or with walking problems. Since 2008, trials have been held at airports and industrial facilities in parallel with development. Toyota is also carrying out evaluations of its marketability in moving seamlessly indoors and out, as well as its practicality in supporting such work as security operations. To bring about a society where partner robots coexist with people, one important topic is the building of a societal foundation that includes a legal system, infrastructure and policies. To this end, Toyota actively promotes the collaboration of industry, government and education, both domestically (the Ministry of Economy, Trade and Industry's Robot Business Robot Practical Application Project and the Promotion Council of NEDO's Assisted Living Project) as well as on an international scale (ISO international conference for the planning of international safety standards for service robots). Toyota hopes to encourage the review of necessary related programs for robot prolifecation, the examination of certification programs and institutions and

the preparation of a societal foundation for promotional policies.



Scenes from the Winglet test drive at MEGA WEB

### All Toyota's 300,000 Employees Acting as the Responsible Party, Raising Their Own Individual Quality of Work and Regaining the Trust of the Customers

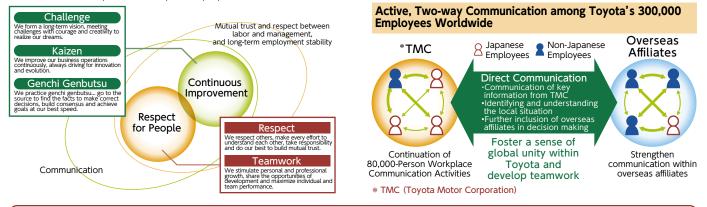
From the beginning, Toyota has had "Continuous Improvement" and "Respect for People" as its pillars, and as its moral foundation the Toyota Way summarized in the five keywords, "Challenge," "Kaizen," "Genchi Genbutsu," "Respect" and "Teamwork." Now, with quality issues related to safety and confidence as an opportunity, each and every Toyota employee will take a moment to reexamine the Toyota Way, and to reinforce human resource development plans such as global communication quality, putting themselves in the customer's shoes to restore their trust. In addition and as always Toyota will continue to steadily promote efforts related to employee safety and health, such as physical fitness and ongoing diversity.

#### Sharing the Toyota Way

Stability in the lives of employees, and opportunities for self-realization and growth as well as corporate development are interdependent and all find their foundations in mutual trust and respect between labor and management, long-term employment stability and communication. Based on this, the Toyota Way 2001 is supported by the two main pillars of "Continuous Improvement" and "Respect for People" and can be summed up in the five key terms — challenge, kaizen, genchi genbutsu, respect and teamwork. "Continuous Improvement" implies that all employees must not let themselves become complacent about the status quo, but put forth their best ideas and efforts to seek greater added-value. In accordance with the second principle, "Respect for People," Toyota respects all stakeholders and believes that the success of its business is created by individual efforts and growth. These two values have been expanded to Toyota employees worldwide.

#### Strengthening Teamwork by Expanding '300,000 Person Communication Activities' with the Aim of Speeding up Transmission of Global Information

The domestic "80,000 Person Workplace Communication Activities" that raised workplace capabilities through communication improvements was promoted and expanded from 2009 as the "300,000 Person Communication Activities" by Global Toyota. While each business unit works to revitalize communication, Toyota will promote information sharing with such things as Japanese and English notation on the company intranet, and English translation and delivery of top management messages and company newsletters. Toyota aims for the further reinforcement of domestic and global teamwork and a stronger sense of unity.



#### Column

### 'Our Attitude' Published and Distributed to Always Return Us to Toyota's 'Origins'

In order to contribute to society through building cars, Toyota has from its inception had a Toyota Way of working and way of taking part in society that has been cultivated and handed down.

Today, as Toyota itself undergoes major transformation, and in order to give even greater importance to the Toyota Way of putting the customer first and genchi genbutsu that are the Toyota's origins, we have compiled the exemplary virtues and actions in work as "Our Attitude" consisting of a total of 10 items.\* This was distributed to all employees in April 2010, and each employee is striving to keep these in mind and put them into practice on a daily basis.

\* Customer First, Challenge, Kaizen, Genchi Genbutsu, Shitsujitsu Goken (We spend money responsibly and with careful consideration. We perform all jobs with sincerity), Teamwork, Ownership and Responsibility, Humility and Gratitude, Integrity, We Love Toyota.



Illustration from the Customer First page (excerpt) Breakdown repairs on a Model G1 truck in 1936. The cause of the breakdown was determined with genchi genbutsu and led to changes in design and improvements in quality.

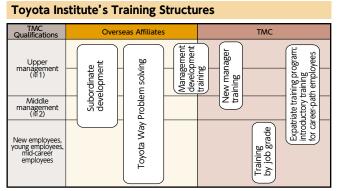
### **Human Resource Development**

The basis for human resource development is putting the Toyota Way into practice. Toyota is working to develop human resources by seizing times of adversity as opportunities to learn, planning greater enhancement and reinforcement of educational programs based on the five Toyota Way keywords, and on-the-job training (OJT) essential to the progress and succession of building excellent products.

Also, Toyota is placing greater importance on quality within each education program, with consideration for quality issues related to safety.

#### The Educational System of the Toyota Institute

The Toyota Institute (TI), with its mission of "human resource development that puts the Toyota Way into practice," is expanding work methods (know-how for problem solving, mentoring, etc.) into the business units in each country around the world to carry out the Toyota Way, which should be shared among all Toyota personnel throughout the world.



%1 Upper management: manager class

%2 Middle management: assistant manager class

# Expanding Education Programs at the R&D Learning Center into Mid-Level Engineering

Improvements in engineers' inherent qualifications is always vital in ensuring automobile quality and performance. The R&D Learning Center was established in 2006 with the objective of, ① laying the groundwork for developing appealing products, and ② maintaining and improving high Toyota quality (customer first). The training system for new engineers was reviewed, and training was carried out over about two months time, targeting development engineers from Toyota, TTDC\* and overseas business units. In 2009, approximately 1,000 people received training in 42 courses.

Also in FY2009, as new engineers training preparations were essentially complete, Toyota began systematizing engineer training targeting mid-level engineers (from their third year in the company to newly appointed assistant managers). Examining the sufficiencies and deficiencies of current mid-level training, we have begun working on enhancing and strengthening training in FY2010 centered on quality related matters. In order to increase the quality of human resource

development through OJT in the workplace, leveling up mid-level engineers is indispensable. To do that, Toyota will carry out training that goes back to the principles. As one example, it established a Design Review (DR) workshop that has the top engineers from each division as instructors. Targeting assistant managers with two or three years of experience, it is set up with eight fields, such as body, chassis, evaluation and electronic technologies. Our goal is to make it so the knowledge and skills the students learn enable them to tackle

workplace problems on their own. Also, Toyota will be strengthening operation of performance indicators to measure the results of training.

#### \*TTDC

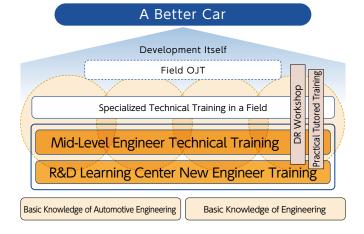
Toyota Technical Development Corp. A partner company in Toyota's

development and design fields



Electronic technology field at the DR workshop

Systematization of Mid-Level Engineer Technical Training



#### A Return to Fundamentals in Human Resource Development Planning for Production/Manufacturing Fields

Towards the early development of diverse and highly skilled human resources, the "Pro-WIN" training program was begun in 2007, targeting 4,500 engineers in the production and manufacturing fields, and Toyota has been promoting planned and continuous human resource development. In FY2009, activities were begun for a return to the fundamentals of "enabling individual thinking and action with genchi genbutsu." From FY2010, Toyota will work toward enhancing and strengthening education program policies.



## Promoting TQM Globally to Improve the Quality of Products and Services

Total Quality Management (TQM) is an activity in which every employee participates in order to: ① Ensure customer-first work practices, ② Learn the principles of quality control and ③ Refine corporate strength through actions. TQM Promotion Division is currently engaged in promoting resolution, providing every employee working in Toyota's global organization with ideas for self-directed action to improve product and service quality, motivate people and revitalize the corporate structure and applying the philosophies of "Customer First," "Continuous Kaizen" and "Total Participation."

Specific activities include a MAST<sup>\*1</sup> Training Course for newly promoted managers, a JKK<sup>\*2</sup> Training Course and an SQC Seminar that offers goal-setting and problem-solving techniques for both administrative and engineering staff. Particularly, QC circles are being proactively expanded in 44 overseas affiliates, and over 100,000 employees, or about 15,000 QC circles are engaged in improvement of immediate problems.

At the same time, the TQM Promotion Division is engaging in communications initiatives and other activities designed to help raise the quality of products and services. During the Month of Quality, November 2009, the 44th TQM Convention was attended by some 4,600 people from group companies and dealers. At the convention, President Akio Toyoda spoke about his commitment to "Customer First," and attendees' comments were such as "I learned how to go back to basics." In May 2010, at a seminar for the Toyota Group's newly appointed board of directors, the themes were Quality and Human Resources and there was an active exchange of opinions. In July 2010, the 6th Ji Kotei-Kanketsu Exhibition and the 24th SQC Kaizen Presentations

were held for the benefit of all employees, and both events reminded participants of the importance of TQM.



\*1 MAST: Management-quality Advancement System by Toyota-group

Toyota-group \*2 JKK: Ji Kotei-Kanketsu Built-in quality with ownership

TQM Convention "Kaizen Case Study Presentation"

#### Workshop Structure - TQM Promotion Division

Oh is stive	Target	Training Courses					
Objective	Personnel	Shop Floor Workers	Administrative Staff				
Improve Management	Executives	TQM Training Course	e for Toyota Group Officers				
Quality: Define ideal manager and set attendee assignments; practice management tasks	GMs, Deputy GMs	New Senior Caretaker Training Seminar	Ji Kotei-Kanketsu Newly Appointed Division GM Seminar Training Manager				
that activate both personnel and the organization.	SCs•GMs	New Caretaker Training Seminar	Course Soikufu Training Seminar (for newly promoted)				
Improve Quality of Individual and Team Work Practices: Define ideal work process, understand basics and methods of problem solving with a team, then practice improving the quality of products and services as well as the attendee's skills and motivation.	Shop Floor and Administ- rative employees	Solkulu Training Seminar (Shop Floor) QC Circle Training Seminar by Hierarchy and Role Solkulu New Employee Training Seminar	(Engineering) SQC Seminar by Skill Level and Sector (Administrative) Data Utilization Seminar Seminar				
Other: Assist expatriates to improve their management quality.	Expatriates (Coordinators)	Coordinator Training Seminar	MAST Training Course				

### **Respect for Diversity**

For global companies engaged in business around the world, it is important to promote a diverse range of human resources activities while raising the skills of each individual employee. By fostering human resources that include a diverse range of individuals and making this a part of its strategy, Toyota is establishing a corporate culture with abundant vitality.

The focus of respect for diversity varies in different countries and regions; nevertheless, Toyota strives to be a company with a working environment that promotes self-realization while respecting diversity of values and ideas among its employees.

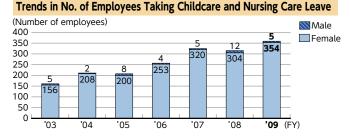
#### Promoting Measures to Create a Workplace Worthy of Vigor and Enthusiasm

To create a more diverse and vibrant workplace by solving corporate issues faced by female employees, Toyota promotes measures applying to three pillars — "Helping employees balance work with childcare," "supporting employees' career development" and "reforming workplace environments and attitudes." In FY2008, Toyota revised its system of flexible working hours for employees with children, and it held a Gender Diversity Management Forum for workplace supervisors. In FY2009, a women's technical career exchange forum that targeted about 1,000 women who work in manufacturing was held at each Toyota plant. The forums introduced role models and helped establish networks among women that went beyond the workplace, thus fostered awareness of the ability to build satisfying careers.

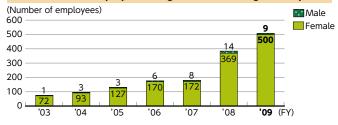
Toyota also established a new system of flexible working hours for nursing care and held lectures and experience-oriented nursing care seminars to help to understand the viewpoints of both the caregivers and those being cared for. In addition, it added more nursing care services and introduced a financing system to help employees balance work with caregiving. Toyota's newly established and revised systems

help balance work with caregiving, as required by the revised Act on the Welfare of Workers Who Take Care of Children or Other Family Members Including Child Care and Family Care Leave that went into effect in June 2010.

#### Full-time Toyota Employees (on an unconsolidated basis) \*\*As of Mar. 31, 2010 Male Female Total Number o full-time employee: 62,928 7,033 69,961 38.5 30.0 37.6 Average age Average service year 17.4 9.7 16.6



#### Trends in No. of Employees Using Flexible Working Hours System



#### Sustainability Report 2010 | Social Aspects Relations with Employees

#### Pregnancy, Childbirth and Care Related Benefits for Employees

Pregnancy Child Birth Age 1 Age 2 Age 3 4th Gran					
	Maternity Leave Plan (for Standing Employees) 6-week Maternity Leave	8-week Post-			
	(14-week maternity leave for multiple pregnancies)	natal Leave			
		Nursing Time (30 min. x 2/day)			
		Parental Leave			
		Exemption of Nonscheduled Work			
		Limitation of Overtime Work (up to 24 h/month and 150h/year)			
		Exemption from Late-night Work			
		Shorter Working Hours (at flextime workplaces)			
		Flextime System with no core time			
		Child nursing leave (5 days for employees with a child up to 4th grade and up to 10 days for multiple children)			
		Partial Work at Home (allowed after 3:00 p.m.)			
	:				

% A regular employee is entitled to take two years of nursing care leave (or four years of moratorium including an accumulation of periods subject to Working Hour Reduction, Core Time Exemption and Partial Work at Home).

#### Key Initiatives Taken Over the Past 5 Years

Year	Support for Balancing Work with Childcare	Support for Career Building	
2005		<ul> <li>Introduction of Professional Career Re-employment Program</li> </ul>	
2006	<ul> <li>Establishment of on-site childcare facility (Toyota Childcare Bubu Park)</li> <li>"Maternity leave" Extended (applicable to female employees who work standing up)</li> <li>"Keep working while raising children" handbook distributed</li> </ul>		
2007	<ul> <li>BR Career and Life Design Department established</li> <li>T-wave Sodatete Net intranet established</li> </ul>		
		<ul> <li>System to promote less vertical decision-making structures</li> <li>New HR system for assistant staff established</li> </ul>	
2008	Career Support Book for supervisors distributed     Gender Diversity Management Forum for supervisors hosted		
	<ul> <li>Flexible working hour system partially revised</li> </ul>		
2009		<ul> <li>Networking Event for Female Shop Floor Worker hosted</li> </ul>	

#### Column

### Networking Event for 1,000 Female Shop Floor Workers at Manufacturing Sites

A networking session for female shop floor workers presented positive role models, including a female team leader who exhibited excellence at work based on knowledge and experience she obtained on the job, as well as a woman who struck a good balance between work and childrearing by eliciting cooperation from her family and co-workers. Group discussions followed in which participants exchanged factual information and shared their past experiences, future expectations and present challenges, raising their awareness of important issues.

Participants responded with positive comments such as "It was beneficial to hear someone else discuss the same concerns and experiences I had, since I have few female colleagues at my workplace,"

"It was a good opportunity to review my future goals and examine communication in the workplace" and "I have found good future advisors I normally would not have had access to." The challenges reported by female employees during the session will be reflected in new corporate policies that will present them with additional opportunities to prove their skills.



Lively group discussions

#### Column

### Tokyo Toyopet Offers a Better Environment for Female Employees

Tokyo Toyopet Motor Sales Co., Ltd. conducted a program to address the employment of women, as part of a broader effort to improve diversity within the organization. Since 2005, seven objectives were advocated as essential to an employeefriendly working environment and necessary to offer customers excellent service. The program included efforts to revisit the company's maternity and childcare programs and policies and to review regulations about shortening employee work hours accordingly. In pursuit of these goals, the HR department's Positive Action Group conducted opinion exchange meetings with female employees and, based on their feedback requesting shorter work hours, revised the relevant benefits to offer more extensive coverage for employees with a child in the fourth grade or younger. In the future, further action will be taken to improve the work environment, including striking a better balance between work and home life.

#### Increasing Employment Opportunities for Disabled People

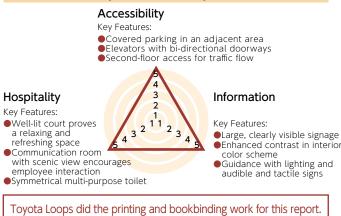
Established to increase employment opportunities for people with disabilities — within Toyota and among society in general — Toyota Loops Corporation started operation in FY2009 and has applied for authorization as a special-purpose subsidiary. The company name "Loops" represents Toyota's desire to bring more people "inside the loop," linking disabled people more closely with society and with workplace communities. The corporate symbol includes the Japanese syllable "Wa," which can refer to three Japanese characters signifying "comfort," "the circle of joy" and "amusing talk." These three principles encapsulate the company's goal to create an organization that employees, family members and local communities can all be proud of. Toyota Loops responds to Toyota's internal printing and bookbinding needs and handles mail, including postal collection, delivery and sorting. The headquarters building was constructed after intensive research into exemplary existing facilities and thorough preparatory work to achieve a universal design that includes "All 5" barrier-free architecture with themes of "accessibility," "hospitality" and "information." Further, inheriting Toyota's DNA, Toyota Loops have worked on activities to make proposals of creative ingenuity for more human-friendly workplaces and a smoother workflow. The company began to host site tours and had approximately 400 visitors during the six-month period following the building's completion. To help support and encourage local initiatives, Toyota Loops formed the "Heartful Net Chubu" in January 2010, joining with businesses and institutions in the Chubu area to help promote the employment of disabled individuals. Some 20 organizations attended the first meeting in April.

In FY2009, the company hired 28 severely disabled and mentally disabled people, and Toyota hired 18 people during the annual recruitment period, and 10 people for its year-round recruitment. As of the end of June 2010, the employment ratio was 2.07% when the special purpose subsidiary is included (1.98% for Toyota only).



A handcart modified for ease of use by wheelchair-utilizing employees

#### Barrier-Free Concept Excels on Every Score



#### Job Placement Program for Over-sixties

Following the 1991 introduction of the Internal Re-employment Program for Retired Professionals, an Optional Re-employment Application System was launched in 2001 that outplaces applicants to external affiliates and other sites, providing a framework for helping over-sixties to continue working, at either an external or internal workplace. Programs were modified to their present state according to the revised Law on Stabilization of Employment of Older Persons that came into effect in FY2006, to expand re-employment opportunities. A review was started at the same time to refine policies on shortening work hours, in response to growing diversity in job preferences and so on.

Column

#### Career Design Forum (CDF) Commences

Beginning in 2009, managers around the age of 50 have been given the opportunity to explore career options (including occupational directions and life choices) and design a fulfilling plan for the future. Participants in the CDF will get expert advice and take part in small-group discussions to help clarify their career goals.

#### **Employment of Fixed-term Contract Employees**

Toyota, where non-fulltime employees (including short-term employees, seconded employees of other companies, temporary employees and fixed-term contract employees) work, is doing all it can as a private business, particularly in the case of fixed-term contract, to ensure stable employment. Recruitment must be balanced with contract renewals and the fulfillment of other obligations. As part of a program Toyota has developed to revitalize and energize its workforce, a limited-contract employee who has worked for Toyota for at least six months and has a recommendation from the workplace will be eligible to take an examination for regular employment as a full-time employee. Examinations are offered during the second and third years of contract employment.

See pages 66 and 67 for further information on approaches to fixed-term contract employment.

### **Safety and Health**

Ensuring employee safety and health is one of Toyota's most important business activities and is a universal value that is unaffected by the times. Continuing on from FY2009, "building a culture that enables all employees/team members to think for themselves and practice safety and health" is the top priority of Toyota's global policy in FY2010 as well, with each workplace serving as the individual driving force behind a company-wide effort. Upon assuming the position of General Safety and Health Supervisor in 1957, Honorary Advisor Eiji Toyoda explained his basic stance on safety and health: "Safe Work is 'the door' to all work. Let us pass through this door." This sentiment is preserved today as part of Toyota's Basic Philosophy for Safety and Health, which expresses the fervent belief that no employee/team member should be put at risk of suffering a work-related accident. With this basic philosophy regarding safety always in mind, Toyota is striving to create a dynamic working environment that is conducive to the mental and physical well-being of employees.

Toyota is also taking measures to promote good employee health, including lifestyle improvement programs and wellness activities.

#### Basic Philosophy for Safety and Health

Safe work Reliable work Skilled work Safe work is "the door" to all work. Let us pass through this door.

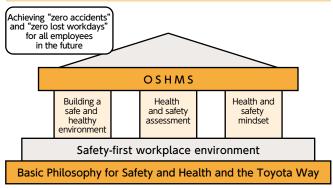
#### Promotion of 3-pronged Approach to Health and Safety

FY2009 represented the second year of Toyota's approach to cultivating a safety-oriented culture. The three pillars of this approach are: improving the system for an "independent" or "interdependent" type safety culture where the workplace takes initiative for safety and health and promotes relevant activities; promoting the Occupational Safety and Health Management System (OSHMS) continuously and thoroughly; and creating a structure for global implementation. As a result of the efforts put forward by each workplace, total accidents decreased by roughly 16% over the previous year, the number of lost workday cases decreased by 35% and the number of STOP6-type accidents decreased by 14%.

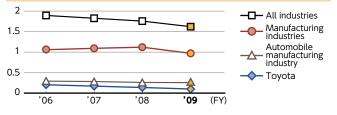
With the aim of improving Toyota's approach to safety and health and strengthening a safety- and health-oriented culture, basic rule observance and interdependent bottom-up initiatives involving the whole company will be implemented in FY2010 so all employees at every workplace realize the risks present and take independent preventive action. This pursuit of establishing an interdependent safety culture at all workplaces within the Toyota Group is meant to foster a goal of "achieving and maintaining zero industrial accidents in the future" at each workplace, thereby strengthening the threepillar approach to health and safety.

#### Sustainability Report 2010 | Social Aspects Relations with Employees

## Conceptualization of Safety and Health Culture Created by All Toyota Employees



Industrial Accident Frequency (frequency rate of lost workday cases)



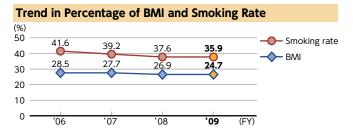
Source: All industries/Manufacturing industries/Automobile manufacturing industry (Ministry of Health, Labour and Welfare, 2009 survey on industrial accidents)

### **Building Good Health**

In FY2009, Toyota conducted BIP2 activities\*1 and efforts to improve metabolic syndrome (a condition when a person has abdominal obesity and abnormal status in two or more of the following areas: blood sugar, blood pressure and blood lipids) with a priority on workplace activities that promote good health practices. As a continuation of initiatives undertaken following FY2008, measures included health enhancement activities conducted at individual worksites by setting individual targets using "healthy PDCA" (Plan, Do, Check, and Act), a health campaign in June and October 2009, and dietary education activities by improving the company cafeteria menus, BMI<sup>2</sup> (body mass index), and smoking cessation clinics. Furthermore in FY2009, those at risk of metabolic syndrome were individually provided with individual guidance. As a result of these activities and the development of better environments, improvements were seen both in employee BMI and smoking rates, though the numerical goals were not achieved.

In FY2010, Toyota will strengthen improvement of workplacefocused health initiatives and workplace support aimed at all employees, which center on physical exercise in the workplace.

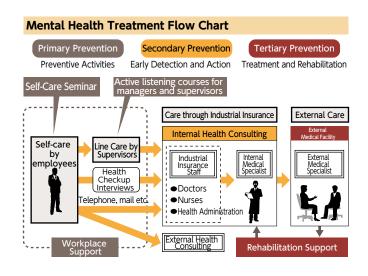
- \*1 BIP2 activity Behavior Change Innovation Program, a lifestyle improvement campaign with targets set for BMI and smoking rate
- \*2 BMI(Body Mass Index) A measure of body fat determined by dividing body mass (kg) by height (m) squared. A BMI of 22.0 is normal, and Toyota has set a goal of 24.2 or less.



#### **Bolstering Mental Health Care**

Toyota holds active listening courses on a regular basis for managers and supervisors to raise their awareness of mental health issues and offer expertise on how mental health care can help prevent problems in the workplace. In addition, a seminar on stress-relief methods was held for newly promoted Team Leaders and mid-level professionals. Other programs are under way to help provide early detection and health checks for mental health issues, including follow-up monitoring for individuals who have had a transfer or promotion or other career-changing event, and extra assistance for employees returning to the workplace from a leave. Information on mental health is accessible anytime from every workplace via the Toyota intranet. FY2009 saw enhanced mental health care programs throughout the company, as doctors and nurses made visits to every workplace to respond to on-site requests, hold self-care seminars and perform other mental health care functions.

In FY2010, these preventive mental health care visits will be expanded, and voluntary on-site programs will be conducted to help raise awareness of the risks of untreated mental health issues.



#### Reinforcing the Health Management of Overseas Personnel

There are differences in the healthcare institutions available to overseas personnel depending on where they are working, and health support may differ from that available to employees in Japan. Since FY2007, affiliates have created physical examination planning sheets, followed up on achievement of plan and personnel who did not undergo physical exams, and successfully raised examination rates. Toyota also periodically assessed local healthcare conditions overseas and used the Internet to provide overseas employees with medical information.

From FY2008, the results of all employee physical examinations are assessed and medical advice is provided based on follow-up sheets from industrial physicians.

In FY2010, Toyota will provide all employees with health examinations and endeavor to understand healthcare systems in different regions by holding regular meetings.

#### **Examples of Overseas Initiatives**

### Promoting Ethics through Two-way Communication Thailand: Toyota Motor Thailand Co., Ltd. (TMT)

TMT has always insisted on the highest ethics in its business activities, and in 1998 the company introduced the first "Organizational Ethics Standards," establishing basic rules of conduct. The corporate ethics standards are the basic rules that corporations must observe as a part of society. Since then, the company has repeatedly revised the standards to meet economic and social changes, and started using a second edition called the "Toyota Code of Conduct." In 2007, TMT introduced the Ethics Promotion Office under the direct control of the president, in order to ensure ethical conduct in business operations. This is an important organization, assigned to prevent any behavior that violates the Toyota Code of Conduct. The office reports to the Corporate Ethics Committee, made up of general managers.

Building a more thorough awareness of the importance of ethical behavior in the workplace requires not only the code of conduct, but also two-way communication between the company and employees. This deepens mutual understanding, unites all employees and ensures strong corporate governance. Eventually it will bring success to the company.

In September 2009, TMT distributed a questionnaire about ethics in the workplace to see what employees thought about the issue, and 9,917 employees responded. The survey revealed some internal problems: for instance 36% of respondents did not understand the Toyota Code of Conduct and most of them were operating employees. This finding led us to focus on promoting ethics to the target group to improve their morale. In 2008-2009, TMT enhanced communication among departments

through programs creating a range of opportunities for two-way communication such as the "Sawasdee (means 'Hello' in Thai) TMT" campaign which consists of three activities: 1) Sawasdee TMT Newsletter, the monthly company newsletter, contains company status reports, activity news, interviews about different management experiences and other useful company information; 2) Sawasdee from the Top, a twice yearly two-way communication between the Vice President (Sub-division head) and management subordinates about company status, subdivision direction and Hoshin and setting the company direction; and 3) Sawasdee My Team, a quarterly two-way communication between General Managers (Department Heads) and their subordinates about the status situation, department direction and setting the company direction.

TMT will continually emphasise the importance ethics, and being part of Thai society, in other words, being a good corporate citizen.



"Sawasdee My Team" activities deepen two-way communication.

# Toyota Training School Cultivates Apprentices and Trainees

South Africa: Toyota South Africa Motors (Pty) Ltd (TSAM)

South Africa has experienced rapid growth thanks to abundant resources and rising incomes among middle-class black citizens after the demise of apartheid in 1994. However, it faces a range of difficult social issues such as a 24.3% jobless rate, a large income gap between whites and blacks, who account for 80% of the population, and an AIDS rate of 18% among people aged 18-49. The government has invested 5% to 6% of GDP to boost educational standards, but real progress will demand even more. In 2004, South Africa launched the Black Economic Empowerment (BEE) program to increase the economic potential of black people. As part of it, the government asks foreign companies to assist with technology development and support education for black people.

Currently, about 6,100 employees work at TSAM, which is the largest employer in South Africa. TSAM established an industrial training school at its plant site in 1979. TSAM's Technical Training School is already used as part of the BEE program. The school provides a seven-month basic course and a four-year course to prepare students for the national exam. There are 140 trainees currently in the Learnership Program and 170 in the four-year Apprenticeship Program. In the Learnership Program, trainees learn not only safety, mechanical assembly, basic electrical and electronic systems, welding, manual skills, and computer use including the Toyota Production System (TPS), but also about HIV and AIDS. Students in the four-year apprenticeship course are selected from graduates of the learnership program, and then study electrical and mechanical machinery maintenance to acquire their national artisan certificates.

Even after they complete the training course, the graduates who joined TSAM take an employee training program to thoroughly learn Toyota 4S — seiri (sort), seiton (straighten), seiso (sweep), seiketsu (sanitary) at the dojos. Each area has Plant Maintenance dojos that focus on plant-specific skills training required for that area. Other companies have recruited some of the skilled employees, but TSAM President & CEO Johan van Zyl says, "The BEE program perfectly reflects the challenges facing this nation. We cultivate people and create the future. People play a key role in TSAM's business. Now and in the future, TSAM continues to value smooth, sustainable relations with customers, suppliers, communities and employees."



Trainees learn basic mechanical assembly.

#### Column

### 2008-2009: Employment Initiatives in the Wake of Global Economic and Production Changes Making maximum efforts to provide stable employment in line with corporate principles and policies.

In 2008, the global financial crisis led to severe economic conditions in regions around the world. The financial crisis initiated by a surge in oil prices and exacerbated by the subsequent subprime loan crisis dealt a serious blow to the world economy and brought about a global recession. These economic conditions led to a rapid contraction of the automotive industry. As a result, Toyota was also forced to review its production plans in an effort to maintain stable operations while making every effort to protect the job security of its employees under these trying circumstances. Toyota addressed all possible adjustments to its operations, including adjusting tact times, limiting overtime work and reviewing shift schedules and workplace conditions. All of the measures taken were in line with Toyota's employment philosophy as set forth in the Basic Toyota Principles. Future actions will continue to reflect these principles.

# About the Basic Toyota Principles and Other Corporate Policies

#### Guiding Principles at Toyota

These principles offer an ideal for what Toyota must become. To ensure that we are abiding by these principles across our operations, and contributing to the sustainable development of society and the planet, they should be shared with and understood by all of our consolidated subsidiaries.

#### Toyota CSR Policy

An interpretation of the Guiding Principles at Toyota that takes into consideration of Toyota's relations with stakeholders, subsequent environmental changes and heightened societal interest in CSR. TMC has shared the statement with its consolidated subsidiaries and is taking other relevant.

#### The Toyota Way

A comprehensive overview of the values and business methods that all employees should embrace in order to carry out the Guiding Principles at Toyota throughout the company's global activities.

#### Toyota Code of Conduct

A summary of the basic guidelines that each of us must keep in mind as a discipline. It provides detailed explanations and examples of the actions and issues that we must be aware of when carrying out actual business activities (including in our jobs and daily business operations) and living in our global society.

#### **Positioning of CSR Policy**



### **Basic Employment Principles**

#### Excerpts from the Guiding Principles at Toyota

- 1. Honor the language and spirit of the law of every nation and undertake open and fair corporate activities to be a good corporate citizen of the world
- 5.Foster a corporate culture that enhances individual creativity and teamwork value, while honoring mutual trust and respect between labor and management

See page 12 for details of the Guilding Principles at Toyota.

#### Excerpt from the Toyota Code of Conduct

Chapter I. Through our communication and dialogue with the company, we (people working for Toyota) strive to build and share fundamental value of

"Mutual Trust and Mutual Responsibility." Toyota (Toyota Motor Corporation and its subsidiaries) endeavors to improve its business achievements so that Toyota can continue to provide employment and fair and stable working conditions for each of us. Simultaneously, Toyota promotes a work environment in which each of us can work in a harmonious and dynamic manner.

#### Excerpts from the Toyota CSR Policy

#### <Employees>

We support equal employment opportunities, diversity and inclusion for our employees and do not discriminate against them. (Guiding Principles 5)

<Employees>

We strive to provide fair working conditions and to maintain a safe and healthy working environment for all our employees. (Guiding Principles 5)

# Initiatives for Directly Employed Temporary Employees in Japan

The automotive industry is particularly affected by seasonal demand fluctuations and economic trends. That is why the hiring of a certain number of temporary employees has been a common practice across the industry for many years. While it is essential to handle personnel placement and contract renewals appropriately for contract employees, Toyota has gone to the greatest lengths possible to ensure stable employment and improve the employability of these workers.

At the completion of a contract, workers receive considerate treatment, including grants for return travel expenses, bonuses and rewards for fulfillment of services. As workers prepare to leave the company dormitory, their personal circumstances are taken into account. If the company recognizes a compelling reason, such as a waiting period for certification to receive unemployment benefits, workers may be allowed to postpone departure by a month, pursuant to a rule that went into effect December 2008. (No rent is charged for the extension period.) In an effort to improve workers' motivation and vitality, temporary employees who have worked more than six consecutive months have opportunities to become permanent employees. Since the end of March 2009, temporary employees have been offered skill-building courses in which they can earn national vocational qualifications.

#### **Overseas Employment Initiatives**

Toyota has made necessary production adjustments overseas, placing a priority on protecting job security. Initiatives included extended plant shutdowns, transferring personnel between plants, freezing new hires and limiting overtime work. The company has made continued efforts to save jobs during the slowdown, using the downtime to focus on kaizen activities and human resource development, transferring personnel between plants, freezing new hires and limiting overtime work.

At the same time, some manufacturing plants in North America, Europe, South Africa and other parts of the world introduced work sharing programs, compressing each individual's working hours and sharing the "saved" hours among multiple workers.

In addition, voluntary retirement programs were introduced to offer employees a more diverse range of options. These actions were taken in accordance with Toyota's pledge to make every effort to protect job security, while reflecting the mutual trust between workers and the employer and our commitment to abide by the labor laws and practices of each country, and our respect for the common labor practices and labor agreements of each country and each individual affiliate.

#### Time Management Measures Lead to Work Sharing, Business Improvement and Social Contributions

In February 2009, work-sharing programs were initiated for approximately 12,000 workers at 6 plants including Kentucky, Indiana, Texas and elsewhere in the United States.

Then Vice President Jim Wiseman said, "Our team members are our most valued resource. We made every effort to protect employment security through a philosophy of shared sacrifice. By retaining our team members' expertise and building their skills during that time, we not only improved plant operations, but helped position the company to come back stronger." In the U.S., non-production days were used for team member training, including skills development and process

improvements. As a result, hundreds of improvements were made in the areas of safety, efficiency and quality. The kaizen measures were designed to further improve the internal processes of each plant and refine product quality

and safety to ensure smooth start-ups on new production lines. To improve quality of life in local communities, employees also took part in social contribution activities including beautification and tree planting.



Classroom lecture on internal plant process improvement



Human resource development training



Planting trees

### Working More Closely with Business Partners and Returning to Basics of 'Emphasis on Quality' and 'Customer First'

Along with our "Customer First" principle, contributing to society through automobile manufacturing and monozukuri is a basic philosophy at Toyota. To address various issues that come up in the course of business in a spirit of cooperation, it is necessary to share these principles with our suppliers, overseas distributors, domestic dealers and other business partners. In addition to pursuing our normal CSR activities, Toyota is committed to securing higher customer satisfaction in all areas, in unified cooperation with its business partners in light of recent quality issues related to safety and confidence.

### **Collaboration with Suppliers**

Since its establishment, Toyota has sought to work closely with its suppliers in its manufacturing activities. In good times and bad, Toyota and its suppliers face the same issues together and Toyota has built strong and close relationships with them based on the need for mutual support and a harmonious society. As its business has expanded on a global scale, Toyota places even greater value on these close relationships, including relationships with new partners, as essential to its efforts to achieve higher customer satisfaction on every level.

#### **Toyota's Basic Purchasing Policies**

In order to ensure stable, long-term procurement of the best products at the lowest prices and in the most speedy and timely manner, Toyota believes that the most important task is the creation of relationships in which suppliers in various countries and regions and Toyota do business on an equal footing based on mutual respect, thus building firm bonds of trust and globally promoting mutual growth and development. Toyota's global purchasing activities are based on the following three basic policies: ① fair competition based on an open-door policy; ② mutual benefit based on mutual trust; and ③ contribution to local economic vitality through localization: good corporate citizenship.

# Development and Deployment of the Toyota Supplier CSR Guidelines

Toyota believes in the importance of collaboration with suppliers in CSR activities and, towards that end, issued the Toyota

Supplier CSR Guidelines in February 2009. Thus far, Toyota has held meetings in Japan to explain the guidelines to 1,100 suppliers and steadily roll out these guidelines for overseas suppliers as well.

TMC suppliers are asked to carry out their own independent CSR activities based on the Toyota Supplier CSR Guidelines, and expand their individual CSR policies and guidelines to their suppliers.



For details on Toyota's Basic Purchasing Policies as well as the Toyota Supplier CSR Guidelines, please visit the following Web site:

http://www.toyota.co.jp/en/csr/relationship/partners.html

# Holding CSR Study Meetings and Global Suppliers Convention

"Compliance with the laws and the spirit thereof" is a fundamental principle of CSR and forms the basis of our corporate activities. Thus, Toyota holds study meetings and briefings as needed, in collaboration with suppliers.

In 2009, CSR Study Meetings gathered some 340 suppliers to learn about such subjects as workplace safety, labor administration and export control management.

In February 2010, the Toyota Global Suppliers Convention was held with attendance of 740 executives from 94 overseas and 354 Japanese companies, and each attendee was asked to cooperate in pursuit of monozukuri, placing particular emphasis on "Quality First and Customer First."

#### Major CSR Study Meetings in FY2009

Date	Subject	Summary
May 2009	Labor Compliance	Legal points to remember under changing labor conditions
Sept. 2009	Workplace Safety	Safety compliance
Sept. 2009	Labor Compliance	Labor compliance and workplace management
Oct. 2009	Competition Laws (antitrust and subcontract laws)	Points to remember surrounding relevant regulations
Oct. 2009	Export Control Management	Overview of export control management and related points to remember



Top suppliers honored at the Global Suppliers Convention

#### Column

### Genchi Genbutsu Collaborations with Suppliers for Quality Improvement

Since 2006, Toyota has cooperated with suppliers in "Joint Manufacturing Activity with Suppliers" activities to improve working practices. After analyses to streamline operations by examining past quality improvement efforts, we established two objectives, namely, solving suppliers' problems and reducing in-process defects. As of May 2010, 27 suppliers have joined the activities. As an example, we collaborated with the Jtekt Corporation to make the built-in quality at the manufacturing process for an automatic trans-

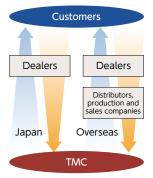
mission oil pump, optimizing the inspection criterion and methods. A year later, the defect rate was reduced to one-tenth of the previous level and the initiative is now being extended to other components.



Collaboration with Jtekt

### **Collaboration with Sales Networks**

The sales network is the point of direct application of Toyota's "Customer First" principle. Toyota and dealers work as one, linked by firm bonds of trust and based on close two-way communication, to enhance customer satisfaction and convey "Toyota Value" — a statement of shared values that are embodied in the superiority of Toyota products and services.



#### Relations with Dealers in Japan and Overseas

Within Japan, TMC has concluded contracts directly with approximately 290 dealers who operate 5,600 sales outlets including used car outlets. A fundamental principle for TMC is "Customer First, Dealer Second, Manufacturer Third." Based on the "Customer First" policy, Toyota believes that dealer success, which ultimately means the growth of Toyota, is achieved by enhancing support of dealer initiatives to improve customer satisfaction through the implementation of PDCA (Plan, Do, Check, and Act) from the perspective of meeting customer and dealer expectations.

Toyota's approximately 170 distributors and 8,000 dealers located overseas serve as its key partners in highlighting the appeal of Toyota vehicles to customers. In order to fully convey to customers the value of its products, Toyota engages in a variety of activities with its partners.

# Advancing Genchi Genbutsu Marketing with a Focus on Customer-centered Activities

There is a growing need for customer-oriented marketing and promotion activities in cooperation with the front line of sales. Two new businesses, Toyota Marketing Japan Co., Ltd. (TMJ) and Toyota Motor Sales & Marketing Co., Ltd. (TMSM), were established with this in mind and began operations in January 2010 with a common mission to implement the "Customer First" and "genchi genbutsu" principles to foster higher levels of professionalism and quick response to customers. Focused on advertising functions that had been overseen by Toyota's Japan Sales Operations Group, the newly organized TMJ executes advertising and promotion plans for the Japanese market. TMJ assumes the responsibilities for Toyota's sales strategy and product planning and development, and gathers information from a viewpoint of genchi genbutsu in order to appropriately detect product demand and needs among customers.

TMSM assumes the marketing support functions for overseas regions, which had previously been placed within Toyota's Japan Sales Operations Group, It works to support overseas distributors and establish a strong global brand image through actions to reinforce autonomous local marketing activities and optimize Toyota's global marketing efforts. TMSM also assumes the task of administrating and assisting TMJ, advertising agencies, MEGA WEB operation companies, shopping complex and auto mall planner/operators that have been acquired by Toyota as wholly owned subsidiaries.

#### **CSR** Promotion

In 2005, the Toyota National Dealers' Advisory Council (TNDAC) issued the Toyota National Dealers' Advisory Council CSR Guidelines. Dealers were asked to promote a three-pronged agenda including legal and regulatory compliance, environmental responses and social contribution activities. In FY2009, a lecture meeting about laws and regulations on energy conservation, specified commercial transactions and installment sales was held for some 400 top managers from dealers nationwide.

# Contributing to Communities through Activities to Create Car Fans

Toyota is working closely with dealers to offer new automotive lifestyles and services, communicating the multifaceted allure of cars to society. The "Doraibu Okoku (Mobility Festival)," a fun event hosted by Toyota to offer exciting driving experiences, was held in Ishikawa and Tochigi for FY2009 and in Kumamoto in May for FY2010. The event has taken place seven times since 2007 and attracted approximately 83,000 participants. Event organization expertise was shared with dealers nationwide and 33 of them have already assimilated parts of the content into their own events. On a similar note, the Prius Cup, a fuel-efficiency race organized in collaboration between dealers and Toyota, gave the public a chance to appreciate the fuel efficiency of hybrid vehicles firsthand. The Prius Cup has been held 10 times, drawing about 3,500 competitors from 260 dealers. Some dealers are now running contests with their own teams. In addition, a classroom-based "Gentaiken (formative experience) Program" offering automotive knowledge to elementary school students became so popular that some dealers started organizing it on their own. Gentaiken programs have been held at more than 90 elementary schools to date, including those hosted by the manufacturer. We will offer a broader range of programs like this, leveraging our expertise, knowledge and achievements to bring about positive change.

#### **Overseas Distributors Invited to New Prado** Product Marketing Workshop

A thorough understanding of the product and a personal conviction of its attractiveness result in more compelling sales. A New Prado Product Marketing Workshop that promoted the product's appealing characteristics was held in March 2009. 79 persons from 52 distributors participated in the workshop, where they listened to various technology presentations and took the New Prado for test drives both on and off the road. At the workshop, they received not only technical information, but also an understanding of core product values (attractiveness, joy), which enhanced their understanding of the product and sales policies. Marketing strategies were introduced and presentation materials that could be used as internal education and marketing tools were distributed, helping the participants to further understand the New Prado's advantages. Toyota also distributed a DVD of its appealing points and product information to nations whose distributors were unable to attend the workshop. Toyota will continue to

strive for further penetration of product knowledge and understanding, and will continue supporting dealer efforts to strengthen their sales promotion activities.



An offroad test drive

#### Column

### Briefing Sessions for Local Dealers in China Explain Safety, Quality Issues

Toyota's quality and recall issues, which started in the U.S., also affected dealers in China. For safety and confidence at the local level, Toyota sent engineers to China in April 2010 to present briefing sessions entitled "Toyota's Thinking on

Quality." The briefings were held at four venues and attended by about 360 companies. Relying on simple language and methodology that made the message clear to non-technical, the explanations included "Toyota's Basic Thinking on Quality Standards," "The Quality Issue in the United States," "Toyota's Thinking on Engineering" and "Safety Performance of Toyota Vehicles," and ended with "Moving Onward and Upward in the Quest for Even Better Quality and Safety." Toyota expressed its commitment to learn from the current quality issues, to reflect customers' voices even more quickly and to conduct even more intensive market research. Toyota promised to provide products that are designed and produced with "safety and quality" first. Finally, Toyota asked its dealers in A presentation scene from the seminar China for even stronger two-way communications with its dealers.



#### **Examples of Overseas Initiatives**

### Supporting Suppliers with TPS/QC Australia: Toyota Motor Corporation Australia Limited (TMCA)

Starting in 2008, the TMCA supplier development team has helped Hella Australia, a TMCA supplier of automotive lights, to improve productivity and profitability by introducing Toyota Way principles and the Toyota Production System. In March 2009, Hella launched a kaizen production line to supply lights for Camry, Aurion and Hybrid Camry models. Senator Kim Carr, Australian Minister for Innovation, Industry, Science and Research, welcomed the opening of Hella Australia's new production line and said the partnership between Toyota Motor Corporation Australia and Hella was a fine example of innovation, collaboration and investment in the future. Through this support, Hella consolidated three main processes across three different plants on their manufacturing site to improve material flow, reduce handling and lower inventory levels for Toyota's headlamps, rear and rear combination lamps.

Meanwhile, in 2008-09, TMCA's Vehicle Logistics Division partnered with its logistics suppliers to form five Quality Circles led by supplier Patrick Autocare. Each team focused on developing and implementing better ways to manage the areas of transit damage, lead time for imported vehicles, insurance processing turnaround times and so on. In March 2009, the teams presented their findings to TMCA and Patrick Autocare. The winner was the Quality Circle team that looked at the vehicle insurance process - the introduction of photo verification of damage sustained during transit. This has reduced the time needed to process many claims (from seven days to four).



The winning Quality Circle team

## Sustainability Report 2010 | Social Aspects Relations with Shareholders

# **Realizing Stable Growth**

Toyota's basic management principle is to benefit society through its business activities, while realizing stable growth founded on a long-term perspective. The three key components of Toyota's financial strategy are "growth," "efficiency" and "stability." Toyota will continue to implement forward-looking investments aimed at ensuring growth in the face of changing market conditions. From the viewpoint of efficiency, Toyota will step up its cost-reduction efforts and further enhance the flexibility and efficiency of its production. In terms of stability, Toyota realizes that it is essential to maintain adequate liquidity while anticipating mid- and long-term growth of the global automotive market, and will work to increase the efficiency of funding and improve cash flow.

# Enhancing Corporate Value through Long-term, Stable Growth

The three key components of Toyota's financial strategy are growth, efficiency and stability.

We believe that the balanced pursuit of these three priorities over the medium to long term will allow us to achieve steady and sustainable growth as well as increase corporate value.

# ① Growth: Sustainable growth through continuous forward-looking investments

We believe that automotive markets worldwide will grow over the medium to long term. As they expand, the center of market growth will shift toward fuel-efficient vehicles, such as hybrid vehicles and compact vehicles and toward resourcerich and emerging markets. We plan to invest actively in these areas to respond to structural shifts in demand and ensure long-term sustainable growth. Concurrently, we plan to continue accelerating measures to provide high-quality, affordable and attractive products that meet customers' needs in each country and region and to provide further support in the areas where we want to advance, namely, emerging markets and next-generation eco-cars.

# Efficiency: Improving profitability and capital efficiency

To meet ongoing demand for hybrid and compact vehicles, we aim to provide high-quality vehicles at affordable prices and to improve profitability through further cost reductions. We will also create a structure for efficient development, production and sales that can respond flexibly to changes in the external environment. In manufacturing, we will expand local production in high-growth emerging markets. On the other hand, in the developed countries such as Japan, the United States and Europe, we intend to revise our current product lineup to reflect changes in the market structure. We will also build a flexible and efficient production system that is resistant to foreign exchange fluctuations. Through the creation of a global and optimal supply system, we aim to realize a strong profit structure.

#### 3 Stability: Maintaining a solid financial base

We preserve a solid financial base by ensuring sufficient liquidity and stable shareholders' equity. Our sound financial position enables us to maintain our level of capital expenditures and investment in research and development even when the price of raw materials increases or there is drastic foreign exchange rate fluctuation. In view of anticipated medium- to long-term growth in automotive markets worldwide, we believe that maintaining adequate liquidity is essential for the implementation of forward-looking investment to improve products and develop next-generation technologies, as well as to establish a structure for production and sales in both the Japanese and overseas markets. We will continue to pursue further capital efficiency and improved cash flows.

#### **Dividends and Share Acquisitions**

We considers benefiting shareholders one of our top management priorities, and makes an effort to realize sustainable growth through ongoing structural improvements to enhance our corporate value. We strive to continue paying dividends while giving due consideration to factors such as the business results in each term, investment plans, and cash reserves.

To survive amid tough competition, we will utilize our internal funds for the early commercialization of nextgeneration technologies targeting safety and the environment. We will make customer safety and security our highest priority, along with initiatives that respond to the needs of customers in emerging markets. Accordingly, we declared an annual dividend payment of ¥45 per share for the fiscal year ended March 31, 2010.

Given the uncertain outlook for global financial conditions, we will put a priority on securing cash reserves. Accordingly, we did not repurchase our own shares in fiscal 2010, and we plan to forgo such repurchases for the foreseeable future.

We will continue striving to further improve profits and meet the expectations of our shareholders.

## Sustainability Report 2010 | Social Aspects Global Society/Local Communities (Initiatives for Improving Traffic Safety)

# Pursuing Dependable Safety and the Reduction of **Traffic Casualties**

In order to ensure the sound future development of a mobile society that relies on automobiles as a means of transportation, it is necessary to minimize their impact on the environment as well as traffic accidents, traffic congestion and other negative aspects. Toyota's basic stance on safety is to pursue dependable safety based on accident analysis. Toyota adopts a comprehensive approach to reducing traffic casualties and is advancing initiatives in the areas of active safety (which seeks to minimize the chances of an accident occurring) and passive safety (which seeks to minimize the damage or injuries sustained in an accident), as well as to educate and raise awareness of drivers, pedestrians and other members of the public regarding traffic safety, and create a safer traffic environment.

#### Initiatives to Improve Traffic Safety -Viewing People, Vehicles and the Traffic Environment as an Integrated Whole

To develop, verify and promote the widespread use of safety technologies based on investigations and analyses of the various types of accidents that are actually occurring in society, Toyota first analyzes the reasons for accidents and the causes of injuries using research data from studies regarding accidents and their impact on human bodies. Next, Toyota reproduces these accidents using various types of simulations, in order to develop preventive technologies. The developed technologies are then verified in actual vehicle tests. In addition, even after these technologies are commercialized, Toyota continues to investigate and analyze accidents.

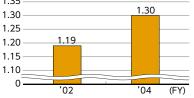
From a global perspective, nations with emerging automotive markets such as China and India are seeing an increase in traffic accidents accompanying the development of motorization. There are roughly 1.3 million traffic casualties worldwide, making it the ninth most common cause of death. Particularly in emerging economies, an inability to provide education and the lack of a traffic environment appropriate to the increased number of automobiles appears to be behind the increasing number of accidents.

Achieving the ultimate goal of completely eliminating traffic casualties will require more than just the development of safer vehicles. Education and awareness among drivers and pedestrians as well as traffic environment improvements must also advance in step with vehicle development.

Toyota's efforts to bringing about an affluent mobile society and to completely eliminate traffic casualties involves adopting a comprehensive approach that views people, vehicles and the traffic environment as an integrated whole.

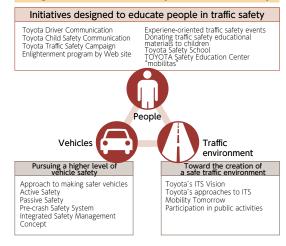
# Number of Traffic Casualties Worldwide





Source: WHO "Global Status Report on Road Safety"

#### Integrated Initiatives to Improve Traffic Safety



#### Safety: Basic Concept

1 Contribution to an affluent mobile society Toyota always focuses on people and on striving toward a mobile society without any traffic casualties in which people are able to travel comfortably with vehicles.

② Working together with society As a member of global society. Toyota strives to improve the traffic safety environment. Toyota is safety conscious and wants to cooperate with various groups, such as local and national governments.

#### ③ Development of safe vehicles

Taking accident analysis data into consideration, Toyota develops technologies for "Active safety" and "Passive safety" to lead the world, and protect and assist consumers.

See page 78 for more on Toyota's traffic safety education initiatives



Global Society/Local Communities (Initiatives for Improving Traffic Safety)

# Toyota's Approach to Safety Technology and Vehicle Development

## **Active Safety**

In vehicle development, Toyota's safety technology can be broadly classified as either active safety or passive safety. Passive safety seeks to reduce the extent of injuries sustained after a collision, while active safety seeks to reduce the likelihood that a crash will even occur at all. The basis for active safety is ensuring driving stability by detecting vehicular conditions that could lead to a collision, and assisting the driver in maneuvering to avoid an accident.

The first active safety technology developed was the Anti-lock Braking System (ABS), which was commercialized in 1971. Then in 1987, the Traction Control System (TRC), which keeps the drive wheels from slipping during acceleration, was introduced. In 1995, Vehicle Stability Control (VSC), which helps control lateral skid, was launched.

Toyota has also been continually working to further develop technologies to help eliminate factors that could potentially lead to vehicular instability. Examples of such technologies include the Night View system, which helps improve the driver's field of vision during nighttime driving; Adaptive Cruise Control (ACC)\*1 and Lane Keeping Assist (LKA)\*2, which help reduce the burden of driving; and the Pre-Crash Safety System (PCS), which detects potential collisions in advance and works to reduce their severity. Toyota will continue to seek greater advances and will use driving simulators and other resources in the development of ever-more innovative active safety technology.



Pre-crash Safety

Alerts the driver through such means as a warning buzzer, and performs braking assistance and automatic braking to reduce the severity of a collision when the vehicle determines that there is a high likelihood of one occurring with a vehicle or other obstacle ahead.



Driving Simulator Provides the closest experience to actual driving in order to safely analyze behavior such as sleeping-at-the-wheel and drunk driving when

passing through

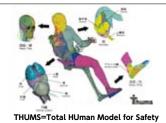
intersections and other situations. Used to estimate the effectiveness of different active safety features.

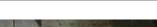
## **Passive Safety**

Toyota's basic thinking on passive safety is to minimize the extent of collision injuries by combining vehicle body structures that securely protect occupants during collisions and absorb the impact with equipment that provides effective protection to occupants.

Developing this sort of vehicle body structure and safety equipment requires both actual collision testing and computer simulation technology. In 1966, Toyota established its Safety Evaluation Department, which has now been an integral part of research and development for over 40 years. In that time Toyota's evaluation and measurement technology has made excellent progress, and the feedback it provides is reliably applied to product development. In 2003 a new Crash Test Laboratory was constructed at the Higashifuji Technical Center. At this all-weather facility a variety of collision testing and roll-over testing can be carried out indoors.

In 1995, Toyota incorporated offset collision tests something not common at the time—as part of its development aimed at improving dependable safety performance. The desire to pursue world top-level safety led Toyota to set the Global Outstanding Assessment (GOA) voluntary collision-safety goal and develop a collision-safety body structure. Furthermore, evaluation requirements and methods, such as compatibility performance intended for ensuring safety in the event of a collision between large and small vehicles, pedestrian protection, and whiplash injuryreduction capabilities, are added as required in line with the times so that Toyota vehicles are continually improving, enabling them to handle an ever-greater variety of accidents. Also, in order to understand how the human body sustains injuries, TMC and Toyota Central R&D Labs have developed human models known as THUMS (Total Human Model for Safety), which can simulate the effects of collisions and other impacts on the human body to a degree that cannot be measured with a crash-test dummy. These models are useful for anticipating where and how an actual human body would sustain injuries in an accident.







#### THUMS

Allows predictions about the extent of injuries to different parts of the body to a degree of precision unattainable with crash-test dummies. THUMS is currently being used in safety technology development such as the pedestrian-injurylessening body structure and Whiplash Injury Lessening (WIL) concept seats.

#### Offset Collision Tests

The offset collisions performed in the safety Crash Test Laboratory of the Higashifuji Technical Center allow precise collision point and speed testing to be carried out, enabling the testing of a variety of accident types, including high-speed collisions and rollovers.

#### \*1 Adaptive Cruise Control (ACC):

A system with enhanced recognition capabilities compared to the cruise control system in earlier vehicles. A radar sensor detects vehicles ahead and controls the accelerator and brakes to maintain a safe distance.

#### \*2 Lane Keeping Assist (LKA):

This system employs a camera to recognize the white traffic lane lines and applies electric power steering to assist the driver in keeping the correct driving lane.

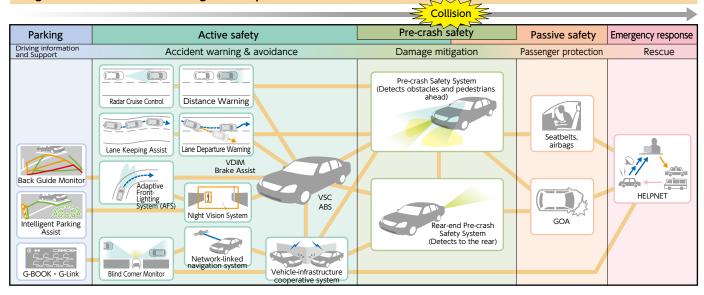
## Sustainability Report 2010 | Social Aspects Global Society/Local Communities (Initiatives for Improving Traffic Safety)

## The Integrated Safety Management Concept

Toyota's vision for the future of vehicle safety is embodied in the "Integrated Safety Management Concept." This concept seeks to integrate a vehicle's onboard safety technologies and systems to achieve an even higher level of safety, and to adopt systems that interact with the infrastructure and use information obtained from other nearby vehicles. The ultimate goal is to create vehicles that do not cause accidents.

Development of the Integrated Safety Management Concept involves the categorization of driving situations by the degree of accident risk and support for the driver at every stage of the safety spectrum, from parking to active safety, pre-crash safety, passive safety and emergency response. By more closely integrating these systems in the future, Toyota seeks to reduce the dangers related to driving as it pursues the goal to create "vehicles that do not cause accidents."

#### Integration of Individual Technologies and Systems



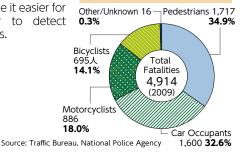
#### Column

# **Development of Automotive Safety Technologies to Protect Pedestrians**

During 2009, in Japan, 4,914 people died in traffic accidents, including 1,717 pedestrians — a figure exceeding the 1,600 automobile drivers or passengers who died. While passenger safety is an essential subject of study, the search for new methods of protecting pedestrians is just as crucial.

Toyota incorporates structures into the engine hood, fenders, bumpers and elsewhere to absorb impact in the event of a collision with head and legs of a pedestrian. Pre-crash active safety is enhanced by

millimeter-wave radar and a newly developed stereo camera, both of which make it easier for the driver to detect pedestrians.



Incidence of Road Fatalities 2009

#### Column

# ITS Technologies to Reduce Traffic Accidents through Closer Integration with Infrastructure

Safety technology and equipment are evolving at Toyota, where the latest Intelligent Transport Systems (ITS) technology is being applied in the development of active safety systems that integrate vehicles and infrastructure. This new development provides direct communication between the road and the vehicle, or between vehicles, to help drivers prevent accidents, and is scheduled for commercialization in cooperation with relevant public agencies and industrial sectors. When DSRC\* service began in FY2009, the Lexus LS was equipped for interactive data exchange with the infrastructure to enhance active safety on the freeway. The

Lexus LS system is intended to help prevent accidents by alerting the driver of the presence of a stopped vehicle or a traffic jam ahead in the driver's blind spot, or of a vehicle merging into traffic on an expressway.

\* DSRC Dedicated Short Range Communication



Global Society/Local Communities (Initiatives for Improving Traffic Safety)

# **Major Safety Technologies and Equipment**

#### [Active Safety] VSC Controls Skidding on Slippery Road Surfaces

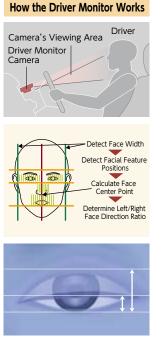
One of the accident-avoidance technologies designed to correct for driving errors and help secure a vehicle's stability, VSC\* helps drivers stay in control by helping to prevent skidding caused by factors like abrupt steering input and slippery road surfaces. When sensors detect skidding, VSC automatically optimizes the braking force acting upon each of the four wheels and the engine power sent to each driven wheel. For example, when a vehicle turns less than a driver intends (understeer) in a slippery corner, VSC works to reduce the power output and strengthen the braking force at the inside rear wheel. Contrarily, if the car starts to spin beyond the intended path due to sharp steering input (oversteer), more braking force is sent to the outside front wheel to reduce its spinning.

# How VSC Has Reduced Accidents

#### Pre-crash Safety System Reduces Crash Damage

The pre-crash safety system is an active mechanism safety designed to reduce collision damage. Pre-crash safety features, including the Pre-Crash Brake and Pre-Crash Seatbelt systems, are activated if the system determines that a collision is inevitable. The Driver Monitor Camera, one of the most advanced technologies, detects the direction of the driver's face, and whether the driver's eves are open, and alerts the driver with an early warning beep if it senses a possible collision. In addition, because of the greater risk posed by a driver taking longer to respond to the physical alert of the Warning Brake feature, the Pre-Crash Brake system automatically reduces the vehicle's speed.

\* Vehicle Stability Control (VSC)



Both upper and lower eyelid positions are detected to calculate each eye's opened and closed states.

#### [Passive Safety] Omnidirectional Body-Structure Compatibility: Mutual Safety in Collisions Between Vehicles of Different Weights

In pursuit of optimization of vehicle body structure, Toyota has developed an impact-absorbing body and reinforced cabin that has evolved in step with a compatibility concept<sup>\*1</sup> designed to help mutual safety in collisions between vehicles of different weights and heights. Toyota performs front, side and rear collision tests on the assumption that the striking vehicle is a heavier, two-ton-class vehicle. Toyota pursues the world's best-in-class passive safety performance.

#### **Omnidirectional Body-Structure Compatibility**





\* Compatibility is a concept intended to assure mutual safety by securing the passive safety of lighter vehicles and reducing the harmful impact of heavier ones.

## SRS Airbags Work Together with Seatbelts

Each front SRS airbag activates in the event of a frontal impact, functioning in combination with a seatbelt to protect a front-seat occupant from physical shock to the head or chest. In the event of a side collision, the SRS side airbag absorbs the impact to a passenger's chest from a strong side impact. SRS curtain shield airbags, mounted inside the front pillar, roof side and rear pillar, fully expand to absorb impact of side passengers'

heads.



Airbags (Prius)



Side and Curtain Shield Airbag (Prius)

## Sustainability Report 2010 | Social Aspects Global Society/Local Communities (Social Contribution)

# Implementing Social Contribution Activities Around the World to Enrich Society and Realize Sustainable Growth

Since its founding, the philosophy of Toyota has been to "be of service to society." Seeking to contribute to the enrichment of society and its sustainable Growth, Toyota has been engaged in various social contribution activities in order to be a good corporate citizen of the world. Even in the midst of a challenging business environment, Toyota will firmly adhere to its founding philosophy and strive to respond to a wide range of societal needs.

## Principles and Policies for Social Contribution

Under its Guiding Principles, Toyota seeks to be a good corporate citizen of the world and to contribute to economic and social development through corporate activities in the communities it conducts business in. The CSR Policy: Contribution Towards Sustainable Development, which interprets the Guiding Principles, explains how Toyota actively promotes and engages in social contribution activities that help strengthen communities and contribute to the enrichment of society. Based on these concepts, Toyota's approach to social contribution activities, initiatives and goals are expressed clearly in the principles and policies that are shared with all Toyota companies throughout the world.

#### **Principles and Policies of Social Contribution Activities**

Purpose	The Toyota Group will undertake social contribution activities to contribute to sustainable social vitality.
Stance	Toyota will maximize the benefits of its social contribution activities by working with partners; by using our resources effectively; and by concentrating on initiatives that address real social needs, including fostering future human resources.
Employee Participation	Toyota will support independent social contribution activities that its employees undertake as members of the community.
Information Disclosure	Toyota will disclose the achievements of its social contribution activities, aiming to promote the development and improvement of societies.
Global Perspective	Toyota will adopt a global perspective on social contribution activities while adapting activities to needs and circumstances in each nation and region where it operates.

#### Implementation Structures in Japan

In 1989, Toyota established the "Corporate Citizenship Activity Committee" chaired by the company president and comprised of relevant directors to act as the highest level decision-making body. It was renamed the "CSR Committee" in October 2007 after taking on several new functions previously carried out by other internal organizations. The "Corporate Citizenship Division" was organized in January 2006 as a specialized division to reinforce corporate social contribution activities and integrate corporate social contribution functions that had been performed by multiple divisions.

#### **Implementation Structures in Japan**

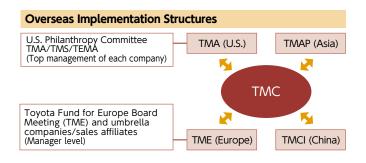


## Strengthening the Overseas Promotional System

As shown in the diagram below, Toyota (TMC) and the Toyota regional companies in North America, Europe, Asia, and China have formed a network, which is used to strengthen promotional efforts. The regional companies conduct promotional activities within their regions while maintaining close communications with TMC.

<U.S.> Society Contribution Committee meetings are held at TMA three or four times a year to discuss separate projects, budgets and policies having to do with strategic donations
 <Europe> Society Contribution Committee meetings are held at TME twice a year to review and support projects by businesses in countries within the region
 <Asia> TMAP reviews and supports projects by businesses in countries within the region
 <China> TMC promotes activities in China based on local needs, with advice from various experts

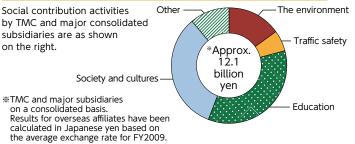
experts



#### **Results of Social Contribution Activities**

All Toyota affiliates conduct independent social contribution activities centered on three focus fields - the environment, traffic safety and education - with other fields added in accordance with local societal needs. In Japan, support of the "society and cultures," and community care, have been added to the three focus fields. Emphasis is also placed on employee volunteer activities, with programs promoted through utilization of Toyota's expertise and resources.

#### FY2009 Activities by Field



# **Environmental Initiatives**

In order to contribute to the sustainable development of society and the earth, Toyota is committed to proactively making social contributions in areas such as environmental education, support for environmental action, conservation of biological diversity, and afforestation.

# Continued Support for the Anti-desertification Initiative in China

In collaboration with the Chinese Academy of Sciences, the Hebei Province Forestry Bureau and NPO Green Earth Center, since 2001 Toyota has been carrying out an initiative to stop desertification in Fengning Man Autonomous County, Hebei Province, where significant desertification has occurred. Over the past nine years, trees have been planted on 2,881 hectares of land, and that area will reach 3,000 hectares by 2011, the end

of the third term. Poplars, pines and indigenous fruit trees were planted to strike a balance between economic independence for local residents and protection for the environment; the fruit trees bore their first crop in 2009. Sales of fruit will contribute local residents' earnings, and part of the proceeds will be used for a tree-planting fund.



Apricots in bloom

#### Philippines Rainforest Restoration Gets 3rdparty Certification, Enters Phase Two

Since 2007, Toyota has been jointly implementing a three-year reforestation initiative with the Peñablanca Municipal Government, the Department of Environment and Natural Resources in the Philippines, and Conservation International, an environmental NGO, with the purpose of planting 1,772 hectares of trees for three years in Peñablanca (approximately 500km north of Manila) in the Province of Cagayan, located in the northern part of Luzon Island in the Philippines. As of March 2010, trees had been planted on 1,699 hectares of land. The project seeks to establish a system that both achieves successful reforesta-

tion and supports the livelihood of local communities. Thus, in addition to establishing a forest exclusively for harvesting wood for fuel to prevent forest destruction, encouraging the cultivation of fruit trees such as mango to improve the lives of local residents. Such project design was evaluated, the project obtained a gold rating under the Climate, Community and Biodiversity Project Design Standards (CCB Standards) in December 2009. The second phase of this afforestation project commenced in August 2010.



Volunteer tree planting by Toyota Motor Philippines (TMP) employees

\*The Climate, Community and Biodiversity Project Design Standards (CCB) is a federation of international NGOs and corporations that assesses forest preservation and related projects.

#### Company-owned Forests in Mie Prefecture Granted FSC<sup>™</sup> Forest Certification

After acquiring a 1,702-hectare mountain forest in the town of Odai, Taki-gun, Mie Prefecture, in October 2007, Toyota implemented reforestation projects including the thinning a total of 523 hectares by March 2010. The company is also examining about 700 mountain sites for forest research and to promote forestry projections, and is preparing a standard procedural guide to forestry and accumulating Geographic Information System data. In May 2010, Toyota was granted Forest Stewardship Council (FSC)<sup>TM\*</sup> forest certification for forest management that complies with certification standards and demonstrates care for the environment.

#### \* Forest Stewardship Council (FSC) FSC<sup>™</sup> C084762

Nonprofit international member organization that operates the Forest Certification System, established by environmental groups, forestry companies, groups of native peoples, etc.

# Human Development Program for Recovering the Relation between Forests and People

An advanced environmental education program called the "Toyomori Institute of Sustainable Living" was started up in May 2009 in coordination with Toyota City and Support Center for Sustainable Regional Design (NPO). It aims to construct sustainable local communities by connecting cities to Satoyama (forests in the interface between cities and nature that have been utilized by people). The Institute is being conducted for 30 individuals recruited from the general public. In 2009, through 11 classroom sessions and field work, five open sessions, the students came to know the local area and learn about leading environmental case studies from community business as well as design projects that connect cities to rural areas.

#### Continuing the Toyota Environmental Activities Grant Program Based on Themes 'Biodiversity Conservation' and 'Global Warming Countermeasures'

The Toyota Environmental Activities Grant Program was launched in commemoration of TMC's receipt of the "Global 500 Award\*" in 1999. Since FY2000, Toyota has been accepting applications to the environmental activities grant program to support projects involved in research and other activities centered on the theme "Environmental Technology and Human Resource Development Contributing to Environment Revitalization and Conservation." In FY2009, 10 of the 100 proposals submitted for regionally based projects with themes of biodiversity conservation and global warming countermeasures were selected on the criteria of appropriateness and potential for future growth. Eight of the 10 were on biodiversity conservation, including "Strategic Management Plan for the Biodiversity Conservation based on Geoecological Types on Hahajima Islands, In the Bonin (Ogasawara) Islands, Southern Japan." The two projects for global warming countermeasures were "Development of Sustainable Organic Agriculture and Securing a Heat Source for Houses through the Effective Use of Natural Energy." Many projects on the theme of biodiversity were also selected for consideration in a meeting of COP 10 (Aichi-Nagoya COP 10 CBD Promotion Committee) to be held in Nagoya in October 2010.

Please see page 42 for past grants.

# Expanding Programs at the Toyota Shirakawa-Go Eco-Institute

Since it opened at the Shirakawa-Go World Heritage Site in 2005, some 66,000 visitors to the Toyota Shirakawa-Go Eco-Institute have come to realize the importance of nature through hands-on environmental education. In FY2009, new programs included "Conservation of the Dormouse and Peteromys momonga" and "Fun Guided Hikes Teaching the Relationship between the Forest, People and Other

Species." A first-grade student who participated in the guided hike became interested in weevils that lay eggs in acorns, cut some branches and studied them over the course of a year, compiling a report that was awarded the National Congress of PTA of Japan Chairman Award at the National Talent Development Contest for Children. Toyota heard this happy news from the student who participated.



Children listen to an interpreter

# **Traffic Safety**

As one part of initiatives that aim to achieve zero traffic deaths and injuries, Toyota has been actively engaged in traffic safety activities since the 1960s, including safe-driving courses for drivers and traffic safety education for children. Toyota works to increase safety awareness of everyone using streets and roadways, including drivers, passengers and pedestrians.

### Toyota Traffic Safety Campaign Focuses on 'Traffic Safety for the Elderly'

Toyota and its dealers conduct the Toyota Traffic Safety Campaign every spring and autumn, coinciding with Japan's nationwide traffic safety campaigns. In FY2009, the campaigns focused on the theme of "traffic safety for elderly people," based on statistics from the Tokyo Metropolitan Police Department showing that 48.5% of those who died in traffic accidents during FY2008 were over 65 year old. Approximately 800,000 copies of an educational leaflet were distributed to customers who visited dealers nationwide. Toyota also donated 2.57 million traffic safety

picture books and 46,000 traffic safety story cards to children entering kindergartens and nursery schools nationwide. It is a continued activity since 1969, and a cumulative total of some 121 million picture books and 1.24 million story cards have been published to date.



Storytelling cards and picture books distributed in FY2009

#### Toyota Driver Communication — Over 40,000 Course Participants

Toyota has been conducting unique nationwide safe-driving courses called "Toyota Driver Communication," since 1987 with the goal of reducing the number of accidents involving young drivers. Since 1987, over 40,000 people have taken the courses. Toyota Safety Education Center "mobilitas," built inside the Fuji Speedway in Shizuoka Prefecture in 2005, offers Toyota Driver Communication courses on a regular basis. The "mobilitas" encompasses a total area of 130,000m<sup>2</sup>, the biggest facility of its kind in Japan. With instructors who train Toyota test drivers, students can safely experience the performance of vehicles at their limits through such exercises as high-speed emergency braking and driving and braking on a slick road surface. In FY2009, 3,800 people

took the courses. In addition, Toyota started its eco drive & safety program in April 2010.



An overview of Toyota Safety Education Center "mobilitas"

### 'Let's Make Bicycle Safety Maps!' New Group-Learning Program on TMC's 'Kodomobilita,' Traffic-Safety Web Site for Kids

In September 2009, Toyota produced the Internet program "Let's Make a Bicycle Safety Map" for students in the upper grades of elementary school, with the aim of "reducing bicycle accidents." With use of both a program on the Kodomobilita Web site and Google Maps (a web mapping service), students create a safety map of the

local area by marking places that they felt were dangerous for cyclists or where the students had themselves felt unsafe. The aim is for the participants to gain a better awareness of traffic safety through discussion and information sharing. Kodomobilita also features instructional content for teachers and parents.



## Toyota Safety School for Parents and Children

Every year Toyota has been inviting children from kindergartens and nursery schools in and around Toyota City, as well as Oyama-cho in Shizuoka Prefecture, to traffic safety classes held at the Toyota Kaikan Exhibition Hall and Toyota Safety Education Center "mobilitas," respectively. In FY2009, about 5,400 children from 119 kindergartens

and nursery schools participated in safety classes held at the Toyota Kaikan Exhibition Hall, and about 340 children and parents participated at "mobilitas." The cumulative total attendance of children since 1975 is approximately 229,300 from some 2,946 kindergartens and nursery schools.



Safety school held at mobilitas

# 'Kurapika Box' Shows Pedestrians the Effects of Reflective Materials

In response to the rising share of traffic fatalities involving elderly people, which continues to increase in step with the aging of the population, Toyota produced a tool called the "Kurapika Box," which demonstrates how reflective materials can improve pedestrian safety at night. The Kurapika Box was introduced in May 2010 and will be a valuable traffic safety education tool in the future.

The device is a lightweight box with about 1.5m long that realistically replicates nighttime conditions. No matter what the external lighting conditions, people can look through special goggles and see the effects of reflective materials. Kurapika Boxes have been set up at four locations as shown in the chart below, mainly to build traffic safety awareness among elderly people. The company will also promote its effectiveness among a broad range of age groups, from children to senior citizens at various events by Toyota, its sales networks and affiliated companies.

pika Box Locations
pika Box Locations

Directly-managed "Toyota Driving School Tokyo"	Tachikawa-shi, Tokyo
Directly-managed "Toyota Chubu Nippon Driving School"	Nagoya-shi, Aichi Pref.
Toyota Safety Education Center "mobilitas"	Oyama-cho, Shizuoka Pref.
Toyota City Traffic Safety Learning Center	Toyota-shi, Aichi Pref.

# **Education**

Toyota cooperates with various segments of society while using its resources effectively to implement educational programs that foster the workforce of tomorrow.

# Cumulative 23,800 Children Participate in the Scientific Jack-in-the-Box! The Why/What Lecture

Toyota has been holding free science and engineering workshops for elementary school students since 1996 to address the social issue of the declining interest in the sciences by youth. Employees who are members of the "Toyota Engineering Society\*" serve as volunteer instructors of the workshops, which are held at science and other museums and Toyota and affiliates' facilities in various sites throughout Japan. The science and engineering workshops convey the "importance of monozukuri and enjoyment of science," providing Toyota original programs such as "collision-safety vehicle bodies," "Electric-power-recovery vehicles" and "Two-legged robots," to bring out originality and ingenuity of children and nurture their attitude to undertake the task of monozukuri. In FY2009, 21 workshops were held with a total of over 1,550 children participating.

Children who participated in the workshops made comments such as "I enjoyed learning what I did not learn at school" and "It was fun so I want to participate again." To date, a cumulative total of 288 workshops have been held with 23,800 children participating.



\*Toyota Engineering Society: An internal organization designed to contribute to the development of various business technology fields and to the regional communities, by raising engineering skills and promoting friendship. Currently, there are approximately 30,000 members.

In the "aerodynamic body" workshop, a child measures a body's wind resistance using a wind tunnel device.

#### The Toyota Children Meet Artists Program Held in Three Regions

The Toyota Children Meet Artists is a program aimed at fostering children's values and rich aesthetic sense through interactions with artists. Conducted in cooperation with the NPO Artist's Studio In A School (ASIAS) and other local NPOs, this educational program has been carried out throughout Japan since 2004. Contemporary artists visit schools, children's centers and hospitals where they give workshop-style classes according to local characteristics or needs. Dancers and modern artists combined music, physical- education and

integrated study while cooperating with teachers to conduct workshops that focused on learning through experience. It aims that all participants will share creative time beyond teaching-learning relationship. In FY2009, workshops were held on five occasions in three regions nationwide, with 2,643 children and parents participating.



Video workshop brings media education to life Setouchi City Ushimado-nishi Elementary School

### Supporting Chinese Students who Have Difficulty Entering University for Financial Reasons

In March 2006, Toyota and the China Soong Ching Ling Foundation jointly established the "Toyota Study Assistance Fund" in China as a social contribution activity. It provides assistance to students in mid-western China who for financial reasons would otherwise have difficulty entering university or advancing their tertiary education despite high academic achievements. The foundation in principle supplies 5,000 yuan per year for four consecutive years to 200 new students selected at 20 universities in mid-western China. Program activities also include leadership training, visits to dealers and plants and invitations to visit Japan.

foundation The has supported a total of 1,000 university students from FY2006 to FY2010. What's more. from FY2008 through FY2010, it created a special fund for 20 students each year who were adversely affected by the Sichuan Earthquake.



The fourth annual presentation of assistance funds (Guizhou University, December 2009)

#### Creating a Unique Graduate School — Toyota Technological Institute at Chicago Receives Accreditation

As a part of Toyota's social contribution activities, Toyota Technological Institute (TTI) was established in 1981 with the founding philosophy of "Always be studious and creative, striving to stay ahead of the times." as stated in the Toyoda Principles. Since then, it has embodied the concept that "Making things is about developing people." Utilizing the advantages of the company's foundation, the school is training highly creative engineers proficient in practical development skills through small-group instruction (an average of 9 students per faculty member) and a curriculum rich in experiments and hands-on training. Since opening its doors, graduates of the institute have achieved a 100% employment rate. Also, TTI has made achievements in cutting-edge research that includes solar cells and autonomous vehicles. In addition, the Toyota

Technological Institute at Chicago (TTI-C) — the first American graduate school affiliated with a Japanese university — acquired U.S. accreditation, enabling it to grant degrees. Toyota will focus on cultivating engineers who play key leader- ship roles in international society.



Toyota Technological Institute at Chicago (TTI-C)

#### History of Toyota Technological Institute at Chicago (TTI-C)

Dec. 2001	Toyota Technological Institute and the University of Chicago conclude tie-up agreement.
Oct. 2002	TTI-C acquires approval from Illinois State Higher Education Agency to establish an institute.
Aug. 2003	TTI-C acquires authority to confer academic degrees from Illinois State Higher Education Agency.
Sept. 2003	TTI-C opens.
Oct. 2009	TTI-C acquires accreditation.

http://www.toyota-ti.ac.jp/english/index-e.htm

# **Society and Cultures**

Toyota is working toward creating a harmonious, self-sustaining society where a diverse range of people respect one another and work together, by assisting with local social contribution projects, supporting welfare services, encouraging self-reliance and other initiatives while utilizing both tangible and intangible resources, such as technology and expertise. It operates the "Toyota Automobile Museum" and the "Toyota Commemorative Museum of Industry and Technology," two unique museums, with an emphasis on passing on the culture of making automobiles and monozukuri.

# Toyota Automobile Museum Events Mark Its 20th Anniversary

The Toyota Automobile Museum (Nagakute-cho, Aichi Prefecture) has a permanent display of about 140 Japanese and foreign classic cars preserved in working condition. Some 4.70 million people have visited (about 230,000 in FY2009) since opening in 1989 with the aim of better understanding automobile culture. The museum holds exhibits and events that include a systematic display commemorating 120 years of automobile development since the birth of the gasoline-powered car, a classic car rally and a displayed car rally, and also develops automobile appreciation programs for children. In FY2009, the museum held two exhibits, "Driving through Time: From Oil Shock to Eco-Awareness" and "Comics and Cars," to commemorate its 20th anniversary.

#### http://www.toyota.co.jp/Museum/

# Toyota Commemorative Museum of Industry and Technology Hosts 15th Anniversary Events

The Toyota Commemorative Museum of Industry and Technology (Nagoya City) was established for the purpose of conveying the importance of the spirit of being studious and creative as well as of monozukuri. Since opening in 1994, the total number of visitors has reached about 2.71 million (approx. 230,000 in FY2009). The museum features a wide range of displays, including looms and automobiles as well as valuable industrial legacies such as a Swiss steam engine that is over 100 years old. In FY2009, a weekend workshop, held every Saturday and Sunday, was started, inviting many guests to "The World of the Jacquard — Amazing Discovery of Weaving Beauty," the commemorative event for the museum's 15th anniversary.

#### http://www.tcmit.org/english/

Column

## **Toyota Community Concerts Held Nationwide**

Since 1981, Toyota and its domestic auto dealers have partnered with the Federation of Japan Amateur Orchestra Corp. (JAO) throughout Japan to jointly support the Toyota Community Concerts — classical music concerts held with the aim of contributing to the promotion of local culture through music. In FY2009, a total of 34 performances were held in 18 prefectures. Everybody, beyond generations, can enjoy such concerts in regions where there are few opportunities to listen to citizen-oriented, live performance.

## Toyota Master Players, Vienna

Since 2000, Toyota has held concerts by a selected orchestra of musicians mainly from the Vienna Philharmonic Orchestra for the purpose of contributing to nurture a rich spirit of many people through music by listening to goodquality music at low prices. In April 2010, five performances were held in five cities nationwide, with 8,300 visitors. In addition, the Toyota Master Players, Vienna held the "invitation to concert," "open rehearsal" and "visiting concerts at school," and so on for youth.

# Toyota Volunteer Center Supports and Promotes Employees' Activities

The Toyota Volunteer Center was established in 1993 as the main office for Toyota's volunteer initiatives, where current and former employees and their families can enjoy a cheery, fun and safe environment to participate in volunteer activities.

The center publishes an in-house newsletter that seeks to increase Toyota employees' awareness of volunteering and introduces a range of volunteer activities administered by a variety of third-party organizations as well as activities planned by the center itself. Toyota aims to link realization of a more fulfilling society to the growth of each employee as he or she volunteers to help find solutions to a variety of regional and societal issues.

# 'Children Career Experience Event' as Part of Community-based Social Contribution

Automobile dealers depend on the prosperity of regional communities and good relationships with them, and listening to local input and feedback is essential to building such relationships. In 2008, Corolla Aichi Corp. organized a support group comprised of six local housewives when it opened its Meito Umemori outlet. The intention was to offer a place where local female drivers could casually drop in and feel in their comfort zone. One of the group's comments was a desire for a place where parents and children could experience an actual career environment outside of school. In response to this interest, Corolla Aichi held "Mama and Kids Career Experience" events targeting elementary school students held in April and August

2009 and in March 2010. Eighty children participated in the events for a total of eight days. After explanation of the vehicle mechanism, some of the children observed a service technician doing tasks such as checking oil and inspecting an engine, while others shared in the experience of an employee at the dealer outlet's café. The dealership heard feedback from highly satisfied children, including, "I was able to learn things from the hands-on experience I couldn't learn at school" and "I want to be an engineer when I grow up too." Corolla Aichi will organize similar support groups at each of its 42 sales outlets, collect input from local participants and support the community by responding to the expressed needs of its citizens.



Children listen to the presentation about a car's underbody and suspension.

# Sustainability Report 2010 | Social Aspects Global Society/Local Communities (Social Contribution)

#### **Major Overseas Activities** The environment Traffic safety Education Society and cultures Europe 2 10 🚸 U.S. Korea 1 China Ð 1 🤋 47 13 Saudi Arabia € Philippines India Thailand Venezuela 8 12 11 20 Malaysia/ Indonesia N Brazil 6 b 3 South Africa Australia 6 Ð Argentina 14 \* 16 : Only U.K. ÷.,

	Field	Title	Outline
1		TogetherGreen	Cultivates leaders in environmental protection, supports environmental protection projects and implements volunteerism that contributes to environmental protection in cooperation with the National Audubon Society of the U.S.
2		EcoDriving Europe	Implements driver education to improve fuel efficiency in cooperation with the environment NGO Ecolife.
3		Toyota Eco Youth	Targets schools nationally, helping to plan and promote environmental projects such as electric power conservation and wastewater treatment.
4	The	Toyota China Youth Environmental Protection Aid Program	Promotes grass-roots environmental activities throughout China under the program's ongoing theme, "Everyone's world, everyone's responsibility," together with the Central Committee of the Communist Youth League of China and the All-China Youth Federation.
5	Environment	Toyota and Mata Atlantica	Implements restoration and preservation activities in Brazil's coastal forests along the Atlantic Ocean that are considered the most devastated of the nation.
6		Toyota Community Spirit	Launched as an outreach effort to help build sustainable systems in the local community.
7		Preventing the Desertification in China	Include a reforestation project since 2001 in Fengning Man Autonomous County. Hebei Province, where severe desertification has taken place, in cooperation with the Chinese Academy of Sciences and other organizations.
8		Rainforest Restoration Initiatives	Tree-planting project begun in September 2007 in the town of Peñablanca, Cagayan Province, located on northern Luzon Island in the Philippines, in cooperation with the Philippine Department of Environment and Natural Resources and other organizations.
9		Toyota Driving Expectations	Has developed and implemented traffic safety programs for young drivers and their parents.
0		Roads to Respect	Provides opportunities for students and young specialists to improve road-infrastructure safety in cooperation with the European Transport Safety Council (ETSC)
1	Traffic	Toyota Safety Education Program	Develops programs to teach children 6 to 12 years old about basic traffic safety and raise their awareness of safety issues.
2	Safety	White Road Campaign	Conducts a road safety project that sends its Milky Way & the Gang mascots on visits to local elementary schools.
13		Toyota Traffic Safety Experience	Holds an experience-based traffic safety awareness program, working hand-in-hand with local communities.
4		Toyota and You	Provides traffic safety programs, including experience-based programs, targeting young drivers and their parents.
5		Toyota Family Literacy Program	Helps literacy-promotion efforts of the National Center for Family Literacy (NCFL) by providing educational opportunities for both childre and their parents to help raise literacy rates.
6		Toyota Technology Challenge	Conducts a contest in which 11 to 16-year-old students build eco-friendly minicars.
7	Education	Toyota Dream-Plus Scholarship	Provides annual scholarships to 45 high-school students nationwide across South Korea who face difficult financial situations, in cooperation with the Beautiful Foundation NGO.
8		Saudi Japanese Automobile High Institute (SJAHI)	Provides advanced education and training in automotive technology and repair, and provides placement assistance for graduates at participating Saudi distributors of Japanese automobiles.
9		Toyota Teach	Runs the Toyota Teach teacher-educational program and provides training in teaching methods, to improve the basic scholastic abilities of elementary and junior high school children.
20	Society and Cultures	Pinta tu Escuela (Paint Your School)	Helps children by improving their elementary school environment through the restoration and construction of school buildings.

http://www.toyota.co.jp/en/social\_contribution/oversea/index.html

### **Examples of Overseas Initiatives**

# Go Green Program Offers a Range of Environmental Learning Options

#### [The Environment]

Vietnam: Toyota Motor Vietnam Co., Ltd. (TMV)

As the Vietnamese economy grows, environmental issues become more pressing, so there is an urgent need to make progress in setting environmental policies. In 2008, TMV, in collaboration with the Vietnam Environment Administration (VEA) and Ministry of Education and Training (MOET) officially launched the "Go Green - Hanh Trinh Xanh" environmental protection program with three objectives — "To raise community awareness towards environmental protection," "To support and directly implement a variety of environmental activities aimed at stopping damage to the environmental protection, "To help individuals and organizations affected by environmental damage in Vietnam." Over the three years the Go Green Program has been in opera-tion, environmental education activities in cooperation with local communities and volunteer organizations have taken place across the country.

The Go Green Nature Preserve (National Park) project got under way. In collaboration with the Education for Nature Vietnam (ENV), Go Green is conducting environmental protection training for representatives of national parks and local nature preserves by 2011. To provide education and support aimed at raising awareness of environmental issues, the program set up the Go Green Club for young people. At the beginning, there were only about 10 participants in the forum, but as of June 2010 its number is nearly 1,500 with a series of meaningful programs such as: an Eco-bag campaign at nearly 30 offices located in the north, an Eco-Fashion Show to create green movement in design and fashion for young people, a weekend urban clean-up called Green City Tour and Green Living Day to promulgate green living habits to young people.

As part of Go Green activities, a series of educational films produced and broadcast on Vietnam Television and shown at the Biggest Picture Day festival with the participation of more than 500 volunteers in Hanoi. Further, Go Green conducted the "Eco-friendly School" program at elementary and middle schools in Vietnam's Quang Ninh Province. Besides lessons about the environment, students help clean up around the school, plant flowers in flower bed and do other activities. Comments received by the Go Green Program from the schools involve said, "Students became concerned about the environment and the natural plants, and they have made Clean Green Program activities a part of their regular routine." "Green Idea Contest" is an initiative to bring out young people's new ideas contributing to environmental protection. TMV will support and help put the three best ideas into action with monetary support. After two years of implementation, Go Green programs have earned great reviews from the public, environmental experts and especially young people who are aware of the need to address environmental issues to ensure their future. Go Green is now recognized as Vietnam's largest environmental protection program.



The ceremony for the "Green Idea Contest" as part of the Go Green Program was held in April 2009.

# Expanding Driving Education Program for U.S. Teens USA: Toyota Motor Sales, U.S.A., Inc. (TMS)

[Safety]

The leading cause of death for young people aged 15-20 is motor vehicle accidents, accounting for 38%\* of all teen deaths each year in the United States alone. In many cases, accidents involving teen drivers are caused by distractions due to mobile phones, loud music or conversation with passengers.

TMS developed a teen driving skills program called "Toyota Driving Expectations" in cooperation with the National Safety Council. It is a free four-hour program for teens and their parents or guardians. During the session, teens learn to avoid possible crises that may occur during driving, driving techniques, how the anti-lock braking system (ABS) works, driving on a slalom track and so on. The program aims to prevent motor vehicle accidents by providing knowledge and skills for driving and accident avoidance. It started in 2004, has been held in 19 cities, and more than 14,000 teenagers

and parents (as of May 2010) have participated in the program since 2006. After the classroom session, a teen participant said, "I kind of thought they were just going to talk to you about what to do and what not to do. I went to this driving thing and learned what I can do and can't do, like what my limits are when I'm driving. I didn't know how bad I was going to be at multitasking like answering the phone, and I learned I wasn't very good at that so I don't think I'll be doing it.

TMS Vice President of Philanthropy and Community Affairs Michael Rouse said, "Safety is a priority for Toyota and we are committed to making an impact in reducing the rate of fatalities and accidents among young drivers by providing teens with real-world experience. Building safe vehicles is only part of the answer — the best safety features in any moving vehicle are the mind and hands of the driver."



A professional driving instructor giving instruction to teen drivers.

\*Source: 2006 National Highway Traffic Safety Administration (NHTSA) data

### **Examples of Overseas Initiatives**

## Toyota Technology Challenge Supports Education U.K.: Toyota Motor Manufacturing (UK) Ltd. (TMUK)

#### [Education]

It has long been recognized that engineering skills have been in steady decline for some time in the U.K., with fewer students viewing engineering as an attractive, exciting career choice. It is this situation that encouraged TMUK to consider initiatives to address the perception that careers in engineering are uninspiring, by each year, sending TMUK engineers into local secondary schools to undertake different engineering projects.

Additionally, 2003 saw TMUK partner with Rapid Electronics Ltd, a distributor of electric components to schools, to create and deliver a challenge to secondary school pupils aged 11-16. The aim of the challenge was to stimulate their interest in technology and engineering. Entitled the Toyota Technology Challenge, the challenge encourages students to design environmentally friendly vehicles. They are then tasked with producing a vehicle made from recycled materials which must then perform on the race track.

Introduced in 2003, the challenge was trailed in three areas, namely the location of Toyota's U.K. production plants and also the location of the sales and marketing headquarters before being launched, with support from the Toyota Fund for Europe as a nationwide challenge, due to the interest of schools across the country who wished to participate.

The challenge also has links across the curriculum, most specifically within design and technology, although the challenge has the potential for wider curriculum links in areas such as mathematics and science. For FY2009-2010, about 331 teams and 10,000 students nationwide participated showing that the challenge continues to grasp the imagination of young people.

Peter Hamer, Principal of the Kirk Hallam Community Technology and Sports College said, "This activity is an excellent way for students to learn about Toyota's stance on quality and environmental protection. Not only does it encourage students to develop their knowledge and skills in engineering, but it also builds teamwork skills and the confidence to work in an adult commercial environment"

Toyota Technology Challenge contestants design and build an environmentally friendly model vehicle in two categories - Solar power where the vehicle must be the quickest in a straight race and PIC microcontroller where the vehicle must be programmed to maneuver around obstacles. Some 10,000 participants from 331 schools for FY2009 -10 (September 2009 - August 2010) continued to set an exceptionally high standard.



A team shows its work to judges.

#### \* Fund Scheme for Europe TME screens projects of its affiliates and supports funds.

#### TPS Guides and Supports Kaizen in Taiwan's Bicycle Industry [Society/Culture] Taiwan: Kuozui Motors, Ltd.

As a result of the Taiwanese bicycle manufacturing industry's continued shift of manufacturing plants to China and emerging countries since the start of 1990, export volume of Taiwan-made bicycles fell from 9.45 million unit in 1998 to 7.53 million in 2000. The average unit price increased from US\$95 to \$109, but export volume decreased and the nation's bicycle manufacturing industry faced a hollowing-out of domestic production due to its response to market changes.

In June 2000, the Ministry of Economic Affairs asked Kuozui Motors, which has a superior kaizen program, to help address the hollowing-out of Taiwan's domestic bicycle industry. Kuozui readily agreed as one of its social contribution initiatives, and introduced the Toyota Production System (TPS) in a leading bicycle manufacturer, Giant Manufacturing Co., Ltd. (GIANT) and three parts makers, and provided specialized instruction in implementing the system. As a result, productivity improved by 15% in two years. Furthermore, Giant and Merida took the lead in forming A-team with 11 parts manufacturers. Under the guidance of the Ministry of Economic Affairs, Kuozui agreed to provide TPS implementation support to 13 bicycle-related companies. Kuozui's support of this team focused not only on skills and technical instruction, but also on the TPS concept and education programs to put it into practice. Kuozui visited field sites with managers of the team leader company twice a month, and offered instructions such as detecting problems, setting goals and clarifying causes of difficulties. They also provided opportunities to visit the Toyota Head Office and its

plants in Japan and Taiwan. As a result, the first run rate\* increased from less than 35% in 2002 to over 70% by 2009. What's more, the average delivery lag dropped from 30 days to 8 days, and exports of spare parts increased by about 19%. All in all, the results were tremendous.

Now, 10 years after the start of Kuozui's support, Taiwan's entire bicycle industry has restructured and is now well organized and self sustainable. Kuozui's team support program is completed, but the company will continue to offer support for measures to help Taiwanese industry grow and gain competitive advantages through monozukuri.

\* First run ratio: Index of quality level at production plants. The rate of products passing all inspection tests the first time



Supporting kaizen at the bicycle plant

<sup>\*</sup> A-team: Taiwan bicycle manufacturer supplier organization

## Sustainability Report 2010 | Social Aspects Global Society/Local Communities (Communication with Society)

# Building Trust with Stakeholders through Deeper Dialogue

Toyota began issuing its environmental report in 1998, and has disclosed similar information in regional reports, along with its subsidiaries, in 16 countries. And starting in 2006, Toyota has made continuous efforts to communicate with local communities through the Toyota Stakeholder Dialogue. In the course of this communication, Toyota received considerable feedback from stakeholders on the recent quality issues, raising concerns about stakeholder confidence in the company. Toyota has learned a great deal from this dialogue and will deepen its communication with stakeholders, increasing transparency and applying feedback to its business practices.

### Participating in the WBCSD Activities

The WBCSD\* is to help develop policies towards sustainable development via three pillars — economic growth, environmental protection and social development. Toyota agrees with the objectives of the WBCSD, and has participated in various projects as a member since 1995. TMC Honorary Chairman Shoichiro Toyoda, who served as Vice Chairman of the WBCSD Executive Committee (ExCo) for five terms (10 years), is now a Member of the Honorary Committee, and Chairman Fujio Cho has served as a member of the WBCSD ExCo since January 2010.

In December 2009, Toyota agreed with and became a signatory to a manifesto for "Energy Efficiency in Buildings," and the company participated in the "Vision 2050" project started in 2008 as one of 29 corporate members. The project report on "Vision 2050" was published in February 2010.

\*WBCSD (World Business Council for Sustainable Development) Headquarters: Geneva



Please download the Vision 2050 Report from the WBCSD Web site.

http://www.wbcsd.org/web/vision2050.htm

#### Column

# Creating Communication Tools to Explain Safety and Brake Recalls of Prius and SAI

Concurrent with recall issues for the new hybrid models, Prius and SAI, Toyota prepared and distributed communication tools to help dealers explain vehicle safety to their customers. The tools outlined the reasons for the recall, the vehicles and models involved, as well as two HV

braking systems, hydraulic and regenerative. They also explain the anti-lock brake system (ABS). Toyota has made every effort to help customers feel confident when operating their vehicles, even if they are subject to recall.



A brochure explains ABS in clear, simple terms

#### Column

# Environmental Performance Brochure to Boost Customer Knowledge and Satisfaction

Toyota produced a Life Cycle Assessment (LCA) brochure in Japan and Europe to help customers understand the environmental performance of the New Prius introduced in FY2009, in the context of LCA. The New Prius received third-party verification for conformity with international LCA standards (ISO 14040 and ISO14044) from the Japan Environmental Management Association For Industry (JAMAI). Toyota uses this brochure to fully explain the environmental impact of its vehicles, from manufacture to disposal, as compared to that of conventional models.

In all its hybrid models, Toyota has adopted a system with higher fuel efficiency and CO<sub>2</sub> reduction that is intended to reduce the consumption of limited fossil fuels by combining a gasoline engine with an electric motor.

Because it is equipped with an electric motor and batteries, the mechanism of the hybrid system is more complicated than a conventional gasoline-powered vehicles, and energy consumption at the manufacturing stage is somewhat greater. However, the net environmental impact of hybrid vehicles is smaller than that of conventional vehicles because their energy consumption during driving is overwhelmingly low. A Life Cycle Assessment (LCA) that calculates the environmental impact from production to disposal makes the hybrid system's advantages easy to understand.

Offering information on the environmental performance of its hybrid vehicles using the LCA is one of many ways Toyota is working to contribute to customer satisfaction.



Prius LCA Report (Japanese version)



Prius LCA Report (English version)

#### 'Meeting to Read the Sustainability Report' for Toyota ASCA Society Held

The "Meeting to Read the Sustainability Report" was co-organized by the TMC Environmental Affairs Division and Toyota ASCA\* Society, and 14 advisors from the society attended.

After the Environmental Affairs Division gave a brief overview of the 2010 report, they exchanged opinions. While the division received opinions from them, such as "I learned about Toyota's initiatives to the environment and society comprehensively" and "I want to use the report to explain Toyota's initiatives to customers and partners," they also brought up an proposal leading to the planning for the next fiscal year, such as "I hope to have a device even for general people to read the report to understand about Toyota. For example, a brief version."



The "Meeting to Read the Sustainability Report" held in July 2010

\*ASCA: Advisory Specialist for Consumer's Affairs

Please refer to page 55 for the Advisory Specialist for Consumer's Affairs.

# Direct Communication through the Toyota Stakeholder Dialogue

Toyota believes that the proper approach to corporate management in the 21st Century is open communication with stakeholders such as customers, business partners and NPOs, so the company has held an annual Toyota Stakeholder Dialogue since 2001. At the ninth annual dialogue on March 15, 2010, Toyota spoke directly with 15 people, including representatives of NGOs/NPOs, government, academia and industry. Attendees discussed "Toyota's environmental initiatives toward Sustainable Development" such as the "global warming issue" and "biodiversity conservation." An outline of Toyota's activities within its automobile manufacturing, new business and social contributions was presented along with Toyota's will, then Toyota heard participants' expectations of Toyota, as well as a broad range of opinions and suggestions, such as, "Toyota should clarify the scope of actions that it undertakes at its own responsibility and work not only to improve fuel efficiency and develop next-generation vehicles, but also should clarify the scope and actively announce on what types of measures it will take including eco-driving, traffic flow improvement, and so on.

Expectations towards Toyota are high," and "Toyota should publicize its efforts to the world at COP 10 which will be held in October 2010." Toyota seriously considers the points raised in the dialogue, and will share this information with relevant internal divisions/persons to be investigated and reflected in its future activities.



The ninth Toyota Stakeholder Dialogue

Please visit the Toyota Global Web site for details of the ninth and past Toyota Stakeholder Dialogues.
http://www.toyota.co.jp/en/csr/dialogue/index.html

## **Examples of Overseas Initiatives**

## TMT Environmental Seminar Connects Business, Government, Academia Thailand: Toyota Motor Thailand Co., Ltd. (TMT)

In Thailand, the first Southeast Asian country to industrialize, environmental pollution has emerged as a serious social issue. The government has responded with programs such as the Esco project under the Federation of Thai Industries that provide energy efficiency management in order to enable users (such as the industries or commercial building tenants) to reduce energy costs while increasing productivity. Another program is the Natural and Cultural Environmental Conservation Division formed by the government to develop environmental and natural resource management. In addition, public awareness of the environment is high in Thailand, and people have high expectations of environmental measures taken by Japanese companies.

In March 2009, TMT held a seminar in Chiang Mai on environmental issues in cooperation with the Faculty of Economics at Maejo University and Thailand Environment Institute (TEI). The theme of the third annual seminar was "Reduce environmental problems, reduce water problems, reduce community problems and reduce global warming." A panel of experts from academia, government and technology discussed issues that are vital to Thai society, such as "Roles and relationship of forests, water and community" and "Guidelines for reduction of forest, water and community problems for sustainable, harmonious living."

Today, a rapidly increasing population and global warming have led to water-related problems such as shortages, pollution, groundwater contamination and flood damage. Seminar participants also discussed water problems in Chiang Mai Province caused by high volumes of wastewater from households and industry. Maejo University specialists discussed waste management with local citizens and shared information and know-how on developing a waste management system for the community.

Participants included environmental experts from various fields who shared their experiences ideas and information.

TMT not only uses what it gained from the seminar for its business activities, but also continually addresses issues in individual communities, such as offering a range of tools to promote community awareness of environmental issues.



The environmental seminar held in Chiang Mai

# Sustainability Report 2010 | Economic Aspects Financial Results

# FY2010 Business Results and Geographic Segment Information

On a consolidated basis for FY2010, ended March 2010, vehicles sales were down 330,000 units, to 7,237,000 units, and net revenues declined 7.7%, to 18,950.9 billion yen, and yet, operating income increased 608.5 billion yen to 147.5 billion yen, and net income increased 646.4 billion yen to 209.4 billion yen. As a result, Toyota was able to report profits in both operating income and net income. In response to the severe business climate in FY2010, all dealers and suppliers worked hard to deliver as many vehicles as possible to customers, and all overseas affiliates and employees made continuous, concerted cost-reduction efforts, particularly in the reduction of fixed costs, and the company was able to improve revenue by 1,690 billion yen and lower its break-even point. Toyota will continue its efforts to make further improvements beyond FY2011, ending in March 2011.

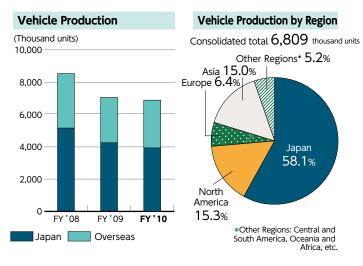
Please visit the Toyota Web site for the Annual Report 2010 (🗖 http://www.toyota.co.jp/en/ir/library/annual/index.html

Consolidated basis	Year ended March 2010 (April 2009 through March 2010)	Year ended March 2009 (April 2008 through March 2009)	Compared to previous year	Reference: Unconsolidated basis Year ended March 2010 (April 2009 through March 2010)
① Net revenues	18,950.9 bil.yen	20,529.5 bil.yen	-7.7%	8,597.8 bil.yen
<ol> <li>Operating income</li> </ol>	147.5 bil.yen	-461.0 bil.yen	_	-328.0 bil.yen
③ Net income	209.4 bil.yen	-437.0 bil.yen	_	26.1 bil.yen
④ Total assets	30,349.2 bil.yen	2,962.0 bil.yen	4.4%	10,350.7 bil.yen
5 Shareholder's equity	Shareholder's equity 10,359.7 bil.yen		3.0%	6,637.6 bil.yen
6 ROE	2.1%	-4.0%	_	0.4%
⑦ Vehicle production	6,809 thousand units	7,051 thousand units	-3.4%	3,206 thousand units
⑧ Vehicle sales	7,237 thousand units	7,567 thousand units	-4.4%	3,230 thousand units

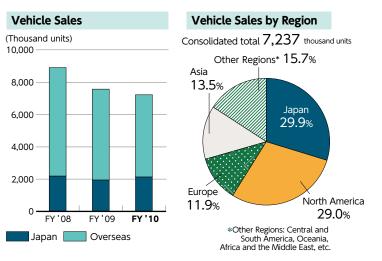
#### Vehicle Production and Sales (consolidated basis)

Markets continued to expand in China, India and other emerging countries. At the same time, overall market conditions in developed countries were adversely affected by changes in the market structure, namely, a shift in consumer demand toward compact and low-priced vehicles, despite government efforts to stimulate demand. Consolidated vehicle sales decreased by 242,000 units (3.4%) from the previous fiscal year, to 6,809,000 units.

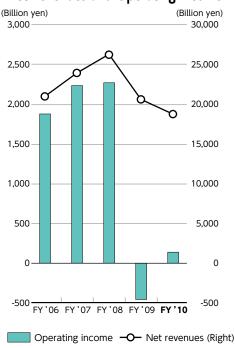
Consolidated vehicle sales both in Japan and overseas decreased by 330,000 units, or 4.4%, to 7,237,000 units in FY2010 compared to



FY2009 (April 1 through March 31, 2009). Vehicle sales in Japan increased by 218,000 units, or 11.2%, to 2,163,000 units in FY2010 compared with FY2009, primarily as a result of the introduction of new products and the efforts of dealers nationwide. Market share for Toyota and Lexus brands, excluding mini vehicles, was 48.2%, representing a record high. Meanwhile, overseas vehicle sales decreased by 548,000 units, or 9.7% in FY2010 compared to FY2009, because of reduced sales in Europe and other regions, notwithstanding sales expansion in Asia.



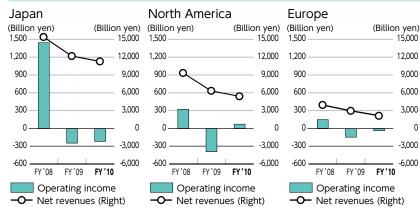
## Net Revenues and Operating Income

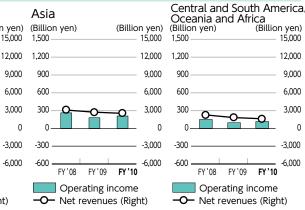


#### **Geographic Segment Information**

- Japan: Net revenues in Japan decreased by 966.4 billion yen, or 7.9%, to 11,220.3 billion yen in FY2010 compared with FY2009. However, operating loss decreased by 12.3 billion yen to 225.2 billion yen in FY2010 compared to FY2009. The decrease in operating loss was mainly due to cost reduction efforts and reductions in fixed costs, in spite of the effects of changes in exchange rates and decreases in both production volume and vehicle exports.
- North America: Net revenues in North America decreased by 552.4 billion yen, or 8.9%, to 5,670.5 billion yen in FY2010 compared to FY2009. At the same time, operating income increased by 475.6 billion yen to 85.4 billion yen in FY2010 compared to FY2009. The increase in operating income was mainly due to decreases in the provision for credit losses, net charge-offs and allowances for residual value losses, as well as valuation gains recorded on interest rate swaps stated at fair value by sales finance subsidiaries, a reduction in fixed costs and other cost reduction efforts.
- Europe: Net revenues in Europe decreased by 866.1 billion yen, or 28.7%, to 2,147.0 billion yen in FY2010 compared to FY2009. Operating loss decreased by 110.3 billion yen to 33.0 billion yen in FY2010 compared with FY2009. The decrease in operating loss was mainly due to reductions in fixed costs and other cost reduction efforts, despite decreases in both production volume and vehicle unit sales.
- Asia: Net revenues in Asia decreased by 64.0 billion yen, or 2.4%, to 2,655.4 billion yen in FY2010 compared to FY2009. Meanwhile, operating income increased by 27.5 billion yen, or 15.6%, to 203.6 billion in FY2010 compared with FY2009. The increase in operating income was due mainly to increases in both production volume and vehicle unit sales.
- Other (Central and South America, Oceania and Africa): Net revenues in other regions decreased by 209.1 billion yen, or 11.1%, to 1,673.8 billion yen in FY2010 compared to FY2009. However, operating income increased by 27.9 billion yen, or 31.9%, to 115.5 billion yen in FY2010 compared to FY2009.

#### Net Revenues and Operating Income by Geographic Segment (figures for net revenues include intra-region net revenues)



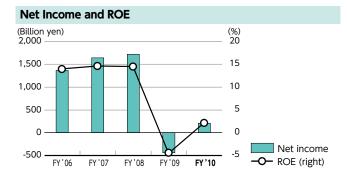


## Net Income and ROE (consolidated basis)

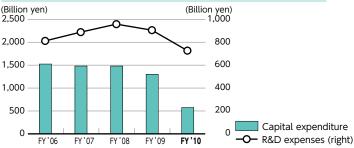
Net income totaled 209.4 billion yen. ROE on a consolidated basis was 2.1%.

#### Capital Expenditure and R&D Expenses (consolidated basis)

Toyota made an effort to invest more effectively, focusing on midand long-term strategic fields such as hybrid vehicles and environment-considering vehicles, while at the same time reviewing current investment strategies and subsequently postponing or scaling down new construction projects and other capacity-expansion initiatives. As a result of these measures, the consolidated capital expenditure for FY2010 totaled 579.0 billion yen.

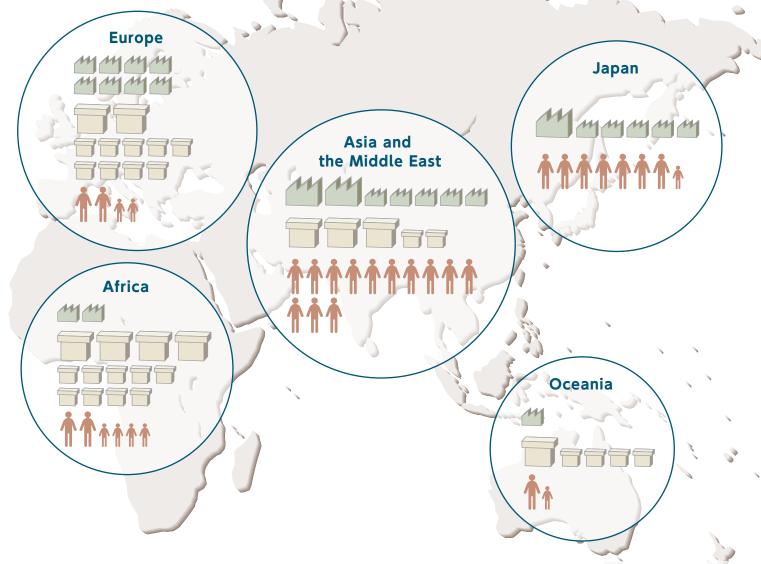


# Capital Expenditure and R&D Expenses



# Contributing to Economic and Social Development through Corporate Activities in the Community while Respecting National and Regional Cultures and Customs

Toyota launched its first overseas plant in Brazil in 1958, and throughout the expansion of its overseas sales networks and plants, it has striven to make economic contributions to each nation and region through local production, procurement and employment. Toyota also places the highest priority on long-term local employment, commences recruitment and education of local employees from the start of construction and helps to develop local labor environments. As of March 31, 2010, Toyota has a total of 66 plants — 15 in Japan and 51 in 26 other nations and regions, as well as approximately 170 distributors and 8,000 dealers worldwide.



## **Domestic and Overseas R&D Sites**



Toyota Motorsport GmbH Location: Germany (Cologne)



Toyota Motor Europe e) R&D/Manufacturing Location: Belgium (Brussels), U.K. (Derby)



Toyota Europe & Design Development Location: France (Nice)



Asia

Toyota Motor Asia Pacific Engineering and Manufacturing Co., Ltd. Location: Thailand (Samutprakarn Province)

Japan

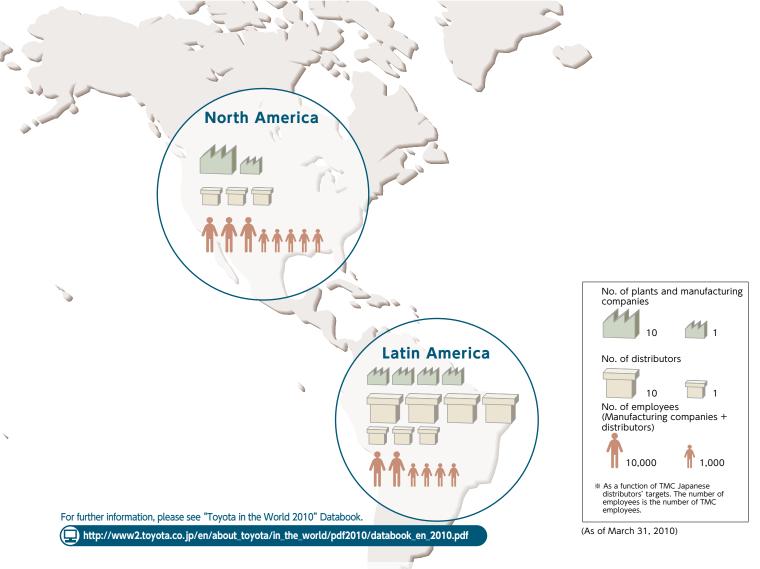


Headquarters Technical Center Location: Japan (Toyota City)

# Sustainability Report 2010 | Economic Aspects Global Expansion

In every nation and region, Toyota is applying its Guiding Principles of conducting open and fair corporate activities to be a good corporate citizen of the world and contributing to economic and social development through its local business activities. Through its overseas subsidiaries, Toyota is dedicated to making a social contribution, addressing a variety of cultural and social issues and engaging in proactive local communication.

Through automobile production, Toyota will promote the growth of each nation and region and will continue to be a locally based corporation.





Toyota Technical Center Asia Pacific Australia Pty. Ltd. Location: Australia (Melbourne)

### North America



Toyota Motor Engineering and Manufacturing North America, Inc. Locations: Michigan, California, Arizona



Calty Design Research, Inc. Locations: California (Newport Beach), Michigan (Ann Arbor)

## Sustainability Report 2010 Four-year Overseas Initiatives (Social Aspects)

# **Examples of Overseas Initiatives** Four-year Chronological Summary of Overseas Initiatives (Social Aspects) by Stakeholder Group

As a global enterprise, Toyota engages in activities that are tailored to the needs of each country and region. This report, which takes the form of an annual report, presents information on new initiatives implemented during the year as well as examples of overseas activities that have achieved significant progress, many of which are being carried out on an ongoing basis. In response to calls from readers for additional information concerning the social aspects of ongoing activities, the following summaries have been included and information has been posted on the Toyota Web site concerning overseas activities over the past four years related to different stakeholder groups.

#### [Relations with Customers]

#### Improving Customer Satisfaction TKM(Toyota Kirloskar Motor), India

Toyota Kirloskar Motor Private Limited (TKM) has set up 55 sales, service and service parts facilities throughout India, servicing Toyota vehicles across the country. TKM has developed the concept of a Mobile Service Van (MSV) for maintenance and repairs, targeting customers located far from their nearest dealer.



(Please see Sustainability Report 2006 for details)

#### [Relations with Employees]

#### Supporting AIDS Countermeasures for Employees TSAM(Toyota South Africa Motors), South Africa

Since 1993, Toyota South Africa Motors (Pty) Ltd. (TSAW) has been implementing initiatives to combat HIV/AIDS, including educational activities and the fostering of volunteer "peer educators." TSAW's onsite clinic also conducts treatment using the AIDS inhibiting drug ARV.



(Please see Sustainability Report 2007 for details)

### [Global Society/Local Communities]

#### **Protecting Wildlife**

TNZ (Toyota New Zealand), New Zealand

In order to help preserve biodiversity in New Zealand, Toyota New Zealand (TNZ) has been supporting the efforts of the conservation organization World Wide Fund for Nature (WWF) to save the endangered Maoi's dolphins, through efforts that include donations and the provision of hybrid vehicles.



(Please see Sustainability Report 2008 for details)

#### [Global Society/Local Communities]

Training School Operation and Teacher Education South Africa: Toyota South Africa Motors (Pty) Ltd. (TSAM)

In 2005 TSAM started "Toyota Teach," an educational program aimed at improving school operation and training and management of teachers, with the ultimate goal of improving children's academic performance. For the first four years, Toyota Teach provided enhanced training on overall school operation. In 2009, instructors were placed in 10 model schools, providing instruction and support in the field. (Please see Sustainability Report 2009 for details)



#### [Relations with Employees]

Establishing In-house Educational Institute as Part of Localization of Human Resource Development

Toyota Motor Thailand Co., Ltd. (TMT), Thailand

TMT established the Toyota Academy Thailand (TA) as a core of its human resource development in 2004, and implemented training for over 30,000 persons including dealer employees.



(Please see Sustainability Report 2009 for details)

#### [Relations with Business Partners]

## Support for Suppliers

TMMIN (Toyota Motor Manufacturing Indonesia), Indonesia

Toyota Motor Manufacturing Indonesia (TMMIN) provided special support to suppliers affected by flooding in 2007, including advice, repair of equipment and provision of spare parts. Assistance was also provided to improve sluice gates and raise levees to prevent damage in the event of future flooding.



#### [Global Society/Local Communities]

#### **Developing Workshops Using Driving Simulators**

Toyota Motor Europe NV/SA (TME)/Toyota Belgium S.A./N.V./Other, Europe

TME, Belgium Toyota and other subsidiaries support the "Eco Driving Europe" program implemented by the environmental NGO Eco Life in Belgium. It holds workshops and events using simulators to convey the importance of eco-driving and specific driving techniques.



(Please see Sustainability Report 2009 for details)

#### [Global Society/Local Communities]

#### Supporting Employee Volunteer Activities TEMA (Toyota Motor Engineering and Manufacturing North America), USA

TEMA has used the Intranet to share information about the volunteer activities of its employees, and has presented awards to recognize those employees who have spent the most time on such activities or who have taken the most proactive approach. The company has a system in place to provide donations to the organizations selected by the award-winning employees.

(Please see Sustainability Report 2008 for details)



📃 To read about many more examples of initiatives by overseas affiliates, please visit: http://www.toyota.co.jp/SR/en/activities/

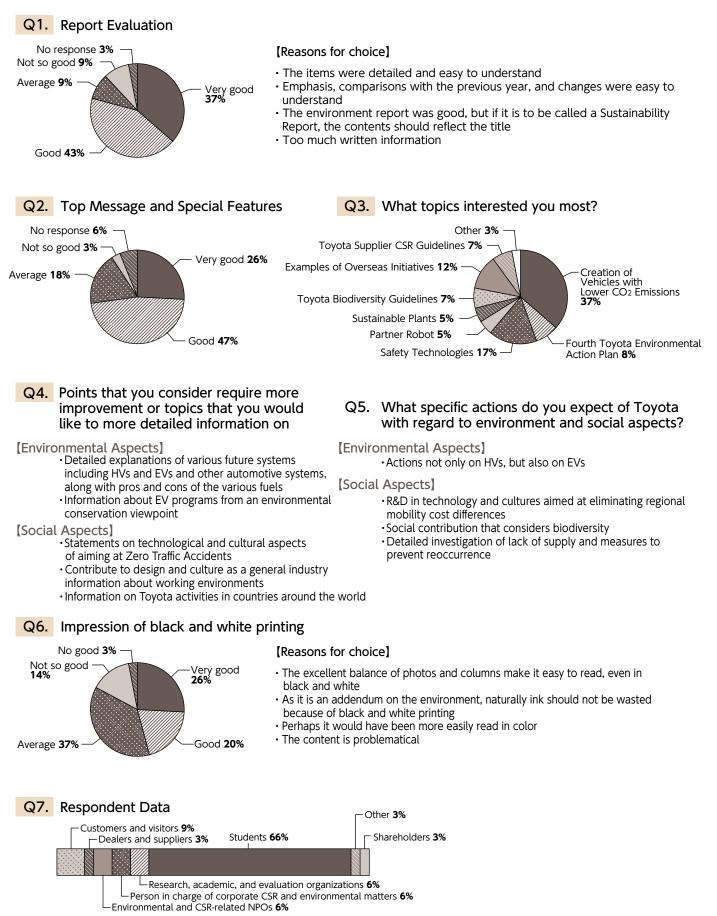
Please s	end us	s your con	nments on the	Sustainability	Report 2010
FAX +8	1-3-38	317-9035 To	oyota Motor Corpo	pration Environment	al Affairs Division
Q1. What	 was your in	npression of this r	eport? Please choose or	e of the following.	
1. Very goo	bd	2. Good	3. Average	4. Rather poor	5. Poor
This year Toyo environmental Was that polic	actions fo	r CO2 reduction	o focus on three issues: and other programs," a	"the quality issue," "mid and "social contribution t	- and long-term hrough making cars."
Q2. [The	quality issu	le]			
1. Very easy to u	inderstand 2. Fa	airly easy to understand	3. Neither easy nor difficult to under	stand 4. Somewhat difficult to understa	nd 5. Very difficult to understand
Please give sp		l	ntal actions for CO2 re	duction and other progr	) ams]
	•			stand 4. Somewhat difficult to understa	
Please give sp					
1. Very easy to u Please give sp Q5. Does to detaile	nderstand 2. Fa	sons.	3. Neither easy nor difficult to unders	stand 4. Somewhat difficult to understa e improvement or topics th	)
<pre>〈Environmental Aspects〉</pre>					
(Social Aspects)	$\rangle$				
emplo 1. Very goo Forest Steward	byment to the design of the de	ne severely disac 2. Good il (FSC)-certified	dvantaged. Tell us your in 3. Average	4. Rather poor adhesives had to be used	5. Poor
(	is your posit	ion with respect :	to the workplace, commu	nity etc.? Please choose o	) ne or more of the following.
<ol> <li>Customer/gene</li> <li>Engaged in gov</li> <li>Involved with t</li> </ol>	eral consumer vernment adm he press	2. Resident in a nistration 5. Mem 7. Person in char ch/educational/eva	n area where a Toyota plant o ber of a nonprofit organizati ge of CSR and environmental	r office is located 3. A Toyot on involved in environmental/CS	a business partner

Thank you for your cooperation

In order to enhance future information disclosure concerning Toyota's activities, Toyota will study and process the content of your responses to this questionnaire.

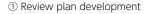
# **Returned Questionnaire Results of the Sustainability Report 2009**

As of August 31, 2010, we had received 35 returned questionnaires regarding the Sustainability Report published in the summer of 2009. We would like to sincerely thank all those who took the the time to fill out and return the questionnaire.



# **Independent Report**

To improve the accuracy and objectivity of the Sustainability Report 2010, the quantitative information concerning Toyota's environmental activities in FY2009, described in pages 16-53 of this report (excluding the columns titled "In Focus" and "Examples of Overseas Initiatives"), has undergone a third-party review conducted by Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd., a subsidiary of Deloitte Touche Tohmatsu. The procedure for the third-party review of this report is as follows:







④ Check the final version

(5) Submit an independent report



#### 4. Conclusions

On the basis of the review procedures described in the providing paragraph, softing has some to nar attained that assoed us to believe the outest quantitative orienteental information. (sockading "In Froms" and "Examples of Oversean Interfaces" sections in the period from April 1, 2009 to March 31, 2019 included in p16-50 of the Report was not accurately reasoned or calculated in accordance with calculation methods adopted by the Company, and metatric reports.

# Web Sites for Overseas Affiliates' Reports

With the addition of Vietnam, in 2010 plans call for separate reports to be issued in a total of 15 countries and regions (including Japan) in which Toyota overseas affiliates and other companies operate. The information disclosed globally by these reports will cover about 85% of Toyota vehicles sold worldwide.)

Arganting						
Argentina	Australia	Brazil	China	Europe	India	Malaysia &Issued in the UMW
New Zealand	The Philippines	North America/Canada	South Africa	Taiwan	Thailand	Holding Report
※ Coverage rate calc	culation in previous issu	ues included Daihatsu and	d Hino Motors. Howev	er, since FY2009 it cove	rs Toyota only.	(As of August 2010)
D : (C )						

Region/Country	URL
Argentina	http://www.toyotasustentable.com.ar/pdf/sustainability_report2009.pdf
Australia	http://www.toyota.com.au/toyota/events/environment/home
Brazil	http://www.toyota.com.br/meio-ambiente/relatorio.asp
China	http://toyota.com.cn/corporate/inchina/report.html
Europe	http://www.toyota.eu/sustainabillity
India	http://www.toyotabharat.com/inen/environment/index.asp
Malaysia	http://www.umw.com.my/socialresp/Pages/default.aspx
New Zealand	http://content.toyota.co.nz/toyota/about_us/sustainability/2009-SDR_Toyota_New_Zealand.pdf
The Philippines	http://www.toyota.com.ph/ecosafety/index.asp
North America	http://www.toyota.com/about/environmentreport2009/
Canada	http://mediap04.toyota.ca/media/pdf/naer2009_e.pdf
South Africa	http://www.toyota.co.za/ContentPage.aspx?PageId=46
Taiwan	http://www.kuozui.com.tw/english/index_e.htm
Thailand	http://www.toyota.co.th/environment/en/a_home.asp
Vietnam	http://www.toyotavn.com.vn/profiles/index/126
Where no direct URL to an	affiliate's report is available, the URL to the CSR activities or environmental initiatives page of the corresponding affiliate's Web site has been provided.

戻 Web Sites for Overseas Affiliates' Reports can also be accessed from TMC's global Web site: http://www.toyota.co.jp/en/csr/report/overseas/



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## TOYOTA MOTOR CORPORATION

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