Toshiba Group ESG Performance E S G

Environment

For the irreplaceable global environment in which we live

Promote corporate activities with full consideration for the global environment throughout our value chain, from design, procurement, manufacturing, logistics and sales, through to disposal.

CONTENTS

Basic Policy

Toshiba Group has formulated the Basic Policy for the Environment which lays out specific environmental strategies to be shared by all members of the Group.

Toshiba Group's Basic Policy for the Environment

Toshiba Group holds environmental initiatives to be one of our top priority tasks in corporate management, guided by The Essence of Toshiba. We will strive to create enriched value and ensure harmony with the earth to be committed to people and committed to the future. Through our environmental management that aims to achieve a decarbonized society, a resource circulating society, and a society in harmony with nature, we will contribute to the realization of a sustainable society and turn on the promise of a new day.

Promoting environmental management harmonized with business operations

- Toshiba Group assesses the impacts of its business activities and products and services on the environment (including biodiversity), sets environmental impact reduction targets, and implements environmental activities.
- Toshiba Group continuously improves its environmental management through audits and activity reviews.
- Toshiba Group complies with all laws and regulations, industry guidelines it has endorsed, and its own standards on the environment.
- Toshiba Group further raises employees' environmental awareness, and the company as a whole makes efforts for environmental protection.
- Toshiba Group operates globally and promotes environmental activities throughout the Group accordingly.

Reducing environmental impacts through business activities and offering environmentally conscious products and services

- Toshiba Group recognizes that natural resources are finite, and it implements vigorous environmental measures to promote their effective, practical use in terms of both business activities as well as products and services.
- Toshiba Group develops and provides environmentally conscious products and services that contribute to reducing environmental impacts throughout their life cycle.
- In all phases of activities – including the design, procurement, manufacturing, logistics, sales, and disposal phases – Toshiba Group implements measures to decrease environmental impacts, such as those for responding to climate change, effective resource use, and chemical management.
- Toshiba Group considers what value and meaning it can provide to society and strives to develop environmental technologies for the future in order to contribute to realizing a sustainable society.

Working together with stakeholders

- Toshiba Group actively communicates with stakeholders, such as local communities and society, and promotes environmental activities in collaboration with them.

> The Essence of Toshiba
> Toshiba Group Standards of Conduct 8. Environment

Environmental Future Vision 2050

“Committed to People, Committed to the Future.” is the long standing Basic Commitment of the Toshiba Group, a statement that expresses our enduring credo to contribute to the development of society through our business. Since our founding, Our Purpose has been to combine the power of invention with our expertise and desire for a better world, to tackle increasingly complex and serious social issues, and to turn on the promise of a new day. Under the Mid-term business plan formulated based on this philosophy, while providing unique services that are highly reliable and state-of-the-art technologies to help solve social issues, we will contribute to the achievement of the Sustainable Development Goals (SDGs) and further enhance our corporate value. Toshiba Group holds environmental initiatives to be one of our top priority tasks in corporate management, and will promote such initiatives closely linked to the company-wide business plan.

> The Essence of Toshiba
> Actions for the Achievement of Sustainable Development Goals (SDGs)

Formulation of Long-term Vision Environmental Future Vision 2050

In recent years, climate change, the depletion of energy and resources, and various other environmental issues have intensified, to the point where they threaten the safe, secure lives of future generations. With regard to climate change in particular, given the impacts of floods, droughts, and enormous typhoons in many parts of the world, the 2015 adoption of the Paris Agreement*1 has accelerated the movement toward carbon neutrality in each country. In the face of these circumstances, companies must recognize the importance of climate change from a long-term perspective and proactively respond in order to achieve carbon neutrality.

In addition, over the last several years, countries worldwide have been trying to address issues such as the transition to a circular economy, marine plastics, water resources, and biodiversity conservation; and society’s interest in such issues are on the rise. Meanwhile, the dissemination of the SDGs, the expansion of ESG investment, and other movements involving corporate management aimed at sustainability overall are gaining momentum.

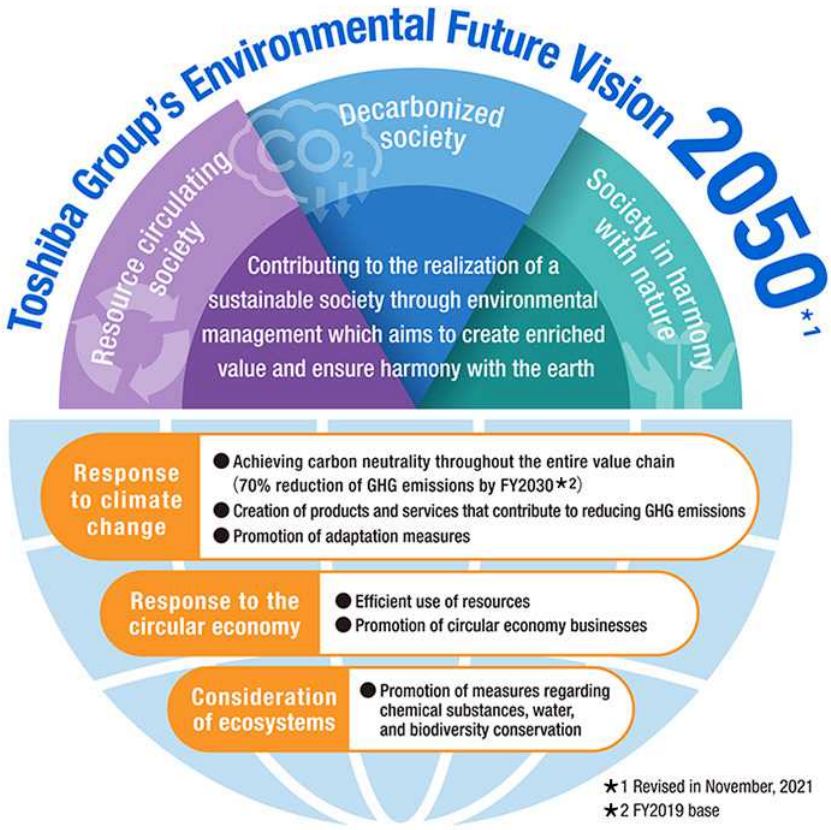
In line with these changes in society, Toshiba Group has been constantly transforming its business structure. Going forward, Toshiba Group aims to strengthen the competitiveness of its business and push ahead with creating new value with a professional and agile management system by establishing “Infrastructure services company” that will drive carbon neutrality and intelligent infrastructure as well as “Devices company” that will support social and information infrastructure.

Amid these changing circumstances, we consider it important to continue providing enriched value to customers while responding to global trends from a long-term perspective in order to contribute to the realization of a sustainable society and to aim to grow sustainably as a company. As such, Toshiba Group formulated the Environmental Future Vision 2050 as a new long-term vision in November 2020 to address carbon neutrality, the circular economy, and other issues from a global perspective. With the goal of “contributing to the realization of a sustainable society through environmental management which aims to create enriched value and to ensure harmony with the earth,” the Environmental Future Vision 2050 aims to realize a sustainable society—in other words, a decarbonized society, a resource circulating society, and a society in harmony with nature. Under the same concept of backcasting,*2 which has been incorporated at the formulation of the previous Vision from 2007, we will promote the implementation of initiatives in three areas: “response to climate change,” “response to the circular economy,” and “consideration of ecosystems” so as to realize the ideal situation in 2050. In October 2021, we revised the vision “response to climate change” to further accelerate initiatives toward achieving carbon neutrality throughout the entire value chain*3.

*1 The Paris Agreement is an international framework adopted at the 21st session of the Conference of the Parties (COP21) that seeks to reduce the volume of greenhouse gas (GHG) emissions. It aims to restrain the increase in the global average temperatures to less than 2°C from the pre-industrial level and to pursue efforts to limit the temperature increase even further to 1.5°C. To this end, the Agreement’s target is to lower the volume of GHG emissions to substantially zero by the latter half of this century.

*2 Backcasting is a method that defines a desired goal and works back through the series of actions necessary for its achievement.

*3 Vision “Response to climate change” formulated in November 2020: “Contribution through the entire value chain to achieve net zero GHG emissions in society (50% reduction across the Group’s value chain by FY2030)”
Vision “Response to climate change” revised in November 2021: “Achievement of carbon neutrality throughout the entire value chain (70% reduction of GHG emissions by FY2030)”



Under **"response to climate change,"** we aim to achieve carbon neutrality throughout Toshiba Group's entire value chain by FY2050. As a milestone, we aim to reduce GHG emissions by 70% by FY2030 compared to the FY2019 level. Specific initiatives include investing in energy-saving equipment and introducing equipment for renewable energy and procuring power derived from renewable energy in carrying out Toshiba Group's business activities; suspending the receipt of new orders for coal-fired thermal power plant construction work; and leveraging our technological capabilities to create products and services that contribute to GHG reductions in society. Such products and services include energy technologies: renewable energy, energy aggregation* for power supply and demand adjustment, CO_2 separation and capture technology, social infrastructure products and building-related products with high energy-saving properties. We will promote business that involves measures to adapt to climate change, which are aimed at ensuring stable energy supply and strengthening resilience, and also reducing GHG emissions derived from products and service purchased in cooperation with our suppliers.

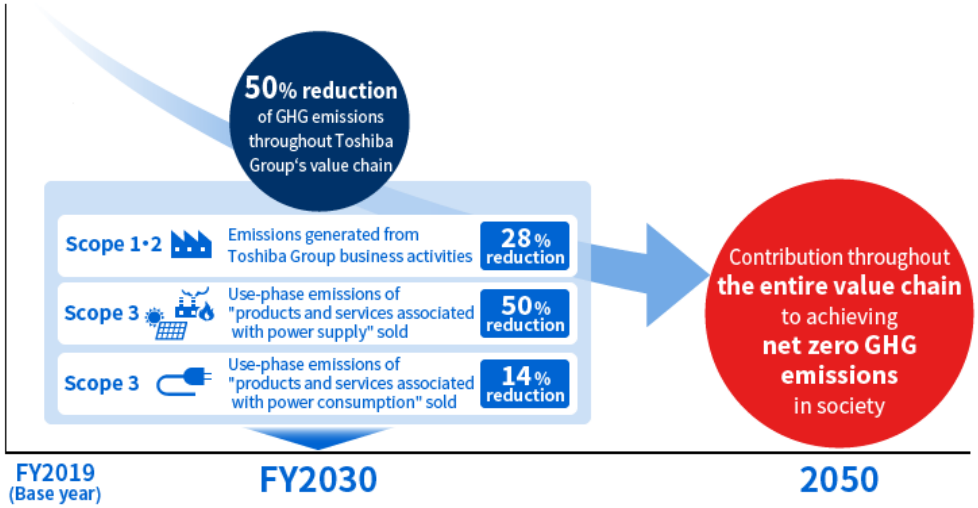
Under **"response to the circular economy,"** we will promote the efficient use of resources in both business activities and products and services. At the same time, we will actively collaborate with relevant parties, such as industry organizations, government agencies, and other companies, in order to adapt our business models to the circular economy. Specifically, we will work to reduce the volume of waste from business activities and to recycle used products and parts, as well as aim to build circular economy business models based on solutions that employ digital technologies, which is our focus business.

Under **"consideration of ecosystems,"** we will contribute to the creation of a society where humans live in harmony with nature and continue to enjoy the blessings of ecosystems by promoting compliance with policies and regulations on chemical substance management in countries around the world, proper management of water resources, and activities to conserve biodiversity on and off the premises of Toshiba sites.

* A mechanism for consolidating various energy resources, such as renewable energy and Electric Vehicle (EV), and controlling output according to power supply and demand conditions.

Response to Climate Change: Breakdown of Greenhouse Gas Reduction Target

In order to achieve the Environmental Future Vision 2050, we set out the following breakdown of GHG emissions reduction target and are promoting related initiatives.



Acquisition of Approval of the SBT Initiative

Our FY2030 target[*1] was approved by the Science Based Targets (SBT)[*2] initiative. Going forward, we aim to have our approval renewed under the SBT initiative's new standard.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

(For all items below, the base year is FY2019.)

Reduce the total of **Scope 1**[*3] and **Scope 2**[*4] **(GHG emissions generated from Toshiba Group's own business activities)**
by 28% by FY2030.

Reduce use-phase GHG emissions of "products and services associated with power supply"[*5] **sold** in **Scope 3**[*6]
by 50% by FY2030.

Reduce use-phase GHG emissions of "products and services associated with power consumption"[*7] **sold** in **Scope 3**
by 14% by FY2030.

*1 Our FY2030 target set before the revision of the Environmental Future Vision 2050 (before November 2021)
*2 Science Based Targets are scientifically grounded GHG reduction targets set by companies on a medium- to long-term basis in order to restrain the global average temperature increase this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. Science-based targets are validated by the SBT initiative. Toshiba Group's target approved is our FY2030 target set before the revision of the Environmental Future Vision 2050 (before November 2021).
*3 Volume of direct emissions through fuel use at Toshiba Group
*4 Volume of indirect emissions through use of electricity and heat purchased by Toshiba Group
*5 Power generation plants, etc.
*6 Volume of indirect emissions generated by Toshiba's value chain (raw materials procurement, distribution, sales, disposal, etc.) outside Scopes 1 and 2
*7 Social infrastructure products, building-related products (air conditioners, lighting equipment, elevators and escalators), retail and printing equipment, power devices, etc.

For Scopes 1 and 2, we will reduce the volume of emissions by measures such as investing in energy-saving equipment and increasing the use of renewable energy in Toshiba Group's own business activities.
For Scope 3, we will target Category 11, "Use-phase GHG emissions of sold products" and aim to reduce emissions.

Response to Climate Change
Greenhouse Gas Emissions across the Value Chain

Toshiba Group's Seventh Environmental Action Plan

We at Toshiba Group have formulated the Environmental Action Plan to achieve our long-term environmental vision. In this plan, we specify detailed areas of activity as well as set and manage targets. Based on Toshiba Group's Environmental Future Vision 2050, we have now formulated the Seventh Environmental Action Plan with an activity period covering FY2021 to FY2023. There are 19 targets set in three activity areas, "Response to climate change," "Response to the circular economy" and "Consideration of ecosystems," with the first two being the priority items, and also "Enhancement of the basis of environmental management," which supports the three activity areas. We will further develop and refine our activities in line with these targets to achieve our long-term vision and to help resolve various social issues, starting with climate change.

Toshiba Group's Seventh Environmental Action Plan

Activity area			Activity content		FY2021 target	FY2022 target	FY2023 target
Response to climate change (Priority item)	Business activities		Reduction of total GHG emissions*1		1.10 million t-CO_2	1.08 million t-CO_2	1.04 million t-CO_2
			Improvement of total energy-derived CO_2 emissions per unit		1% improvement compared to FY2020	1% improvement compared to FY2021	1% improvement compared to FY2022
	Products & services		Products and services associated with power supply	Reduction of GHG emissions during power supply (Base year: FY2019)*2	9.1% reduction	11.4% reduction	13.6% reduction
				Contribution to GHG reduction through introduction of renewable energy (cumulative total)*3	13 million t-CO_2	28 million t-CO_2	43 million t-CO_2
			Products and services associated with power consumption	Contribution to GHG reduction during product use (cumulative total)*4	26 million t-CO_2	54 million t-CO_2	84 million t-CO_2
	Business activities/ Products & services		Contribution to GHG reduction through digital technology		Promotion of the use of digital technologies to realize remote operation, automation, and intelligence		
			Promotion of business that adapt to impacts of climate change		Development of measures aimed at stable energy supply, strengthened resilience, etc.		
Response to the circular economy (Priority item)	Business activities		Reduction of waste volume*5		31,000 t	33,000 t	33,000 t
			Improvement of the volume of waste generated per unit		1% improvement compared to FY2020	1% improvement compared to FY2021	1% improvement compared to FY2022
	Products & services		Increased amount of plastic resources recycled (cumulative total)*6		700 t	1,400 t	2,200 t
			Increased amount of resources saved (cumulative total)*7		150,000 t	300,000 t	450,000 t
			Promotion of circular economy businesses		Creation of business models that improve both resource efficiency and corporate value		
Consideration of ecosystems	Chemical substance management	Business activities	Reduction of the amount of chemicals discharged per unit		1% improvement compared to FY2020	1% improvement compared to FY2021	1% improvement compared to FY2022
		Products & services	Reduction of specified chemical substances contained in products		Responding to policies and regulations regarding specified chemical substance management by countries around the world		
	Water resource management	Business activities	Improvement of the amount of water received per unit		1% improvement compared to FY2020	1% improvement compared to FY2021	1% improvement compared to FY2022
	Conservation of Biodiversity		Activities at global sites based on the themes set out in reference to the new international goals*8		Setting of five themes*9 as Toshiba Group's activity targets and promotion of employee participatory initiatives in and outside Toshiba sites		

Activity area		Activity content	FY2021 target	FY2022 target	FY2023 target
Enhancement of the basis of environmental management	Environmental communication	External communication	Communicating Toshiba Group's environmental initiatives on its Environment website		
		Networking with stakeholders	Promotion of communication activities in the age of the "new normal" based on collaboration with local residents, NPOs, NGOs, and administrative offices and among employees		
	Environmental risk management & compliance	Strengthening of the internal compliance management system and thorough implementation of internal education	Building and strengthening of the internal compliance management system through the Toshiba Group Environmental Audit System and Performance Evaluation System; provision of environmental education according to different posts, occupational roles, and specializations		

* Basic-unit goals for energy-derived CO_2 emissions, waste, water, and chemical substances: activities are assessed using indicators such as nominal output, the number of products manufactured, the number of persons and total floor area.

*1 CO_2 from electricity is calculated using emission coefficients provided by power companies.
*2 The reduction rate of GHG emissions from products and services associated with power supply, such as thermal power generation (compared to FY2019). The calculation method is as follows: GHG emissions from power generation for FY2021 onward due to newly installed or upgraded facilities are calculated into a reduction rate from emissions in FY2019. The arithmetic mean for the results during the period of the Seventh Environmental Action Plan is used.
*3 Contribution to GHG reduction by products and services associated with power supply such as hydroelectric, geothermal, and photovoltaic power generation. The calculation method is as follows: Obtain the difference between average GHG emissions per unit of all thermal power generation (coal, gas, oil) and GHG emissions per unit of renewable energy generation and multiply it by output, operation rate, facility utilization rate, expected service life, etc. Aggregate the cumulative total volume of contribution to GHG reduction due to power generation in FY2021 onward attributable to newly installed or upgraded facilities.
*4 Contribution to GHG reduction by products and services associated with power consumption, such as social infrastructure products. The calculation method is as follows: Obtain the difference between total GHG emissions of assumed substitute products and total GHG emissions of shipped products and multiply it by the expected service life. Aggregate the cumulative total volume of the three years.
*5 Obtained by deducting the volume of objects with value from the total volume of waste generated (excluding sites engaged in waste treatment and power generation).
*6 Cumulative total volume of recycled plastics and bioplastics used over the three years.
*7 Cumulative total volume of resources conserved due to lighter product weights and longer product service lives over the three years. The calculation method is as follows: [Total volume of input materials for assumed substitute products – Total volume of input materials for shipped products]
*8 *Post-2020 Global Biodiversity Framework* scheduled to be adopted at the 15th Conference of the Parties to the Convention on Biological Diversity (COP 15) (scheduled to be held from October 2021 to May 2022). Toshiba Group has set its activity themes referring to the first draft of the framework. First draft:
https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf
*9 (1) Building of ecosystem networks, (2) Conservation of rare species, promotion of ex situ conservation, (3) Response to marine plastics issues, (4) Response to climate change (mitigation, adaptation), (5) Conservation of water

Achievement of the Sixth Environmental Action Plan

We at Toshiba Group have formulated the Environmental Action Plan to achieve our long-term environmental vision. In this plan, we specify detailed areas of activity as well as set and manage targets. Since we formulated our first Environmental Action Plan in 1993, we have reviewed the areas of activity and the scope of governance every few years. In the Sixth Environmental Action Plan (activity period: FY2017–2020), we set targets for 15 areas in the Business category (promoting initiatives to reduce environmental impacts in product/service lifecycles) and the Management category (promoting basic activities that support business initiatives).
In FY2020, which is the final year of the plan, we achieved our targets in all 15 areas of activities, making progress in each category. Under the Seventh Environmental Action Plan which started in FY2021, we will continue to work toward achieving the new targets.

> The Seventh Environmental Action Plan

Achievement of the Sixth Environmental Action Plan (Actual results for FY2017 - FY2020) (PDF: 211 KB)

Toshiba Group's Sixth Environmental Action Plan

■ Business

Activity area	Activity content		FY2020		
			Target	Result	Evaluation
Reducing environmental impacts in manufacturing	**Reduction of total greenhouse gas emissions**[*1]		1.66 million t-CO_2	1.05 million t-CO_2	Achieved
			We achieved the target by actively implementing energy-saving and production efficiency improvement measures at each site.		
	Improvement of total energy-derived CO_2 emissions per unit activity (Compared to FY2013 level)		92%	92%	Achieved
			We achieved the target by implementing energy-saving measures, such as the introduction of energy-efficient equipment, taking production efficiency improvement measures, and using renewable energy.		
	Reduction of waste volumes[*2]		52,000 t	26,000 t	Achieved
			As we had lower factory utilization due to the COVID-19 pandemic, the total volume of waste generated significantly decreased, leading to reduced waste volumes.		
	Improvement of the total volume of waste generated per unit production (Compared to FY2013 level)		96%	74%	Achieved
			As we had lower factory utilization due to the COVID-19 pandemic, the total volume of waste generated significantly decreased, improving the total volume of waste generated per unit production.		
	Improvement of the amount of water received per unit production (Compared to FY2013 level)		96%	93%	Achieved
			We achieved the target by recycling wastewater and using rainwater.		
	Reduction of the total amount of chemicals discharged per unit production (Compared to FY2013 level)		96%	84%	Achieved
			We achieved the target by improving productivity and using alternative manufacturing processes.		
Improving environmental performance of products and services	**Increased reduction of CO_2 emissions** (cumulative total)	Power supply[*3]	16.3 million t-CO_2	21.61 million t-CO_2	Achieved
			We achieved the target by working to develop and spread a wide range of energy technologies.		
		Power consumption[*4]	6.3 million t-CO_2	6.95 million t-CO_2	Achieved
			We achieved the target by expanding our lineup of products and services that offer enhanced energy efficiency.		
	Increased amount of resources saved (cumulative total)		380,000 t	400,000 t	Achieved
			We achieved the target by continuously reducing resource consumption of products in all business areas.		
	Increased amount of recycled resources (recycled plastics) used (cumulative total)		3,000 t	3,514 t	Achieved
			We achieved the target by continuing to use recycled plastics in MFPs, industrial air conditioners, etc.		
	Reduction of specified chemical substances contained in products Using alternative materials for four phthalates[*5] or identifying alternates for all products by July 2019		—	We completed the substitution of four phthalates used in regulated products for the European market, and continue to manage the products in the same way.	Achieved

■ Management

Activity area	Activity content	FY2020	
		Result	Evaluation
Ensuring of environmental risk compliance	Enhancement of compliance with global environmental regulations and human resource development ■ Reviewing of measures to ensure compliance with global environmental regulations ■ Enhancement of local networks of environmental human resources at overseas production sites	■ In the area of business activities, we provided an online education program on environmental risks and compliance three times to Group companies. A total of approximately 750 employees from the environment, administration, engineering, manufacturing, and other divisions participated in the program. ■ In the area of products and services, we provided an online education program on laws and regulations related to chemicals contained in products and relevant international standards to Group companies. A total of approximately 280 employees from the environment, safety, quality control, manufacturing, procurement, marketing, and other divisions participated in the program. ■ We strengthened compliance at production sites by holding meetings of personnel in charge of environmental affairs in China and sharing legal and regulatory updates.	Achieved
Environmental communication	Improvement of information disclosure ■ Improvement of reporting based on external requirements	■ **We were selected for the prestigious A List in the CDP Climate Change Report 2020 and recognized as a Supplier Engagement Leader in the Supplier Engagement Rating conducted by CDP.** ■ We received the Excellence Award of the environmental reporting category for our Sustainability Report 2020 at the 24th Environmental Communication Award. ■ **We published our Sustainability Report 2020 and disclosed information based on the TCFD recommendations.**	Achieved
	Development of networks with stakeholders ■ Enhancement of communication with customers through Toshiba Group Environmental Exhibition and education program at Toshiba Science Museum ■ Enhancement of communication with local communities by implementing Global Environmental Action at our sites worldwide	■ **We hosted education programs for children at six locations, including elementary schools and event venues.** ■ **We carried out at least 350 Global Environmental Action events worldwide on the topics of chemicals, energy, resources, and others in cooperation with local residents, NPOs, NGOs, administrative offices, and other groups.**	Achieved
Conservation of biodiversity	Contributions to Aichi Targets ■ Choosing 10 of the 20 Aichi Targets as Toshiba goals to develop measures at our sites worldwide	■ **We carried out activities to achieve the Aichi Targets at 61 sites worldwide (39 sites in Japan and 22 sites overseas).**	Achieved

・Values related to energy consumption required for manufacturing (nominal output, the number of products manufactured, number of persons, total floor area, etc.) are used for basic-unit goals for GHG emissions.
・For waste, water, and chemical substances, volume-based nominal outputs are used as an indicator for basic-unit goals for appropriate assessment.

*1 CO_2 emission coefficients for electricity are calculated using emission coefficients provided by power companies.
*2 Obtained by deducting the volume of objects with value from the total volume of waste generated (excluding sites engaged in waste treatment and power generation).
*3 Reductions in emissions from products and services associated with power supply such as power plants. The calculation method is as follows:
For thermal power, a comparison with average CO_2 emissions per unit of electricity for the same fuel type; for renewable energy, a comparison with CO_2 emissions per unit of electricity for average thermal power of all types. Cumulative total volume of CO_2 emission reductions through power generation in FY2017 onward due to newly installed or upgraded facilities.
*4 Reductions in emissions from products and services associated with power consumption such as social infrastructure products. The calculation method is as follows:
[CO_2 emissions of assumed substitute products − CO_2 emissions of shipped products] (Compares use-phase emissions per year and cumulates emissions for half the expected product service life)
*5 Bis (2-ethylhexyl) phthalate, butyl benzyl phthalate, di-n-butyl phthalate, and diisobutyl phthalate. These substances are used mainly as plasticizers for plastics (e.g., cable coatings) and there are some concerns about their effects on the human body.

Overview of Environmental Impacts

Toshiba Group quantifies its environmental impacts at each stage of the life cycle of its products and services — from materials procurement, manufacturing, distribution, customer use, to collection and recycling. This data covers the actual results of 296 Toshiba Group companies for FY2020.

Overview of Environmental Impacts (PDF: 257KB)

Creation of Environmentally Conscious Products

Toshiba Group aims to contribute to resolving climate change and other environmental issues by continuing to improve the environmental performance of all products and services that we develop.

First, we identify the level of environmental performance that would lead to resolving issues facing society and customers through use of products and services, set *eco-targets* to achieve the required level of performance, and incorporate such targets into product specifications.

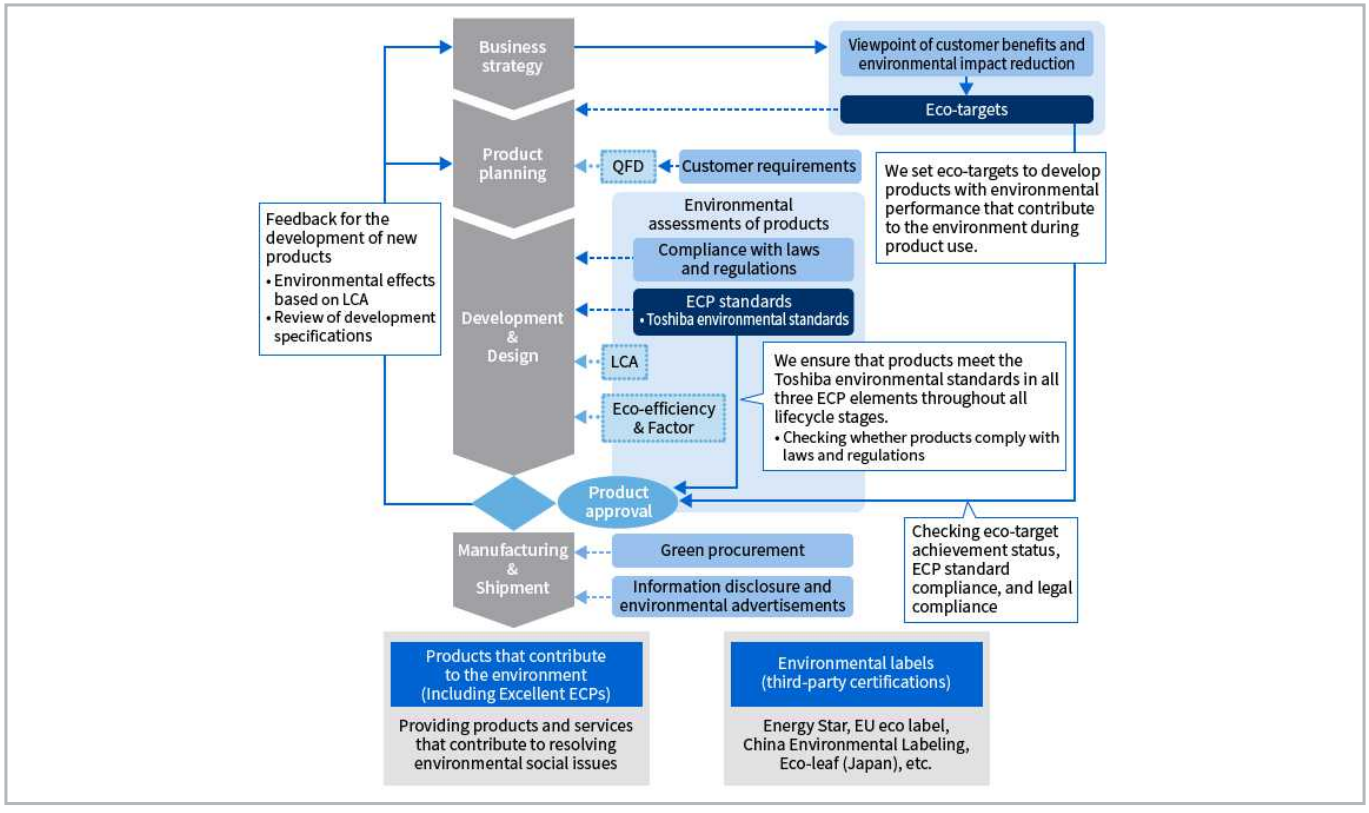
Then, we confirm that our products and services comply with all relevant laws and regulations. Meanwhile, based on the three elements of ECPs* (**Toshiba Environmental Standards**), we define and manage ECP Standards as mandatory environmental performance to be achieved at each stage of the lifecycle of products and services in order to ensure their quality with respect to the environment.

From among such products and services, we choose those with the highest levels of environmental performance at the time of product release and certify them as **Excellent ECPs** within Toshiba Group.

* Environmentally Conscious Products

> **Products certified as Excellent ECPs**

■ **Process of Creating Excellent ECPs**



> **Green Procurement Guidelines**

> **Environmental Labels**

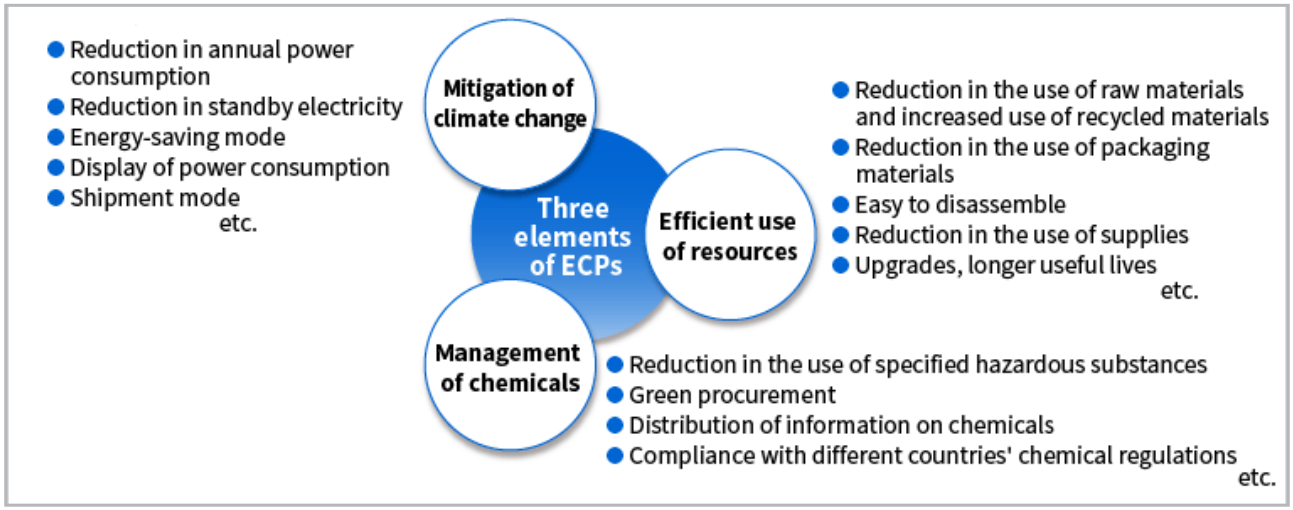
Toshiba Environmental Standards

- Assessment Based on the Three Elements of ECPs -

Environmentally Conscious Products (ECPs) are designed to minimize environmental impacts throughout all stages of their lifecycles, including during procurement of materials, manufacture, distribution, use, disposal, and recycling.

ECPs have three elements: mitigation of climate change, efficient 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 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



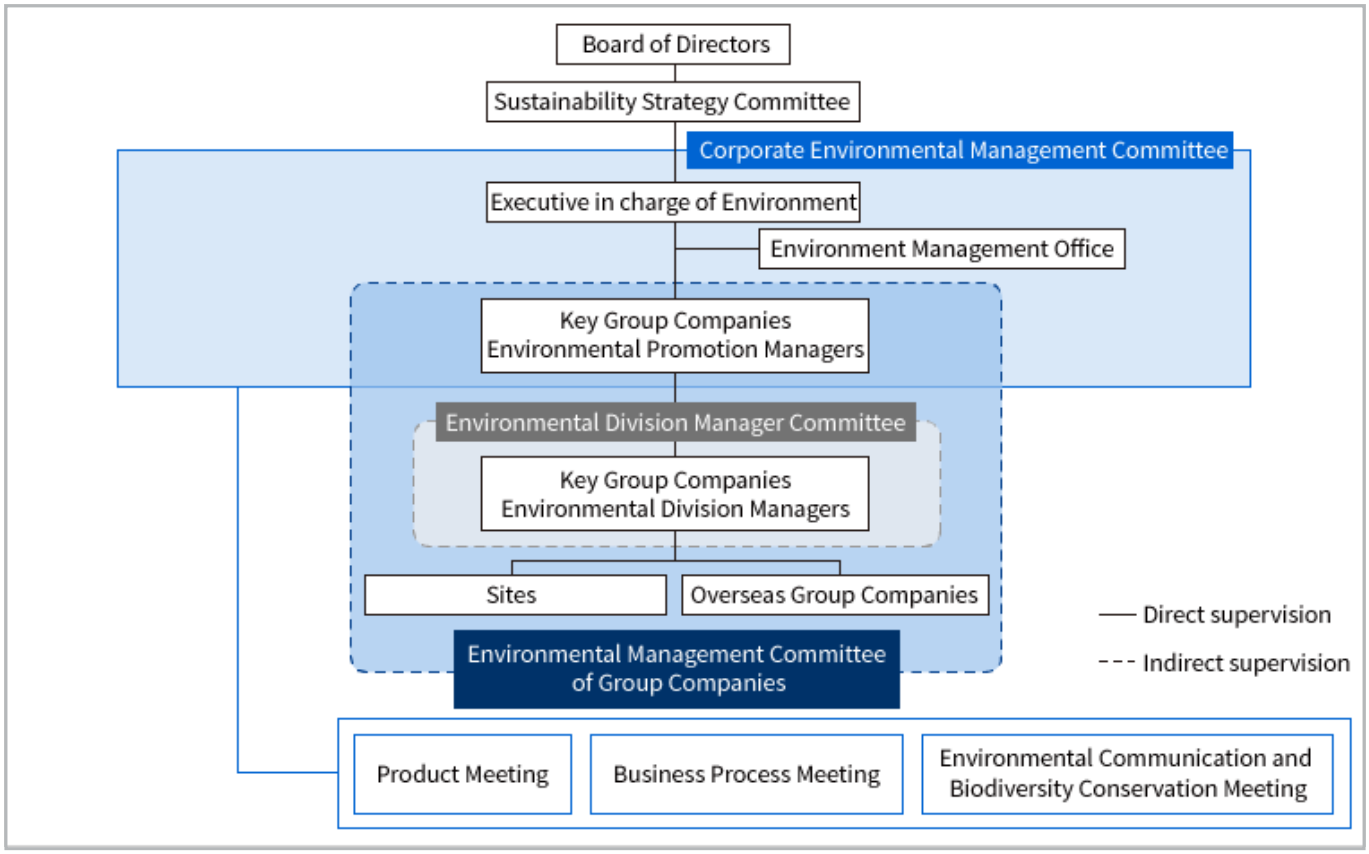
Environmental Management Structure

Group-wide Structure

We, the entire Toshiba Group, are promoting environmental management worldwide.

The Corporate Environment Management Office drafts and promotes important policies, strategies, and measures to be enforced throughout the Group. It obtains executives' approval of these policies, strategies, and measures and then implements them throughout the Group. More specifically, it convenes semiannually the Corporate Environmental Management Committee, which is a decision-making body for the entire Group chaired by the Executive in charge of f Environment, consisting of environmental promotion managers of key Group companies, and corporate staff division managers. The Committee makes recommendations on Toshiba Group's environmental measures at its meetings. It also checks and follows up on the progress of the Environmental Action Plan, which has been formulated to achieve the Environmental Vision. It discusses and decides the future direction and plans in line with corporate policies.
Among the important environmental measures and policies discussed at Corporate Environmental Management Committee meetings, critical issues related to management are deliberated and reported at the Sustainability Strategy Committee chaired by the President and CEO and held semiannually. These issues are also reported roughly twice a year to all directors, including outside directors, at the Board of Directors meetings. What is reported at the Board of Directors meetings is reflected in our Group's management strategy.

■ **Toshiba Group environmental management structure**



› Sustainability Management

■ **Issues Deliberated at Corporate Environmental Management Committee Meetings in FY2020**

	Issues deliberated	Other topics discussed
Corporate Environmental Management Committee meeting held for the first half of FY2020	Preparations for acquiring approval of the SBT initiative	Compliance measures related to government approval, licenses and filings of facilities compliant with environmental laws and regulations, measures to promote ESG, and other initiatives
Corporate Environmental Management Committee meeting held for the second half of FY2020	Formulation of the Basic Policy for the Environment, basic environmental regulations, long-term environmental vision, and medium-term environmental activity plan	Screening status for approval of the SBT initiative, environmental management audit results, etc.

Under the Corporate Environmental Management Committee, there are three subcommittees: the Product Meeting, which manages the development of environmentally conscious products and technologies, the Business Process Meeting, which promotes efforts to reduce the environmental impacts caused by business activities, and the Environmental Communication and Biodiversity Conservation Meeting, which promotes environmental communication and biodiversity conservation activities. With these subcommittees, the Corporate Environment Management Office develops detailed plans, identifies issues, explores solutions to the identified issues, and shares information across the Group. Under the Product Meeting and Business Process Meeting, specialized working groups set themes and engage in activities that cover a wide variety of fields.

Global Environmental Management Structure

Toshiba Group has a particularly large number of production sites in China. To ensure proper environmental management there, we have established a local department in charge of the environment. In Europe, the U.S., and Asia-Oceania, we work with the relevant regional headquarters to formulate environmental measures in each region, gather and share information on trends in laws and regulations, and provide cooperation and assistance to Group companies in these regions with respect to their environmental efforts.

ISO 14001

In promoting environmental management, we place importance on worksite environmental efforts as well, and currently, 62 sites of Toshiba Group have become ISO 14001-certified.

In many business domains, we are striving to obtain integrated certification that covers their headquarters, sales offices, production sites, and their group companies to develop comprehensive environmental management systems.

■ Number of ISO 14001-certified Sites

Business domains	Number of certified sites
Toshiba Corporation	1
Toshiba Energy Systems & Solutions Corporation Group	7 (including integrated certification)
Toshiba Plant Systems & Services Corporation Group	2
Toshiba Infrastructure Systems & Solutions Corporation Group	13 (including integrated certification)
Toshiba Elevator and Building Systems Corporation Group	4 (including integrated certification)
Toshiba Lighting & Technology Corporation Group	3 (including integrated certification)
Toshiba Carrier Corporation Group	6
Toshiba Tec Corporation Group	14
Toshiba Electronic Devices & Storage Corporation Group	4 (including integrated certification)
Toshiba Digital Solutions Corporation Group	3 (including integrated certification)
Battery Division	1
Other	4
Total	**62**

Note : As of October 15, 2021

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.

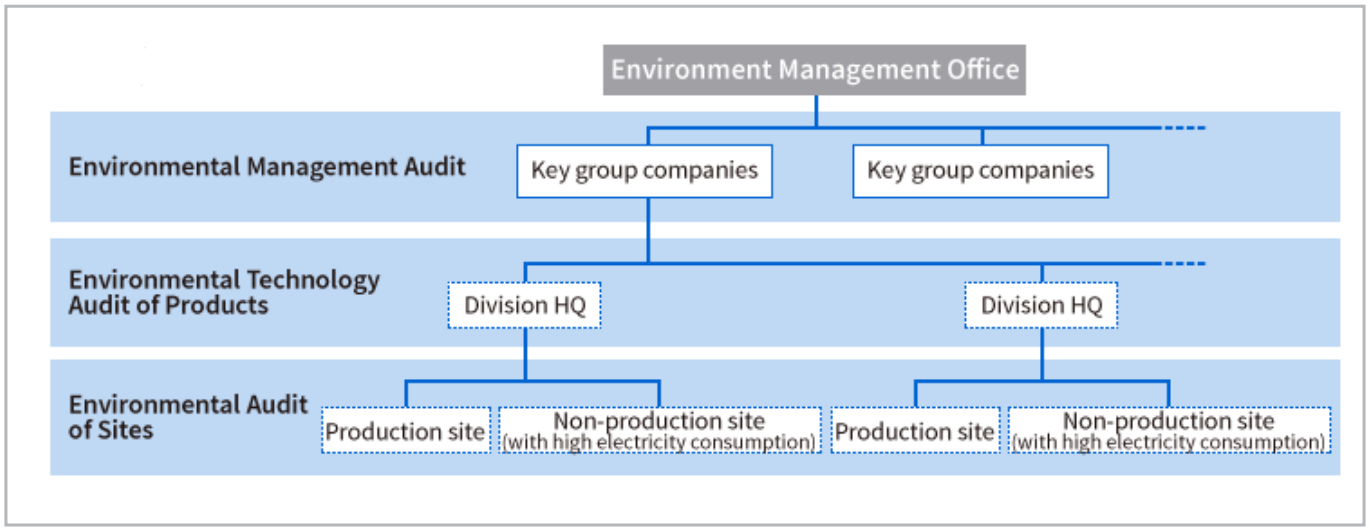
The Environmental Management Information System makes it possible to centrally manage and register not only performance data, such as energy consumption required for business activities and the volume of waste generated from these activities, but also environmental accounting information and the results of site environment audits. It covers all consolidated subsidiaries within the scope of environmental management of Toshiba Group (296 companies in FY2020) and is accessible from countries around the world.

Toshiba Group Environmental Audits and Performance Evaluation System

Toshiba Group Environmental Audits

Toshiba Group conducts three types of internal audits: (1) “environmental management audit” of key Group companies, (2) “environmental audit of sites,” specifically production sites and non-production sites with high electricity consumption, and (3) “environmental technology audit of products” of business divisions. These internal audits are aimed at evaluating the status of the environmental management structure, compliance, facility management, and other relevant areas within Toshiba Group, and having discussions to identify and improve issues. We link the audit areas and criteria of the environmental audit of sites and environmental technology audit of products with those of the environmental management audit, to closely verify the environmentally conscious aspects in our business activities, products and services. Further, production sites with relatively low environmental impacts are excluded from the environmental audits of sites but use the same audit criteria to conduct a self-audit (inspection) within each Group company.

■ Toshiba Group’s environmental audit system



To improve assessment quality, we review these audit areas every year. In FY2020, we performed evaluation of audit areas in line with the Sixth Environmental Action Plan, and confirmed the status of specific environmental efforts. From FY2021 onward, we will review these audit areas in line with the Seventh Environmental Action Plan and promote environmental efforts.

Environmental Management Audit

FY2020 Audit Results

Audited targets: eight key Group companies

No.	Audit area (number of items)	No. of non-conformities/ recommendations	No. of good practices
1	Environmental policies and systems (14)	5	13
2	Legal compliance and risk management (9)	3	9
3	Business processes (11)	0	7
4	Products and services (15)	1	7
5	Information disclosure and communication (9)	1	16
6	Supply chain management (3)	4	3

Examples of non-conformities/recommendations

- Systems for managing risks and compliance with environmental laws and regulations in terms of products or site management were inadequate.
- Supply chain management was inadequate, for example, information contained in the Green Procurement Guidelines was not organized.

Examples of good practices

- Toshiba Group manages in detail its course of action and priority measures and reflects them in its activity plans.
- Each business division makes a detailed plan for creating ECP* and appropriately manages the plan.

* Environmentally Conscious Products

Environmental Technology Audit of Products

The objective of the environmental technology audit of products is to improve the environmental quality of products and increase their contribution to the environment. To this end, the audit checks compliance with relevant legal requirements and the ECP standards set for each product (group) to secure environmental quality and the progress of ECP creation activities, which have the goal of creating products that contribute to reducing environmental impacts.

Environmental Audit of Sites

The objective of the environmental audit of sites is to improve each site's environmental control by checking its environmental management status, control status of each environmental issue type (water discharge, air pollution, noise, waste, chemicals, energy consumption, etc.) at representative facilities, and compliance system to obey applicable laws and regulations, agreements, and rules, among others.

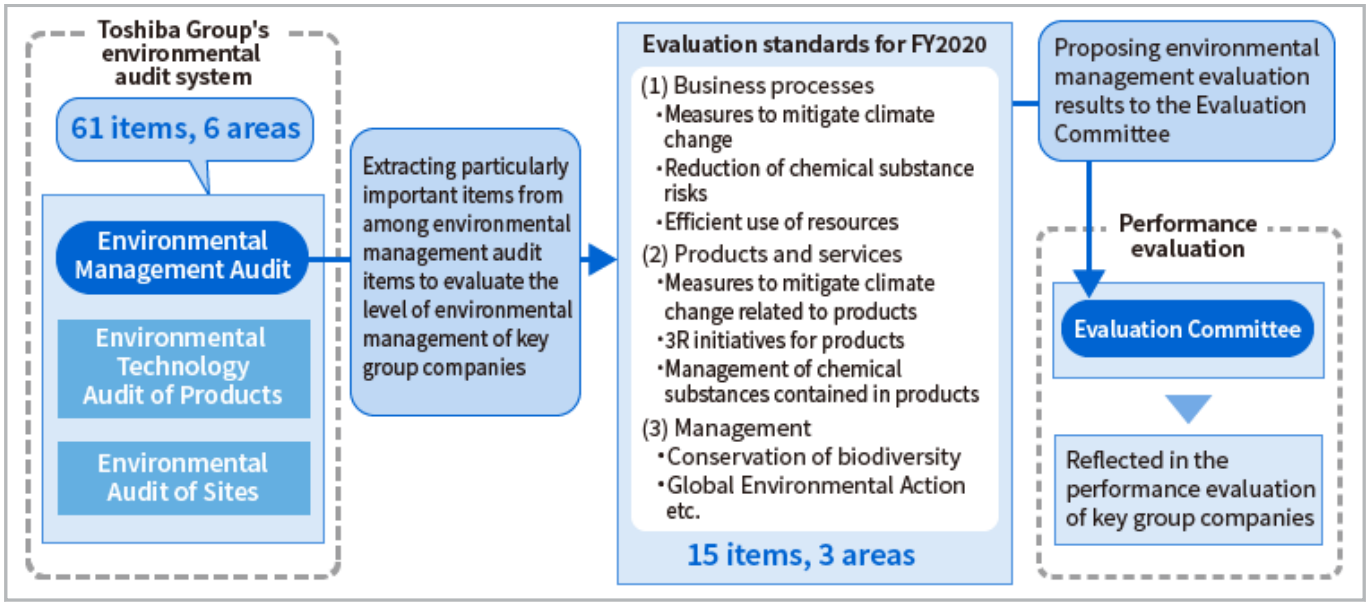
Environmental Education and Human Resource Development

Performance Evaluation System

Based on the Toshiba Group's environmental audits, we evaluate key Group companies' environmental management levels. Among 61 items in the 6 areas of the environmental management audit, we select those that match the top priority items in the Sixth Environmental Action Plan as performance evaluation criteria. In FY2020, we selected 15 items in areas of business activities, products and services, management, and other as performance evaluation criteria, and carried out quantitative evaluation. We submitted the evaluation results to the Performance Evaluation Committee and reflected the environmental management level assessment results in the performance evaluation results of each evaluated company.

From FY2021 onward, we will review these items in line with the Seventh Environmental Action Plan to promote our efforts.

■ Performance Evaluation System



Response to Climate Change

Medium- to Long-term Vision

- As a response to climate change:
  We will achieve carbon neutrality throughout the entire value chain.
  —Achieve carbon neutrality by FY2050
  —**70% reduction** of GHG emissions by FY2030 (from the FY2019 level)

70% reduction of emissions generated from Toshiba Group business activities by FY2030:
(from the FY2019 level)

80% reduction of use-phase emissions of products and services associated with power supply sold by FY2030:
(from the FY2019 level)

14% reduction of use-phase emission of products and services associated with power consumption sold by FY2030:
(from the FY2019 level)

- Reduce GHG emissions derived from purchased products and services in collaboration with suppliers (base year TBD)
- Promote business that related to climate change adaptation measures

FY2020 Achievements

- Total GHG generated from business activities:
  1.05 million t-CO_2
- Reduction of GHG emissions by products and services*
  Products and services associated with power supply:
  21.61 million t-CO_2
- Products and services associated with power consumption:
  6.95 million t-CO_2

Future Challenges and Approaches

Under Environmental Future Vision 2050 and the Seventh Environmental Action Plan, Toshiba Group will promote the reduction of GHG emissions in product manufacturing and in the use of products and services; and the reduction of GHG emissions derived from products and services purchased in cooperation with suppliers, to respond to climate change throughout its entire value chain. Toshiba Group also aims to contribute to the realization of a sustainable society by promoting businesses related to climate change adaptation measures.

Environmental Future Vision 2050
The Seventh Environmental Action Plan

* Cumulative total from FY2017.

Response to Climate Change

As global warming continues and temperatures rise, we are likely to experience more natural disasters including typhoons, floods, and tornadoes, which seriously affect people's daily lives and society. Other concerns include droughts due to low precipitation and sea level rise due to melting glaciers on land. To respond to these impacts of global warming, the world is accelerating the movement toward achieving carbon neutrality by lowering GHG emissions to net zero by 2050. We are required to respond to climate change caused by global warming by striving to reduce GHG emissions in both business activities and products and services, thereby to help achieve carbon neutrality.

With the aim of achieving carbon neutrality throughout its entire value chain by FY2050, Toshiba Group has been driving responses to climate change through various measures. They include reducing energy consumption and the volume of GHG used in production processes in Japan and abroad, introducing energy-saving processes and equipment, using renewable energy, providing energy technologies to realize decarbonization, and reducing electricity consumption in the use of products and services we develop. We will also focus on the reduction of GHG emissions from products and services purchased in cooperation with suppliers and climate change adaptation solutions. As a new initiative under the Seventh Environmental Action Plan, Toshiba Group will also focus on the reduction of GHG emissions through the use of its digital technologies that enable remote operation, automation, and intelligence. In FY2020, we acquired approval of the Science Based Targets (SBT)[*1] initiative regarding our GHG reduction target for FY2030.

We were selected for the prestigious A List in the CDP[*2] Climate Change Report 2020 for our climate change information disclosure. We have also endorsed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)[*3] and will continue to focus our efforts on information disclosure regarding the risks and opportunities related to climate change in our Group's businesses.

*1 Science Based Targets are scientifically grounded GHG reduction targets set by companies on a medium- to long-term basis in order to restrain the global average temperature increase this century well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. Science-based targets are validated by the SBT initiative. Toshiba Group's target approved is our FY2030 target set before the revision of the Environmental Future Vision 2050 (before November 2021).
For details, please see https://www.toshiba.co.jp/env/en/vision/vision2050_0.htm

*2 CDP is an international non-profit organization founded in the United Kingdom in 2000. Working with institutional investors, CDP conducts surveys on companies' environment-related initiatives (climate, water and forests).

*3 The TCFD is an organization established by the Financial Stability Board (FSB) in 2015 for financial institutions and companies to discuss the climate change issue from the perspective of financial stability.

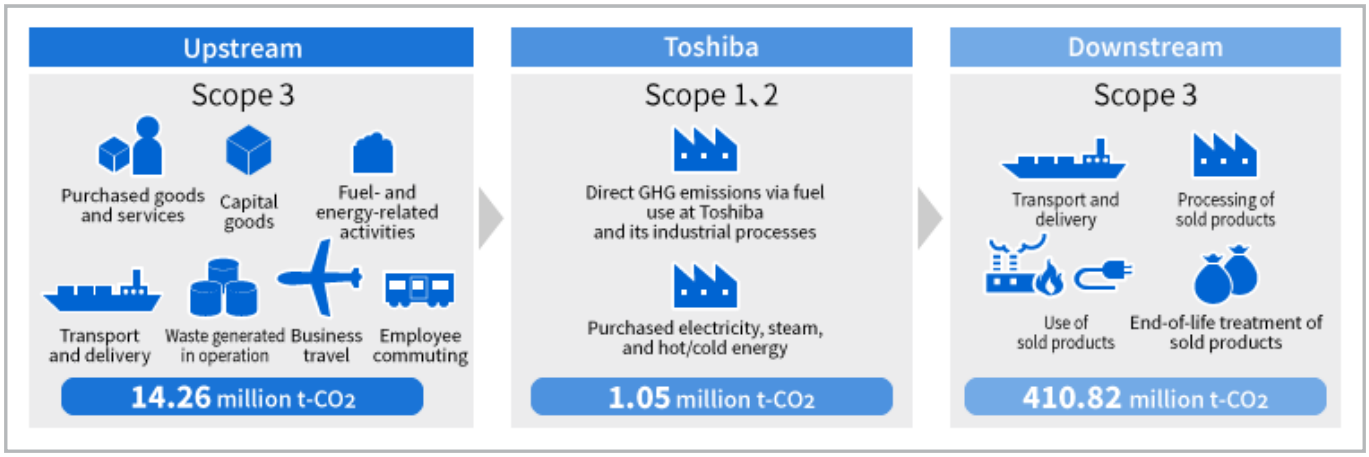
Greenhouse Gas Emissions Across the Value Chain

As climate change becomes an increasingly serious issue, companies must monitor and manage not only their own GHG emissions but also emissions generated across their entire value chain. Based on the GHG Protocol*, which provides international standards for calculating GHG emissions, and the Ministry of the Environment's Basic Guidelines for Calculating GHG Emissions throughout the Supply Chain, Toshiba Group monitors 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). Toshiba Group will continue working effectively throughout product lifecycles by quantitatively analyzing emissions accordingly.

GHG emissions through the use of sold products account for a high percentage of emissions across the value chain. We will therefore continue to promote the development of energy technologies to realize decarbonization and to improve the energy efficiency of products.

* The 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)

(FY2020)



Category		Categories covered by calculations		FY2019 calculation results (10,000 t-CO_2)	FY2020 calculation results (10,000 t-CO_2)
Upstream emissions	1	Purchased goods and services		1,571	1,380
	2	Capital goods		40	32
	3	Fuel- and energy-related activities not included in Scope 1 or 2		6	6
	4	Transportation and distribution (upstream)		3	2
	5	Waste generated in operations		1	1
	6	Business travel		2	0.4
	7	Employee commuting		4	4
	8	Leased assets (upstream)		0.3	0.3
Toshiba Group		Direct emissions (Scope 1)		32	28
		Indirect emissions associated with energy use (Scope 2)		82	77
Downstream emissions	9	Transportation and distribution (downstream)		22	20
	10	Processing of sold products		—	—
	11	Use of sold products	Products and services associated with power supply*1	53,763	34,311
			Products and services associated with power consumption*2	6,839	6,749
	12	End-of-life treatment of sold products		2	2
	13	Leased assets (downstream)		—	—
	14	Franchises		—	—
	15	Investments		—	—
Total				**62,367**	**42,614**

*1 For example, power plants

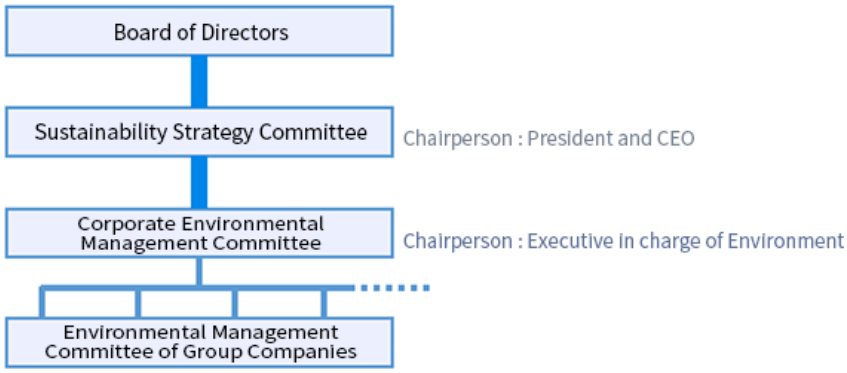
*2 Social infrastructure products, building-related products (air conditioners, lighting equipment, elevators and escalators), retail and printing equipment, power devices, etc.

Information Disclosure Based on the TCFD Recommendations

The impact of climate change is intensifying every year, society's interest in this issue is on the rise, triggering demands that companies step up their actions. The Task Force on Climate-related Financial Disclosures (TCFD), which was established by the Financial Stability Board, published its final report in 2017 that urged companies to disclose information on their climate-related risks and opportunities. We have endorsed the TCFD recommendations and are a member of the TCFD Consortium, which aims to promote actions by organizations in Japan in support of the TCFD recommendations. We will actively disclose information on climate change in the four areas (Governance, Strategy, Risk Management, and Metrics and Targets) specified by the TCFD.

Governance

We have a system in place that has the Board of Directors appropriately supervise our efforts to address climate change and other important sustainability-related issues. For important issues related to management risks and opportunities in particular, the executive in charge of sustainability and the executive in charge of environment bring them up to all directors, including outside directors, at the Board of Directors meetings to be reflected in the Group's management strategy.
Prior to reporting to the Board of Directors meetings, specific policies, strategies, and measures related to the environment, including climate change, are deliberated at the Corporate Environmental Management Committee, which is chaired by the executive in charge of environment. This semiannual meeting is attended by the environmental promotion managers of key Group companies, corporate staff division managers, and Corporate Environment Management Office personnel.
In FY2020, the Corporate Environmental Management Committee deliberated on the formulation of a new long-term vision Environmental Future Vision 2050 as well as the establishment of GHG reduction targets and the acquisition of approval of the SBT initiative to achieve the vision. These matters were then reported to the Board of Directors.
We established the Sustainability Strategy Committee above the Corporate Environmental Management Committee to further strengthen Toshiba Group's sustainability management structure from FY2021 onward. The Sustainability Strategy Committee is chaired by the President and CEO and convened semiannually. Corporate officers involved in sustainability, corporate staff division managers, and presidents of key Group companies discuss sustainability-related issues including climate change. Important matters related to management are regularly reported to the Board of Directors.



Environmental Management Structure
Sustainability Management

Strategy

We consider a variety of mega-trends at the development stage of Toshiba Group's Mid-term business plan, and consider the risks and opportunities presented by climate change, which are then reflected in our business strategy. For example, in response to the trend toward achieving carbon neutrality in Japan and abroad, we decided to suspend the receipt of new orders for coal-fired thermal power plant construction work in FY2020. Furthermore, we announced that we will accelerate our efforts toward achieving carbon neutrality throughout the entire value chain under the new Mid-term business plan which starts in FY2022.
We are attempting to predict the future, specifically 2030 and 2050, by analyzing climate change-focused scenarios such as the 2°C (and beyond 2°C) scenario by the International Energy Agency (IEA) and the 4°C scenario (RCP 8.5) by the Intergovernmental Panel on Climate Change (IPCC). The 2°C (and beyond 2°C) scenario predicts risks (e.g., stricter energy efficiency regulations and the introduction of a carbon tax) as well as opportunities (e.g., increased demand for energy-saving products and energy technologies to realize decarbonization). The 4°C scenario predicts higher physical risks due to disasters such as floods and typhoons. Based on these predictions, the Group companies analyze risks and opportunities in each of their respective business fields and share results at Corporate Environmental Management Committee meetings. Based on the TCFD recommendations, we will estimate the medium-to long-term risks and opportunities for market expansion/creation for each business and reflect them in our future business strategies.
The table below shows the currently assumed risks and opportunities for Toshiba Group.

■ Transition Risks

Area	Assumed risks	Toshiba Group's response
Policy and regulations	Increased costs due to the tightening of energy efficiency regulations and the introduction of a carbon tax; missing out on sales opportunities in the case of a failure to adapt to these changes	• **Set a medium- to long-term target to achieve carbon neutrality throughout the entire value chain and pursue the target** • **Reduce total GHG emissions in business activities** • **Increased reduction of GHG emissions by products and services** • **Enhance compliance with global environmental regulations** • **Monitor GHG emissions across the value chain**
Technology and markets	Delayed response to market demand for energy-saving products and services as well as energy technologies to realize decarbonization; missing out on sales opportunities due to delayed adaptation to country-/region-specific energy mixes	• **Set a medium- to long-term target to achieve carbon neutrality throughout the entire value chain and pursue the target** • **Increased reduction of GHG emissions by products and services** • **Improve the energy efficiency of products and services associated with power consumption** • **Develop energy technologies to realize decarbonization and provide a wide variety of energy technologies** • Suspend the receipt of new orders for coal-fired thermal power plant construction work
Reputation	Lower corporate evaluations and reputation due to delayed response to climate change; the impact of such delays on the stock price and sales	• Promote actions to achieve our FY2030 GHG emission target • Improve disclosure based on demands from external parties

■ Physical Risks

Assumed risks	Toshiba Group's response
Damage to production equipment due to disasters (e.g., floods and typhoons); suspended procurement of raw materials and parts; suspended operations of production sites due to disrupted logistics and sales capabilities	• Formulate and take BCP measures at each site, such as raising the floor where equipment is installed in areas at risk of large-scale water hazards • Secure multiple suppliers that are based in different locations • Check BCP measures during the assessment process prior to new site construction

■ Opportunities (Products and Services)

Assumed opportunities	Toshiba Group's response
Increased demand for products related to automobiles and industrial products as electrification continues in such fields	• Increase investments in battery business for automotive and industrial use. Build a new battery plant in Yokohama. • Increase investments in power semiconductors that enable the improvement of energy efficiency of electric vehicles and industrial equipment. Establish a new production line that mainly manufactures power semiconductors at Kaga Toshiba Electronics Corporation to increase production capacity.
Growth in the renewable energy business and increased demand for energy technologies to realize decarbonization	• Expand renewable energy-related business • Promote virtual power plant (VPP) business • Promote CO_2 separation and capture technology
Increased market demand for climate change adaptation solutions as the impact of climate change becomes more visible	• Promote the climate change adaptation solutions business, such as weather radars and rainwater drainage systems

Response to climate change is one of the priority actions in the Environmental Future Vision 2050, and addresses both the risks and opportunities for Toshiba Group's sustainable growth. We will aim to significantly reduce GHG emissions throughout the value chain and create more products and services that contribute to the reduction of GHG emissions in society.

We also understand the importance of taking into consideration the characteristics of the Group's businesses; that most of the GHG emissions occur during the use of our products and services throughout our value chain, while in some business areas, such as electronic devices and storage, GHG emissions during the manufacturing stage account for much of the total emissions. We will appropriately deal with both by enhancing product and service energy efficiency and expanding our energy business to realize decarbonization for the former; and promoting emissions reduction measures at production sites for the latter.

› **Environmental Future Vision 2050**

Risk Management

At the Business Risk Review Committee meeting, we assess risks of matters including climate change-related risks that have a significant impact on management. Matters that are especially important in terms of business risks are discussed at the Management Committee meeting. Countermeasures and preventive measures for matters related to environmental risks including climate change are also discussed at the Risk Compliance Committee, directly under the control of the President and CEO.
Climate change-related risks and opportunities that have been assessed and identified are shared by the executive in charge of environment, Group companies, and corporate staff divisions at Corporate Environmental Management Committee meetings, and are managed through the aforementioned organizational structure for promoting environmental management.

› Responses to environmental risks

Metrics and Targets

Under the Environmental Future Vision 2050, we aim to achieve carbon neutrality throughout Toshiba Group's entire value chain by FY2050. As a milestone, we aim to reduce GHG emissions by 70% by FY2030 compared to the FY2019 level.
We set out the following breakdown of GHG reduction target for FY2030 and are promoting related initiatives.

1. **Reduce** the total of **Scope 1**[*1] and **Scope 2**[*2] **(GHG emissions generated from Toshiba Group's own business activities)**
   by 70% by FY2030.
2. **Reduce use-phase GHG emissions of "products and services associated with power supply"**[*3] **sold** in **Scope 3**[*4]
   by 80% by FY2030.
3. **Reduce use-phase GHG emissions of "products and services associated with power consumption"**[*5] **sold** in **Scope 3**
   by 14% by FY2030.
4. **Reduce GHG emissions from products and services purchased from other companies in Scope 3.**

   Targets 1 to 3 above are compared to the FY2019 levels. The base year for target 4 is to be determined.

*1 Volume of direct emissions through fuel use at Toshiba Group
*2 Volume of indirect emissions through use of electricity and heat purchased by Toshiba Group
*3 Power generation plants, etc.
*4 Volume of indirect emissions generated by Toshiba's value chain (raw materials procurement, distribution, sales, disposal, etc.) outside Scopes 1 and 2
*5 Social infrastructure products, building-related products (air conditioners, lighting equipment, elevators and escalators), retail and printing equipment, power devices, etc.

› Environmental Future Vision 2050
› The Seventh Environmental Action Plan

Response to Climate Change in Business Activities

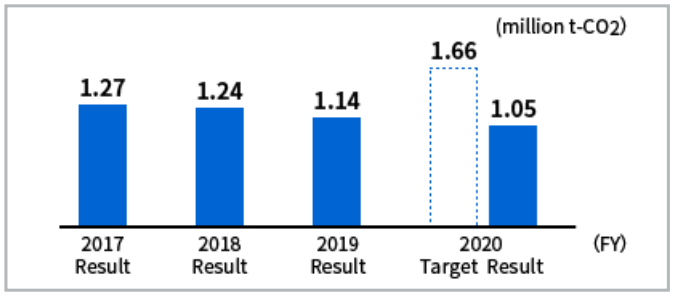
Toshiba Group has been proactively installing systems to capture and/or remove sulfur hexafluoride (SF_6), which is used to insulate heavy electric machinery, and perfluorocarbons (PFCs), which are used to produce semiconductors. By steadily taking measures to improve our production processes, the Group is working to reduce the total volume of GHG* emissions generated from our business activities. In particular, to reduce energy-derived CO_2 emissions resulting from the use of electricity, we are making efforts to proactively adopt energy-saving measures at our production sites, including those overseas, to improve production efficiency, as well as to introduce renewable energy.

In FY2020, total GHG emissions were 1.05 million t-CO_2, so we achieved our target of 1.66 million t-CO_2. Energy-derived CO_2 emissions per unit activity were 92% compared to the FY2013 level. Although total GHG emissions have remained almost flat compared to the previous year, per unit activity improved as a result of investment in high-efficiency equipment and other efforts.
Renewable energy accounted for 0.08% of total energy consumption.

Going forward, Toshiba Group will contribute to the realization of a decarbonized society by working to significantly reduce GHG emissions through the promotion of measures such as expansion of the use of renewable energy at our sites worldwide based on our long-term GHG emissions reduction target. As a new initiative under the Seventh Environmental Action Plan, Toshiba Group will also focus on the reduction of GHG emissions through the use of its digital technologies that enable remote operation, automation, and intelligence.

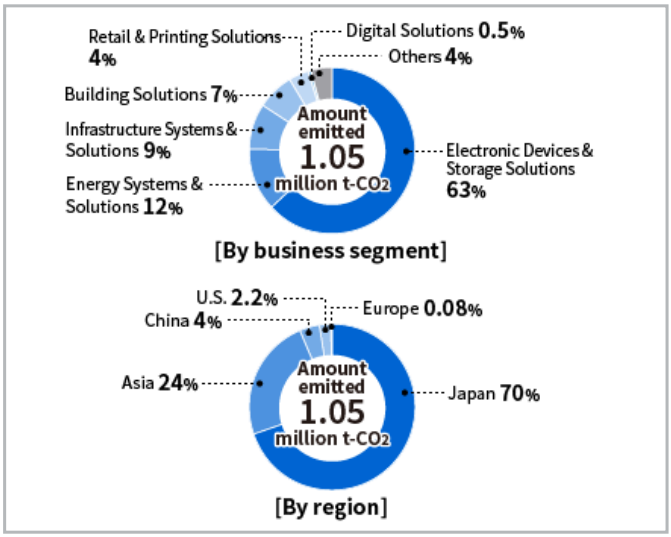
* Carbon dioxide (CO_2), methane (CH_4), dinitrogen oxide (N_2O) (= nitrous oxide), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3)

■ Total GHG emissions

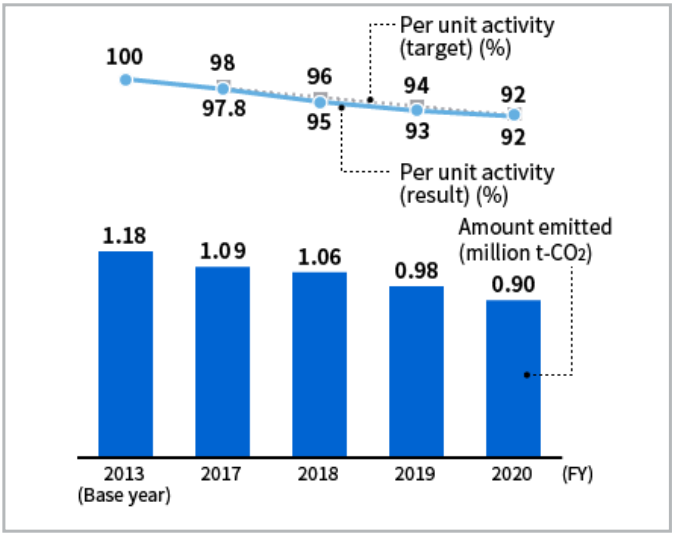


※ 電力CO_2排出係数には、各電力会社より提供された排出係数を用いています

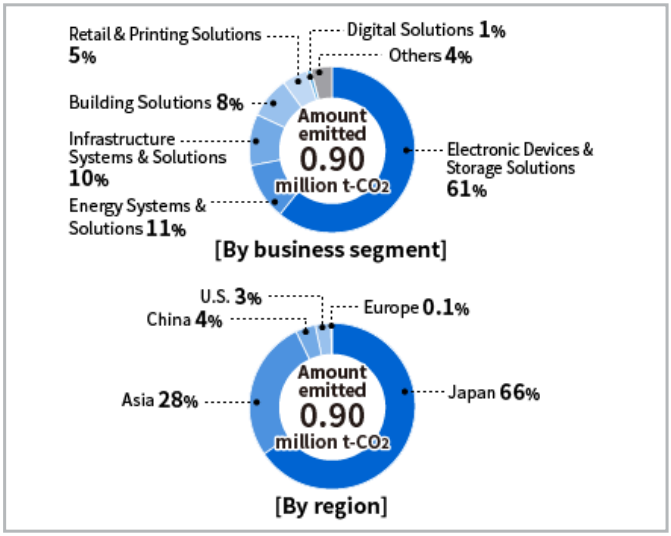
■ Breakdown of total GHG emissions (FY2020)



■ Energy-derived CO_2 emissions and those per unit activity



■ Breakdown of energy-derived CO_2 emissions (FY2019)



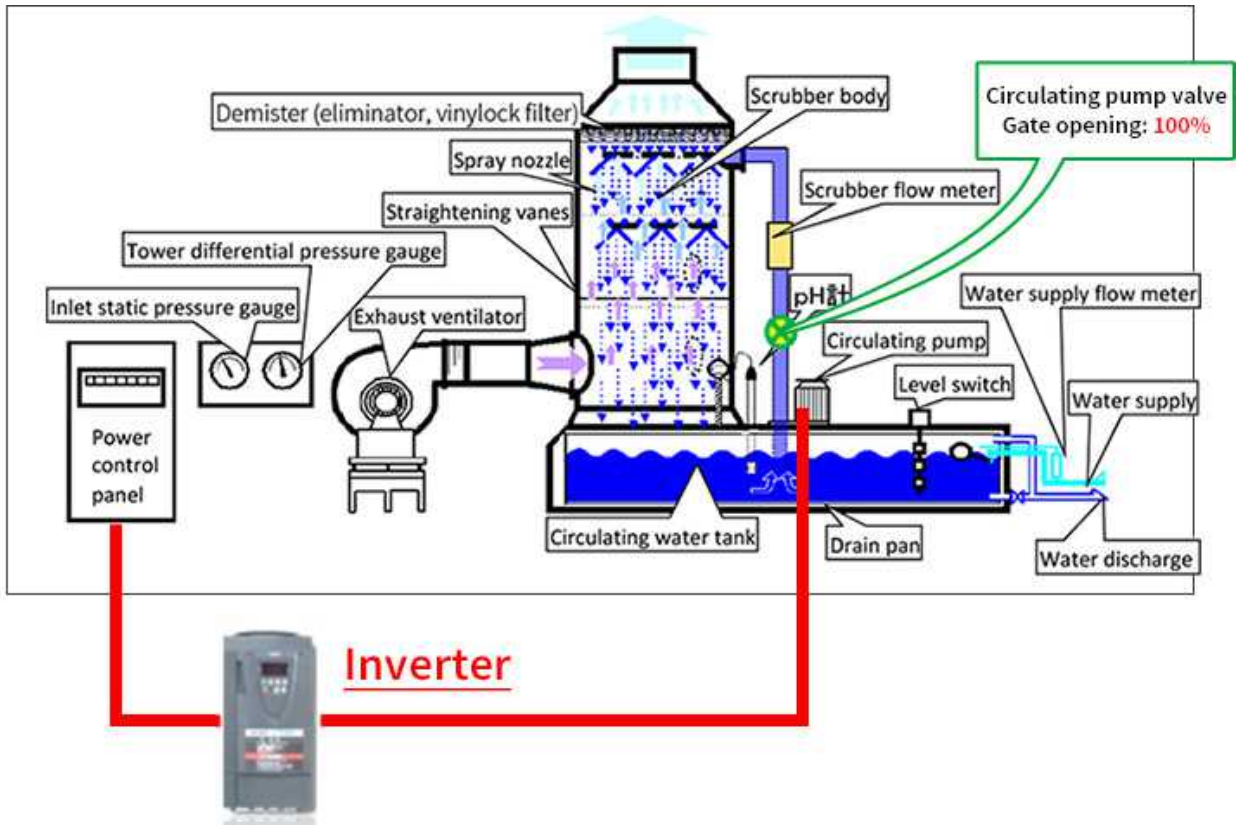
* CO_2 emission coefficients for electricity are calculated using emission coefficients provided by power companies.
*Per unit activity refers to values related to energy consumption required for manufacturing (nominal output, the number of products manufactured, number of persons, total floor area, etc.).

Case

Reduction of Power Consumption by Installing an Inverter in the Scrubber Circulating Pump

Kaga Toshiba Electronics Corporation

Kaga Toshiba Electronics Corporation installed an inverter in the circulating pump used in scrubber equipment. This reduces excessive circulating water and cuts energy used in the pump for that purpose.



Case

Use of Carbon Neutral LNG at Toshiba Group

Toshiba Corporation

Toshiba Group is a member of the Carbon Neutral LNG Buyers Alliance and started using Carbon Neutral LNG (CNL) in Fuchu Complex and Komukai Complex for the first time within Toshiba Group. CNL is a type of LNG that offsets greenhouse gases generated in the process from extraction to the burning of natural gas by carbon credits (carbon offsetting) obtained by projects that help conserve biodiversity and reduce poverty in emerging countries. Thus, it is deemed to be carbon neutral on a global scale even when burned. Toshiba Group will contribute to the realization of a sustainable society by responding to climate change and other social issues through increasing the use of CNL.

Increased reduction of GHG emissions by products and services

(1) Eco-products (Power Supply): Contributions by Products and Services Associated with Power Supply

We contribute to reducing CO_2 emissions by developing renewable energy technologies and improving the efficiency of power infrastructure facilities such as power plants.

In FY2020, as a result of developing and spreading the use of a wide range of energy technologies including high-efficiency thermal power generation systems, we reduced CO_2 emissions since FY2017 by 21.61 million t-CO_2 (cumulative total), achieving the reduction target of more than 16.30 million t-CO_2 (cumulative total) set in the Sixth Environmental Action Plan. We have rolled out the new Seventh Environmental Action Plan starting from FY2021. Under the plan, we will continue to reduce GHG emissions during power supply from thermal power generation and other types of power generation and to manage contribution to GHG reduction by products and services associated with power supply such as hydroelectric, geothermal, and photovoltaic power generation, as part of our efforts to contribute to reducing CO_2 emissions.

Going forward, in addition to focusing on the development and provision of wide-ranging renewable energy technologies, we will continue to develop and provide storage battery solutions and hydrogen power storage systems designed to realize a stable power supply toward the large-scale introduction of renewable energy.

(2) Eco-products (Power Consumption): Contributions by Products and Services Associated with Power Consumption

We will contribute to reducing CO_2 emissions by improving the energy-saving performance of products and services associated with power consumption, including social infrastructure products, services and office equipment.

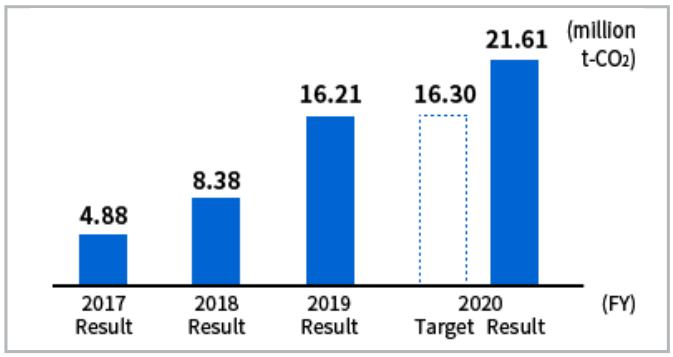
In FY2020, as a result of expanding the provision of products and services with enhanced energy-saving performance, we reduced CO_2 emissions since FY2017 by 6.95 million t-CO_2 (cumulative total), achieving the reduction target of more than 6.3 million t-CO_2 (cumulative total) set in the Sixth Environmental Action Plan. We have rolled out the new Seventh Environmental Action Plan starting from FY2021. Under the plan, we will continue to contribute to reducing CO_2 emissions from products and services associated with power consumption.

Going forward, we aim to spread the use of products and services that have large energy-saving effects, such as industrial air conditioners and LED lighting. Furthermore, we will expand our business for products that can achieve significant reductions in CO_2 emissions such as system products mainly in the social infrastructure domain, particularly in emerging countries that have rapidly increasing demand.

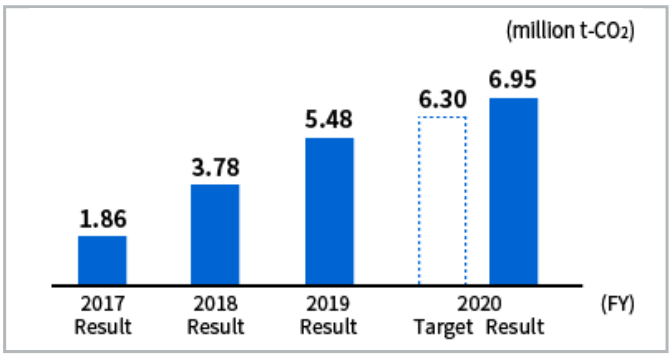
We newly added “Contribution to GHG reduction through digital technology” to the activity content of the Seventh Environmental Action Plan. We will also focus on activities to reduce GHG emissions in society by providing customers with services and solutions that utilize digital technology.

Through these efforts, Toshiba Group will promote reductions in emissions from products and services, to contribute to realizing a carbon-neutral society.

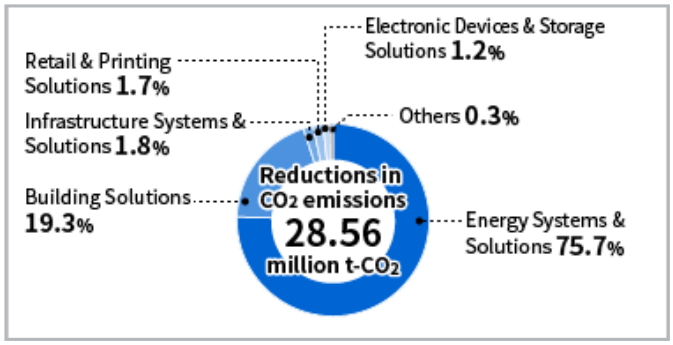
■ **Reductions in CO_2 Emission by Eco-products (Power Supply) (Cumulative Total)**



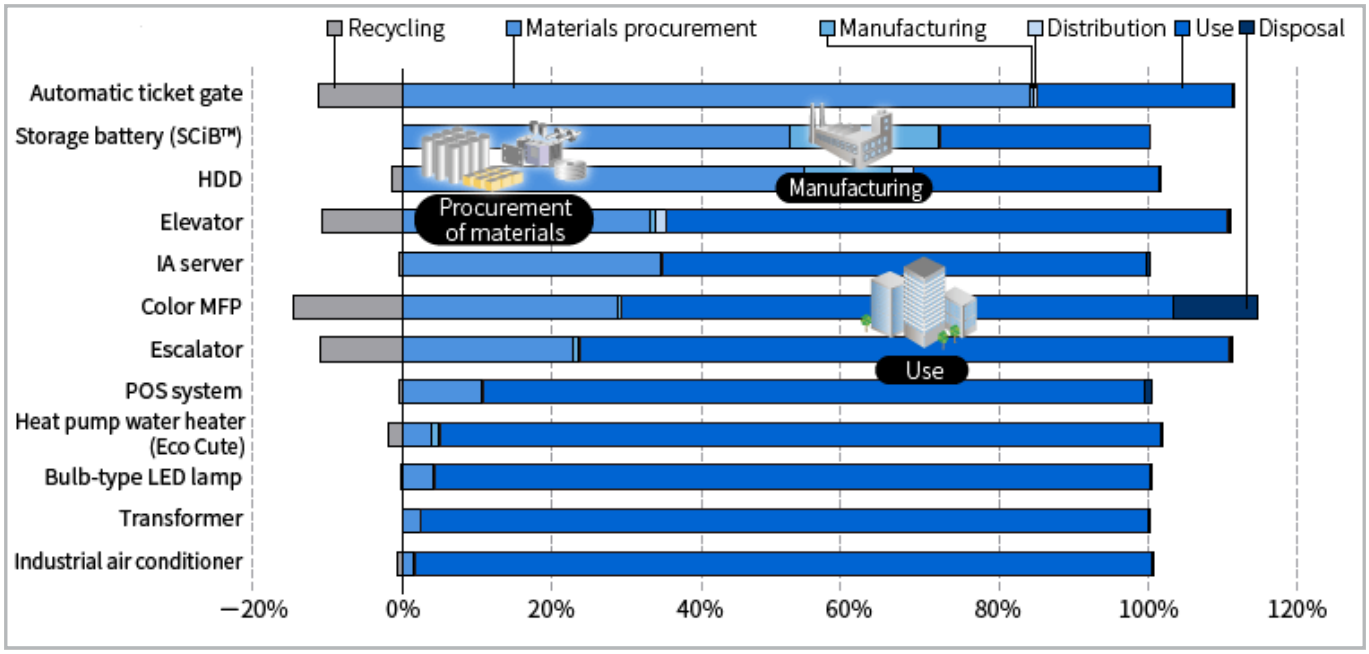
■ **Reductions in CO_2 Emission by Eco-products (Power Consumption) (Cumulative Total**



■ Breakdown of reductions in CO_2 emissions by business segment (FY2020 (cumulative total))

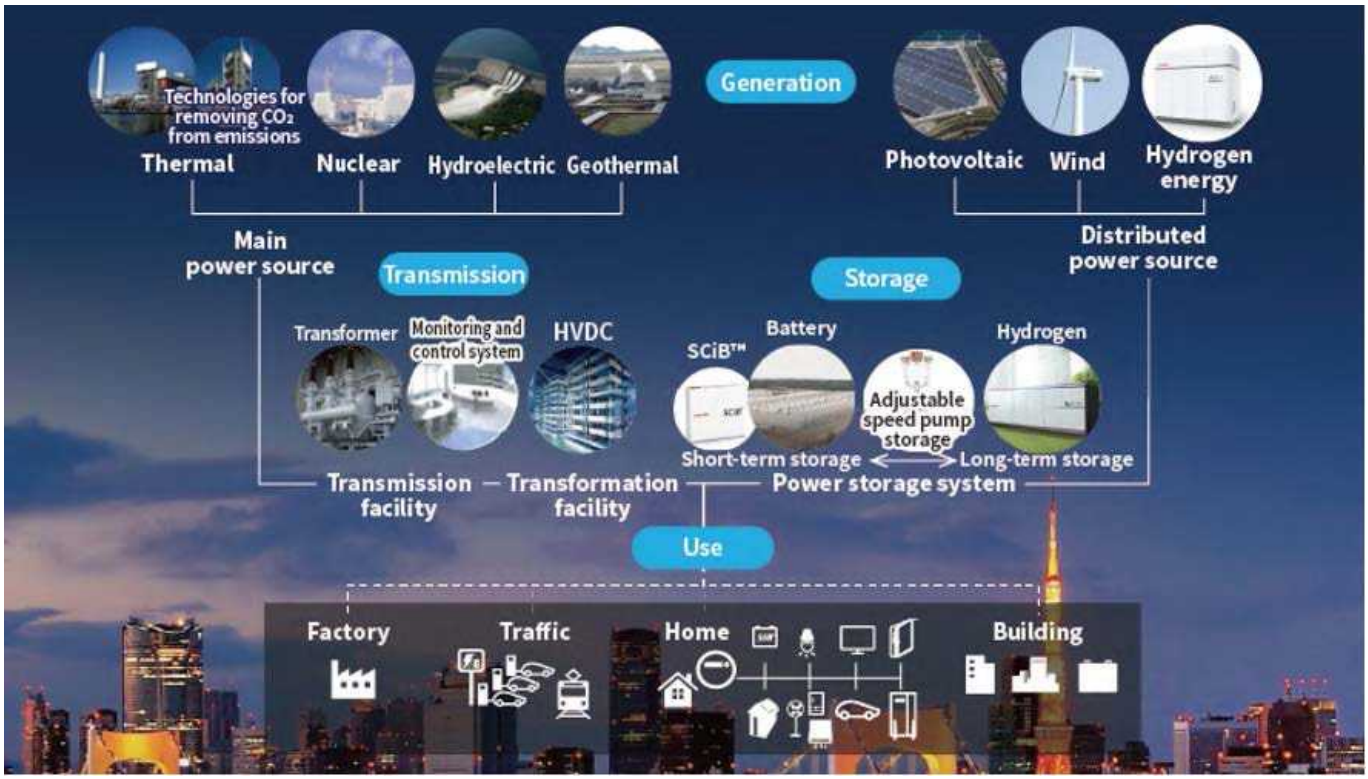


■ Percentages of CO_2 emissions from the lifecycle stages of Toshiba Group's products



Products and Services Associated with Power Supply

Contribution by Products and Services Associated with Power Supply



Generating Power – Power Generation Technologies –

Electric power supply is an important lifeline that supports our lives. Toshiba Group promotes various initiatives to ensure a stable power supply as well as to mitigate global warming.

Main Power Source

Currently, approximately 60%*1 of the world's power is produced by thermal power generation from fossil fuels. Toshiba Group aims to achieve its goal of ensuring both environment-friendliness and a stable power supply by using a variety of technologies, including high efficiency thermal power generation and technologies for separating and capturing CO_2 from emissions caused by thermal power generation.

We are also striving to restart nuclear power plants in Japan. To this end, we are implementing measures to enhance nuclear reactor cooling systems and control the release of radioactive materials with the aim of preventing serious accidents and mitigating the effects of radiation. In addition to developing a reactor core material that can reduce the volume of hydrogen in the event of a major accident as well as to promoting cyber security measures, we will continue ongoing efforts to further improve the safety of nuclear power plants.

Toshiba Group is also engaged in technology development, and responds to a wide range of customer requirements, including the development of a technology for hydroelectric power generation that improves water wheel efficiency by applying CFD*2, promotion of the introduction of renewable energy devices by using adjustable speed pumped storage power generation systems that contribute to grid stabilization, and the sales expansion of Geoportable™, a compact geothermal power generation equipment that can be introduced at a low initial cost.

*1 Source: World Energy Outlook 2020
*2 CFD: Computational Fluid Dynamics

Renewable Energy (Photovoltaic)

In the area of industrial photovoltaic power generation systems, Toshiba Group has delivered large-scale photovoltaic power plants with capacities of more than 10 MW to many locations in Japan. In addition, in 2018, we began selling a 360-W photovoltaic module with a conversion efficiency of 22.1% for residential photovoltaic power generation systems, thereby helping reduce CO_2 emissions.

Storing Power – Power Storage Technologies –

The quantity of power generated by some renewable energy technologies fluctuates depending on the weather, so generating power with renewable energy is an unstable method for generating power. Expanding the use of this method requires controlling sharp output fluctuations and achieving load leveling through peak shifts. To handle such requirements, Toshiba Group provides products such as adjustable speed pumped storage power generation systems and a stationary storage battery system that uses Toshiba's high-performance lithium-ion battery, SCiB™, as modules.

Furthermore, in 2015, we commercialized H2One™, a hydrogen-based autonomous energy supply system that can supply power whenever needed by manufacturing and storing hydrogen using surplus power from renewable energy.

Distributing Power – Power Transmission and Transformation Technologies –

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, and monitoring and control equipment systems that remotely control these devices. With regard to DC power transmission technology that can reduce transmission losses compared to AC power transmission, Toshiba Group leverages its own technologies to participate in international projects for DC power transmission technologies as well as to provide such projects with major devices, including suspended thyristor valves and converter transformers.

Comprehensive Energy Coordination – Power Demand Forecasting Technology, etc. –

As the use of renewable energy increases, technology to fill the gap between power supply and demand has become more and more important. We have been developing virtual power plant (VPP) technology to optimally control multiple batteries using IoT, a technology to accurately forecast power demand and power generation from renewable energy, and other technologies as comprehensive technologies to generate, transmit, and store energy.

Our high accuracy forecasting technology for power demand and solar power generation that combines our existing high accuracy weather forecasting technology based on a numerical weather model and weather big data technology using AI have received goods results*3 in a contest hosted by major power companies.

We are also developing P2G*4 technology that uses hydrogen as adjustments for renewable energy. Hydrogen is positioned as a key technology for carbon neutrality since it is a CO_2-free energy source that can be stored and transported. In March 2020, we started the operation of one of the world's largest P2G demonstration facilities at Namie Town in Fukushima Prefecture.

*3 Best award in the "First Electricity Load Forecasting Technology Contest" (2017), a contest hosted by TEPCO Power Grid, and Grand prize in the "PV in HOKKAIDO Contest on Technology for Predicting Solar Energy Production" (2019), a contest hosted by TEPCO and Hokkaido Electric Power.

*4 P2G: Power to Gas (converting surplus electricity to hydrogen and other gases)

Products and Services Associated with Power Consumption

Contribution by Products and Services Associated with Power Consumption

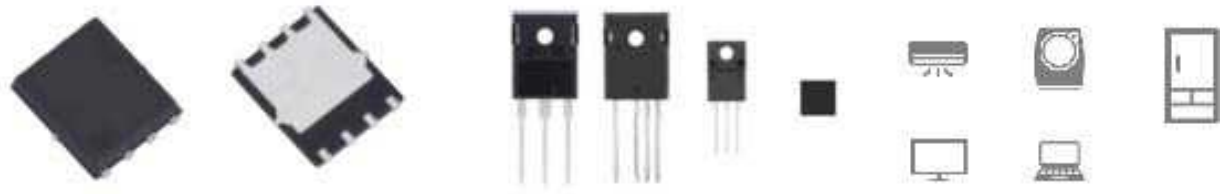
With regard to product groups such as air conditioners and LED lights for which CO_2 emissions during use account for the largest percentage of emissions generated throughout product lifecycles, improving energy-saving performance leads to significant reductions in CO_2 emissions. Toshiba Group helps reduce CO_2 emissions by developing and providing advanced energy-saving technologies.

Case

Key Devices that Contribute to Energy Savings – Power Semiconductors

Toshiba Electronic Devices & Storage Corporation

Power semiconductors are used everywhere involving the conversion of electricity, but some power is lost as heat during conversion. The causes are broadly divided into conduction loss and switching loss, which are in a trade-off relationship. Toshiba's high-performance power semiconductors have succeeded in lowering this dichotomy of loss in a well-balanced manner through a variety of innovations. In recent years, silicon carbide (SiC) and gallium nitride (GaN) have been put into practical use as high-performance semiconductors with low loss, which could not be achieved with silicon. However, as they are expensive, they are used only in applications with large benefits such as railways and wireless base stations. Silicon power semiconductors are likely to continue to be used in many products. U-MOS X series and DTMOS VI series are state-of-the-art silicon power semiconductors that enable high efficiency in many electric devices in households, and contributes to the energy savings of equipment using those devices.



Related pages: Contributes to reducing loss of switching power supplies: 80V N-Channel MOSFET with improved trade-off between on-resistance and charge characteristics
Contributes to higher efficiency of switched-mode power supply: Aggressive reduction of MOSFET switching loss

Case

Air-conditioning Systems SMMS-u Series for Buildings

Toshiba Carrier Corporation

Today, building owners are facing situations where they need to replace air-conditioning systems in their building not only because they are old or out of order but also they need to comply with energy regulations or guidelines that are getting more stringent overtime. This series was developed based on the concept of combining "compact and energy-saving" and "new solutions for reducing the Life Cycle Cost (LCC) of building-use air-conditioning systems." The world's largest capacity triplet rotary compressor and the world's first dual-state inverter that allows to switch between connection motor drives are key innovations adopted for this series to cover a wide operating range while attaining high efficiency. This series has accomplished the industry's highest annual performance factor (APF) for 18 and 20HP models while using one of the smallest chassis in the industry. As a result, it won the Minister of Economy, Trade and Industry Prize, the highest honor at the 2020 Energy Conservation Grand Prize for excellent energy conservation equipment. The series has also been certified as an Excellent ECP* for FY2020.

* Our products and services that have the highest level of environmental performance in the industry at the time of release

Related pages: Release of the Super Multi u (SMMS-u) Series High-efficiency Air-conditioning Systems for Buildings (Japanese)
Toshiba Carrier's New VRF Series SMMS-u Won the Highest Honor at 2020 Energy Conservation Grand Prize Award of Japan

ESG Performance: Environment

Response to the Circular Economy

Medium- to Long-term Vision

- Promote efficient use of resources in both business activities and products and services.
- Actively collaborate with relevant parties, such as industry organizations, government agencies, and other companies, in order to adapt our business models to the circular economy.

FY2020 Achievements

- Waste volume in business activities: **26,000 t**
- Amount of resources saved in products*: **400,000 t**
- Amount of the use of recycled plastics in products *: **3,514 t**

Future Challenges and Approaches

Under the Environmental Future Vision 2050 and the Seventh Environmental Action Plan, Toshiba Group aims to contribute to the realization of a sustainable society by reducing waste volume in business activities, increasing amount of resources saved in our products and services, and recycling resources from a long-term perspective, while promoting businesses conducive to the circular economy.

> Environmental Future Vision 2050
> The Seventh Environmental Action Plan

* Cumulative total from FY2017.

Under the concept of the Circular Economy, Europe, and various other countries are currently promoting a rapid policy shift to an economic system that circulates resources without creating waste. The new system treats products and raw materials that have been discarded without being used in the linear economic system of mass production, mass consumption, and mass disposal as new resources. We, as a company, are required to use limited resources with care in our production activities and cyclically use resources to curb resource consumption and environmental impact.

Toshiba Group is promoting the efficient use of resources in both business activities and products and services by minimizing resource inputs in production processes in Japan and abroad, eliminating unnecessary tasks in manufacturing processes, thus simultaneously reducing environmental impacts and costs, as well as by promoting the 3R (Reduce, Reuse and Recycle) initiatives in products. In the future, we will actively collaborate with relevant parties, such as industry organizations, government agencies, and other companies, and consider waste as a new resource to circulate resources without creating waste, as a means to promote circular economy businesses that pursue a business model that increases both resource efficiency and corporate value.

Reduction of Waste Volume in Business Activities

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 that does not exceed the Earth's environmental capacity.

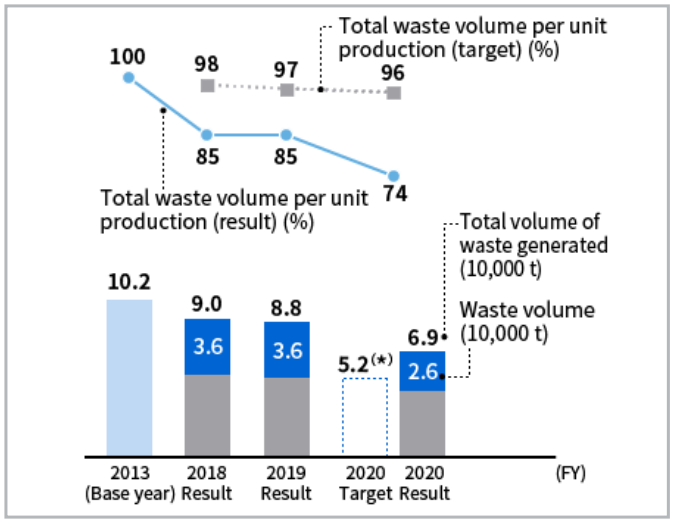
In FY2020, the volume of waste (excluding that of objects with value) totaled 26,000 tons. The total volume of waste generated per unit production was 74% compared to that of FY2013, achieving the target.

Waste is a matter of concern to all employees. We have decided to promote measures at all workplaces having all employees participate, focusing first of all on not generating waste and aiming to improve the recycling rate. At each stage of design, development, production, and distribution, we give thorough consideration to reducing, recycling, and facilitating waste disposal. We monitor the composition of waste and promote the reduction or elimination of hazardous substance content, as well as thorough sorting and storage.

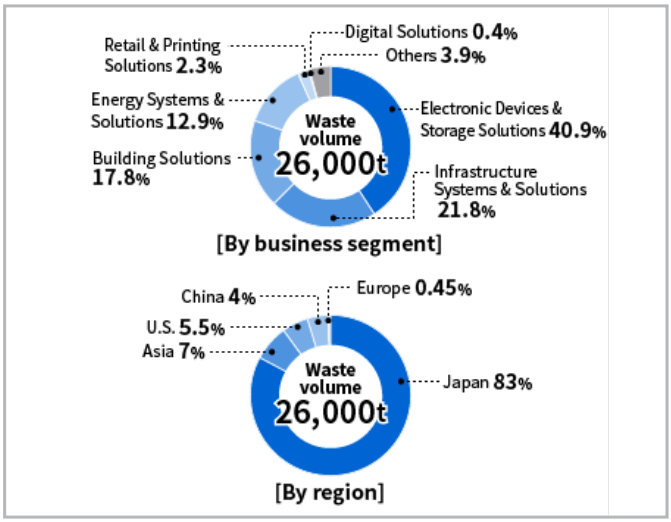
The total volume of hazardous waste* is 2,800 tons, and its recycling rate is 78%.

* The total volume of hazardous waste indicates the quantity of specially controlled industrial waste specified by the Waste Management and Public Cleansing Act of Japan (the "Waste Management Act").
* The volume recycled refers to the quantity reused or recycled of the specially controlled industrial waste specified by the Waste Management Act.

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



■ Breakdown of the waste volume (FY2020)

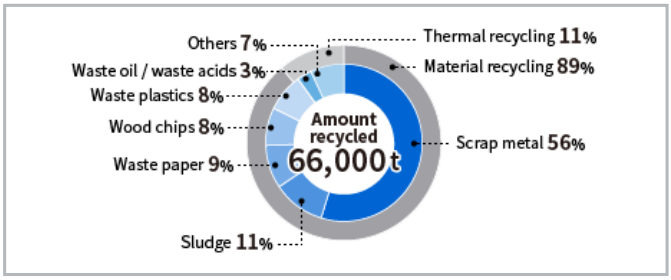


* The target values are for the waste volume only.

Promoting Recycling

In FY2020, Toshiba Group recycled 66,000 tons of resources, and 96% of the total volume of waste generated was reused effectively as various resources. The recycled resources consisted mainly of scrap metal, waste paper, and wood chips, and 89% of them were used effectively for material recycling (recycled into materials for products), and the remaining 11% 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 to raise the quality of recycling chiefly by increasing the percentage of resources recycled into materials.

■ Breakdown of the volume recycled (FY2020)

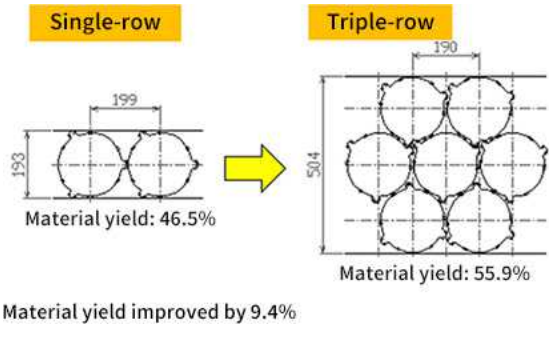


Case

Resource Saving through Improved Material Yield in the Manufacturing Process

Toshiba Industrial Products and Systems Corporation

Toshiba Industrial Products and Systems Corporation manufactures iron cores for generators used in hybrid electric vehicles. Its iron core stamping process had generated raw material losses. The company was faced by the challenge of reducing losses and costs through more efficient production methods and saving resources to reduce environmental impact.
Accordingly, the company used its original technologies – a large high-precision mold technology and a technology – to stabilize the conveyance of thin and wide rolled materials and improved the stamping method from single-row punching to triple-row punching. This improved the material yield by 9.4% and achieved resource saving.
Triple-row punching, which punches three rows of iron laminations with a single press punch, realized a 2.9-fold improvement in production efficiency and reduced the energy used during manufacturing, thus achieving high-efficiency manufacturing.



3R Initiatives for Products (Reduce, Reuse, Recycle)

In order to achieve a sound resource circulating society, there is a need to reduce the volume of resources extracted and discharged as waste throughout product lifecycles. Toshiba Group is promoting 3R* initiatives for products from the three perspectives of reducing waste, increasing incoming recycling, and upgrading outgoing recycling. We are also taking measures to incorporate 3Rs in product design as well as designing recycling systems and are implementing activities to reduce environmental impacts of our products throughout their lifecycles.

* Reduce, reuse, and recycle

Waste Reduction

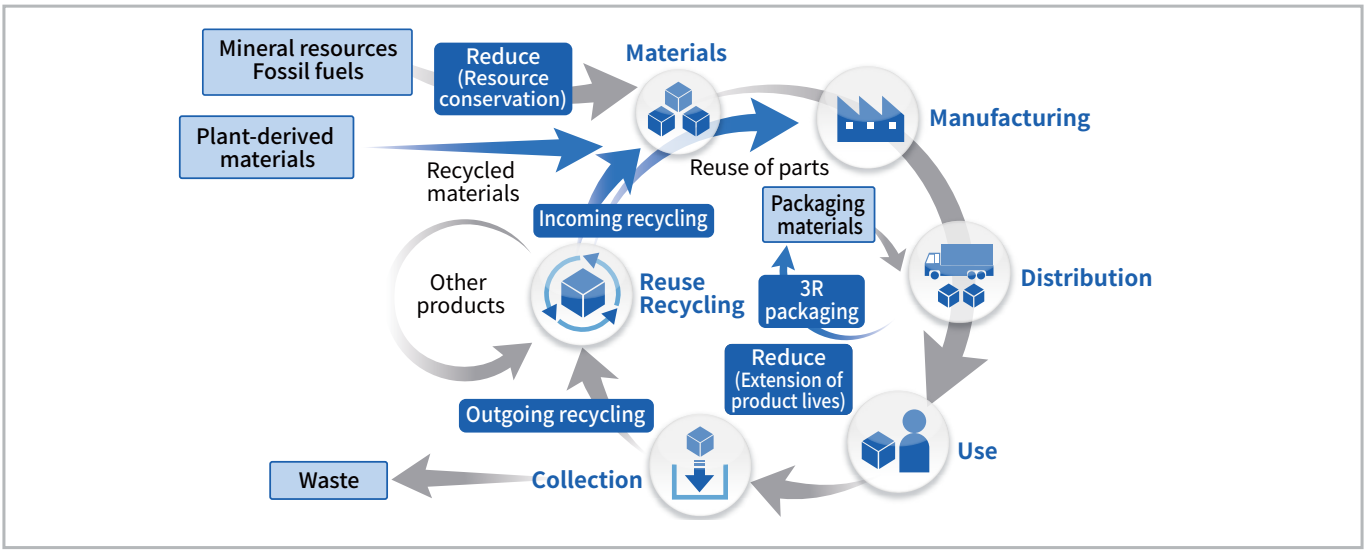
We achieve waste reduction through various means, including reducing the volume of resources used to manufacture products (reducing weight and size) and extending product lives (including upgrades and maintenance).

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 that enable reusing and recycling materials, we enhance outgoing recycling while further improving the design of the system for recycling end-of-life products.



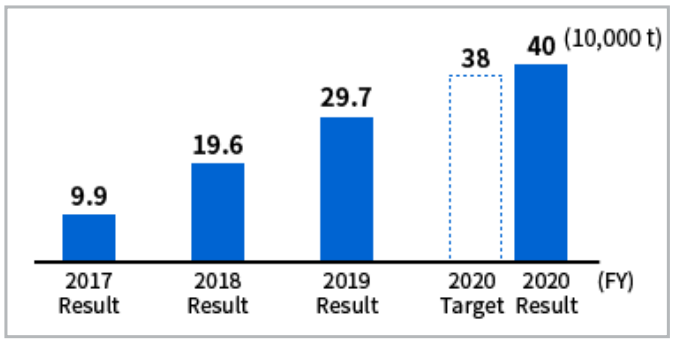
3R Initiatives for Packaging Materials

We will streamline the use of packaging as well as product materials to reduce environmental impacts throughout their entire lifecycles. We will work to reduce the use of packaging materials through various measures taking into account the characteristics of each business area and product group such as reducing the space taken up by packaging, expanding the use of returnable (reusable) cases, and using materials with low environmental load.

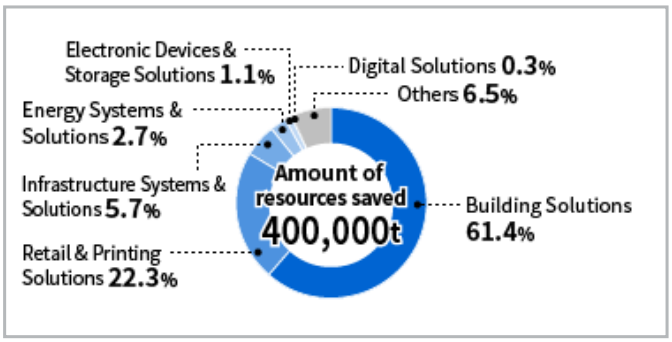
Increased Amount of Resources Saved in Products

In FY2020, the total volume of resources used in Toshiba Group's major products, estimated by multiplying the weight of products and packaging materials by the number of truck shipments, was approximately 300,000 tons. Based on comparisons with previous product models adjusted for the expected number of years of use, we also estimated the volume of resources saved for different products. Our comparisons show that we have reduced the use of resources by 110,000 tons compared to previous product models and by 400,000 tons in total from FY2017 and achieved the target volume of resources saved of 380,000 tons (cumulative total) set in the Sixth Environmental Action Plan. Under the new Seventh Environmental Action Plan which started in FY2021, we will continue to promote design that will reduce resource consumption in all kinds of products toward increasing the volume of resources saved.

■ **Amount of resources saved (cumulative total)**



■ **Amount of resources saved by business segment (FY2020 (cumulative total))**



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

Case

LED Studio Light "UNI-SOL"

Toshiba Lighting & Technology Corporation

In recent years, LED lighting equipment has become widely used to save energy. However, many special-purpose lighting still use conventional light source products, and studio light with 575 W metal-halide lamp are generally used for shooting of movies and TV programs. Studio lights, due to their purpose, need to be small size and lightweight. However, switching to LED light source with keeping same product size and brightness was challenging due to large housing. Focusing on the fact that studio lights are only used for a short time, the company commercialized the LED studio light "UNI-SOL" for shooting by optimization design of LED lifetime and brightness. With the same brightness, half the luminaire weight, four-fold light source lifetime (compared to metal-halide lamps), and no mercury, UNI-SOL is a great improvement over conventional products in both practicality and environment performance.
LED lighting equipment usually needs to be fully replaced when the light source reaches the end of life. On the other hand, UNI-SOL is designed as only LED light source replacement, is an environmentally-friendly lighting equipment with reducing waste by 90%.
This product was certified as an Excellent ECP* in FY2020.

* Our products and services that have the highest level of environmental performance in the industry at the time of release

Related page: LED Studio Light UNI-SOL (Japanese)

UNI-SOL luminaire

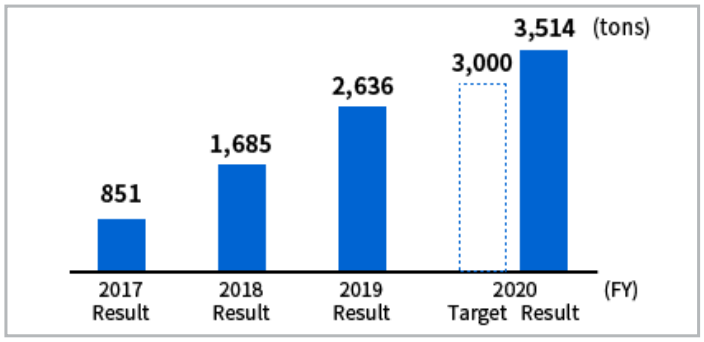
Power supply unit

Increased Amount of the Use of Recycled Plastics in Products

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

Use of recycled plastics by Toshiba Group is increasing mainly in multi-function printers, hard disk drives, batteries, industrial air conditioners, and ceiling lighting equipment. From FY2017 to FY2020, the cumulative total volume of recycled plastics used was 3,514 tons, achieving and exceeding the target of 3,000 tons (cumulative total) set in the Sixth Environmental Action Plan. From FY2021 onward, we will continue our efforts under the Seventh Environmental Action Plan. Going forward, in order to increase the use of recycled plastics, we will ensure a supply of waste plastics as well as develop new uses for recycled plastics.

■ Amount of Recycled Plastics Used (Cumulative Total)



Recycling of End-of-Life Products

In order to ensure efficient use of resources and appropriate treatment of hazardous substances, in accordance with recycling regulations in each country and region of the world, Toshiba Group is promoting the collection and recycling of products that customers have stopped using. In Japan, in addition to products subject to the Act on Recycling of Specified Kinds of Home Appliances and the Act on the Promotion of Effective Utilization of Resources, we have established a unique scheme to collect elevators, MFP/POS systems, and other office equipment. Toshiba Group also observes the WEEE Directive* in Europe and state laws in the United States. Furthermore, we are 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 other countries in Asia and Central/South America.

* WEEE Directive: The European Union (EU) Waste Electrical and Electronic Equipment Directive

ESG Performance: Environment

Consideration of Ecosystems

Medium- to Long-term Vision

- Compliance with policies and regulations on chemical substance management in countries around the world
- Proper management of water resources
- Promotion of activities for biodiversity conservation on and off the premises of Toshiba sites

FY2020 Achievements

- **The amount of chemicals discharged per unit**

  84% (compared to FY2013 level)

- **Reduction of specified chemical substances contained in products:**

  Completed the substitution of substances used in regulated products for the European market and continued control.

- **The amount of water received per unit**

  93% (compared to FY2013 level)

- **Activities for biodiversity conservation:**

  Carried out activities to achieve the Aichi Targets at 61 sites worldwide.

Future Challenges and Approaches

Under the Environmental Future Vision 2050 and the Seventh Environmental Action Plan, we will contribute to the creation of a society where humans live in harmony with nature and continue to enjoy the blessings of ecosystems by promoting compliance with policies and regulations on chemical substance management in countries around the world, proper management of water resources, and activities to conserve biodiversity on and off the premises of Toshiba sites.

> Environmental Future Vision 2050
> The Seventh Environmental Action Plan

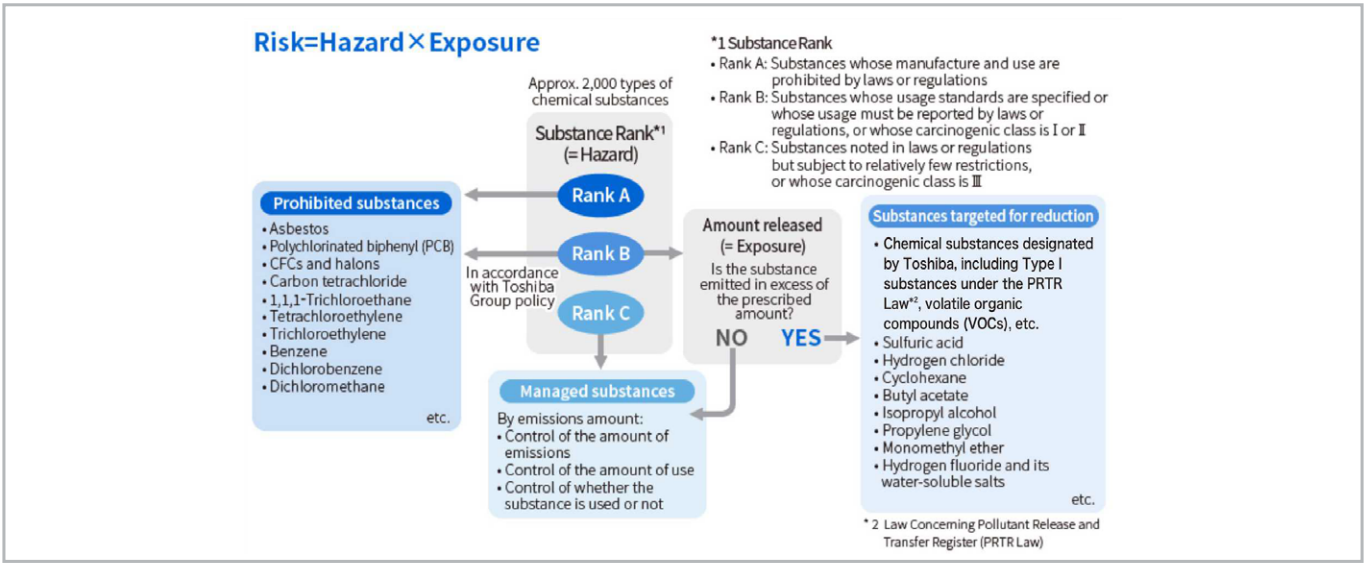
What we should not forget when we conduct our business activities is coexistence with nature. Our lives and well-being are supported by the blessings of nature. To continue to enjoy such blessings, we must recognize that humans are part of the ecosystem and work together to preserve them. At the same time, we must use natural resources in a sustainable manner so as not to exhaust or contaminate them.

Toshiba Group has its operational sites at a variety of locations around the world. Some of the sites are located in areas with high water risks, and others use large volumes of water and chemical substances for production. In addition, we use various chemical substances in many of the products and services we supply. Toshiba Group will contribute to the creation of a society where humans live in harmony with nature and continue to enjoy the blessings of ecosystems by promoting initiatives to conserve biodiversity on and off the premises of its sites, while properly managing water resources and chemical substances.

Management of Chemical Substances Based on Rank

Toshiba Group classifies the handling of chemical substances into the three categories of prohibition, reduction, and control, and manages each of them according to internal regulations. The relationship between the ranking of substances and management classifications, which underlies this initiative, is indicated in the chart 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 properties, and other factors. Chemicals are classified into prohibition, reduction, or control by determining their respective risk upon combining the rank of the substance that shows the hazard level and their emission which mean the impact of exposure to the substance.

■ **Substance ranking and management classifications**



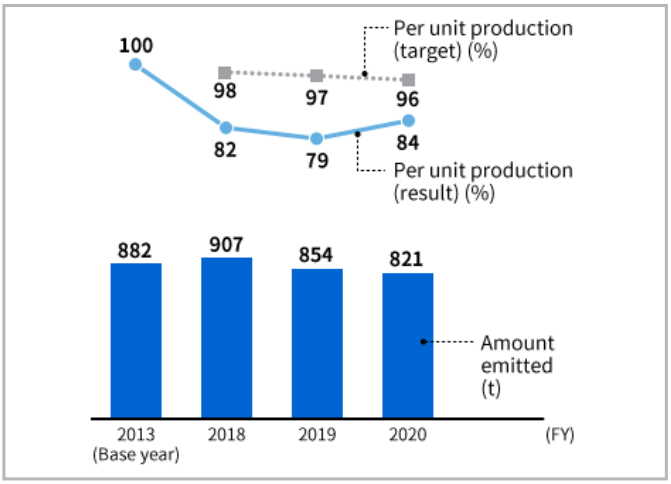
Reduction of Emissions of Chemical Substances in Business Activities

Toshiba Group strives to reduce the emission of chemical substances by designating substances that have large direct impacts on the environment as those targeted for reduction.

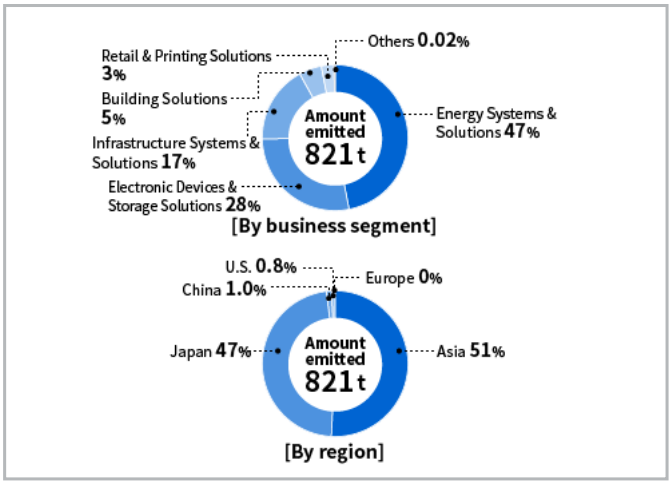
In FY2020, Toshiba Group took measures to address solvents used in cleaning and resin processing, which are the major emissions in terms of volume. We promoted initiatives such as using alternative substances and improving productivity and manufacturing processes in order to reduce the use of raw materials as well as reducing the evaporation of volatile organic compounds (VOCs) by enhancing chemical management. As a result, the quantity of chemical substance emissions per unit production was 84% of the FY2013 level and we therefore achieved our target.

Toshiba Group plans to use alternative substances and increase the efficiency of using materials by improving processes as an incoming countermeasure and to expand the usage of equipment to remove and capture emitted substances as an outgoing countermeasure.

■ **Emissions of substances targeted for reduction and those per unit production**



■ **Breakdown of emissions of substances targeted for reduction (FY2020)**



Case

Reducing the Emissions of Chemical Substances by Introducing Powder Coating

Toshiba Carrier Corporation

Toshiba Carrier Group has been manufacturing products with less environmental impacts by promoting reduction, substitution, and proper management of chemical substances. The group has multiple coating processes involving the use of paints and solvents that contain VOCs. VOCs such as suspended particulate matters and photochemical oxidants are chemical substances that are considered to be one of the causes of air pollution, and can be harmful to human health. A few years ago, Toshiba Carrier's Fuji Factory & Engineering Center began increasing the use of powder coating that use VOC-free paints, largely contributing to reduction of VOCs. Furthermore, powder paint that falls inside the equipment can be collected and reused as is. This has also reduced the waste of paints. In FY2020, the amount of VOCs used in the Fuji Factory & Engineering Center is expected to be reduced by 62% compared to the previous year, thanks to the introduction of powder coating for painting air conditioner casings. This is an example of how the group has been steadily reducing the emissions of chemical substances.

Management of Chemical Substances Contained in Products

Initiatives for Management of Chemical Substances Contained in Toshiba Group Products

Toshiba Group provides a wide range of products, from electronic devices to building- and facility-related equipment, industrial systems, and energy and social infrastructure products. Various chemicals are used to manufacture these products. Toshiba Group considers "minimizing the risks involved in the use of chemicals," the precautionary principles proposed and adopted at the WSSD[*1] and other conferences, as an important challenge to address if it were to properly manage these chemicals. We have been promoting initiatives to specify the chemicals to be managed, to eliminate the use of specified chemicals (including the use of substitute substances), and to reduce the amount of chemicals contained in our products. In addition, we share information on such specified chemicals in each process of our production activities in order to minimize the risks of these chemicals to human health and the global environment.

Also, to respond to the globalization of business, Toshiba Group takes global measures to manage chemicals contained in products. We gather and assess the latest trends in policies and regulations on chemical management of countries around the world and reflect them in Toshiba Group's management of chemicals.

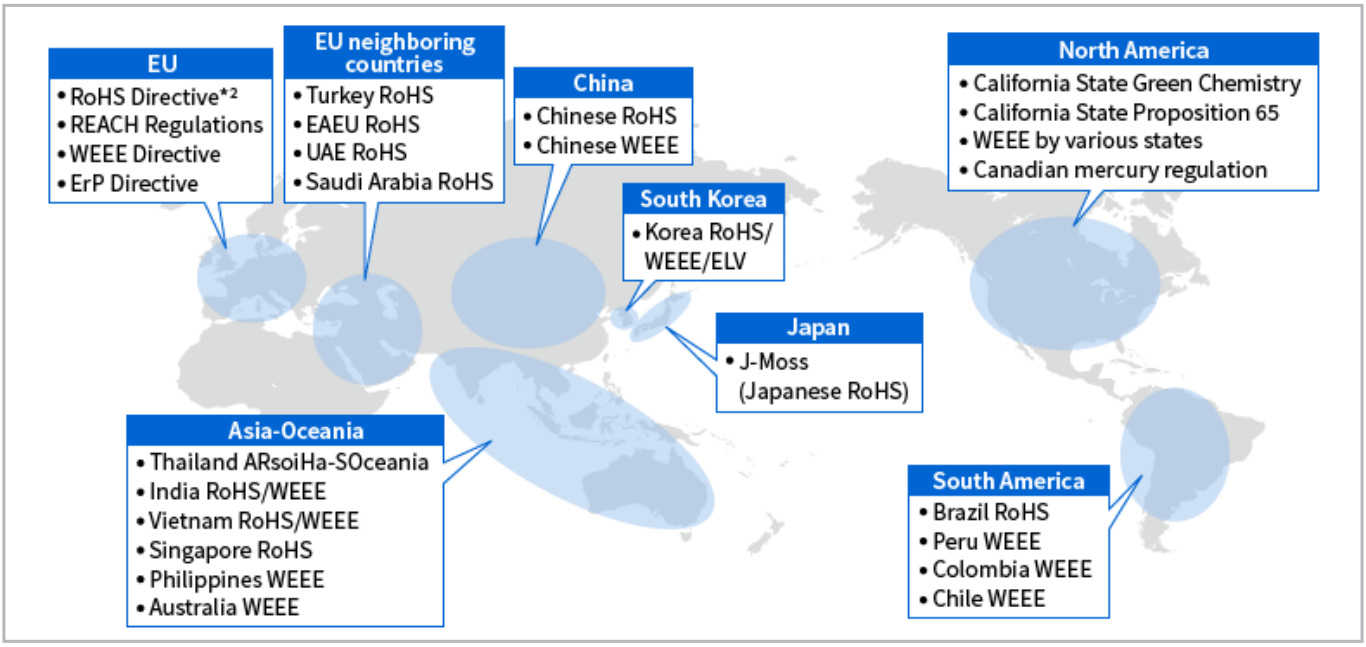
Furthermore, Toshiba Group promotes the Green Procurement initiative, which specifies *prohibited substances*, which are prohibited from use in procured items such as product materials and parts, and *managed substances*, which are monitored for use in procured items, to be reduced and substituted to mitigate their environmental impact. Our aim is to procure products, parts, and materials with less environmental impact in cooperation with our business partners and suppliers.
Rank A (prohibited) substances are those prohibited or restricted from use in products (including packaging) by laws and regulations in Japan and abroad, and include substances on the Declarable Substance List of IEC 62474: Material Declaration for Products of and for the Electrotechnical Industry prepared by the International Electrotechnical Commission (IEC). For substances in the IEC 62474 Declarable Substance List that are stated on the Candidate List of Substances of Very High Concern (SVHC) of EU's REACH Regulation, we manage them as Rank B (managed) substances.

■ **Toshiba Group Environment-related Substance List**

Category	Definition
Rank A (Prohibited Substances)	Substances whose presence is prohibited in procurement items (including packaging) in 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 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 RoHS:The Restriction of the use of certain Hazardous Substances in electrical and electronic equipment

Promoting Substitution of the Four Phthalates*1

Toshiba Group promotes substitution of the four phthalates as part of our priority measures for managing chemicals contained in products.

Phthalates are used as a plasticizer for PVC and other plastics. They are widely used in electrical and electronic equipment as plasticizers for cords and internal wire cable coatings as well as for various types of packing. However, concerns have been raised over the reproductive toxicity of phthalates. Also, use of the four phthalates has been regulated for electrical and electronic equipment sold in the EU market since July 22, 2019 under the EU RoHS Directive. Due to their regulation in the EU, use of the four phthalates is becoming subject to regulation in various countries.

Toshiba Group defined the four phthalates as prohibited substances in the Toshiba Group Green Procurement Guidelines and is promoting substitution of materials containing phthalates with alternatives*2.

Also, we develop technology to promote substitution while maintaining product quality by evaluating alternative substances' reliability and developing methods to easily assess whether high polymer materials contain phthalates.

Our products for Europe have been updated to comply with the regulation that came into force on July 22, 2019 that restricts phthalates. We will continue to conduct thorough ongoing management of products subject to the EU RoHS Directive, and we will further substitute or take other actions for our energy and social infrastructure products as well.

*1 Bis (2-ethylhexyl) phthalate, butyl benzyl phthalate, di-n-butyl phthalate, and di-isobutyl phthalate. These substances are used mainly as plasticizers for plastics (e.g., cable coatings), and there are some concerns about their effects on the human body.
*2 We aim to complete identification of alternative materials for some products (product groups) for which RoHS regulation starts in 2021 as well as for products not regulated by the RoHS Directive.

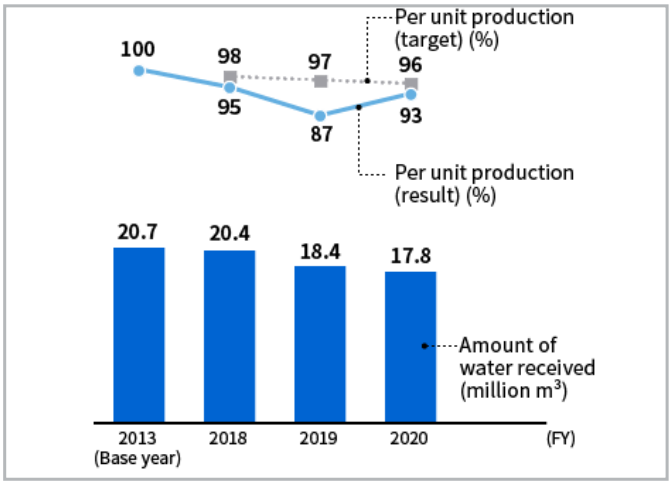
Reduction of the Amount of Water Received in Business Activities

In response to rising concerns over water problems worldwide, Toshiba Group is promoting sustainable water resource management. Each of our production sites has incorporated the policy of reducing the volume 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 the wastewater generated in sites and introducing systems for using rainwater.

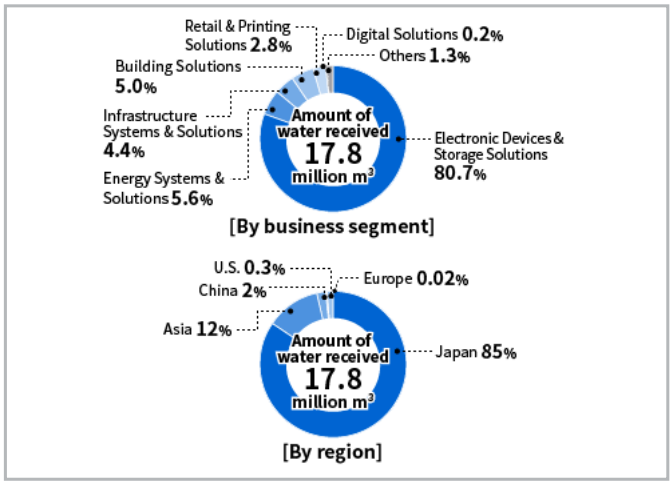
The total volume of water received in FY2020 was 17.8 million m^3 and the volume of water received per unit production was 93% of the total for FY2013, so we achieved our targets.

Since Toshiba Group has multiple production sites in Southeast Asia, where water risks are relatively high, we will focus our risk management efforts on appropriately dealing with the issues of each region by promoting recycling of wastewater and using rainwater as measures for water-shortage problems as well as by raising the floor of main equipment and making other efforts as flood control measures.

■ **Amount of water received per unit production**



■ **Breakdown of the amount of water received (FY2020)**



Case

Reducing the Volume of Water Used through the Effective Use of Rainwater

Toshiba JSW Power Systems Pvt., Ltd.

Toshiba JSW Power Systems Pvt. Ltd. (Toshiba JSW) has been reducing the volume of water used by utilizing rainwater and reusing treated water.
The company stores rainwater in a pond and uses the water for various uses, such as sprinkling water for plants in the premises, cooling water for manufacturing processes, and water for flushing toilets.
The rainwater storage pond is cleaned regularly so that the quality of water is maintained. The rainwater falling on the factory building roofs is not wasted either; the rainwater is once stored in the rainwater tank equipped with a monitor to grasp the water level. The monitor allows us to transfer the rainwater to the pond before it overflows from the tank. Through the use of rainwater, Toshiba JSW reduced 15,000 m^3 water used annually.

Cleaning the pond

Pond to store rainwater

Rainwater tank

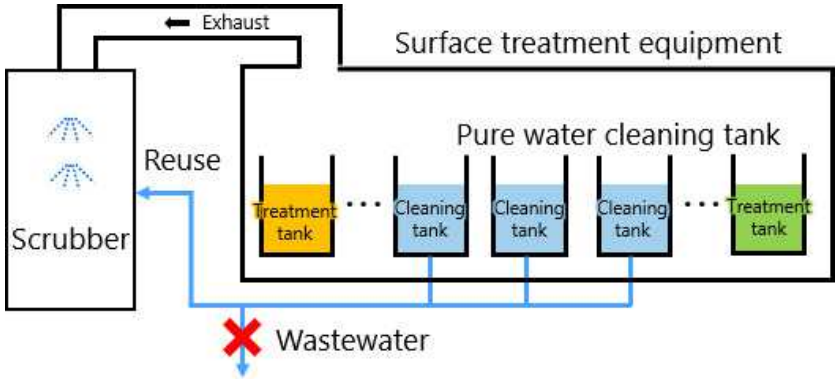
Annual reduction in water used: approx. 15,000 m^3

Case

Reducing the Volume of Water Used through the Reuse of Cleaning Water

Toshiba Hokuto Electronics Corporation

Toshiba Hokuto Electronics has succeeded in reducing the volume of water used by reusing wastewater. Specifically, wastewater from the pure water cleaning tank for substrates is reused for sprinkling water on the odor control scrubber. (This technology was co-developed with Toshiba Materials Co., Ltd.)



Conservation of Biodiversity

The Importance of Taking Action for the Conservation of Biodiversity

Triggered by the adoption of the Aichi Targets in 2010 and the announcement of the Sustainable Development Goals (SDGs) set out in the 2030 Agenda for Sustainable Development in 2015, the world has seen increased recognition of the importance of the conservation of biodiversity and sustainable use in recent years. In 2019, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)*1 released its global assessment results. This report highlighted the adverse effects of human activities on ecosystems, stating that “around 1 million animal and plant species are now threatened with extinction” and “nature is declining globally at rates unprecedented in human history.” The Post-2020 Global Biodiversity Framework, which is the new global target replacing the Aichi Targets, is scheduled to be formulated at the 15th Conference of Parties to the Convention on Biological Diversity (COP15) during the period from the second half of FY2021 to the beginning of the next fiscal year. Biodiversity conservation needs to be addressed comprehensively by economic society as it is closely related to the challenges facing the world today — the COVID-19 crisis and climate change. For companies aiming to create a sustainable society, efforts to conserve biodiversity are becoming an integral part of their challenges.

Toshiba Group aims to create a sustainable society in harmony with nature by promoting the reduction of environmental impacts through our business activities, products, and services, such as responding to climate change and the circular economy and ensuring water and chemical substance management, as well as biodiversity conservation activities that directly act on nature. It takes a long time to recover and improve biodiversity and ecosystems. We will monitor the impact the Group has on biodiversity and the risks and opportunities associated with biodiversity so as to continue to engage in long-term biodiversity conservation activities.

Toshiba Group’s biodiversity conservation: Risks and opportunities of not taking or taking action

Risks : Unstable, costly resource procurement (e.g., water and minerals); damage to the company’s reputation

Opportunities : Avoidance of risks due to unstable, costly resource procurement; increased corporate value; heightened employee motivation

*1 IPBES is an intergovernmental platform covering biodiversity and ecosystem services and is also known as the biodiversity version of the Intergovernmental Panel on Climate Change (IPCC). The pillars of its work are Assessments, Capacity Building, Knowledge Generation, and Policy Support. IPBES works with specialists from various fields of study to assess the relationship between humans and nature, generate new knowledge, develop capabilities, and reflect such assessment results, knowledge, and capabilities in policy making. In May 2019, IPBES released a Summary for Policymakers (SPM) in the Global Assessment Report on Biodiversity and Ecosystem Services.

Activities under the Toshiba Group's Sixth Environmental Action Plan (FY2017–2020)

The Strategic Plan for Biodiversity 2011–2020 was adopted at the 10th Conference of the Parties to the Convention on Biological Diversity (COP10) held in Nagoya City in 2010. The plan sets a medium- to long-term vision for achieving "a society in harmony with nature" by 2050 and aims to achieve the mission and specific action goals, the Aichi Targets, by 2020. The Aichi Targets consist of 5 strategic goals and 20 individual targets.

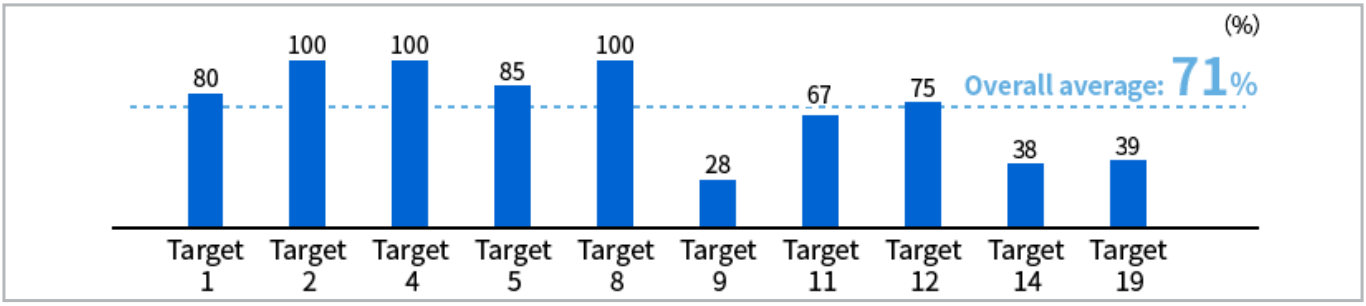
Considering biodiversity conservation activities an important element of environmental management, Toshiba Group promoted related activities under the Sixth Environmental Action Plan. We have set a goal for FY2020 to contribute to the achievement of 10 of the 20 individual Aichi Targets that are closely connected to our business activities (Targets 1, 2, 4, 5, 8, 9, 11, 12, 14, and 19). We carried out biodiversity conservation activities in accordance with the regional characteristics of each of 61 sites worldwide (39 in Japan, 22 overseas).

In FY2020, activities to achieve the 10 Aichi Targets were implemented at an average of 71% of sites. Implementation rates were relatively high for Targets 1, 2, 4, 5, 8, 11, and 12 but relatively low for Targets 9, 14, and 19. For targets with a low implementation rate, we are analyzing why.

■ Toshiba Group's Sixth Environmental Action Plan (FY2017–2020) – 10 Activity Targets –

Aichi Targets	Toshiba Group's Activity Targets	
	Theme	Description
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, Environmental Action Plans, and ISO 14001 goals and targets
Target 4	**Sustainable production**	Mitigation of climate change and efficient use of resources
Target 5	**Reducing habitat loss**	Building ecosystem networks that connect natural habitats with Toshiba Group sites, planting trees
Target 8	**Reducing chemical pollution**	Management of chemicals
Target 9	**Eliminating alien species**	Elimination of alien species at company sites
Target 11	**Conserving protected areas**	Activities that contribute to preserving protected areas outside Toshiba Group sites
Target 12	**Conserving endangered species**	Protecting rare plant and animal species, ex-situ conservation
Target 14	**Maintaining and managing ecosystem services**	Maintenance and improvement of cultural services
Target 19	**Improving and spreading knowledge and technology**	Accumulating and disclosing ecosystem survey data (including habitat maps) and creating biodiversity conservation technologies

■ **FY2020 Activity Implementation Rate by Target*2 and Analysis Results (61 Sites Worldwide)**



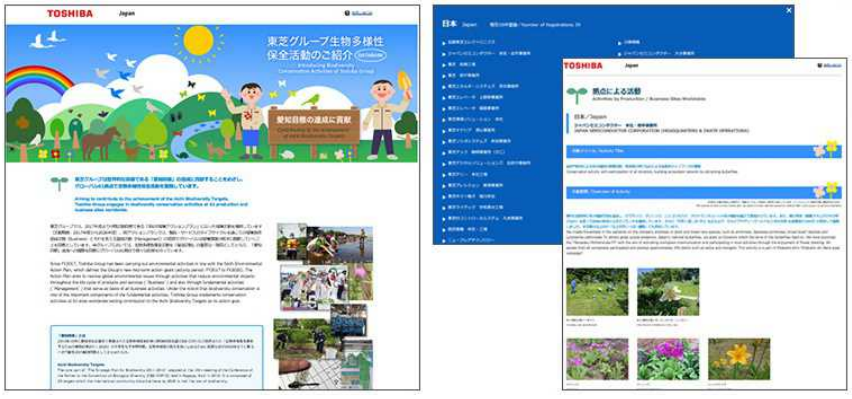
*2 The percentage of the number of sites that worked on each target to all 61 sites

	Analysis results by target
Target 1	We promoted stakeholder education, nature watching events, workshops, and information dissemination.
Target 2	We created and implemented biodiversity conservation plans in line with ISO14001: 2015.*3
Target 4	We promoted reduction of GHG emissions and effective use of resources through our regular business activities.
Target 5	We promoted tree planting and continuation of the “creation of an ecosystem network” proposed in the Fifth Environmental Action Plan (2012–2016).
Target 8	We primarily focused on promotion of chemical substance management in business activities as well as environmentally conscious products and services.
Target 9	We launched efforts to remove alien species at Toshiba Group sites, but we made little progress overall because these activities are subject to many legal restrictions and require specialized knowledge.
Target 11	We promoted activities to conserve biodiversity not only at Toshiba Group sites but also in protected areas outside Toshiba Group sites.
Target 12	We continued to promote “protection of rare species” as proposed in the Fifth Environmental Action Plan (2012 -2016).
Target 14	We participated in activities such as tree planting designed to conserve underground water, but we made little progress overall because activities to achieve this target often involve the government and local communities and become large in scale.
Target 19	We failed to translate our intention to conduct detailed ecosystem surveys, disclose survey results, and develop technologies to conserve biodiversity into Toshiba Group activity goals, so we made little progress.

*3 The 2015 version added “sustainable resource use,” “climate change mitigation and adaptation,” and “protection of biodiversity and ecosystems” to the scope of environmental conservation activities.

■ **Toshiba Group Biodiversity Conservation Activity Database**

We aggregate activities implemented in FY2020 at 61 sites worldwide in a database, and make it available to the public on our website. The database also shows how our activities correspond to the Aichi Targets.



Introducing Biodiversity Conservation Activities of Toshiba Group

Case 1

Participation in "How Far Can Dragonfly Fly" Forum (Aichi Target 1 & 19 *4)

Keihin Product Operations, Toshiba Energy Systems & Solutions Corporation

The Keihin Product Operations has participated in the "How Far Can Dragonfly Fly Forum," which are held in collaboration with companies, administrative offices, citizens, experts, and educational institutions in the Keihin coastal area. The forum investigates the dragonflies living in the area. Specifically, it tracks dragonflies by marking them with numbers on their wing to study what kind of dragonflies live, how it changed over time, how far they can travel, and how the natural environment connect between the coastal and inland areas. This activity is one of the ecological survey models in collaboration among industry, government, and academia in the Keihin area. The Keihin Product Operations contributes to the activity by surveying the many dragonflies that return to the area every year.

Dragonfly marked with a number on its wing

Case 2

Tree Planting in Areas Around a Dam in Collaboration with Local Communities (Aichi Target 1 & 14)

Toshiba Information Equipment (Philippines), Inc.

Angat Watershed has the Angat Dam, which supplies water to meet Metro Manila's needs. The company planted 1,000 endemic trees (Narra, Palosapis, and Guijo) in one hectare of land around the dam. A total of 83 people, including the company's employees, university staff, government staff, and the Philippine Army, participated in the activity.

Participants wearing matching T-shirts to mark the occasion

Case 3

Reduction of Single-Use Plastics in Operational Sites (Aichi Target 8 & 14)

Toshiba Tec Group

Addressing marine pollution problems, Toshiba Tec Group has been working to reduce the use of single-use plastics in its operational sites. Efforts made by the Japan headquarters and sites in China and other Asian countries include discontinuing the use of plastic checkout bags, charging for them, as well as discontinuing the use of plastic knives, forks, spoons, straws, and muddlers at staff canteens*5. At a site in France, some menu items in the coffee vending machines were upgraded to allow the use of personal mugs. In addition, a site in the United States has provided its employees and their families with education on marine pollution problems. The group will further enhance these activities to reduce the use of single-use plastics at each site.

Poster for awareness-raising of single-use plastic problems


Coffee vending machine compatible with mugs

Case 4

Conservation of Rare Plants Including Linaria Japonica (Aichi Target 11 & 12)

Imabari Complex, Toshiba Lighting & Technology Corporation


Creating a map of the habitat of rare plants and animals at Odagahama beach

The Imabari Complex is promoting activities to protect and nurture critically endangered species (CR)*6, namely Marsilea quadrifolia, Hydrocharis dubia, and Linaria japonica, by creating biotopes within its premises. Linaria japonica is a rare species and naturally grow only in the Odagahama beach in Imabari City, if limited to Shikoku island. In 2015, the company started the conservation activities after two roots of Linaria japonica were provided by the Ehime Prefectural Biodiversity Center, which performs an experiment on growing Linaria japonica. Since 2016, the complex has been creating a map which plots the habitat of endangered species found at Odagahama beach. The map was made in collaboration with the fourth grade children of the local elementary school, Ehime Prefectural Government staff, an NPO, and a neighborhood community association. In FY2020, the complex started two activities with children of two elementary schools. One is creating the map at Karakohama National Park where Scutellaria strigillosa (CR+EN) naturally grow. The other is observing endangered species such as *Suaeda malacosperma* (VU) and Trigochin asiatica (VU) at the mouth of the Shinabe river.

*4 The main items in the Aichi Targets the activity contributes to. The activity may also contribute to targets other than those stated. The same applies below.
*5 Items subject to reduction in use differ by site.
*6 Ehime Prefecture Red List. The same applies below.

■Toshiba Group's Activities Introduced in Biodiversity Journals

Toshiba Group's biodiversity conservation activities were introduced in the casebook on private sector engagement in biodiversity published by the Ministry of the Environment (May 2020) and KNCF NEWS Vol. 85 published by the Keidanren Committee on Nature Conservation (August 2020).

Casebook on private sector engagement in biodiversity published by the Ministry of the Environment (Japanese)
(page introducing Toshiba)

KNCF NEWS Vol. 85 published by Keidanren Committee on Nature Conservation
(page introducing Toshiba)

Launch of Toshiba Group's Seventh Environmental Action Plan

In Toshiba Group's Seventh Environmental Action Plan which starts in FY2021 (and will end in FY2023), we have set the following five activity themes: Building of ecosystem networks, Conservation of rare species, promotion of ex situ conservation, Response to marine plastics issues, Response to climate change (mitigation, adaptation), and Conservation of water, with reference to the Post-2020 Global Biodiversity Framework (first draft) [*7], which is the new global target replacing the Aichi Targets. Under these themes, we will promote employees' participation in the activities. We aim to refine and enhance the activities while keeping in mind education, corporate communications, and collaboration.

*7 Toshiba Group's activity themes have been set with reference to the first draft of the Post-2020 Global Biodiversity Framework. First draft:
https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf

Participation in the Biodiversity Working Group of the 4 Electrical and Electronic Industry Associations[*8]

With the aim of raising awareness of and promoting biodiversity conservation activities in the industry, we work with other member companies to roll out measures to make biodiversity conservation mainstream. In FY2020, we published case studies of activities run by member companies online[*9], issued the English version of Let's Try Biodiversity![*10], a booklet introducing specific approaches to and good cases of biodiversity conservation activities (the Japanese version had been already issued), and held webinars for member companies by lecturers from external organizations. In addition, the working group collected information and held discussions on new and important trends in biodiversity including the Post-2020 Global Biodiversity Framework. From FY2021 onward, Toshiba Group will continue acting as a member of the working group to contribute to facilitating biodiversity conservation activities in the industry.

*8 The Japan Electrical Manufacturers' Association (JEMA); Japan Electronics and Information Technology Industries Association (JEITA); Communications and Information Network Association of Japan (CIAJ); and Japan Business Machine and Information System Industries Association (JBMIA)
*9 Biodiversity Conservation Activity Database: https://bio.jema-net.or.jp/Japanese/env/biodiversity_db/ (Japanese)
*10 https://www.jema-net.or.jp/Japanese/env/ltb_tool/LTB_E-ver.pdf

Let's Try Biodiversity (English Version)

Enhancement of the Basis of Environmental Management

Environmental Communication

Environmental Education Programs for Children

As part of our environmental communication initiatives, we collaborate with the Association of Corporation and Education, an NPO that specializes in developing classroom lectures with companies, to hold environmental education programs for children at Toshiba Science Museum*1 and elementary schools.

In these programs, we raise children's awareness of global warming, resource depletion, and other environmental issues that seriously affect people's lives. We also introduce various scientific technologies to help solve such issues. By doing so, we encourage children to consider environmental issues, explore ways to help society, and take action. These activities align with the concept of Education for Sustainable Development (ESD)*2 proposed by the United Nations.

The content of these programs is also in line with the elementary school curriculum guidelines and is suitable for science, social studies, and general education classes. The program places importance on experiments, group activities, and active communication with teachers in order to provide children with an opportunity to learn about initiatives and technologies that have been developed to resolve environmental issues while having fun.

In FY2020, we held two programs: What's on the other side of the power outlet? (Theme: Energy) and A mysterious material that controls electricity!?—Discovery and use of semiconductors and learning how to use energy (Theme: Semiconductors). We held classes at five locations in total, including event venues and elementary schools near our business and production sites*3.
We will continue these educational initiatives to provide children, who will take part in the development of a sustainable society in the future, with an opportunity to think about what they can do now and what they can do 10 and 20 years from now.

Website introducing our environmental education programs for children (Japanese)

*1 In FY2020, classes at the Toshiba Science Museum were canceled due to the COVID-19 pandemic.

*2 Education that aims to equip current and future generations with capabilities to create a sustainable society. ESD requires two perspectives: (1) development of personality and qualities, which include self-discipline, the ability to make decisions, and a sense of responsibility; and (2) training of individuals to recognize their relationships with others, society, and the natural environment as well as to respect the concepts of 'relationships' and 'connections.' (Source: Ministry of Education, Culture, Sports, Science and Technology website)

*3 Some classes were held online.

What's on the Other Side of the Power Outlet? (Theme: Energy)

In this class, which includes an experiment, children learn about the characteristics of various types of power generation, such as wind, geothermal, solar, and thermal power generation. They learn that electricity is indispensable in our daily lives. They also develop an interest in the future of energy by learning about global warming issues and combined use of multiple energy sources.

A Mysterious Material That Controls Electricity!?—Discovery and Use of Semiconductors and Learning How to Use Energy (Theme: Semiconductors)

Children learn about the functions of semiconductors, which are essential in the use of electricity, by examining the evolution of appliances such as washers and air conditioners that we use every day. By learning that semiconductors not only enable products to save energy but also are manufactured in an environmentally aware way to reduce environmental impacts, children gain insights into the roles of semiconductors in society. We believe this program provides a smooth introduction to the programming class that became mandatory in elementary schools in FY2020.

Shota Wada
Executive Director
Association of Corporation and Education

Energy program

Although there are various energy education programs, there are few lessons that discuss the combination of power generation methods. The program was intended to ensure that children understand the characteristics of power generation methods and think about how those methods should supplement each other.

Semiconductor program

The mechanism and roles of semiconductors are closely connected with the study of subjects such as science and social studies. We tried not only to have the students realize first-hand how everyday study is connected to familiar products and technologies, but also to create a program that will lead to constructive study that can be applied to solutions to solving environmental issues.

Environmental Advertisements

We introduced our new long-term vision, Toshiba Group's Environmental Future Vision 2050. In particular, we delivered a message on how we are contributing to carbon neutrality around the world throughout our entire value chain by describing the specific cases of products and services so as to inform that Toshiba Group is taking measures in a wide range of business fields.

Past Cases

Nikkei ESG (April 2021 issue) by Nikkei BP

Toshiba Group's Global Environmental Action

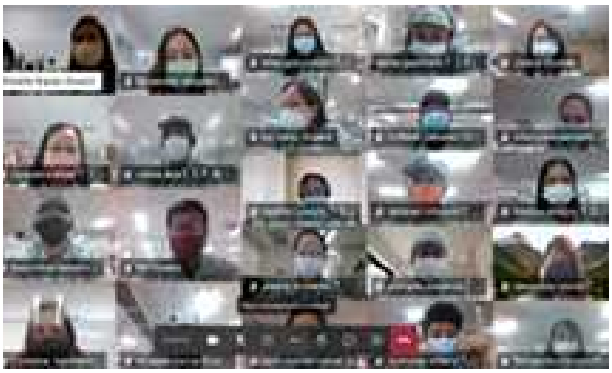
Toshiba Group is promoting Global Environmental Action, which is an employee participatory environmental program. In the Sixth Environmental Action Plan, which started in FY2017, we have set a theme for each fiscal year and carried out activities worldwide in accordance with that theme. The main theme for FY2020 was chemical substances. Each operational site provided its employees with seminars and education programs as well as held meetings at production sites to check the control status. Although the number of activities was lower than usual due to the COVID-19 pandemic, approximately 350* activities were carried out across the Group. We fostered solidarity across Toshiba Group companies by setting a common activity theme. By introducing a new theme each year, we raised employees' awareness about a wide range of environmental issues. We also collaborated with local communities to enhance communication with them as well as with NPOs and NGOs.

* Including activities based on themes other than chemical substances

Providing Education on Work Related to Chemical Substances

Toshiba Information Equipment (Philippines), Inc. (Philippines)

Toshiba Information Equipment (Philippines) held a webinar for its 120 employees on chemical substance management, inviting an external consultant well-versed in occupational health and safety. The webinar provided education on the Philippines' environmental laws and regulations as well as the uses of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and Safety Data Sheet (SDS), enhancing employees' knowledge and awareness of chemical substances.



Learning about chemical substance management via a webinar

Call for Entries and Result Announcement of Environmental Iroha Karuta, an Environmental Slogan Contest

Toshiba Carrier Corporation (Japan)

During the Environment Month and Energy Saving Month every year, Toshiba Carrier solicits environmental ideas and slogans from its employees, and publishes them on Toshiba Carrier Group Social Environmental Report. In FY2020, 362 slogans were entered and 50 of them were published as Iroha Karuta (a Japanese card game) on the report. This activity brings a fresh perspective to the content of our report and is effective in raising environmental awareness among our employees. It also allows us to communicate our passion for the environment to our external stakeholders. Readers commented that "Some of the slogans are unique and interesting" and "The environmental slogan contest is a feature I am looking forward to every year."

Social Environmental Report

FY2020 report (Japanese)

FY2021 report (Japanese)

Examples of Environmental Iroha Karuta

Holding a Recycling Facility Tour

Nishinihon Kaden Recycle Corporation

Nishinihon Kaden Recycle has periodically invited citizens, students, companies, and administrative bodies including international institutions to its recycling facility to introduce them to recycling and a resource circulating society. In FY2020, in collaboration with the Kitakyushu Eco-town Center, the company held an event providing an online tour and an environment class to 83 school students of elementary, junior high, and special support schools in Kitakyushu City, Nakama City, and Onga District. At the event, students were able to tour the factory online and directly ask questions to people working in the factory. In addition, staff of the Eco-town Center visited their classrooms to give lectures.

Touring the factory online

Holding the TELC-BATON 2020

Toshiba Elevator and Building Systems Corporation (Worldwide)

Toshiba Elevator and Building Systems has an annual environmental event, where one site of the company conducts environmental activities for a week, and then another site does the next week, just like passing the baton in a relay race in track and field. FY2020 was the sixth year of the event. Through the event, all of the 265 sites, those of Japan and Chinese subsidiaries, enjoyed "passing the baton" to improve environmental awareness. This activity won an Excellent Award at the 2020 Excellent Enterprise Award for Environmental Human Resource Development held by the Ministry of the Environment and Environmental Consortium for Leadership Development (EcoLeaD)*.

* Received the award along with activities to promote the development of environmentally conscious products, company-wide measures for reducing environmental impacts, and development of successful applicants for the Certification Test for Environmental Specialists (Eco Test).

Green Fund campaign (Central Tokyo Branch of Tokyo Branch Office)

Baton passing ceremony (passed on from Kawasaki Branch of Kanagawa Branch Office to Kawasaki-Higashi Sales Office)

Launch of Toshiba Group's Seventh Environmental Action Plan

In FY2021, the first year of the Seventh Environmental Action Plan, Toshiba Group will continue to disseminate its environmental initiatives and world trends through its Environment Website and environmental education opportunities. In addition, we will promote environmental communication activities suitable for the era of the new normal to create networks with stakeholders, based on collaboration with communities and organizations at each site worldwide, such as local residents, NPOs, NGOs, and administrative offices as well as among employees.

Ensuring of Environmental Risk Compliance

Responses to Environmental Risks

We, Toshiba Group, pursue the highest standard of compliance management in environmental management operations that relate to our business activities, products, and services.

Corporate staff divisions draft and formulate Group-wide policies and regulations related to environmental compliance management. In accordance with such policies and regulations, each Group company sets its compliance management items to be observed by its business divisions and sites, and executes its business.
In addition, corporate staff divisions conduct **in-house environmental audits** to meticulously check whether environmental policies are in place and how relevant laws and regulations are managed at key Group companies, business divisions, and sites on a regular basis. This helps us identify potential environmental risks and implement measures to prevent environmental incidents and violations of laws.
If a major environmental risk is identified, the Risk Compliance Committee, chaired by the executive officer in charge of the Legal Division, discusses preventive measures to be taken. If any environmental risk should materialize, all the concerned parties, including environmental promotion managers and related persons of relevant Group companies and sites, will work together under the direction of the executive in charge of environment to take preventive measures, check relevant business and production sites as well as consider recurrence prevention measures.

To manage environmental risks and ensure compliance, we make the most of opportunities such as **Company-wide environmental education, environmental auditor certification training**, and the **Corporate Environmental Management Committee meeting** to share the latest trends in laws and regulations, incidents occurred within the Group, and audit results for each Group company, business division, and site. This has contributed to raising the awareness of compliance.

Compliance Management in Products and Services

We, Toshiba Group, are pursuing the highest standard of compliance with environmental regulations and requirements that relate to our products and services. To this end, we implement control over the entire process, from development and design through to shipment, and ask our customers for their cooperation. For chemical substances in particular, we gather and assess the latest trends in policies and regulations around the world and incorporate the information into **Toshiba Group's chemical substance management**.

Compliance Management in Business Activities

Toshiba Group **manages chemical substances by ranking**. At the same time, the Group works on **soil and groundwater purification**, and **manages products using polychlorinated biphenyl (PCB)** and **ozone-depleting substances**, in accordance with relevant laws and regulations. In particular, we have independently set discharge/emission limits of chemical substances that are stricter than legal requirements in order to manage discharges/emissions into the water/air. Each site observes these limits.

Violations of Laws and Regulations

The Sixth Environmental Action Plan states that ensuring the highest standard of environmental risk and compliance management is a priority task for management, and promoted specific measures to prevent risks in products and services as well as manufacturing. As a result, no violations of laws and regulations occurred in FY2020. Under the Seventh Environmental Action Plan, which has started in April of FY2021, we will continue to strive for compliance management as part of the enhancement of the basis of environmental management.

› Past Cases

Soil and Groundwater Purification

Soil and Groundwater Purification

Preventing Contamination and Reducing Contamination Risks

Preventing Contamination and Reducing Contamination Risks

Storage and Management of PCB

Storage and Management of PCB

Management of Ozone-depleting Substances

Management of Ozone-depleting Substances

Environmental Education and Human Resource Development

Environmental Education and Qualification

In order to raise the level of our environmental activities, we provide environmental education to all employees. Our environmental education scheme consists of (1) management and general education, (2) specialized education, and (3) ISO 14001 education*. We implement curricula appropriate for different posts, occupational roles, and specializations, and review the content of education annually to ensure we share up-to-date information.

* Conducted for each certified organization.

■ **Environmental Education System**

Management education	General education	Specialized education	ISO 14001 education
e-learning (for all Toshiba Group members)	Education for new employees	Education for certification of site environmental auditors	Education for employees
	Education for managers	Education for certification of product environmental technology auditors	Education for managers
		Education on introduction to environmentally conscious design	Education for special employees
			Training courses for internal auditors

Introducing Environmental Activities via E-learning

We hold an annual e-learning program on the Standards of Conduct for Toshiba Group in which all employees including executives worldwide participate. In the program, we also introduce our environmental activities. This program helps employees deepen their understanding of global environmental issues and the efforts made by Toshiba Group.

Education for New Employees

To encourage new employees to become businesspeople and members of society with high environmental awareness, we provide them with environmental education every April. Education was provided online in FY2020 and FY2021 due to the COVID-19 pandemic.

Education for Environmental Auditors

As specialized education, Toshiba Group internally trains auditors for environmental audits, which we started to conduct in 1993. In the education for obtaining certification as site environmental auditor, the first screening uses off-the-job training, onsite training, and a written examination to determine who passes. Those who pass the first screening then take part in actual audits as support staff members and submit reports to become certified as environmental auditors. In the course for obtaining certification as product environmental technology auditors, candidates are certified after they complete off-the-job training and pass a written examination. Although the education programs were suspended in FY2020 due to the COVID-19 outbreak, we resumed them in FY2021 by implementing new ways of education. For example, we provided some programs online and introduced one-on-one education programs.

Environmental Accounting

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.

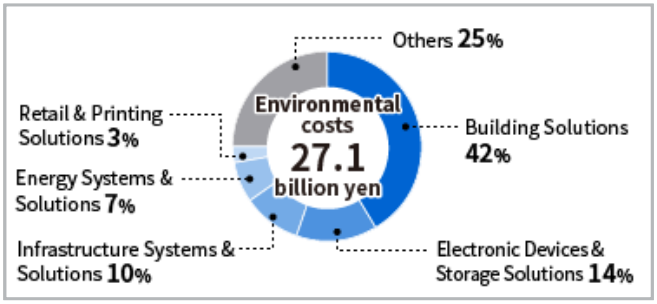
Environmental costs are calculated in accordance with the Ministry of the Environment's Environmental Accounting Guidelines 2005. To assess benefits, we show reductions in environmental impacts in physical amounts and also calculate benefits on a monetary basis.

■ Environmental Costs (FY2020)

Unit: million yen

Category	Description	Investments	Costs
Business area costs	Reduction in environmental impacts	2,376	5,746
Upstream/downstream costs	Green procurement, recycling, etc.	684	659
Administration costs	Environmental education, EMS maintenance, tree planting on factory grounds, etc.	31	2,383
R&D costs	Development of environmentally conscious products, etc.	947	18,154
Public relations costs	Support for local environmental activities, donations, etc.	0	9
Environmental damagerestoration costs	Restoration of polluted soil, etc.	0	165
Total		**4,038**	**27,116**

■ Breakdown of Environmental Costs by Business Segment (FY2020)



■ Environmental Benefits (FY2020)

Category	Description	Reductions in environmental impacts		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	1,409,000 (GJ)	1,324	Reductions in electricity charges and waste processing costs compared to the previous year, plus sales of valuables.
		Waste	17,900 (t)	1,355	
		Water	720,408 (m^3)	68	
		Total monetary benefits		2,747	
(B) Assumed benefits	Reductions in environmental impacts measured as a monetary value	Reductions in the amount of chemicals discharged	482 (t)	18,721	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.
Total monetary benefits				**21,468**	

* Reductions in environmental impacts for actual and assumed benefits indicate differences between FY2020 and FY2019.
Negative benefits indicate that the increase in environmental impacts exceeded reductions due to increases in production and other factors.