Environmental Initiatives



Vision for Environmental Activities

Toyota Industries works with consolidated subsidiaries in and outside Japan to promote environmental activities on a global scale. With regard to our "CO2 Cancel" initiative, we aim to accomplish its targets in fiscal 2016.

Global Environmental Commitment

As one tenet under our Basic Philosophy, Toyota Industries works to contribute to regional living conditions and social prosperity and also strives to offer products and services that are clean, safe and of high quality. Accordingly, in February 2011, we established the Global Environmental Commitment, a specific environmental action guideline, to be shared and implemented throughout the Toyota Industries Group.

The entire Toyota Industries Group comprising 168 companies in and outside Japan will dedicate concerted efforts to realizing a prosperous life in harmony with the natural environment by carrying out activities aimed at "establishing a low-carbon emission society," "establishing a recycling-based society" and "reducing environmental risk and establishing a society in harmony with nature" as our way of "promoting environmental management."



Working toward "CO₂ Cancel"

What Is "CO₂ Cancel"?

We have been promoting initiatives under our original concept called "CO2 Cancel." This refers to our aim to offset CO₂ emissions from production activities by reducing CO₂ emissions via improved product efficiency and other means. We have positioned this approach as a new environmental target under the Fifth Environmental Action Plan and have been yielding steady, positive results.

Activities for Accomplishing "CO₂ Cancel"

Aiming to accomplish "CO2 Cancel" in fiscal 2016, we have been undertaking activities accordingly.

Our efforts included the successful development and release of such new products as internal-combustion lift trucks with lower fuel consumption and an air compressor for fuel cell vehicles, which offers lower energy consumption. As a result of concerted and proactive efforts to reduce CO₂ emissions from production activities, we made further progress toward the goal of attaining "CO2 Cancel" in fiscal 2016.

To achieve the goal, we will continue to promote our CO₂ reduction activities both in terms of product development and production activities.





Notional Diagram of "CO2 Cancel"

CO₂ emissions from production activities = Total CO2 emissions from Toyota Industries' plants

Reduction of CO₂ emissions via improved product efficiency = Total reduction in CO2 emissions attained by major products which are manufactured at Toyota Industries' plants

Structure to Implement Environmental Management

Positioning environmental response as one of its most crucial management issues, Toyota Industries is enhancing its environmentally oriented corporate management on a global basis through the promotion of consolidated environmental management.

Promotion of Environmental Management System

Toyota Industries has positioned environmental response as one of its most crucial management issues. To guickly reflect top management's decisions on business operations. Toyota Industries has established and been operating a Company-wide integrated environmental management system (EMS), with the president at the top.

Environmental Management Structure



In fiscal 2015, we provided education to employees to raise the level of our environmental management. These included introductory courses for environmental management and environmental audits, in which the former is for cultivating required knowledge and the latter for gaining knowledge and techniques of internal audits. Proactive participation by department heads and others in managerial positions has enabled us to increase

Scope of Group-Wide Environmental Management (As of March 31, 2015)

Europe Production companies: 6 BT Products AB (Sweden) Toyota Industrial Equipment, S.A. (France) CESAB Carrelli Elevatori S.p.A. (Italy) L.T.E. Lift Truck Equipment S.p.A. (Italy) TD Deutsche Klimakompressor GmbH (Germany) Uster Technologies AG (Switzerland)

Japan Non-consolidated: 10 plants Production companies: 12 Aichi Corporation (Saitar Nishina Industrial Co., I td. (Nagano HANDA Casting Company (Aichi) Unica Co., Ltd. (Aichi) Tokaiseiki Co., I td. (Shizuoka) Altex Co., Ltd. (Shizuoka) IZUMI MACHINE MEG. CO. LTD. (Aichi Nagao Kogyo Co., Ltd. (Aichi) Miduho Industry Co., Ltd. (Aichi Iwama Loom Works, Ltd. (Aichi) Tokyu Co., I td. (Aichi) Hara Corporation (Gifu)

Asia Production companies: 6

Toyota Industrial Equipment Vietnam Co., Ltd. (Vietnam) Kirloskar Toyota Textile Machinery Pvt, Ltd, (India) P.T. TD Automotive Compressor Indonesia (Indonesia) Toyota Industry (Kunshan) Co., Ltd. (China) TD Automotive Compressor Kunshan Co., Ltd. (China) Yantai Shougang TD Automotive Compressor Co., Ltd. (China)

62 Toyota Industries Report 2015

understanding of environmental management and develop internal auditors.

Environmental Audits

Toyota Industries implements annual internal environmental audits as well as external audits carried out by an independent third-party institute.

The external audit conducted in fiscal 2015 revealed one non-conformance. We have already completed measures to correct it and passed on the relevant information to other plants to prevent recurrence.

We continued to conduct internal audits under the mutual, interdivisional audit system introduced in fiscal 2013. In fiscal 2015, we strived to upgrade our auditing capabilities by organizing audit teams with the dual goals of fostering the development of auditors and increasing audit efficiencies. In the area of audits, our focus was placed on reducing environmental risks and improving environmental performance, and we successfully clarified the degree of contribution by each business division's efforts to overall environmental management.



Conducting an introductory course for environmental audits

Non-production companies Japan: 23

Outside Japan[,] 110

North America Production companies: 9

Cascade Corporation (U.S.A.) Indiana Hydraulic Equipment, Corp. (U.S.A.) North Vernon Industry Corp. (U.S.A.) Raymond-Muscatine Inc. (U.S.A.) The Raymond Corporation (U.S.A.) Toyota Industrial Equipment Mfg., Inc. (U.S.A.) Michigan Automotive Compressor, Inc. (U.S.A.) TD Automotive Compressor Georgia, LLC (U.S.A.) Toyota Industries Compressor Parts America, Co. (U.S.A.)

Latin America Production company: 1

Toyota Material Handling Mercosur Indústria e Comércio de Equipamentos Ltda (Brazil)

Initiati

Fifth Environmental Action Plan

The results of our activities in fiscal 2015 showed steady progress across the board toward achieving respective targets for fiscal 2016.

Progress in the Fifth Environmental Action Plan

With an eye to realizing a prosperous life in harmony with the natural environment through the establishment of a sustainable society, we have formulated the Fifth Environmental Action Plan for the period from fiscal 2012 to

fiscal 2016, promoting activities according to the plan. Through activities undertaken during fiscal 2015, we made steady progress toward achieving respective targets for fiscal 2016.

Product Related

† Targets for FY2016 undisclosed due to confidential information

	Fifth Environmental Action P	EV2015 Achievemente		
Segments	Action Policies	Specific Actions	FT2015 Achievements	
	Reduce CO ₂ emissions by 10% from major produc the Fifth Plan*1	ts to be developed during the period covered by		
Establishing a Low-Carbon Emission Society	In the Automobile-Related Business, promote electrification and develop technologies and products that will contribute to reduction of CO ₂ emissions	 Improve energy efficiency of car air conditioners Develop technologies to respond to electrification of vehicles Develop technologies to enable weight reduction Reduce energy loss Develop new engines 	<automobile-related business=""> • Developed highly efficient electric car</automobile-related>	
	In the Materials Handling Equipment Business, develop technologies and products that will contribute to reduction of CO ₂ emissions	 Improve fuel efficiency of internal-combustion lift trucks Reduce energy loss in electric-powered lift trucks and improve energy efficiency of functional units 	 	
	In the Textile Machinery Business, develop technologies and products that will contribute to reduction of CO ₂ emissions	 Reduce energy use through lower air consumption Reduce power use through lower load from windage loss Reduce energy loss 	Consumption	
	In the R&D field, develop technologies for energy efficiency	 Develop new technologies that contribute to improved energy efficiency in automobiles 		
Establishing a Recycling-Based Society	Implement initiatives to promote 3R (reduce, reuse and recycle) design for effective resource utilization	 Reduce use of resources through longer product life Reduce use of resources through standardization, modularization and reduction of components Reduce use of resources through weight and size reductions Promote reuse of components and resources 	Developed plastic glazing back window	
Reducing Environmental Risk and Establishing a Society in Harmony with Nature	Reduce emissions to improve air quality in urban areas in all countries and regions	Develop engines that meet future regulations	 Developed lift truck engines compliant with emissions regulations ahead of schedule 	
	Manage chemical substances contained in products	 Investigate chemical substances contained in products and manage switching over of SVHC*2 and other substances of concern to other substances 	 Expanded the scope of substances of concern (investigated substances of concern contained in supplies) 	

Production Related

Fifth Environmental Action Plan Targets		FY2015 Achievements				FY2016 Targets	
Segments	Action Policies/Specific Actions	Subject	Scope	Control Items	Base Year (FY)	Achievements	Targets
Establishing a Low-Carbon Emission Society	Promote energy reduction and energy conservation through innovative production technologies Reduce greenhouse gas emissions during production processes through energy JIT ⁺³ Promoting measures to curb global warming	CO ₂ emissions • Energy- derived CO ₂ • 5 gases ^{*4} • CO ₂ from logistics	Non- consolidated	Total emissions	2006	-18%	-18%
			Global	Eco	2006	1.29	1.27
			Non- consolidated	efficiency*5		1.42	1.47
	Reduce CO ₂ emissions through green logistics	CO ₂ from logistics	Non- consolidated Eco efficience	Total emissions	1991	-35%	-20%
				Eco efficiency	2007	1.54	1.09
Establishing a Recycling-Based Society	Enhance resource productivity • Reduce use of timber-derived packaging materials • Reduce the volume of discarded materials by taking action at the source, such as improving yields and other measures • Promote internal reuse	Packaging material volume	Non- consolidated	Eco efficiency	2007	3.43	1.09
		Waste generation volume	In Japan	Eco efficiency	2013	1.03	1.01
			Non- consolidated			1.03	1.01
Reducing nvironmental Risk Ind Establishing a ociety in Harmony with Nature	Further reduce emissions of substances of concern Minimize environmental risks • Expand the use of a preliminary review system • Reduce risks related to wastewater • Appropriately manage chemical substances based on social conditions • Enhance risk communication with relevant organizations and local residents	VOC*6 emissions	Non- consolidated (automobile body)	Emission volume per unit of production	_	24 (g/m²)	24 (g/m²)

Promoting Environmental Management

Fifth Environme				
Action Policies	Specific Actions	FT2015 Achievements		
Reinforce CO2 reduction activities for "CO2 Cancel"	 Further reduce CO₂ emitted from production activities in plants Aim to cancel out CO₂ emissions of Toyota Industries by reducing CO₂ emissions through improved efficiency in newly developed products 	Conducted activities for achievement of "CO ₂ Cancel" (Target: FY2016)		
Augment and promote consolidated environmental management	 Build a global environmental management system and promote related activities to: 1) Comply with environment-related laws and reduce environmental risks in each country 2) Achieve the highest-level environmental performance in each country Aim for efficient and systematic corporate management by integrating and operating environmental management system and quality/safety management systems 	 Visualized environmental performance and environmental risk reduction measures of consolidated subsidiaries in and outside Japan 		
Enhance and promote environmental education and enlightenment activities	 Develop environmental specialists to lead internal environment-related activities Strengthen internal environment-related activities and broaden family-friendly initiatives by planning and promoting enlightenment activities that can be carried out at home 	Conducted environmental awareness survey among employees, which scored 3.9 out of 5 points		
Improve eco-conscious brand image	 Reinforce environmental activities according to the contents and results of Survey of Environmental Oriented Management Index to pursue higher brand image 	Toyota 1KD industrial diesel engine received a Logistics Environmental Technology Development Award in the 15th Logistics Environmental Awards program		
Augment activities related to protection of biodiversity	 Identify the impact of business activities on biodiversity and reinforce initiatives by defining specific goals Contribute to biodiversity through conservation of forests and protection of rare species 	 Conducted maintenance and management activities at Biotope of the East of Obu Station, which were jointly carried out with the local community Held biotope tour for students 		
Promote sustainable plant activities	 Promote energy reduction and energy conservation through innovative production engineering, reduce energy loss and build a plant environment in harmony with nature by using renewable energy and other means 	Continually reviewed energy strategy for the medium to long term		

*1: Target products Toyota Industries develops and produces. The CO2 reduction volume is calculated based on the method Toyota Industries determined using FY2011 levels as the baseline. *2: Substances of Very High Concern

*3: Just In Time

3: Just in Time 4: Greenhouse gases other than CO₂, including methane (CH₄), dinitrogen monoxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆) *5: Eco-efficiency = Production efficiency in subject year / Production efficiency in base year

Production efficiency = Production indicator (Net sales or production volume, etc.) / Environmental impact of production activities *6: Volatile Organic Compounds

† Targets for FY2016 undisclosed due to confidential information

Establishing a Low-Carbon Emission Society

We position the establishment of a low-carbon emission society as one of our most crucial environmental tasks. We have been working to reduce CO₂ emissions in our global business activities and at the same time accelerate our efforts to develop more environment-friendly products.

Summary

CO₂ Emissions (Production Activities)

FY2015 Results

Total emissions (non-consolidated) 18% reduction (vs FY06 level)	FY16 target: 18% reduction (vs FY06 level)
Eco-efficiency (global)	FY16 target:
1.29 (FY06 = 1.00)	1.27 (FY06 = 1.00)

Under the Fifth Plan, we set out to achieve a target of reducing total non-consolidated CO₂ emissions from production activities by 18% in fiscal 2016 compared with the fiscal 2006 level. In fiscal 2015, we promoted energy-saving measures when installing new equipment and carried out joint activities among the manufacturing, production engineering and environment departments to reduce the amount of air used in production activities.

Our product development activities are based on the keywords of 3Es (Energy, Environmental protection and Ecological thinking), and we focus on developing products that meet the need for increased energy savings, electrification and weight reduction. In this area, we are currently working toward a target of attaining a 10% reduction in CO₂ emissions from primary products by fiscal 2016 compared with the fiscal 2011 level.

Initiatives for Establishment of a Low-Carbon **Emission Society**

CO2 Emissions (Non-consolidated/Consolidated subsidiaries in and outside Japan)



Saving Energy Used for Air Conditioning by Introducing Coating Dry-Off Oven Exhaust Heat Recovery Equipment

In fiscal 2015, as part of its ongoing activities to reduce CO₂ emissions, the Takahama Plant, a development and production base of materials handling equipment in Aichi Prefecture, undertook a project to reuse exhaust heat from the coating drv-off oven.

Previously, city gas was used to power the product cooling system required in the coating process and for air conditioning in the plant, while exhaust heat from the dry-off oven was being emitted externally.

The project installed exhaust heat recovery equipment suitable for the plant and succeeded in efficiently recovering otherwise wasted exhaust heat and reusing the recovered energy for the product cooling system and air conditioning.

As a result, annual CO2 emissions of the Takahama Plant were reduced by about 200 tons. This project won the Most Outstanding Practice Award in fiscal 2015 under our internal award program to recognize excellent environmental improvement activities.

We will continue to undertake improvement activities to further reduce CO₂ emissions.

Reusing Exhaust Heat



Certification of Environmentally Friendly Products

Toyota Industries has been proactively promoting development of eco-conscious products. To certify and showcase to the public products that possess exceptionally high environmental performance and meet internal environmental standards, we launched the Toyota Industries Environmentally Friendly Product Certification System in fiscal 2007. With the addition of two types of lift trucks and one textile machine in fiscal 2015, a total of 18 products have obtained certification under this system to date.

For certified environmentally friendly products, see http://www.toyota-industries.com/csr/environment/product/eco5.html



8FD35 - 8FD80 (fitted with the Toyota 1KD) 8FG35 - 8FG50 (fitted with the Toyota 1FS)

Attained a significant reduction in fuel consumption compared with the previous model by installing the Toyota 1KD diesel engine or Toyota 1FS gasoline engine, both certified as environmentally friendly products under our internal certification

svstem † The models fitted with the Toyota 1KD satisfy Japan's 2014 Non-road Special Motor Vehicles emission regulation.

GENEO nternal-combustion lift truck

8FD15 - 8FDJ35 (fitted with the Toyota 1ZS)

Attained a significant reduction in fuel consumption compared with the previous model by newly installing the Toyota 1ZS diesel engine certified as an environmentally friendly product under our internal certification system.

+ The model satisfies Japan's 2014 Non-road Special Motor Vehicles emission regulation.

JAT810 Air-jet loom

The JAT810 air-jet loom offers a diverse range of originally developed features, including an air-saving system that ensures higher energy-saving performance. Attained significant reductions in both air and power consumption compared with the previous model.



*1: Compared with the previous model. (The percentage of reduction may vary depending on operating conditions.)

Toyota 1KD Industrial Diesel Engine Received Logistics Environmental Technology **Development Award in 15th Logistics Environmental Awards Program**

We developed the Toyota 1KD without using a diesel particulate filter (DPF) and successfully attained both lower fuel consumption and cleaner emissions by improving the fuel efficiency of the engine itself. This approach was highly recognized and received the Logistics Environmental Technology Development Award in the 15th Logistics Environmental Awards program*². The Toyota 1KD has been fitted in our GENEO internal combustion lift trucks.

*2: Award program sponsored by the Japan Federation of Freight Industries to promote environmental conservation and environmental awareness in the freight industry and recognize organizations/companies and individuals which/who have contributed to achieving sound industrial growt







Toyota 1KD diesel engine

Establishing a Recycling-Based Society

With a view to establishing a recycling-based society, we have been dedicating considerable efforts to making effective use of resources throughout our entire supply chain.

Summary

Waste Generation Volume (Production Activities)

FY2015 Results



Our eco-efficiency targets in the area of waste generation volume under the Fifth Plan are set at 1.01 both on a non-consolidated basis and for Toyota Industries and its consolidated subsidiaries in Japan (fiscal 2013 as the base year). To reduce materials losses, we engage in activities to make effective use of resources throughout the entire supply chain, extending the scope of our activities to our business partners.

Initiatives for Establishing a Recycling-Based Society

■ Waste Generation Volume (Non-consolidated/Consolidated subsidiaries in Japan)



Collaborating with Business Partners to Reduce Use of Resources

The Anjo Plant, a development and production base of electronic devices in Aichi Prefecture, has been undertaking improvement activities jointly with business partners as well as internal departments responsible for development, production engineering and manufacturing. These activities,

aimed at reducing the plant's resource consumption, begin in the product development stage. In fiscal 2015, the plant devised a better way to pack components being delivered from business partners.

Previously, individual components were delivered from business partners in separate cardboard boxes, which were discarded after operators took out components for mounting on a product.

For newly developed products, we collaborated with business partners as early as in the product development stage and came up with simple packing by eliminating the use of cardboard boxes and partially reusing packing materials. The improved method successfully reduced the amount of packing materials discarded as waste.

Moreover, by delivering multiple components as a unit in a roll form, we were able to reduce man-hours required for packing and transporting on the business partner side and those for transporting and unpacking at the Anjo Plant.

We will continue to seek reduced use of resources in our production activities.

Packing Method









Joint review session with business partners

Effective In-House Utilization of Metal **Resources**

The Higashichita Plant, a production base of foundry parts and engines in Aichi Prefecture, has been reusing metal scrap generated at our other plants as a foundry raw material. In fiscal 2015, the plant's efforts were geared to the reuse of copper scrap.

Previously, we purchased and used copper pellets as a foundry raw material. Among metal scrap generated at our other plants, we verified that the reuse of enameled copper wire scrap as a foundry raw material was possible.

Discarded wires, however, were not readily reusable because they were tangled and it was difficult to remove a required quantity quickly. The issue was resolved by requesting plants generating the wire scrap to break the tangled bulk into convenient quantities.

This initiative has enabled efficient and internal reuse of enameled copper wire scrap, which had otherwise been sold to the market as waste. In the future, we will extend our efforts to other metal resources.

■ State of Enameled Copper Wire Scrap

Before improvement



Tanaled and difficult to remove a required quantity quickly (hard to measure)

After improvement



Easy to remove a required quantity quickly and use as foundry raw material

Compiling and Disseminating Waste Disposal Know-How within Toyota Industries

Employees in charge of waste disposal at our plants in Japan share information on case examples that lead to resource recycling and reduction of waste disposal costs, translating their shared knowledge into Company-wide improvement activities.

In fiscal 2015, they started compiling their know-how on waste disposal into a Waste Disposal Handbook and issued a part of the handbook, the Guide to the Work of Equipment Disposal. It has been disseminated to relevant departments and effectively utilized to ensure proper disposal and compliance with applicable laws and regulations.



Genchi genbutsu (go and see for yourself) confirmation of waste disposa

OPIC

Promoting "Kaizen by Karakuri" Initiatives to Business Partners

We have been promoting initiatives to attain kaizen (improvement) by utilizing Japan's traditional, simple mechanical systems called karakuri, which do not require power generated by motors or other devices.

In fiscal 2015, we held a briefing session to explain our "kaizen by karakuri" initiatives, in which 45 representatives from business partners and other parties participated. Our presentation on a karakuri pump, its structure and usage prompted lively questions and answers. Participants took back case examples to achieve further kaizen in their respective companies.



"Kaizen by karakuri" briefing sessior

Reducing Environmental Risk and Establishing a Society in Harmony with Nature

We work to ensure the prevention of environmental incidents by fully enforcing the management of chemical substances in product development and production activities and systematically monitoring drainage systems.

Summary

VOC Emissions (Production Activities)

FY2015 Results

Emissions per unit of production (non-consolidated/automobile body) FY16 target: 24 g/m² 24 g/m²

Under the Fifth Plan, we set a fiscal 2016 target of attaining emission volume per unit of production below 24 g/m² for volatile organic compounds (VOCs) from the automobile body painting process and undertook activities accordingly. In fiscal 2015, we continued our efforts to increase the recovery rate and enhance maintenance and management of thinner, a solvent used for cleaning. Consequently, emission volume per unit of production in fiscal 2015 was 24 g/m².

Soil and Groundwater Pollution Countermeasures

Toyota Industries carries out surveys and purification of soil and groundwater contaminated from the past use of trichloroethylene. We regularly report the survey results to local government authorities and provide information at local community meetings. As measures to prevent pollution from substances covered by the Soil Contamination Countermeasures Law as well as from grease and oils, we have drilled observation wells at all plants to conduct regular checks.

Trichloroethylene readings are available at: http://www.toyota-industries.com/csr/environment/

Installation of a System to Constantly Monitor Rainwater

In our plant sites, rainwater is routed through a pipe, which is separate from the drainage system of wastewater generated in production processes, and released into a sewage system.

In order to enforce strict management of both rainwater and wastewater from production processes, we have installed an oil separation tank and a system to constantly monitor water quality.

If the system detects an indication of deteriorating water

quality, it sends alerts to responsible departments and reroutes the rainwater into an emergency tank. Then, depending on the degree of quality deterioration, we either carry out purification at internal wastewater treatment facilities or consign disposal to an external company to ensure contaminated water is not discharged off the premises.



Rainwater constant monitoring system

Visualizing Risk through Piping Inspections

We have been promoting visualization of risks caused by the aging of piping to respond to the revision to Japan's Water Pollution Control Act in April 2011 and to prevent groundwater and soil pollution due to defects in drainage systems.

During fiscal 2015, our four production bases in Aichi Prefecture conducted an inspection of buried piping by getting inside the pipes and performing a visual check or, if pipes were inaccessible, by using self-propelled pipe inspection cameras. The state of deterioration revealed in the inspection was marked on the drain system blueprint of each plant. Based on a risk map created from these blueprints, we will implement required measures depending on the degree of urgency.



Thoroughly Enforcing Management of Chemical Substances

Many of the chemical substances needed for our production activities may cause adverse effects on the environment. Thus, appropriate management of chemical substances based on the safety data sheet (SDS) and other available information is crucial in ensuring safe handling and minimizing potential harmful effects.

Before starting to use a chemical substance, we check our internal system to confirm any applicable laws and regulations and usage conditions, and make sure to disseminate safety, health and environmental precautions to operators. This allows operators to understand safe and appropriate usage, effectively preventing industrial accidents, occupational diseases and environmental abnormalities.

Receiving accurate information from business partners also forms an essential part of our chemical substances management. In fiscal 2015, we concentrated our efforts on renewing awareness among business partners for the

■ Toyota Industries' Chemical Substances Pre-Evaluation System



importance of providing accurate information as well as on keeping our pool of information up to date. We will continue to seek to minimize environmental risk throughout the entire supply chain.



Briefing session for business partners

Environmental Management

Toyota Industries engages in a range of new environmental activities, from the conservation of biodiversity to measuring Scope 3 emissions.

Calculating Greenhouse Gas (GHG) Emissions in the Supply Chain

We recognize that measuring the three scopes defined by the GHG Protocol and turning the results into specific efforts to reduce CO₂ emissions are important in creating a lowcarbon society. Scopes 1 and 2 are GHG emissions from our business activities, the former being direct emissions from our use of fossil fuels and the latter being indirect emissions from the use of purchased energy resulting from generation of electricity by power plants and other facilities. Scope 3 emissions are indirect emissions associated with each product from the purchase of raw materials to end use by customers and disposal.

In fiscal 2015, we joined the Ministry of the Environment's project to support calculation of supply chain GHG emissions for the establishment of a framework for disclosure of environmental information. We received assistance from NTT Data Institute of Management Consulting, Inc. in calculating our Scope 3 emissions.

In the fiscal 2015 results, combined Scope 1 and 2 emissions accounted for 1.8% of the total emissions, with Scope 3 emissions reaching 98.2%. The largest source of emissions, which accounted for 93.0%, was Category 11 (Use of sold products) under Scope 3. This was because the figure included an estimate of future GHG emissions of our products (lift trucks, vehicles, engines, etc.) throughout their lifecycle (during use until disposal).

Going forward, we will continue to monitor GHG emissions within the entire supply chain and accordingly promote CO₂ emissions reduction activities.

GHG Emissions in Supply Chain (FY2015)



Scope 3 Emissions by Category (FY2015)



Hosting a Biotope Tour for University Students

In April 2014, we conducted a tour for university students who are members of the Life Relay Project* of our biotope, which we have developed and completed on Companyowned idle land in Obu City, Aichi Prefecture. During the tour, we explained the concept of our biotope and living organisms found there and exchanged opinions on how to turn it into an even better habitat for these living organisms. * A project jointly carried out by Aichi Prefecture, NPOs, companies and students with the aim of forming ecological networks by leveraging corporate green zones of the Chita Peninsula as well as developing young environmental leaders



Participants of the biotope tour

Activity Examples of Consolidated Subsidiaries (Outside Japan)

Germany

Improving Consolidated Management of Energy Consumption

TD Deutsche Klimakompressor GmbH (TDDK)

Subsidiary producing car air-conditioning compressors

In fiscal 2015, TDDK installed a new system that allows the automatic collection of energy consumption data of all production lines. With the new software, TDDK is able to raise the reliability of data and reduce man-hours for collecting data. In addition, automatic visualization of data to understand the trends in energy consumption make it possible to further improve the level of consolidated management.



By accumulating more data and streamlining management of energy consumption, TDDK is aiming for more effective environmental activities.



Members who made improvements

Environmental Management

U.S.A.

Introduction of Potentiometers on Electric Induction Furnaces

North Vernon Industry Corp. (NVIC)

Subsidiary producing materials handling equipment parts

NVIC has been using an electric induction furnace to melt scrap iron, which drives up monthly electricity consumption. To address this issue, NVIC introduced potentiometers on the electric induction furnaces to limit the application of power to 75% of the maximum amount. At this rate, iron can still be melted in time to meet production schedules, but CO₂ emissions can be reduced while also decreasing electricity consumption.

As a result, NVIC has achieved a 5.1% reduction in electricity used per ton of iron melted in fiscal 2015 compared with fiscal 2014, reducing CO₂ emissions by 3,650 tons.

NVIC is examining adding another furnace to Plant 2, which will require modification of the power controls.

OPIC

TDDK Obtains ISO 50001 Certification in March 2015

ISO 50001 is an international standard that establishes systems and processes for various organizations to improve energy performance on an ongoing basis and aims at reducing the emissions volume of greenhouse gases and lowering energy costs. As a result of obtaining this certification, TDDK will aim for more effective environmental activities.

Environmental Impact Flow and Environmental Accounting

In this section, we provide an overall picture of environmental impact resulting from our global business activities and report the results of environmental accounting (environmental conservation cost, environmental conservation benefits and economic benefits of environmental conservation initiatives).

Environmental Impact Flow



*2: Short for Pollutant Release and Transfer Register, the PRTR law is a scheme whereby businesses measure the release and transfer of PRTR designated pollutants and report their performance to the government. The government then compiles this data and releases it to the public.

(Millions of ven)

Environmental Accounting and On-Site Verification

Fiscal 2015 Environmental Accounting*3

Environmental Conservation Cost

Scope of data collection: Toyota Industries Corporation Period of data collection: April 1, 2014 – March 31, 2015

*3: Environmental accounting data is collected in compliance with the Ministry of the Environment's Environmental Accounting Guidelines 2005 Edition.

Category		FY2	015	FY2014		
		Investment	Expenses	Investment	Expenses	
Business area costs	Pollution prevention costs	944	189	585	427	
	Global environmental conservation costs	528	4,301	325	3,192	
	Resource recycling costs	132	160	144	639	
Upstream/downstream costs		0	142	0	343	
Management costs		3	221	5	1,219	
Research and development costs		28	1,437	28	1,943	
Social contribution activity costs		2	628	0	456	
Environmental remediation costs		24	6	0	43	
Total		1,661	7,084	1,087	8,262	
		8,7	45	9,3	49	

Environmental Conservation Benefits

Environmental Impact	Comparison with Previous Fiscal Year
CO ₂	15,105 t decrease
Generation of waste products	4,930 t decrease
Water	141,841 m ³ decrease

Economic Benefits of Environmental Conservation Initiatives

		(IVIIIIONS OF YER)
Item	Details	Amount
Revenue	Returns from sale of recycled waste products	4,919
	Energy cost reductions	617
Cost reduction	Cost reduction by resource savings (including reductions in amount of water use and wastewater treatment costs)	63
Total		5,599

On-Site Verification

Every year, Toyota Industries Head Office's Plant Engineering & Environment Department takes the initiative in conducting on-site verification of the accuracy and consistency of environmental data included in the Toyota Industries Report. The results for fiscal 2015 are as follows.

On-Site Verification Sites

Toyota Industries Corporation

• Obu Plant, Hekinan Plant, Morioka Works, Anjo Plant **Consolidated subsidiaries in Japan**

 IZUMI MACHINE MFG. CO., LTD., Tokyu Co., Ltd., Aichi Corporation

Items to be Verified

- 1. Adequacy of the scope of data collection; validity of data collection and calculation methods; validity of internal verification
- 2. Trustworthiness and accuracy of collected/calculated data as well as data reported to the Head Office; accuracy of methods of reporting to the Head Office

Results

- 1. The verified sites retained original data (evidence) for all statistics, which were confirmed to be valid as was the method of data collection.
- 2. All discrepancies found during verification have been corrected after respective causes have been identified.
- 3. Considerations of improvements will be made for data collected using complex collection methods that may result in calculation errors.