Committed to People, Committed to the Future.

TOSHIBA CORPORATION
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Inquiry page on Toshiba website
URL http://www.toshiba.co.jp/env/en/contact/

The report is available on the Toshiba website
URL http://www.toshiba.co.jp/env/en/

Published in December 2016

TOSHIBA

Leading Innovation

2016 Environmental Report

Toshiba Group promotes environmental management, focusing on environmental issues as one of its top management priorities. It has also formulated the Basic Policy for the Environment which, in accordance with Basic Commitment of the Toshiba Group, lays out specific environmental strategies to be shared by all members of the group.

Basic Commitment of Toshiba Group

We, Toshiba Group companies, based on our total commitment to people and to the future, are determined to help create a higher quality of life for all people, and to do our part to help ensure that progress continues within the world community.

Commitment to People

We endeavor to serve the needs of all people, especially our customers, shareholders, and employees, by implementing forward-looking corporate strategies while carrying out responsible and responsive business activities. As good corporate citizens, we actively contribute to further the goals of society.

Commitment to the Future

By continually developing innovative technologies centering on the fields of Electronics and Energy, we strive to create products and services that enhance human life, and which lead to a thriving, healthy society. We constantly seek new approaches that help realize the goals of the world community, including ways to improve the global environment.

TOSHIBA Group Slogan

Committed to People,
Committed to the Future. TOSHIBA

Toshiba Group's Basic Policy for the Environment

We of the Toshiba Group recognize that the basic responsibility of people living today is to hand over the precious global environment to the next generation in a sound condition. Out of this recognition and in accordance with our Environmental Vision, we will strive to create affluence and ensure coexistence with the earth. We will also contribute to realizing a sustainable society by aiming at achieving a low-carbon and recycle-oriented society that strives to coexist with nature through our environmental activities.

◆Promoting environmental management

- Toshiba considers environmental stewardship to be one of management's primary responsibilities and promotes environmental activities in harmony with economic activities.
- Toshiba assesses the impacts of its business activities, products, and services on the environment, including with regard to biodiversity, and specifies objectives and targets with respect to the reduction of environmental impacts and prevention of pollution.
- Toshiba strives to continuously improve environmental management through internal audits and reviews of activities.
- Toshiba complies with all laws and regulations, industry guidelines it has endorsed, and its own standards concerning the environment.
- Toshiba strives to enhance the awareness of all its employees with respect to the environment and requires that they make a practical contribution to the environment through their work.
- Toshiba operates globally, and accordingly, promotes environmental activities throughout Toshiba Group.

◆Providing environmentally conscious products and services and reducing their environmental impact through business activities

- Toshiba recognizes that natural resources are finite and implements vigorous environmental measures to promote their effective and practical use in terms of both products and business processes.
- Toshiba develops and provides environmentally conscious products and services which contribute to the reduction of environmental impacts throughout their life cycles.
- Toshiba strives to reduce the environmental impacts of all business processes, encompassing design, manufacturing, logistics, sale, and disposal, with a particular focus on the mitigation of climate change, efficient use of resources, and management of chemicals.

◆As a corporate citizen of planet Earth

- Toshiba contributes to society through its environmental activities, which include the development and provision of excellent, environmentally conscious technologies and products in cooperation with society at large and with local communities.
- Toshiba is committed to maximizing disclosure and transparency in communication with stakeholders and society at large in order to facilitate mutual understanding.

Toshiba Group Business Overview

Company Overview (as of March 31, 2016)

Company name	Toshiba Corporation (TOSHIBA CORPORATION)
Headquarters address	1-1, Shibaura 1-chome, Minato-ku, Tokyo
Founded	July 1875
Paid-in capital	200 billion yen (as of July 31, 2016)
Consolidated net sales	5.6687 trillion yen
Number of employees (consolidated)	187,809

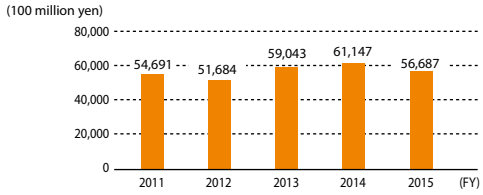
CSR-related international charters/guidelines Toshiba endorses

- United Nations Global Compact
- GRI (Global Reporting Initiative)
- EICC (Electronic Industry Code of Conduct)

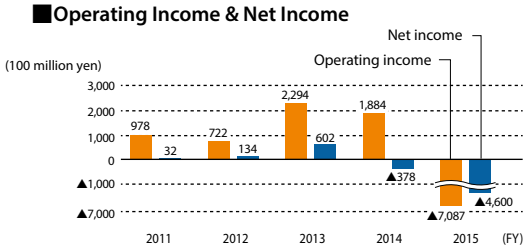
Number of shareholders	437,466
Number of shares issued	4,237,600,000 shares
Number of consolidated subsidiaries	551 (161 in Japan, 390 overseas)
Number of affiliates accounted for by the equity method	144
Stock exchange listings	Tokyo, Nagoya

Financial Results (Consolidated)

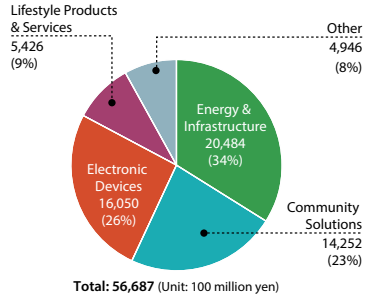
■Net sales



■Operating Income & Net Income

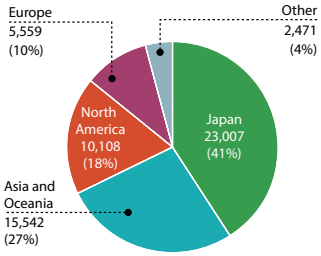


■Sales by Business Segment (FY2015)



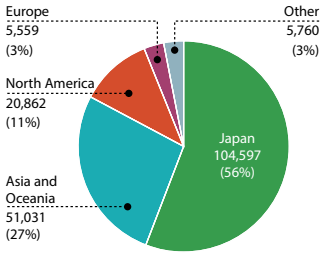
Total: 56,687 (Unit: 100 million yen)

■Sales by Region (FY2015)



Total: 56,687 (Unit: 100 million yen)

■Number of Employees by Region (FY2015)



Total: 187,809 (people)

Note: Eliminations of sales among segments were 447.1 billion yen.

Main Products and Services

Energy System Solutions

Nuclear power generation systems, thermal power generation systems, hydroelectric power generation systems, fuel cells, power generation, photovoltaic power generation systems, power distribution systems, etc.

Infrastructure System Solutions

Instrumentation and control systems, station operation automation devices, transportation devices, motors, radio devices, government office systems, water supply and sewerage systems, environmental systems, broadcasting systems, telecommunications systems, building and facility power supply systems, elevators, escalators, lighting equipment, industrial light sources, industrial air conditioners, compressors, etc.

Retail & Printing Solutions

POS systems, multi-function printers, etc.

Storage & Device Solutions

Small signal devices, power semiconductors, optical semiconductors, logic LSIs, mixed signal ICs, image sensors, NAND flash memories, disk drives (HDDs and SSDs), semiconductor manufacturing systems, etc.

Industrial ICT Solutions

IT solutions, etc.

Other

PCs, tablets, TVs, recorders (BD recorders, etc.), etc.

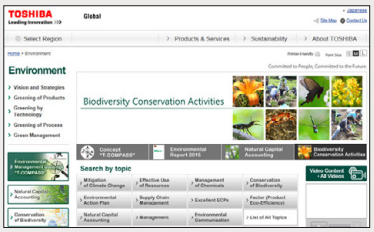
Editing Policy

Toshiba Group has published the Environmental Report since FY1998 (from FY2004 to FY2007, environmental information was provided in the CSR Report). This report is published to provide detailed environmental information on Toshiba Group to all stakeholders of the Group. The content of the FY2016 edition includes information on the progress of the Fifth Environmental Action Plan, initiatives for products with the highest level of environmental performance, and production sites' efforts to reduce environmental impacts, as well as messages from four in-house company presidents and a feature article on biodiversity conservation. At the same time, to contribute to reduction in environmental impact, this report will be published only on Toshiba's website with its print version not issued.

■Providing detailed environmental information
http://www.toshiba.co.jp/env/en/index.htm

Environmental Report

Website for environmental activities



More detailed information and other data are available on the website for environmental activities.

■Providing financial information

Annual report
http://www.toshiba.co.jp/about/ir/en/finance/index.htm

Website for investor relations
http://www.toshiba.co.jp/about/ir/index.htm

■Reporting on CSR activities (social and environmental) in general

CSR Report
http://www.toshiba.co.jp/csr/en/report/index.htm

Website for CSR activities
http://www.toshiba.co.jp/csr/en/index.htm

Contents

CEO Interview 05

Special Features

Messages from In-house Company Presidents 07
Conservation of Biodiversity 11

Chapter 1 Vision and Strategies

Toward the Realization of Environmental Vision 2050 17
Progress in the Fifth Environmental Action Plan 19
Environmental Management Concept "T-COMPASS" 21
Making GHG Emissions in the Supply Chain Visible for All Categories 22
Overview of Environmental Impacts 23

Chapter 2 Greening of Products

Creation of Products with the Highest Level of Environmental Performance 25
Excellent ECPs 27
Mitigation of Climate Change by Products and Services 29
Efficient Use of Resources 31
Recycling of End-of-Life Products 33
Management of Chemicals in Products 35
Product Eco-efficiency 37

Chapter 3 Greening by Technology

Low-carbon Energy Technologies 39
Generating Energy 40
Storing Energy 43
Distributing Energy 44

Chapter 4 Greening of Process

Considerations to the Environment Through Manufacturing 45
Mitigation of Climate Change 47
Efficient Use of Resources 49
Management of Chemicals 51
Responses to Environmental Risks 53

Chapter 5 Green Management

Continuous Improvement of the Foundation of Environmental Management 55
Environmental Management Structure 56
Environmental Education and Human Resource Development 57
Environmental Audits 59
ISO14001, Risks and Compliance 60
Environmental Accounting 61
Natural Capital Accounting 63
TOPICS Toward Inter-company Comparisons of Natural Capital Accounting 66
Environmental Communication 67
Third-Party Evaluation 69
Evaluation by External Parties (FY2015 results) 70

● **Organizations covered**
In principle, this report covers Toshiba Group (Toshiba Corporation and its 598 consolidated subsidiaries in Japan and overseas). In cases where the report covers entities other than Toshiba Group, the individual entities are indicated.
* In this report, "Toshiba" refers to Toshiba Corporation.

● **Reporting period**
This report focuses on the results of activities in FY2015 (from April 1, 2015 to March 31, 2016), but includes some activities continuing from the past and some more recent activities.

● **Publication**
The current issue was published in September 2016 (The publication of the next issue is scheduled for September 2017; the previous issue was published in November 2015).

● **Significant changes during the reporting period**
- Topcon Corporation was excluded from application of the equity method as a result of the transfer of its stock.
- Toshiba Medical Systems Corporation was excluded from application of the equity method as a result of the transfer of its stock (however, the environmental performance data on FY2015 results in this report includes data on Toshiba Medical Systems Corporation).
- Toshiba concluded a contract regarding the transfer of Toshiba Home Appliance Corporation's stock.

● **Reference guidelines**
- GRI (Global Reporting Initiative)
  Sustainability Reporting Guidelines Fourth Edition (G4)
  Note: The GRI Content Index is shown on the website.
- Environmental Reporting Guidelines 2012
- Environmental Accounting Guidelines 2005

● **Ensuring universal design in terms of color vision**
We made efforts to ensure the text and charts herein are easy to read for as many readers as possible irrespective of differences in color vision. For details, please visit our website for environmental activities.

Disclaimer
This report includes descriptions of Toshiba Group's future plans and strategies, as well as prospects of its financial results. These descriptions and prospects are based on matters decided and opinions formed using information that is obtainable at this time.

Toward the Realization of a Sustainable Society

Satoshi Tsunakawa
Toshiba Corporation
Director, President and CEO

Q1. Please tell us your opinion about Toshiba Group's environmental management.

Ever since joining Toshiba, I have always been committed to the environment. In particular, I have engaged in developing initiatives for environmental conservation and for ensuring the safety and security of customers, including initiatives to improve products' environmental performance in order to minimize energy and resource consumption as well as to reduce the physical loads placed on product users. Having been appointed President and CEO in June 2016, I remain firm in my belief that the environment is one of the most important issues facing the management of Toshiba Group. I believe that for the Group, environmental management is the second most important issue preceded only by compliance. Needless to say, to obtain the trust of stakeholders and to ensure the future growth of our business, thorough compliance must be maintained. At the same time, I believe it is also indispensable to proactively implement environmental management on an ongoing basis.

Toshiba Group has consistently made genuine efforts to realize environmental conservation. We have developed Environmental Vision 2050 to set forth our ideal world for 2050 in which all people can lead affluent lifestyles in harmony with the Earth. To realize this vision, we formulate Environmental Action Plans in order to set specific action goals and manage progress during each fiscal year. This fiscal year marks the final year of the Fifth Environmental Action Plan. We are currently making steady progress in each of the following areas: Greening of Products (creation of products with the highest level of environmental performance), Greening by Technology (global development of advanced low-carbon technology), Greening of Process (pursuit of the world's lowest level of environmental impacts), and Green Management (basic activities, including human resource development and environmental communication).

Based on the belief that developing environmentally conscious products, services, and manufacturing processes is the proper mission of a manufacturing company, we will continue to promote environmental management, thereby raising the level of our environmental initiatives.

Q2. What measures does Toshiba Group intend to take to solve environmental issues such as climate change?

The Paris Agreement, which provides a new framework for mitigating climate change, was adopted at COP21 in Paris in December 2015. In response to this, at a cabinet meeting held in May 2016, the Japanese government decided to implement the Climate Change Mitigation Plan, which outlines specific goals and strategies to reduce greenhouse gas (GHG) emissions. As the trend toward mitigating climate change gains momentum worldwide, our industry will also be required to take more active measures than ever before. By placing priority on mitigation measures to reduce GHG emissions, Toshiba Group will promote energy-saving programs at individual production and business sites as well as implement measures for high-efficiency manufacturing at an accelerated pace throughout our entire supply chain. At the same time, we will proactively provide energy-efficient products and low-carbon technologies, thereby contributing to reducing GHG emissions worldwide. We will also develop measures to adapt to the effects of climate change,

including developing weather radar, rainwater drainage systems, disaster prevention information systems, and hydrogen-based autonomous energy supply systems.
In addition, we will make steady efforts to find solutions to issues besides climate change, including reducing risks to water resources, developing programs to ensure effective use of resources, such as 3R (Reduce, Reuse, and Recycle) activities, and ensuring proper management of chemicals used in products and in manufacturing processes.

Q3. What initiatives will you promote in high-priority businesses?

To promote environmental initiatives, we set appropriate goals in three high-priority businesses (energy, social infrastructure, and storage) as well as in the ICT solution business, which supports these three businesses.
In the energy business, we aim to realize a low-carbon society by systematically providing a wide range of technologies, including high-efficiency thermal power generation, nuclear power generation that does not emit CO_2 when generating electricity, storage battery solutions, and power transmission and distribution systems.
In the social infrastructure business, we aim to realize a sustainable society by providing environmentally conscious products and services in the areas of public infrastructure, buildings and facilities, and industrial systems, all of which support society.
In the storage business, we implement various measures to reduce environmental impacts during manufacturing as well as to promote the development of environmentally conscious products, including the use of NAND flash memories in datacenters to reduce energy consumption.
In the ICT solution business, we provide solutions designed to reduce environmental impacts by developing and utilizing IoT platforms that take advantage of Toshiba Group's strengths, such as speech and image recognition technology as well as embedded software, thereby supporting our three high-priority businesses through the use of ICT.
Toshiba Group will make steady efforts to promote initiatives on products and services as well as manufacturing processes in these business areas, and to reduce the environmental impacts on society as a whole to contribute to the realization of a sustainable society.

Q4. What is your vision and commitment to Toshiba Group's environmental management going forward?

Toshiba Group is currently formulating the Sixth Environmental Action Plan in order to provide new activity goals for FY2017 and beyond. In the Sixth Environmental Action Plan, we will promote measures to reduce the environmental impacts of products and services as well as of manufacturing processes while keeping focused on realizing a sustainable society. To this end, we will step up our efforts more than ever before to create a sustainable society, including realizing a low-carbon society through the energy business. At the same time, we will further strengthen environmental management while addressing new trends, such as the circular economy in Europe. By recognizing the ideal of environmental management to be a state in which environmental perspectives are built into all stages of corporate management so as to contribute to reducing environmental impacts through corporate activities, products, and services, Toshiba Group aims to play a pioneering role in realizing a sustainable society.
At the same time, we must reinforce our awareness that Toshiba Group's three high-priority businesses (energy, social infrastructure, and storage) as well as the ICT solution business, which supports these three businesses, have important roles to play in supporting society going forward and people's lives as well as in contributing to a sustainable future for the Earth. We will also focus on raising environmental awareness and on providing environmental education and training so that each employee can perform his or her daily tasks with a strong commitment to contributing to the environment through business activities.

Q5. Finally, please give a message to the stakeholders.

Toshiba Group remains firm in its resolve to seriously consider what it as a company can do for the future of the Earth and to carry out all available measures. We will maintain this stance into the future, and under a new system as a revitalized Toshiba, all members, including top management as well as those working in the field, will share a genuine commitment to environmental management. We would like to regain your trust by presenting our efforts to all of our stakeholders.
One of my favorite proverbs is "slow and steady wins the race." I believe that in environmental management, as in business management, making appropriate efforts surely and steadily will eventually lead to successful results. In addition, I also believe that it is necessary to respond quickly and appropriately to new challenges to contribute to society.
To once again strive toward realizing a sustainable society, all members of Toshiba Group will share our group slogan as companies that develop businesses to support society: "Committed to People, Committed to the Future." We sincerely hope that we may enjoy your ongoing support.

We offer a wide range of energy technologies to the world in order to realize a low-carbon society.

Danny Roderick, President and CEO, Energy Systems & Solutions Company

As preventing global warming is one of the most crucial issues faced by humankind, energy policies for future generations have been widely discussed across the world. As an in-house company offering a wide range of energy technologies globally, Energy Systems & Solutions Company is committed to responding to global warming as a critical mission, and has been working to achieve a variety of technological developments.

Thermal power generation generates CO_2 as a result of the combustion of fossil fuel. Therefore, we have been putting our efforts on technological development to minimize CO_2 emissions through a system using a highly efficient gas combined-cycle and carbon capture technology.

For nuclear power generation, we give safety the highest priority. We have been developing technologies to prevent accidents and minimize the effect of an accident if one occurs. Because nuclear power generation is environmentally conscious as it does not generate CO_2 emissions, we will continue working with it into the future while giving the utmost consideration for safety and people's security.

We have also been devoting ourselves to promoting renewable power generation such as hydroelectric, photovoltaic, geothermal, and wind power. Furthermore, we have also been developing storage battery solutions and hydrogen electric power storage system to use renewables effectively, and a power transmission and distribution system to ensure power supply stability.

We intend to contribute to the realization of a low-carbon society globally by offering these advanced technologies in a comprehensive manner.

I assumed the post of president of Energy Systems & Solutions Company in June 2016. Since then, I have been sharing my clear vision of the future of the company with our employees, and have been working on creating a work environment to facilitate the free exchange of honest opinions, not just mere rhetoric. All our workers share a sense of mission with regard to contributing to the environment, and identify problems faced by their colleagues without communication barriers in order that we may intensify the effectiveness of our efforts.

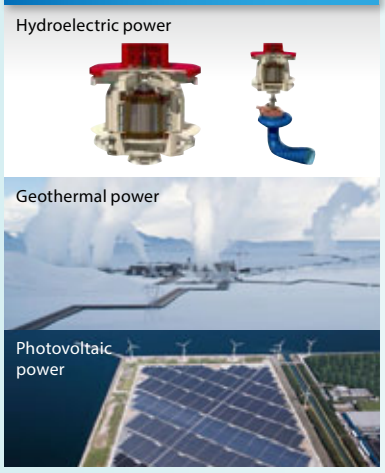
Regardless of our nationality and race, all human beings share the same Earth. We believe that it is our role for all of our employees to exert themselves in the offering of low-carbon technologies and help our Earth to last longer for our children and grandchildren.

Energy Systems & Solutions Company

We provide various power generation solutions to ensure a stable electricity supply.

Large power generation facilities

Renewable energy



Power transmission/distribution/storage

We support people's affluent lifestyles and realize a sustainable society through a wide range of products and services.

Shinichiro Akiba
President and CEO, Infrastructure Systems & Solutions Company

The Infrastructure Systems & Solutions Company provides a wide range of products and services in areas that support people's lifestyles, including public infrastructure systems, buildings and facilities, and industrial systems. All of these businesses play important roles in providing social lifelines and have great responsibility for ensuring people's safety and security. I believe that our mission is to provide environmentally conscious products and services in order to reduce the environmental impacts of society as a whole and to contribute to the realization of a sustainable society. In other words, environmental activities are themselves the business of the Infrastructure Systems & Solutions Company.

To reduce environmental impacts, we are placing particular focus on efforts to develop solutions designed to mitigate climate change. As measures to mitigate climate change, we will develop products such as renewable energy systems, building energy consumption management systems, and storage battery systems that use the SCiB™ secondary battery. At the same time, to help adjust to the effects of climate change, we will develop weather radar, rainwater drainage systems, and disaster prevention information systems, thereby mitigating climate change while implementing BCP measures.

Developing environmentally conscious manufacturing processes is also important. To this end, we will promote energy and resource efficient manufacturing at all of our many production and business sites in Japan and overseas, thereby reducing environmental impacts worldwide.

To promote environmental initiatives, I believe we must also share our vision within our company. At the Infrastructure Systems & Solutions Company, we share our company vision, which aims to realize a sustainable society and contribute to the future of people and the Earth, with all our employees in Japan and overseas. We are also stepping up efforts to facilitate in-house communication, such as by periodically distributing video messages to communicate company policies. I believe that communicating our vision clearly will enable all employees to share common objectives and play an active part in environmental activities.

We will continue to build long-standing relationships with stakeholders and to contribute to realizing a sustainable society through our business activities.

Infrastructure Systems & Solutions Company

We provide a wide range of products and services in three areas that support society and industry.

Social infrastructure


Water treatment systems


Power transmission/ conversion systems


Disaster prevention communication systems


Road systems


Broadcasting systems

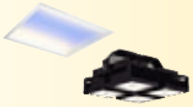

Air traffic control systems


Postal systems

Buildings and facilities


Building power supplies


Elevators


Lighting


Air conditioning

Industrial systems


Railway systems


Industrial/ In-vehicle systems

Battery systems

We will reduce the environmental impacts of manufacturing processes in order to contribute through our products to reducing the energy consumption of the information society and social infrastructure.

Yasuo Naruke
President and CEO, Storage & Electronic Devices Solutions Company

Among Toshiba Group's in-house companies, the Storage & Electronic Devices Solutions Company has an especially high percentage of environmental impacts during manufacturing. This is because the company consumes large amounts of power for semiconductor plant clean rooms and uses a lot of water in manufacturing processes. For this reason, we are working to improve energy efficiency at our manufacturing sites by various means.

Take, for example, the use of big data. At Yokkaichi Operations, we have introduced an Artificial Intelligence (AI) system capable of processing enormous amounts of data on devices and systems by using deep learning to analyze data quickly and accurately. In this way, we support efficient facility management and resource utilization, thereby improving overall factory productivity while reducing environmental impacts.

We are also actively taking measures to produce products that consider environmental impacts. As big data will be used increasingly often in the future, we believe storage systems using NAND flash memory can process data at high speeds will greatly contribute to reducing the energy consumption of society as a whole. Meanwhile, besides having high reliability and great durability, power semiconductors can also efficiently convert voltage to reduce the energy consumption of social infrastructure, including that of power transmission and distribution facilities, railroads, and hybrid cars.

It is also important to raise employees' environmental awareness. We are working to raise the environmental awareness of all employees so that they can understand the enormous impacts of our business on the environment as well as think about what they can do to reduce environmental risks and then do so. Also, to ensure the sense of safety of local community residents, we will actively publicize our initiatives to society at large, including by appropriately disclosing information and holding factory tours.

We will step up our efforts to contribute through manufacturing processes and products to reducing the energy consumption of the information society and social infrastructure.

Storage & Electronic Devices Solutions Company

We provide a wide range of storage and electronic device products, such as NAND flash memories, SSDs, HDDs, discrete semiconductors, and system LSIs.

We will promote the IoT business to reduce environmental impacts and support our customers' growth toward a digitized society.

Hironobu Nishikori
President and CEO, Industrial ICT Solutions Company

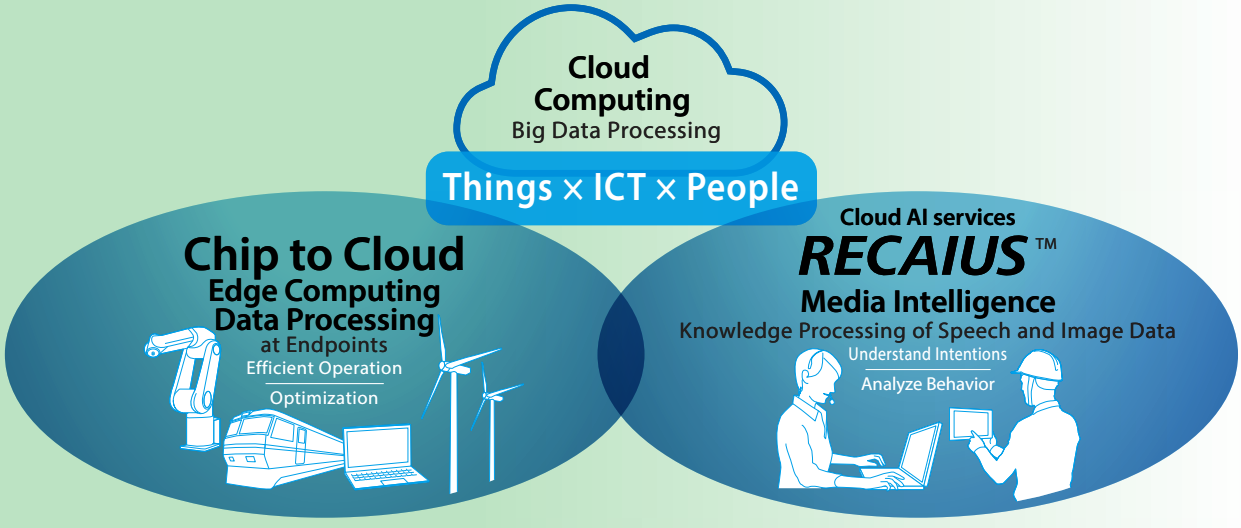
We are working to promote the IoT business in an effort to orient Toshiba Group's business structure toward IoT services and to contribute to customers' growth amidst the digitation of society. In particular, we place high priority on further developing Toshiba's original Chip-to-Cloud and RECAIUS™ technologies, which provide advanced ICT solutions that can reduce environmental impacts.

The Chip-to-Cloud technology was developed with Toshiba's semiconductor know-how. It is Toshiba's edge solution that has been designed to carry out appropriate processing in accordance with the actual conditions of worksites where devices are used. This solution minimizes network loads, thereby reducing CO_2 emissions. RECAIUS™ is a speech and image utilization cloud AI service that provides benefits to and supports humans. It was developed by evolving the media intelligence technologies that Toshiba has been working on over the years. For example, RECAIUS™ makes it possible to immediately and automatically convert statements made at a meeting into text and then to share them on a cloud system instead of preparing and distributing meeting minutes on paper. It improves operational efficiency while helping create a paperless system, thereby contributing to resource conservation.

For many years, I lived in Germany, which is known to be an environmentally advanced nation. In Germany, there are many opportunities for parents to think with their children about the environment during the process of raising them. I was impressed that individuals have a high level of environmental awareness. My experience in Germany has led me to believe that to effectively promote environmental activities, it is important to raise environmental awareness at the individual level and to motivate each individual to contribute to the environment. The Industrial ICT Solutions Company Group has engaged in cleaning the riverbeds of the Arakawa and Tamagawa rivers for nine years, and some 600 employees participate each year. By continuing activities such as this, we raise employees' environmental awareness through our daily operations on an ongoing basis so that they can always perform their tasks in an environmentally conscious way.

Industrial ICT Solutions Company

We develop IoT services and provide total solutions throughout ICT lifecycles, ranging from consultation to system operation and maintenance.



Special Feature 2

Conservation of Biodiversity

Toshiba Group is carrying out biodiversity conservation activities at 62 business and production sites worldwide. We have confirmed that more than 100 rare species inhabit these sites, where we are developing activities to protect these species.

Toward realizing a society in harmony with nature

Toshiba Group is systematically implementing measures to fulfill three requirements for a sustainable society with a view to achieving a low-carbon, sound material-cycle society that strives to be in harmony with nature.

In an effort to achieve a low-carbon, sound material-cycle society, we are working to reduce greenhouse gas emissions and waste generated by manufacturing processes. At the same time, we are also striving to reduce environmental impacts throughout product life cycles by providing energy-efficient products and by conserving resources when manufacturing products, as well as to develop low-carbon power generation technologies and renewable energy sources, thereby contributing to climate change mitigation.

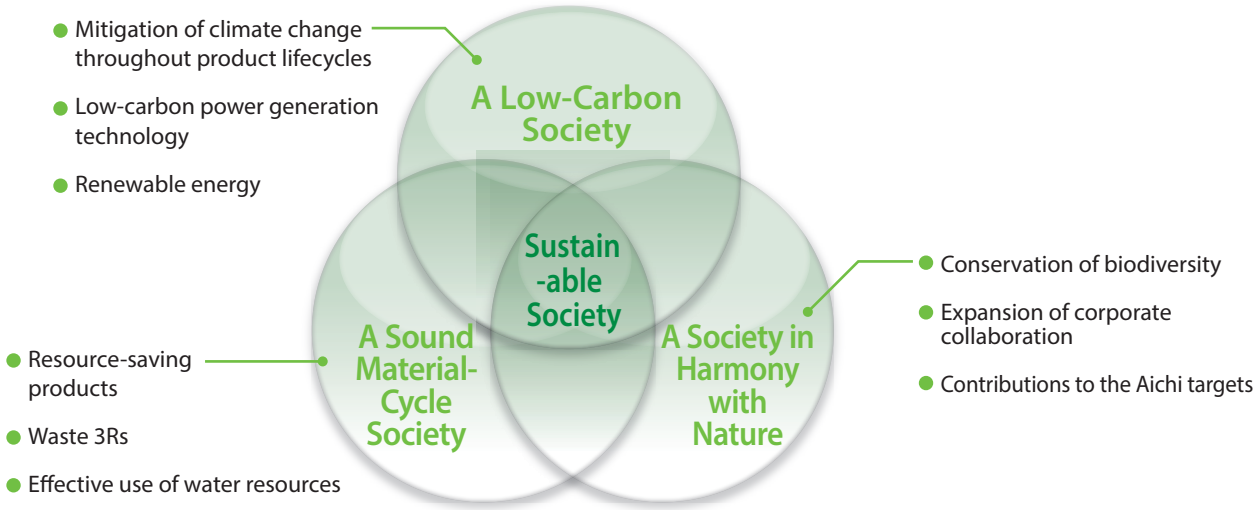
Furthermore, to achieve a society in harmony with nature we aim to realize a world in which humans and all other living species can enjoy healthy lives and continue to benefit from nature's bounties. In addition to mitigating climate change and reducing chemical pollution, we are also conducting group-wide environmental activities based on a recognition of the importance of maintaining and expanding environments for conserving biodiversity.

We have achieved our goal of developing biotopes at 62 company sites worldwide by 2015, which we set in the Fifth Environmental Action Plan that started in 2012. In particular, due to our efforts to protect rare species on company premises, we have achieved successful results, with more than 100 species, including endangered species, inhabiting Toshiba Group's production sites (refer to page 13).

In 2014, we also started joint activities with Dai Nippon Printing Group at 12 company sites in 6 areas across Japan. As it becomes increasingly important to mainstream biodiversity and to encourage private sector participation, going forward we will make efforts to further expand corporate collaboration (refer to pages 15 and 16).

We aim to contribute to achieving the Aichi targets, which are global goals to be achieved for 2020, during the period from FY2017 onward (refer to page 14).

By promoting these initiatives, we hope to contribute to realizing an environmentally harmonious society.



Over 100 rare species inhabit our sites

Toshiba Group is developing biodiversity conservation activities at 62 business and production sites worldwide. First, during the two-year period from 2012 to 2013, we conducted ecosystem surveys on and around our business and production sites. We actively take measures to protect rare animal and plant species found within our sites. On the premises of the sites, Toshiba Group also promotes ex-situ conservation (Article 9 of the Convention on Biological Diversity)* in order to protect and artificially breed (inside the sites) rare flora and fauna which inhabit the surrounding areas before returning them to their original habitats. As a result of these activities, at present more than 100 rare species inhabit Toshiba Group's business and production sites.

* Measures taken to recover and rehabilitate threatened species and reintroduce them into their original habitats under appropriate conditions as well as measures taken to complement in-situ measures (as stipulated in Article 8 of the Convention) aiming to conserve such threatened species within their original habitats

Significance of promoting ex-situ conservation on our site premises

Compared to parks and forests, where government organizations and NPOs promote initiatives to protect rare species, corporate production sites are better insulated from excessive picking or hunting by third parties thanks to more effective security measures; such sites also are at lower risk of feeding damage due to natural predators or invasive alien species. Therefore, corporate sites share the characteristics of strict nature preserves.

We recognize the effects of our land use on ecosystems. At the same time, as part of efforts to protect the diversity of rare species through our new ecosystem conservation initiatives, we will continue to make use of the characteristics of our business and production sites having large areas of land.

■Major rare species protected by Toshiba Group*

A: Plants B: Birds C: Reptiles and amphibians D: Fish E: Insects F: Mammals

	Species name		Species name		Species name		Species name		Species name		Species name
A1	Kapa-Kapa	A16	*Kumokiriso* plant (*Liparis kumokiri*)	A31	*Tashiroran* orchid (*Epipogium roseum*)	A46	Spotted bellflower	B61	Common kestrel	D76	Golden venus chub
A2	Solomon's seal	A17	Japanese yew	A32	*Tedoridokusa* plant (*Equisetum x moorei*)	A47	Bradford pear (*Pyrus calleryana*)	B62	Common buzzard	D77	Japanese eight-barbel loach
A3	Purple-fringed riccia	A18	*Kogama* (*Typha angustifolia*)	A33	Water clover	A48	*Mikekado* pumpkin	B63	Peregrine falcon	D78	Killifish
A4	Japanese gentian	A19	Primrose	A34	Evergreen witchhazel	A49	*Mishimasaiko* (*Bupleurum scorzonerifolium*)	B64	Lark	E79	Oriental hairstreak
A5	Leucaena	A20	*Sakuratade* (*Persicaria conspicua*)	A35	Frogbit	A50	Jade bee orchid	B65	Shrike	E80	Great purple emperor
A6	Birthwort	A21	Japanese alder	A36	Oak	A51	Shrub-althea	C66	Japanese rat snake	E81	Owl fly (*Ascalaphus ramburi*)
A7	Toadflax	A22	Macranthum azalea	A37	*Nojigiku* (*Chrysanthemum japonense*)	A52	Taiwan cow-tail fir	C67	Japanese striped snake	E82	Japanese Luehdorfia butterfly
A8	*Oochigoyuri* (*Disporum viridescens*)	A23	Star magnolia	A38	Japanese iris (*Iris ensata*)	B53	Black-faced bunting	C68	Tokyo daruma pond frog	E83	Chinese windmill
A9	*Oonigana* (*Prenanthes tanakae*)	A24	*Shimajitamuraso* plant (*Salvia isensis*)	A39	*Hamakakiran* orchid (*Epipactis papillosa var. sayekiana*)	B54	Long-tailed bushtit	C69	Japanese brown frog	E84	*Shouryoubatta modoki* (*Gonista bicolor*)
A10	Clematis	A25	Riverstream orchid (*Cymbidium goeringii*)	A40	*Hamakanzo* (*Hemerocallis fulva var.littorea*)	B55	Common kingfisher	C70	Japanese grass lizard	E85	Butterfly skimmer
A11	Horned maple	A26	Hyacinth orchid (*Bletilla striata*)	A41	*Higeshiba* (*Sporobolus japonicus*)	B56	Oriental greenfinch	C71	Japanese five-lined skink	E86	*Nokogiri kamikiri* (*Prionus insularis insularis*)
A12	*Kawajisha* (*Veronica undulata*)	A27	White lauan	A42	*Himeshaga* (*Iris gracilipes*)	B57	Grey-headed lapwing	C72	East Japan five-lined skink	E87	Flower chafer (*Amphicoma pectinata*)
A13	*Kinran* orchid (*Cephalanthera falcata*)	A28	Swirlkechick	A43	Southern adderstongue	B58	Grey-faced buzzard	C73	Northern crested newt	E88	Spotted alga beetle (*Haliplus sharpi*)
A14	*Ginran* orchid (*Cephalanthera erecta*)	A29	*Setsubunso* plant (*Shidateranthis pinnatifid*)	A44	Thoroughwort	B59	Japanese wagtail	C74	Tiger keelback	E89	Squirrel darter (*Sympetrum risi risi*)
A15	*Kugenumaran* orchid (*Cephalanthera longifolia*)	A30	*Takonoashi* plant (*Penthorum chinense*)	A45	Mongolian oak	B60	Chattering cisticola	D75	Ezo salamander	F90	Common pipistrelle

* Definition of rarity: A species specified by the International Union for Conservation of Nature (IUCN), a species listed in the Red Lists of various countries and regions, or a species so designated by experts

Case Study 1 All departments participate in breeding rare species

Japan Semiconductor Corporation Headquarters & Iwate Operations

We created a flowerbed in the wetlands on the company premises to plant rare species, such as the gooseneck loosestrife and broad dwarf daylily. Also, all seven departments of the company are collaborating with the Kitakami Plant of DT Fine Electronics (DTF), a Dai Nippon Printing Group company, to collect the seeds of dwarf daylilies, primroses, and Japanese primroses that bloomed the previous year in order to grow seedlings. Meanwhile, to attract great purple emperors, Japan's national butterflies that inhabit the surrounding area, we planted a young *Ezoenoki* (*Celtis jessoensis*) tree and eight *Ezoenoki* saplings. Japanese circes, which are closely related to great purple emperors, have already been confirmed to have come to the trees. We look forward to seeing great purple emperors visit the garden.

All factory departments and DTF Kitakami working together to conduct a seedling germination experiment

Expanding the flowerbed (bottom left: broad dwarf daylilies)

Fifth Environmental Action Plan Results

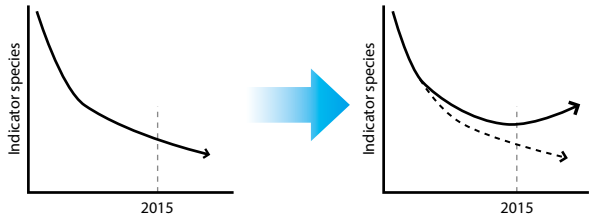
Developing biotopes at 62 production and business sites worldwide

Fifth Environmental Action Plan Medium-term Plan

Under the Fifth Environmental Action Plan for the period from 2012 to 2015, Toshiba Group aimed to achieve the goal of developing biotopes at 62 production and business sites worldwide.

In 2012, the Group set a goal of minimizing the adverse effects of its business activities on biodiversity and shifting its biodiversity policy toward initiatives for improvement to realize an ideal state of environmental management in 2015. These efforts aim to stop the decreases in the kinds of biodiversity that each site has decided to protect by 2015 and allow for such biodiversity to increase in subsequent years.

■Minimizing Adverse Effects and Increasing Biodiversity (Conceptual Diagram)



Development of biotopes will be promoted in three steps: biodiversity surveys, selection of metrics, and measurement of effects. Biodiversity surveys consist of investigations of living organisms and "red lists" in the environs of our sites, explorations of biodiversity by experts, and assessments of biodiversity potential at such sites and in neighboring areas.

Based on this survey data, Toshiba Group will select living organisms to serve as metrics, take measures to protect and increase them, and make periodic measurements of effects, thereby verifying the appropriateness of the biotope development process. Under the medium-term plan, the Group will take these steps at a minimum of 31 of its sites (50%) each year.

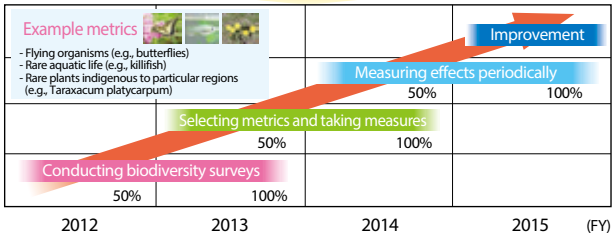
Incorporating these three steps into the medium-term plan enables implementation of PDCA cycles by individual sites as well as by the Group as a whole.

■Medium-term plan

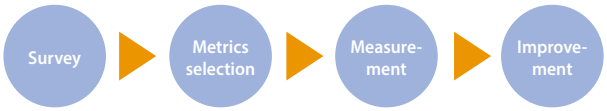
FY2012	FY2013	FY2014	FY2015
50% of sites surveyed	Percentage of sites where surveys were conducted 100% Percentage of sites for which indicators were selected 50%	Percentage of sites for which indicators were selected 100% Percentage of sites with measured effects 50%	Percentage of sites with measured effects 100%

* 50%: 31 sites or more

Developing biotopes at all (62) major sites worldwide



■Steps in biotope development



Survey	Investigate organisms living on the premises; investigate IUCN and local area Red Lists; onsite inspection by local experts; assessment of biodiversity potential for targeted and neighboring areas.
Metrics selection	Select relevant metrics on the basis of investigation data; devise measures to protect and expand the selected metrics.
Measurement	Measure the metrics on a periodic basis. Examples of measurement targets: Number of species of animals, number of animals within each species, number of plant roots, size of planting area.
Improvement	Improvement or enhancement in metrics achieved as a result of periodic measuring.

Fifth Environmental Action Plan Results

As a result of developing activities by taking the three steps (survey, metrics selection, and effect measurement) at individual sites, we achieved the plan goals for all fiscal years. Out of a total of 62 sites, measures were taken to protect rare species at 32 sites, and we made progress in building ecosystem networks at 42 sites. In terms of protection of rare species, Toshiba Group has been working to protect more than 100 species, including species of endangered plants (78%) and fish (38%). The major indicator species of ecosystem networks are butterflies (approx. 64%), birds (33%), and dragonflies (3%).

In FY2016, we have been carrying out activities by extending the Fifth Environmental Action Plan.

Note: Since multiple measures were implemented at some sites, the sum of the numbers does not equal 62 (100%).

■Fifth Environmental Action Plan Results

Item	FY2012 Plan (Result)	FY2013 Plan (Result)	FY2014 plan (Result)	FY2015 plan (Result)
Percentage of sites surveyed	50% (81%)	100% (100%)	—	—
% of sites where indicators have been selected	— (19%)	50% (91%)	100% (100%)	—
% of sites where effects have been measured	—	— (18%)	50% (67%)	100% (100%)

Toward Achieving the Aichi Targets

Examining the relationship between Toshiba Group's activities and the Aichi targets

The Aichi targets were adopted at the tenth Conference of the Parties to the Convention on Biological Diversity (COP10) held in Nagoya City in 2010. The Aichi targets define 20 goals for the international community to achieve by 2020.

To better understand these goals, we examined the relationship between Toshiba Group's business activities and the Aichi targets. As a result, we discovered that our business activities relate to 10 of the 20 individual Aichi targets (targets 1, 2, 4, 5, 8, 9, 11, 12, 14, and 19). With the aim of contributing to the achievement of these 10 targets, Toshiba Group started biodiversity conservation activities in FY2016.

Making contribution to the Aichi targets one of the next medium-term goals

Currently, the Group is reviewing its next medium-term environmental plan for the period from FY2017 to FY2020. From March 2015 to March 2016, members of the in-house biodiversity working group had four discussion sessions. Based on these discussions, we plan to make it a medium-term goal for Toshiba Group to contribute to the Aichi targets, which are global goals for 2020. More specifically, we will set goals for each company site to contribute to the 10 Aichi targets that relate to Toshiba Group's business activities. In addition to the programs presented in the Fifth Environmental Action Plan (conducting ecosystem surveys, building ecosystem networks, and protecting rare animal and plant species), we will also play an active part in holding nature observation meetings, eliminating foreign species, and collaborating with stakeholders.

■Goals for the next medium-term environmental plan (Contributing to the 10 Aichi targets)

Aichi target	Toshiba Group initiative
Target (1): Raising awareness	Environmental education, information disclosure, and collaboration with outside organizations
Target (2): Incorporating targets into strategies and plans	Incorporation of targets into environmental policies and environmental action plans
Target (4): Sustainable production	Mitigation of climate change and effective use of resources
Target (5): Reducing habitat loss	Building ecosystem networks that connect natural habitats with company sites
Target (8): Reducing chemical pollution	Management of chemicals
Target (9): Controlling alien species	Eliminating alien species at company sites
Target (11): Conserving protected areas	Activities that contribute to conserving protected areas
Target (12): Conserving endangered species	Protecting rare plant and animal species, ex-situ conservation
Target (14): Ecosystem services	Maintaining and improving cultural services
Target (19): Improving and spreading knowledge and technology	Accumulating and disclosing ecosystem survey data and creating biodiversity conservation technologies

Also, at COP12 held in October 2014, an interim review of the Aichi targets was conducted based on the Global Biodiversity Outlook 4 (GBO-4); only three targets were evaluated as likely to be achieved in 2020. Nine out of the eleven targets in the next medium-term environmental action plan are considered unlikely to be achieved. Therefore, efforts to achieve the 2020 goals must be accelerated.

■Interim assessment of the Aichi targets based on GBO-4

Expected to be achieved in 2020 (3 items)	●**Target 11** Target 16 Target 17	
In progress (9 items)	●**Target 1** ●**Target 2** Target 7 ●**Target 9** Target 13	●**Target 14** Target 15 ●**Target 19** Target 20
No progress (8 items)	Target 3 ●**Target 4** ●**Target 5** Target 6	●**Target 8** Target 10 ●**Target 12** Target 18

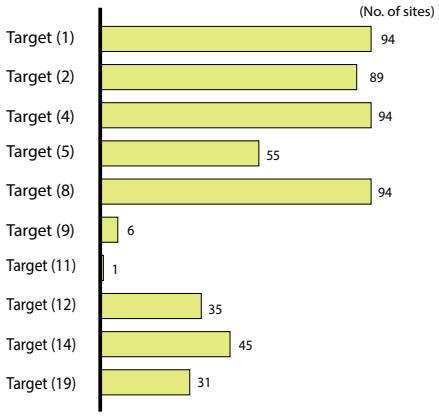
●: Targets set in the next medium-term environmental action plan

Contributions to the 10 Aichi targets

The following graph shows the numbers of sites that were engaged in activities contributing to the 10 Aichi targets as of March 2016. We believe all factories are contributing to target 4 (sustainable production) and target 8 (reducing chemical pollution) through conventional environmental conservation activities (mitigation of climate change, effective use of resources, and management of chemicals). Data on biodiversity conservation activities indicates that although many sites are working to achieve target 1 (raising awareness) and target 2 (strategies and plans), there has not been much progress with respect to target 9 (alien species) and target 11 (protected areas).

We will continue to promote biodiversity conservation activities that are focused on contributing to the Aichi targets.

■Contributions to the 10 Aichi targets



Collaboration with Dai Nippon Printing Group

Working in collaboration at 12 company sites in 6 areas across Japan

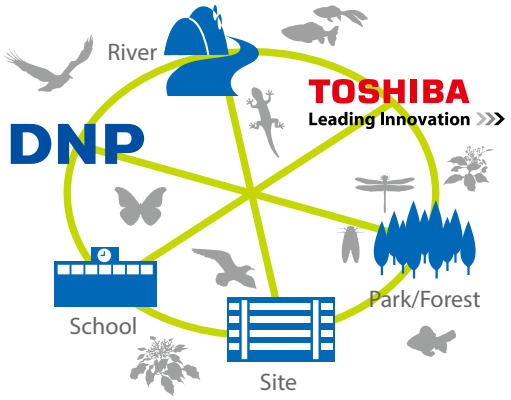
Toshiba Group and Dai Nippon Printing (DNP) Group are working together to carry out biodiversity conservation activities by making use of each other's company premises at 12 sites in 6 areas across Japan. Joint projects include the following: protecting rare species; building ecosystem networks that connect the two corporate groups' business sites; joint biological species surveys; and joint nature observation sessions.

In the project to protect rare species, we are striving to maintain local species populations by protecting and breeding rare animal and plant species on company premises. In addition, we are working to return animals and plants to their original habitats to help restore them to the wild.

To build ecosystem networks, we are working to develop biological corridors that connect company sites to local parks and rivers by growing the same species of grass that butterflies eat on the premises of the two corporate groups.

For this project, we selected company sites located in the same drainage basins or the same hilly areas. A drainage basin is an area where rainwater flows into a river. Like a community forest or hill, a drainage basin constitutes an ecosystem unit. When relocating animal and plant habitats between collaborating company sites, we take care to ensure that such habitats are located within the same drainage basin or hilly area.

■Image of a biological corridor that connects local communities

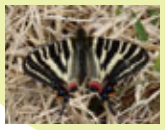


■Collaborating at 12 company sites in 6 areas

Class A River System Drainage Areas

28 drainage areas with river names listed on the map, 81 drainage areas listed in the tables, 109 areas in total

◆Toshiba Lifestyle Products & Services Corporation
Aichi Operations (Seto City, Aichi)
◆Dai Nippon Printing Nagoya Plant (Nagoya City, Aichi)


Japanese Luehdorfia butterfly


Chinese windmill

◆Japan Semiconductor Corporation
Headquarters & Iwate Operations (Kitakami City, Iwate)
◆DT Fine Electronics Kitakami Plant (Kitakami City, Iwate)


Ezoenoki


Japanese circe

◆Nishinihon Kaden Recycle Corporation
(Kitakyushu City, Fukuoka)
◆DNP Fine Optronics Kurosaki Plant
(Kitakyushu City, Fukuoka)


Violet


Indian fritillary

Collaboration area

Source: Ministry of Land, Infrastructure, Transport and Tourism

◆Toshiba Corporation Komukai Complex
(Kawasaki City, Kanagawa)
◆DT Fine Electronics Kawasaki Plant
(Kawasaki City, Kanagawa)


Japanese eight-barbel loach


Joint Tamagawa biological species survey

◆Toshiba Carrier Corporation Tsuyama Factory
(Tsuyama City, Okayama)
◆DNP Imagingcomm
DNP Lifestyle Materials Marketing
DNP Fine Optronics Okayama Plant (Okayama City, Okayama)


Sakuratade (*Persicaria conspicua*)


Owl fly (*Ascalaphus ramburi*)

◆Toshiba Lighting & Technology Corporation
Head Office and Yokosuka Operations
(Yokosuka City, Kanagawa)
◆DNP Technopack Yokohama Plant
(Yokohama City, Kanagawa)


Hamakanzo (*Hemerocallis fulva var.littorea*)


Transplanted by employees of the two corporate groups

1	Shokotsu River	18	Sagami River	35	Shonai River	52	Asahi River	69	Rokkaku River
2	Yubetsu River	19	Ara River	36	Suzuka River	53	Takahashi River	70	Kase River
3	Tokoro River	20	Seki River	37	Kumozu River	54	Ashida River	71	Honmyo River
4	Abashiri River	21	Hime River	38	Kushida River	55	Ota River	72	Kikuchi River
5	Rumoi River	22	Kurobe River	39	Miya River	56	Oze River	73	Shira River
6	Mu River	23	Joganji River	40	Yura River	57	Yoshino River	74	Midori River
7	Saru River	24	Jinzu River	41	Yamato River	58	Naka River	75	Kuma River
8	Naruse River	25	Sho River	42	Maruyama River	59	Doki River	76	Oita River
9	Natori River	26	Oyabe River	43	Kako River	60	Shigenobu River	77	Ono River
10	Omono River	27	Tedori River	44	Ibo River	61	Hiji River	78	Banjo River
11	Koyoshi River	28	Kakehashi River	45	Kino River	62	Monobe River	79	Gokase River
12	Aka River	29	Kano River	46	Kita River	63	Niyodo River	80	Omaru River
13	Kuji River	30	Abe River	47	Chiyo River	64	Onga River	81	Kimotsuki River
14	Naka River	31	Oi River	48	Tenjin River	65	Yamakuni River		
15	Ara River	32	Kiku River	49	Hino River	66	Chikugo River		
16	Tama River	33	Toyo River	50	Takatsu River	67	Yabe River		
17	Tsurumi River	34	Yahagi River	51	Yoshii River	68	Matsuura River		

* Toshiba Lifestyle Products & Services Corporation was acquired by China's Midea Group in July 2016. Nevertheless, the company will continue to collaborate with Dai Nippon Printing Group Nagoya Plant.

Case Study 2 Conservation of *hamakanzo* daylilies

Toshiba Lighting & Technology Corporation
Head Office and Yokosuka Operations
DNP Technopack Yokohama Plant

At Toshiba Lighting & Technology Corporation Head Office and Yokosuka Operations in May 2012, we transplanted 28 stocks of *hamakanzo* daylily (of the lily family), which were on the verge of extinction in Koajiro Valley on the Miura Peninsula due to excessive picking, to breed them on the company premises. Two years later, in May 2014, we returned 100 daylily stocks to Koajiro Valley, their original habitat, thereby restoring them to the wild. In July 2015, we transplanted 30 daylily stocks from our company site to DNP Technopack's Yokohama Plant, where they were again bred successfully. In June 2016, 82 daylily stocks were returned to their original habitat.
Currently, the beautiful orange flowers of approximately 400 *hamakanzo* daylilies blossom in July and August each year, bringing pleasure to visitors. At the same time, excessive picking of *hamakanzo* daylilies that were restored to the wild is happening again. There are no effective measures to prevent excessive picking. Therefore, the two corporate groups must put more effort into conserving *hamakanzo* daylilies. We plan to continue to periodically provide daylily stocks.

Hamakanzo (*Hemerocallis fulva var. littorea*)

Transplanting daylilies from Toshiba Lighting & Technology to DNP Technopack (July 2015)

Recurrence of excessive picking (August 2015)

Restored to the wild in the original habitat (July 2016)

Toward mainstreaming of biodiversity

Though biodiversity is currently being mainstreamed worldwide, people do not recognize the importance of biodiversity very well. Nevertheless, biodiversity conservation activities promoted by the two corporate groups are being implemented on the premises of company sites. These activities, which employees come into contact with daily, help to raise environmental awareness and to improve the recognition of biodiversity's importance. On factory tours, we present our activities to local residents. In addition, we explained our activities to the many visitors to the DNP Group booth at Eco Products 2015 as well as at the 25th Toshiba Group Environmental Exhibition (refer to page 67). In the left-hand example of the *hamakanzo* daylily conservation project, we installed a signboard in front of a community of plants we restored to the wild in order to show how the two corporate groups have worked together in conservation, thereby advertising the project to more than 100,000 site visitors annually (estimate by the Koajiro Field Activity Coordination Council). A press release issued jointly by the two corporate groups in April 2015 also elicited positive responses from inside and outside the companies

Toshiba Group Environmental Exhibition (June 2016)

Jointly issued press release (April 2015)

Initiatives developed by the two corporate groups aim to develop effective biodiversity contribution activities without spending too much energy or money. As many companies can engage in such activities, irrespective of company size, industry, and business operation, we will actively promote collaboration with other companies in the future. Protecting and breeding animal and plant species requires the provision of multiple conservation sites to reduce the risk of extinction due to heavy rain or disease. If we can develop similar activities on the premises of all companies, including those of Toshiba Group and the DNP Group, we can greatly contribute to conserving biodiversity. Toshiba Group will also contribute to mainstreaming biodiversity and to promoting private sector participation by expanding corporate collaboration.

There is no doubt that a trend toward conserving biodiversity is emerging around the world. Many countries are currently striving to achieve the Aichi biodiversity targets adopted in Japan in 2010. The 2020 Tokyo Olympic Games will mark a turning point for the Aichi targets for 2020 and 2050, when all parties, including Japan, will be evaluated for their progresses.
Biodiversity is also growing in importance in ISO Environmental Management. In the previous system, the issues related to the biodiversity was merely mentioned in appendixes. By contrast, under ISO14001, which was revised in 2015, biodiversity is mentioned as a requirement to be fulfilled on the same level as that of resources and climate change. Also, the Sustainable Development Goals (SDGs) include items related to biodiversity under the themes of terrestrial and marine ecosystems as well as of sustainable production and consumption.
Toshiba's initiatives have been highly evaluated for their bottom-up approach, which allows not only the head office but also individual factories and production sites to act on their own initiative to consider what animal and plant species must be protected and what programs must be implemented. The data presented in this report shows how initiatives are actively developed at many production sites to protect rare species, to develop biotopes, and to reduce the amount of chemicals discharged. At the same time, the data also reveals that efforts to protect against damage from invasive alien species are insufficient. The head office, individual factories and sites must periodically review what must be improved based on an overview of the activities carried out. Toshiba Group Environmental Report, which are issued periodically, provide an appropriate opportunity to reflect on Toshiba Group's environmental initiatives. Toshiba Group would be well advised to also consider setting goals for a specified period (e.g., for the next year, or for five years hence) in these reports. Toshiba Group is gathering and publishing data on the numbers of programs developed at factories around the globe within the framework of the Aichi targets. Therefore, to meet the requirements of the Aichi targets as benchmarks, the Group must clarify which targets it aims to achieve to what extent by when. In addition, environmental education must be evaluated not only in terms of whether or not it is provided to employees, but also in terms of how it enables employees to share their experiences and how it deepens their environmental knowledge.

Graduate School of Environmental Studies, Tohoku University
Ryo Kosaka

Toward the Realization of Environmental Vision 2050

Toshiba Group will contribute to society by creating new value through innovation to ensure that all people can lead affluent lifestyles in harmony with the Earth.

INDEX

Summary of activities in FY2015

Progress in the Fifth Environmental Action Plan P19

Improvement of overall eco-efficiency

- Achieved the goal of Factor 3.0
- Achieved our goals for 16 of the 22 items in the Plan

Environmental Management Concept "T-COMPASS" P21

- Visualizing LCA-based environmental indicators with Toshiba Group's unique radar chart

Scope 3 Initiatives P22

- Making GHG emissions in the supply chain visible for all categories

Overview of Environmental Impacts P23

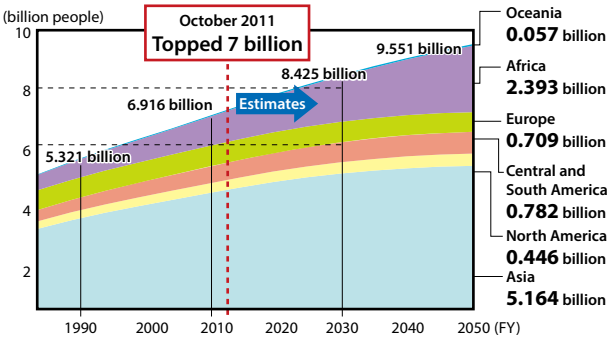
- Assessing the environmental footprints of all businesses throughout product life cycles

Environmental Vision 2050

The world population topped seven billion in October 2011, and rapid population growth and the urbanization of populations are expected to continue to occur mainly in the emerging countries of Africa, Asia and other regions. As a result, food, water, and energy shortages; decreases in the consumable resources such as fossil fuels, metals, and minerals that support today's society; climate change; and other problems are having global effects as a result of their complicated, intricate relations with one another. We must address these issues urgently.

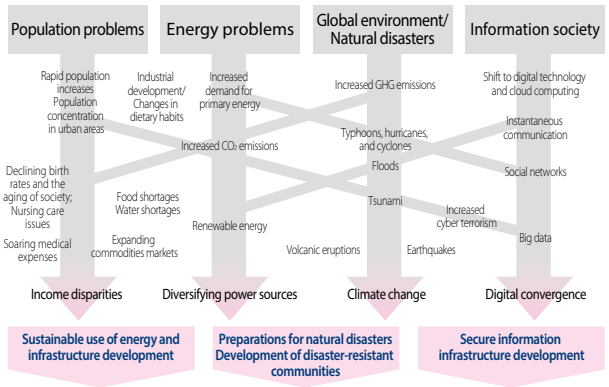
Toshiba Group has developed Environmental Vision 2050, a corporate vision that envisages affluent lifestyles in harmony with the Earth as an ideal situation of mankind in 2050, and will work to realize this vision.

■Changes in the World Population (Estimates)



Source: UN, World Population Prospects: The 2012 Revision

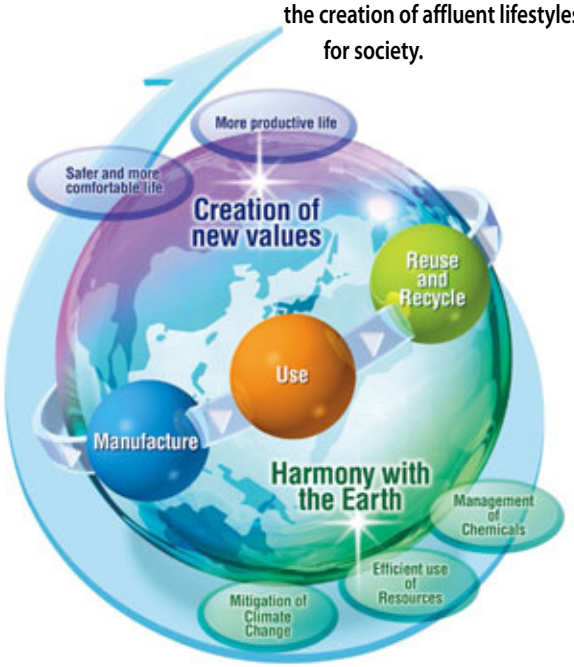
■Mega-trends in Environmental Changes



Throughout the life cycle of products from manufacture and use to recycling and reuse, Toshiba Group will strive to provide safer and more comfortable lifestyles and create enriched value for customers. The Group will also strive for harmony with the Earth by working to mitigate climate change, using resources efficiently, and managing chemicals properly in order to reduce environmental impact.

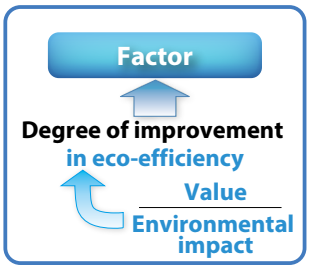
Environmental Vision 2050

Toshiba Group practices environmental management that promotes harmony with the Earth, contributing to the creation of affluent lifestyles for society.



Performance indicators for our Vision

Based on the concept of eco-efficiency, we have set goals to ensure that all people can lead affluent lifestyles in harmony with the Earth.



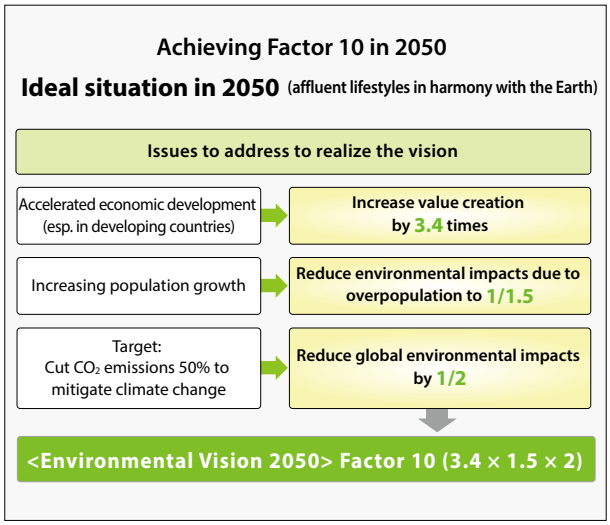
Eco-efficiency can be expressed as a fraction, with the creation of new value as the numerator and environmental impacts as the denominator. The more enriched value created—or the more environmental impact is reduced and progress made toward coexisting with the Earth—the more eco-efficiency improves. We call the degree of improvement in eco-efficiency the "Factor," and increasing the Factor leads to affluent lifestyles in harmony with the Earth.

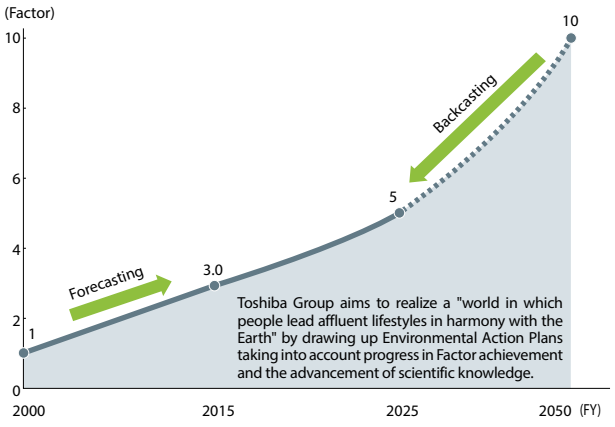
Based on several predictions about the future shapes society may take, we examined how much we need to raise the Factor by 2050.

It is assumed that the gross domestic product (GDP) of a country reflects value that its people can enjoy. According to the Organisation for Economic Co-operation and Development (OECD), the world's average GDP per capita is expected to grow 3.4 times by 2050.

It is also expected that the world population will increase by 1.5 times as compared to 2000 by 2050. And at the Conference of the Parties to the U.N. Framework Convention on Climate Change, participants emphasized that it is necessary to reduce greenhouse gas emissions by half by 2050.

If the three points cited above are taken into account, the required degree of improvement in eco-efficiency (Factor) in the world in 2050 is 10.2 (3.4 × 1.5 × 2). Toshiba Group Environmental Vision 2050 requires that the Group globally achieve Factor 10 by 2050. In consideration of the above, a long-term goal has been set by backcasting from the ideal situation in 2050. (See the graph below.)





Targets for Environmental Vision 2050

- It is necessary to increase the world's eco-efficiency by 10 times as compared to the FY2000 level by FY2050 (Factor 10).

Progress in the Fifth Environmental Action Plan

Toshiba Group achieved its annual goal for overall eco-efficiency by reaching its eco-efficiency goals in two areas: products and business processes.

In FY2015, we achieved our annual goal for overall eco-efficiency

In order to realize an ideal state of environmental management in 2050, Toshiba Group formulates environmental action plans and manages specific environmental activities and their targets. Since we formulated our first environmental action plan in FY1993, the Group has expanded its scope of environmental activities and governance. We are working on 22 activity items by extending for one year the activity period that was scheduled to cover the period from FY2012 to FY2015 under the Fifth Environmental Action Plan.

The Environmental Vision 2050 requires the Group to increase the degree of improvement in overall eco-efficiency by ten times (Factor 10) by FY2050 and by five times (Factor 5) by FY2025 compared to the FY2000 level. By backcasting from 2050, we worked to achieve the FY2015 goal of increasing eco-efficiency by 3.00 times (Factor 3.00).

As a result, we increased product eco-efficiency in FY2015 by 3.42 times (target: 3.40 times) compared to the FY2000 level thanks to continued progress in creating value and reducing environmental impacts mainly in the areas of social infrastructure, healthcare systems & services, and electronic devices & components. We improved business process eco-efficiency by 1.52 times (target: 1.50 times) because of reductions in greenhouse gas emissions through energy-saving investments etc. As a result, Toshiba Group succeeded in improving overall efficiency by 3.04 times (Factor 3.04) in FY2015 compared to the FY2000 level, exceeding our target of 3.00 times.

Achievement Status of the Fifth Environmental Action Plan

The table on the right side summarizes the progress made in FY2015 with respect to the Fifth Environmental Action Plan. During FY2015, Toshiba Group achieved its goals for 16 of the 22 items in the Plan.

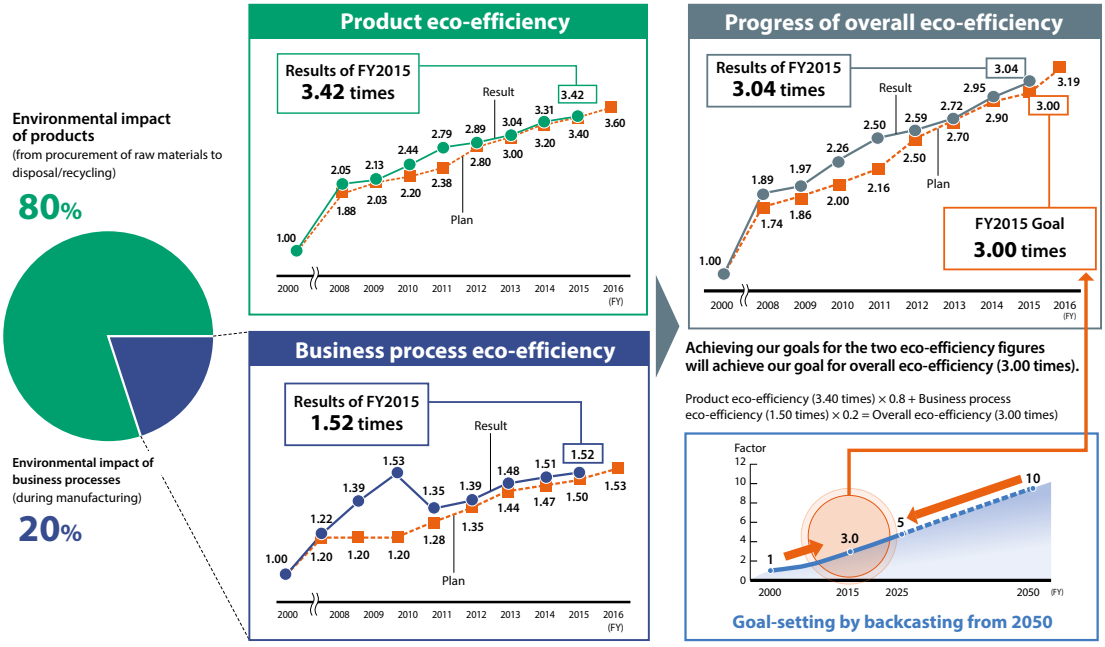
In the Greening of Products and Greening by Technology initiatives, we achieved our goals for three of the seven items. In particular, sales of excellent ECPs were 2.75 trillion yen, greatly exceeding the amount initially planned. As for reducing CO_2 with energy-related products, we could not achieve our goal due to a delay in commencing operation of a plant under construction. We will step up our efforts to promote high-efficiency thermal power generation as well as use of renewable energy.

In the Greening of Process initiative, we achieved our goals for eight of the nine items. We achieved our goal of reducing total greenhouse gas emissions mainly by making energy-saving investments; taking measures to conserve electricity used for air conditioning, lighting, etc.; and monitoring power consumption more closely. Although we reduced the amount of final waste disposal, we were unable to achieve our target percentage of final waste disposal because of difficulties at our overseas production sites.

In the Green Management initiative, we achieved our goals for two of the three items. Specifically, to conserve biodiversity, we used our business and production sites to complete the selection and measurement of indicators for all target areas to protect rare flora and fauna. In terms of environmental education and human resource development, we refrained from holding events related to Toshiba eco-style leaders. Consequently, we had only limited opportunities to talk to employees and were unable to achieve our goal.

In FY2016, we aim to achieve all goals in the Fifth Environmental Action Plan by accelerating global business development in the energy sector, by placing strict controls on waste management at our overseas production sites, and by enhancing our environmental education and human resource development programs.

■**Progress of overall eco-efficiency**



■Toshiba Group's Fifth Environmental Action Plan

Eco-efficiency	FY2015			FY2016
	Goal	Result	Evaluation	Goal
Improvement of overall eco-efficiency (compared to FY2000 level)	3.0 times	3.0 times	Achieved	3.2 times
Improvement of product eco-efficiency (compared to FY2000 level)	3.4 times	3.4 times	Achieved	3.6 times
Improvement of business process eco-efficiency (compared to FY2000 level)	1.5 times	1.5 times	Achieved	1.5 times

Greening of Products/Greening by Technology		FY2015			FY2016
		Goal	Result	Evaluation	Goal
Overall	Increasing sales amounts of Excellent ECPs (Greening of Products/ by Technology)	1.80 trillion yen	2.75 trillion yen	Achieved	2.00 trillion yen
		Sales of certified products increased in all areas.			
	Expansion of sales of energy-related products (Greening by Technology)	1.90 trillion yen	1.60 trillion yen	Not achieved	1.70 trillion yen
		Sales in various businesses did not increase as much as initially expected. As a result, we were unable to achieve our goal. We will continue our efforts to increase sales of energy-related products.			
Mitigation of climate change	Reduction of CO_2 emissions through eco-products*1 (Greening of Products)	15 million tons	15.1 million tons	Achieved	15.5 million tons
		We improved energy-saving performance, thereby reducing CO_2 emissions during product use.			
	Reduction of CO_2 emissions through energy-related products*2 (Greening by Technology)	490 million tons	471 million tons	Not achieved	476 million tons
		We could not achieve the goal because the start of operation of a plant under construction was delayed. We will promote use of high-efficiency thermal power generation and renewable energy.			
Effective use of resources	Resource savings for products*3	50%	30%	Not achieved	50%
		We could not achieve the goal because of a decrease in sales of resource-efficient products, such as TVs and home appliances. To expand sales, we will share case studies on resource-efficient products within the group.			
	Increasing the use of recycled plastics for products*4	3.00%	9.67%	Achieved	3.50%
		We made progress in using recycled plastic components for MFPs and industrial air conditioning systems, etc.			
Management of chemicals	Reduction of specified chemical substances contained in products*5 (reduction of PVC*6/BFRs*6)	80 product groups in total	76 product groups	Not achieved	66 product groups in total*10
		We could not achieve the goal mainly because we had difficulty selecting alternate materials that fulfilled the requirements. We will continue to examine use of alternate materials to achieve the goal.			

Greening of Process		FY2015			FY2016
		Goal	Result	Evaluation	Goal
Mitigation of climate change	Reduction in total greenhouse gas emissions (Compared to FY1990 level)	4.39 million tons (65%)	3.08 million tons (46%)*7	Achieved	3.32 million tons (49%)
		We made improvements by actively promoting energy-saving measures and by improving production efficiency.			
	Improvement of total energy-derived CO_2 emissions per unit production*8 (Compared to FY2010 level)	90%	80%	Achieved	90%
		We made improvements by actively promoting energy-saving measures and by improving production efficiency.			
	Improvement of total CO_2 emissions from product logistics per unit production (Compared to FY2010 level)	95%	71%	Achieved	69%
		We made improvements by improving load factors and restructuring logistics centers.			
Effective use of resources	Reduction in waste volumes*9 (Compared to FY2000 level)	117,000 tons (62%)	86,000 tons (46%)	Achieved	110,000 tons (58%)
		More waste was turned into valuables due to efforts to sort waste more carefully.			
	Improvement of the total volume of waste generated per unit production (Compared to FY2010 level)	90%	77%	Achieved	88%
		The total volume of waste decreased as a result of process improvements.			
	Reduction in the percentage of final waste disposal (Compared to the total volume of waste generated by Toshiba Group)	0.50%	1.40%	Not achieved	0.50%
		We reduced the amount of final waste disposal at targeted overseas business and production sites, but we could not achieve our goal for the percentage of final waste disposal.			
	Improvement of the amount of water received per unit production (Compared to FY2010 level)	90%	78%	Achieved	87%
		We achieved the goal by making improvements at semiconductor plants that receive large amounts of water.			
Management of chemicals	Reduction in the total emissions of chemicals discharged (Compared to FY2000 level)	1,967 t (78%)	1,438 t (57%)	Achieved	1,660 t (66%)
		We achieved the goal mainly by installing volatile organic compound removers.			
	Improvement of the amount of chemicals handled per unit production (Compared to FY2010 level)	95%	75%	Achieved	84%
		We achieved the goal mainly by optimizing the amount of chemicals used and by revising wastewater treatment processes.			

Green Management		FY2015			FY2016
		Goal	Result	Evaluation	Goal
Conservation of biodiversity	Developing ecosystem networks with our sites playing a central role in collaboration with local communities	Percentage of sites with measured effects 100%	Percentage of sites with measured effects 100%	Achieved	Percentage of sites with measured effects 100%
		We have completed measurement at all 62 global sites and continue to protect and monitor indicator species.			
Environmental education and human resource development	Development of Toshiba eco-style leaders	2,000 leaders	1,340 leaders	Not achieved	2,000 leaders
		We could not achieve the goal mainly because we refrained from holding eco-style leader-related events.			
Environmental communication	Expanding environmental communication to connect people around the world	Promotion of "Global Environmental Action" to cope with global environmental issues	We implemented approximately 400 programs at 276 of our business and production sites in 25 countries worldwide	Achieved	Toshiba Group Global Environmental Action
		We developed Global Environmental Action programs worldwide from April to June.			

Figures for benchmark years indicate performance data in the boundary set for 2015. Applicable to production and non-production sites in Japan and abroad.
As an indicator that enables appropriate assessment of reduction in greenhouse gas emissions, volume-based real outputs are used for basic-unit goals.
Real production = [Nominal output in Japan] / [corporate goods price index (for electrical equipment) announced by the Bank of Japan for the year (compared to 1990 levels, where 1990 is represented as 1)] + [nominal output outside Japan]

*1 [CO_2 emissions of assumed substitute products] – [CO_2 emissions of shipped products] (Compares emissions during the usage stage and cumulates emissions for the expected number of years of use.)
*2 Compared with CO_2 emissions (rate to net production output) for average thermal power of the same fuel type; for nuclear power/renewable energy, compared with CO_2 emissions (rate to net production output) for average thermal power of all types.
*3 Rate of increase in the amount of resources saved (based on FY2010).
*4 [Amount of recycled plastics] / [Amount of plastics used for products] × 100
*5 Abolished except special uses.
*6 PVC: Polyvinyl chloride is one of the most common plastics and is used in a wide range of products. There is concern about the generation of hazardous substances due to inappropriate treatment of PVC at the time of disposal and the harmfulness of some additives (e.g., phthalate esters) used to soften PVC.
BFR (brominated flame retardants): BFRs are used as flame retarders for plastics. Some BFRs are raising health concerns while others persist in the environment or are bioaccumulative. There is also concern over the generation of hazardous substances due to inappropriate treatment at disposal.
*7 5.10 t-CO_2/10,000 kWh is used for the power factor in Japan. GHG Protocol data is used overseas.
*8 The coefficient of electricity for sites in Japan is fixed to that of FY2010.
*9 Obtained by deducting the volume of objects with value from the total volume of waste generated (excluding business and production sites engaged in waste treatment and power generation).
*10 Toshiba Medical Systems Corporation and Toshiba Lifestyle Products & Services Corporation were excluded from the targets. As a result, the total number of product groups changed to 66.

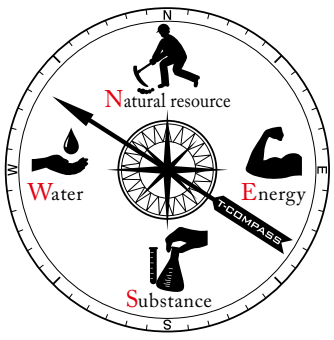
Environmental Management Concept "T-COMPASS"

We will further advance and expand our environmental management systems by strategically addressing new global trends in environmental management

Toshiba Group has introduced T-COMPASS*1, a concept of environmental management, to achieve two aims. One of these aims is to enhance management focused on multiple environmental areas (multiple criteria) and product life cycles; this represents a new global trend. As we strive to help realize a sustainable society, responding properly to energy problems and climate change is our highest priority. In addition to these global environmental issues, however, there are many local agendas such as factors influencing human health, ecosystems, and resources; all these issues must be resolved comprehensively. As Toshiba Group's compass for its environmental activities, T-COMPASS defines four domains for the group's environmental contributions and represents these domains as the symbols of the four cardinal compass points. We will systematically categorize measures implemented in the past into the four T-COMPASS domains and introduce various measures to enhance our environmental management with respect to products and manufacturing. For example, we will promote resource recycling to minimize the amount of resources consumed; promote the use of renewable energy and ensure compliance with the SCOPE 3 Standard to respond to climate change and energy issues; go one step beyond what is required by global regulations, such as reducing PVCs, to minimize the risks posed by chemical substances; and enhance management of our sites by taking water stress into consideration to minimize the amount of water resources.

We will also expand the scope of environmental management not only to individual products but also to our supply chain and organizations. Further, we will take into consideration local differences in environmental issues and strengthen our environmental strategies for different regions. Our second aim is to expand our environmental management network. To realize environmental management supported by the participation of all Toshiba Group employees around the world, we must share a commitment to contributing to solving all environmental issues as the world's foremost eco-company. In Toshiba Group Global Environmental Action 2015, to develop action programs in countries around the world, we selected issues appropriate for different regions from among the environmental issues addressed in T-COMPASS.

Toshiba Group environmental compass T-COMPASS

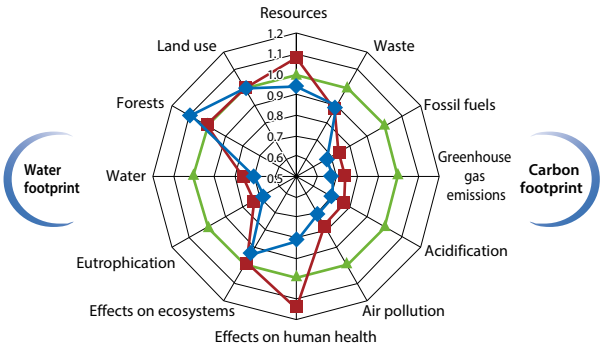


We are using the same approach as before to reduce overall environmental impact. However, T-COMPASS visualizes environmental contributions in four major areas in a specific and easy-to-understand way. We believe this enables us to further share the value provided by Toshiba Group with our stakeholders inside and outside the group.

Characteristics of T-COMPASS

●Characteristic: Visualizing environmental impacts by a radar chart

T-COMPASS expresses LCA-based environmental indicators using its own radar chart. Symbols of the four cardinal compass points are used to represent the four major domains all Toshiba Group companies should address. The environmental footprint standard, which combines standards for assessing carbon and water footprints that have been recognized as global trends in recent years, makes reductions in overall environmental impacts easy to understand visually. Highly relevant environmental indicators are arranged appropriately along different axes; the radar chart depicts the structure of life cycle impact assessments in a simplified way. In addition to typical environmental indicators in the four major domains, other indicators are also defined in detail (up to eight or twelve points on the compass), thus enabling more detailed eco-designs.



Toshiba Group's environmental footprints

Toshiba Group will analyze the environmental impacts of all its businesses throughout product life cycles in order to identify hot spots. By performing analysis on a trial basis while making the most of the LCA databases it has developed, the Group aims to establish an assessment method based on the latest discussions about environmental footprints.

* T-COMPASS: Toshiba Comprehensive environmental database and its Practical Application to Simplified and/or Streamlined LCA

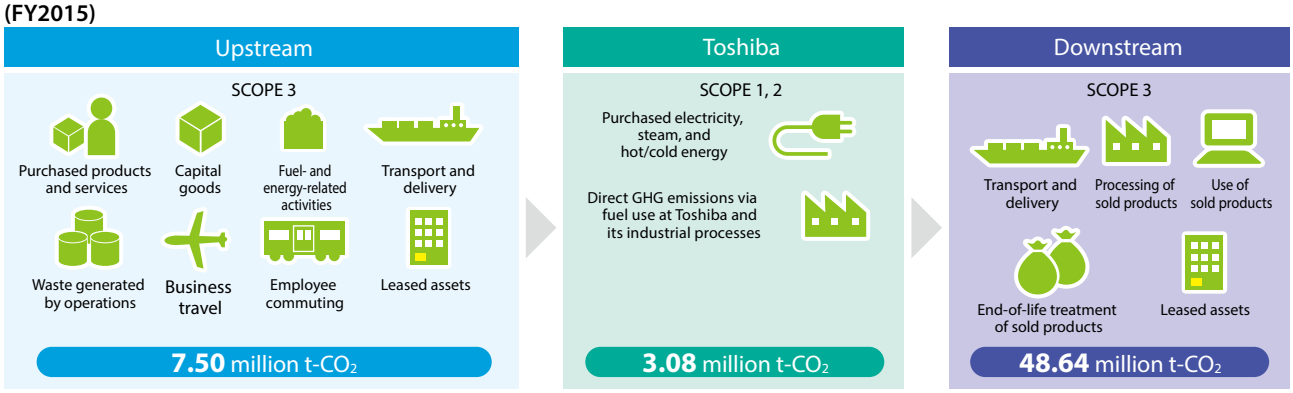
Making GHG Emissions in the Supply Chain Visible for All Categories

As climate change issues become increasingly serious, companies are required to control and manage not only their own greenhouse gas (GHG)*1 emissions, but also emissions generated throughout their entire supply chains. Based on the GHG Protocol*2, which provides international standards for calculating the amount of GHG emissions, and the Ministry of the Environment's Basic Guidelines for Calculating GHG Emissions throughout the Supply Chain, Toshiba Group manages and calculates indirect GHG emissions generated outside the scope of its own business activities (Scope 3) in addition to its own emissions (Scopes 1 and 2). GHG emissions during the use of sold products account for more than 80% of Toshiba Group's GHG emissions. For this reason, we are focusing on developing products with high energy efficiency in order to reduce GHG emissions on an ongoing basis during use.

Toshiba Group believes that it is important to work effectively to reduce GHG emissions throughout product life cycles and to visualize environmental impacts across all categories by quantitatively analyzing emissions per category as described above. In the future, we will create a system for gathering data on GHG emissions generated throughout the supply chain in order to enhance our emissions management.

*1 CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3
*2 Greenhouse Gas Protocol (GHG Protocol): Guidelines for calculating and reporting GHG emissions formulated by companies, NGOs, and government organizations under the leadership of the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD)

(FY2015)

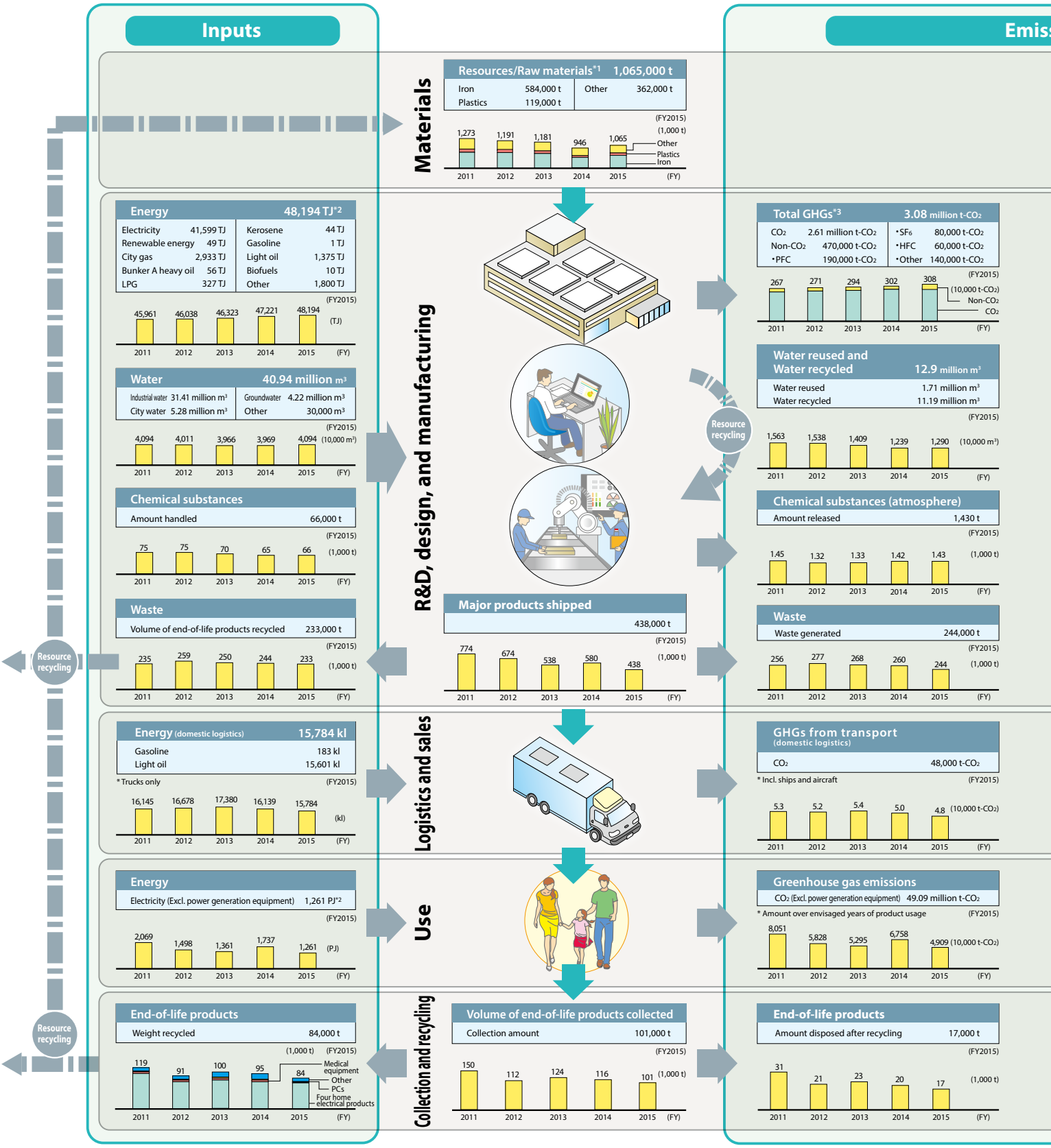


Category		Categories covered by calculations	FY2014 calculation results (10,000 t-CO_2)	FY2015 calculation results (10,000 t-CO_2)	Amount released emissions	Considerations
Upstream	1	Purchased goods and services	750	616	−18%	GHG emissions decreased mainly due to screening businesses
	2	Capital goods	84	72	−15%	GHG emissions decreased mainly due to screening investments
	3	Fuel- and energy-related activities (not in Scope 1 or 2)	16	17	6%	GHG emissions increased mainly due to increased production
	4	Upstream transportation and distribution	42	36	−13%	GHG emissions decreased due to modal shifts as well as lighter and smaller products
	5	Waste generated in operation	3	3	−4%	GHG emissions decreased mainly due to an increased use of paperless systems
	6	Business travel	7	6	−10%	GHG emissions decreased mainly due to an increased number of online meetings
	7	Employee commuting	—	—	—	GHG emissions for this category were estimated at 0.1% of the total or less
	8	Upstream leased assets	—	—	—	This category is not relevant, due to the fact that the type of industry category of Toshiba is manufacturing
Toshiba	9	Direct GHG emissions (Scope 1)	75	89 ☑	19%	GHG emissions increased mainly due to growth of the semiconductor business
	10	Indirect emissions associated with energy-derived emissions (Scope 2)	227	219 ☑	−4%	GHG emissions decreased mainly due to energy-saving efforts
Downstream	11	Downstream transportation and distribution	11	10	−10%	GHG emissions decreased due to smaller and lighter products
	12	Processing of sold products	—	—	—	In this category, we mainly deal with finished products and parts that do not require processing
	13	Use of sold products	6,758	4,909 ☑	−27%	GHG emissions decreased mainly due to improved energy efficiency of air conditioners and TVs and of screening businesses
	14	End-of-life treatment of sold products	−40	−55	38%	The GHG emission reduction effect was enhanced due to increased use of reusable materials
	15	Leased assets (Downstream)	—	—	—	This category is not relevant, due to the fact that the type of industry category of Toshiba is manufacturing
	16	Franchises	—	—	—	This category is not relevant, due to the fact that the type of industry category of Toshiba is manufacturing
	17	Investments	—	—	—	This category is not relevant, due to the fact that the type of industry category of Toshiba is manufacturing
Total			7,932	5,922		

* Categories guaranteed by a third party are marked (☑). For the details of the calculation method, refer to "Methods of calculation related to the third-party assurance" (p. 69).

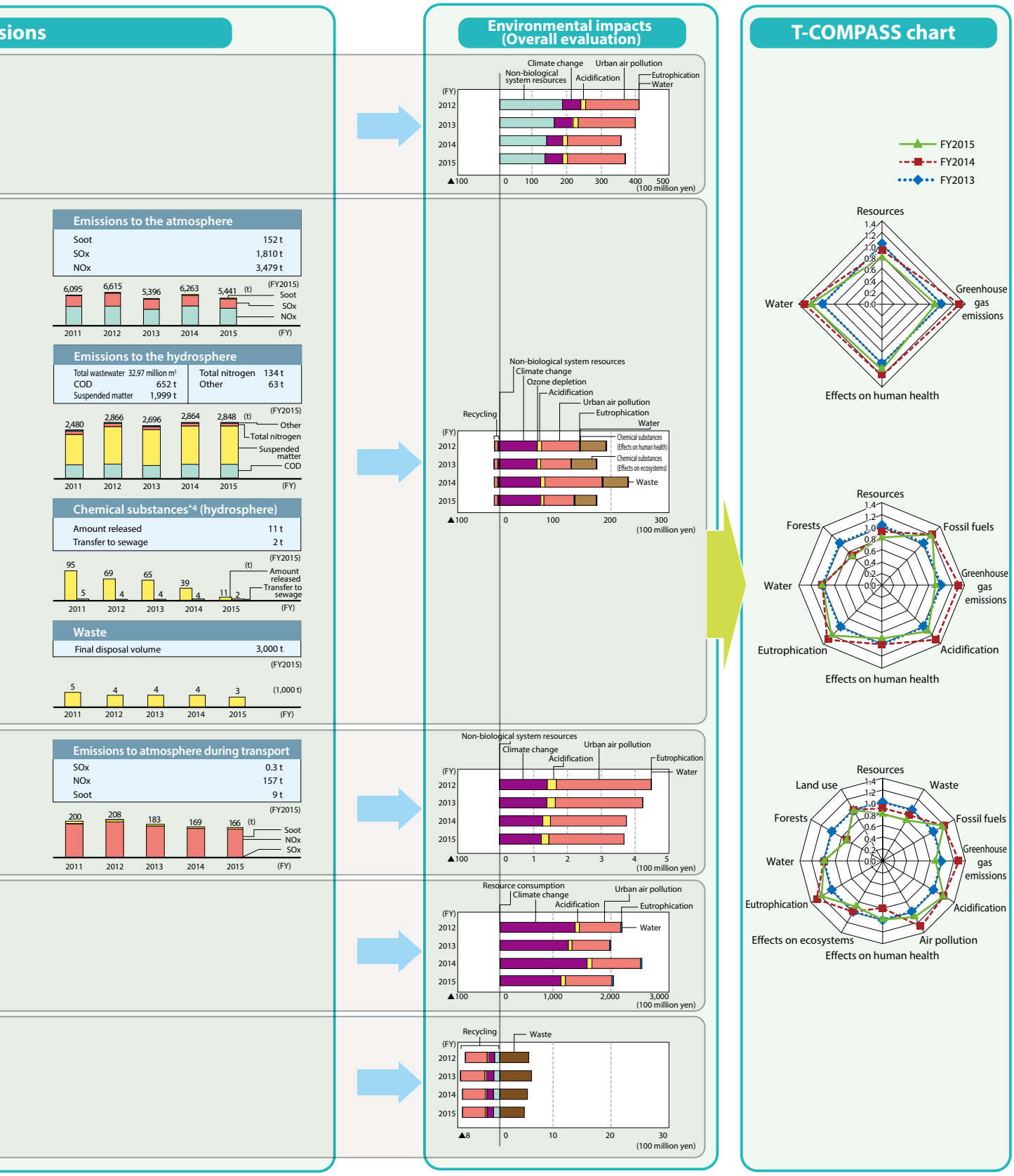
Overview of Environmental Impacts

Toshiba Group, as shown in the material flow below, is proceeding to quantitatively analyze the environmental impacts at each stage of the product/service life cycle—from materials procurement, manufacturing, and distribution to customer usage, product retrieval, and recycling. Furthermore,



*1 Material inputs are calculated based on the Estimation Method for Material Inputs Using Input-Output Table (EMIOT), a method independently developed by Toshiba Group. ("EMIOT": Estimation method for Material-inputs using Input-Output Table) EMIOT uses ratios of resources used per unit production, which are prepared based on the Input-Output Table, to calculate total material inputs. One distinctive feature of the method is that input-output analysis is applied only to the flow of resources from upstream to downstream. Another is that the volume of such resources by industrial sector is stored in a database. Using this method, it is possible to calculate weights of input resources by resource type from the data on procurement (monetary value) by resource category, which are gathered by materials procurement divisions. Therefore, data can be gathered not only on direct materials, but also indirect materials. Previously, it was difficult to totalize as resources the imported inputs that accompany the procurement of complex materials and service businesses. However, by using this method, it has become possible to grasp the amount of imported inputs by material category for such procured materials as well.

we are carrying out overall assessments on the environmental impact of input resources/energy and emission of greenhouse gas and chemicals using the Life-cycle Impact assessment Method based on Endpoint modeling (LIME) (refer to page 37 for details). We realized that environmental impacts are most significant during the customer usage, material procurement, and manufacturing stages of the product life cycle in that order. As such, we feel that it is extremely important to implement effective initiatives based on environmental impact assessments carried out across the entire product life cycle. Moving forward, we are expanding the items on which we are collecting data and are striving to improve the precision of the data. This data was collected from 598 Toshiba Group companies (actual results for FY2015).



*2 TJ = 10^{12} J; PJ = 10^{15} J. The joule is a unit of energy measuring mechanical work, heat, and electricity. One joule equals about 0.239 calories.
*3 In this table, the CO_2 emission coefficient for electricity in Japan is 4.76 t-CO_2/10,000 kWh in FY2011, 4.87 t-CO_2/10,000 kWh in FY2012, 5.54 t-CO_2/10,000 kWh in FY2013 and FY2014, and 5.10 t-CO_2/10,000 kWh in FY2015.
*4 The volume of hydrogen fluoride and its water-soluble salt emitted into hydrosphere since FY2009 is calculated to be zero because hydrogen fluoride used becomes non-water-soluble salt through post-use treatment.

Chapter 2 Greening of Products

Aiming to achieve the highest level of environmental performance, we strive to expand the creation and widespread use of Excellent ECPs.

INDEX

Summary of activities in FY2015

Excellent ECPs P27

- Sales of Excellent ECPs in FY2015: **2.75 trillion yen**

Mitigation of Climate Change by Products and Services P29

- Reducing CO_2 emissions by providing eco-products: **15.10 million t-CO_2**

Efficient Use of Resources P31

Promoting the 3Rs throughout entire product life cycles

- Amount of resources saved: **283,000 t**
- Percentage of recycled plastics used: **9.67%**

Recycling of End-of-Life Products P33

- Amount of end-of-use products recycled: **95,000 t**

Management of Chemicals in Products P35

Reduction in use of specified chemicals

- Promoting use of alternatives to PVC/BFRs: **76 product groups**

Product Eco-efficiency P37

Creation of Excellent ECPs

●Aiming to achieve the highest level of environmental performance for all products that we develop

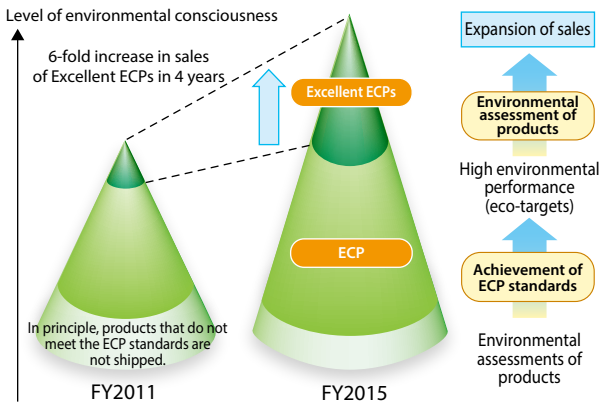
Toshiba is implementing the Greening of Products initiative, which aims to achieve the highest level of environmental performance for all products that we develop and to minimize the environmental impact of products throughout their entire life cycles. We will promote the development of localized products designed to minimize environmental impact in response to the individualized needs of different countries and areas, including products equipped with cutting-edge features for developed countries as well as products for developing countries, where environmental impact is likely to increase as a result of economic growth.

To create ECPs, Toshiba Group sets "eco-targets" and incorporates them into product specifications to develop products with the highest level of environmental performance in the business strategy formulation and product planning stages.

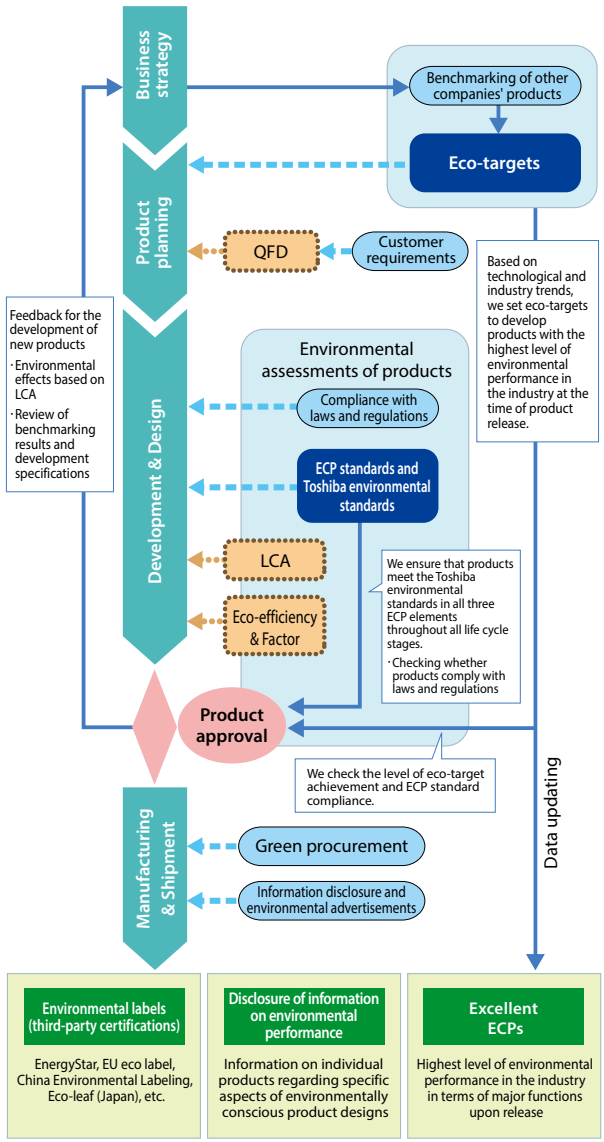
Then, in the product development and design stages, we make environmental assessments of the products to ensure that they meet the Toshiba environmental standards. During the environmental assessments, we check whether the products comply with laws and regulations as well as meet the ECP standards in all three elements throughout all stages of their life cycles.

In the final product approval stage, we check the level of achievement of the eco-targets and whether the products are in compliance with the ECP standards, certifying and publicizing those products with the highest level of environmental performance at the time of product release.

■Expansion of creation of Excellent ECPs



■Process of creating Excellent ECPs



Aiming to increase product eco-efficiency by 3.6 times in FY2016

Since 2003, Toshiba Group has been promoting activities to create ECPs by viewing product eco-efficiency, or the Factor, as an important indicator.

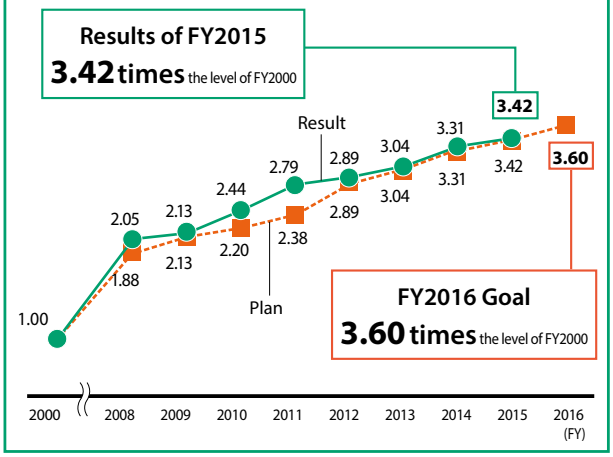
●Results of FY2015 and future initiatives

By the end of FY2015, we had calculated the Factor values (degree of improvement in eco-efficiency) for almost all Toshiba Group products. By enhancing the value of products and by reducing their environmental impact, Toshiba Group was able to increase the average environmental efficiency of all products by 3.42 times (Factor 3.42) compared to FY2000, greatly exceeding our initially planned goal.

We aim to increase product eco-efficiency to 3.60 times the level of the base year in FY2016.

Product eco-efficiency

Value of a product / Environmental impact of a product

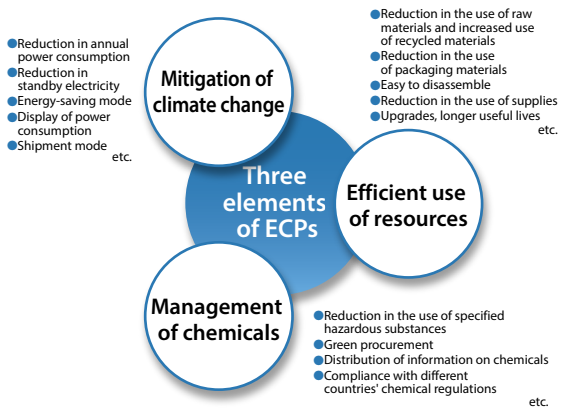


Toshiba Environmental Standards

- Assessment based on the three elements of ECPs -

Environmentally Conscious Products (ECPs) are designed to minimize environmental impact throughout all stages of their life cycles, including during procurement of materials, manufacture, distribution, use, disposal, and recycling. ECPs have three elements: mitigation of climate change, effective use of resources, and management of chemicals. Toshiba Group sets its own environmental standards (ECP standards) for each product model to assess overall environmental performance, which includes all three of these elements. Environmental assessments are performed during the development of every product to check not only whether the product complies with laws and regulations but also to check whether the product meets the ECP standards.

■Three elements of ECPs



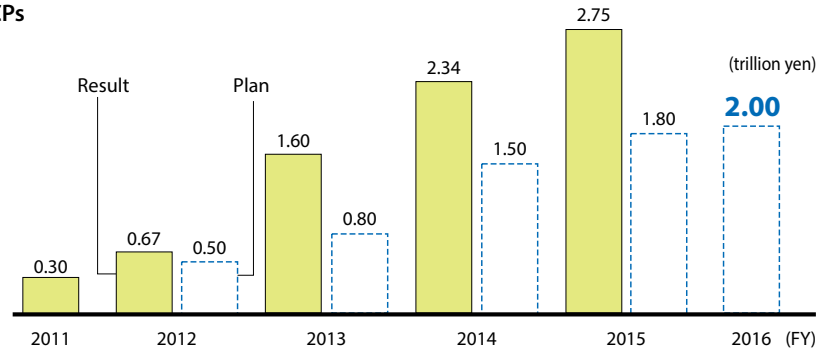
Excellent ECPs

Group-wide efforts to create products with the highest level of environmental performance

●Results of FY2015 and future initiatives

Toshiba Group is making efforts to achieve the highest level of environmental performance for all products we develop. In FY2015, we certified 95 products as Excellent ECPs. Toshiba Group's sales of Excellent ECPs reached the goal for FY2015 (1.8 trillion yen) in FY2014, one year ahead of schedule. As a result of further progress in the areas of energy and infrastructure as well as community solutions, sales of Excellent ECPs for FY2015 totaled 2.75 trillion yen. Excellent ECPs are not limited to products for the domestic market; they are being created in countries around the world. We will continue to make efforts to create Excellent ECPs in all Toshiba Group product areas.

■Sales of Excellent ECPs



■Products certified as Excellent ECPs in FY2015

Energy & Infrastructure System

In order to meet growing energy demand in the world, Toshiba Group will provide main power supply and power generation systems globally that contribute to a stable energy supply and the shift toward a low carbon society as well as equipment, systems, and services that support social and industrial infrastructure. Toshiba Group's secondary battery SCiB™ is installed on cars, power generation systems, and a variety of other devices by taking advantage of its features, including quick charging, a long battery life, and a high level of safety.

Hybrid Puffer™ Gas-Insulated Switchgear (GIS)

- Designed to be compact (to save resources) by using Toshiba's original method (hybrid puffer™ method) for arc extinction*1
- Footprint: 8.96 m^2
  (This is the most space-saving equipment in the industry world)
- Distance between lines: 800 mm
  (This is the shortest distance in the industry world)
- Reduced use of SF_6 gas*2:
  -25% (based on Toshiba data)

*1 Arc extinction: To extinguish generated arc when electric current is cut off with a breaker

*2 SF_6 gas: Sulfur hexafluoride, one of the greenhouse gases

EV bus system using SCiB™ batteries

- CO_2 emissions reduced by approx. 40% compared to diesel buses (no emissions while driving)
- The rapid charging performance of SCiB™ batteries enables super quick charging several times per day, which supports running buses according to an ordinary bus schedule. Reduces the amount of batteries that must be carried compared to batteries that are charged at night once a day
- Batteries after service as in-vehicle ones can be reused in stationary applications by using residual battery value assessment technology*

* Some batteries may not be able to be reused depending on the deterioration

Community Solutions

In order to contribute to the creation of smart communities designed to be environmentally friendly and to ensure comfortable lifestyles, Toshiba Group provides total solutions for a wide range of areas, including energy and water as well as transportation, for offices, factories and homes. In offices, for example, we develop devices with the highest efficiency for facilities (e.g., lighting and air conditioning systems as well as elevators) and provide advanced office equipment (e.g., accounting machines). We also provide services for achieving detailed control of the operation of such devices, thereby reducing the overall energy consumption of buildings.

Light Commercial Air Conditioner "Super Power Eco-mini"

- Satisfies the Energy Saving Act 2015 standard and achieves an APF (2015) value of 6.2*1 with a compact chassis using high-efficiency components
- The smallest height (1,050 mm) in the industry*2
- Recycled plastic used in the propeller fan

*1 APF (Annual Performance Factor) is Japanese Energy Efficiency Standard. This value is for Super Power Eco mini 4HP class (JIS B 8616:2015)
*2 At the time of product release

An industry first! Adjustable illumination, halogen-bulb-type, mini-krypton LED light bulb featuring GaN*1 technology

- Equipped with a GaN power device and saves resources with a compact power supply (with the circuit board area reduced by 60%)
- This adjustable illumination LED light bulb, which has the same shape as conventional light bulbs but was difficult to produce, was made available by installing an illumination adjustment circuit in the space created by downsizing the power supply; it facilitates replacement of conventional lights with LED lights
- Power consumption reduced by approx. 85% compared to conventional light bulbs
- An LED light bulb designed to enable smooth illumination adjustment, which further contributes to reducing energy consumption

*1 Abbreviation of "Gallium Nitride"; one of the technologies for the future proposed in the Ministry of the Environment's Action 50-80

Self-checkout/ Accounting System SS-900G/K

- Achieved the highest energy savings in standby mode* by using the high performance low power CPU and efficient power
- Achieved the highest resource savings* for product miniaturization and installation area by reviewing the shape and reducing the size of parts

* At the time of product release

TOSHIBA machine-roomless elevator SPACEL-GR II/ORDER SPACEL -GR II

- Designed to use regenerative power, to reduce standby power consumption, to adopt LED lighting, and to improve system efficiency*, thereby reducing power consumption by as much as 50%
- Eliminates lubricant oil by adopting a roller guide for the elevator cage and balance weight
- Realizes a reduction of lead use, mercury-free lighting by adopting LED lighting, and PVC-free elevator cage

* Comparison of a 15-person passenger elevator with a speed of 105 m/minute equipped with a regenerative power function against a conventional model (SPACEL-EX) (data compiled by Toshiba)

Visual Devices and Notebook PCs

Toshiba Group provides high-value-added, low-environmental-impact products designed for comfortable, environmentally friendly lifestyles. We offer products and services that meet the needs of customers, some of which are even ahead of the times.

LCD television 4K REGZA G20X series

- Equipped with a backlighting technology that Toshiba has developed over many years and a new engine, 4K REGZA Engine HDR, to achieve a high image quality and a low power consumption. The power consumption* of 55G20X is less than 100 kWh/year
- Awarded a FY2015 Energy Conservation Grand Prize (Special Jury Prize). The industry's first 4K-compatible television to be awarded the prize

* Measured based on the Energy Saving Act
Amount of power consumed annually by watching TV for 4.5 hours per day

Business notebook PC Satellite Pro R50-C

- The battery lasts for as long as approx. 9.0 hours*. Using a PC on battery power during the daytime when there is heavy demand for power and charging the battery at night when power demand is relatively low contributes to the leveling of power demand

* The actual operating time varies depending on the model as well as on the usage conditions and settings

Mitigation of Climate Change by Products and Services

In order to promote developments aimed at mitigating climate change, Toshiba Group assesses the entire life cycle of products. We will provide energy-saving products worldwide and reduce CO_2 emissions in order to contribute to mitigation of climate change.

Reducing CO_2 emissions through the Greening of Products initiative

With a view to mitigating climate change, Toshiba Group is striving to reduce CO_2 emissions through the Greening of Products initiative aimed at developing products by setting eco-targets for mitigation of climate change to improve major environmental performance.

Toshiba Group's products cover a wide range of categories from consumer electronics to power generation plants, and CO_2 emissions from these products in different stages of their life cycle vary from one product to another. Under the Fifth Environmental Action Plan, we will continue to evaluate products throughout their entire life cycle. At the same time, we will focus our efforts on reducing environmental impact during customers' use of products, which has a large effect on the environmental efforts of Toshiba Group as a whole, and further enhance the annual CO_2 emissions reduction effect that may be achieved if conventional products are replaced by eco products.

●Results of FY2015

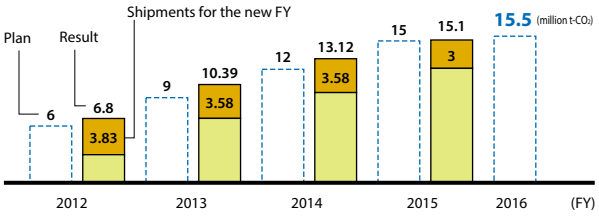
Since FY2010, we have set eco-targets regarding the mitigation of climate change in order to develop products with the highest level of environmental performance. In FY2015, we were able to reduce CO_2 emissions by 15.10 million tons per year by offering newly developed products throughout the world.

●Future initiatives

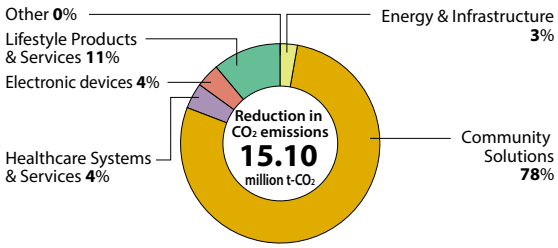
Toshiba Group will continue to reduce the amount of CO_2 emissions across all its products by identifying key factors that contribute to reducing CO_2 emissions and by sharing advanced examples and core technologies among group companies. At the same time, we will expand our business in global markets for home and business appliances, such as LED light bulbs and industrial air conditioners that have large energy-saving effects, as well as for social infrastructure products—especially in markets in developing countries where there is a rapidly growing demand for products that can achieve great reductions in CO_2 emissions.

Through these measures, we aim to achieve a reduction in CO_2 emissions of 15.50 million tons by FY2016.

■Changes in reductions in CO_2 emissions

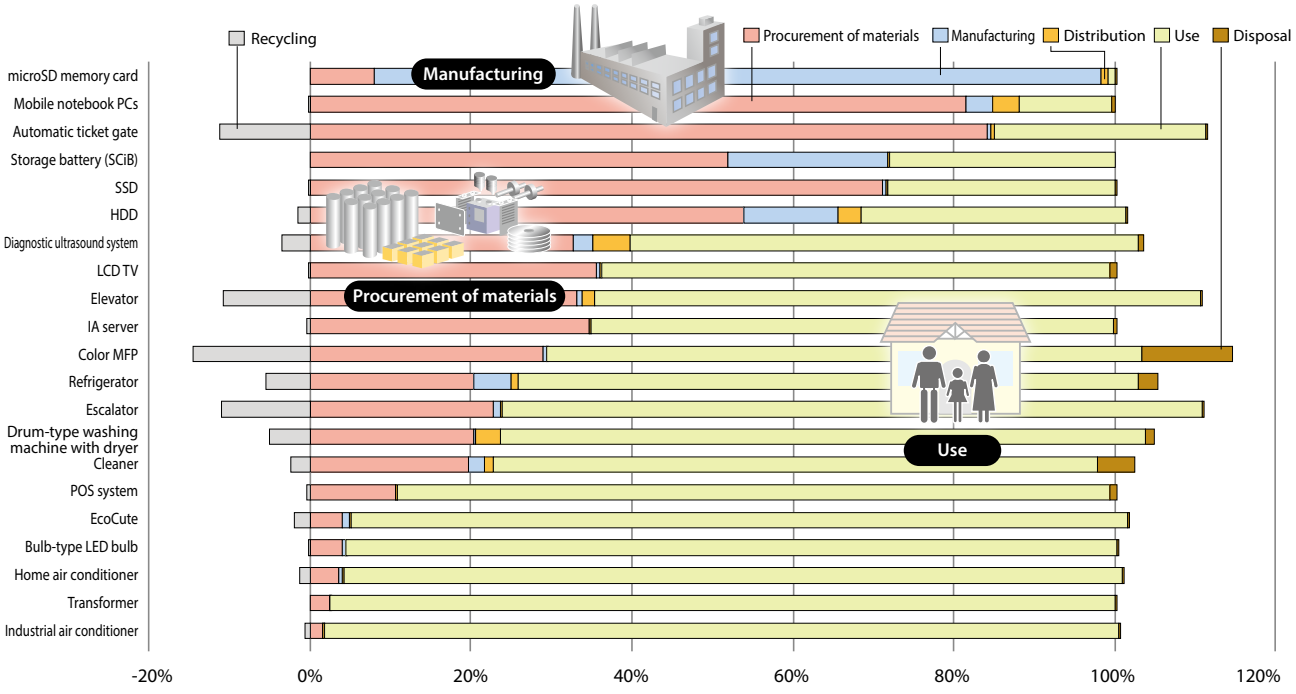


■Breakdown of reductions in CO_2 emissions (FY2015)

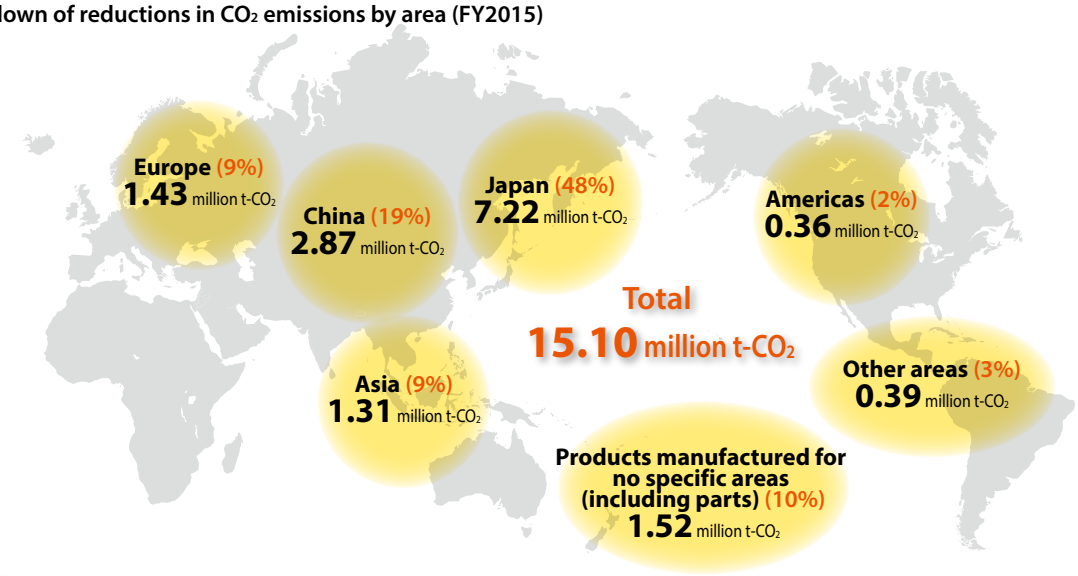


(By business segment)

■Percentages of CO_2 emissions from the lifecycle stages of Toshiba Group's products



■Breakdown of reductions in CO_2 emissions by area (FY2015)



Case Study 1 Energy-saving solutions for rolling stock

Toshiba Group is working to further improve the efficiency and energy-saving performance of various devices and systems used in rolling stock. We are also striving to systematically reduce energy consumption from multiple perspectives, including reducing the number of man-hours and parts required for replacement as well as downsizing products using new system module structures.

Energy-saving features

●Greatly reducing the energy consumption of all system devices
Example: Reducing energy consumption by 39% with a Permanent Magnet Synchronous Motor (PMSM) system*1

●Monitoring, analyzing, and automatizing train operations to support energy-efficient driving
Example: Reducing energy consumption by 10% with automatic train operation*2

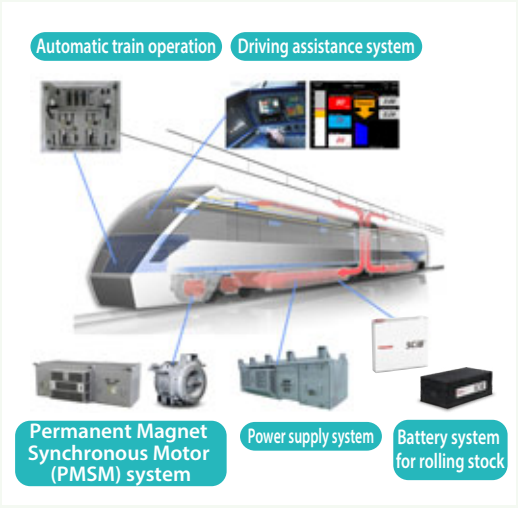
Making maintenance simple and extending service life

●Contributing to developing easy-to-maintain rolling stock by simplifying conventional operations

Reducing size and weight

●Reducing the size and weight of equipment by adopting new systems/parts and using modular structures

*1: Based on field test results for Toshiba's PMSM and Induction Motor (IM)
*2: Based on results of simulation and field tests (over 10%)



Case Study 2 Highly power-efficient SSDs for the enterprise

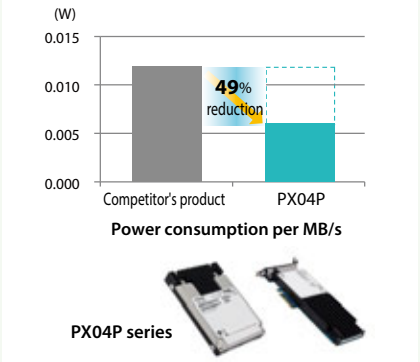
Advancements in cloud services and the widespread use of big data in recent years have raised concerns over the exponential increase in the amount of information saved on large-scale storage systems, most typically those of datacenter systems. Toshiba Group provides high-performance, highly power efficient SSDs for the enterprise, thereby contributing to reducing the power consumption of storage systems and various servers in datacenters and at other sites.

Energy-saving features

●Realizing high-speed data transfer by using the latest interface standard, NVMe*

●Using Toshiba NAND in combination with an originally developed controller to reduce power consumption per MB/s in write operations by 49% compared to competitors' products

* NVMe: Non-Volatile Memory Express, an interface optimized for non-volatile memory
NVMe™ is a trademark of NVM Express, Inc.



Efficient Use of Resources

Toshiba Group promotes 3R (reduce, reuse and recycle) initiatives for products to reduce resource consumption and increase incoming and outgoing recycling.

Toshiba Group's 3R initiatives for products*

In order to create a sound material-cycle society, there is a need to reduce the amount of resources extracted and discharged as waste throughout the product life cycle. Toshiba Group is promoting 3R initiatives for products aimed at reducing waste, increasing incoming recycling, and improving outgoing recycling. We are also taking measures to promote design for 3Rs of product and recycling systems and are implementing activities to reduce the environmental impact of our products throughout their life cycles.

* Reduce, reuse, and recycle

●Waste reduction

We achieve waste reduction through various means, including reducing the amount of resources used to manufacture products (reducing weight and size) and extending product lives (including upgrades and maintenance).

●Incoming recycling

Incoming recycling refers to the application of recycled materials in products. We will work to improve our incoming recycling rate by increasing our use of recycled materials, plant-derived materials, and reusable parts.

●Outgoing recycling

Outgoing recycling refers to the collection and recycling of end-of-life products. By promoting designs for reusing and recycling materials, we improve outgoing recycling while simultaneously improving the system design for recycling end-of-life products further.

Increase in the percentage of resource savings

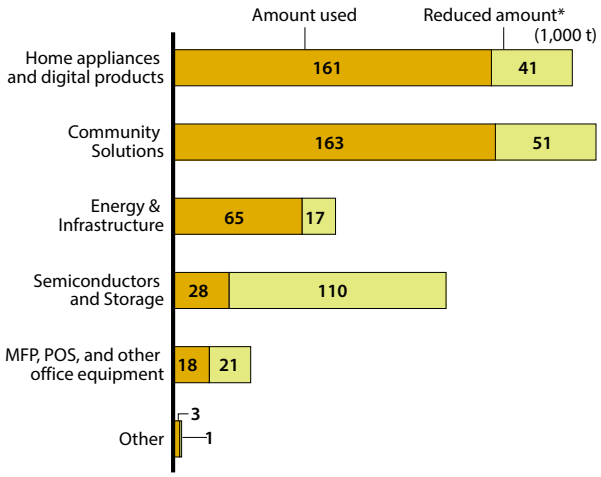
●Results of FY2015

Under the Fifth Environmental Action Plan, we aim to further increase the amount of resources conserved to 1.5 times the FY2010 level. In FY2015, the total amount of resources used in Toshiba Group's major products, estimated by multiplying the amount used for products and packaging materials by the number of shipments, was approximately 430,000 tons. Based on comparisons with the previous product models and adjusting for the expected number of years of use, we also estimated to what extent resource consumption has been reduced for different products. Our comparisons show that we have reduced the use of resources by 240,000 tons, or by 30% compared to previous product models. As a result of reduced production of LCD TVs and other digital products, we were unable to achieve our goal.

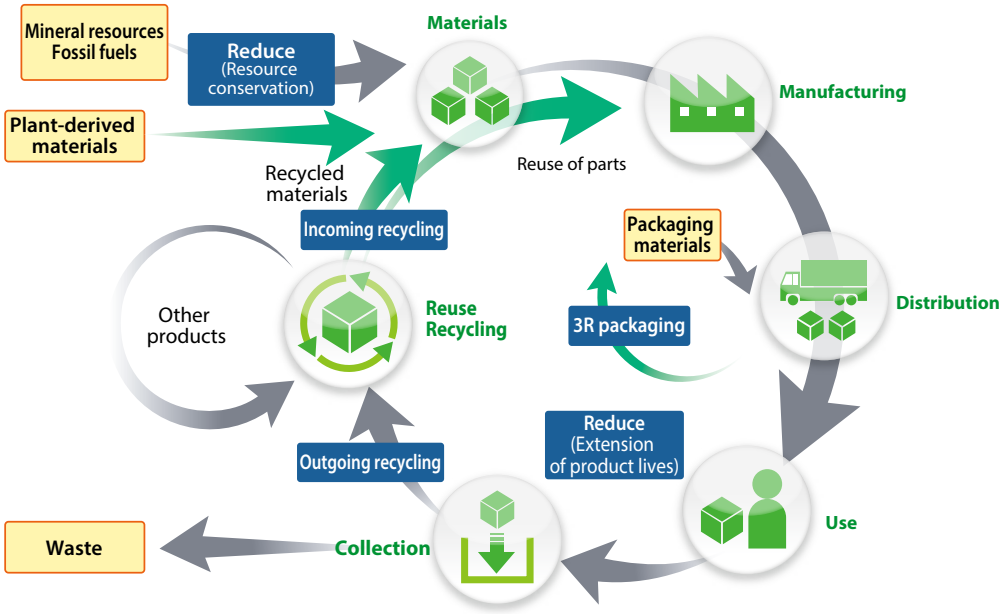
●Future initiatives

We will continue to promote resource-saving designs for all products with the aim of further reducing resource consumption.

■Amount of resources used by Toshiba Group and reductions in resource consumption (FY2015)



* Calculated by comparison with the previous product models adjusting for the expected number of years of use



3R initiatives for packaging materials

We will streamline the use of packaging as well as product materials to reduce environmental impacts throughout their entire life cycles. We will work to reduce the use of packaging materials in accordance with the characteristics of each business area and product category through various measures, such as reducing packaging volume, enlarging the size of returnable (reusable) cases, and using materials with low environmental impact.

Increased use of recycled plastics

Toshiba Group is promoting initiatives to recycle plastic waste generated by end-of-life products.

●Results of FY2015

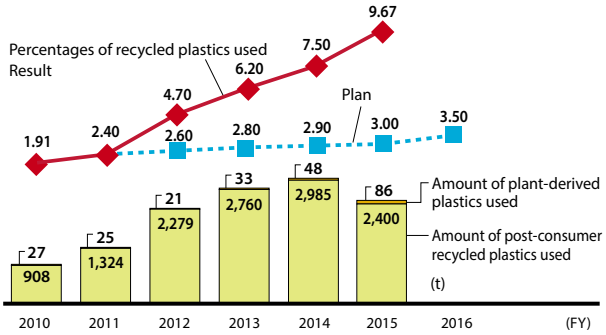
As a result of reduced production of home appliances, the amount of recycled plastics used in Toshiba Group products decreased to approximately 2,400 tons in FY2015. However, use of recycled plastics in MFPs and industrial air conditioners continues to increase. The percentage of recycled plastics relative to the total amount of plastics used in products* was 9.7%, greatly exceeding the initial goal (3.0%).

●Future initiatives

In order to further increase the percentage of recycled plastics used in our products, we will secure a supply of waste plastics as well as develop new uses for recycled plastics in all product groups.

* [Amount of recycled plastics] / [Amount of plastics used for products] × 100

■Amounts and percentages of recycled plastics used



Post-consumer recycled materials vary in quantity available and quality depending on how they are obtained. At times, we may need to use virgin materials due to insufficient supply or quality problems.

Case Study 1 Color MFP e-STUDIO5005AC Series

Toshiba TEC Corporation

e-STUDIO5005AC series achieved the minimum product mass and installation area*1 with 3D laser welded frame and re-design of the case layout. Also achieved the highest resource savings*1 by increasing the percentage of use of recycled plastics with the use of high post-consumer recycled material. Further achieved the highest energy savings*1 (top-level Typical Electricity Consumption*2) by using a low melting point toner and improving the thermal conductivity of the fusing belt.

*1 At the time of product release; the current position is not guaranteed
*2 Indicator of energy efficiency

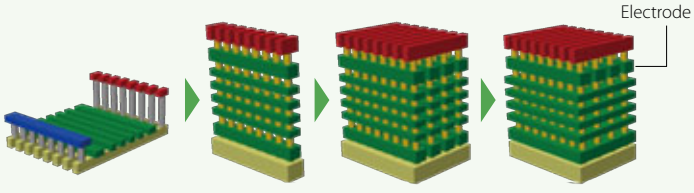
Case Study 2 BiCS FLASH™*, a three-dimensional flash memory that can store massive amounts of data

Toshiba Storage & Electronic Devices Solutions Company

By arranging two-dimensional NAND flash memories in three dimensions, BiCS FLASH™ has broken through the limitation of 128-Gb die density, which was difficult to overcome due to miniaturization limitations. The memory capacity per die has increased to 256 Gb, which means a single BiCS FLASH™ die can store an amount of data equivalent to approximately 200 years' worth of newspapers. Paperless storage of information also helps conserve resources.

* BiCS FLASH™ is a trademark of Toshiba Corporation

The transition of Flash Memory from 2D to 3D



The prior art of NAND flash memory
1. Stand it up.
2. Line them up.
3. Connect the electrodes into planar shape.

Recycling of End-of-Life Products

Toshiba Group is expanding recycling of end-of-life products globally.
In Japan, too, the Group actively promotes recycling of end-of-life products centered on waste home appliances and personal computers.

Recycling end-of-life products globally

In order to ensure efficient use of resources and appropriate treatment of hazardous substances, in accordance with recycling regulations in each country and territory of the world, Toshiba Group is promoting the collection and recycling of products that customers have discontinued use of. The Group promotes collection and recycling of end-of-life products while striving to minimize collection and recycling costs as it complies with each country's recycling scheme. In Japan, in addition to products covered by the Act on the Recycling of Specified Kinds of Home Appliances, the Act on the Promotion of Effective Utilization of Resources, and other relevant laws, the Group has established a unique scheme to collect elevators, MFP/POS systems, and other industrial equipment. Toshiba Group also responds appropriately to the Directive on Waste Electric and Electronic Equipment (WEEE) in Europe*1 and state laws in the United States. Furthermore, it is preparing to respond appropriately to recycling-related laws enacted in China, India, and Australia and those expected to be enacted in the future by governments in Asia, Central and South America, and other regions.

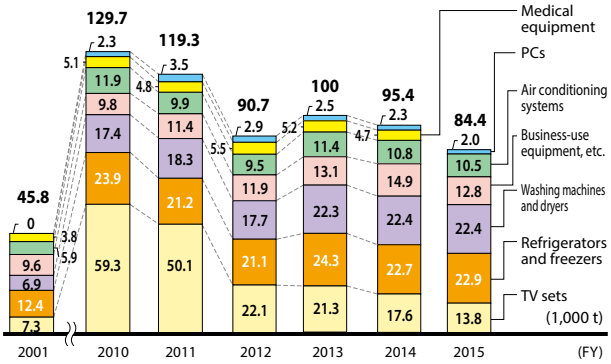
●Results of FY2015

In FY2015, in Japan and abroad, Toshiba Group collected about 101,000 tons of end-of-life products, of which it recycled about 84,000 tons. The total volume of end-of-life products collected decreased by approximately 16,000 tons.

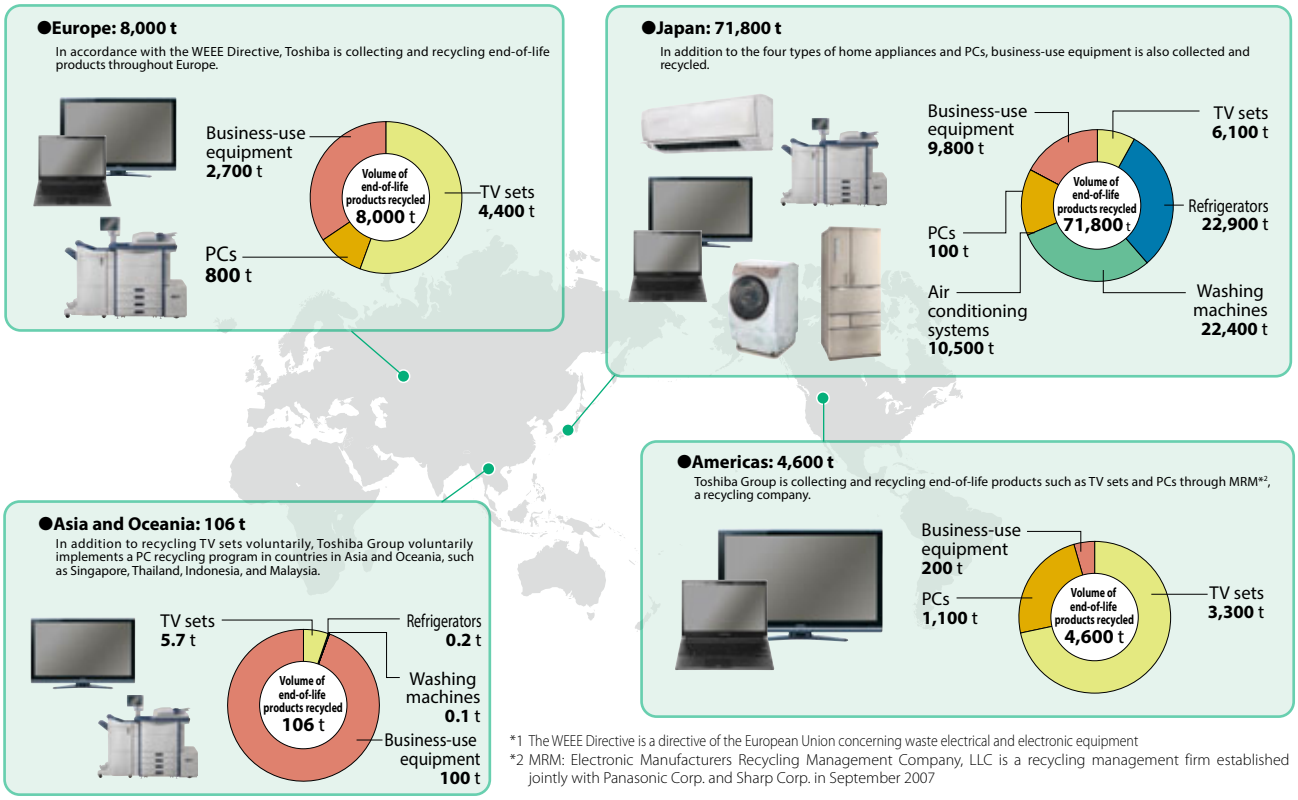
This was due to the selling of the medical equipment business as a result of a change in Toshiba Group's business structure as well as a continuing decrease in the amount of end-of-life televisions collected in the Americas and Europe as a result of the structural reform of the TV business.

In the future, Toshiba Group will continue to increase the volume of end-of-life products collected and recycled in Japan and establish a collection scheme in a wider range of its overseas locations.

■Volume of end-of-life products recycled (global)

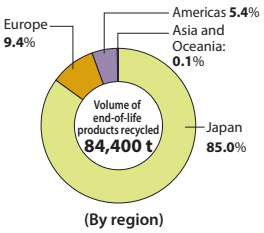


■Volume of end-of-life products recycled by region (FY2015)



*1 The WEEE Directive is a directive of the European Union concerning waste electrical and electronic equipment
*2 MRM: Electronic Manufacturers Recycling Management Company, LLC is a recycling management firm established jointly with Panasonic Corp. and Sharp Corp. in September 2007

■Breakdown of the volume of end-of-life products recycled (FY2015)



Looking at the volume of end-of-life products recycled by region, in Japan 80% or more of the total volume is recycled, with four types of home appliances accounting for the bulk of this. Major items collected and recycled in Europe include TV sets and business-use equipment. In the U.S., major items include TV sets and PCs. Maintaining the volume of end-of-life products collected in China and other Asian countries as well as preparing to respond to recycling-related laws that are expected to be enacted in other areas are issues to be addressed in the future.

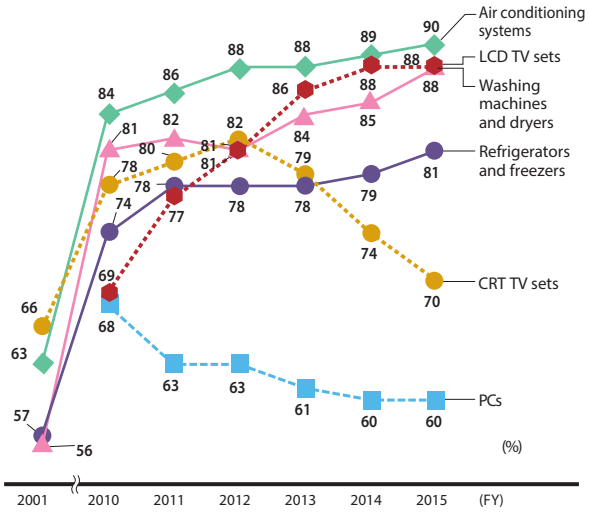
Recycling of end-of-life products in Japan

In Japan, Toshiba Group is collecting and recycling end-of-life products in accordance with the Act on the Recycling of Specified Kinds of Home Appliances and the Act on the Promotion of Effective Utilization of Resources.

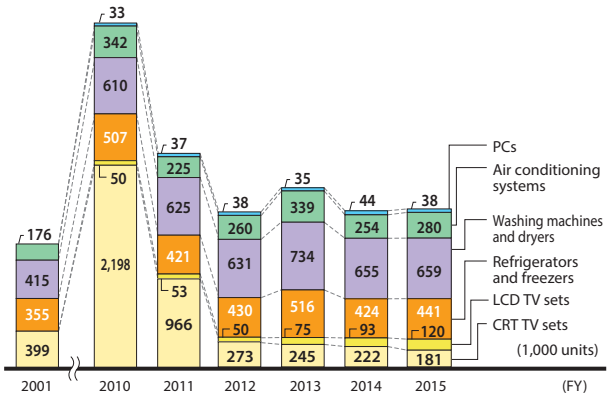
●Results of FY2015

The number of the four types of home appliances collected in FY2015 was approximately 1.68 million. The recycling rate for all four types of products increased by about 2% compared to the previous year. This was chiefly because of an increase in the number of LCD TVs, refrigerators, washing machines, and air conditioners collected. The number of end-of-life PCs for business and home use returned to the average annual level of about 38,000 units (a decrease of 16% compared to the previous year) because replacement due to the termination of support for Windows XP during the previous fiscal year passed its peak.

■Percentage of four types of home appliances and PCs recycled in Japan



■Number of four types of home appliances and PCs collected in Japan



Case Study 1 Expanding the use of recycled plastics in air conditioners

Toshiba Environmental Solutions Corporation and Toshiba Carrier Corporation

Toshiba Group is working in collaboration with material makers to expand the use of recycled plastics in air conditioners. In the process of dismantling end-of-life home air conditioners, Toshiba Environmental Solutions Corporation collects and crushes cross-flow fans used in air conditioner indoor units that are made of glass fiber-reinforced AS resin. After that, the crushed cross-flow fans are washed, foreign materials are removed, and then they are recycled into plastics by Toray Industries, Inc. Recycled plastics are used as materials for outdoor unit fans in home and industrial air conditioners designed by Toshiba Carrier Corporation.

Collection, dismantling, and sorting

Cross-flow unit in indoor unit

Fans crushed

Plastics coarsely crushed and collected

Recycling and manufacture of resin

Recycled plastic pellets*1 (Glass fiber-reinforced AS resin)

Fan manufacturing and air conditioner assembly

Air conditioner outdoor unit fan

Use

Home air conditioner indoor unit

Industrial and home*2 air conditioner outdoor units

*1: Resin regenerated and manufactured by Toray Industries, Inc. *2: Home air conditioners designed and sold by Toshiba Home Appliance Corporation

Management of Chemicals in Products

In addition to ensuring proper management of chemicals contained in products, Toshiba Group also promotes communication and information sharing on such chemicals through the value chain to minimize risks to human health and the global environment.

Toshiba Group's initiatives for the management of chemicals contained in our products

Toshiba Group manufactures and sells a wide range of products, from electronic devices (e.g., semiconductors and hard disks) to audio-visual products (e.g., PCs and TVs), building- and facility-related devices (e.g., air conditioners, elevators, and lighting devices), industrial systems (e.g., motors and railroad systems), and energy and social infrastructure products (e.g., power generation, transmission, and distribution systems). Various chemicals are used to manufacture these products. To properly manage these chemicals and to achieve our goal of minimizing the risks involved in the use of chemicals in accordance with the precautionary principles, which were proposed and adopted at the World Summit on Sustainable Development (WSSD*1) and other conferences, Toshiba Group has been promoting initiatives to specify the chemicals to be managed, to eliminate the use of specified chemicals (including the use of substitute materials), and to reduce the amount of chemicals contained in our products. In addition, we also promote communication and information sharing on such chemicals through the value chain in order to minimize risks to human health and the global environment throughout product lifecycles.

Also, to respond to the globalization of business, Toshiba Group is developing global measures to manage chemicals contained in products. To this end, we are collaborating with regional environmental divisions (in China, Southeast Asia, Europe, and the U.S.) to gather and assess the impact of policies and regulations of countries around the world to enhance Toshiba Group's management of chemicals.

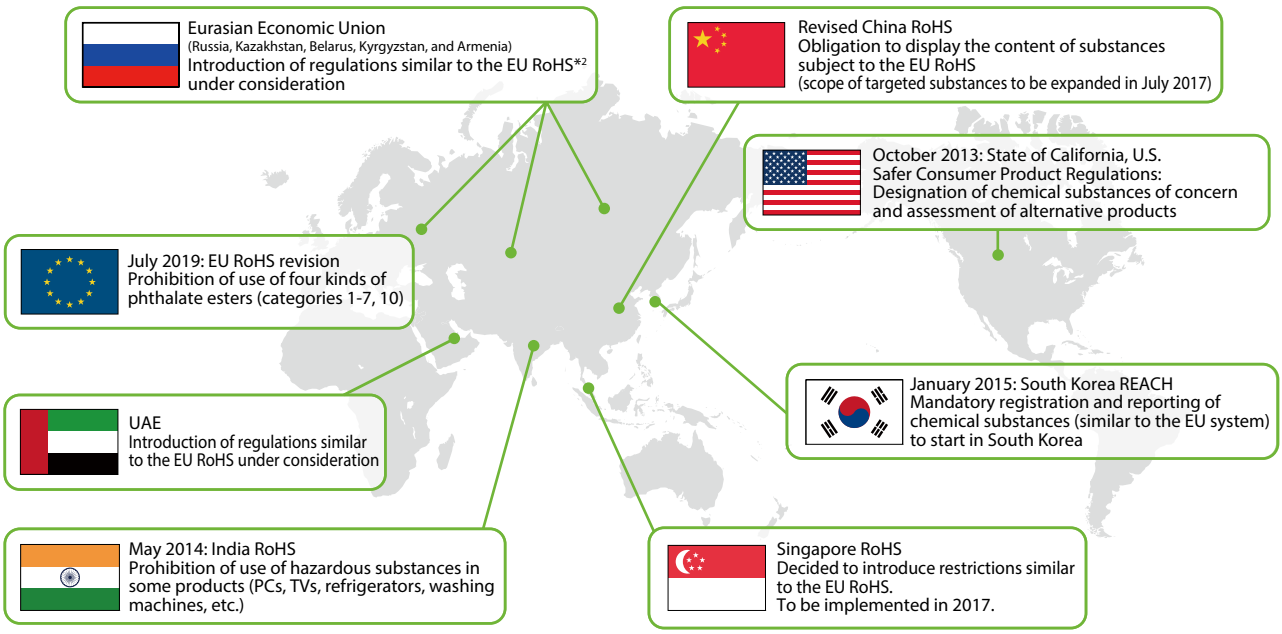
Furthermore, to promote the Green Procurement initiative, Toshiba Group has specified "prohibited substances," whose presence is prohibited in procurement items, including product materials and parts, and "managed substances," whose environmental impact should be reduced, based on their actual usage, via reduction of use and substitution. Our aim is to procure products, parts, and materials in cooperation with our business partners and suppliers to minimize the environmental impact of these chemicals.

■Toshiba Group Environment-related Substance List

Category	Definition
Rank A (Prohibited Substances)	Substances whose presence is prohibited in procurement items (including packaging) in the Toshiba Group. Substances whose use in products (including packaging) is prohibited or restricted by domestic or foreign laws and regulations.
Rank B (Managed Substances)	Substances whose environmental impact should be reduced, based on their actual usage, via reduction of use and substitution, or recovery and detoxification in a closed system.

Due to sector specific conditions and other circumstances, details of the management of chemicals (substances managed, management levels, threshold values, etc.) may differ among Toshiba Group companies.

■Examples of regulations on chemicals contained in products in different countries



*1 WSSD: World Summit on Sustainable Development
*2 Restriction of certain Hazardous Substances (RoHS): A directive that limits the use of specified hazardous substances in electrical and electronic devices

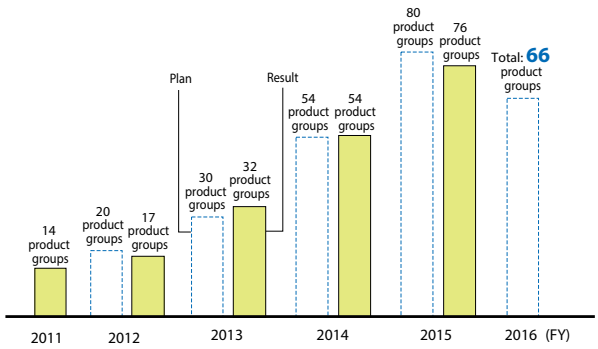
Promoting use of alternatives to PVC/BFRs

●Results of FY2015 and future initiatives

In the Fifth Environmental Action Plan, Toshiba Group set a goal of using substitute materials to replace polyvinyl chloride (PVC) and brominated flame retardants (BFRs) contained in products across a total of 80 product groups. In FY2015, we reduced the use of PVC and BFRs in lifestyle products and social infrastructure products as well as expanded the scope of our initiative from 54 product groups, for which we achieved our goal in FY2014, to 76 product groups. We will continue our efforts this fiscal year to promote the use of alternatives to PVC/BFRs.

* As a result of changes to Toshiba Group's business structure, we excluded medical equipment and home appliances from the target product groups. Consequently, the total number of product groups targeted for our initiative in FY2016 has changed from 80 to 66.

■Changes in product groups covered by the PVC/BFR substitution initiative



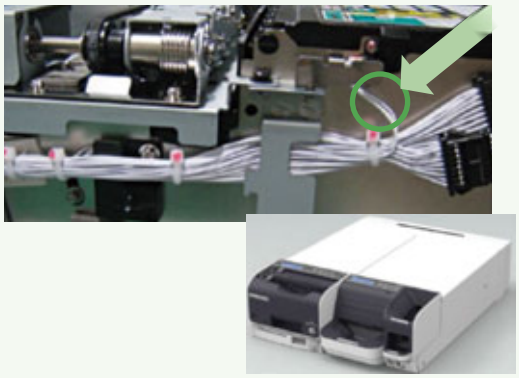
The following are examples of products for which Toshiba Group promoted the use of alternatives to PVC/BFRs in FY2015.

Case Study 1 POS system

Toshiba TEC Corporation

POS systems make use of cable harnesses with assembled parts made from multiple electric wires (for power supply and signal communication) that have been bound together.

Toshiba TEC Corporation had been using PVC harnesses that were soft and provided a large degree of freedom in wiring. However, the company considered adopting PVC-free harnesses and is now using parts that do not contain PVC. Toshiba TEC will use this case study as an example to promote the use of PVC alternatives in other products.



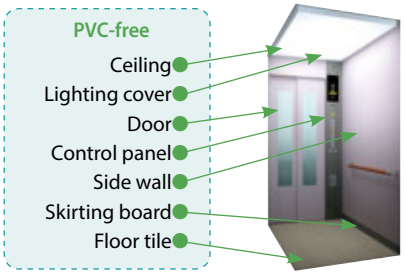
Case Study 2 Elevator

Toshiba Elevator and Building Systems Corporation

In manufacturing elevators, resin-coated decorative copper plates as well as lighting covers and tiles made of PVC were previously used to provide color variations and finishing touches to the interiors of elevator cages as well as to increase elevator durability.

Toshiba Elevator and Building Systems Corporation evaluated the possibility of using PVC-free materials in such parts and adopted these materials to produce PVC-free elevators.

Using an alternative to PVC for elevator cage interiors



Case Study 3 Ventilator instruction label

Toshiba Carrier Corporation

PVC had been used for many years to manufacture instruction labels for products (e.g., ventilation fans) that must be cleaned by customers with detergent. This is because PVC is known to protect printed letters from being washed off by detergent as well as to make it easy to use an adhesive that prevents labels from easily peeling off.

To find an alternative to PVC for instruction labels, the company tested different combinations of mounts, adhesives, and printing ink to examine detergent resistance and the difficulty of peeling off, eventually succeeding in commercializing a PVC-free label.

Product Eco-efficiency

Eco-efficiency

The concept of eco-efficiency was developed to realize a sustainable society by providing products and services designed to improve the quality of life while reducing environmental impact. The concept of eco-efficiency was proposed in 1992 by the Business Council for Sustainable Development (BCSD: renamed the World Business Council for Sustainable Development (WBCSD) in 1995).

As defined by the WBCSD, "eco-efficiency is achieved by the delivery of competitively priced goods and services that satisfy human needs and bring quality of life, while progressively reducing ecological impacts and resource intensity throughout the life-cycle to a level at least in line with the Earth's estimated carrying capacity."

$$\text{Eco-efficiency} = \frac{\text{Value of product/service}}{\text{Environmental impact}}$$

$$\text{Factor} = \text{Degree of improvement in eco-efficiency compared to the benchmark period}$$

To realize a world in which all people can lead affluent lifestyles in harmony with the Earth and to achieve Toshiba Group Environmental Vision 2050, the eco-efficiency of products and services must be increased. Eco-efficiency can be improved by improving the quality of life while minimizing environmental impact throughout product lifecycles. Toshiba Group developed an original method for calculating eco-efficiency in order to promote activities to create ECPs with high eco-efficiency. The Factor indicates the degree of improvement in eco-efficiency in comparison to a benchmark. Greater values of the Factor indicate that more technological progress and innovation are contributing to realizing a world in which all people can lead affluent lifestyles in harmony with the Earth.

Factor

Toshiba Group originally developed a method for calculating eco-efficiency to introduce an indicator that enables overall assessment of products' environmental friendliness. Comprehensive activities for creating ECPs that are aimed at increasing the Factor are part of the Factor T initiative, so named after Toshiba's initial.

Factor T is expressed by multiplying a value factor, which represents a product's degree of improvement in value, with an environmental impact reduction factor, which represents the degree of environmental impact. The value factor quantifies the value of a product or service using QFD, while the environmental impact reduction factor assesses environmental impact using LIME*.

■Calculation of Factor T

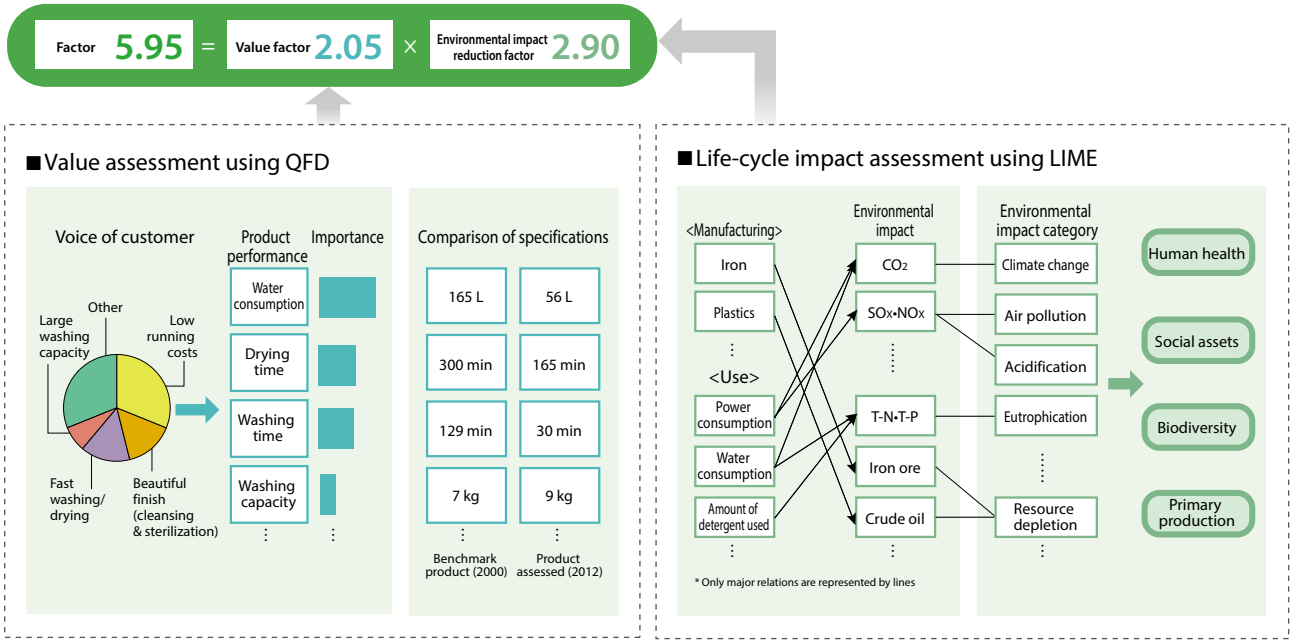
$$\text{Factor} = \frac{\text{Eco-efficiency of the product assessed}}{\text{Eco-efficiency of the benchmark product}} = \frac{\text{Value of a product}}{\text{Environmental impact of a product}} = \text{Value factor X} \times \text{Environmental impact reduction factor Y}$$

Provided value has improved by X times

Environmental impact has decreased to 1/Y

* LIME: One of the leading environmental assessment methods in Japan, LIME (Life-cycle Impact assessment Method based on Endpoint modeling) was developed by the National Institute of Advanced Industrial Science and Technology (AIST)

■Calculation of Factor T



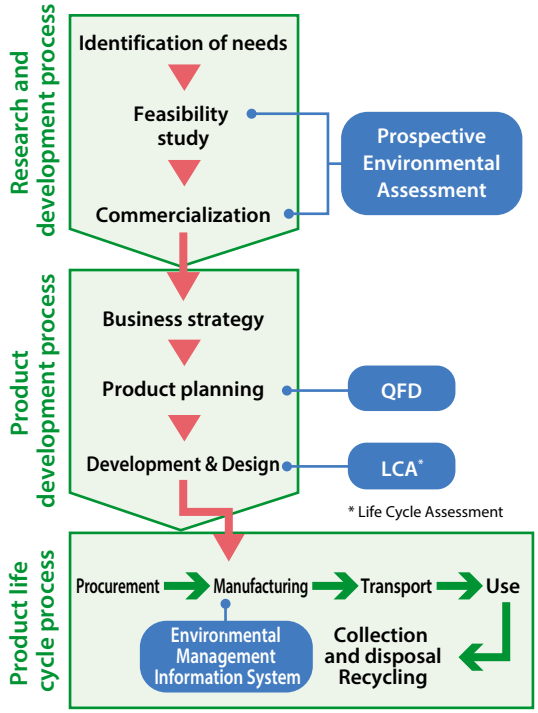
The Factor T initiative was started in 2003. Under this initiative, we have carried out various activities involving parties inside and outside Toshiba Group, including the announcement of Environmental Vision 2050, formulation of Environmental Action Plans, conferences with competitors aiming at standardization, and contribution to the establishment of ISO standards. Toshiba Group will continue to pursue the Factor T initiative in order to work toward realizing a sustainable society by incorporating new knowledge.

For detailed information about the calculation method and its application to Toshiba products, see the explanatory materials ("[Factor T] Reader" and "Encouragement of [Factor T]").

http://www.toshiba.co.jp/env/jp/factor_t/index_j.htm (in Japanese)

http://www.toshiba.co.jp/env/jp/report/pdf/factor_t2012_2.pdf (in Japanese)

Development of LCA and the Concept of Eco-efficiency in Toshiba Group



Factor T

Toshiba Group continues to promote the creation of ECPs by comprehensively considering the environment and value creation.

- We screen environmental effects from the research and development stage before commercializing products, thereby promptly analyzing the risks involved and increasing our market competitiveness.
- By the end of FY2013, we completed the Factor assessment for all product groups. We are now measuring improvements in the eco-efficiency of all Toshiba Group's product groups.

Life cycle management

Improvement in environmental performance throughout product life cycles

- We measure business process eco-efficiency. We also develop measures to reduce the environmental footprints of products and organizations.

Chapter 3 Greening by Technology

Contributing to a stable power supply and mitigation of climate change through low-carbon energy technologies

INDEX

Summary of activities in FY2015

Greening by Technology Initiatives P39

Spreading use of low-carbon energy technologies
- Expansion of sales of energy-related products
  1.6 trillion yen in FY2015

Reducing CO_2 emissions with low-carbon energy technologies
- The amount of CO_2 emissions reduction
  471 million tons in FY2015

Generating Energy P40

Thermal power generation
- Achieving the world's highest level of power generation efficiency by Advanced Ultra Super Critical (A-USC) coal-fired power generation and high-efficiency gas combined-cycle power generation
- Collecting over 90% of CO_2 by combining CO_2 capture and storage technologies

Geothermal power
- Ensuring long product lives, reliability, and high operating rates with technology that supports long-term system operation without trouble by applying Toshiba's original corrosion-resistance technology to steam turbines

Storing Energy P43
- Commercializing H_2One™, a hydrogen-based autonomous energy supply system that combines hydrogen power storage employing water electrolysis with fuel cell power generation technology

Distributing Energy P44
- DC power transmission system projects underway at six locations, including between Hokkaido and Honshu
- Participating in a project for DC power transmission between Italy and Montenegro

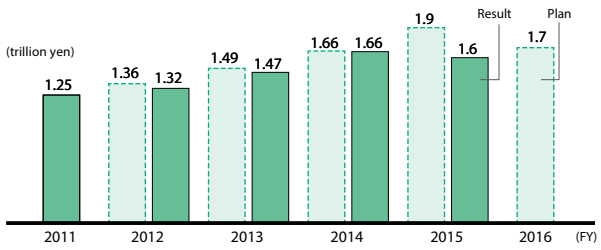
Aiming to increase sales of energy-related products to 1.7 trillion yen and reducing the amount of CO_2 emissions to 476 million tons in FY2016

The Fifth Environmental Action Plan calls for Toshiba Group to address two indicators in the energy sector: the amount of CO_2 emissions reduction of energy-related products and sales of energy-related products. In order to achieve Environmental Vision 2050, we are working to develop technologies to supply low-carbon energy and to mitigate climate change.

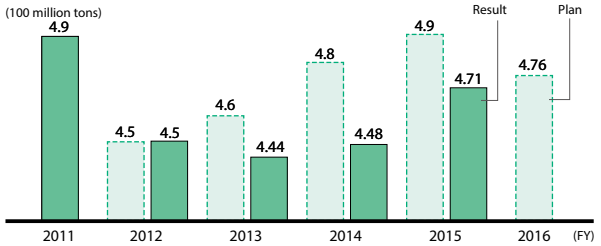
●Results of FY2015 and future initiatives

While we are making progress mainly by increasing the amount of CO_2 emissions reduction through high-efficiency thermal power generation, some goals have not been attained due to delays compared to initial plans with respect to the start of operation of plants under construction. However, we aim to increase sales of energy-related products to 1.7 trillion yen and reduce the amount of CO_2 emissions to 476 million tons in FY2016 by spreading high-efficiency thermal power generation and renewable energy, mainly through delivery of combined cycle thermal power generation systems and power generation systems to geothermal power plants. In this way, we will contribute to ensuring a stable power supply and mitigation of climate change.

■Sales for energy-related products



■The amount of CO_2 emissions reduction through energy-related products



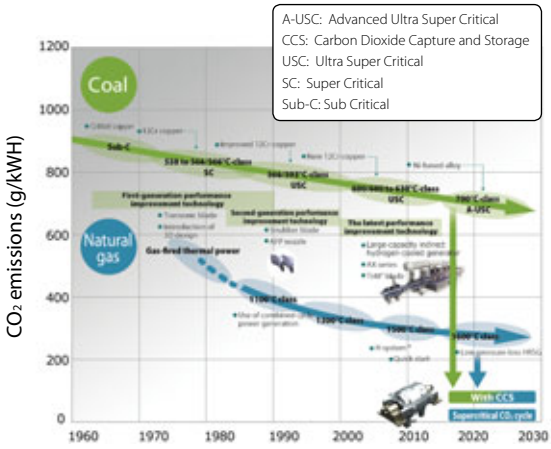
Generating Energy: Power generation technologies for mitigating climate change

For stable electric power supply and climate change mitigation, Toshiba Group is developing technologies to reduce CO_2 emissions of thermal power as well as developing and spreading renewable energy technologies such as hydroelectric, geothermal, wind, and photovoltaic power. The Group is also making sustained efforts to develop technologies for safety of nuclear power.

Thermal Power

Initiative for zero-emissions thermal power generation

Thermal power generation systems are important from an energy security perspective, but at the same time there is great need to reduce CO_2 emissions. Toshiba Group is working to achieve the highest level of power generation efficiency by using Advanced Ultra Super Critical (A-USC) coal-fired power generation and high-efficiency gas combined-cycle power generation as well as to collect at least 90% of CO_2 emissions by combining CO_2 capture and CO_2 storage technologies. Furthermore, by combining supercritical CO_2 cycle power generation, which does not emit CO_2 into the atmosphere, with CO_2 storage technology, we aim to collect 100% of CO_2 emissions (zero emissions).

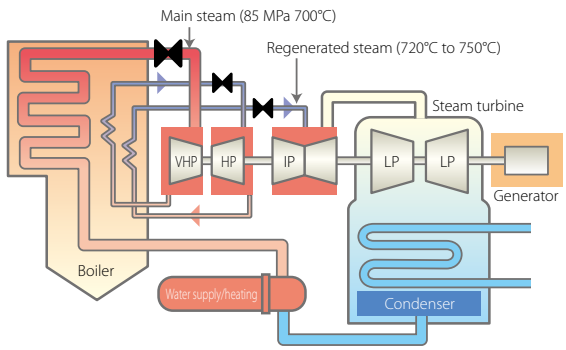


Toshiba Group's thermal power generation for a low-carbon society

Development of A-USC coal-fired power generation technology

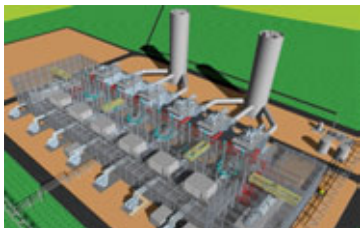
The advanced ultra super critical (A-USC) coal-fired power generation system is a coal-fired power generation system with 700°C-class ultra supercritical steam. In ordinary advanced thermal power generation, the steam temperature is approximately 600°C. However, in A-USC coal-fired power generation, the steam temperature is raised to 700°C or more in order to greatly improve power generation efficiency by 46% or more (high heating value standard). We are currently working to commercialize this technology.

■A-USC system diagram



Development of high-efficiency gas combined-cycle power generation

Combined-cycle power generation uses gas and steam turbines in combination. By harnessing waste gas energy, it improves efficiency compared to coal-fired thermal power generation and also reduces CO_2 emissions per unit of generated power. It realizes the world's highest efficiency of 62% (low heating value standard).



Overview: Combined cycle thermal power plant

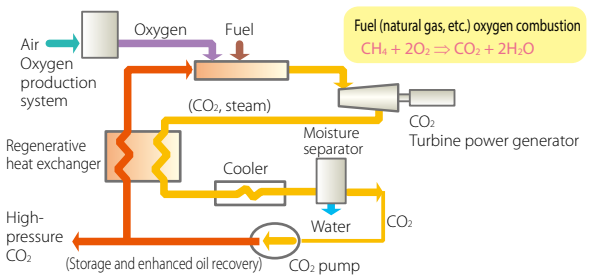
Commercialization of carbon capture technology

In order to commercialize technology for capturing CO_2 from exhaust gas emitted from thermal power plants, Toshiba Group is planning to build commercial plants and proposing applications of our system to potential customers based on know-how gained through over 8,600 hours of verification tests at the Mikawa pilot plant in Fukuoka Prefecture. In October 2012, as part of the Plant Biomass Energy Utilization Project for Saga City's Incineration Plant, we captured CO_2 from the incineration plant's exhaust gas at a purity rate of over 99%, one of this technology's distinctive features.

Development of a supercritical CO_2 cycle power generation system

A supercritical CO_2 cycle power generation system is a high-efficiency power generation system designed to drive turbines by high-temperature, high-pressure CO_2 generated by burning fuel with pure oxygen. It generates electricity while simultaneously capturing CO_2. As the system also uses pure oxygen to burn fuel, it is an environmentally conscious thermal power generation system that does not generate NO_x and can capture pure CO_2 without carbon capture technology. We are currently working to commercialize this system.

■Supercritical CO_2 cycle system diagram

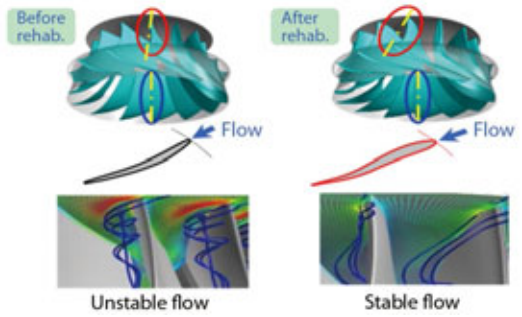


Hydroelectric Power

Toshiba Group has delivered about 2,000 units of both turbines and generators, totally over 58 GW of hydroelectric power generation equipment, to more than 40 countries around the world.

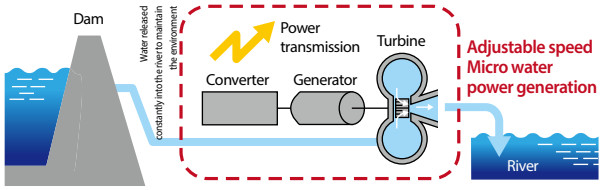
We play an active part in rehabilitating aged hydro power generation facilities. To rehabilitate turbines, we apply advanced flow analysis technology to increase output by improving turbine efficiency.

■Example of turbine rehabilitation technology



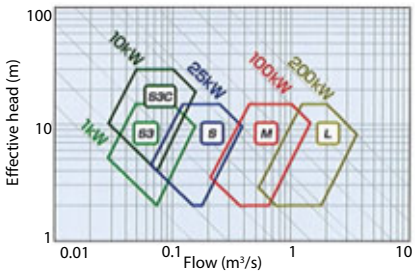
We also have the world's best-in-class technologies and achievements for pumped storage systems, in which water is pumped up using surplus power during nighttime and power is generated during daytime to offset power-demand peaks, as well as for adjustable speed pumped storage systems that are effective in power system stabilization. In addition, we play an active part in making effective use of hydroelectric energy. Our micro hydroelectric power generation system Hydro-eKIDS™ has been well received. Moreover, we have developed adjustable-speed small hydroelectric power generation systems to effectively use the specific amounts of water* constantly being released into rivers from dams where water levels fluctuate significantly. In the future, we will continue to develop and promote the use of hydroelectric power generation, the most frequently used type of renewable energy, by offering a wide range of product lineups, from large-capacity to small hydroelectric systems.

■Adjustable speed small hydroelectric power generation system



* To maintain the environment downstream of dams, a specific amount of water is constantly released into the river from the dams even during periods other than floods and irrigation

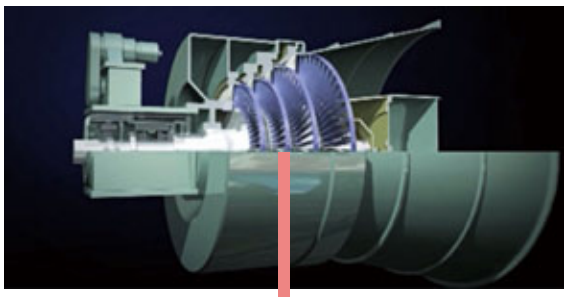
■Micro hydroelectric power generation system Hydro-eKIDS™ equipment selection table



* Five types of standard units are available for use to generate from 1 to 200 kW of electricity. Toshiba Group has also operated micro hydropower generation systems for 15 years and delivered or received orders for 75 systems in 46 locations.

Geothermal Power

Toshiba Group delivers facilities equivalent to 24% of the world's total geothermal power generation capacity. According to the temperature properties of geothermal sources, we provide optimal geothermal power generation systems, focusing on flash steam systems that require particularly advanced technologies, to make efficient use of thermal energy. Toshiba Group has a proprietary high-corrosion-resistance technology called "super rotor" technology. By applying this technology to steam turbines, the turbines can be operated for a long period of time without trouble even in highly corrosive geothermal plant environments, thereby ensuring long plant lives, high operational reliability, and high operating rates. The Geysers Geothermal Power Plant in the U.S. has an established track record of operating this system using our super rotor technology for a period of ten years without requiring inspection.

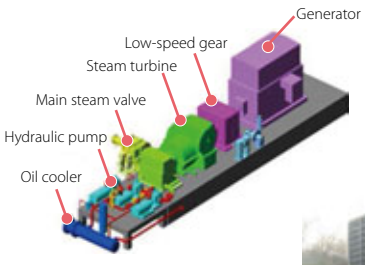


Geothermal steam turbine

General aged turbine parts

Turbine parts produced with Toshiba technology (after 10 years of continuous operation)

We also promote the use of Geoportable™, a 2MW-class compact geothermal power generation system. Geoportable™ has a small footprint and contributes to effective use of geothermal energy in locations with only one or two geothermal wells. Geoportable™ can also be used as a packaged unit to shorten the period before delivery from planning to operation, thereby enabling quick return on investment.



Compact geothermal turbine power generator

Waita Geothermal Power Plant

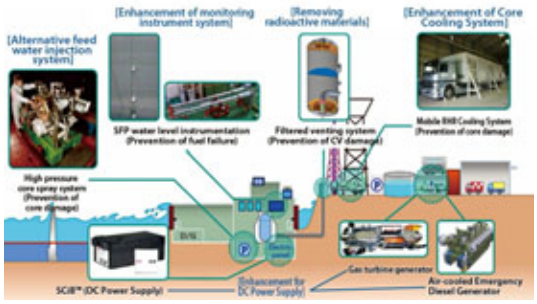
Nuclear Power

Ongoing efforts to improve the safety of nuclear power plants

Toshiba Group is working to develop new technologies to improve the safety of nuclear power plants.

Based on lessons learned from the accident at Fukushima Daiichi Nuclear Power Station, we are striving for restarting nuclear power plants in Japan. To this end, in addition to improving power supply systems by using backup generators and storage batteries as well as enhancing nuclear reactor cooling systems by using feed water injection and mobile cooling systems, we are also implementing measures to enhance monitoring functions and to remove radioactive materials for preventing serious accidents and mitigating the effects of radiation.

■For restarting nuclear power plants



* D/G: Diesel power generator; P: pump

To further improve the safety of nuclear power plants, we will continue ongoing efforts against airplane crashes and cyber attack as well as to develop a reactor core material that can reduce the amount of hydrogen in the event of serious accidents.

Accident-resistant reactor core

Meanwhile, to meet growing energy demand worldwide, Westinghouse Electric Company is constructing new plants in China and the United States, each with four advanced pressurized water reactors (AP1000™) equipped with passive safety systems.*

Toshiba Group will continue to make concerted efforts, both in Japan and overseas, to expand the use of safe nuclear power.

* Passive safety system: A system that cools a nuclear reactor by harnessing gravity and other natural forces without using pumps and other equipment that require external power

AP1000™ construction site

Photovoltaic Power Generation

Promoting the use of high-efficiency photovoltaic power generation systems for industrial and housing use

In order to contribute to the mitigation of climate change and effective use of limited fossil fuel resources, countries around the world are promoting the use of photovoltaic power generation; in Japan, too, public-private partnerships for its wider use are in progress. Toshiba Group contributes to reducing CO_2 emissions by promoting the use of photovoltaic power generation systems that achieve the highest level of efficiency and long-term stability.

Toshiba Group provides total support for industrial photovoltaic power generation systems, from system development to construction and maintenance. In addition to the experience we have acquired through construction of mega solar systems for electric power companies, we also make the most of Toshiba Group's comprehensive capabilities, including our engineering skills and our experience in manufacturing high and extra high voltage devices. Thus, our mega solar systems achieve the highest level of efficiency and long-term stability.

We have delivered large-scale photovoltaic power plants with capacities of 100MW class, including Tahara Solar - Wind Joint Project (50MW). We are also increasing sales of photovoltaic modules for other contractors responsible for EPC (engineering, procurement, and construction) of photovoltaic power plants, thereby contributing to reductions in CO_2 emissions.

Tomatoh Abira Solar Park Corp.
SoftBank Tomatoh Abira Solar Park

Tahara Solar - Wind Joint Project
Tahara Solar/Wind Electricity Generation Plant

Idemitsu Kosan Co., Ltd.
Himeji Power Plant

Kumamoto Arao Solar Park Corp.
SoftBank Kumamoto Arao Solar Park

In the area of residential photovoltaic power generation systems, we began selling a 250-W photovoltaic module with a conversion efficiency of 20.1% in December 2012. This conversion efficiency has already exceeded the 2020 goal (20%) for practical use modules set by NEDO* in the photovoltaic power generation roadmap.

Thanks to its high efficiency, Toshiba's system that uses this module generates a large amount of power per area, thereby further contributing to reducing CO_2 emissions.

250-W photovoltaic module

* NEDO: New Energy and Industrial Technology Development Organization

Storing Energy: Power generation technologies for mitigating climate change

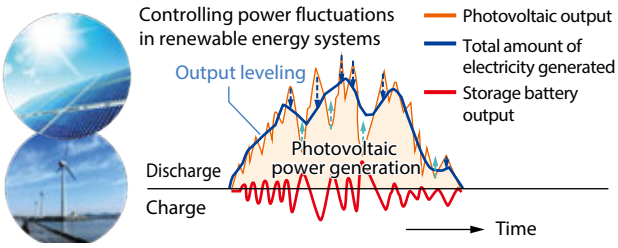
In order to ensure a stable power supply when large amounts of renewable energy, such as photovoltaic and wind power, are introduced, we are developing and providing diverse storage battery solutions and hydrogen power storage systems.

Stationary storage battery systems, an important trump card for spreading renewable energy

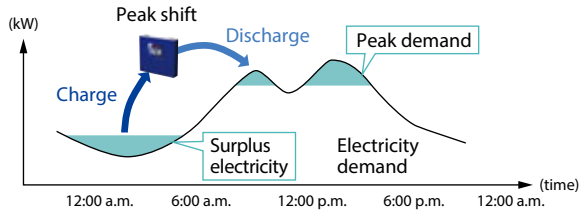
Power generation that uses wind, sunlight, and other renewable energy sources instead of fossil fuels is attracting public attention as a means of mitigating climate change and is actively being introduced in Japan as well as overseas, especially in Europe.

However, the amount of power generated by renewable energy varies with the weather, so generating power with renewable energy is an unstable power generation method. Expanding the use of this method requires controlling sharp output fluctuations and achieving load leveling through peak shifts by charging batteries at night when demand is low and discharging electricity during the day when demand peaks.

■Control of output fluctuations



■Peak shifting



Stationary storage battery systems to contribute to a stable power supply

The stationary storage battery system proposed by Toshiba Group uses Toshiba's high-performance SCiB™ lithium batteries as modules. These batteries' major characteristic is that lithium titanate (LTO), a safe battery material, reduces the risk of smoke and fire generation to the minimum, thereby ensuring a high level of safety. In addition, SCiB™ lithium batteries do not degrade even after more than 15,000 charge-discharge cycles, providing a long product life. Therefore, their input-output properties are stable over a wide range of capacities and facilitate charging and discharging from 0% to 100%, which can reduce the number of batteries needed for systems and thus contribute to downsizing.

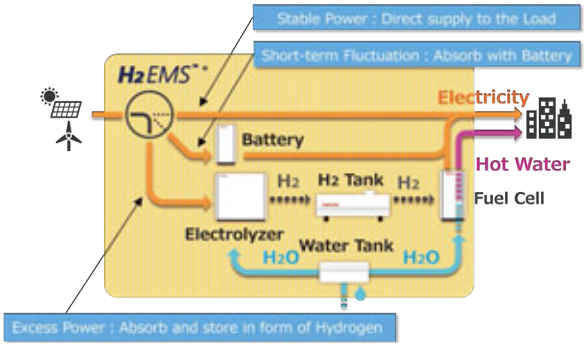
Stationary storage battery

Hydrogen-based autonomous energy supply system using hydrogen power storage technology

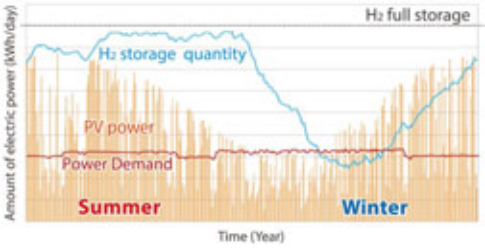
Hydrogen is expected to serve as a major secondary energy source in the future due to the following advantages it offers in terms of energy policy: (1) hydrogen may greatly reduce energy consumption by facilitating use of fuel cells that can achieve high energy efficiency; (2) hydrogen, which can be produced from a variety of energy sources by various methods, may improve energy security; (3) in addition to generating no CO_2 emissions during use, the use of renewable energy-derived hydrogen can also reduce environmental impacts. Therefore, the Japanese government is promoting the use of hydrogen through industry-university-government collaboration as one of its energy-related projects.

In 2015, Toshiba Group commercialized H_2One™, a hydrogen-based autonomous energy supply system, by combining a hydrogen power storage technology employing water electrolysis with fuel cell power generation technology. This system can achieve CO_2-emissions-free power generation by using sunlight and wind power in combination as well as store power in the form of hydrogen for a long period of time. Therefore, it is expected to be used for local consumption of locally produced energy and also in emergencies as a system that enables self-sufficient supply of electricity and hot water without relying on system power sources.

■H_2One™ structural diagram



Toshiba Group has delivered H_2One™ units to Kawasaki City, Huis Ten Bosch, and the Yokohama Port and Harbor Bureau to ensure a stable supply of electricity and hot water throughout the year. Huis Ten Bosch stores surplus photovoltaic power as hydrogen from summer to autumn and makes up for shortages in photovoltaic power output by using up hydrogen from autumn to winter in order to properly manage its power supply system. (See the figure below.)



Power supply using H_2One™ (Huis Ten Bosch)

Distributing Energy

Toshiba Group provides high-efficiency equipment related to power transmission/distribution systems for power plants, buildings, offices, and homes, thus contributing to the realization of a low-carbon society.

Next-generation DC transmission system that reduces power loss during long-distance power transmission

As more and more renewable energy systems are installed in different locations, including on the oceans and in the mountains, it becomes increasingly important to develop technologies for linking different systems over wide areas.

DC power transmission can reduce transmission losses caused by voltage drops due to AC line reactance or by the Ferranti effect (voltage increases) due to static electricity. In addition, this technology is also indispensable in a country like Japan, where systems that differ in frequency (50 Hz and 60 Hz) must be linked.

■HVDC application

In Japan, DC power transmission system projects are currently underway at six locations, including between Hokkaido and Honshu. Toshiba Group is participating in all of these projects.

Overseas, we are also participating in a project for DC transmission between Italy and Montenegro as well as manufacturing major devices, including suspension valves and converter transformers, for the project. Thanks to our proprietary circuit composition technology, Toshiba Group can reduce device volumes by some 20% compared to other companies. Using this technology, we contribute to reducing installation footprints.

Suspension valve
(externally commutated)

Converter transformer

Power transmission/distribution system that uses advanced technologies to ensure a stable power supply

In order to provide an economical and stable power supply, we deliver various systems, including high-voltage, large-capacity power transmission/transformation devices, medium and low-voltage power distribution devices, system protection relay devices that incorporate digital technologies, and monitoring and control equipment systems that remotely control these devices.

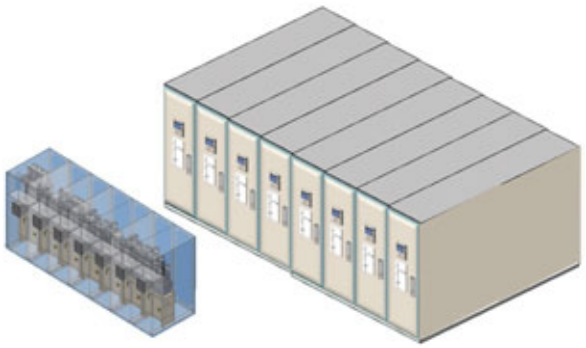
550-kV gas-insulated switch system

Solid-insulated switchgear

Power system monitoring/control system

By employing advanced technologies, we reduce the volumes of power distribution systems, including gas-insulated switch (GIS) systems, transformers and other power transmission/transformation devices, air-insulated switchgears (AIS), and solid-insulated switchgears (SIS), thereby contributing to reduced installation footprints.

We have also created SF_6 gas-free solid-insulated switchgears by using high-performance epoxy resin as an insulation material to contribute to mitigating climate change.



Solid-insulated switchgear

Air-insulated switchgear

Comparison of volume and area (36-kV example)

	Solid-insulated switchgear	Air-insulated switchgear
Volume	22%	100%
Area	26%	100%

Pursuing the world's lowest level of environmental impacts through high-efficiency manufacturing

INDEX

Summary of activities in FY2015

Mitigation of Climate Change P47

- Total GHG emissions: 3.08 million t-CO_2
- CO_2 emissions associated with product logistics (in Japan): 48,000 t-CO_2
- CO_2 emissions from employees' business travel (by aircraft): 59,000 t-CO_2

Efficient Use of Resources P49

- Amount of waste: 86,000 t
- Amount of water received: 40.8 million m^3

Management of Chemicals P51

- Total amount of chemicals discharged: 1,438 t

Responses to Environmental Risks P53

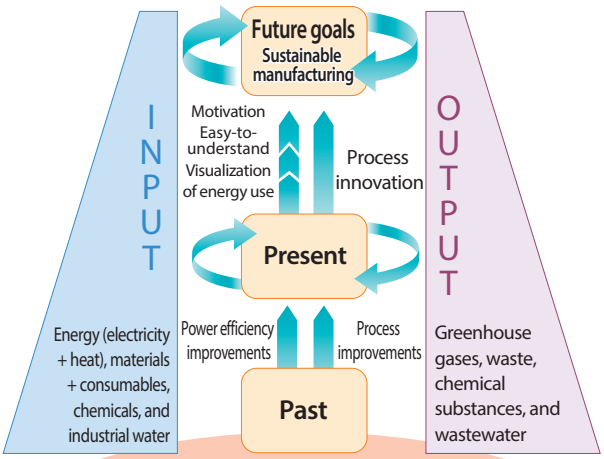
- Collection of VOCs in groundwater: 388 kg

Pursuing the world's lowest level of environmental impacts

Toshiba Group is promoting Greening of Process, an initiative for high-efficiency manufacturing, which aims to minimize resource inputs in production processes in Japan and abroad, eliminate waste in manufacturing processes, and reduce to a minimum emissions into the atmosphere and waters, thus achieving the world's lowest level of environmental impacts. Specifically, this initiative consists of two efforts: "improvement of plant efficiency," which refers to efforts to grasp energy consumption appropriately in order to ensure effective improvement of equipment operation and introduce high-efficiency equipment, and "process innovation," which aims to achieve sustainable manufacturing in collaboration with all units involved in manufacturing.

■High-efficiency manufacturing

Pursuing the world's lowest level of environmental impacts by minimizing inputs and outputs



Plant efficiency improvements × Process innovation

Mitigation of Climate Change

- Reducing energy consumption and the volume of greenhouse gases used
- Introduction of energy-saving processes and equipment
- Shift to low-carbon energy and gases with low greenhouse effects

Efficient Use of Resources

- Reducing the total waste volume
- Reuse of waste
- Collection and recycling of end-of-life products
- Reduction in the volume of water received

Management of Chemicals

- Pre-use risk assessments for hazardous substances
- Reducing the volume of chemicals used and introducing alternatives
- Appropriate management of substances used

Toshiba Group is promoting the Greening of Process initiative from three perspectives: mitigation of climate change, efficient use of resources, and management of chemical substances. In terms of mitigation of climate change, Toshiba Group is actively taking energy-saving measures on a company-wide scale to reduce emissions of greenhouses gases, including CO_2 and perfluorocarbons (PFCs). We will grasp energy consumption in real time (visualization), analyze data (easy-to-understand), and take actions for improvement (motivation). In terms of efficient use of resources, we will continue our efforts to reduce the total volume of waste generated and final waste disposal volumes through 3R activities as well as strive to use valuable water resources efficiently by various means, including utilizing water risk assessment tools. As for management of chemicals, the Group will make efforts to reduce the amount of targeted substances handled and discharged mainly through the introduction of alternative substances and process improvements. In the future, we will endeavor to achieve the world's lowest level of environmental impacts by realizing high-efficiency manufacturing that enhances our business competitiveness.

Business process eco-efficiency
Increasing business process eco-efficiency to 1.5 times the FY2000 level in FY2015

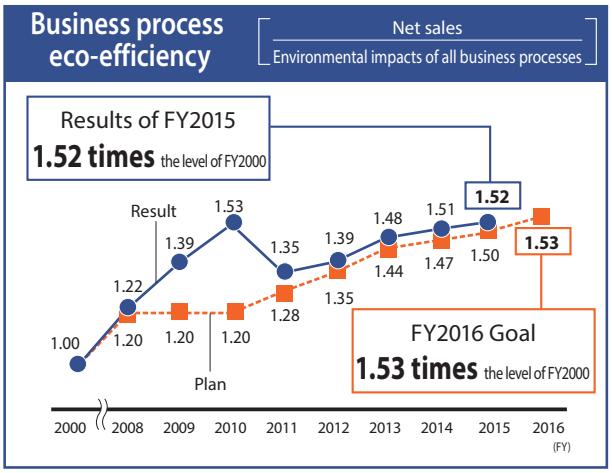
Toshiba Group, which comprehensively assesses the effects of environmental impacts in its business operations, views business process eco-efficiency as an important indicator of high-efficiency manufacturing and is working to reduce environmental impacts in manufacturing processes.

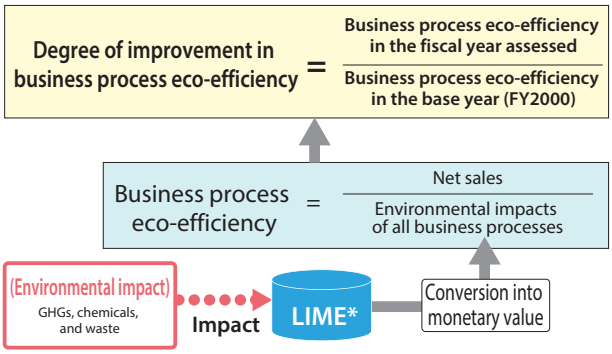
●Results of FY2015

Sales decreased in FY2015 compared to the previous year. However, due to reductions in GHG emissions through energy-saving efforts and other factors, business process eco-efficiency improved compared to the previous year to 1.52 times (in comparison with the FY2000 level), exceeding the goal of 1.50 times.

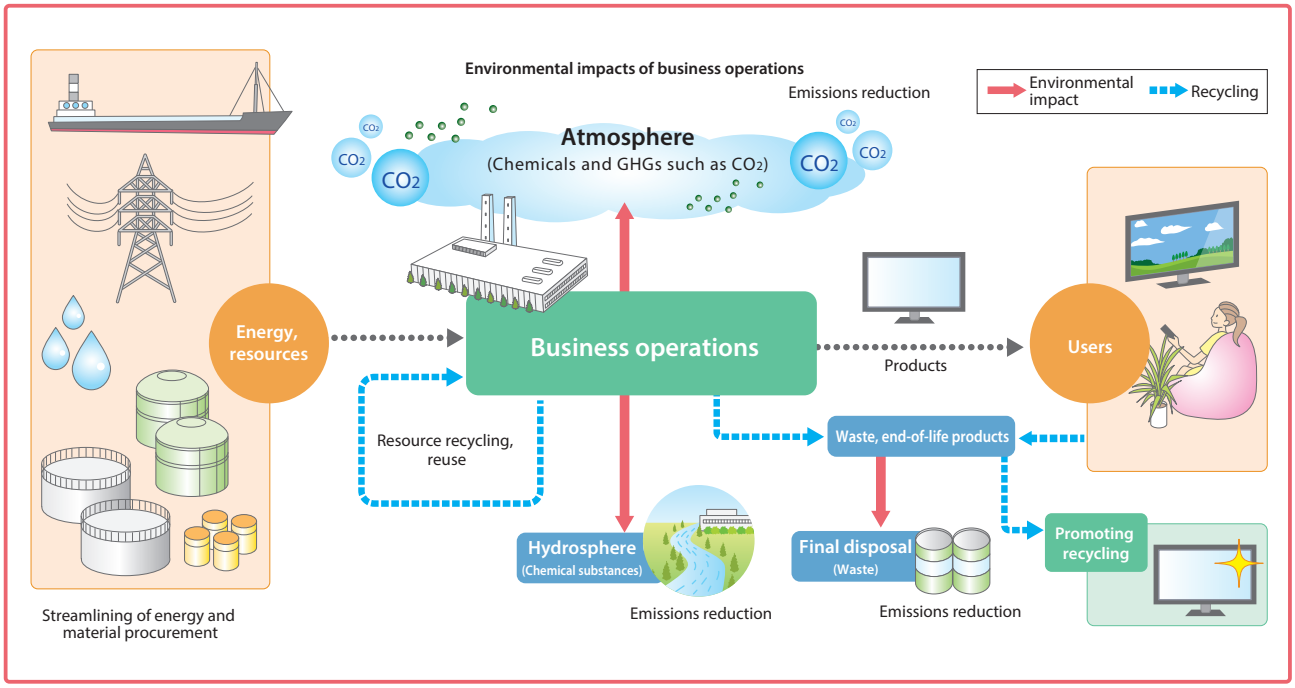
●Future initiatives

The goal of the Fifth Environmental Action Plan is to increase business process eco-efficiency to 1.6 times compared to the FY2000 level in FY2016. To achieve this goal, Toshiba Group will work to reduce environmental impacts according to the nine specific targets (refer to page 20 for details).





* LIME: One of the leading environmental assessment methods in Japan, LIME (Life-cycle Impact assessment Method based on Endpoint modeling) was developed by the National Institute of Advanced Industrial Science and Technology, an independent administrative institution.



Mitigation of Climate Change

To mitigate climate change, Toshiba Group is developing various initiatives, including reducing total GHG emissions and curbing CO_2 emissions resulting from product logistics.

Reducing total GHG emissions

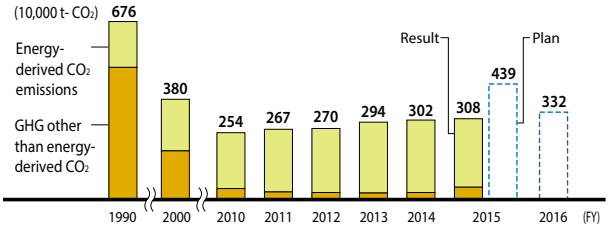
Toshiba Group proactively installed systems to collect and/or remove sulfur hexafluoride (SF_6), which is used to insulate heavy electric machinery, and perfluorocarbons (PFCs), which are used to produce semiconductors. As a result, in FY2000, the Group nearly halved the total amount of GHG emitted* compared to the FY1990 level, and in subsequent years, GHG emissions continued to decrease as the Group steadily took measures to improve its production processes. To reduce energy-derived CO_2 emissions resulting from the use of electricity, we are continuing our efforts to proactively take energy-saving measures at all business and production sites, including ones overseas, to improve production efficiency, and to introduce renewable energy.

* Carbon dioxide (CO_2), methane (CH_4), dinitrogen oxide (N_2O) (= nitrous oxide), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3)

●Results of FY2015 and future initiatives

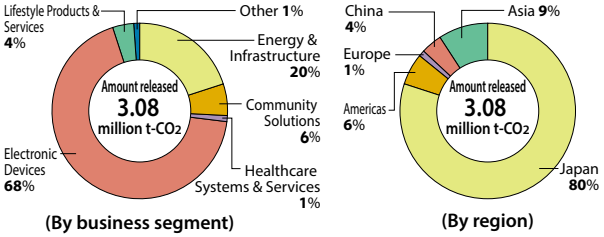
In FY2015, Toshiba Group reduced GHG emissions other than energy-derived CO_2 to less than 10% of the FY1990 level mainly by installing PFC removal equipment. Meanwhile, energy-derived CO_2 emissions were affected by deterioration in the CO_2 emission coefficient for electricity due to the effects of the Great East Japan Earthquake, but the Group reduced energy consumption compared to the FY2010 level by taking proactive conservation measures, including making capital investments. The CO_2 emission coefficient for electricity is expected to further deteriorate in the future, but Toshiba Group will continue to make steady efforts to reduce total GHG emissions by investing proactively in high-efficiency equipment. The Group's goal is to reduce total GHG emissions to 3.32 million tons or less in FY2016.

■Changes in total GHG emissions



* The CO_2 emissions coefficient for electricity is used to calculate energy-derived CO_2 emissions (in Japan: 3.50 t-CO_2/10,000 kWh in FY2010, 4.76 t-CO_2/10,000 kWh in FY2011, 4.87 t-CO_2/10,000 kWh in FY2012, 5.70 t-CO_2/10,000 kWh in FY2013, 5.54 t-CO_2/10,000 kWh in FY2014, and 5.10 t-CO_2/10,000 kWh in FY2015). Overseas electricity is based on the GHG Protocol.

■Breakdown of GHG emissions (FY2015)



Reducing energy-derived CO_2 emissions

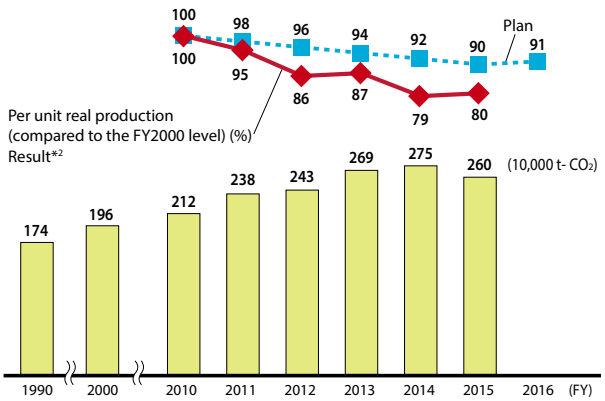
●Results of FY2015

Under the Fifth Environmental Action Plan, in order to assess CO_2 emissions measures consisting mainly of those for electricity conservation, the Group uses energy-derived CO_2 emissions per unit production by fixing the CO_2 emission coefficient to FY2010. The amount of CO_2 actually emitted in FY2015 was 2.60 million tons (an increase of 480,000 tons compared to the FY2010 level), a substantial increase which was greatly affected by the deterioration of the CO_2 emission coefficient for electricity due to the Great East Japan Earthquake; however, as a result of initiatives to reduce power consumption mainly through energy-saving investments, proactive electricity conservation, and production adjustments, Toshiba Group was able to reduce energy-related CO_2 emissions per unit production to 80% of the FY2010 level, 10 percentage points higher than the initial goal.

●Future initiatives

In order to meet growing market demand, Toshiba Group plans to introduce facilities, mainly those for manufacturing semiconductors. Therefore, energy-derived CO_2 emissions are likely to increase in the near future. The Group will continue its efforts to reduce CO_2 emissions per unit production by 9% compared to the FY2010 level in FY2016 by adopting a variety of energy-saving measures, including performing energy-saving diagnoses and investing in energy-saving facilities.

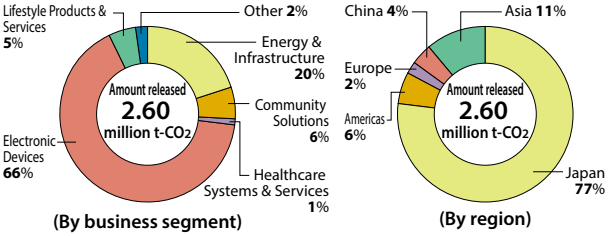
■Changes in energy-derived CO_2 emissions per unit production



* The CO_2 emissions coefficient for electricity is used to calculate energy-derived CO_2 emissions (in Japan: 3.50 t-CO_2/10,000 kWh in FY2010, 4.76 t-CO_2/10,000 kWh in FY2011, 4.87 t-CO_2/10,000 kWh in FY2012, 5.70 t-CO_2/10,000 kWh in FY2013, 5.54 t-CO_2/10,000 kWh in FY2014, and 5.10 t-CO_2/10,000 kWh in FY2015). Overseas electricity is based on the GHG Protocol.

*2 The coefficient of electricity for sites in Japan is fixed to that of FY2010.

■Breakdown of energy-derived CO_2 emissions (FY2015)



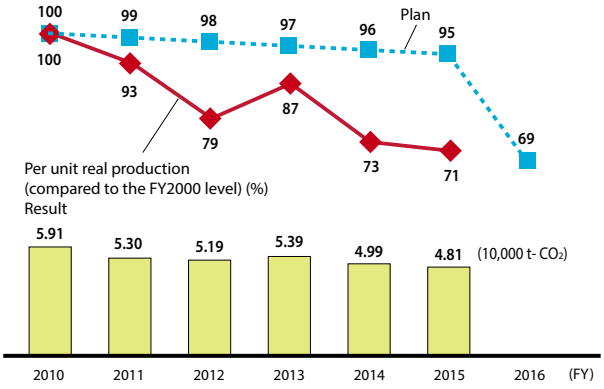
Reducing CO_2 emissions associated with product logistics

●Results of FY2015 and future initiatives

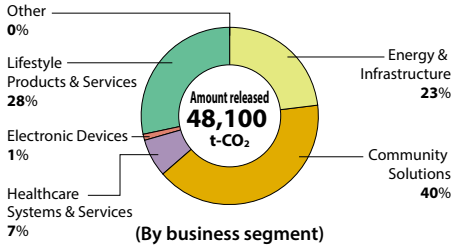
In FY2015, Toshiba Group strove to reduce energy consumption during product logistics by taking various measures, including improving load factors when transporting products, applying modal shifts to a wider range of products, and shortening the transport distance by restructuring distribution centers. As a result, we reduced total CO_2 emissions as well as CO_2 emissions per unit production compared to the previous year's level. In particular, the Group reduced CO_2 emissions per unit production by 29% compared to the FY2010 level, exceeding the initial target for FY2015 by 24%.

In the future, Toshiba Group will continue its efforts to reduce CO_2 emissions associated with product logistics with a view to reducing CO_2 emissions per unit production by 31% compared to the FY2010 level in FY2016.

■Changes in CO_2 emissions per unit production associated with product logistics in Japan



■Breakdown of CO_2 emissions associated with product logistics in Japan in FY2015



■CO_2 emissions associated with overseas and international logistics (approximate figures)

Toshiba Group works to collect data on overseas and international logistics for the group and calculates approximate CO_2 emissions associated with such logistics for improvement.

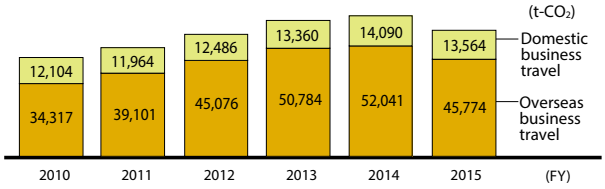
●Total: 362,000 t-CO_2		
(Breakdown)	International logistics	: 297,000 t-CO_2
	Logistics in overseas countries	: 17,000 t-CO_2
	Logistics in Japan	: 48,000 t-CO_2

Reductions in CO_2 emissions from employees' business travel

Toshiba Group is working to analyze CO_2 emissions resulting from employees' business travel. The graph below indicates CO_2 emissions from employees' business travel (by air) from FY2010 to FY2015.

In FY2015, we reduced CO_2 emissions by reducing travel time by using webconferences.

■Changes in CO_2 emissions from employees' business travel



Use of renewable energy

Toshiba Group is continuously striving to use renewable energy for a wider range of its operations. In FY2015, the Group used about 4,883 MWh's worth of renewable energy. This means that the Group reduced CO_2 emissions by about 2,490 tons*. Toshiba Corporation has also used a green power system since January 2005 and has since been purchasing 2,000 MWh of electricity under a green power certificate annually.

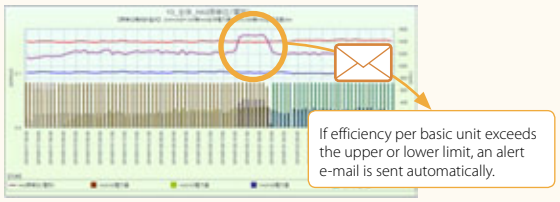
* Calculated based on 5.10 t-CO_2/10,000 kWh

Case Study 1 Visualizing power energy consumption per basic unit

Toshiba Corporation Yokkaichi Operations

At Yokkaichi Operations, which manufactures memory products, the optimal energy supply constantly changes due to large load fluctuations resulting from production increases and other factors. Therefore, we manage production in terms of efficiency per basic unit and assess the optimal supply based on changes in supply per basic unit.

To further improve efficiency, we are working to visualize power energy consumption per basic unit. If energy efficiency decreases, an alert e-mail is sent to concerned parties, thereby enabling the reduction of time required to notice the situation. If efficiency per basic unit decreases, we analyze the data in detail by using an assortment of statistical tools in order to identify the cause of the decrease. Combining visualization with data analysis makes it possible to improve efficiency and helps reduce GHG emissions.



Efficient Use of Resources

In order to realize a sustainable society based on a sound material cycle, Toshiba Group works to reduce the volume of raw materials and water resources used in its business operations as well as to use them efficiently, striving to reduce the volume of generated waste and final disposal thereof.

Reducing the total waste volume

Toshiba Group is working to reduce waste generation by minimizing the volume of waste generated per unit production, which indicates business process efficiency improvement, as well as by reducing the total volume of waste to a level below the Earth's environmental capacity.

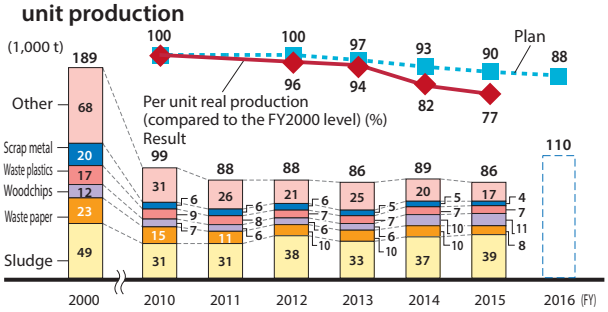
●Results of FY2015

In FY2015, the total volume of waste generated per unit production was 77% compared to that of FY2010, exceeding the initial target. The volume of waste (excluding that of objects with value) totaled 86,000 tons, which is 31,000 tons lower than the initial target. Out of the total volume of waste, the amount of hazardous waste was 4 tons in FY2000, 0.3 tons in FY2013, 0.6 tons in FY2014, and 0.5 tons in FY2015.

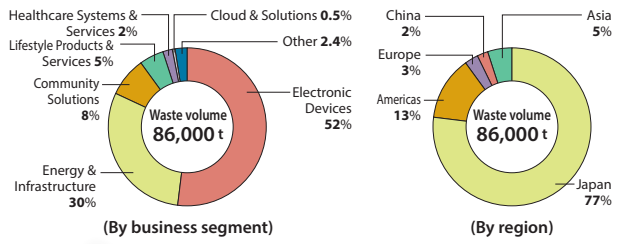
●Future initiatives

In the Fifth Environmental Action Plan, Toshiba Group aims to reduce the volume of waste per unit production in FY2016 by 12% compared to FY2010 and to reduce the total volume of waste to 110,000 tons. We will promote dialogues with stakeholders inside and outside the Group and create diverse networks for resource recycling.

■Waste volume and total volume of waste generated per unit production



■Breakdown of the total volume of waste generated (FY2015)



Reducing the final disposal volume

In order to create a sound material-cycle, sustainable society, Toshiba Group is working to achieve zero waste emission—an initiative of reducing final landfills to zero by promoting the reuse and recycling of waste.

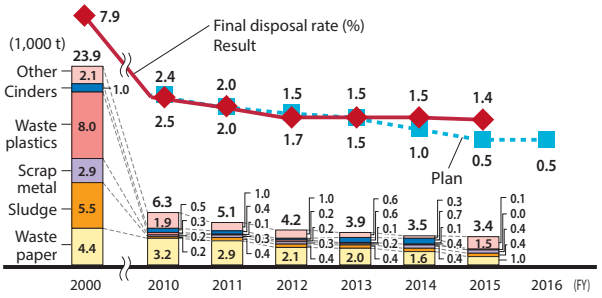
●Results of FY2015

The percentage of final landfills to the total volume of waste generated by Toshiba Group in FY2015 was 1.4%, falling short of the initial target of 0.5%, though an improvement of 0.1% compared to the previous year. Out of the final disposal volume, the amount of hazardous waste was 0.17 tons for FY2000, 0.07 tons for FY2013, 0.03 tons for FY2014, and 0.02 tons for FY2015.

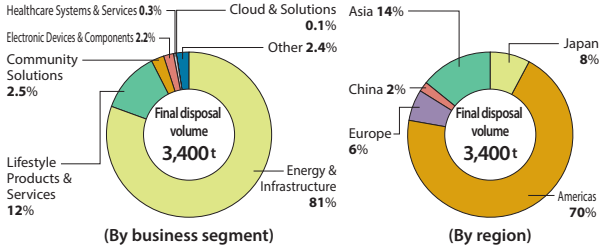
●Future initiatives

One goal of the Fifth Environmental Action Plan is to reduce the percentage of final landfills to 0.5% in FY2016. To this end, Toshiba Group will take recycling measures and accumulate recycling know-how at business and production sites in Japan as well as apply such know-how to overseas sites with high reduction potential.

■Final waste disposal volume and the final disposal rate



■Breakdown of the final waste disposal volume (FY2015)

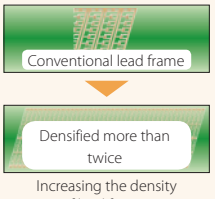


Case Study 1 Reducing metal waste through 3R activities at a semiconductor manufacturing site

Toshiba Semiconductor (Thailand) Co., Ltd.

Toshiba Semiconductor (Thailand) Co., Ltd., which manufactures small-signal devices and optical devices, faced the challenge of how to reduce the amount of metal waste. To overcome this challenge, the company actively implemented 3R measures in cooperation with its mother plant, the Himeji Operations-Semiconductor, to reduce the amount of waste, including lead frames and mold resin.

- ●Reducing generated waste by 25.3 t/year by replacing conventional lead frames with high-density-type frames (material utilization efficiency: 242% of the previous level)
- ●Reducing generated waste by 1.6 t/year by making the shape of mold resin smaller (material utilization efficiency: 466% of the previous level)



Increasing the density of lead frames

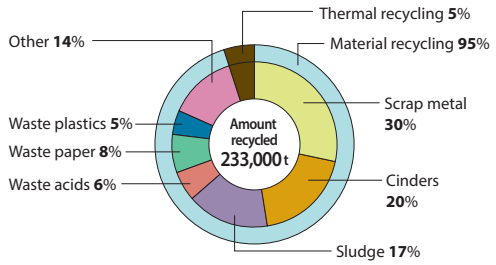
The company also promoted recycling of electronic parts, including spray cans and batteries, to achieve its goal of reducing the final disposal amount to zero to meet Thailand's administrative standard (DIW*). As a result, the DIW awarded the company the "Zero Waste to Landfill Achievement Award 2015."

* DIW: Department of Industrial Works

●Promoting recycling

In FY2015, Toshiba Group recycled 233,000 tons of resources. 95% of the total volume of waste generated was reused efficiently as various resources. The recycled resources consisted mainly of scrap metal and cinders, and 95% of them were used efficiently for material recycling (recycled into materials for products), and the remaining 5% for thermal recycling (heat recovery). In the future, Toshiba Group will continue to increase the total volume of resources recycled and at the same time will strive for higher quality recycling chiefly by increasing the percentage of resources recycled into materials.

■Breakdown of the volume recycled (FY2015)



Efficient use of water resources

In response to a global increase in concerns regarding water problems, Toshiba Group is promoting sustainable water resource management. In FY2015, we enhanced analysis and management of production sites located in high-water-risk regions and sites that need large amounts of water. To analyze data on high-water-risk regions, we used Aqueduct, a water risk assessment tool developed by the World Resources Institute (WRI), and we considered water problems from various perspectives, including the risk of pollution by wastewater and level of interest in water issues among area residents, in addition to the physical amounts of water resources in individual river basins.
Each of our business and production sites has incorporated reducing the amount of water received into its annual plan in order to develop specific strategies and conduct follow-up surveys on an ongoing basis. We are promoting wide-ranging initiatives, including recycling wastewater generated in factories and introducing systems for using rainwater.

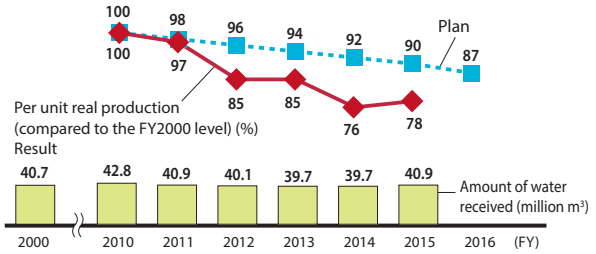
●Results of FY2015

The total amount of water received in FY2015 was 40.86 million m³, an increase of approximately 1.2 million m³ compared to the previous fiscal year. However, the amount of water received per unit production was 78% of the total for FY2010, exceeding the initial target by 12 percentage points.

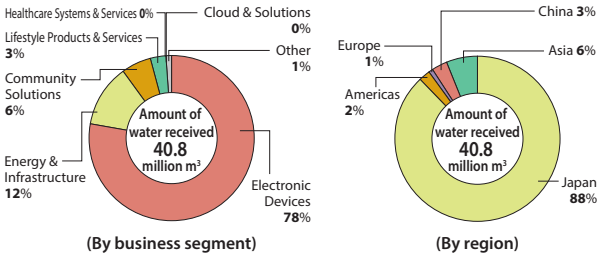
●Future initiatives

Under the Fifth Environmental Action Plan, Toshiba Group aims to reduce the amount of water received per unit production by 13% compared to the FY2010 level in FY2016. We will continue to promote the reuse and recycling of water in the electronic device segment, which accounts for 78% of the water received by Toshiba Group.

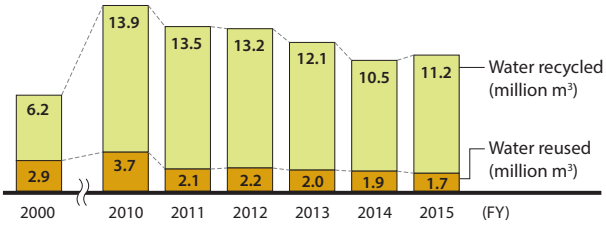
■Amount of water received and that per unit production



■Breakdown of the amount of water received (FY2015)



■Amount of water recycled (FY2015)



Case Study 2 Waste management and local communication that support semiconductor production

Japan Semiconductor Corporation Oita Operations

Japan Semiconductor Corporation Oita Operations manufactures mixed signal ICs and other semiconductors. During production, the plant uses many chemicals, all of which are appropriately treated in order to discharge wastewater that meets the various applicable standards. In addition, the plant uses wastewater to breed Japanese freshwater snails, which fireflies feed on, and has worked with local community organizations, local government organizations, and companies in the vicinity to release the snails in the upstream of the Kitabana River, thereby successfully breeding fireflies. (2014: Several fireflies ⇒ 2015: 1,200 fireflies observed)
For these activities, the plant was awarded the Ministry of the Environment Award at the FY2015 Model Environmental Initiative Award Celebration held by the Ministry of the Environment. The plant will continue to promote local communication while expanding its ecosystem preservation activities.


Working with a local community association to confirm the release of freshwater snails (feed for fireflies)


Raising employees' environmental awareness by creating artwork with aluminum cans (firefly motif)

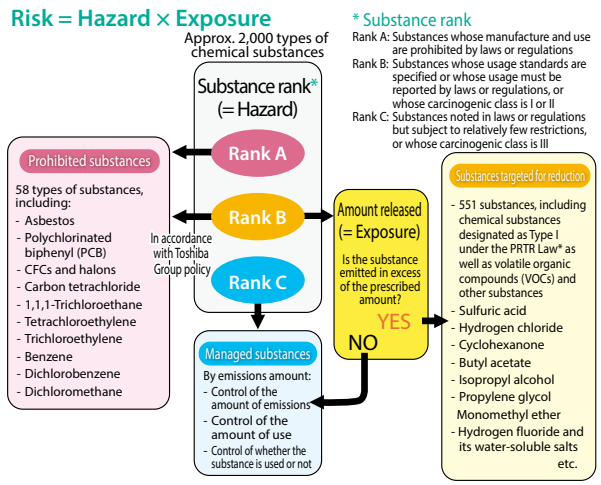
Management of Chemicals

Toshiba Group is striving to manage chemical substances appropriately in its business operation processes. The Group reduces emissions of targeted substances by using alternatives, improving processes, and taking other measures.

Managing chemical substances by ranking

Toshiba Group classifies standards for the handling of chemical substances into the three categories of prohibition, reduction, and control, and manages chemical substances according to the regulations for each category. The relationship between substance ranking and management classifications, which shows the concept underlying this initiative, is indicated in the figure below. Approximately 2,000 types of chemical substances are classified into three ranks (hazard level A, B, and C) based on the regulatory levels set by environmental legislation, data on carcinogenic chemicals, and other factors. The classifications of prohibition, reduction, and control are determined by judging risks for each chemical substance using the ranking of the substance equivalent to hazard levels and emissions equivalent to exposure to the substance.

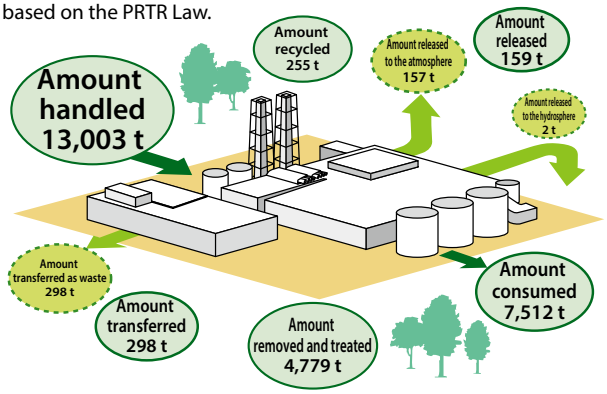
■Substance ranking and management classifications



* Law Concerning Pollutant Release and Transfer Register

■PRTR-based material balance

This expresses the balance of Toshiba Group's total material volume based on the PRTR Law.



- The amount consumed refers to the amount of substances covered by PRTR that are changed into other substances by chemical reaction or transferred outside along with products whether they are contained therein or accompany them.
- The amount of removed and treated refers to the amount of substances covered by PRTR that undergo such processes as incineration, neutralization, decomposition, reaction treatment and are changed into other substances inside operation sites.
- Landfills at operation sites (stable, controlled, or isolated) are equivalent to the amount emitted. The amount released to public sewerage is categorized as the amount transferred.
- The difference between the amounts transferred and recycled is determined based on whether fees are charged for recycling of the materials. Accordingly, waste is included in the amount transferred if Toshiba Group asks contractors to dispose of it and pay for the service, even if the purpose is to recycle it.

Reducing emissions of chemical substances

Toshiba Group strives to reduce the consumption of chemical substances by designating substances that have large direct impacts on the environment as those targeted for reduction. By business segment, electronic devices, power and social infrastructure systems, and community solutions account for over 90% of the total emissions of such substances, and by region, 80% of such emissions originate from Japan.

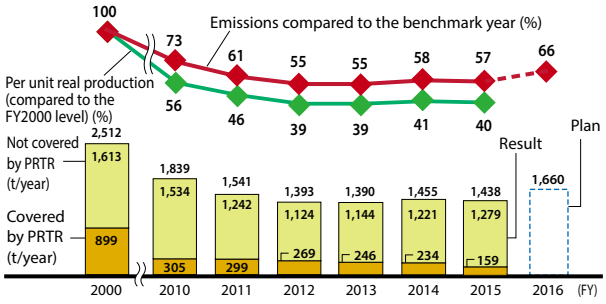
●Results of FY2015

In FY2015, Toshiba Group gave priority to taking measures for solvents used in cleaning and resin processing, which ranked high among such emissions, and promoted such initiatives as using alternative substances, starting operation of combustion detoxifying devices, improving manufacturing processes in order to reduce the use of raw materials, and reducing the amount of VOC evaporation by enhancing chemical management. As a result, the Group reduced emissions of substances targeted for reduction by 1,074 tons (43%) compared to the FY2000 level.

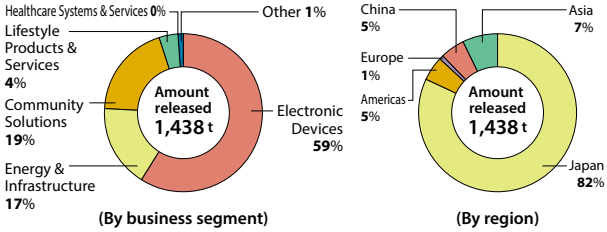
●Future initiatives

In the Fifth Environmental Action Plan, the Group aims to reduce the emissions of substances in FY2016 to 1,660 tons. It plans to use alternative substances and increase material efficiency by improving processes as an incoming countermeasure and expand introduction of emission removal and collection equipment as an outgoing countermeasure.

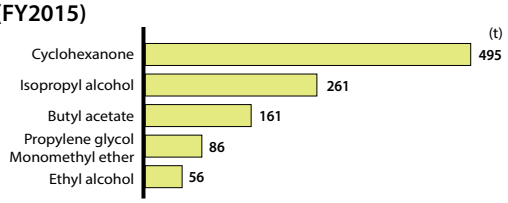
■Emissions of substances targeted for reduction



■Breakdown of emissions of substances targeted for reduction (FY2015)



■Emissions of top five substances targeted for reduction (FY2015)

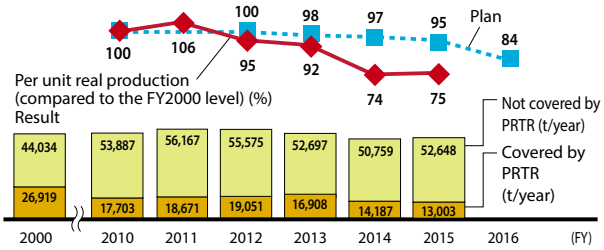


Reduction in the amount of chemical substances handled

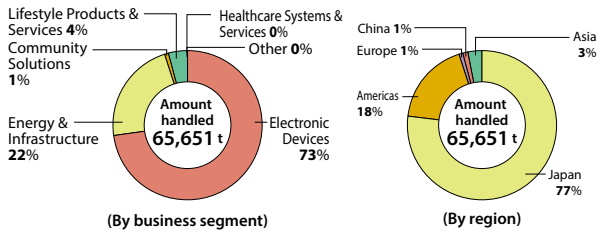
●Results of FY2015 and future initiatives

In FY2015, electronic devices as well as power and social infrastructure systems accounted for over 90% of the total amount of chemicals handled, with substances used for chemical reactions and wastewater treatment raking high among chemicals. The material balance for PRTR-covered chemicals indicates that 37% of them are removed through coagulation and absorption and 58% are consumed together with the products that contain them, which taken together represent the majority of the chemicals handled. It also indicates that only about 1% of the chemicals used are discharged into the atmosphere or hydrosphere. Under the Fifth Environmental Action Plan, the Group is aiming to reduce the amount of chemicals handled per unit production by 16% compared to the FY2010 level in FY2016.

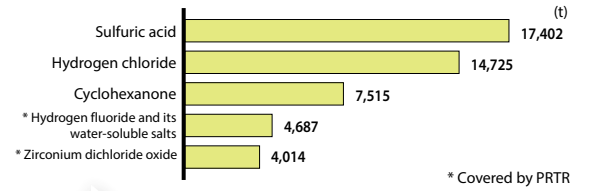
■Amounts of substances targeted for reduction handled



■Breakdown of the amounts of substances targeted for reduction handled (FY2015)



■Amounts of top five substances targeted for reduction handled (FY2015)



* Covered by PRTR

Case Study 1 Reducing environmental impact by introducing a compressor powder coating

Toshiba Carrier Corporation Fuji Factory & Engineering Center

At Toshiba Carrier Corporation's Fuji Factory & Engineering Center, workers previously coated compressors by soaking them in water-soluble paint having a 35% composition of volatile organic compounds (VOCs). Recently, the company newly adopted a powder-coating system that makes use of robots to apply powder coating paint containing no VOCs, thereby reducing VOC emissions by 6.4 tons per year. As a result, the plant now recycles more than 95% of the paint used in powder coating, thereby reducing waste paint by 720 kg* annually.

* Based on FY2015 results

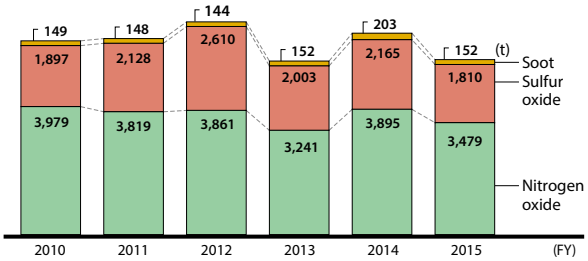
Powder coating by robots

Management of substances that impact the atmosphere and hydrosphere

Toshiba Group is working to grasp the extent of emissions of sulfur oxides (SOx) and nitrogen oxides (NOx), both of which are major causes of air pollution, as well as the level of chemical oxygen demand (COD), an indicator of water pollutants, and emissions of total nitrogen and suspended matter to ensure appropriate management of such emissions. In addition, each business and production site voluntarily sets the maximum permissible levels of concentrations for these substances and complies with these prescribed standards. In FY2015, we reduced the total amount of sulfur oxides (SOx), nitrogen oxides (NOx), and dust and soot discharged into the atmosphere by approximately 13% compared to the FY2014 level. We reduced the total amount of suspended matter, total nitrogen, chemical oxygen-demanding (COD) substances, and other materials by 1% compared to the FY2014 level.

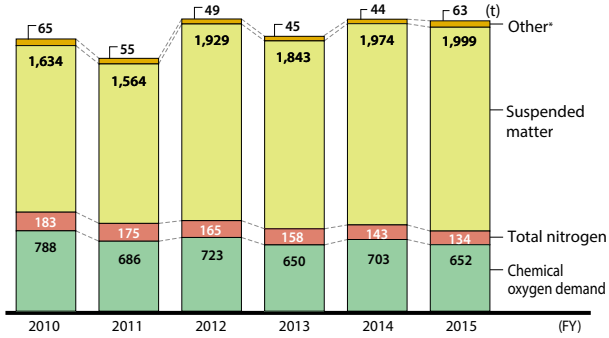
■Impacts on the atmosphere

Amount of impact = Concentration of each substance × Amount of substance emitted (based on the Air Pollution Control Act)



■Impacts on the hydrosphere

Amount of impact = Concentration of each substance × Amount of substance discharged (based on the Water Pollution Control Act)



* N-hexane extracts, phenols, copper, zinc, soluble iron, soluble manganese, total chromium, total sulfur, and nickel

Management of ozone-depleting substances

Toshiba Group possesses specified chlorofluorocarbons (CFCs), which deplete the ozone layer, as coolant for air conditioners installed in factories; we appropriately dispose of such CFCs in accordance with the law. In FY2014, the Group had 11.0 tons of specified CFCs. In FY2015, due to measures such as facility upgrades, we reduced the amount of specified CFCs to 10.3 tons, about 7% reduction compared to the previous year.

Under the system for reporting and publishing the estimated amount of CFC leaks stipulated in the Fluorocarbons Emissions Control Act, Toshiba Corporation reported approximately 2,100 t-CO_2 of leaks in FY2015. We will continue to further enhance our management of chemicals through routine and periodic inspections as well as environmental audits.

Responses to Environmental Risks

Toshiba Group is working to purify contaminated soil and groundwater by ascertaining the present condition of soil and groundwater at its business and production sites. The Group's basic policy is to prevent chemical substances from contaminating soil and groundwater as well as to identify environmental liabilities, such as PCB-containing equipment, and to systematically dispose of such equipment.

Soil and groundwater purification

Toshiba Group is working to purify contaminated soil and groundwater by ascertaining the present condition of soil and groundwater at its business and production sites. The Group is also taking safety measures for environment-related equipment to prevent contamination with chemicals and reduce environmental risks. A survey of all business and production sites confirmed contamination at 12 sites, where soil and groundwater contamination with volatile organic compounds (VOCs) has been purified, and the results are being monitored. VOCs in groundwater are collected and eliminated mainly using the water pumping method.

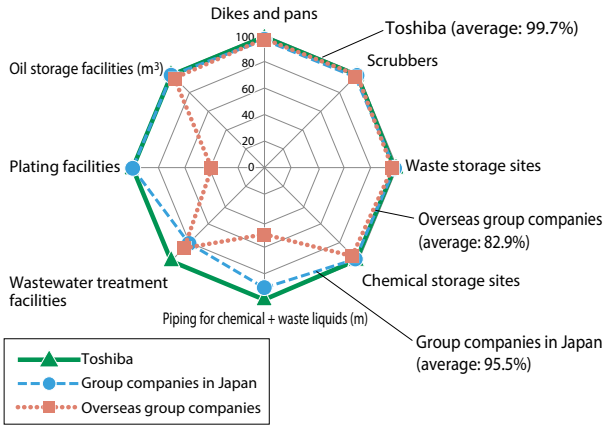
Toshiba Group uses the water pumping method to purify soil and groundwater mainly in areas with high concentrations of VOCs, but if the VOC concentration in such areas is lowered due to progress in purification, the Group takes such measures as stepping up water pumping efforts in other areas with relatively high VOC concentrations. In FY2015, the Group collected 388 kg of VOCs. The amount collected was about 23% less compared to the previous year, but this is chiefly because the amount of VOCs collected per liter of water pumped is gradually decreasing due to the progress made in purification through drastic measures that make the most of the opportunity presented by land modifications, methodological changes (from water pumping to in-situ purification), and declines in relative concentrations of VOCs as a result of purification. At the same time, Toshiba Group will strive to ensure full communication with local governments and residents in neighboring areas through tours of purification facilities and other public relations activities.

Preventing contamination and reducing contamination risks

In order to prevent contamination with chemical substances and reduce contamination risks, Toshiba Group independently established the Structural Design Guidelines to prevent leaks of chemicals at its eight types of environment-related facilities (including wastewater treatment plants), and its overseas sites are also promoting continuous improvements in this area. In FY2015, Toshiba Group achieved a compliance rate of 99.7% for all of Toshiba's sites and 95.5% for all of its group companies' sites in Japan.

In its overseas operations, at the time of establishing a new business or relocating a business, Toshiba Group also assesses contamination risks by investigating land use and contamination histories. Assessments are made in accordance with laws and regulations in each country, and Toshiba Group's own rigorous standards are applied in countries without relevant legislation.

■Rate of compliance with the Structural Design Guidelines (FY2015)



■Purification of soil and groundwater contaminated with volatile organic compounds

Business or production site	Location	Progress in purification	Purification method*1	Amount collected*2 (kg)
Former site of Asia Electronics Inc.'s Yokohama Operation Center	Yokohama, Kanagawa Prefecture	Being monitored*3	A, E, G	—
Toshiba Corporation Komukai Complex	Kawasaki, Kanagawa Prefecture	Purification in progress	A, G	52.1
Toshiba Corporation Himeji Operations-Semiconductor	Taishi Town, Ibo County, Hyogo Prefecture	Being monitored (North district)	D, F, G	—
		Purification in progress (South district)	A, F	117.3
Toshiba Corporation Oita Operations	Oita, Oita Prefecture	Being monitored	G	—
Toshiba Carrier Corporation Fuji Factory & Engineering Center	Fuji, Shizuoka Prefecture	Purification in progress	A, B	114.3
Toshiba Carrier Corporation Tsuyama Factory	Tsuyama, Okayama Prefecture	Purification in progress	A, B	0.3
Kawamata Seiki Co., Ltd.	Kawamata Town, Date County, Fukushima Prefecture	Purification in progress	A	0.0
Former site of Toshiba Shomei Precision Corporation's Kawasaki Works	Kawasaki, Kanagawa Prefecture	Being monitored	A, B, F	—
Former site of Toshiba Lighting & Technology Corporation's Iwase Works	Sakuragawa, Ibaraki Prefecture	Purification in progress	A	0.0
Lighting Device & Fixture Corporation Ibaraki Plant	Joso, Ibaraki Prefecture	Being monitored	A, B	—
Toshiba Components Co., Ltd. Kimitsu Operation Center	Kimitsu, Chiba Prefecture	Purification in progress	A, B	104.0

*1 Purification method: ....(A) groundwater pumping, (B) soil gas suction, (C) reduction decomposition, (D) oxidation decomposition, (E) interception containment, (F) removal by excavating soil, and (G) bio-activation.
*2 Amount collected: .....Amount collected from April 2015 to March 2016
*3 Monitoring: .....Monitoring to confirm how things develop after work that will allow measures to be taken or purification is completed.

In order to ensure effective prevention of groundwater contamination, an act revising part of the Water Pollution Control Act was promulgated on June 22, 2011 and came into force on June 1, 2012. To prevent groundwater from becoming contaminated with hazardous substances*, new provisions have been added that require those who install facilities where hazardous substances are used, stored, or otherwise handled to comply with structural, equipment, and usage standards to block hazardous substances from entering the ground and to record and maintain records of periodic inspection results.

As early as FY1990, Toshiba Group established the Structural Design Guidelines, an initiative that anticipated the purpose of these revisions to the Act, and has since been working to improve compliance with these guidelines by developing measures to prevent underground infiltration and by conducting periodic facility inspections to facilitate on-site improvements.

Through such measures, we aim to further reduce environmental risks.

* As stipulated in Article 2 of the Order for Enforcement of the Water Pollution Control Act, the 28 hazardous substances subject to regulation include cadmium, lead, and trichloroethylene (as of April 2016).

Identifying environmental liabilities

With the enforcement of the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, keepers of PCB waste are required to appropriately dispose of PCB waste. The revision of the Enforcement Ordinance in December 2012 moved back the deadline for disposal of PCB waste until March 2027. In March 2016, Toshiba Group reported environmental liabilities of approximately 16 billion yen as expenses for the outsourcing of disposing of PCB waste by making it harmless. These expenses cover the disposal of such items as PCB-containing products stored and managed at business and production sites nationwide. The Westinghouse Electric Company group, a consolidated subsidiary of Toshiba Corporation, complies with U.S. federal, state, and other local legislation concerning the discharge of pollutants, disposal of hazardous waste, and other activities that lead to environmental pollution. Such legislation has affected and is expected to affect Toshiba Group in the future, but the status of legislation and regulations, the ability to identify sites that require removal of contamination, waste disposal capacity, and other conditions are uncertain; therefore, it is difficult to accurately estimate final costs incurred by, and the time required for, future decontamination. Of those costs, approximately 7.5 billion yen in environmental liabilities was reported as a loss that could reasonably be estimated in March 2016. The amount of environmental liabilities will be revised according to the progress in environmental assessments and purification work, technological innovation, and the new demands of legislation. These do not have serious effects on the financial condition and business performance of Toshiba Group, but the Group will continue to identify and disclose its environmental liabilities properly in the future.

Storage and management of PCB

Since 1972, when the manufacture of products using polychlorinated biphenyl (PCB) was discontinued in Japan, Toshiba Group has kept PCB and PCB-containing products under strict surveillance, controlled them, and reported their storage to the relevant authorities in accordance with the Waste Management and Public Cleansing Act and the Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes. In addition to meeting the prescribed storage standards, the Group makes doubly sure through the installation of dikes and double containers and other measures that they are stored appropriately.

To manage high-concentration PCB waste, Toshiba Group has registered some 7,400 transformers and condensers as well as some 73,000 stabilizers and compact condensers with Japan Environmental Storage & Safety Corporation (JESCO), which provides wide-area PCB treatment services, and is gradually disposing of the devices according to JESCO's plan.

We are also working to dispose of low-concentration PCB waste at government-certified detoxification facilities and prefectural governor-authorized facilities (31 facilities across Japan as of August 18, 2016).

During FY2016A, we also conducted a large-scale in-house survey on devices in use (including transformers, condensers, and stabilizers) that may contain PCB. As a result, we discovered devices that may contain PCB in use at a number of business and manufacturing sites. When checking transformers for maintenance, we analyze the oil, and if we discover PCB contained in such oil, we suspend use of the transformers, upgrade them, or draft a disposal plan. Condensers are fully sealed and become useless if their oil is analyzed, regardless of whether or not they contain PCB. Therefore, we are drafting plans to gradually update condensers while taking care not to impair our business activities. These measures are incorporated into Toshiba Group's policies for the future and shared by all company personnel. We will continue our efforts to identify devices that contain PCB and to dispose of them properly.

■Disposal policies for the future

	PCB waste (Pollution-confirmed materials for storage)	PCB devices in use
High density	Proceed according to JESCO's disposal plan.	Formulate plans to upgrade or dispose of devices.
Low density	Proceed with disposal at government-certified facilities.	Transformers: Analyze oil during maintenance. Formulate plans to upgrade or dispose of devices containing PCB. Condensers: Formulate plans to gradually upgrade fully sealed devices while taking care not to impair business activities. Formulate plans to upgrade or dispose of devices containing PCB.

PCB-containing equipment being transported to JESCO

Chapter 5 Green Management

We aim to become the most excellent company globally by stepping up our environmental management.

INDEX

Summary of activities in FY2015

Special Feature **Conservation of Biodiversity** P11
- Percentage of sites that have measured effects **100%**
- Rare species protected by Toshiba Group **Over 100 species**

Environmental Education and Human Resource Development P57
- Number of certified eco-style leaders in FY2015 **1,340**
- Activities conducted by participants in the second year of the Toshiba Environmental School

Environmental Audits, Environmental Risks and Compliance P59
- Cumulative number of audits in FY2015 **More than 4,000**
- Legal violations related to the environment in FY2015 **1**

Environmental Accounting P61
- Environmental investments and costs slightly increased compared to the previous year, while environmental conservation benefits greatly decreased.

Investments: 11.5 billion yen
Environmental costs: 52.7 billion yen
Benefits: 82.8 billion yen

Natural Capital Accounting P63
- LIME analysis of effects on natural capital
- Example comparison of companies using CDP

Environmental Communication P67
- The 25th Toshiba Group Environmental Exhibition was held
- Global Environmental Action was implemented

Environmental activities: approx. 400

Evaluation by External Parties P70
- Received multiple awards, including the FY2015 Energy Conservation Grand Prize

Initiatives for Green Management

Green Management is an initiative aiming at continuously improving the foundation of environmental management, such as the development of personnel responsible for environmental activities, environmental management systems, and environmental communication as well as conservation of biodiversity. Toshiba Group not only gives top priority to complying with laws and regulations but also provides environmental training to all employees. Based on our unique environmental audit system, we strive to promote environmental management, develop products, and check environmental activities at our business and production sites to enhance the level of such activities. In addition, we are actively promoting initiatives for environmental communication and conservation of biodiversity.

●Initiatives in FY2015

The Fifth Environmental Action Plan sets three goals for Green Management: conservation of biodiversity, environmental education and human resource development, and environmental communication. To achieve the first goal, conserving biodiversity, we chose indicators for all 62 sites and measured the effects of our biodiversity conservation activities. For environmental education and human resource development, we have registered 1,340 employees as Toshiba eco-style leaders, who play a leading role in their respective site's environmental activities. Although we fell short of our original goal, these efforts will enhance site activities going forward. For environmental communication, we implemented the Global Environmental Action program to promote environmental activities worldwide. In FY2015, Toshiba Group implemented approximately 400 environmental programs at 276 sites in 25 countries around the world.

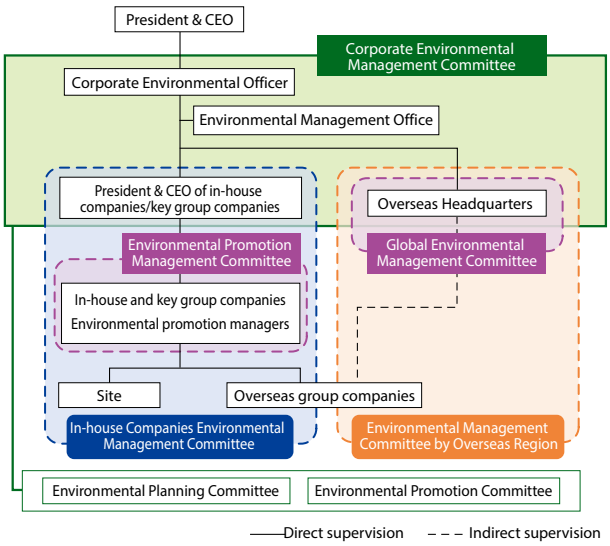
Environmental Management Structure

Environmental Management Structure

Toshiba Group is promoting environmental management worldwide as a group. There are four pillars upholding our environmental management: (1) strengthening of the management structure, (2) provision of environmentally conscious products and services, (3) development of environmentally conscious manufacturing, sales, and processes, and (4) promotion of communication. We take active measures to promote initiatives focused on these objectives.

The Corporate Environmental Management Office develops and implements important corporate-level policies, strategies, and measures with the approval of senior managers and makes them fully known to all personnel of the company. Specifically, Toshiba semiannually convenes the Corporate Environmental Management Committee, a group-wide decision-making organization regarding environmental management chaired by the Corporate Environmental Officer, which consists of executive officers, environmental management officers of in-house and key group companies, and overseas environmental promotion managers of corporate regional headquarters. Meetings of the Committee make proposals for environmental measures related to management, technological development, production, and sales; confirm and follow up on the progress in the Environmental Action Plan to achieve the Environmental Vision; discuss and decide the overall policy and plans for environmental management; and make the company-wide policy fully known to all managers and employees.

■Toshiba Group environmental management structure



The following committees are organized as subgroups of the Corporate Environmental Management Committee: the Environmental Planning Committee, which manages the development of environmentally conscious products and technologies; and the Environmental Promotion Committee, which promotes efforts to reduce the environmental impacts of business activities. These committees formulate detailed plans, identify potential problems, review measures implemented to solve problems, and promote the sharing of information among all company members. Various working groups specializing in particular themes are engaged in activities in a wide range of areas under the supervision of these committees.

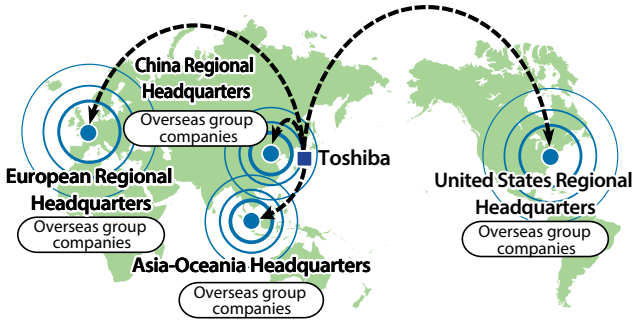
Corporate Environmental Management Committee

●Enhancement of the global environmental management structure

At the global level, Toshiba Group has established four corporate regional headquarters in Europe, the U.S., China, and Asia-Oceania in order to collect and share information on environmental policies and regulations in each region and to provide cooperation and support for group companies in these regions in developing effective environmental strategies. Furthermore, Toshiba Group holds meetings of the Global Environmental Management Committee to promote the Group's environmental management in countries around the world.

We also have an auditing system through which we provide training for local auditors who conduct the environmental audits of overseas sites.

■Global environmental management network

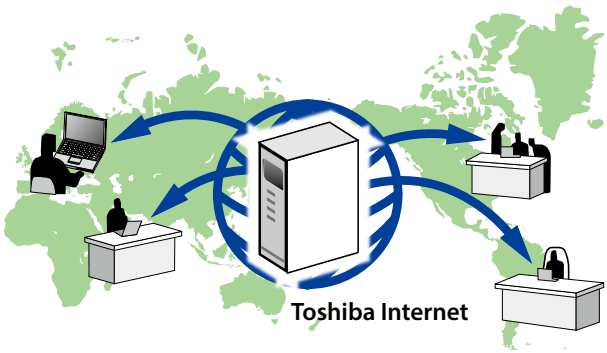


Environmental Management Information System

We have developed an Environmental Management Information System in order to collect and manage environmental data required to promote environmental management.

The Environmental Management Information System makes it possible to centrally manage and register not only performance data, such as energy consumption required for business activities and the amount of waste generated from these activities, but also environmental accounting information and the results of site environment audits. It covers all consolidated subsidiaries within the scope of management of Toshiba Group (598 companies in FY2015) and is accessible from countries around the world.

■Global support system



Environmental Education and Human Resource Development

Training of eco-style leaders

Toshiba Group is promoting the training of Toshiba eco-style leaders as part of its programs for environmental education and human resource development. The objective is to certify employees having keen environmental awareness in all divisions as Toshiba eco-style leaders and raise employees' overall environmental awareness through participation in internal environmental programs and events. To become certified, employees are required to obtain an internal or external environmental license (e.g., passing of the Eco Test sponsored by the Tokyo Chamber of Commerce and Industry or becoming a Toshiba environmental auditor or nature observation instructor). In FY2015, Toshiba Group certified 1,340 employees as eco-style leaders, falling short of the initial goal. Nevertheless, these efforts will enhance site activities going forward.

Comment from an eco-style leader

Toshiba Elevator and Building Systems Corporation
Environmental Protection & Recycling Planning Group
Occupational Safety & Environmental Protection Center
Nami Sukegawa

As an Environmental Officer of Toshiba Elevator and Building Systems Corporation, I draft plans for various programs. At the same time, I also actively promote initiatives to raise environmental awareness within our company, such as distributing an environmental newsletter to employees and their families. Last year, I spread the practice of donating old clothes, which I had been doing on my own, throughout the workplace. As an eco-style leader, I would like to continue activities to raise environmental awareness at our company.

Environmental education/Human resource development

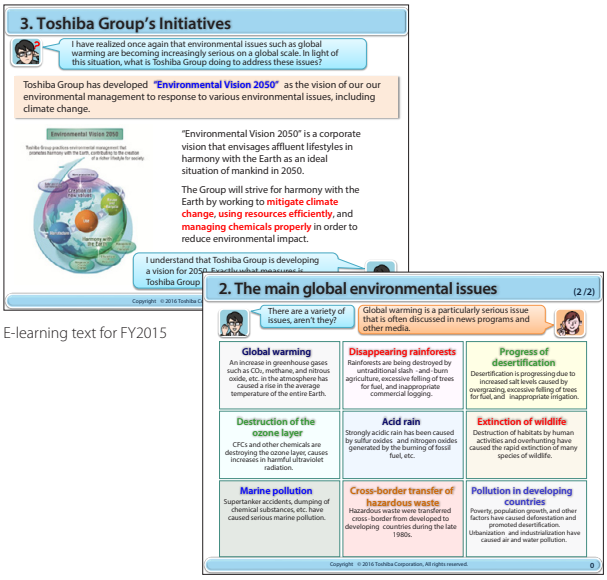
In order to raise the level of environmental activities, we provide environmental education programs for all employees. These education programs are composed of (1) general education courses, (2) ISO 14001 education courses, and (3) specialized education courses, offering curriculums designed to meet the needs of different posts, occupational roles, and specialties. All curricula for these courses are reviewed annually in order to help employees share the latest information.

■Environmental education system

General education	ISO 14001 education	Specialized education
e-learning (for all group company members)	Training courses for internal auditors	Education for certification of in-house environmental auditors (Site auditors/Technology auditors)
Education for new employees	Education for special employees	Introductory course on environmentally conscious design
Education for managers	General education	Toshiba Environmental School

■Environmental e-learning

We provide an environmental e-learning program as a general education course once a year to all employees in Japan and overseas. This program helps employees deepen their understanding of global environmental issues and Toshiba Group's environmental initiatives.



E-learning text for FY2015

■Training for auditors (site audit)

We provide training for auditors for our in-house environmental audits, which were put into practice in 1993. In the training program for site auditors, candidates are screened through group education, on-site training, and a written examination. After the screening, candidates participate in actual audits as assistants and submit reports in order to be certified as auditors. Technology auditors are certified through group education and a written examination. In FY2015, 16 employees were certified as site auditors, 12 as technology auditors, and 16 as overseas local auditors. The current number of certified auditors is 360.

Education and written examination (1 day)
↓
Chosen as a candidate
↓
Practical training
↓
Assistance in audits (2 days, twice)
↓
Submission of audit reports (twice)
↓
Certified as an auditor

●Knowledge required
- ●Global environmental issues
- ●Environmental laws and regulations
- ●ISO environmental management system
- ●Environmental science and technology
- ●Toshiba's environmental promotion rules and structural guidelines, etc.

●Requirements for auditors
- ●Employment in a position equivalent to or higher than section chief
- ●Auditors are classified into chief auditors, executive auditors, and assistant auditors depending on their experience and skills.

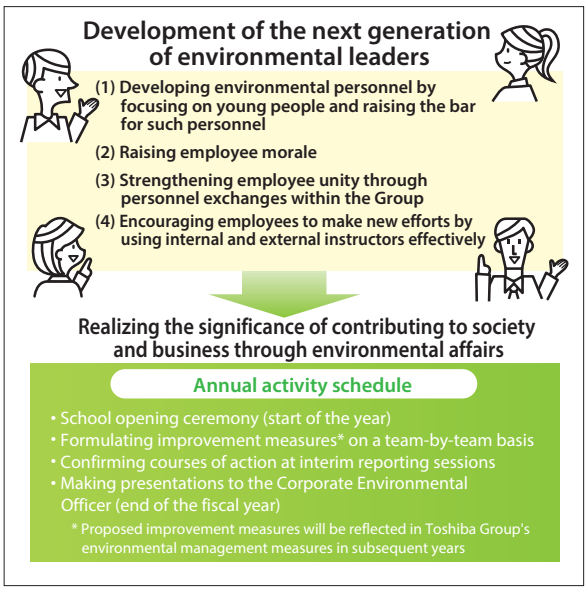
●Other
- ●Education sessions are held once a year.
- ●The pass rate in FY2015 was about 60%.

Toshiba Group certified auditors in FY2015

Site auditors: 165 Overseas local auditors: 103
Technology auditors: 92

Toshiba Environmental School

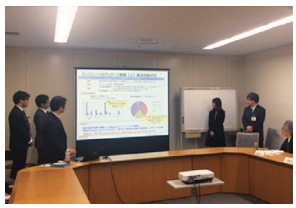
In FY2014, in order to improve our human resources in the area of environmental management, Toshiba Group launched Toshiba Environmental School, a program to develop the environmental management abilities of young and mid-level employees in charge of environmental affairs. Following FY2014's program (the first year), in which 11 employees discussed themes such as effective use of resources and environmental management for the future, in FY2015, 12 employees from the environment, facility management, research and development, sales, and other departments participated to discuss the following two themes: environmental communication and basic environmental activities. At the final briefing in March, all participants presented the discussion results and proposals for future environmental management measures for each team to a Corporate Environmental Officer. Some of the proposals made by year two program participants are scheduled to be reflected in Toshiba Group's Sixth Environmental Action Plan, which will be announced in FY2017, and thus will be incorporated into future environmental policies.



Class activities in FY2015 (year two program participants)

Interim reporting sessions held in Kamakura

Attending a Corporate Environmental Management Committee meeting



Presentation of results before Corporate Environmental Officer at the final briefing session

Discussions and proposals in FY2015 (year two program participants)

◆Environmental communication:

Aiming to raise employees' environmental awareness

Proposing measures to raise each employee's environmental awareness and to help them support integrating business with environmental management

Example: Developing environmental activities at each site under a common theme; information disclosure focused on employees' activities; an in-house awards system, etc.

◆Basic environmental activities:

Aiming to enhance human resource development and measures to assess risks and ensure compliance

Analyzing current activities using the MI approach to identify issues and proposing the development of high-priority strategies to solve identified issues

Example: Human resource development...
Enhancing use of overseas local networks and developing programs for environmental personnel training
Risks and compliance...
Centralized management of information on environmental regulations, etc.

Comments from employees who participated in the Environmental School program

Toshiba Corporation
Industrial ICT Solutions Company
Technology Management & Administration Division
Masako Kurotori (First year student of Toshiba Environmental School)

At the opening ceremony of the first year of the Environmental School program in FY2014, we were encouraged to serve as members who can play pivotal roles in environmental management in 2030. So, for me, the Environmental School education started from imagining myself 16 years hence. Through discussions with people from various departments, I reconfirmed the importance of studying environmental issues from a broad perspective. The Environmental School provided me with a valuable opportunity to develop my interest in actively acquiring knowledge. Other associates who participated in the program have become important partners with whom I can share thoughts about Toshiba Group's environmental management.

Toshiba Corporation
Storage & Electronic Devices Solutions Company
Productivity Improvement Planning Division
Goro Tadenuma (Second year student of Toshiba Environmental School)

I participated in the second year of the Environmental School program in FY2015 to study how to raise employees' environmental awareness and how to advertise our activities to the public at large through environmental communication. In addition to periodic discussions, we also attended tours of factories related to participants' departments and held an interim report meeting in Kamakura. Away from our routine tasks, we were able to develop unique strategies for the future by participating in activities with fresh minds. I hope employees from a wide range of departments will continue to participate in this program to develop strategies creatively.

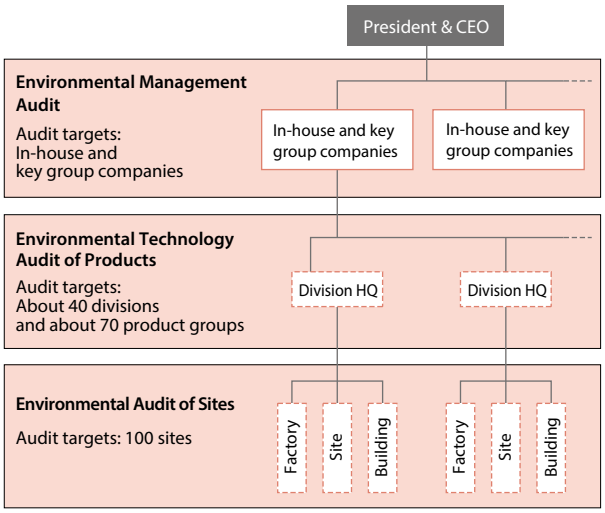
Environmental Audits

Toshiba Group's environmental audit system

After conducting environmental audits for the first time in 1989, Toshiba Group developed a comprehensive environmental audit system and has been using the system since FY1993 to conduct audits based on standards established by the group. The audit system initially developed was composed of four categories: (1) management system audits (environmental promotion systems, etc.), (2) on-site audits (levels of compliance with rules regarding environmental facilities, etc.), (3) VPE audits (levels of achievement of goals set in the voluntary plan), and (4) technology audits (product environment management system, environmental performance, etc.). Audits were conducted over two days to check these items. The most important of these categories was on-site audits, reflecting the shop-floor approach. This approach is incorporated into the environmental audits of sites conducted today.

Environmental technology audits of products became an independent category in FY1995. Environmental management audits were started in FY2004 to evaluate the level of environmental management in in-house companies and key group companies.

■Toshiba Group's environmental audit system

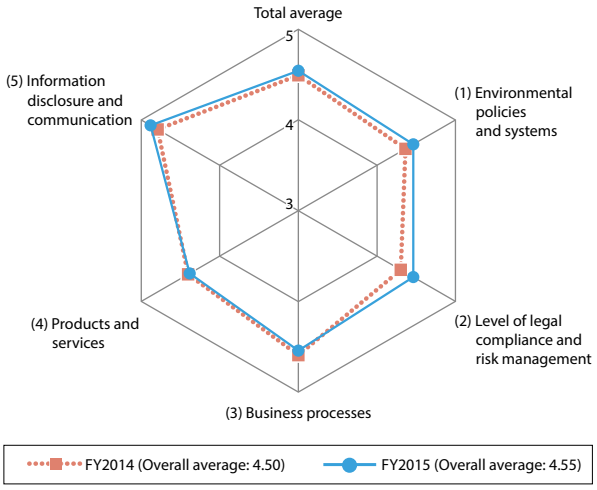


Since FY2006, these multiple audits have been systematized so that they can be conducted as one of three types: (1) environmental management audits covering in-house companies and key group companies, (2) environmental technology audits of products covering various divisions, and (3) environmental audits of sites covering production sites and non-manufacturing sites that consume large amounts of power. In-house companies and group companies conduct self-audits (self-inspections) within their companies based on the same standards in order to check business and production sites with relatively low levels of environmental impact that are not covered by site environment audits.

Audit items for these three audits are reviewed annually to improve the evaluation level. Since FY2012, we have evaluated the level of environmental management based on audit items linked to the goals of the Fifth Environmental Action Plan, thus stepping up environmental management.

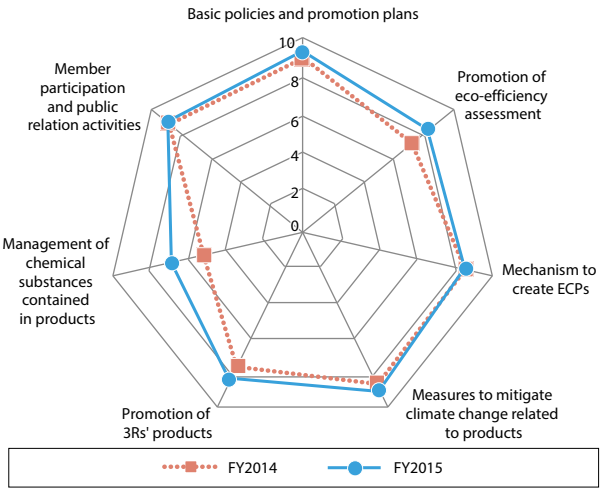
■Audit results (FY2015)

●Environmental management audit (total number of check items: 72)

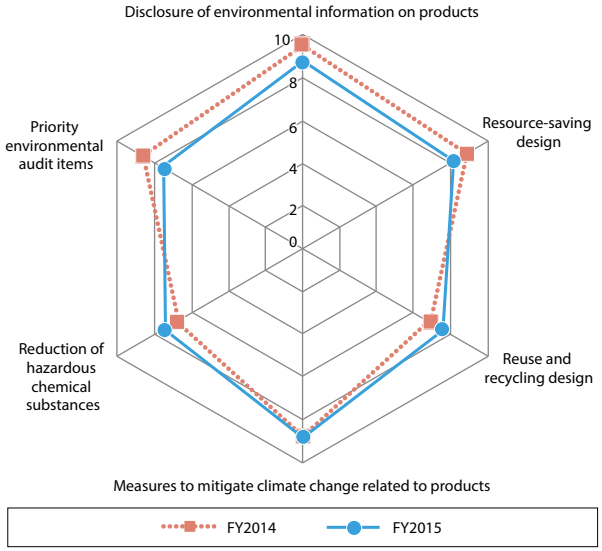


●Environmental technology audit of products (total number of check items: 40)

EMS audit*

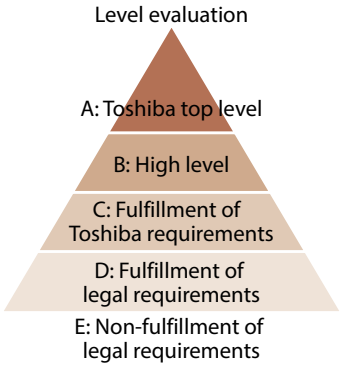


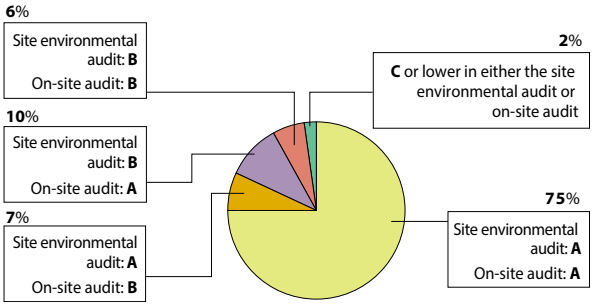
Product/Technology audit



* Environmental Management System

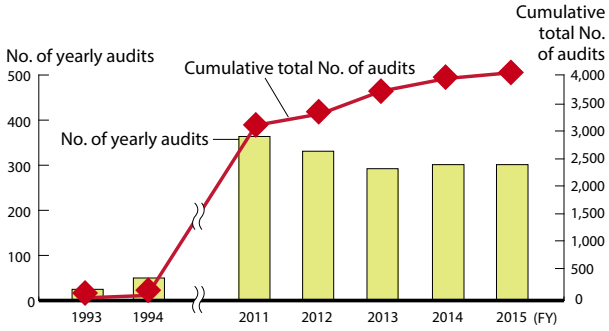
●Environmental audit of sites (total number of check items: 220)





We conduct over 300 audits, including self-audits, annually, and the total number of audits conducted since FY1993 exceeds 4,000. We also provide in-house training for auditors who conduct audits.

●Toshiba Group's environmental audit records



ISO14001

ISO 14001

In recognition of the importance of activities at business and production sites in promoting environmental management, we obtained ISO 14001 certification for all of Toshiba Corporation's 13 domestic business and production sites by 1997 and have maintained the certification to this day. In addition, all of Toshiba Group's 163 business and production sites eligible for certification have obtained ISO 14001 certification. We will also acquire ISO 14001 certification for new overseas business and production sites that will become eligible for certification as a result of future business expansion.

Toshiba Energy Systems & Solutions Company, Toshiba Infrastructure Systems & Solutions Company, Toshiba Storage & Electronic Devices Solutions Company, and other companies are striving to obtain integrated certification for their headquarters, sales offices, factories, and their group companies in order to develop environmental management systems for entire in-house and group companies.

■Number of ISO-14001-certified sites

As of July 31, 2016

	Eligible sites	Certified sites	Certification rate
Toshiba Corporation's business and production sites	13	13	100%
Domestic manufacturing sites	50	50	
Domestic non-manufacturing sites	40	40	
Overseas manufacturing sites	41	41	
Overseas non-manufacturing sites	19	19	
Total	163	163	

Risks and Compliance

●Compliance with environmental laws and regulations

Toshiba Group sets self-regulation standards stricter than legal standards regarding atmospheric emissions and discharges into the hydrosphere so as to ensure that all its business and production sites comply with environmental rules.

We conduct in-house environmental audits in order to identify potential environmental risks and to prevent environmental accidents. We also develop company-wide initiatives by sharing information, such as the results of internal audits on individual business and production sites, new regulation policies, and examples of accidents in other companies from among group companies.

Unfortunately, there was one violation of a law in FY2015, but we responded swiftly and appropriately to the problem. Using the lesson learned from this problem, we will strive to prevent the recurrence of similar problems and make further efforts to ensure compliance with relevant laws and ordinances in the future.

■Toshiba Digital Frontiers Corporation (July 2015)

Failed to submit reports on the issuance of Industrial Waste Manifests to the relevant authorities.

Measures were implemented to identify the cause and to prevent recurrence.

●Responses to environmental risks

The Risk Compliance Committee examines how to cope with diversified risks under the direct supervision of the President and also takes measures to prevent environmental risks.

If any environmental risk should materialize, the Corporate Environment Management Division and the environmental promotion managers and other concerned parties of in-house companies, key group companies, and business and production sites work in collaboration under the direction of the Corporate Environmental Officer to implement appropriate measures, including sharing information, checking relevant business and production sites, and preventing recurrence.

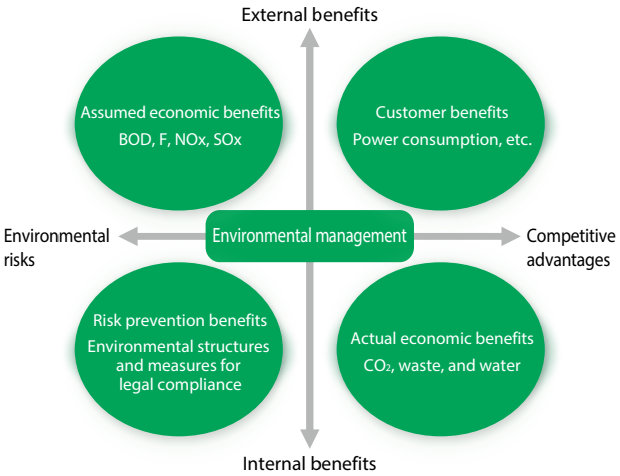
Environmental Accounting

As a tool for environmental management

With a view to promoting environmental management, Toshiba Group is working to introduce an environmental accounting approach aimed at collecting accurate data on investments and costs required for its environmental conservation initiatives and analyzing the collected data in order to reflect investment effects and cost benefits in managerial decision making.

Environmental costs are calculated in accordance with the Ministry of the Environment's Environmental Accounting Guidelines 2005. As for environmental benefits, Toshiba Group's environmental accounting assumes four basic concepts: competitive advantages, prevention of potential environmental risks, internal benefits, and external benefits. We classify benefits into four categories based on combinations of these concepts to develop a comprehensive approach to environmental accounting: customer benefits due to reduced power consumption of products, actual economic benefits resulting from reductions in the amount of waste and energy consumed, assumed economic benefits estimated to result from reductions in air pollutant emissions, and benefits resulting from preventing potential risks. To assess benefits, we show reductions in environmental impact in physical amounts and also calculate benefits on a monetary basis.

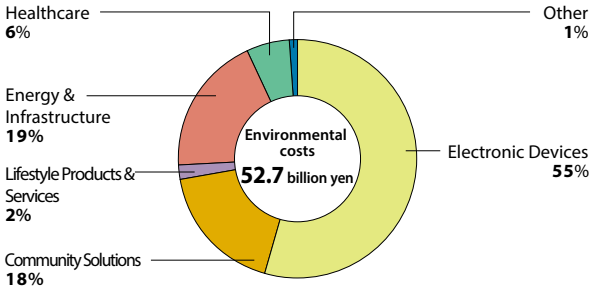
■Environmental accounting as a tool for environmental management



Environmental costs and benefits

Total environmental costs increased by 3.3% from the previous year to 52.7 billion yen. Of the different business sections, the electronic device section, which handles semiconductors, accounted for the largest percentage of total environmental costs, followed by the Energy & Infrastructure Group and the Community Solutions Group. Total investments increased by 24% from the previous year to 11.5 billion yen.

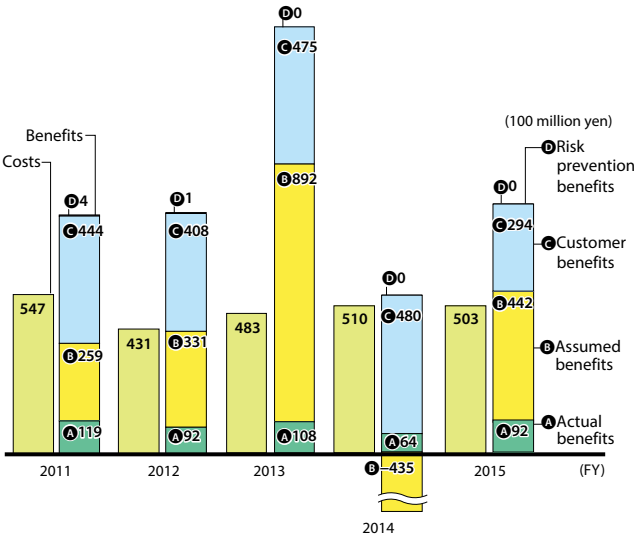
■Breakdown of environmental costs by business segment (FY2015)



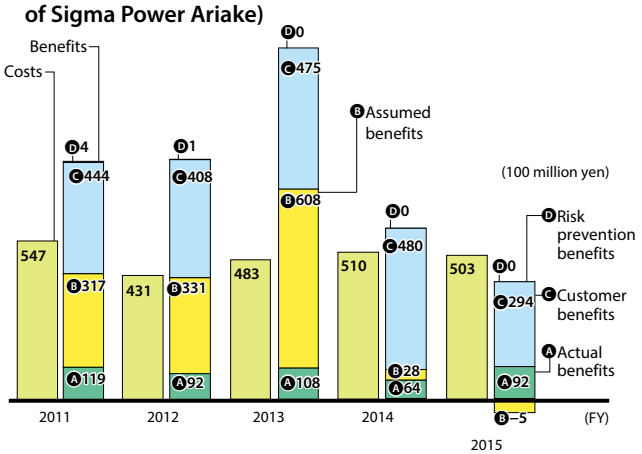
The total amount of environmental benefits was 82.8 billion yen. The breakdown of the total is as follows: actual economic benefits were 9.2 billion yen; assumed economic benefits were 44.2 billion yen; customer benefits were 29.4 billion yen; and risk prevention benefits were 7 million yen. The most important cause of the increase in assumed economic benefits was the reduced environmental impact of Sigma Power Ariake Co., Ltd., which engages in the thermal power generation business. The amount of assumed economic benefits excluding the effects of the power generation business was −0.5 billion yen. Considering the large effect of the power generation business on environmental benefits, we also show the changes in environmental benefits after excluding the effects of Sigma Power Ariake.

We will continue to appropriately analyze environmental costs and develop environmental management measures to further increase environmental benefits.

■Environmental costs and benefits (including the effects of Sigma Power Ariake)



■Environmental costs and benefits (excluding the effects of Sigma Power Ariake)



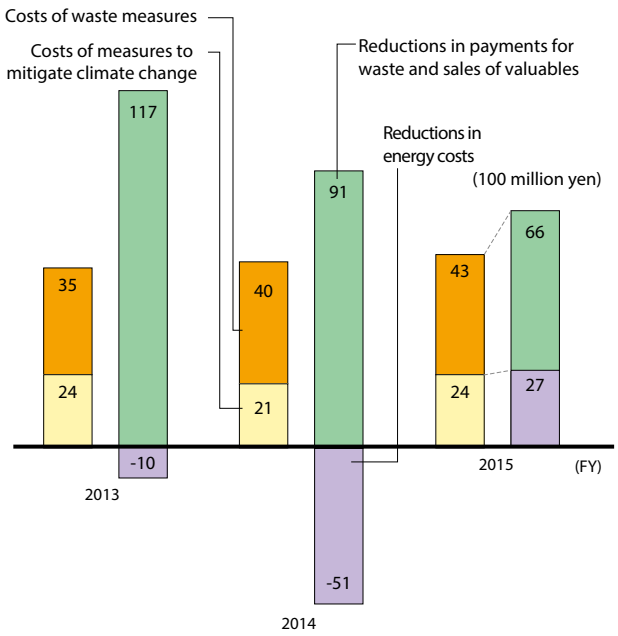
Cost benefits of environmental management measures

The figure shows the changes in the cost benefits of measures for climate change mitigation and waste disposal over the past three years. We compared the costs incurred in taking measures to mitigate climate change and dispose of waste against the total amount of reductions in payments related to energy consumption and waste disposal compared to the previous year as well as sales of valuables during the current year. In the table below, costs are expressed as business area costs and benefits as actual benefits.

In FY2015, measures to mitigate climate change and to dispose of waste both brought larger benefits than the costs of implementing them.

The major issue to be addressed going forward is how to overcome two conflicting problems: an increase in emissions of environmental pollutants as a result of business expansion and the need for cost reductions. Toshiba Group will also analyze the cost benefits and other financial aspects of environmental management measures in more detail.

■Cost benefits of measures for climate change mitigation and waste disposal



■Environmental costs (FY2015)

Unit: million yen

Category	Description	Investment	Costs
Business area costs	Reduction in environmental impact	9,840	21,947
Upstream/downstream costs	Green procurement, recycling, etc.	614	964
Administration costs	Environmental education, EMS maintenance, tree planting on factory grounds, etc.	179	3,259
R&D costs	Development of environmentally conscious products, etc.	900	26,267
Public relations costs	Support for local environmental activities, donations, etc.	10	43
Environmental damage restoration costs	Restoration of polluted soil, etc.	0	172
Total		**11,544**	**52,652**

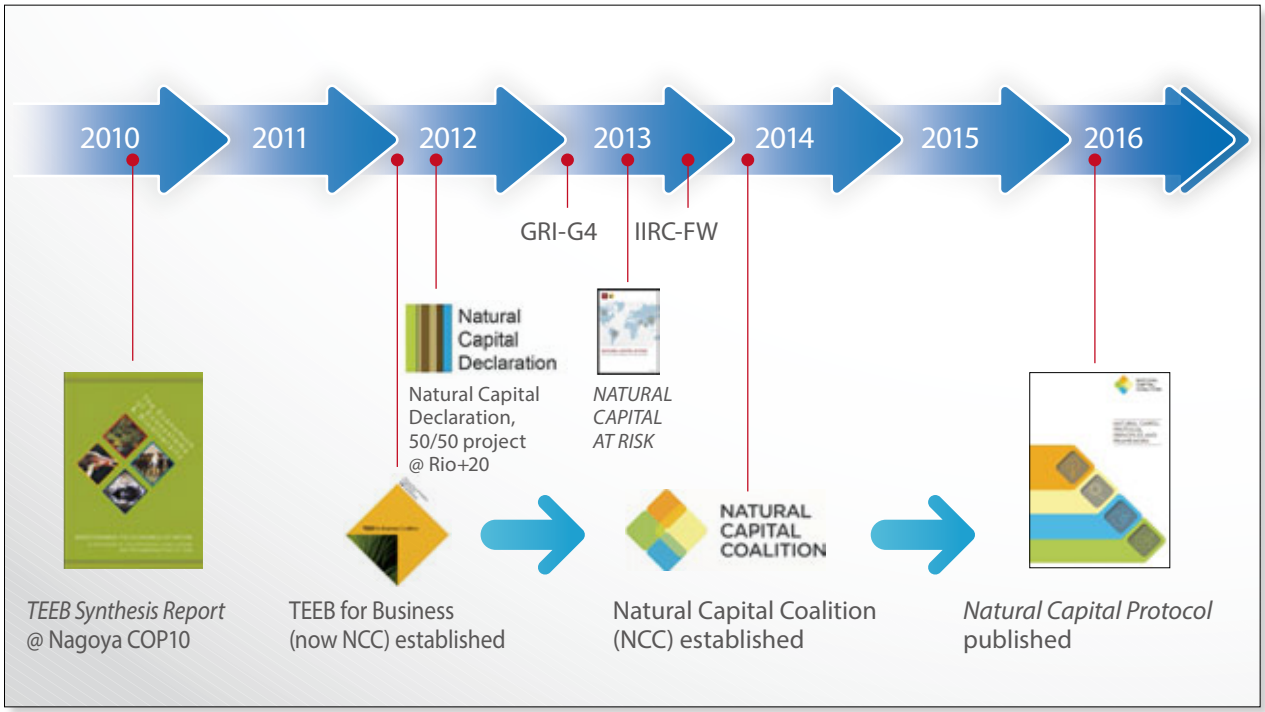
■Environmental benefits (FY2015)

Category	Description	Reductions in environmental impact		Benefits measured as a monetary value (million yen)	Calculation method
(A) Actual benefits	Costs that can be measured directly as a monetary value, such as electricity and water charges	Energy	−1,589,355 (GJ)	2,712	Reductions in electricity charges and waste processing costs compared to the previous year, plus sales of valuables.
		Waste	4,313 (t)	6,584	
		Water	−27 (m^3)	−120	
		Total monetary benefits		9,177	
(B) Assumed benefits	Reductions in environmental impacts measured as a monetary value	Reductions in the amount of chemicals discharged	424 (t)	44,248	To obtain monetary values, we assessed the impact of different substances by using the equivalent amount of cadmium for each substance, which we calculated based on environmental standards and on threshold limit values for chemical substances specified by the American Conference of Governmental Industrial Hygienists (ACGIH-TLV), and then multiplying such amounts by the damage compensation for cadmium contamination. In order to compare different environmental impacts by the same standard, reductions in environmental impacts on the atmosphere, hydrosphere, and soil compared to the previous year are shown alongside monetary amounts that represent the values of such reductions.
(C) Customer benefits	Reductions in environmental impacts during product use measured as a monetary value	Reductions of CO_2 emissions during use	2.39 (million t-CO_2)	29,382	Reductions in environmental impact throughout product life cycles measured in physical and monetary units (monetary amounts). The product life cycle includes (1) material procurement, (2) manufacture, (3) transport, (4) use, (5) collection and transport, (6) recycling, and (7) proper treatment. In this report, we focused on reductions in environmental impacts during product use. We used the following equation to calculate energy-saving benefits: Benefits (yen) = Σ [(Old model annual power consumption − New model annual power consumption) × Number of units sold annually × Standard unit electricity price]
(D) Risk prevention benefits	Reductions in environmental risks before investment			7	Benefits from investments in environmental structures, such as dikes designed to prevent soil and groundwater contamination, evaluated for their effects of hedging against possible future risks. We used the following equation to calculate risk avoidance effects per capital investment project: Standard purification and repair costs and the occurrence factor were calculated using values originally estimated by Toshiba to evaluate risks involved in chemical leaks. Risk avoidance effects = Amount of chemicals, etc. stored or retained × Standard purification/repair costs × Occurrence factor
Total monetary benefits				**82,814**	

Reductions in environmental impact for actual and assumed benefits indicate differences between FY2014 and FY2015.
Reductions in environmental impact for customer benefits are based on comparisons between the benchmark year (in principle FY2000) and FY2015.
Negative benefits indicate that the increase in environmental impacts exceeded reductions due to increases in production and other factors.

Natural Capital Accounting

■Recent Trends in Discussions on Natural Capital



Trends in natural capital

In recent years, natural capital accounting, which incorporates the value of natural capital into corporate accounting, has been actively debated.

The Economics of Ecosystems and Biodiversity (TEEB), which was published in 2010, recommends disclosure of biodiversity information in corporate accounting reports. It also proposes setting "no net loss" and "net positive impact" as targets as well as considering an offset system. Furthermore, *the Natural Capital Declaration: (NCD)* prepared in 2012 by the United Nations Environment Program Finance Initiative (UNEP FI) requires that natural capital, which generates several trillions of dollars annually, be evaluated in the same way as social and financial capital. "The 50/50 Project," which was launched by the World Bank in 2012, also aims to incorporate natural capital into government accounting in 50 countries and corporate accounting at 50 companies.

Moreover, *Natural Capital at Risk*, a report published in 2013 by the TEEB Business Coalition (now the Natural Capital Coalition), proposes that companies evaluate the effects of their operations and supply chain activities on natural capital.

Meanwhile, *the International Integrated Reporting Framework (FW)* drafted by the International Integrated Reporting Council (IIRC) and *the Sustainability Reporting Guidelines G4* drafted by the Global Reporting Initiative (GRI) were published one after the other in 2013. The IIRC-FW specifies natural capital as one of six capital assets that support corporate activities. In addition, the GRI-G4 recognizes economic assessments of natural capital as an important information disclosure item, requiring companies to implement appropriate measures.

Against this backdrop, Japan's Ministry of the Environment held a public meeting in March 2015 to discuss natural capital accounting. Toshiba personnel attended the meeting. At the meeting, experts in different areas—including scholars, institutional investors, consultants, and business managers—actively exchanged views about the needs, utility, and future of natural capital accounting from their professional perspectives and had lively discussions.

Then, in July 2016, the Natural Capital Coalition published *the Natural Capital Protocol*. Rather than providing a method for quantitatively assessing natural capital, the Protocol shows procedures for assessing and managing natural capital as well as processes for incorporating natural capital accounting into corporate decision making.

Natural capital

Natural capital refers to capital (stock) generated by nature, including forests, soil, water, air, and biological resources. Flows generated from natural capital can be regarded as ecosystem services. According to the definition by Masatsugu Taniguchi, Specially Appointed Professor at Kyoto University's Graduate School of Economics, natural capital exists on earth in the biosphere, geosphere, atmosphere, and ocean. Natural capital includes all entities except artificial objects in these spheres, including forests and fishery resources in the biosphere, minerals and energy resources in the geosphere, air and sunlight in the atmosphere, and currents and tides in the ocean.

Appropriate evaluation of the value of natural capital and wise use will likely increase the sustainability of corporate management.

■Classification of natural capital

Natural capital	Biosphere	Ecosystems, biodiversity (animals, plants, fungi, etc.), forests, surface water, soil, climates and landscapes, humans (cultures, traditions, and spirituality)
	Geosphere	Minerals, fossil fuels, groundwater
	Atmosphere	Air, wind, sunlight
	Ocean	Coastal waters, seafloors, currents, and tides

Compiled based on materials provided by Specially Appointed Professor Taniguchi

Requirements for corporate natural capital accounting

Stakeholders particularly interested in natural capital include institutional investors mainly in Europe and the United States. An increasing number of investors are beginning to pay attention to business sustainability when making investment decisions, and they are said to be highly interested in how companies disclose corporate information.

To meet these stakeholders' needs, Toshiba Group is reviewing the following four requirements for corporate natural capital accounting.

■Requirements for corporate natural capital accounting

(1)	Assessing environmental impacts in terms of physical quantities
(2)	Converting physical quantities into monetary values
(3)	Assessing environmental impacts across entire supply chains and identifying areas with large impacts as hot spots
(4)	Enabling inter-company comparisons

At present, companies disclose a variety of environmental impact data. Items with particularly great impact on natural capital are greenhouse gas emissions and water usage amounts. However, it is difficult for investors to make investment decisions based on information on physical quantities alone. Therefore, it is necessary to make these values easier to understand by converting them into monetary values. In addition, it is also necessary to enable inter-company comparisons to facilitate selection of companies to invest in, as well as to assess environmental impacts of entire supply chains and to indicate areas with particularly serious impacts on natural capital as hot spots and review measures for improvement, thereby helping to judge business sustainability.

In addition, business management actions that do not devalue natural capital include collecting and recycling end-of-life products as well as recycling water at factories. Businesses that use renewable energy generated by sunlight, water, wind and tides as well as businesses that perform desalination of seawater and other water businesses can promote economic activities without damaging natural capital.

In addition, biodiversity conservation activities directly help restore ecosystems.

We will continue our efforts to quantify the effects of these various business activities on natural capital.

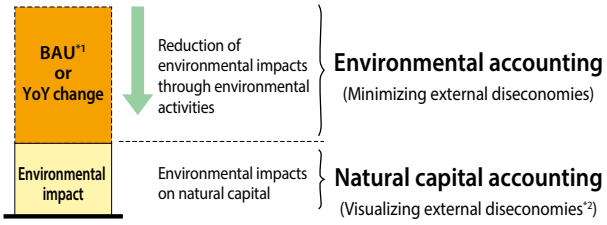
Environmental accounting and natural capital accounting

Environmental accounting (for details, see p. 61) aggregates the costs of environmental conservation activities and analyzes the benefits obtained from such activities. Toshiba Group calculates four environmental conservation benefits (actual economic benefits, assumed economic benefits, customer benefits, and risk prevention benefits).

However, environmental impacts associated with business activities cannot be reduced to zero. Viewing these final environmental impacts as "external diseconomies," we can regard environmental accounting as an attempt to measure the costs and benefits involved in various environmental activities in order to minimize such diseconomies. Meanwhile, natural capital accounting is an attempt to "visualize external diseconomies" by converting environmental impacts into monetary values.

Toshiba Group's concept of natural capital accounting can be summarized as shown in the chart below. The chart indicates that reduction of environmental impacts by the environmental activities leads to minimization of effects on natural capital. In the future, we will continue to further raise our level of environmental management by effectively using the two tools of environmental accounting and natural capital accounting.

■Environmental accounting and natural capital accounting



*1 BAU (Business as Usual): Best obtainable value for environmental impacts

*2 This chart is presented merely for the convenience of the reader; in reality, some external diseconomies are also visualized in the environmental accounting scheme. For example, to calculate the B benefits (assumed benefits) used in environmental accounting, we assess the impact of different substances discharged annually in reference to the equivalent amount of cadmium for each substance, which we calculate based on environmental standards and other criteria, and then multiply such amounts by the damage compensation for cadmium contamination. This enables us to compare the environmental impacts of different substances (nitrogen oxides (NOx), sulfur oxides (SOx), suspended matter, total nitrogen, chemical oxygen demand (COD), etc.) on the atmosphere, hydrosphere, and soil according to the same standard. These effects are recognized as external diseconomies. By continuing to apply our original environmental approach while also considering the use of approaches specific to natural capital accounting, Toshiba Group will analyze the financial aspects of environmental management in greater detail.

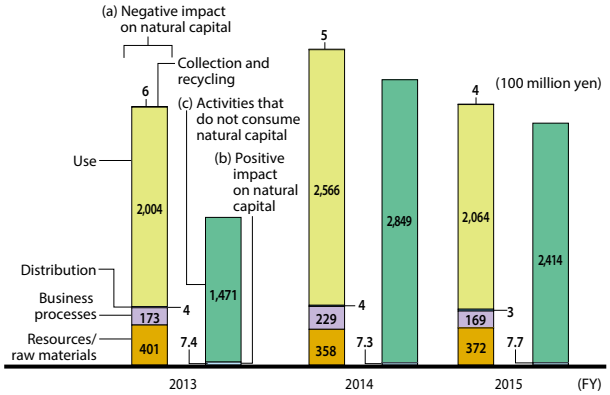
Integrated assessment of product life cycles, including supply chains

Since FY2009, Toshiba Group has annually published data on environmental impacts throughout entire product life cycles, including supply chains, which we convert into monetary values using one of the leading environmental assessment methods in Japan (LIME: refer to p. 37 for details). Natural capital accounting, which has often been discussed in recent years, requires assessment activities for the upstream of a company's supply chain as well as for the company's own business activities. Toshiba Group is accumulating detailed data on entire product life cycles, including raw materials procurement, research and development, design, manufacture, distribution and sales, use, and collection and recycling. These activities are analyzed as negative impacts on natural capital.

At the same time, we are also gathering data on business activities that positively affect natural capital as well as activities that do not consume natural capital.

Results for the period from FY2013 to FY2015 are shown below.

■Integrated assessment of environmental impacts



(b) Costs covered
- Costs of biodiversity conservation activities
- Nature conservation and afforestation costs
- Donations and financial support associated with environmental protection

(c) Activities covered
- Amount of power generated by using renewable energy systems put into operation in the relevant fiscal year (geothermal, hydroelectric, wind, and photovoltaic power generation)
  * Calculated using the electricity charge per kWh
- Reuse and recycling of water as well as effective use of rainwater
  * Calculated using the price of one cubic meter of industrial water

The impact on natural capital in FY2015 measured in monetary value decreased by 17% from the previous year to 261.2 billion yen. Data by life cycle stage shows that the environmental impact is most significant during the use of products sold, followed by the procurement of resources and raw materials. To reduce the environmental impact during the use of products, it is important to create products with the highest level of environmental performance, including energy efficiency.

Meanwhile, the monetary value of business activities that did not consume natural capital was 241.4 billion yen in FY2015. These activities include newly started power generation using delivered renewable energy systems as well as reuse and recycling of water in addition to rainwater utilization at business and production sites.

Moreover, the costs incurred for biodiversity conservation, factory afforestation, and other initiatives that positively affected natural capital totaled 770 million yen. This includes, for example, cases in which new ecosystems are created through environmentally friendly greenery management on the premises of Toshiba factories built on reclaimed land which originally had no ecosystem.

These numbers include monetary values of environmental impacts and the amounts that were actually paid. Therefore, they cannot be simply compared. However, Toshiba Group is considering a system for comparing in an expeditious manner these results to offset or reduce its environmental impacts for natural capital. We found that the reduction rate changed from 57% to 90% to 93% over the three-year period from 2013 to 2015. The reduction rate has increased particularly rapidly since FY2014 due to the increased amount of power produced by newly started hydroelectric power generation. We believe our analysis will lead to offsetting impacts on natural capital required by TEEB.

In the years to come, the Group will strive to improve the reduction rate by reducing environmental impacts for natural capital through reduction of such impacts and expanding business activities that do not affect (deteriorate) natural capital as well as those that positively affect natural capital.

Challenges for the future

At present, to quantitatively evaluate the impacts of activities of Toshiba Group and its supply chains on natural capital with respect to the four items chosen as the requirements for natural capital accounting for companies, we use LIME along with physical quantities to convert the impacts into monetary values. Also, in response to requests made mainly by institutional investors, we are considering making inter-company comparisons based on publicly released information (for details, refer to TOPICS on p. 66).

At the same time, we are aware of the great need to analyze and disclose information on local differences in environmental impacts. We will work to improve the accuracy of such analysis and continue to make improvements.

■Current status of natural capital accounting

Requirements for natural capital accounting		Current status
(1)	Assessing environmental impacts in terms of physical quantities	○
(2)	Converting physical quantities into monetary values	○
(3)	Identifying areas with large environmental impacts as hot spots	×
(4)	Enabling inter-company comparisons	○

Discussions of natural capital accounting have only recently begun. We expect that more lively discussions will take place worldwide in the future as various case studies are conducted.

TOPICS

Toward Inter-company Comparisons of Natural Capital Accounting

The results of the aforementioned natural capital accounting analysis depict various environmental effects that we estimated using a specialized method, LIME. However, investors and other stakeholders are likely to find it difficult to use this method to compare companies.

Therefore, here we present an example of an inter-company comparison using public data. The information on physical quantities used in the following comparison is company data disclosed in CDP and CDP's water program. Using the trade unit prices of the European Union Emission Trading Scheme (EU-ETS) and the average unit prices of industrial water in relevant countries as conversion coefficients provides a simple means of calculating the impact on natural capital.

The average price of emission rights under the EU-ETS during the 2012-2014 period was approximately 6 euros/t-CO_2. Therefore, we used 6 euros/t-CO_2 as the conversion coefficient for CO_2.

To estimate the monetary value of water, we calculated an average from the prices of industrial water in the relevant countries and obtained approximately 30 yen/m^3. The CDP water program shows amounts of water in liters, so we used 0.03 yen/L as the conversion coefficient for water*.

We analyzed trends during the past three years based on CDP data and trends for the past two years based on CDP water data. The table below shows the CDP and CDP water data Toshiba Group has registered along with hypothetical data for companies chosen for comparison. CDP and CDP water data are calculated and registered by individual companies at their own initiative. Therefore, data on a given item is not always available for all companies. Consequently, it is not possible to simply compare the totals. Nevertheless, these databases provide the richest available data on companies' environmental impacts, so we use these numbers.

* The purpose of this demonstration is to calculate common coefficients to compare companies in terms of natural capital accounting, not to calculate probabilities regarding the economic value of CO_2 and water.

■CDP data

(Unit: 1,000 t-CO_2)

	Toshiba			Company A			Company B		
FY	2012	2013	2014	2012	2013	2014	2012	2013	2014
Assessment: Disclosure/performance	98/A	100/A	100/A	99/B	98/A	85/C	92/B	97/B	85/C
Purchased goods and services	6,580	7,000	7,500	15,121	15,900				
Capital goods	570	780	838	1,210	1,070				
Fuel-and-energy-related activities (not included in Scope 1 or 2)	200	16	159	329	410		985	203	
Upstream transportation and distribution	5,000	500	468	1,370	892		229	540	334
Waste generated in operation	35	27	29	181	183		79	137	
Business travel	59	66	68	332	240				
Employee commuting	8	8	7	469	431	200			
Leased assets (upstream)									
Transportation and distribution (downstream)	980	14	11	628	786		294	302	280
Processing of sold products				7	10		697	948	
Use of sold products	58,300	52,950	67,580	163,857	119,762			109,430	
End of life treatment of sold products	81	92	87	462	370		3,780	4,540	
Leased assets (downstream)				319	399				
Franchises							178	306	
Investments							698	986	
Other (upstream)									
Other (downstream)									
Total	71,812	61,453	76,747	184,285	140,453	200	6,940	117,392	614

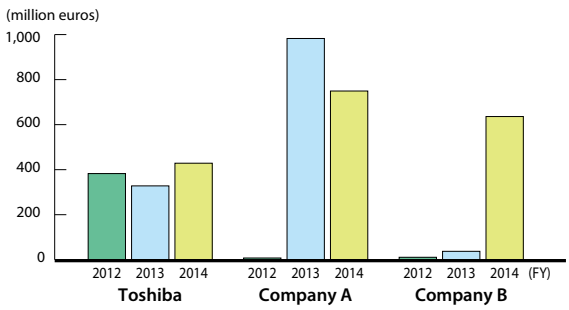
■CDP water data

(Unit: 1,000 L)

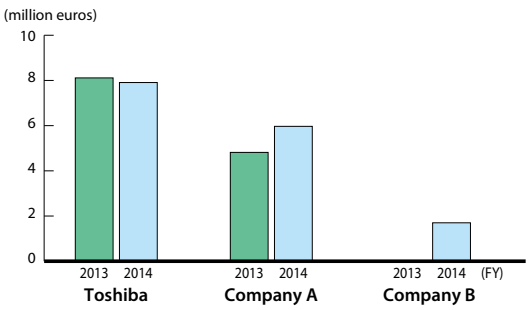
	Toshiba		Company A		Company B	
FY	2013	2014	2013	2014	2013	2014
Total volume of water withdrawn	40,563,000	39,539,000	20,081,000	28,845,000	No answer	7,903,000
Total wastewater		32,149,000	948,100	1,103,000		
Total volume of water consumed		7,390,000				
Total volume of recycled water used	15,369,000	14,088,000				

The following graphs show the monetary amounts obtained by multiplying these physical quantities by the conversion coefficients for CO_2 and water. Impacts on natural capital vary depending on the type of industry and company size. In natural capital accounting, we think it is more important to compare trends over a medium-or long-term period (three or five years) rather than single-year figures. We hope to create a system to evaluate companies that are working to reduce impacts on natural capital based on long-term trends.

■Example of an inter-company comparison based on CO_2 emissions measured in monetary amounts



■Example of an inter-company comparison based on water consumption measured in monetary amounts



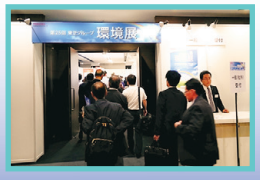
Environmental Communication

25th Toshiba Group Environmental Exhibition

25th Anniversary of Environmental Exhibition

On June 9 and 10, 2016, the 25th Toshiba Group Environmental Exhibition was held at Kawasaki City's Smart Community Center (Lazona Kawasaki Toshiba Building). Approximately 4,000 guests visited during the two days. At this year's Environmental Exhibition, we presented 45 examples of environmentally conscious products and services as well as manufacturing technologies that reduce environmental impacts in the areas of energy, social infrastructure, and storage, which are the major pillars of Toshiba Group's growth strategy. Also, since this year marked the 25th anniversary of the Environmental Exhibition, we displayed panels that showed Toshiba Group's environmental management and the Exhibition's history. We also created an area where visitors could send messages to Toshiba Group. In addition, we held a BEMS tour to introduce our building solutions as well as a briefing session for the press.

Report website: http://www.toshiba.co.jp/env/jp/communication/2016/exh/kankyouten2016_report.htm (in Japanese)






We displayed Toshiba Group's environmental management policies along with environmentally conscious products, services, and manufacturing processes in the respective sections.

Overall Policy/Strategy Section

We presented Toshiba Group's Environmental Vision 2050, results of the Fifth Environmental Action Plan, and T-COMPASS initiatives. In the area for biodiversity conservation activities, we also displayed Japanese eight-barbel loaches and other species protected on our factory premises.

Energy Section

We displayed a zero-emissions thermal power generation system with the world's highest level of efficiency that captures 100% of CO_2 generated by incineration, a geothermal power generation system with the largest market share globally, and a hydrogen-based autonomous energy supply system.

Social Infrastructure Section

In addition to a storage battery solution using SCiB™ rechargeable batteries, we also displayed a railroad system designed to systematically reduce energy use from multiple perspectives and a machine-roomless elevator that reduces power consumption by as much as 50% (in-house comparison).

Storage Section

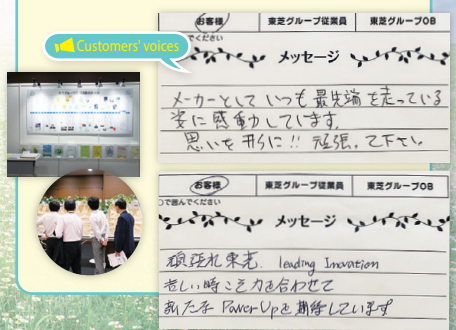
We displayed three-dimensional flash memories that enable large-capacity storage alongside energy conservation activities, including programs to visualize energy efficiency and analyze data at Yokkaichi Operations, where three-dimensional flash memories are mass-produced. We also displayed power semiconductors, which are used in railroad and power systems.

Environmental Management Section

In addition to environmental communication activities that are conducted worldwide to raise employees' environmental awareness and to foster a sense of togetherness, we also introduced our environmental education and human resource development programs aimed at training environmental personnel.

Section on Other Activities

In addition to an LCD TV that won the FY2015 Energy Conservation Grand Prize (Special Jury Prize), we also displayed a special panel commemorating the 25th anniversary of the Toshiba Group Environmental Exhibition and asked customers to send messages to Toshiba Group.



Employee-supported environmental action programs carried out worldwide

Toshiba Group promotes environmental activities in collaboration with local communities in order to raise employees' environmental awareness and to foster a sense of togetherness. In FY2015 and FY2016, we carried out diverse activities in countries around the world with employees' support, including e-waste recycling events, energy conservation competitions, protection of rare species, and nature observation programs.

Environmental advertisements

●Visual advertisements for environmental education and human resource development

Toshiba Group published advertisements based on interviews with young employees who are engaged in or very interested in environmental activities in the *Nikkan Kogyo Shimbun* newspaper and Nikkei Business Publications' *ecomom*.

In the *Nikkan Kogyo Shimbun* newspaper, three employees who are participating in the Environmental School program for employees developed by Toshiba to train next-generation environmental leaders introduced their usual business activities and the environmental programs they are promoting. Also, three Toshiba eco-style leaders who are engaged in environmental awareness-raising activities within Toshiba Group reported on their activities in *ecomom*.

Published in the *Nikkan Kogyo Shimbun* newspaper on March 22, 23, and 25.

●The 25th Toshiba Group Environmental Exhibition promotional website launched jointly by Nikkei Business Publications' *ecomom* and Toshiba Group

To widely promote the typical products we displayed at Toshiba Group Environmental Exhibition held on June 9 and 10, we launched a website jointly with Nikkei Business Publications. We asked two housewives to make field reports on self-checkout machines and home fuel cells in order to discuss Toshiba Group's environmental initiatives from their perspective.

Nikkei Business Publications *ecomom* website
http://special.nikkeibp.co.jp/atclh/MOM/16/toshiba0630/
(in Japanese)

Third-Party Evaluation

In order to improve the reliability of the environmental performance data presented in this report, Toshiba Group requested PwC Sustainability LLC to provide third-party assurance for Toshiba Group's GHG emissions listed on p. 22. The details are as follows.

Scope of the assurance

●GHG emissions caused by business processes:
GHG emissions generated by Toshiba Corporation and its group companies in Japan and overseas (Scopes 1 and 2[*1])
We selected and visited two production sites (Toshiba Corporation Yokkaichi Operations and Hamakawasaki Operations).

●GHG emissions caused by use of products sold:
GHG emissions caused by use of products sold by Toshiba Corporation and its group companies in Japan and overseas (Scope 3 Category 11[*2])

*1 Scopes 1 and 2: GHG emissions generated by Toshiba through use of fuels and electricity (Scope 1: direct emissions; Scope 2: indirect emissions)
*2 Scope 3 Category 11: GHG emissions caused by use of products and services produced and sold during the year covered by the report.

This English language report is a translation of the original Independent Practitioner's Limited Assurance Report in Japanese for reader's convenience.

pwc

Independent Practitioner's Limited Assurance Report on Toshiba Corporation's "Toshiba Group's GHG Emissions"

June 29, 2016

To: Mr. Satoshi Tsunakawa,
Representative Executive Officer, President and CEO
Toshiba Corporation

PricewaterhouseCoopers Sustainability LLC
Sumitomo Fudosan Shiodome Hamarikyu Bldg.
8-21-1 Ginza, Chuo-ku, Tokyo 104-0061, Japan

We have undertaken a limited assurance engagement of the information marked [▲] (hereafter the "Selected Information") in the Toshiba Corporation's "Toshiba Group's GHG Emissions" (hereafter the "Report") for the year ended March 31, 2016.

We have not performed any procedures with respect to other information in the Report and, therefore, no conclusion is expressed on such information.

Company's Responsibilities

Toshiba Corporation (hereafter the "Company") is responsible for the preparation of the Selected Information in accordance with the Company's policies and standards (hereafter "Reporting Criteria"), which is applied as explained in note of the Report. The Company's responsibility includes the design, implementation and maintenance of internal control, relevant to the preparation of the Selected Information that is free from material misstatement, whether due to fraud or error.

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

In accordance with the International Standard on Quality Control, we maintain a comprehensive system of quality control including documented policies and procedures with respect to compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Understanding Reporting and Measurement Methodologies

The absence of a significant body of established practice on which to base the evaluation and measurement of non-financial information allows for different, but acceptable, measurement techniques. The nature of non-financial information, and the techniques and precision used to determine and evaluate it, can result in materially different measurements. This may affect comparability between different entities and periods of time. The Selected Information, therefore, should be read and understood together with the Reporting Criteria. The Reporting Criteria used is applicable as at March 31, 2016.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Selected Information based on the procedures we have performed and the evidence we have obtained. Depending on the type of information, we conducted our limited assurance engagement in accordance with:

- International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements ("ISAE 3410") for GHG emission information (scope 1 emission and scope 2 emission).
- International Standard on Assurance Engagements 3000, Assurance Engagements other than Audits and Reviews of Historical Financial Information ("ISAE 3000" revised December 2003) for other information in the Selected Information.

These standards require that we plan and perform this engagement to obtain limited assurance about whether the Selected Information is free from material misstatement.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

We assessed the risk of material misstatement in the Selected Information due to fraud or error, and performed the following procedures:

- inquiry with relevant Company management;
- evaluating the suitability of the Reporting Criteria as the basis for preparing the Selected Information;
- evaluating the overall presentation of the Selected Information;
- evaluating the design of the key structures, systems, processes and controls for managing, recording and reporting the Selected Information. This included visiting the two sites (Toshiba Yokkaichi Operations, Toshiba Hamakawasaki Operations) and corporate offices selected on the basis of their inherent risk and materiality to the group, to understand the key processes and controls for reporting site performance data and to obtain supporting information; and
- performing limited substantive testing on a selective basis of the Selected Information at the corporate offices and in relation to forty-two sites to check that data had been appropriately measured, recorded, collated and reported.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling information with underlying records.

The procedures performed in a limited assurance engagement vary in nature from, and are less in extent than for, a reasonable assurance engagement. As a result, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether the Selected Information has been prepared, in all material respects, in accordance with the Reporting Criteria.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information in this report for the year ended March 31, 2016 is not prepared, in all material respects, in accordance with the Reporting Criteria.

[▲] The maintenance and integrity of Company's website is the responsibility of Company management. Our engagement did not consider matters relating to the maintenance and integrity of Company website. Accordingly, we accept no responsibility for any errors or changes to Selected Information or Reporting Criteria when presented on the website.

Result

Based on research conducted in accordance with Toshiba Group's policies and standards as well as with ISAE 3000[*3] and 3410[*4], it was concluded that there are no significant items that have not been disclosed or covered by the report.

*3 ISAE 3000: International Standard on Assurance Engagements 3000 (assurance engagements other than audits or reviews of historical financial information)
*4 ISAE 3410: International Standard on Assurance Engagements 3410 (assurance engagements on greenhouse gas statements)

Methods of calculation related to the third-party assurance

●CO_2 emissions caused by use of fuels: Calculated based on the Ministry of the Environment's Manual for Calculating and Reporting GHG Emissions (Version 4.1).
●CO_2 emissions coefficient for electricity purchasing: 5.10 t-CO_2/10,000 kWh is used as the power factor in Japan for FY2015. GHG Protocol data is used overseas.
●Greenhouse gases other than CO_2: Calculated by using the Global Warming Potential (GWP) in the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).
●CO_2 emissions caused by use of products sold: Calculated by aggregating the emissions estimated to be generated during use of products in the future for the year the products were sold.

Evaluation by External Parties (FY2015 results)

■Evaluation of products

Award title		Award-winning item(s)	Winner
FY2015 Energy Conservation Grand Prize	Agency for Natural Resources and Energy Director-General's Award	High Bay LED Fixture "Square Standard Model•Square Series"	Toshiba Lighting & Technology Corporation
	Chairman of the Energy Conservation Center Japan's Prize (Product and Business Model Category)	Drum-type washer-dryer TW-117X3	Toshiba Lifestyle Products & Services Corporation
	Chairman of the Energy Conservation Center Japan's Prize (Product and Business Model Category)	Air-cooled heat pump chiller Universal Smart X3 series	Toshiba Carrier Corporation
	Special Jury Prize (Product and Business Model Category)	4K-compatible LCD TV: 4K REGZA G20X series	Toshiba Visual Solutions Corporation
FY2015 Kawasaki Mechanism Certification System		C Band Solid-State Multiparameter Weather Radar, and Mail-Sorting Machine TT-210	Toshiba Corporation Komukai Complex
City of Kawasaki's Low CO_2 Kawasaki Brand 2015		C Band Solid-State Multiparameter Weather Radar, and Mail-Sorting Machine TT-210	Toshiba Corporation Komukai Complex
FY2015 (64th) Awards for Engineers Who Have Made Distinguished Contributions in the Electric Industry	Encouragement Award	Development of a diesel power generator for ships	Nishishiba Electric Co., Ltd.
Awards for Resource-Recycling Technologies and Systems	Encouragement Award	Establishment and operation of a collector replacement system	JBMIA Reverse Logistics Committee (Toshiba TEC Corporation is among the participating companies.)
ACR News Awards 2016	2016 Air conditioning product of the year	Two Pipe VRF Unit SMMS-e	Toshiba Carrier UK Ltd.
	2016 National ACR & Heat pump Award	Two Pipe VRF Unit SMMS-e	Toshiba Carrier UK Ltd.

■Evaluation of business activities

Award title		Award-winning item(s)	Winner
FY2015 Ministry of the Environment Involved in Environmental Measures Exemplary Efforts Awards	Minister of the Environment Award	- Preliminary assessment system that supports wastewater treatment - Local communication in the drainage area (Kitahana River)	Japan Semiconductor Corporation Oita Operations
FY2015 Kawasaki City Award for Environmental Contribution		Promotion of measures to mitigate climate change	Toshiba Corporation Komukai Complex
Yokohama Environmental Action Awards Yokohama 3R Dream Promotion Award	Award for Business Sites with Outstanding 3R Activities	3R activities	Toshiba Corporation Semiconductor & Storage Products Company Ofuna Office
FY2015 Fukushima Protocol Project (for production sites) Old version	Award (Office and Store Category)	Contribution to the mitigation of climate change through CO_2 emissions reduction campaigns at business and production sites	Toshiba Alpine Automotive Technology Corporation
China IT168 Multi-function Printer Evaluation Convention	Overall CO_2 Eco Creation Award	Award for significant environmental contributions by using innovative recycling technologies	Toshiba TEC Information Systems (Shenzhen) Co., Ltd.
3Rs Awards	Award & certificate	A score of over 80% of administrative indicator audit items achieved with respect to 3R-related waste management	Toshiba Semiconductor (Thailand) Co., Ltd.
CSR-DIW Award	Award & certificate	Seven CSR-related criteria (including environmental measures) defined by the Department of Industrial Works (DIW) fulfilled	Toshiba Semiconductor (Thailand) Co., Ltd.
Zero Waste to Landfill Award	Bronze Medal Award	1. A score of over 80% of administrative indicator audit items achieved with respect to 3R-related waste management 2. No waste disposal by landfill (excluding government-designated substances, including lamps, batteries, and insulation)	Toshiba Semiconductor (Thailand) Co., Ltd.
Singapore 3R Packaging Awards	Gold Award	Reducing waste by replacing wooden pallets with reusable plastic pallets and by using plastic containers instead of cardboard boxes (awarded the Gold Award for having received the Merit Award three years running)	Toshiba TEC Singapore Pte Ltd.
DON EMILIO ABELLO Energy Efficiency Award	Outstanding Award	Contributions to mitigating climate change by energy conservation activities on the company premises	Toshiba Information Equipment (Philippines), Inc.
Credit Rating Evaluation of Environment in Shenyang	Green company (highest level)	Environmental management	Toshiba Elevator (Shenyang) Co., Ltd.
Environmental Good Governance Project 2015		Environmental management	Toshiba Hokuto Electronic Devices (Thailand) Co., Ltd.

■Evaluation of communication programs

Award title		Award-winning item(s)	Winner
THE BUSINESS EXCELLENCE AWARDS (By Markham board of trade, Canada)	The Donald Cousens Conservation & Environmental Leadership Award	Toshiba of Canada, Ltd.'s environmental activities recognized as pioneering activities for environmental conservation and sustainability	Toshiba of Canada, Ltd.
Keep Houston Beautiful and The City of Houston Honorable Mention Award	Honorable Mention Award	Held events to collect e-wastes from employees and residents living in the vicinity	Toshiba International Corporation
Appreciation letter by Dong Nai Children Hospital		Received the appreciation letter from Dong Nai Children Hospital for donation of 4,026,000VND (20,000 yen) collected in the MOTTAINAI recycling bazaar held in TIPA	Toshiba Industrial Products Asia Co., Ltd.
Environmental Good Governance Project 2015	Best Practice Award	Local environmental activities	Toshiba Semiconductor (Thailand) Co., Ltd.

Message from the editor

We started to plan Toshiba Group Environmental Report 2016 with a firm commitment to showing stakeholders how we are making genuine efforts for environmental management as the revitalized Toshiba.
In an effort to show Toshiba Group's stance towards environmental management in top executives' own words, we presented an interview with the CEO at the beginning of this report. In addition, we asked four in-house company presidents to display their commitment in the feature article. We also took care to report on a wide range of events, including case studies on our products and business processes, site activities to conserve rare animal species, and employees' voices in order to show our activities from every angle.
In order to achieve Environmental Vision 2050, Toshiba Group will continue to work sincerely to implement environmental management. We look forward to your continued support.