



KONICA MINOLTA

Giving Shape to Ideas

KONICA MINOLTA
Environmental
Report 2012



Management Philosophy
The Creation of New Value

Management Vision

An innovative corporation that continues to create inspiring products and services in the field of imaging
A global corporation that leads the market by advanced technologies and reliability

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Editorial Policy

Konica Minolta reports on its major environmental efforts in Konica Minolta CSR Report 2012, and posts information in more detail on the website. The Konica Minolta Environmental Report 2012 is available in PDF format, with content focusing on the Group’s basic concepts and on activities in fiscal 2011.

Report Boundary

This report covers the entire Konica Minolta Group, including Konica Minolta Holdings, Inc., the Group’s business companies and common function companies, and its affiliates. When data is given on a specific subset of companies, the boundary is separately indicated.

In this report, “Konica Minolta” refers to the Konica Minolta Group.

Reporting Period

In principle, the report covers activities from April 1, 2011 to March 31, 2012. Some sections may include information on earlier initiatives or more recent activities.

In this report, “fiscal 2011” refers to the fiscal year starting April 1 2011 and ending March 31 2012.

Publication Date

October 2012 (next report: scheduled for September 2013; previous report: December 2011)

Relevant Guidelines

In making this report, Konica Minolta referenced the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines Version 3.0 and the Environmental Reporting Guidelines 2007 issued by the Ministry of the Environment (Japan).

Disclaimer

In addition to facts about past or present circumstances, this report contains description of the Group’s current plans and projections for the future. These descriptions are based on information that is currently available and have been deemed reasonable based on the Group’s current status. The Group’s actual performance could differ from its predictions due to future changes in the business environment.

Overview of the Konica Minolta Group

Group Formation

The Konica Minolta Group consists of business companies, common function companies, and other affiliates under the holding company Konica Minolta Holdings, Inc. Powered by the core technologies it has developed in four fields—materials, optical, nano-fabrication and imaging technology—Konica Minolta delivers a variety of products and services to customers all over the world.

* The Konica Minolta Group includes Konica Minolta Holdings, 92 consolidated companies, 16 non-consolidated companies, and 4 affiliates (as of March 31, 2012).

Holding Company

KONICA MINOLTA HOLDINGS, INC.

Head office	2-7-2 Marunouchi, Chiyoda-ku, Tokyo, Japan
Established	December 22, 1936
Paid-in capital	37,519 million yen (as of March 31, 2012)
Consolidated net sales	767.8 billion yen (FY 2011)
Business activities	As a holding company, drafts and implements group management strategies, as well as supervising, managing and coordinating group management
Fiscal year-end	March 31
Number of employees	Non-consolidated: 228 (as of March 31, 2012) Consolidated: 38,206 (as of March 31, 2012)

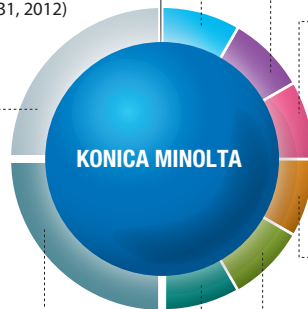
Common Function Companies

KONICA MINOLTA TECHNOLOGY CENTER, INC.

Business Activities
Provides services to group companies including R&D, customized product design and management of intellectual property assets

KONICA MINOLTA BUSINESS EXPERT, INC.

Business Activities
Provides various shared services for the Group in the fields of engineering, logistics, environment, safety and others



Business Companies

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

Business Activities
Manufacturing and sale of multi-functional peripherals (MFPs), printers, and equipment for production print systems and graphic arts, and providing related solution services

Business Solutions Business

Production Print Business

KONICA MINOLTA ADVANCED LAYERS, INC.

Business Activities
Manufacturing and sale of electronic materials (TAC films, etc.) and performance materials

Performance Materials Business

KONICA MINOLTA OPTICS, INC.

Business Activities
Manufacturing and sale of optical products (pickup lenses, etc.) and measuring instruments for industrial and healthcare applications

Optics & Sensing Business

KONICA MINOLTA MEDICAL & GRAPHIC, INC.

Business Activities
Manufacturing and sale of consumables and equipment for healthcare systems

Healthcare Business

Affiliates Managed by the Holding Company

KONICA MINOLTA IJ TECHNOLOGIES, INC.

Business Activities
Manufacturing and sale of inkjet printheads, inks and textile printers for industrial use

Industrial Inkjet Business

KONICA MINOLTA PLANETARIUM CO., LTD.

Business Activities
Manufacturing and sale of planetarium systems, show contents production and sales, construction of planetariums and facility management service

Planetarium Business

* The following reorganization took place on April 1, 2012:

1. The commercialization promotion section for new functional materials such as organic light emitting diode lighting, barrier film, and heat insulation film was transferred from Konica Minolta Holdings, Inc. to Konica Minolta Opto, Inc. and the trade name was changed to Konica Minolta Advanced Layers, Inc.
2. The optics business, which primarily manufactures pickup lenses for optical disks, glass substrates for HDDs, and lens units, was transferred from Konica Minolta Opto, Inc. to Konica Minolta Sensing, Inc., which handles the sensing business, and the trade name was changed to Konica Minolta Optics, Inc.

Overview of the Konica Minolta Group

Business Companies

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

Business Solutions Business

Principal Products

- MFPs (Multi-functional peripherals)
- Laser printers
- Filing devices
- Facsimile machines
- Software and peripheral devices



Business Fields

- Corporate offices
- SOHO

Production Print Business

- Digital printing systems
- Digital color-proofing systems
- CTP (Computer to Plate)
- Remote color management systems
- RGB workflow products
- Prepress production systems



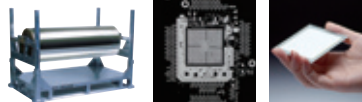
- Printing companies
- Corporate printing departments

KONICA MINOLTA ADVANCED LAYERS, INC.

Performance Materials Business

Principal Products

- TAC film for LCD polarizers
- VA-TAC film for increasing viewing angle
- High-precision photo plates
- Barrier Film
- Functional film for windows
- Organic Light Emitting Diode



Business Fields

- Electronics industries
- Research institutes

KONICA MINOLTA OPTICS, INC.

Optics & Sensing Business

Principal Products

- Pickup lenses for optical disks
- Prisms for pickups
- Glass substrates for HDDs
- Micro-camera modules
- Lens units
- Spectrophotometers, colorimeters
- Luminance meters, illuminance meters, and luminance colorimeters
- Spectroradiometers
- Non-contact 3D digitizers
- Pulse oximeters
- Solar cell measurement and calibration equipment
- Spectrometers



Business Fields

- Electronics industries
- Auto industries
- Research institutes
- Hospitals/Nursing homes

KONICA MINOLTA MEDICAL & GRAPHIC, INC.

Healthcare Business

Principal Products

- Digital X-ray diagnostic imaging systems (CR, DR)
- Digital mammography
- Diagnostic ultrasound systems
- Medical imaging filing systems
- All-in-one medical imaging information workstations
- Medical management support and service
- Diagnosis medicine



Business Fields

- General hospitals
- Clinics

Affiliates Managed by the Holding Company

KONICA MINOLTA IJ TECHNOLOGIES, INC.

Industrial Inkjet Business

Principal Products

- Inkjet printheads
- Inkjet textile printers
- Inkjet print units
- Inkjet inks



Business Fields

- Digital printing
- Textile dyeing
- Printed electronics

KONICA MINOLTA PLANETARIUM CO., LTD.

Planetarium Business

Principal Products

- Optical planetariums
- Digital full-dome systems
- Dome screen
- Digital full-dome show



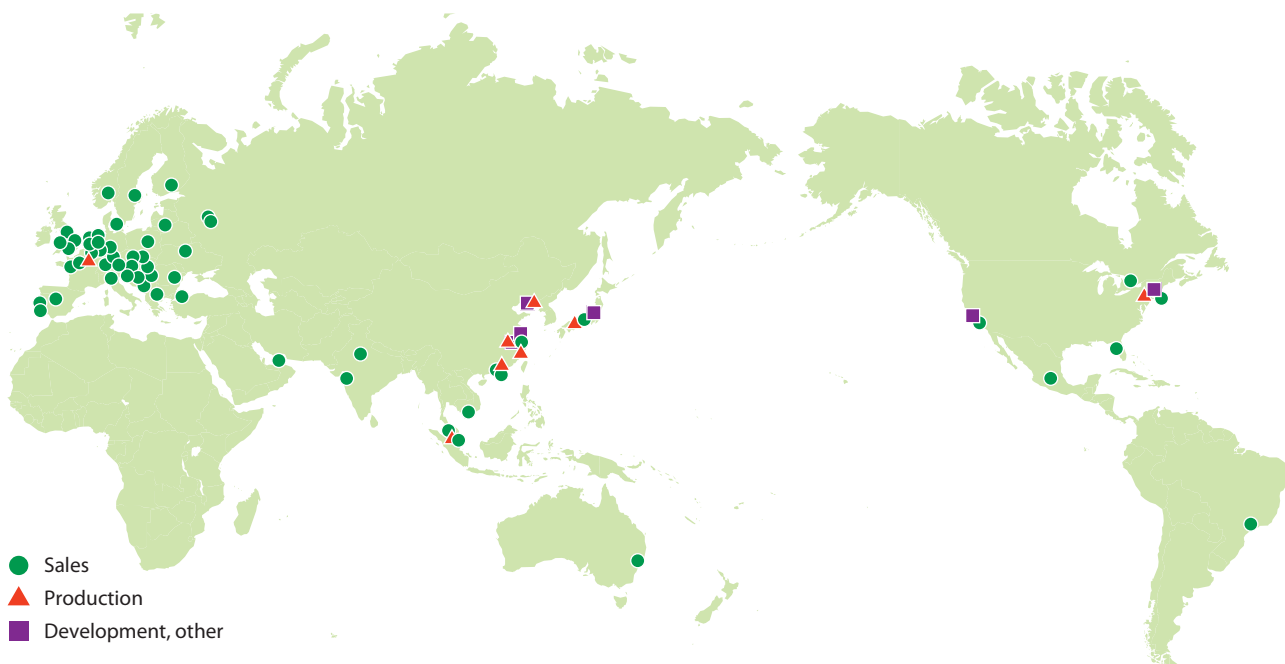
Business Fields

- Planetariums
- Restaurants
- Amusement facilities
- Art museums

Overview of the Konica Minolta Group

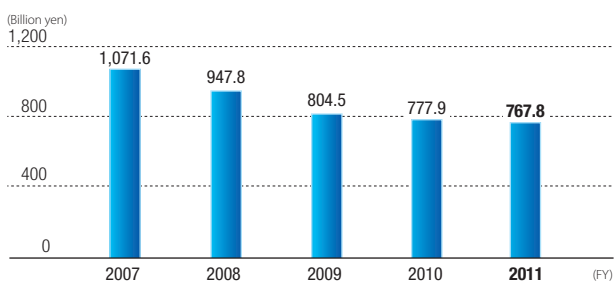
Global Network

Konica Minolta has subsidiaries in 38 countries. It operates business in 176 countries and regions through the subsidiaries or via other local agencies (as of March 31, 2012).

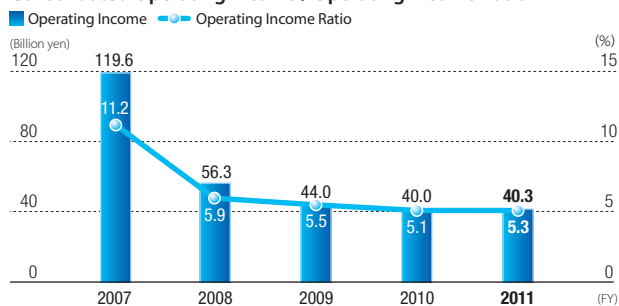


Financial Data

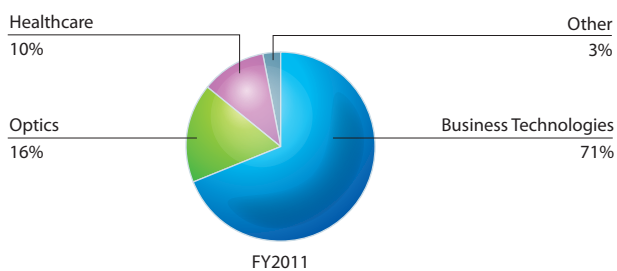
Consolidated Net Sales



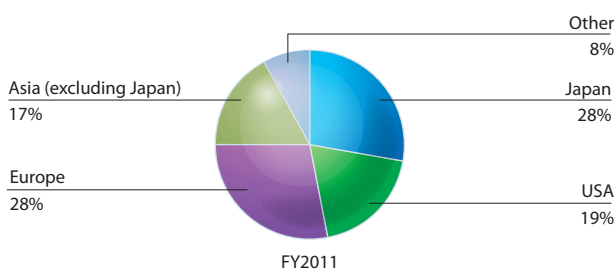
Consolidated Operating Income / Operating Income Ratio



Breakdown of Sales by Business Segment



Breakdown of Sales by Region



“Giving Shape to Ideas”

In September 2011, Konica Minolta announced a new brand communication message to the world: “Giving Shape to Ideas.”

Konica Minolta continues to give shape to a wide variety of new ideas designed to provide solutions to the challenges its customers and the broader society face.

* The term “Konica Minolta” is used in this section in place of the names of individual business companies or related companies.

Supporting a Recycling-Oriented Society
(Resource Saving / Energy Saving)

We need to manage worldwide document output more efficiently.

Optimized Print Services Help Solve Problems for Global Corporations

Global corporations are pursuing ways to address the cost and security issues of the office equipment used in their offices around the world. To help them achieve these goals, Konica Minolta provides Optimized Print Services (OPS) that fully manage office equipment operations, optimize equipment setups and improve operating efficiency. These services are employed by the German automobile manufacturer BMW, for example, to efficiently operate and manage a total of 6,800 bizhub systems of multi-functional peripherals at offices and production sites all over Europe, helping the company to improve efficiency and information security in running office equipment on a large scale.



Supporting a Recycling-Oriented Society
(Resource Saving)

We want to print no more than the needed number of materials at any given time.

Integrated Digital Printing Management System Expands the Potential of On-Demand Printing

Stanford University in the U.S. was grappling with the problem of how to efficiently supply educational materials. Konica Minolta provided a comprehensive solution that included a digital printing system, the Printgroove application that allows consolidated printing management and 24-hour service via the web, and its proprietary security system. By linking to the Stanford Intellectual Property Exchange, a system developed by the university that allows the transfer of research papers and other files while protecting copyrights and patents, students are now able to purchase the educational materials they require on demand at low cost in the form of printed materials or digital files.



Supporting a Recycling-Oriented Society
(Resource Saving)

I wish we could dye beautiful fabric more quickly.

Inkjet Textile Printing Enables High Productivity, High Quality Prints

In inkjet textile printing, the designs are created on computers and sent to a printer, making textile printing plates used in conventional printing unnecessary and significantly reducing the time it takes to deliver product. By spraying only a few picoliters of printing ink accurately on the fabric, inkjet textile printing can easily create high-quality prints and achieve effects such as color gradation, fine lines, and overlaid patterns that were very difficult to do using conventional printing methods. The Nassenger PRO 1000 printer, launched in 2011, boasts extremely high productivity with the ability to print 1,000 m² of fabric per hour when operating at maximum capacity. With its low environmental impact, high quality, and high productivity, demand is high in fashion and fabric centers around the world such as Italy, Turkey, and India.



Supporting a Recycling-Oriented Society
(Product Recycling)

We want to reuse rare earth elements.

Rare Earth Recycling Technology Enables Limited Resources to be Reused at Low Cost

There are only a few supplier countries of rare earth materials worldwide, and there is concern that limited supply will lead to higher costs. Clearly, rare elements must be used efficiently if we are to realize a sustainable society. Konica Minolta has been working on developing a recycling technology for cerium oxide, a rare earth element used as a polishing material for glass substrates for HDDs. Using the materials technology gained from the development of film, Konica Minolta has successfully developed a way to separate and remove the glass particles from the waste liquid produced during the polishing process using a chemical agent. The system does not require large machinery, allowing recycling to be done quickly and at low cost.



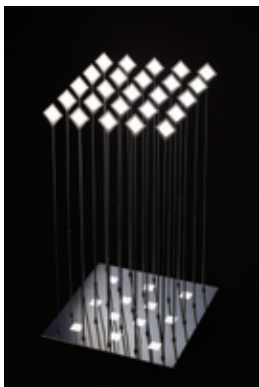
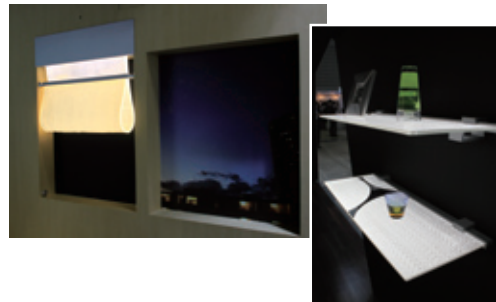
Preventing Global Warming, Supporting a Recycling-Oriented Society, Reducing the Risk of Chemical Substances

Can lighting be both exciting and environmentally friendly?

Symfos

Advanced LED Lighting Uses Flat Surface Light Emitting Technology

LED lighting that consumes low power, lasts longer and emits less heat is in great demand because it has a low environmental impact and is economical. Konica Minolta has developed flat surface light sources by applying its optics and film technology to guide and diffuse the light of LED point light sources. The lineup includes two types of lighting: a flat lighting device that takes up less space and a high-potential lighting device that can be used for light designing. These new types of lighting devices are perfect for a wide variety of lighting situations.



OLED Panels with the World's Highest Level of Light Emission Efficiency

Organic light emitting diode (OLED) lighting takes advantage of the light-emitting properties certain organic materials have when electrified. It is a promising new technology because it has a high degree of light-emission efficiency and can illuminate from an entire surface. Konica Minolta used its own blue phosphorescent light emitting material to develop an OLED panel product with a light-emission efficiency of 45 lm/W, the world's highest level for a mass-produced OLED panel product. In October 2011, it was made available in the form of sample kits, and it promises to create a new age of next-generation lighting.

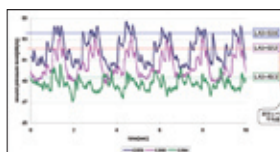
Enhancing Environmental Comfort of Products when Operated

I sure wish there was a quieter printer.

New Technology Has Made MFP Sound More "Pleasant," Providing for a More Comfortable Office Environment

Konica Minolta has been working hard to create quieter MFPs. Since 2007, the company has been involved in joint research with Kyushu University in Japan aimed not only at reducing absolute noise level, but also at cutting the particular kinds of noise that people find uncomfortable to make the sound emitted by MFPs more pleasant. The research analyzes the noise emitted when MFPs are in operation using techniques borrowed from the study the train noise, and then identifies the specific materials and structures that cause the objectionable noise to enable specific improvements to control it. Based on user reports that the MFP noise was less bothersome,* the company included its improvements in all MFP models to be launched in fiscal 2012 and beyond.

* Konica Minolta internal survey



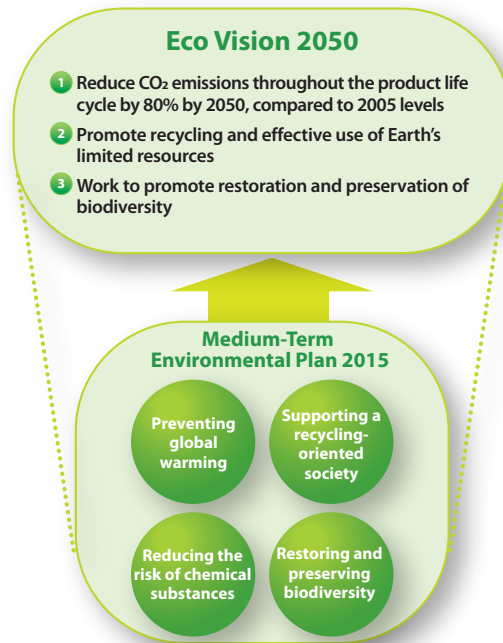
Eco Vision 2050

Formulation of Eco Vision 2050 for a sustainable earth and society

In January 2009 Konica Minolta formulated Eco Vision 2050 as its long-term environmental vision. This vision guides Konica Minolta in the right direction to achieve its future objectives and fulfill its responsibility as a global corporation by contributing to a sustainable earth and society.

Konica Minolta created the Medium-Term Environmental Plan 2015 as a milestone marker toward the goals outlined in its Eco Vision 2050.

Relevant Information ● Medium-Term Environmental Plan 2015 ▶ P. 12



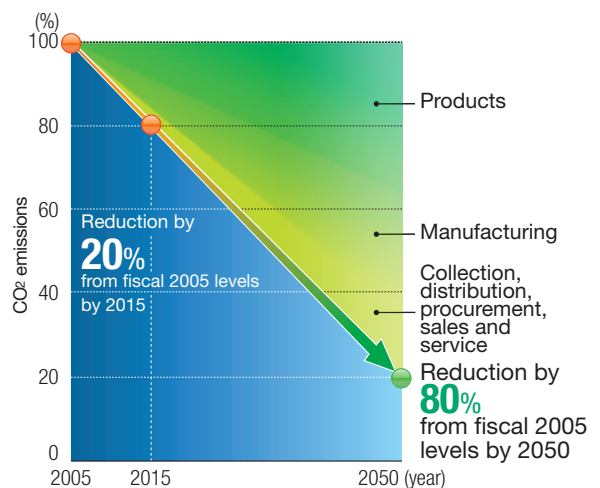
Approach to Setting Targets for CO₂ Emissions in Eco Vision 2050

According to an announcement made by the Intergovernmental Panel on Climate Change (IPCC), greenhouse gas emissions in 2004 were 49 billion t-CO₂, which, divided by a population of 6.4 billion people, amounts to 7.66 t-CO₂ per person per year. The amount of greenhouse gases that the earth can absorb naturally is thought to be 11.4 billion t-CO₂. Divided by the projected population of 9.2 billion people in 2050, this figure amounts to 1.24 t-CO₂ per person per year—which corresponds to a reduction of about 80% of current annual per capita emissions.

Based on these estimates, Eco Vision 2050 sets a target of 80% reduction in CO₂ emissions throughout the product life cycle in 2050, with 2005 as the baseline. In addition, the Medium-Term Environmental Plan 2015 uses backcasting* from this target to set a target of 20% reduction by fiscal 2015.

* **Backcasting:** A way of thinking that involves defining a future action by sketching a desirable image of the future and a goal, and then looking back at the current situation from the perspective of that goal.

Reductions in CO₂ Emissions



Environmental Management

Environmental Policy

Implementing an integrated environmental management system that ensures that corporate activities are good for both people and the environment

The Konica Minolta Group conducts all of its corporate activities in harmony with people and the environment by integrating environmental, economic and social perspectives into the Group's corporate strategy, as the Environmental Policy of the Konica Minolta Group. The Group's basic approach is to work steadily to solve environmental issues, based on securing reliable data and quantitative measurement

of performance and impacts.

Based on this policy and approach, the Group works to reduce the environmental impact of its products and services over their entire life cycle. The Group places particular emphasis on preventing global warming, supporting a recycling-oriented society, reducing the risk of chemical substances, and restoring and preserving biodiversity.

Konica Minolta Environmental Policy

The Konica Minolta Group aims to promote sustainable development and profitable growth. We integrate environmental, economic and social perspectives into our business strategies so that our business activities are implemented in harmony with human lives and with the environment in all aspects.

Our concept is to make steady progress toward resolution of environmental challenges based on quantitative measurement and analysis of reliable data in regard to environmental performance and impact. This basic concept is demonstrated in the following affirmation:

"Management Based On Facts"

1. Working toward a sustainable society as a global citizen

In response to the call for a sustainable society, we will conduct business activities from the perspective of on-going enhancement of performance in environmental preservation, economic growth and social responsibilities (ethics). Every one of us will enhance its knowledge and awareness on the environment, economies and societies on a global scale and act with responsibility in pursuit of a sustainable society.

2. Compliance with laws and other requirements

We will comply with legal requirements in respective countries and regions, as well as our Group standards. In addition, we will respect, in an equitable manner, expectations of our stakeholders and consensus in the international community.

3. Consideration for the environment throughout the entire life cycle of products and services

We are committed to reducing the environmental load in all stages throughout the entire life cycle of products and services, recognizing that responsibility for a product rests with its manufacture.

4. Initiatives to counter global warming

We will continuously reduce greenhouse gas emissions that derive from our business activities from the perspective of the life cycle of our products and services throughout the entire Group, recognizing that global warming is one of the most important world issues.

5. Initiatives toward a recycling-oriented society

We are always reviewing what we can do as a corporate citizen in order to create recycling-oriented society while striving for minimizing consumption of natural resources and promoting "Zero Waste Emission" activities. In addition, we will accelerate initiatives for the recovery and recycling of end-of-life products and packaging materials.

6. Prevention of chemical pollution and minimization of potential risks to the environment

We will take every countermeasure for preventing chemical pollutions, recognizing that chemical substances can impose significant impact on human health and safety and the environment. At the same time, we will continuously suppress use of chemicals and reduce discharge volume in order to minimize environmental risks.

7. Promotion of information disclosure

We will execute accountability to all the stakeholders by actively disclosing environmental information and ensuring risk communication. We will as well make every effort to accomplish our commitment to the societies. Our Environmental Policy is to be disclosed to the public.

8. Establishment of environmental objectives and targets

We establish and administer environmental objectives, targets, and management programs to translate this Environmental Policy into reality. We will continuously review such objectives, targets and programs for further improvement of our environmental performance.

April 1, 2009
Konica Minolta Holdings Inc.
President and CEO



Masatoshi Matsuzaki

Environmental Management

Management System

Operating environmental management system based on ISO 14001

To ensure efficient implementation of environmental management throughout the Group as a whole, Konica Minolta operates its management system based on ISO 14001, and adopts as its basic policy that all Group production sites around the world obtain ISO 14001 certification.

To address a range of environmental issues, it is necessary to implement measures that take into account each stage in the product life cycle. To accomplish this, Konica Minolta believes that it must operate not only its manufacturing sites, but also its product development, sales and administration divisions, under an integrated management system with efficient cooperation between divisions. Based

on this concept, Group companies in Japan have acquired multi-site ISO 14001 certification so that the entire Group can be managed under a single ISO certification. In addition, all the main production sites outside Japan has acquired ISO14001 certification based on the policy that Group production sites having large environmental impact should acquire the certification.

In conducting activities, the Group sets numerical targets and periodically evaluates attainment. The evaluation results are reported back to each site to enable continuous improvement.

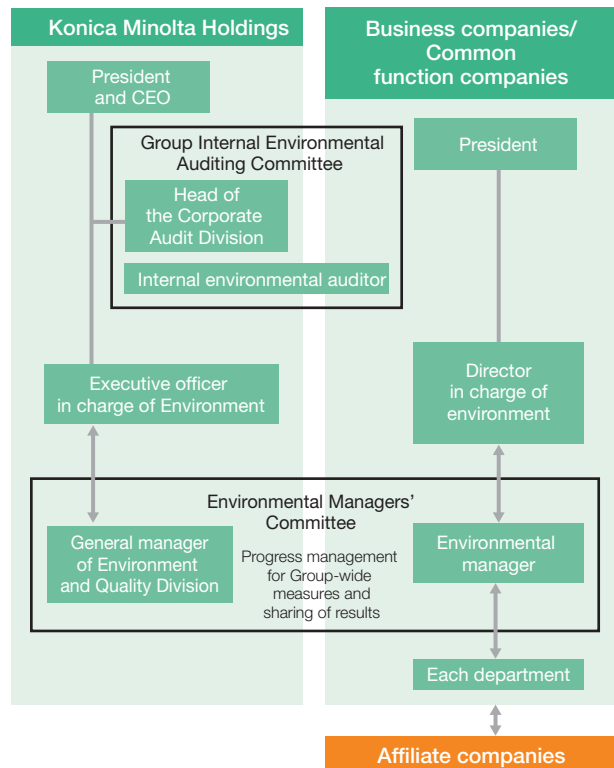
Organization

All aspects of environmental management overseen by the Executive Officer in charge of environment

Konica Minolta Holdings, Inc. has appointed an executive officer in charge of environment with the authority and responsibility for Group-wide environmental issues. Directors in charge of the environment have also been appointed at each business company and common function company, with the authority and responsibility for environmental issues at their individual operations.

Furthermore, Konica Minolta Holdings, Inc. has established an Environmental Managers' Committee headed by the General Manager of the Environment and Quality Division as an organization for oversight of the environmental target implementation plan for the whole Group. The committee meets on a quarterly basis in principle, and in addition to promoting the environmental target implementation plan, it monitors progress and manages information concerning environmental issues across the Group.

Group Environmental Management System



Environmental Audits

At Konica Minolta, the Group Internal Environmental Auditing Committee, which is chaired by the head of the Corporate Audit Division at Konica Minolta Holdings, Inc., directs the internal environmental auditing for the entire Group.

In addition, internal environmental audits are carried out at least once a year to confirm proper functioning of the management system and to assess compliance. In this way, the Group ensures that all its organizations are fully compliant.



Environmental Management

Compliance with Environmental Regulations

Strengthening the global compliance system

As environmental problems such as global warming and the depletion of energy resources increase in scope to encompass entire regions and indeed the entire world, government policies and regulations at the regional and national levels around the world are being strengthened in order to ensure sustainable growth.

As a global business enterprise, Konica Minolta carries out environmentally responsible business activities at all of its production sites and sales offices. In order to ensure that all legal regulations are complied with, the Group is strengthening its global compliance system. Meetings are held each month to discuss legal issues with internal experts organizations

of each region of the world, and legal review meetings are held every two to three months involving production sites. Through information sharing, the participants analyze and investigate potential problems related to legal regulations. In addition to internal auditing conducted at each Group company, specialized diagnosticians conduct a “compliance diagnosis” annually as a way to make improvements on the legal challenges on the horizon for Group companies.

In fiscal 2011, all production sites and sales offices have implemented compliance diagnoses. None were found in violation of any important environmental regulation.

Medium-Term Environmental Plan 2015

Konica Minolta has established its Medium-Term Environmental Plan 2015 as a milestone marker toward the goals outlined in Eco Vision 2050. The plan comprises specific approaches and targets for four objectives: preventing global warming, supporting a recycling-oriented society, reducing the risk of chemical substances, and restoring and

preserving biodiversity. The Group has designated these objectives as goals for all of its businesses to pursue, and is incorporating them into its business plans while formulating specific measures for their achievement, with the overall aim to successfully carry out the Medium-Term Environmental Plan 2015.

Fiscal 2015 Targets and Initiatives

Objectives	Major Fiscal 2015 Targets (Base Year: Fiscal 2005*1)		Initiatives
Preventing global warming	CO ₂ emissions throughout product life cycle	-20%	<ul style="list-style-type: none"> Develop new energy-saving technologies and incorporate them in products Improve energy efficiency by developing better production Technologies Achieve Green Factory Certification standards on a business unit basis Improve distribution efficiency through SCM*2 Increase efficiency in sales and services
	CO ₂ emissions from product usage	-60%	
	CO ₂ emissions from manufacturing (per unit of sales)	-10%	
	CO ₂ emissions from distribution (per unit of sales)	-30%	
	CO ₂ emissions from sales and service (per unit of sales)	-50%	
Supporting a recycling-oriented society	Petroleum-based resource usage (per unit of sales)	-20%	<ul style="list-style-type: none"> Develop new technologies of resource conservation and incorporate them in products Reduce the volume of waste from manufacturing activities by developing new production technologies Reduce fuel consumption via more efficient sales and service activities Decrease the volume of product packaging Reduced production loss through better production technologies and production innovations (zero waste activities) Achieve Green Factory Certification standards on a business unit basis Optimize resource recovery systems in each region
	Packaging materials usage (per unit of sales)	-25%	
	Waste discharged externally*3 from manufacturing (per unit of sales)	-50%	
	Product recycling: Build up product recycling systems in each region and aim for a recycling rate of 90% or more		
Reducing the risk of chemical substances	Chemical substance management: Maintain strict management of chemical substances, including the entire supply chain*4		<ul style="list-style-type: none"> Establish a new chemical substance management system Atmospheric Reduce VOC risk through better production technologies and production innovations Achieve reduction plan on a business unit basis
	Atmospheric emissions of volatile organic compounds (VOCs) (environmental impact index*5)	-75%	
Restoring and preserving biodiversity	Help restore and preserve biodiversity		<ul style="list-style-type: none"> Create programs for biodiversity preservation and restoration

*1 Many international frameworks use 1990 as a base year for greenhouse gas reduction targets. Konica Minolta, however, decided to use fiscal 2005 as its base year, as the result of a Group merger in 2003 and the considerable changes that have been made to its business portfolio since then.

*2 **Supply Chain Management (SCM):** A method for effectively managing the flow of goods from procurement to production, and from sales to final product delivery to the customer.

*3 **Waste discharged externally:** Volume discharged outside Konica Minolta sites, obtained by subtracting the internally recycled and reduced volumes from the total waste generated in production processes.

*4 **Supply chain:** In this case, the process by which raw materials from upstream companies pass through component manufacturers and are delivered to Konica Minolta.

*5 **Environmental impact index:** An index unique to Konica Minolta designed to measure impact on the environment, obtained by multiplying VOC emission volume by a hazard factor (impact on human health and environmental impact) and a location factor.

Fiscal 2011 Targets and Results/Fiscal 2012 Targets

Targets have been set for each fiscal year under the Medium-Term Environmental Plan 2015.

Fiscal 2011 Targets and Results, and Fiscal 2012 Targets (compared with fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results	Self-assessment	Fiscal 2012 Targets
Preventing global warming	CO ₂ emissions throughout product life cycle	-44.4%	-48.4%	★★★	-48.1%
	CO ₂ emissions from product usage	-64.0%	-65.8%	★★★	-67.7%
	CO ₂ emissions from manufacturing (per unit of sales)	+38.9%	+34.5%	★★★	+32.5%
	CO ₂ emissions from distribution (per unit of sales)	-23.3%	+4.1%	★	-4.4%
	CO ₂ emissions from sales and service (per unit of sales)	+39.3%	-6.6%	★★★	-15.2%
Supporting a recycling-oriented society	Petroleum-based resource usage (per unit of sales)	+24.0%	+21.4%	★★★	+15.7%
	Packaging materials usage (per unit of sales)	+2.9% ^{*1}	+12.1%	★★	+9.7%
	Waste discharged externally ^{*2} from manufacturing (per unit of sales)	+1.6%	+13.9%	★★	+8.1%
	Product recycling : •Expand sales of re-manufactured MFPs •Enhance recycling systems		•Marketed re-manufactured MFPs worldwide •Implemented survey on recycling systems	★★★	•Market re-manufactured MFPs worldwide •Investigate packaging and parts reuse
Reducing the risk of chemical substances	Chemical substance management : •Study alternatives to substances to be reduced •Compliance with the China RoHS ^{*3}		•Implemented risk assessment on substances to be reduced •Continued monitoring for compliance with the China RoHS and prepared plans for compliance with the revised RoHS Directive ^{*4}	★★★	•Plan alternatives to materials targeted for reduction •Respond to RoHS self-declaration of conformance
	Atmospheric emissions of volatile organic compounds (VOCs) (environmental impact index ^{*5})	-67.0%	-73.4%	★★★	-70.5%
Restoring and preserving biodiversity	•Compliance with criteria of the Green Factory Certification System •Revise and implement the draft procurement standards for paper		•Revised Green Factory Certification Standards •Implemented trial runs of ecosystem impact assessment •Investigated revising the procurement standards for paper	★★	•Pursue compliance with the Guidelines for Biodiversity Preservation •Deploy the ecosystem impact assessment •Establish the procurement standards for paper and prepare global deployment

^{*1} Base year data has been revised to reflect changes in calculation method and the target has been adjusted accordingly.

^{*2} **Waste discharged externally:** Volume discharged outside Konica Minolta sites, obtained by subtracting the internally recycled and reduced volumes from the total waste generated in production processes.

^{*3} **China RoHS:** Administrative Measure on the Control of Pollution Caused by Electronic Information Products. Hazardous substances regulations enacted by China in March 2007.

^{*4} **RoHS Directive:** Regulations enacted by the EU in July 2006 prohibiting the use of specified hazardous substances in electrical and electronic equipment.

^{*5} **Environmental impact index:** An index unique to Konica Minolta designed to measure impact on the environment, obtained by multiplying VOC emission volume by a hazard factor (impact on human health and environmental impact) and a location factor.

How the targets for CO₂ emissions are set

Konica Minolta is working to set reduction targets for the amount of CO₂ emitted over the life cycle of its products. The Group divides the product life cycle into four stages and sets targets for reductions at each stage. Emissions per unit of sales volume are used for setting targets for the manufacturing, distribution, and sales and service stages. This is done to distinguish reductions that are due to decreases in production and sales from reductions that result from CO₂ reduction measures, and as such, it is intended to validate

the efficiency of the measures. However, the recent sudden exchange rate fluctuations and declining price of a range of products have had a significant impact on the net sales, so meeting the actual and forecast emissions per unit of sales volume continues to present challenges. Although there is no change in the Group's determination to meet its fiscal 2015 targets for the throughout product life cycle, Konica Minolta plans to consider introducing indices that can accurately reflect the effectiveness of reduction measures as they should.

Three Green Activities

Three Green Activities

Environmental innovations via three green activities that support the medium-term Environmental Plan 2015

Konica Minolta is implementing Three Green Activities as part of its effort to realize the Medium-Term Environmental Plan 2015. First, the Green Products Certification System promotes the development of environmentally responsible products. Second, the Green Factory Certification System allows for a comprehensive evaluation of its production sites'

environmental activities. Third, Green Marketing activities ensure sales companies around the world make and execute environmental activity plans that are closely tied to their local areas. The Konica Minolta Group is working to bring about environmental innovations through the Three Green Activities.



Konica Minolta Environmental Mark



The Konica Minolta Environmental Mark expresses the Group's commitment to promoting initiatives that reduce environmental impact in every phase of the business. The mark is used as a certification mark for products certified under the Green Products Certification System and for factories certified under the Green Factory Certification System. Additionally, it will be used as a symbol of Green Marketing activities.

* The three arches symbolize Green Products, Green Factories and Green Marketing — the core of Konica Minolta's environmental activities. The arches rest on a green leaf—which represents the environment—forming a round Earth to convey this key message: "Konica Minolta is striving to fulfill its role on the planet as a bridge to a more sustainable society."

Three Green Activities Green Products Certification System

Defining evaluation standards for the environmental performance of products, and promoting the development of environmentally responsible products

Konica Minolta introduced a product assessment system in 1992 in order to develop and provide environmentally responsible products. To further strengthen this effort, the Group has introduced the Green Products Certification System, a unique system for evaluating products with superior environmental performance that went into full operation in July 2011.

Under this system, standards are set for each of the different businesses and product characteristics, and products that meet these standards are certified at one of three levels. The targets are basically set as early as the product planning stage. Not only must the product meet standards for environmental performance, it must also fulfill requirements such as being produced at a Green Factory certified plant, compliance with environment-related regulations, and management in accordance with the Group's

CSR procurement plan.

The Group introduced sales ratio targets for certified Green Products in fiscal 2012 (see the chart below), aiming to increase the number of products certified. The sales ratios for fiscal 2011 were 11% for Green Products Plus and 12% for the total of Green Products.

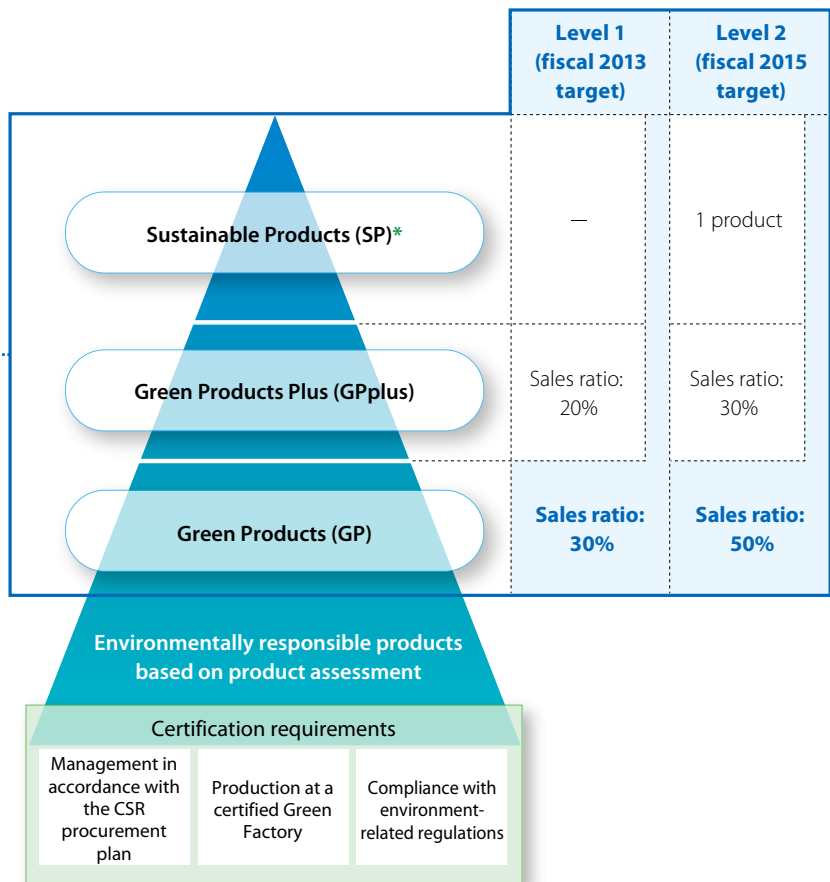
The environmental performance of certified products will be made public in product catalogs and websites.



Green Products Certification System

Certification standards (excerpts)

- **Preventing global warming**
 - Reduce CO₂ emissions from product usage
 - Reduce CO₂ emissions throughout product life cycle
- **Supporting a recycling-oriented society**
 - Reduce petroleum-based resource usage
 - Make products smaller and lighter
 - Increase the operating life of products
 - Promote the use of re-used and recycled materials
 - Promote the use of plant-based materials
 - Reduce rare metals usage
- **Reducing the risks from chemical substances**
 - Restrict the use of hazardous chemical substances
- **Restoring and preserving biodiversity**
 - Use biological resources in a sustainable manner
- **Manufacturing process innovation**



* Sustainable Products (SP) certification standards require that the product not only embody superior environmental performance not typically achieved by earlier products, but also incorporate original technology. While seeking to reduce the environmental impact of all of its products, by setting a very challenging certification level, Konica Minolta aims to promote innovation and contribute more proactively to sustainability.

Three Green Activities Green Products Certification System | Certified Products in Fiscal 2011

Office Equipment

Monochrome MFPs

Green Products Plus

bizhub 652/552

Supporting a recycling-oriented society

- The industry's first using fire resistance and recycled PET (As of the February 2012 launch date). [The first in the industry](#)
- Adopted plant-based biomass resin for main unit and toner.
- Increased the operational life of developer unit about five times (compared to our conventional model).



Green Products

bizhub 42/36

Supporting a recycling-oriented society

- The industry's smallest and lightest in the A3 MFPs (as of the November 2011 launch).
- Adopted plant-based biomass resin for toner and a label on the body.



Color MFPs

Green Products

bizhub C25

Supporting a recycling-oriented society

- Top class lightweight (45% reduction compared to our conventional model).
- Adopted plant-based biomass resin for toner.



Green Products Plus

bizhub C754/654

Preventing global warming

- Best in class in low power consumption (TEC) (as of the February 2012 launch). [The top of the industry](#)
- bizhub C754 :5.66kWh/week
- bizhub C654 :4.94kWh/week



Supporting a recycling-oriented society

- Best in class in compact size (as of the February 2012 launch). [The top of the industry](#)
- The industry's first using fire resistance and recycled PC/PET (as of the February 2012 launch date). [The first in the industry](#)

Performance Materials

TAC film for LCD polarizers

Green Products Plus

VA-TAC series / Optical thin TAC series

Supporting a recycling-oriented society

- Optimizing the formula made this the industry's top thin film product. [The top of the industry](#)

Green Products Plus

UY series / UA series

Reducing the risks from chemical substances

- Slashed the risk of chemical substances and improved film properties by the unique formula. [The first of the industry](#)

Three Green Activities Green Products Certification System | Certified Products in Fiscal 2011

Optical Products

Zoom Lenses for Digital Still Cameras

Green Products

Green Products Registration No. OT-1

Preventing global warming

- 33% reduction of CO₂ emissions from product usage (compared to our previous device).
- 20% reduction of CO₂ emissions throughout product life cycle (compared to our previous device).

Green Products

Green Products Registration No. OT-5

Preventing global warming

- 11% reduction of CO₂ emissions from manufacturing process of lenses (compared to our previous device).

Supporting a recycling-oriented society

- 16% of weight reduction (compared to our previous device).

Green Products

Green Products Registration No. OT-2

Supporting a recycling-oriented society

- 24% of weight reduction (compared to our previous device).

Green Products

Green Products Registration No. OT-6

Supporting a recycling-oriented society

- 12% of volume reduction (compared to our previous device).

LED shelf lighting for refrigerator/freezer showcases

Green Products Plus

Green Products Registration No. OT-3

Preventing global warming

- Development of a specially-shaped light guiding panel that effectively spreads the light from LEDs allowed a reduction of approximately 70% of the energy consumption of fluorescent shelf lighting. [The top of the industry](#)



Supporting a recycling-oriented society

- Has over double the life of fluorescent lighting.

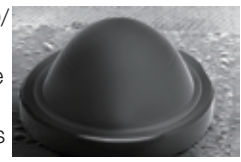
BD/DVD/CD-compatible plastic single objective lens for optical disks

Green Products Plus

Green Products Registration No. OT-4

Supporting a recycling-oriented society

- The industry's first BD/DVD/CD-compatible plastic single objective lens for optical disks using diffraction optics technology. The use of petroleum-based resources has been reduced by over 50% (compared to our conventional devices). [The first in the industry](#)
- Smaller size made possible by reducing approximately 30% off the total length and outside diameter (compared to our conventional devices). [The top of the industry](#)



Glass Substrates for HDDs

Green Products Plus

Green Products Registration No. OT-7, OT-8

Supporting a recycling-oriented society

- Reducing cerium abrasive usage significantly by manufacturing process innovation technology. [The top of the industry](#)
- Improving storage capacity of hard disk per unit of weight.
 - OT-7 :88% increase
 - OT-8 :194% increase (compared with OT-7, 56% increase)



Three Green Activities Green Products Certification System | Certified Products in Fiscal 2011

Measuring Instruments

Reference PV Cell

Green Products

AK-100/110, AK-200, AK-120/130/140, AK-300

Preventing global warming

- Until now it has been difficult for anyone other than testing laboratories with specialized equipment to evaluate solar cells. The Reference PV Cell AK-200 makes it possible for development and manufacturing sites to obtain highly reliable values and therefore is contributing to the R&D and rapid popularization of solar cells. (Contribution to the general adoption of renewable energy)



Chlorophyll Meter

Green Products

SPAD-502Plus

Restoring and preserving biodiversity

- Compared with other methods for measuring the amount of chlorophyll in plants such as rice, including chlorophyll measurement, infrared digital camera analysis and so on, the SPAD-502Plus is portable and enables quick, simple and non-destructive measurement. Understanding the growth of crops makes it possible to apply the optimum quantity of fertilizer, avoiding over-fertilization and contributing to reduced environmental impact. (Sustainable use of biological resources)



Spectrophotometer

Green Products

CL-500A

Preventing global warming

- CL-500A is the world's first portable spectrophotometer calibrated to JIS/DIN standards. It is capable of evaluating how well the colors of objects can be rendered (color rendering). As a tool for evaluating color rendering, a diagnostic criteria for installed lighting proposed by the Ministry of the Environment in its Basic Policy for the Promotion of Procurement of Eco-Friendly Goods and Services, it contributes to research and development and quality improvements in energy-saving lighting, bearing in mind the quality of light.



Chroma Meter

Green Products

CL-200A

Preventing global warming

- CL-200A is a handheld device for measuring color temperature based on miniaturization, optical and filter technologies. It contributes to the development of energy-saving lighting and lighting control systems that take into account the quality of light, such as the safety and comfort of the light environment.



Illuminance Meters

Green Products

T-10A / MA

Preventing global warming

- As a high-precision, high-quality portable illuminance meter with multipoint measurement functions, it contributes to promoting energy-saving design in a wide range of fields related to lighting. It is an effective tool for checking not only illumination light sources themselves, but also light intensity and quality control and the energy-saving and safety properties of lighting in production areas and office environments.



Three Green Activities Green Products Certification System | Certified Products in Fiscal 2011

Healthcare Products

Cassette Digital Radiography Detector

Green Products Plus

AeroDR

Preventing global warming

- Energy consumption when reading images has been cut by approximately 60%, and 90% when on standby (compared to our conventional devices). Continuous standby has been extended to 16 hours.



Supporting a recycling-oriented society

- Main unit weight 2.9kg (including battery). The world's lightest wireless DR (as of the April 2011 launch).

The first in the industry

Green Products Plus

AeroDR 17x17HQ

Preventing global warming

- Energy consumption when reading images has been cut by approximately 60%, and 90% when on standby (compared to our conventional devices). Continuous standby has been extended to 16 hours.



Supporting a recycling-oriented society

- Main unit weight 3.6kg (including battery). The world's lightest wireless DR of 17x17 inches (as of the February 2012 launch).

The first in the industry

Desktop CR

Green Products Plus

REGIUS Σ

Preventing global warming

- Power consumption at 100VA, less than 1/10 that of a film processor.
- 64% reduction of CO₂ emissions throughout product life cycle (compared to our conventional CR)



Supporting a recycling-oriented society

- The world's lightest cassette CR system at 28kg (as of the April 2011 launch).

The first in the industry

Industrial Inkjet

Inkjet Printheads

Green Products

KM1024 Series (KM1024L/ KM1024M/ KM1024S)

Preventing global warming

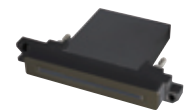
- Approximately 50% reduction of CO₂ emissions during product usage by the development of the low-capacitance actuator (compared to our conventional devices).

Reducing the risks from chemical substances

- Approximately 70% reduction of hazardous chemical substances (compared to our conventional devices).

Supporting a recycling-oriented society

- Approximately 20% reduction of the amount of petroleum-based resources usage. (compared to our conventional devices).



- Approximately 20% reduction of the space to be equipped and approximately 20% of weight reduction by slimming of the head (compared to our conventional devices).
- Approximately 70% reduction of consumption of the rare metal (compared to our conventional devices).

* The above data applies to the environmental performance of KM1024M (14p).

Three Green Activities Green Factory Certification System

Operating a unique certification system to enhance environmental activities at production sites

Konica Minolta has implemented its unique Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites since January 2010. This system has two levels of targets. The Level 1 targets for fiscal 2011 are preliminary goals representing milestones on the way to the Level 2 targets, which are to be achieved by fiscal 2015.

In this system, not only progress against targets but also the implementation process is evaluated. In order to achieve clarity in the evaluation, guidelines have been prepared and a way created to quantify implementation conditions with a score. The guidelines bring together all of Konica Minolta's know-how in environmental measures, and are comprised

of approximately 250 implementation items as well as the evaluation standards for each item. The Group uses the guidelines to improve the quality of its activities.



green factory

Green Factory Certification Standards

Objectives	Management Indicators		Level 1	Level 2
Preventing global warming	CO ₂ emissions (per unit of production ^{*1})		12% reduction ^{*5}	20% reduction ^{*5}
Supporting a recycling-oriented society	Zero waste activities	Waste discharged externally ^{*2} (per unit of sales)	30% reduction ^{*5}	50% reduction ^{*5}
		Final disposal rate of Total waste	0.5% or less	0.5% or less
	Petroleum-based resource waste ^{*3} (per unit of sales)		30% reduction ^{*5}	50% reduction ^{*5}
Reducing the risks of chemical substances	Atmospheric emissions of volatile organic compounds (VOCs)		Achievement of fiscal 2011 targets for each site in accordance with Medium-Term Environmental Plan 2015	Achievement of fiscal 2015 targets for each site in accordance with Medium-Term Environmental Plan 2015
	Guidelines for managing soil contamination risk		—	Consistent with guidelines
Restoring and preserving biodiversity	Guidelines for biodiversity preservation (consideration of water resources and wastewater, and proper management of greenery at factories)		—	Consistent with guidelines
Guideline-based activities	Achievement rate of implemented items ^{*4}		70% or more	90% or more

^{*1} **Per unit of production:** Environmental impact in terms of production output or production volume. Each business unit selects the measure that enables its productivity versus CO₂ emissions to be evaluated appropriately.

^{*2} **Waste discharged externally:** Volume discharged outside Konica Minolta sites, obtained by subtracting the internally recycled and reduced volumes from the total waste generated in production processes.

^{*3} **Petroleum-based resources waste:** Volume of petroleum-based out of total volume of waste discharged externally.

^{*4} The guidelines have a 4-point evaluation benchmark ranging from 0 to 3 points for each implemented item and a standard score which serves as the performance target. The achievement rate refers to the percentage of items that meet the standard score relative to all items.

^{*5} The base year is fiscal 2005. However, in the event that there is a significant change to production items or production conditions due to business reorganization, the base year may be revised according to the Group's internal regulation.

Relevant Information ● Guidelines for Managing Soil Contamination Risk ▶ P. 38
● Guidelines for Biodiversity Preservation ▶ P. 40

Three Green Activities Green Factory Certification System | Level 1 Achievement Units

All of the 22 business units* have achieved Level 1 by the end of fiscal 2011.

* A single business unit is an organization engaged in the same production activities even across different locations. A single location may include several business units.

Green Factory Level 1 Achievement Units

● Preventing global warming ▲ Supporting a recycling-oriented society ◆ Reducing the risks of chemical substances

Business Unit	Product	Main Measures	Achievement Year
Konica Minolta Supplies Manufacturing Co., Ltd.	● Consumables for MFPs and laser printers (photoconductor drum and developer)	<ul style="list-style-type: none"> ● Effective use of polymerization reaction heat; reduction of steam loss; improvement of efficiency with consolidated facilities; introduction of use of waste heat from dehumidifiers ▲ Change in the method of cleaning the machinery when changing over products; reduction of toner collection loss when filling toner bottles ◆ Introduction of solvent recovery equipment; technological establishment of alternative formulation of solvent and its implementation in production 	2010
Konica Minolta Supplies Manufacturing Kansai Co., Ltd.	● Developer for MFPs and laser printers	<ul style="list-style-type: none"> ● Optimization of supply pressure of air compression equipment; improvement of production efficiency by modifying facilities ▲ Reduction of the product changeover frequency; improvement of yield percentage during changing 	2010
Konica Minolta Electronics Co., Ltd.	● Electrical circuit boards, optical sensor and various precision injection molded articles	<ul style="list-style-type: none"> ● Improvement of efficiency of production with introduction of energy-saving production facilities ▲ Blocking of mold and downsizing of runners; review of part delivery methods; reduction of defective circuit boards 	2010
Konica Minolta Business Technologies (Dongguan) Co., Ltd.	● MFPs, laser printers and related parts and consumables	<ul style="list-style-type: none"> ● Improving assembly process efficiency; changeover to vaporization cooling; switching to energysaving, high-efficiency lamps ▲ Changing packaging materials such as cardboard used for parts to returnable containers; increasing reuse of left-over plastic from molding process of runners 	2010
Konica Minolta Supplies Manufacturing U.S.A., Inc.	● Developer for MFPs and laser printers	<ul style="list-style-type: none"> ● Countermeasure against air leaking of compressors; improvement of facilities' setup condition; Increase in productivity with work improvement ▲ Introduction of returnable wooden shipping pallets; optimization of loaded quantity; larger lots of packaging form for delivery 	2011
Konica Minolta Supplies Manufacturing France S.A.S.	● Developer for MFPs and laser printers	<ul style="list-style-type: none"> ● Improvement of facilities operating ratio; reduction in air-conditioning operating hours; reduction in takt time ▲ Introduction of returnable boxes of bulk toner; simplified and larger lots of packaging for delivery; reduction of toner collection loss when filling toner bottles 	2011
Toyohashi Precision Products Co., Ltd.	● Cartridges for MFPs, various precision manufactured parts, etc.	<ul style="list-style-type: none"> ● Reduction of air-conditioning load (introduction of highly-efficient chiller, introduction of inverters for pumps, etc.) ▲ Reduction of scrap of metal stamping materials(improvement of mold, minimizing feeding pitch, reduction of defective units, increase in yield percentage, etc.) 	2011
Konica Minolta Business Technologies (Wuxi) Co., Ltd.	● MFPs, consumables for MFPs, and related options	<ul style="list-style-type: none"> ● Increase in productivity (downsizing of production area with improvement of working efficiency); switching to high-efficiency lamps ▲ Introduction of returnable cardboard; reuse of shipping pallets; reduction of packaging materials through returning boxes of parts to suppliers 	2011
Konica Minolta Chemical Co., Ltd.	● Electrophotographic chemicals, chemicals for photosensitive materials, etc.	<ul style="list-style-type: none"> ● Optimization of production methods associated with changes in product lineup; introduction of inverters for pumps and implementation of quantity control ▲ Expansion of internal recycling of solvents; expansion of proper treatment of wastewater at company treatment facilities ◆ Expansion of scrubbers (flue gas cleaning systems); appropriate operation and maintenance of extraction facilities through maintenance and inspection 	2010
Konica Minolta Opto, Inc. Performance Materials Business Department	● TAC film for LCD polarizers and high-precision photo plates	<ul style="list-style-type: none"> ● Increase in productivity; improving efficiency in energy consumption ▲ Increase in productivity; further improvement of thinning film ◆ Increase the solvent recovery ratio 	2011

Three Green Activities Green Factory Certification System | Level 1 Achievement Units

● Preventing global warming ▲ Supporting a recycling-oriented society ◆ Reducing the risks of chemical substances

Business Unit	Product	Main Measures	Achievement Year
Konica Minolta Opto, Inc. Hachioji component business	● Pickup lenses for optical disks	<ul style="list-style-type: none"> ● Increase in productivity; improvement of facilities and utilities (insulation of mold temperature controllers and hoses) ▲ Increase in productivity; recycling of waste runners into containers for shipping 	2010
Konica Minolta Opto Products Co., Ltd.	● Pickup lenses for optical disks, and lenses for laser printers	<ul style="list-style-type: none"> ● Increase in productivity; improvement of facilities and utilities (insulation of mold temperature controllers and hoses, improving efficiency in cold water production) ▲ Increase in productivity; recycling of waste runners into containers for shipping 	2010
Konica Minolta Sensing, Inc. Sakai Site	● Measuring instruments for industrial and healthcare applications	<ul style="list-style-type: none"> ● Improvement of production efficiency; changeover to high-efficiency facilities 	2010
Konica Minolta Opto (Dalian) Co., Ltd.	● Pickup lenses for optical disks, glass lenses and lens units	<ul style="list-style-type: none"> ● Increase in productivity; reduction of the number of lamps and switching to high-efficiency lamps ▲ Effective use of waste runners; reinforcement of activities of separating waste and bringing back the trash; introduction of returnable cardboard; reuse of cushioning materials ◆ Abolishing totally the use of trichloroethylene; reduction of discharge to the atmosphere of IPA 	2011
Konica Minolta Optical Products (Shanghai) Co., Ltd.	● Lens units, optical modules, prisms, etc.	<ul style="list-style-type: none"> ● Increase in productivity; improvement of facilities and utilities (improving efficiency of vapor deposition equipment and air conditioner) ▲ Introduction of returnable cardboard; reuse of trays of parts; reuse of IPA ◆ Reduction of discharge to the atmosphere of IPA 	2011
Konica Minolta Opto, Inc. Osakasayama Site and Itami Site, Konica Minolta Opto Device Co., Ltd., and Konica Minolta Glass Tech. Co., Ltd. Itami Plant	● Lens units, glass substrates for HDDs, and glass lenses	<ul style="list-style-type: none"> ● Increase in productivity; Improvement of production facilities (Improving efficiency of furnaces); improvement of utilities (air conditioner and air compressor) ▲ further improvement of thinning glass substrate materials; recycling of the cleaning solvent; reduction of plastic containers by the use of the proprietary container ◆ Reduction of discharge to the atmosphere of IPA 	2011
Konica Minolta Glass Tech (M) Sdn. Bhd.	● Glass substrates for HDDs	<ul style="list-style-type: none"> ● Increase in productivity; improvement of utilities (improving efficiency of air conditioning and lighting) ▲ Reduction of discharge of polishing sludge (reducing the amount and moisture content of polishing sludge) ◆ Reduction of discharge to the atmosphere of IPA 	2011
Konica Minolta Medical & Graphic, Inc. Kofu Site	● Radiographic film	<ul style="list-style-type: none"> ● Increase in productivity with faster film transfer in the production process; halting of air conditioning outside production times ▲ Expansion of recycling of coating solvent; improvement in production yield percentage ◆ Operation and maintenance of deodorization equipment; reduction of changeover losses 	2010
Konica Minolta Technoproducts Co., Ltd. Sayama Assembly of equipment such as medical diagnostic imaging systems	● Medical diagnostic imaging systems	<ul style="list-style-type: none"> ● Reduction of storage area through just-in-time delivery of parts; reduction of assembly area by revising the assembly line configuration ▲ Implementation of paperless processes using IT for work instructions; introduction of returnable containers for parts 	2010
Konica Minolta Technoproducts Co., Ltd. Sayama Production of photostimulable phosphor plates using vapor deposition method	● Photostimulable phosphor plates	<ul style="list-style-type: none"> ● Improvement of yield percentage; improvement of operating ratio ▲ Increase in yield percentage 	2010
Konica Minolta Technoproducts Co., Ltd. Hino Production of photostimulable phosphor plates using coating method	● Photostimulable phosphor plates	<ul style="list-style-type: none"> ● Reduction of drying load using a new formulation ▲ Reduction of loss of coating solution 	2010
Konica Minolta IJ Technologies, Inc.	● High productivity inkjet printheads	<ul style="list-style-type: none"> ● Increase in productivity with enhancing facilities and process improvement 	2011

Three Green Activities **Green Marketing Activities**

Working on reduction of the environmental impact both in sales and service activities and product usage

In order to reduce the environmental impact of sales and service, Konica Minolta has introduced initiatives in accordance with the Medium-Term Environmental Plan 2015 to reduce CO₂ emissions from distribution, the amount of packaging, the amount of fuel used by company vehicles, and to recover old products and reuse their materials. Similarly, in

order to facilitate the reduction of the environmental impact incurred when customers use its products, Konica Minolta is focused on providing Green Products and Optimized Print Services (OPS) solutions that support the optimization of the document printing environment in business offices.

Activity Policy	Objectives	Details
Promoting activities to reduce the environmental impact of product usage	Products	Promoting and expanding sales of Green Products
	Solutions	Supporting the optimization of documentation environments with a focus on Optimized Print Services (OPS) that fully manage office equipment operations, optimize equipment setups improve operating efficiency.
Continuing activities to reduce the environmental impact according to the Medium-Term Environmental Plan 2015	Reduction of CO ₂ emissions from distribution	Inventory deployment and supply adjustment based on demand forecasts, applying the optimal transport routes and methods, improving loading rates and vehicle turnover rates, optimal placement of distribution centers, and integration of reverse logistics, etc.
	Reduction of packaging materials usage	Collection, resource recovery, and recycling of things such as devices, consumables packaging, pallets, and styrofoam, as well as simplification of packaging and recycling for service parts
	Reduction of company vehicle's fuel consumption	Maximizing distance efficiency, using eco-vehicles (fuel-efficient cars), eco-driving practices, reducing the number of vehicles, driving management systems, and video conferencing, etc.
	Optimization of collection and recycling	Reorganization of the collection and recycling system, reusing consumables and other parts, and offering re-manufactured or refurbished devices

Features **Providing Solutions to Reduce Customer's Environmental Impact**

Green Marketing emphasizes reducing the environmental impact of sales and service activities as well as the environmental impact of customer usage of products.

Konica Minolta Business Solutions (UK) Ltd., an office equipment and solutions sales company, developed the OPS Green Audit Process, an original program that conducts a comprehensive analysis of the customer's document workflow, including its environmental impact. The program allows companies who do not have staff trained in environmental issues to analyze power consumption and other data for their document production, calculate the resulting CO₂ emissions and devise countermeasures. By adjusting workflows based on this process, they can reduce their environmental impact and cut operating costs.

In November 2011, the international NPO The Green Organisation recognized the merits of this service by awarding the company the Green Apple Award.



Receiving the Green Apple Award

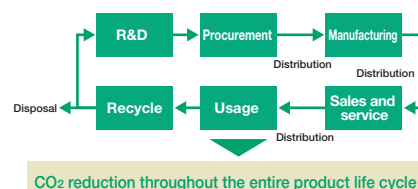


Basic Concept / Targets and Results

Basic Concept

Recognizing that the prevention of global warming is an important responsibility of a manufacturer, Konica Minolta is taking steps to reduce CO₂ emissions throughout the entire product life cycle. The Group is committed to building a sustainable earth and society by working to reduce CO₂ emissions throughout the product life cycle, including not only direct CO₂ emissions from its business activities (e.g. emissions from product manufacturing and from vehicles used for sales and services), but also indirect emissions (e.g. emissions from use of products and distribution).

Reduction of CO₂ Emissions throughout the Product Life Cycle



Targets and Results for Fiscal 2011

Reaching CO₂ emissions reduction goals throughout the Product Life Cycle

As part of its effort to reduce CO₂ emissions throughout the entire product life cycle, Konica Minolta has set CO₂ reduction targets for each stage of the life cycle, including product usage, manufacturing, distribution, and sales and services. Building on the results of reduction efforts implemented in previous years, in fiscal 2011 Konica Minolta set reduction targets that were even more challenging than the fiscal 2015 goals. The Group reached its fiscal 2011 goal for CO₂ emissions reduction across the entire product life cycle, primarily by reducing the CO₂ emitted from product usage, which accounts for nearly half of total emissions.

Konica Minolta is paying particular attention to the Business Technologies business, which accounts for over 90% of the total CO₂ emissions from product usage, and is pursuing the development of energy-saving product technologies.

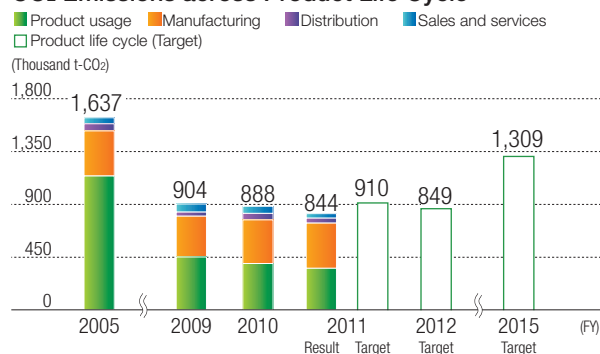
The Group is reducing CO₂ emissions from production in accordance with the certification standards of its Green Factory Certification System. The effort based on this system since fiscal 2005 has resulted in the reduction of approximately 100,000 tons of CO₂ emissions for fiscal 2011.

Working to reduce CO₂ emissions from distribution, Konica Minolta has been striving to curtail the use of air transport. Unfortunately, in fiscal 2011 production and

shipping delays caused by the difficulties in procuring parts after the flooding in Thailand forced the Group to use more air transport to make up for production delays of key products during the fourth quarter. As a result, CO₂ emission reduction targets were not met.

Relevant Information ● Green Factory Certification System ▶ P. 20

CO₂ Emissions across Product Life Cycle



* Data for past fiscal years have been adjusted to reflect corrections in distance data used to calculate CO₂ emissions from distribution.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment	details
Preventing global warming	CO ₂ emissions throughout product life cycle	-44.4%	-48.4%		★★★	
	CO ₂ emissions from product usage	-64.0%	-65.8%	Marketed products with high energy-saving performance	★★★	P.25
	CO ₂ emissions from manufacturing (per unit of sales)	+38.9%	+34.5%	Improved energy efficiency in production	★★★	P.27
	CO ₂ emissions from distribution (per unit of sales)	-23.3%	+4.1%	Reduced air freight	★	P.28
	CO ₂ emissions from sales and service (per unit of sales)	+39.3%	-6.6%	Increased efficiency in sales and services Introduced eco-cars and eco-driving	★★★	P.29

Relevant Information ● Standards for calculating CO₂ emissions ▶ P. 55

CO₂ Emissions from Product Usage

Marketed products with energy-saving technologies to achieve reduction targets

Multi-functional peripherals (MFPs) occupy the largest portion of CO₂ amounts emitted during product usage among all Konica Minolta products.

For this reason, Konica Minolta Business Technologies, Inc. focuses its efforts in developing MFPs that can provide substantial energy-saving performance.

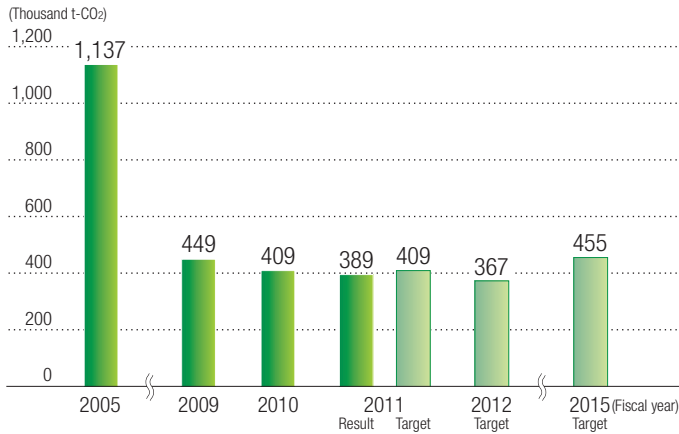
In fiscal 2011, the company launched the bizhub C754/C654 color MFP with best-in-class low power consumption. The launch of this series helped the company reach its target. This series improves upon the energy-saving features of

existing models such as toner with a lower fusing temperature and the IH fusing unit that reduces power consumption in standby mode. It also has a variety of features that reduce environmental impact when in use (Refer to case 1 of page 26).

The Group is also working to design products other than MFPs to reduce CO₂ emissions, and many of them have received Konica Minolta's certification as Green Products.

Relevant Information ● Green Products Certification System ▶ P. 15

CO₂ Emissions from Product Usage



Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
Preventing global warming	CO ₂ emissions from product usage	-64.0%	-65.8%	Marketed products with high energy-saving performance	★★★

Relevant Information ● Standards for calculating CO₂ emissions ▶ P. 55

CO₂ Emissions from Product Usage

Energy-Saving Product Design

Case 1 bizhub C754/C654 MFPs

The bizhub C754/C654 is a series of color MFPs with best-in-class low power consumption. Improvements have been made on the existing polymerized toner so that it is able to fuse at low temperatures. Further, using IH technology, the company has improved the heating efficiency of the fusing heater, cutting power consumption by approximately 10% compared to existing models.

An LED with superior energy-saving properties is used as the light source for the scanner, delivering both energy-savings and faster scanning. The proximity sensor in the control panel is now built-in and the device is now able to return more quickly from "sleep-mode," meaning that energy savings can be realized without sacrificing operating efficiency. These products have been certified as Konica Minolta Green Products Plus.



bizhub C754

Other environmental performance

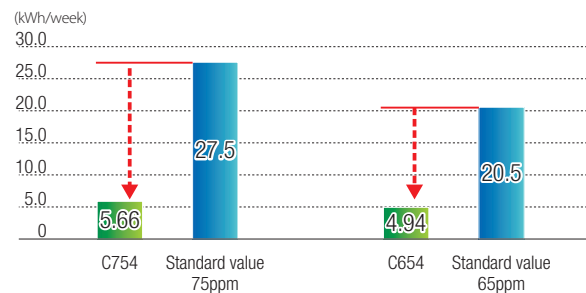
Eco Indicator

The built-in Eco Indicator includes an eco meter which displays toner and paper savings as well as a display for cumulative power usage so users can view their contribution levels.

Weekly timer with learning function

The weekly timer, which sets the on/off times for Sleep mode for each day of the week, now employs a new learning function so it can automatically correct the setting times to the actual usage situations for more effective power saving.

Power Consumption (TEC* Value)

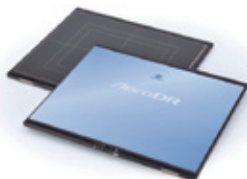


* TEC: Typical Energy Consumption, a measure of energy consumption established by the International Energy Star Program.

Case 2 AeroDR Cassette Digital Radiography Detector

The AeroDR cassette digital radiography detector made by Konica Minolta Medical & Graphic, Inc., now uses far less power while maintaining image quality and processing capacity as a result of a newly developed IC and a variety of

design techniques. Compared to existing models, the AeroDR uses approximately 60% less power when scanning images and approximately 90% less power when on standby.



Aero DR

CO₂ Emissions from Manufacturing

Konica Minolta met its targets through activities related to the Green Factory Certification System

Through operation of its unique Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites, Konica Minolta improved its energy production efficiency and steadily reduced CO₂ emissions from manufacturing.

In fiscal 2011, all 22 business units achieved Green Factory Level 1 (12% reduction*¹ in CO₂ emissions per unit of production*²). The effort based on this system since fiscal 2005 has resulted in the reduction of approximately 100,000 tons of CO₂ emissions for fiscal 2011. As a result, sales per unit

of consumption targets were reached in fiscal 2011.

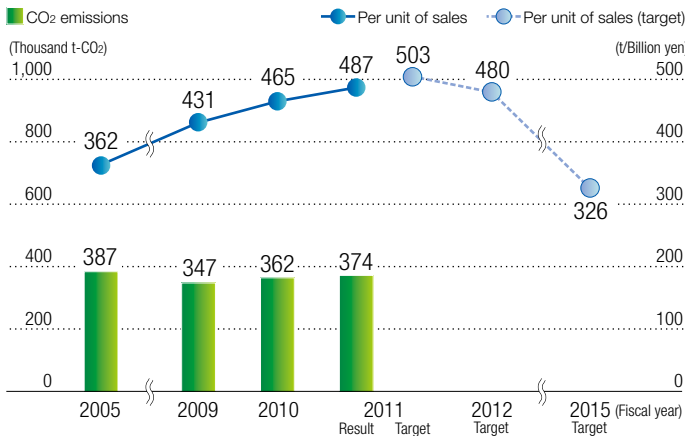
As of fiscal 2012, the Group is working on initiatives to achieve Green Factory Level 2 (20% reduction*¹ in CO₂ emissions per unit of production).

*¹ The base year is fiscal 2005. Based on this numerical value, standards tailored to factory characteristics are established.

*² **Per unit of production:** Environmental impact in terms of production output or production volume

Relevant Information ● Green Factory Certification System ▶ P. 20

CO₂ Emissions from Manufacturing



* Fiscal 2005 data has been restated to reflect the improvement in calculation accuracy.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
	CO ₂ emissions from manufacturing (per unit of sales)	+38.9%	+34.5%	Improved energy efficiency in production	
Preventing global warming	CO ₂ emissions from manufacturing (per unit of sales)	+38.9%	+34.5%	Improved energy efficiency in production	★★★

Relevant Information ● Standards for calculating CO₂ emissions ▶ P. 55

Feature Certification as Top-Level Facilities

In fiscal 2011, two of the Group's major sites, Konica Minolta Tokyo Site Hino and Tokyo Site Hachioji were certified as Top-Level Facilities by the Tokyo Metropolitan Government under the Tokyo Metropolitan Environmental Security Ordinance. Top-Level Facilities are certified by the Tokyo Metropolitan

government as "facilities that have made outstanding progress in implementing measures against global warming." Until fiscal 2011, only 3 factories of private firms were certified as Top-Level, and 2 of those were Konica Minolta factories.

CO₂ Emissions from Distribution

Due to failure to minimize the amount of airfreight, targets were missed by a significant margin

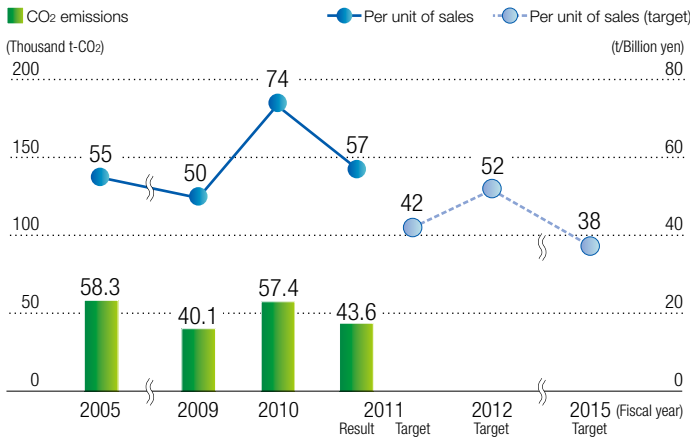
For the same shipment weight transported over an identical distance, cargo shipment by air produces 57 times the amount of CO₂ as shipment by sea (based on GHG Protocol published values). Consequently, Konica Minolta has focused its efforts on reducing air transport.

In fiscal 2011, the Group once again implemented initiatives designed to minimize airfreight; for instance, seeking to reduce negative effects on quality, firmly maintaining development schedules, and improving the ability to demand

forecasts. Still, targets were missed by a significant margin. Progress was made in the first and second quarters, but increases in airfreight came later, caused by delays in production and shipping due to difficulty with procurement as a result of flooding in Thailand since the third quarter and the need to make up for delayed production of core products during the fourth quarter.

The Group will continue working to reduce the amount of airfreight by improving systems throughout the supply chain.

CO₂ Emissions from Distribution



* Fiscal 2005 and 2009 data has been revised to reflect revisions in the distance data for calculation.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
	CO ₂ emissions from distribution (per unit of sales)	-23.3%	+4.1%	Reduced air freight	
Preventing global warming	CO ₂ emissions from distribution (per unit of sales)	-23.3%	+4.1%	Reduced air freight	★

Relevant Information ●Standards for calculating CO₂ emissions ▶ P. 55

CO₂ Emissions from Sales and Service

Konica Minolta promotes the management and reduction of CO₂ emissions from its business vehicles

Konica Minolta promotes the management and reduction of CO₂ emissions from the business vehicles operated by its sales companies around the world.

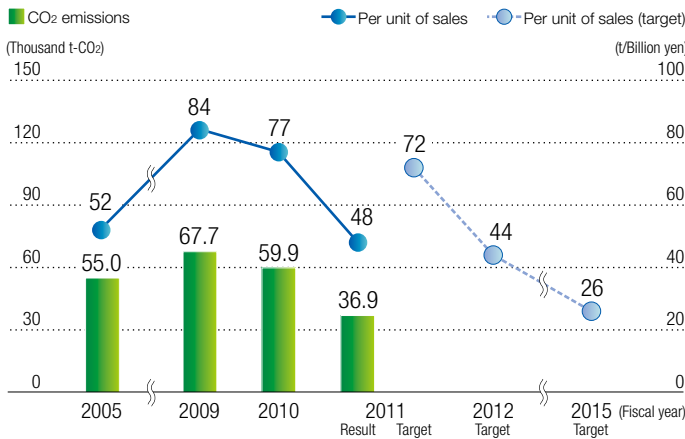
The Group is promoting measures such as reducing the amount of travel through more efficient sales and service activities, introducing eco-friendly vehicles with low emissions of CO₂, and eco-driving to reduce energy consumption.

For example, Konica Minolta Business Solutions Japan Co., Ltd., an office equipment and solutions sales company, has been implementing a “vehicle operation management

system” for company-owned vehicles. This system constantly gathers and stores data about the way company-owned cars are being used, such as the rate of sudden acceleration and deceleration, driving time, fuel consumption, and so on, and is thus able to contribute to eco-driving, helping to improve mileage and reducing the environmental impact of vehicle use.

As a result of these measures, targets were reached in fiscal 2011. Konica Minolta will continue implementing environmental measures at all Konica Minolta sales companies.

CO₂ Emissions from Sales and Service



* Fiscal 2005 and 2010 data has been restated to reflect the improvement in calculation accuracy.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
	CO ₂ emissions from sales and service (per unit of sales)	+39.3%	-6.6%	Increased efficiency in sales and services Introduced eco-cars and eco-driving	
Preventing global warming	CO ₂ emissions from sales and service (per unit of sales)	+39.3%	-6.6%	Increased efficiency in sales and services Introduced eco-cars and eco-driving	★★★

Relevant Information ●Standards for calculating CO₂ emissions ▶ P. 55

Basic Concept / Targets and Results

Basic Concept

Petroleum-based resources are exhaustible, and need to be used efficiently from the perspective of preventing global warming. Konica Minolta is pushing ahead with an approach that focuses on reducing the use of petroleum-based resources as one of its priorities in a recycling-oriented society.

Also, the Group is pursuing a balance between

environmental impact reduction and cost reduction, by promoting (1) the reduction of the use of packaging materials, (2) the reduction of waste discharged externally* from the production process, and (3) the recycling of used products.

* **Waste discharged externally:** Volume discharged outside Konica Minolta sites, obtained by subtracting the internally recycled and reduced volumes from the total waste generated in production processes.

Targets and Results for Fiscal 2011

Reducing resources used in products and using more recycled materials

Konica Minolta is implementing reduction of petroleum-based resource usage via initiatives for each of the following phases of the product life cycle: development, production, and sales and service. The Group is emphasizing the reduction of plastic material and other resources used in products, which account for over 60% of total petroleum-based resource usage. In addition to making products lighter, thinner, shorter and smaller, Konica Minolta is also increasing the use of recycled materials. In fiscal 2011, the Group released various new products featuring reduced resource usage. Konica Minolta Business Technologies, Inc. launched its bizhub C754/C654 color MFPs, which use recycled PC and PET resins.

The Group is reducing the amount of waste discharged externally from manufacturing by improving the production efficiency of each production business unit and increasing the percentage of internal recycling in accordance with

the standards in the Green Factory Certification. In fiscal 2011 the total amount of waste discharged externally from manufacturing was down 3% in comparison with the previous fiscal year. However, since this reduction did not meet the results expected when the measures were established, the reduction target per unit of sales was not reached.

Packaging materials usage reductions did not meet targets due to increases in the usage of packaging materials that were made necessary by increased shipments of large machines such as production print equipment in the Business Technologies business.

In the area of product recycling, Konica Minolta continues to make strides in marketing of re-manufactured MFPs. It also conducted a survey on the collection rates of used products around the world and is preparing new initiatives based on the survey results.

Relevant Information ● Green Factory Certification System ▶ P. 20

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment	details
Supporting a recycling-oriented society	Petroleum-based resource usage (per unit of sales)	+24.0%	+21.4%	Reduced resources used in products Reduced waste in production Introduced eco-cars and eco-driving	★★★	P.31
	Packaging materials usage (per unit of sales)	+2.9%	+12.1%	Reduced packaging through improved design Made packing boxes returnable between production facilities	★★	P.32
	Waste discharged externally from manufacturing (per unit of sales)	+1.6%	+13.9%	Improved production efficiency and promoted internal recycling	★★	P.33
	Product recycling : • Expand sales of re-manufactured MFPs • Enhance recycling systems			Marketed re-manufactured MFPs worldwide Implemented survey on recycling systems	★★★	P.34

* The petroleum-based resource usage, for which reduction targets are set in the Medium-Term Environmental Plan, is calculated by taking the total amount of (1) petroleum-based resource usage in products; (2) petroleum-based resource waste in waste discharged externally from manufacturing; and (3) fuel consumption of sales and service vehicles.

Relevant Information ● Standards for calculating petroleum-based resource usage in products, packaging materials usage and waste discharged externally from manufacturing ▶ P. 56

Reduce Petroleum-Based Resource Usage

Konica Minolta adopted original recycled plastic in MFPs

Konica Minolta has set three themes for reducing the use of petroleum-based resources: the amount of resources such as plastic used in products; waste generated in production; and the fuel consumption of sales and service vehicles.

Of these, the Group is placing particular emphasis on reducing the resources used in products, which account for more than 60% of the total. Besides making products lighter, thinner, shorter and smaller, Konica Minolta is also increasing the use of recycled materials.

In fiscal 2011, the Group is continuing to reduce the amount of resources it uses in various products, including its bizhub C754/654 color MFPs, which use a original recycled plastic and achieve industry-top-class compactness. Many of these products have received Konica Minolta's certification as Green Products.

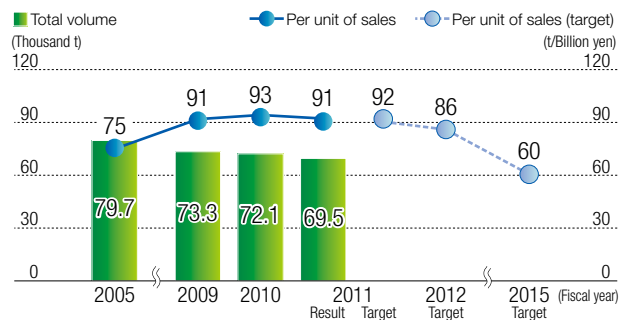
The Group has made efforts to reduce the amount of waste generated during production as part of its Green Factory Certification System. Efforts were made in fiscal 2011 to continue improvements in both productivity and yield and to implement internal recycling of waste solvent.

In an effort to reduce the amount of fuel used during sales and service, distance traveled was reduced by improving efficiency in sales and service operations, eco-cars with better

mileage were introduced, and employees were encouraged to practice eco-driving.

As a result of these measures, fiscal 2011 targets for the use of petroleum-based resources were met.

Petroleum-Based Resource Usage



* Data for past fiscal years have been adjusted to reflect revisions in the amounts of petroleum-based material used in products.

Relevant Information ● Green Products Certification System ▶ P. 15
● Green Factory Certification System ▶ P. 20

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
Supporting a recycling-oriented society	Petroleum-based resource usage (per unit of sales)	+24.0%	+21.4%	Reduced resources used in products Reduced waste in production Introduced eco-cars and eco-driving	★★★

* The petroleum-based resource usage, for which reduction targets are set in the Medium-Term Environmental Plan, is calculated by taking the total amount of (1) petroleum-based resource usage in products; (2) petroleum-based resource waste in waste discharged externally from manufacturing; and (3) fuel consumption of sales and service vehicles.

Relevant Information ● Standards for calculating petroleum-based resource usage in products ▶ P. 56

Features Effective Use of Resources with an Original Recycled Plastic

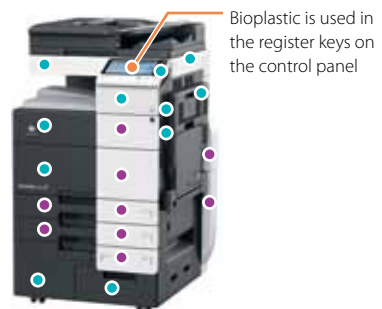
PET*1 is a widely used plastic material. In recent years, it has become more and more popular from the perspective of recycling. However, the poor durability of recycled PET has made it difficult to use as outer casing for MFPs. Konica Minolta Business Technologies has developed a recycled plastic by evenly mixing recycled PET and recycled PC*2 to create a material that has the required strength and fire-retardant properties to meet safety standards and can be mold injected. This original recycled plastic was first used in the bizhub C754 and C654 MFPs. Recycled PET is made from recovered and recycled plastic drinking bottles, and recycled PC is made from recovered and recycled one-gallon jugs from water coolers. The new recycled plastic material makes effective use of existing resources.

*1 PET: Polyethylene terephthalate, a type of polyester

*2 PC: Polycarbonate, a type of thermoplastic resin

*3 ABS: Acrylonitrile butadiene styrene, a type of thermoplastic resin

Parts Using Environmentally Responsible Plastic



● Recycled PET/PC plastic
● Recycled PC-ABS*3 plastic

Reduce Packaging Materials Usage

Packaging materials redesigned and other measures taken, but reduction targets were missed

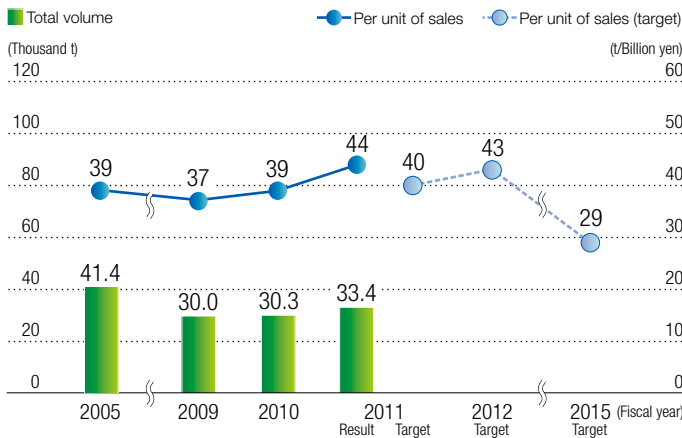
Konica Minolta Business Technologies, Inc., a core business company of the Group, is working to reduce the amount of packaging materials for MFPs, which are its main product.

Specifically, the company is reducing the weight of packaging by improving its design, reusing the boxes used for transporting toner between production sites, and using returnable packaging boxes for service parts at sales companies.

The calculation methods for the amount of packaging

materials used were revised in fiscal 2011 in order to improve accuracy, and the 2011 targets were also revised accordingly. However, increases in the packaging material used by Konica Minolta Business Technologies due to increased shipments of its large machines such as production print equipment led to a failure to meet the revised reduction targets. New targets based on the new calculation method has been set as of fiscal 2012, and the Group will implement further efforts to meet them.

Packaging Materials Usage



* Data for past fiscal years have been adjusted to reflect changes in calculation method for the amount of packaging materials.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
Supporting a recycling-oriented society	Packaging materials usage (per unit of sales)	+2.9%	+12.1%	Reduced packaging through improved design Made packing boxes returnable between production facilities	★★

Relevant Information ●Standards for calculating packaging materials usage
▶ P. 56

Feature Recycling Centre for Used Packaging Materials

Konica Minolta Business Solutions (UK) Ltd. created a recycling centre called “Greenhub” at its main warehouse in an effort to zero out used packaging material from MFPs sent to landfill.

At the centre, the company sorts the packaging materials into cardboard, styrofoam, and film, then crushes and compacts the materials, and finally sells them to a local recycling operator. Recycling is made easy by disposing of the materials in this way, and the effort will also reduce the environmental impact that accompanies waste transportation.



Styrofoam crusher

Reduce Waste Discharged Externally from Manufacturing

Konica Minolta pursues activities related to the Green Factory Certification System

Konica Minolta is promoting the improvement of production efficiency and internal recycling and is constantly working to reduce the amount of waste discharged externally*¹ from manufacturing. It tackles all this using its Green Factory Certification System, which is designed to allow a comprehensive evaluation of the environmental activities at production facilities.

In fiscal 2011, all 22 business units achieved Green Factory Level 1 (30% reduction*² in waste discharged externally per unit of production*³). As a result of measures implemented since fiscal 2005, waste reductions amounted to approximately 8,500 tons in fiscal 2011. In fiscal 2011, the total volume was reduced by 3% from the previous fiscal

year. However, since this reduction did not meet the results expected when the measures were established, the reduction per unit of sales did not hit the target.

As of fiscal 2012, the Group is working on initiatives to achieve Green Factory Level 2 (50% reduction*² in waste discharged externally per unit of production).

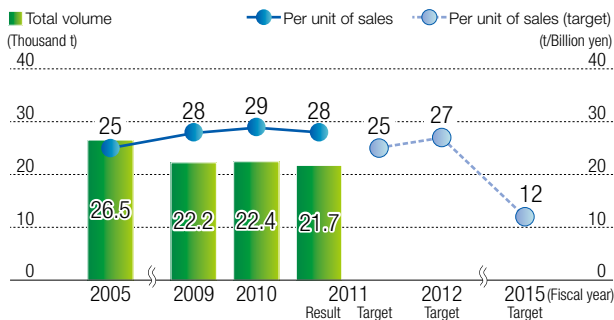
*¹ **Waste discharged externally:** Volume discharged outside Konica Minolta sites, obtained by subtracting the internally recycled and reduced volumes from the total waste generated in production processes.

*² Basically, fiscal 2005 is the base year. In principle, these values are set to match the characteristics of each plant.

*³ **Per unit of production:** Environmental impact in terms of production output or production volume.

Relevant Information ● Green Factory Certification System ▶ P. 20

Waste Discharged Externally from Manufacturing



* Fiscal 2005 data have been revised to reflect slight revisions made by some sites.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
Supporting a recycling-oriented society	Waste discharged externally from manufacturing (per unit of sales)	+1.6%	+13.9%	Improved production efficiency and promoted internal recycling	★★

Relevant Information ● Standards for calculating waste discharged externally from manufacturing ▶ P. 56

Product Recycling

Konica Minolta continues to build a global system for recycling of resources

The Medium-Term Environmental Plan 2015 calls for building a system for recycling used products in each region, with the aim of obtaining a 90% recycling rate or more. The Group, focusing on its office equipment and consumable supplies, has been working to implement various measures.

In fiscal 2011, Konica Minolta proceeded with plans to

market re-manufactured MFPs worldwide as a priority initiative and conducted surveys of the recycling systems around the world.

In fiscal 2012, the Group plans to move ahead on preparations for marketing of re-manufactured MFPs and look into recycling of packaging materials and components.

Fiscal 2011 Targets and Results

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets	Fiscal 2011 Results	Self-assessment
Supporting a recycling-oriented society	Product recycling : <ul style="list-style-type: none"> • Expand sales of re-manufactured MFPs • Enhance recycling systems 	Marketed re-manufactured MFPs worldwide Implemented survey on recycling systems	★★★

Recovery and Recycling of Office Equipment

Recovery and Recycling Printer Cartridges

Konica Minolta has established a system for free-of-charge recovery and recycling of used toner cartridges for laser printers in 18 European countries and Japan. Furthermore, in the United States the scope of the system has been expanded to include used MFP toner bottles also. In North America and Europe, this system is called the Clean Planet Program.



U.S. website



European website

Recovery and Recycling of Used MFPs and Laser Printers

To facilitate the recovery and recycling of used products, Konica Minolta has established systems in each area that are suited to the regulations and markets of respective countries around the world.

In Japan, the company has received approval from the Ministry of the Environment to recover MFPs, copiers, and printers sold in Japan based on a special system for wide-area treatment of industrial waste.

Konica Minolta operates a fee-based recovery program for collecting and recycling used laser printers and copiers from corporate clients. At this time, the program does not handle used equipment disposed of by individual customers,

as such equipment is classified as general waste.

Outside Japan, Konica Minolta is undertaking recycling programs tailored for specific countries and their markets. In Europe, the company has adopted measures in conformity with the EU directive on the disposal of waste electrical and electronic equipment (WEEE).

Machines collected in Japan in fiscal 2011

Estimated collection rate	71.0%
Recycling rate	98.6% (by weight)

Basic Concept / Targets and Results

Basic Concept

There is international consensus on the need for companies that manufacture and use chemical substances to take steps to minimize the adverse effects of chemicals, not only on human health, but also on the environment. Based on this shared perception, many countries around the world are currently revising their regulations concerning chemical substances.

Having taken a position in advance of this new international current, based on a concept known as the "precautionary principle," Konica Minolta has focused on enhancing its advance evaluation of chemical risks, reducing the emission of harmful substances into the atmosphere,

eliminating hazardous substances from production processes and products, and improving safety management for workers and product users.

The Medium-Term Environmental Plan 2015 sets targets for strict management of chemical substances, including the entire supply chain,* and reduction of atmospheric emission of volatile organic compounds (VOCs) in order to further reduce the risk of chemical substances.

* **Supply chain:** In this case, the process by which raw materials from upstream companies pass through component manufacturers and are delivered to Konica Minolta.

Targets and Results for Fiscal 2011

Eliminating substances targeted for reduction and reducing VOC emissions

Konica Minolta is carrying out the planned elimination of substances targeted for reduction as part of its chemical substance management initiatives applied throughout the supply chain. In fiscal 2011, a risk assessment of the substances targeted for reduction under the REACH regulations*1 was carried out. The Group created a plan for the purpose of compliance with the revised RoHS Directive*2.

Since 1993 Konica Minolta has had initiatives in place to reduce the emissions of volatile organic compounds (VOCs) which the Group determines to have a high risk in terms of

hazard and volume into the atmosphere around its production sites throughout the world. In fiscal 2011, while production levels were on the rise, the amount of VOCs emitted remained the same as the previous fiscal year and reduction targets were met.

*1 **REACH regulations:** Regulations enacted by the EU in June 2007 concerning the registration, evaluation, authorization and restriction of chemicals, to consolidate existing regulations concerning chemical substances.

*2 **RoHS Directive:** Regulations enacted by the EU in July 2006 prohibiting the use of specified hazardous substances in electrical and electronic equipment.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment	details
Reducing the risk of chemical substances	Chemical substance management : <ul style="list-style-type: none"> Study alternatives to substances to be reduced Compliance with the China RoHS*1 		Implemented risk assessment on substances to be reduced Continued monitoring for compliance with the China RoHS and prepared plans for compliance with the revised RoHS Directive		★★★	P.36
	Atmospheric emissions of volatile organic compounds (VOCs) (environmental impact index*2)	-67.0%	-73.4%	Implemented reduction plan	★★★	P.37

*1 **China RoHS:** Administrative Measure on the Control of Pollution Caused by Electronic Information Products. Hazardous substances regulations enacted by China in March 2007.

*2 **Environmental impact index:** An index unique to Konica Minolta designed to measure impact on the environment, obtained by multiplying VOC emission volume by a hazard factor (impact on human health and environmental impact) and a location factor.

Relevant Information ● Standards for calculating atmospheric emissions of VOCs ▶ P. 56

Chemical substance management

Preparing a system designed to comply with regulations around the world

As chemical regulations are made more stringent, Konica Minolta is in the process of preparing a system designed to meet the demands of regulations around the world quickly and confidently. In fiscal 2011, the Group conducted risk assessments on substances to be reduced under REACH regulations.*1 The Group will survey alternative materials and technologies and create a replacement plan. A plan was created for the purpose of compliance with the revised RoHS*2

Directive that was officially announced in July 2011. Following this plan, the Group will proceed with measures designed to facilitate self-declaration of conformity with RoHS.

*1 **REACH regulations:** Regulations enacted by the EU in June 2007 concerning the registration, evaluation, authorization and restriction of chemicals, to consolidate existing regulations concerning chemical substances.

*2 **RoHS Directive:** Regulations enacted by the EU in July 2006 prohibiting the use of specified hazardous substances in electrical and electronic equipment.

Fiscal 2011 Targets and Results

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets	Fiscal 2011 Results	Self-assessment
Reducing the risk of chemical substances	Chemical substance management : <ul style="list-style-type: none"> • Study alternatives to substances to be reduced • Compliance with the China RoHS* 	Implemented risk assessment on substances to be reduced Continued monitoring for compliance with the China RoHS and prepared plans for compliance with the revised RoHS Directive	★★★

* **China RoHS:** Administrative Measure on the Control of Pollution Caused by Electronic Information Products. Hazardous substances regulations enacted by China in March 2007.

Green Procurement System

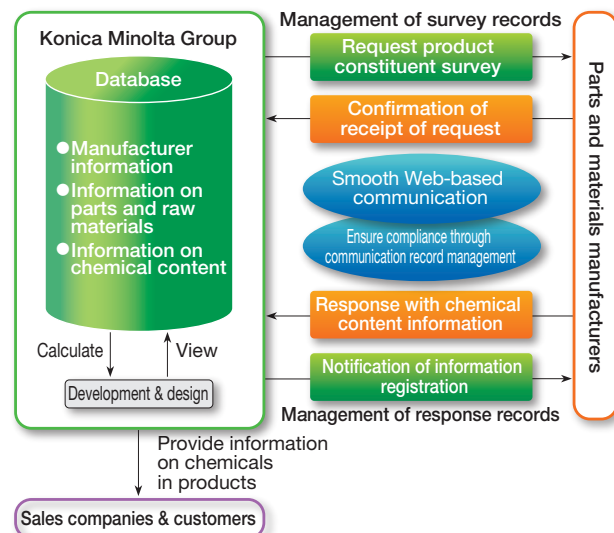
Implementation of a Green Procurement System compliant with more stringent chemical substance regulations

Konica Minolta implements green procurement, assessing the chemical constituents of parts and components and giving preference to those with the least environmental impact. Konica Minolta has established its own list of banned and monitored substances from the perspective of compliance and environmental safety, and the Group is working to reduce or eliminate chemicals that adversely affect human health and the environment from its production processes and products.

The Group introduced its SIGMA Green Procurement System in 2009, overhauling the previous system of collecting information on chemical substances. Since then, the system

has been updated as needed to comply with the strengthening of regulations on chemical substances in products that were part of the later REACH regulations, such as restrictions on candidate substances for authorization and added restricted substances. The results of the information collected are evaluated by experts in the Group on a regular basis, and feedback is given to the business companies to promote more accurate responses. In terms of parts containing hazardous materials, the Group is observing trends in regulations and alternative technologies and is working on plans to eliminate hazardous materials in order to be sure it avoids risks.

Overview of the SIGMA Green Procurement System



Main Features

- Japanese, English and Chinese language support
- Supports two standard chemical substance surveys (JAMP*1 and JGPSSI*2) and independent methods.
- Separates the procedures for checking for prohibited substances and for collection of information on reported substances in products
- Sharing information of survey and response with business partners
- Databasing of communication records ensures compliance through tracking
- Simplifies the response to changes in regulations and substances subject to control

*1 **JAMP:** Standards for chemical substance surveys established and implemented by the Joint Article Management Promotion-consortium.

*2 **JGPSSI:** Standards for chemical substance surveys established and implemented by the Japan Green Procurement Survey Standardization Initiative.

Reduction of Atmospheric Emissions of VOCs

Implementing a unique risk management index to reduce VOCs

Since 1993, Konica Minolta has worked to reduce atmospheric emissions of volatile organic compounds (VOCs) that the Group determined to have a high risk in terms of hazard and volume, at its production sites around the world. The Group worked systematically to eliminate the use of highly hazardous solvents by fiscal 2010, having eliminated benzene, formaldehyde, chloroform, and others by fiscal 2004, and the remaining applicable substance, 1, 2-dichloroethane, during fiscal 2010. In fiscal 2011, the Group maintained this state throughout the fiscal year.

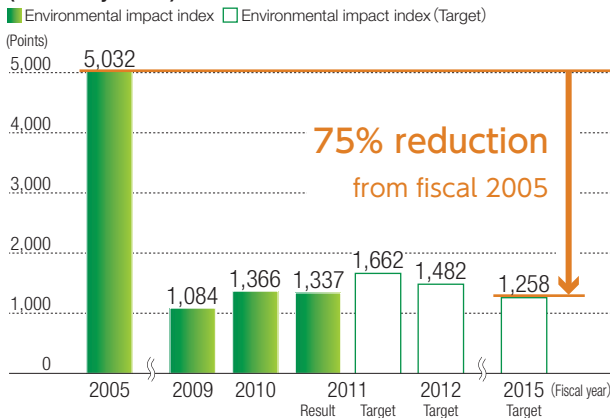
The Group has established its own environmental impact index* as part of the Medium-Term Environmental Plan 2015, with the aim of reducing the use of substances that pose a risk to ecosystems or may have an indirect environmental impact,

as well as substances that pose a direct risk to human health or a risk of atmospheric pollution. The targets call for a 75% reduction by fiscal 2015 compared with fiscal 2005.

Though production volume increased in fiscal 2011 compared to the previous year, VOC emissions were down 73% from fiscal 2005, on an environmental impact index basis, unchanged from the previous year and meeting the annual target.

* **Environmental impact index:** An index unique to Konica Minolta.
 Environmental impact index (point) = Atmospheric emissions of VOCs [t] × Hazard coefficient × Location coefficient
Hazard coefficient: Set at 1-fold, 10-fold, or 100-fold depending on the severity of the impact on human health and the environment (set independently by Konica Minolta based on the coefficient used in the safety evaluations conducted by Kanagawa Prefecture in Japan)
Location coefficient: Outside the industrial estate 5, inside the industrial estate 1

Reduction of Atmospheric VOC Emissions (Risk-Adjusted)



* Fiscal 2009 data has been revised to reflect more accurate information.

Fiscal 2011 Targets and Results (Base Year: Fiscal 2005)

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets		Fiscal 2011 Results		Self-assessment
Reducing the risk of chemical substances	Atmospheric emissions of volatile organic compounds (VOCs) (environmental impact index)	-67.0%	-73.4%	Implemented reduction plan	★★★

Relevant Information ● Standards for calculating atmospheric emissions of VOCs ▶ P. 56

Countermeasures against Contamination of Soil and Ground Water

Regular monitoring and further purification to prevent the spread of contamination

Konica Minolta is conducting robust management through periodic observation at sites in Japan where soil or ground water contamination has been identified to ensure that the contaminants do not affect the surrounding environment. The Group has organized a specialist team to manage remediation of polluted sites and to prevent the spread of contamination. Detailed surveys conducted under the team's supervision serve as the basis for developing countermeasures and

examining suitable purification technologies. The Group reports the results of its observations and remediation efforts periodically to local government agencies and to concerned neighboring residents.

Relevant Information ● Summary of Contaminated Soil or Ground Water at Operation Sites ▶ P. 51

Establishment of Guidelines for Managing Soil Contamination Risk

Guidelines have been set for risk management of soil contamination as part of Konica Minolta's unique Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites, as the certification standards for Level 2 require compliance with these guidelines, from April 2011.

Relevant Information ● Green Factory Certification System ▶ P. 20

Guidelines for Managing Soil Contamination Risk

- The risk of soil contamination has been assessed through preliminary surveys at production sites known to have a high risk from past surveys.
- If soil contamination (in excess of the standard value) is observed, measures are taken to prevent damage to human health.
- Measures are also taken to prevent run off of contamination outside the site.

Basic Concept / Targets and Results

Basic Concept

Preservation of biodiversity is one of the major environmental issues that have to be addressed, along with global warming.

Konica Minolta makes it a policy to evaluate its impact and dependence on biodiversity in its business activities, address them in priority order of their impact, and put into practice measures that utilize Group resources such as technology and products.

Targets and Results for Fiscal 2011

Assessing ecosystem impact using WET testing

In fiscal 2011, Konica Minolta implemented various initiatives to restore and preserve biodiversity at its production sites. Specifically, the Group revised the Level 2 Certification Standards for Konica Minolta's unique Green Factory Certification System to stipulate that the production sites had to be consistent with its Guidelines for Biodiversity Preservation. The Guidelines are composed of three main categories—consideration of water resources, consideration of wastewater, and proper management of greenery at factories—and stipulate such items as reduction of water

consumption, monitoring of impact of wastewater on ecosystems, and prohibition of the planting and sowing of seeds of invasive alien species on plant premises. These measures are being carried out in accordance with the Green Factory Activities Plan.

Trial runs of ecosystem impact assessment tests have been carried out by production sites in order to verify the impact of wastewater on the surrounding ecosystems, confirming that there has been no negative impact.

Fiscal 2011 Targets and Results

Self-assessment ★★★ Achievement more than 100% ★★ Achievement more than 80% and less than 100% ★ Achievement less than 80%

Objectives	Fiscal 2011 Targets	Fiscal 2011 Results	Self-assessment	details
Restoring and preserving biodiversity	<ul style="list-style-type: none"> Compliance with criteria of the Green Factory Certification System Revise and implement the draft procurement standards for paper 	Revised Green Factory Certification Standards Implemented trial runs of ecosystem impact assessment Investigated revising the procurement standards for paper	★★	P.40

Relevant Information ● Green Factory Certification System ▶ P. 20

Specific Initiatives

Integration with the Green Factory Certification System

Undertaking measures for the conservation of ecosystems at its production sites

Konica Minolta is working to preserve biodiversity as part of its unique Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites.

Guidelines have been set for consideration of water resources and wastewater, and proper management of greenery at factories, as the certification standards for Level 2 require compliance with these guidelines.

Relevant Information ● Green Factory Certification System ▶ P. 20

Guidelines for Biodiversity Preservation

Consideration of water resources

- Reduction targets are set for total water consumption, or for water used on site, and reduction measures are implemented.
- If groundwater is used, measures must be taken to reduce the amount used.

Consideration of wastewater

- In order to prevent ecological damage to rivers and lakes, a risk management system must be established to shut off highly polluted wastewater.
- Checks are in place to determine the impact of wastewater emitted into public water areas on ecosystems, such as aquatic habitats.

Proper management of greenery at factories

- Invasive alien species that are likely to have a negative impact on ecosystems are not planted or sown on the factory's premises.
- When planting trees in factory grounds, management and protection must be accorded to any rare species that are discovered.

WET Testing at Four Japanese Plants Confirms

Confirming that no negative impact on three test organisms

Konica Minolta has included in the Guidelines for Biodiversity Preservation a stipulation that it investigate the impact plant wastewater has on ecosystems, and this is a certification requirement set forth in the Green Factory Certification System. In fiscal 2011 four plants that emit wastewater from manufacturing processes into public water areas carried out bioassays using Whole Effluent Toxicity (WET)* testing, which is a new method of wastewater management currently attracting attention around the world.

Specifically, the testing, implemented with the cooperation of the National Institute for Environmental Studies, was done on an algae (*Selenastrum capricornutum*),

a crustacean (*Ceriodaphnia dubia*), and a fish (zebra fish, *Danio rerio*). The results indicated that there was no negative impact (algae: inhibition of growth; crustacean: inhibition of breeding; fish: reduced hatching rate or reduced survival rate after hatching) on any of the three test organisms at any of the four plants. Among plans to increase the number of plants that carry out WET tests, the Group is currently looking into conducting these tests at plants outside Japan.

* WET: A method that assesses the aggregate toxic effect of wastewater on aquatic life rather than the volume of individual chemical substances. Unlike conventional effluent management methods, it enables holistic assessment of the effect of an effluent, detecting impact caused by any non-regulated chemical substance or the combined impact of multiple substances.

Procurement Standards for Paper Forms

Procuring copy paper in consideration of forest resource conservation

Konica Minolta Business Solutions Co., Ltd., an office equipment and solutions sales company in Japan, has established the PPC Paper Purchase Standards, which have been implemented since 2007. The Standards stipulate that copy paper supplied to customers should be procured by taking into account the impact of forest destruction and

degradation on living environments of animals, plants, and people.

To ensure the sustainability of forest resources, the company launched a global review of its procurement standards for paper, aiming to complete the revision in fiscal 2012.

Basic Concept/Environmental Information Disclosure

Basic Concept

The entire Konica Minolta Group is working to carry out environmental conservation activities and to reduce the environmental impact associated with its business activities. The Group actively provides information on the planning and progress of these efforts. By developing close communication with various stakeholders, Konica Minolta intends to fulfill its responsibilities as a good corporate citizen.

The Group distributes information through various

methods, including its website and CSR reports, based on the principle of transparent and ongoing information disclosure. In order to inform customers of the environmental performance of its products, Konica Minolta seeks to provide this information through environmental labels. It is actively pursuing various social contribution activities while creating regular opportunities for direct dialogue with community members.

Environmental Information Disclosure

Providing environmental information in reports and online

A printed CSR report and an online environmental report are prepared to provide information on the environmental activities of the entire Konica Minolta Group. Environmental information concerning individual Konica Minolta sites in Japan is presented in reports issued by each site.

The reports are updated once a year, and PDF-file versions are available for download from the Group's environmental website.



CSR Report 2012



Environmental Report 2012



The Group's environmental website

Environmental Information Disclosure

Providing Environmental Information on Products

Actively supplying information concerning products using environmental labels

Type-I Environmental Labels

Konica Minolta is actively promoting the acquisition of Type-I environmental certification labels. These labels indicate that a third-party institution has certified the low environmental impact of a product.

●Blue Angel Mark

Launched in Germany in 1978 as the world's first environmental labeling system, the Blue Angel Mark is granted to certify products and services that have a smaller environmental impact. Since receiving the world's first Blue Angel certification in the field of copiers in January 1992, Konica Minolta has continued to receive certification for new products by clearing the certification bar each time it has been raised.



●Eco Mark

The Eco Mark was established by the Japan Environment Association in 1989 as a standard environmental labeling system in Japan. Konica Minolta's basic policy is to obtain Eco Mark certification for all its office equipment.



●EcoLogo

Established by the Canadian government in 1988, EcoLogo is North America's most widely respected environmental standard and certification system. In 2009, Konica Minolta obtained EcoLogo certification, ahead of the competition, for 12 of its MFPs in the newly established Office Machines category.



●China Environmental Labeling Product Certification for Low-Carbon Products

In 2010, the Chinese Ministry of Environmental Protection introduced a new low-carbon product certification system targeting four categories: MFPs, printers, household refrigerators, and household washing machines.



Konica Minolta's high environmental performance based on the company's proprietary technology was evaluated, with the result that the monochrome MFP bizhub 164 and other models were granted certification.

●Hong Kong Green Label Scheme

This environmental standard and certification mark is run by the Hong Kong Green Council, a nonprofit organization. To be certified, products are required to meet stringent standards concerning reduction of harmful substances and consideration for environmental impact throughout the product life cycle. In March 2011, Konica Minolta received certification for three color MFP models, becoming the first MFPs to be certified.

International Energy Star Program

Products that meet certain standards can be registered as Energy Star devices as part of an energy-saving program for OA equipment. Implemented in 1995 through an agreement between the Japanese and US governments, the international program has now expanded with the participation of the European Union, Canada, Australia, New Zealand, Taiwan, and other countries.

Almost all of Konica Minolta's MFPs and laser printers meet the Energy Star standards.



Eco Leaf Environmental Label

Type-III environmental labeling provides information on the environmental impact of a product, based on quantitative measurement of environmental impact through the product's entire life cycle, from raw material procurement to production, sales, usage, disposal, and recycling.

Konica Minolta discloses environmental impact data concerning its office equipment through the Eco Leaf system of Type-III environmental labeling.

Eco Leaf offers a system certification tool whereby a third-party institution certifies that a company has mechanisms for the proper and effective gathering of environmental impact data. Konica Minolta has obtained this certification for its copier and printer businesses.



Communication with Society

Participating in Shows and Exhibits

Case Presentation of Environmental Technologies and Products at Exhibitions and Facilities

Japan's largest environmental exhibition, Eco-Products, is held annually at Tokyo Big Sight, and Konica Minolta has participated in this exhibition every year since 1999.

At Eco-Products 2011, held in December 2011, the Group introduced its Green Products Certification System, among other environmental initiatives, and exhibited Green Products such as its bizhub 602 MFP. The Group also exhibited future environmental technologies such as LED and OLED lighting, considered to be the next generation in lighting, aiming to

introduce its businesses of the future.

In addition, the Group maintains a permanent booth at the Osaka ATC Green Eco Plaza (Suminoe-ku, Osaka), which seeks to stimulate environmental businesses by exhibiting environmental technologies and products at the exhibition. Through such activities, Konica Minolta provides straightforward information about its environmental efforts and the energy-saving technologies used in its MFPs.

Relevant Information ● Green Products Certification System ▶ P. 15



The Konica Minolta booth at Eco-Products 2011



Display of organic light emitting diode (OLED) lighting



The permanent booth at Osaka ATC Green Eco Plaza

Environmental and Social Contribution Activities

Case 1 Organizing a "Green Concert"

Konica Minolta Business Solutions (HK) Ltd., an office equipment and solutions sales company, held its Konica Minolta Green Concert for the second time on November 27, 2011. The concert, first held in 2010, is an event that combines the environment, sports, music, and charity and draws public attention to the energy crisis and environmentally-friendly lifestyle choices.

In order to meet the electricity needs of the concert, the Power Generating Challenge was held at The Hong Kong Polytechnic University in mid November, in which teams of five to eight people pedaled bicycles to generate electricity. They received prizes for their team unity and the amount of electricity they were able to generate. All the entry fees after covering the administration cost of the event were donated to the university to be used for the research and development of renewable energies. Popular Hong Kong singers performed and raised awareness of the importance of environmental protection in front of a crowd of 1,600 people.



Contest participants pedaling to generate electricity

Communication with Society

Case 2 Participating in Efforts to Protect Orangutans (Malaysia)

Orangutans, whose name is Malay for “person of the forest,” are facing extinction due to poaching and sale, as well as the loss of natural habitat due to the destruction of forests as land is converted for agricultural use. In November 2011, Konica Minolta Business Solutions (M) Sdn. Bhd., an office equipment and solutions sales company in Malaysia, became the foster parent of a two-year old orangutan being raised at the Semengoh Wildlife Rehabilitation Center in Sarawak. The company will serve as the orangutan’s foster parent for two years through the end of 2013. The 20,000 ringgit cost of adoption will be used not only for the protection of orangutans but also for educational programs necessary for their protection, and for the purchase of food and medical supplies required by the rehabilitation center.



With the staffs of the Semengoh Wildlife Rehabilitation Center in Sarawak

Case 3 Supporting Charity for Protecting the Japanese Red-Crowned Crane (Japan)

Not long ago, the number of red-crowned cranes* indigenous to Japan plummeted due to the deterioration of their native habitat. The bird was, for a time, on the verge of extinction. However, thanks to the establishment of the Tsurui Ito Red-Crowned Crane Sanctuary in 1987 by the Wild Bird Society of Japan, and to the protection activities undertaken by local residents and concerned organizations, the number of cranes has increased to more than 1,000. Konica Minolta has been a supporter of the crane-protection activities since the establishment of the sanctuary. As part of this effort, Konica Minolta co-sponsors the Konica Minolta Japanese Red-Crowned Crane Charity.

* The red-crowned crane is a large bird with a white body and a patch of red on the crown of its head. Its habitat extends from eastern Eurasia to Hokkaido in Japan.



Japanese red-crowned crane

Case 4 Supporting Forest Conservation Activities (Japan)

Konica Minolta is a participant and a partner in a variety of forest protection initiatives. One of these is the Takao Forest Society. Focusing on the natural vegetation in the national forest located in Uratakao, in the western part of Tokyo Metropolis, the society aims, by thinning the trees, planting more, clearing undergrowth and so on, to re-create a lush forest where coniferous trees mingle with broad-leaved varieties. Konica Minolta is a corporate member of the society, and the employees take part in its activities, working up a sweat for the cause of fostering better forests.

In addition, the quarterly newsletter of the Society is printed using Konica Minolta’s high-speed MFPs.

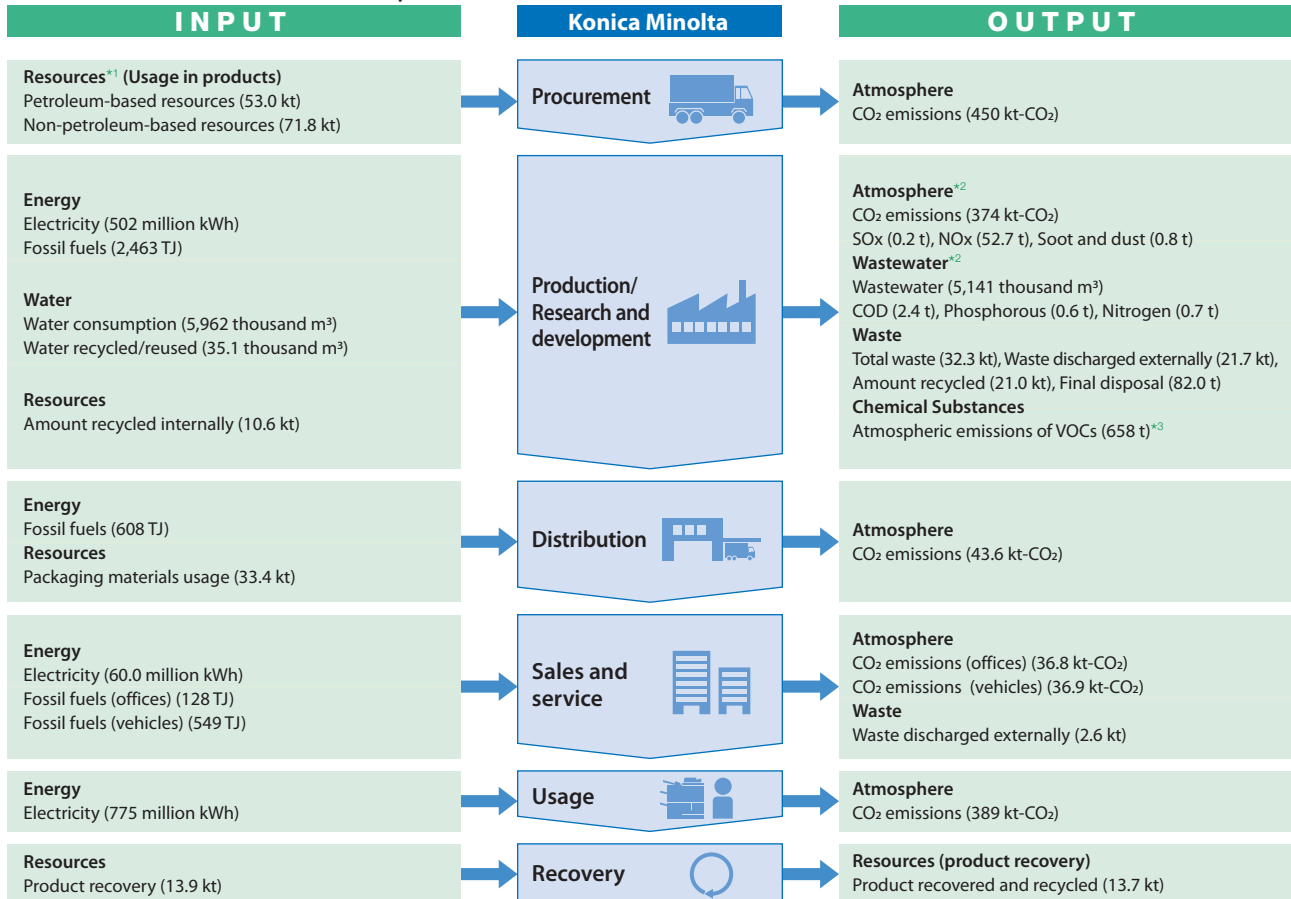


Takao Forest Society

Environmental Impacts Resulting from Business Activities

Environmental Impacts Resulting from Business Activities

Overall Picture of Environmental Impact



*1 Calculated by weight of each material or part used in major products and consumable supplies, based on the product specification.

*2 The figures for atmospheric pollutants and water pollutants are total values for plants that are legally required to measure emissions.

*3 The figure for amount of atmospheric emissions of VOCs is the total value for sites subject to reduction targets stipulated in the Medium-Term Environmental Plan 2015.

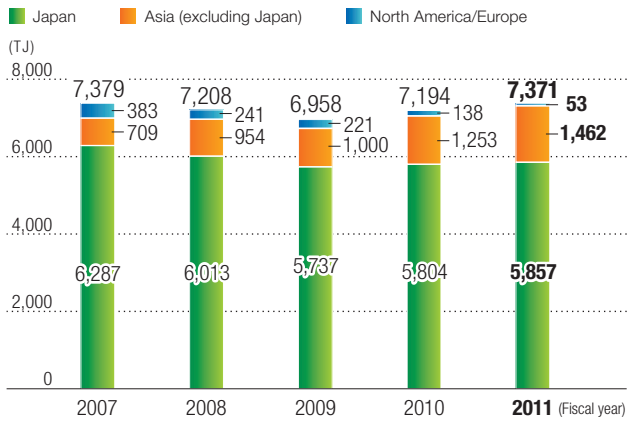
Relevant Information ● Standards for Calculating Environmental Data
 ▶ P. 55-56

INPUT

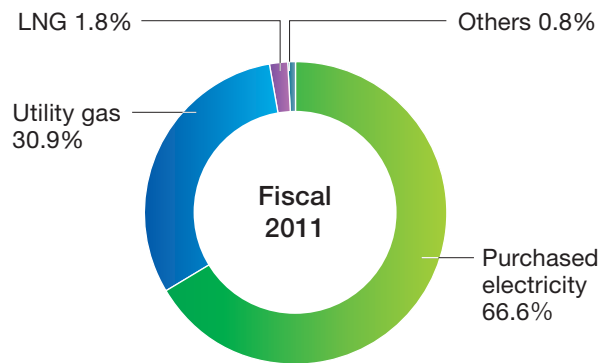
Energy and Water

Boundary of data: Charts cover production and R&D sites in the Konica Minolta Group.

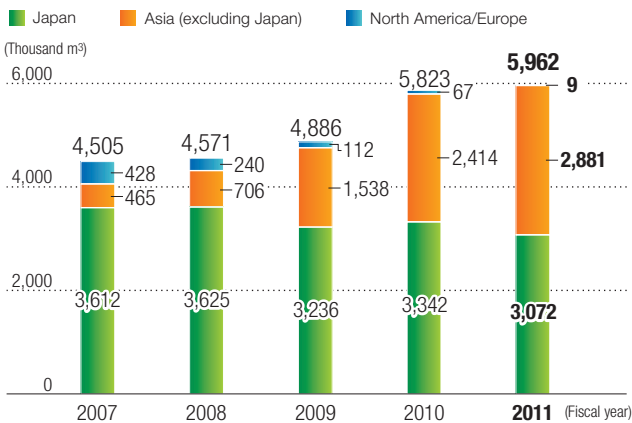
Total Energy Inputs



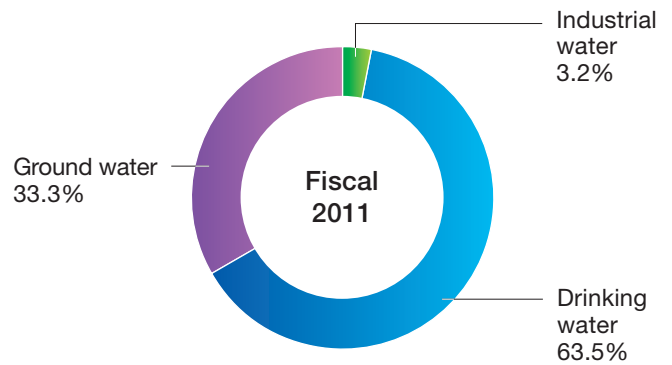
Energy Use by Type



Total Water Inputs



Water Use by Type



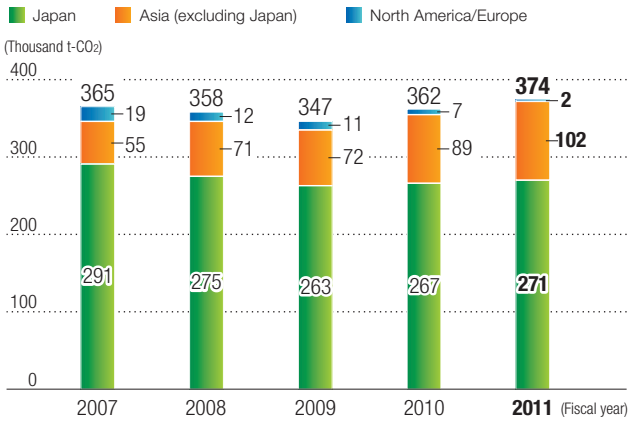
* Fiscal 2010 data has been restated to reflect the improvement in calculation accuracy.

OUTPUT

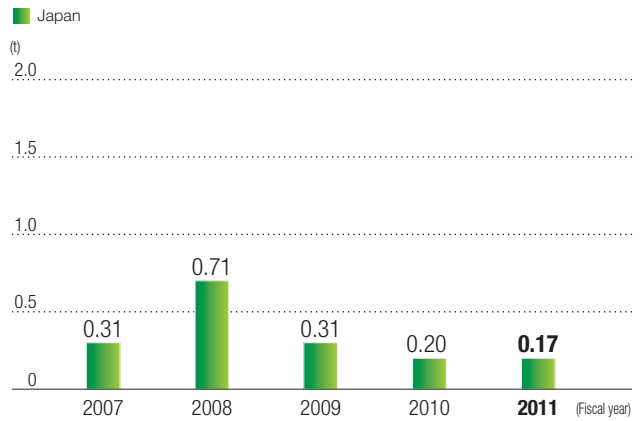
Atmosphere

Boundary of data: Charts cover production and R&D sites in the Konica Minolta Group.

CO₂ Emissions

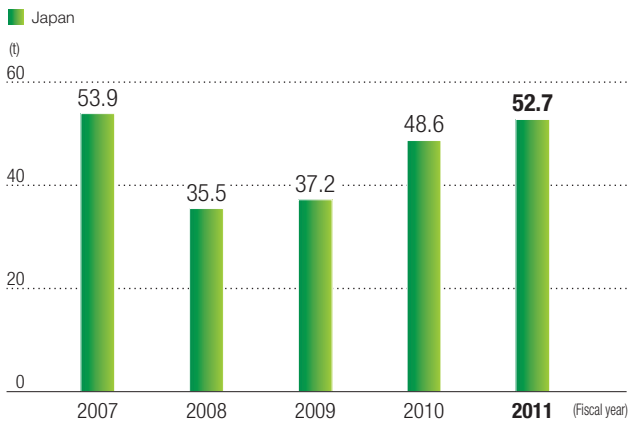


SO_x Emissions

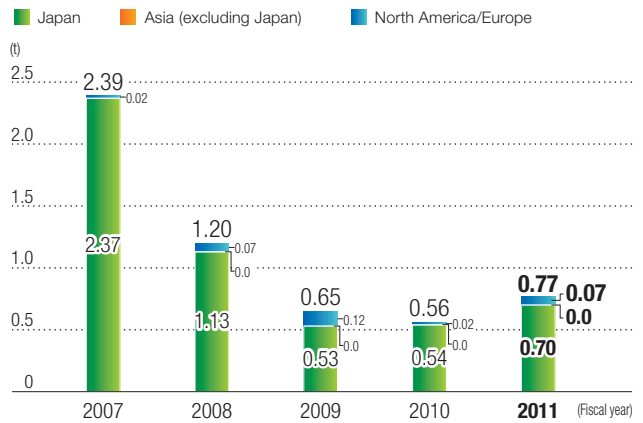


Relevant Information ● Standards for calculating CO₂ emissions ▶ P. 55

NO_x Emissions



Soot and Dust Emissions



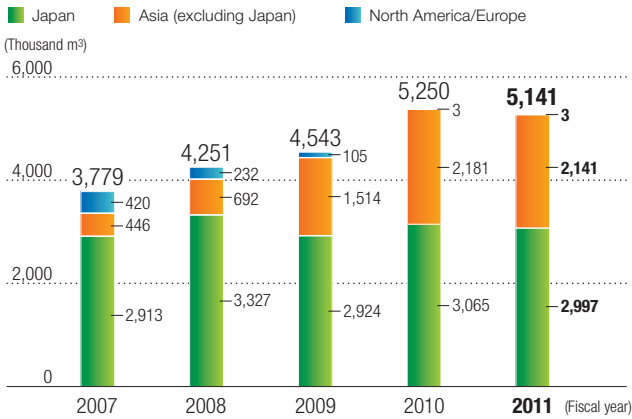
* The figures for atmospheric pollutants are total values for plants that are legally required to measure emissions.

OUTPUT

Wastewater

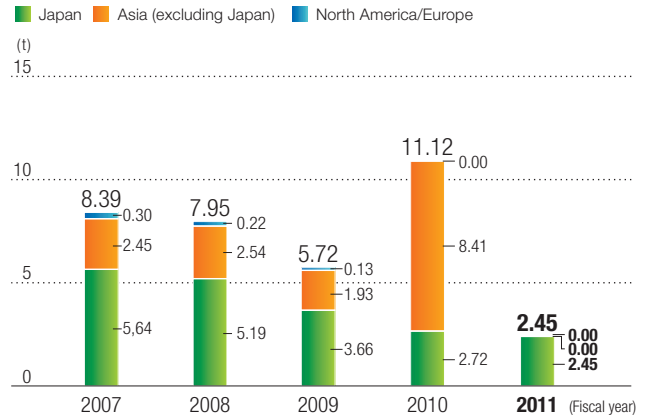
Boundary of data: Charts cover production and R&D sites in the Konica Minolta Group.

Total Wastewater

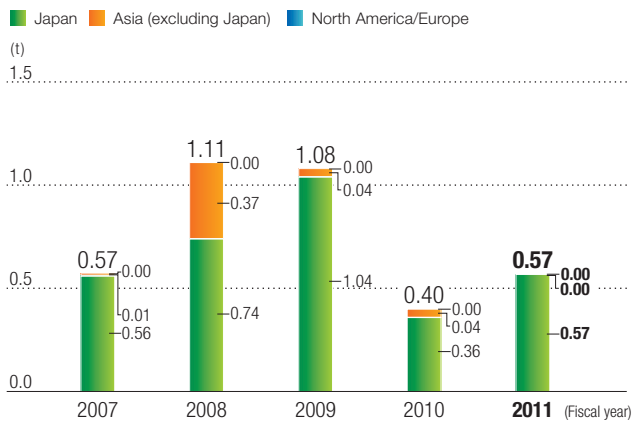


* Fiscal 2010 data has been restated to reflect the improvement in calculation accuracy.

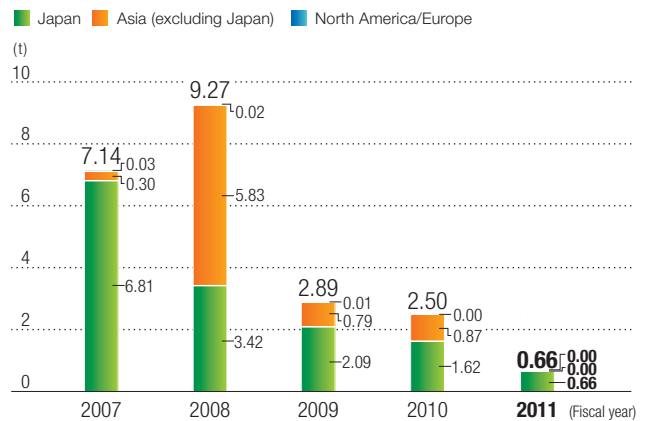
COD into Public Waters



Phosphorus Discharged into Public Waters



Nitrogen Discharged into Public Waters



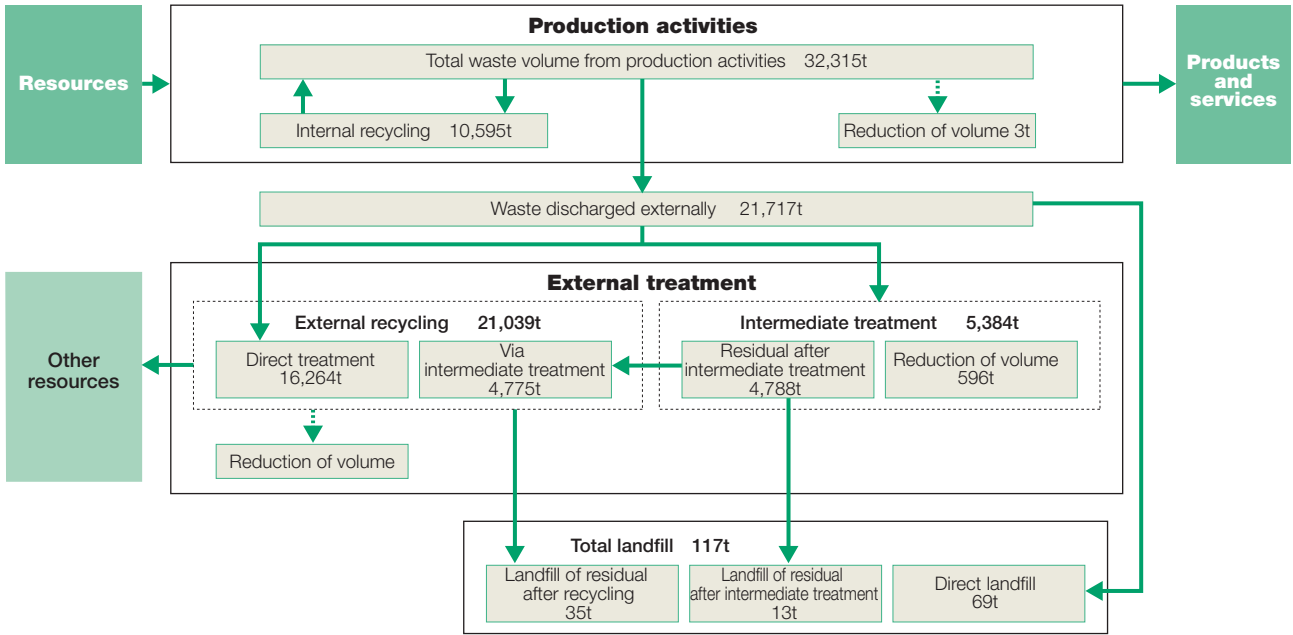
* The figures of water pollutants are total values for plants that are legally required to measure waste.
 * At fiscal 2011, some sites has switched to discharge from public water to the sewer

OUTPUT

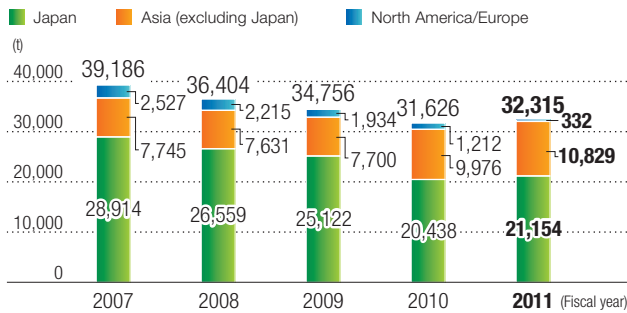
Waste

Boundary of data: Charts cover production sites in the Konica Minolta Group.

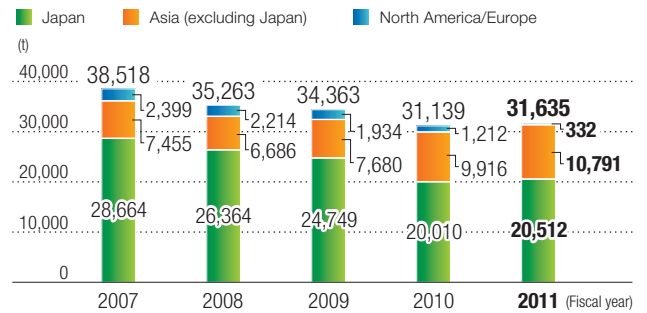
Waste Flows (Results of Recycling and Waste) Fiscal 2011



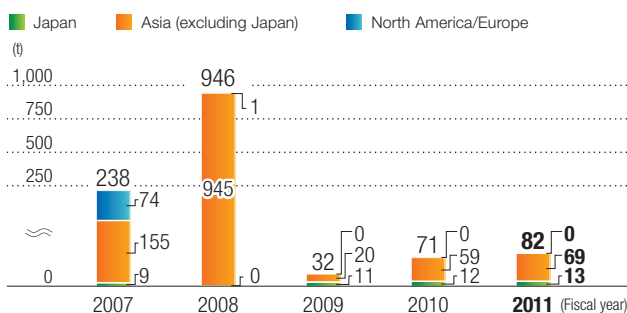
Total Waste Volume



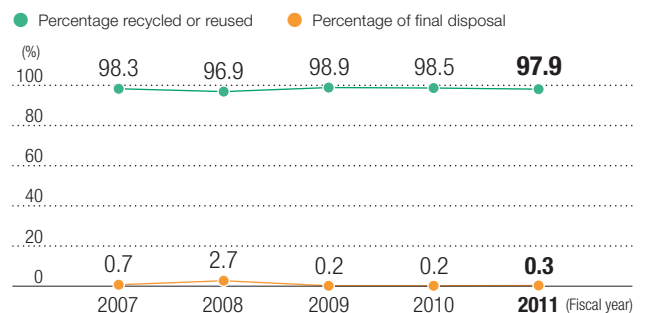
Total Volume of Recycled Resources (Internally and Externally Recycled)



Total Volume of Final Disposal (Landfill Waste)*



Percentage Recycled or Reused/Percentage of Final Disposal



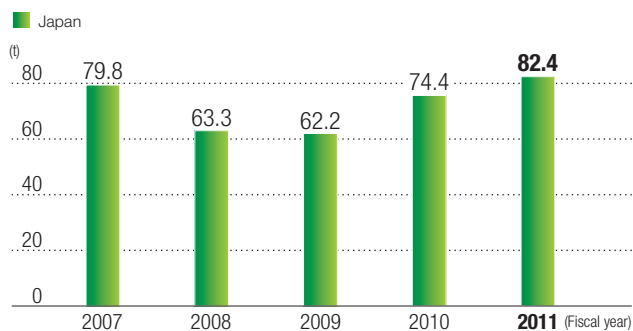
* The figures are the sum of direct landfill and landfill of residual after intermediate treatment.

OUTPUT

Chemical Substances

Boundary of data: Charts cover Konica Minolta Group production sites in Japan.

Atmospheric Emissions of PRTR Substances



Substances Controlled by Pollution Release and Transfer Register (PRTR) System Fiscal 2011

(t)

Identification Number	Name of Chemical Substance	Amount Handled	Releases			Amount Used (in products)	Treated on-site (Incinerated, Decomposed)	Amount Transferred Externally		Recycled
			To Air	To Water	To Soil			Waste*	Sewage	
7	N-butyl acrylate	1776.2	1.2	0.0	0.0	1769.7	0.0	5.4	0.0	0.0
13	Acetonitrile	54.7	1.5	0.0	0.0	0.0	2.5	46.7	0.0	0.0
23	P-aminophenol	4.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0
31	Antimony and its compounds (Sb equivalent)	5.1	0.0	0.0	0.0	4.3	0.0	0.8	0.0	0.0
71	Ferric chloride	118.5	0.0	0.0	0.0	0.0	118.5	0.0	0.0	0.0
80	Xylene	2.7	0.0	0.0	0.0	0.0	0.0	2.7	0.0	0.0
82	Silver and its water-soluble compounds (Ag equivalent)	130.3	0.0	0.0	0.0	125.7	0.0	4.5	0.0	0.0
181	Dichlorobenzene	3.9	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0
186	Dichloromethane (also known as methylene chloride)	844.3	63.4	0.0	0.0	7.3	0.1	754.7	0.0	26.6
232	N,N-dimethylformamide	21.4	0.0	0.0	0.0	0.0	0.1	21.3	0.0	0.0
240	Styrene	5030.0	4.5	0.0	0.0	4994.2	0.0	31.2	0.0	0.0
275	Sodium dodecyl sulfate	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0
277	Triethylamine	1.1	0.0	0.0	0.0	0.2	0.1	0.8	0.0	0.0
283	2,4,6-trichloro-1,3,5-triazine (also known as cyanuric chloride)	1.3	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0
300	Toluene	59.2	11.3	0.0	0.0	0.1	0.5	47.3	0.0	1.9
342	Pyridine	2.0	0.0	0.0	0.0	0.3	0.0	1.8	0.0	0.0
353	Diethyl phthalate	3.2	0.0	0.0	0.0	3.0	0.0	0.2	0.0	0.0
392	N-hexane	33.1	0.1	0.0	0.0	0.0	0.1	33.0	0.0	0.0
395	Water-soluble salts of peroxodisulfuric acid	150.9	0.0	0.0	0.0	15.1	135.8	0.0	0.0	0.0
412	Manganese and its compounds (Mn equivalent)	294.5	0.0	0.0	0.0	294.0	0.0	0.5	0.0	0.0
415	Methacrylic acid	519.9	0.4	0.0	0.0	516.8	0.0	2.7	0.0	0.0
417	2,3-epoxypropyl methacrylate	2.3	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0
461	Triphenyl phosphate	118.5	0.0	0.0	0.0	118.1	0.0	0.4	0.0	0.0

* In accordance with PRTR system definitions, even if materials were recycled later, they were counted here as waste if they were not sold at a profit.

Management of Chemical Substances

Surveys and Measures Taken on Soil and Groundwater Contamination

Summary of Contaminated Soil or Ground Water at Operation Sites

Operation Site	Substances	Progress in Fiscal 2011
Tokyo Site Hino (Hino, Tokyo)	Fluorine, Boron, Mercury	The company makes periodic observations at monitoring wells located at the site boundary. It has been confirmed that specified hazardous substances with a history of use are all below the limit of environmental standard values, and have no impact on the surrounding environment. With the removal of buildings, the company performed a survey of the soil on the site in accordance with Tokyo Metropolitan Ordinance, and identified slight contamination of soil at certain locations within the site. The company has implemented remediation by means of excavation.
Tokyo Site Hachioji (Hachioji, Tokyo)	Hexavalent chromium	The company continues with measures for remediation and prevention of dispersion by pumping ground water taken from wells located within the site. Through continued periodic observation of ground water, the company has confirmed that there is no runoff from the site.
Mikawa Site, Western Zone (Toyokawa, Aichi Prefecture)	TCE*1, Fluorine	Since implementing excavation and removal of soil contaminated with TCE in fiscal 2010, the concentrations in ground water are below the limit of environmental standard values in the southeast part of the site. The company continues with measures to prevent dispersion of the soil contaminated with fluorine. Through continued periodic observation of ground water, the company has confirmed that there is no runoff relevant substances from the site.
Itami Site (Itami, Hyogo Prefecture)	Lead, Arsenic, Cadmium, Fluorine, Boron	Regarding the ground water contamination with boron identified in a specific area of the site, the company continues with remediation and prevention of dispersion of the contaminant through pumping, and has confirmed that there is no runoff from the site. Regarding lead, arsenic, cadmium, and fluorine, the company has performed observation of ground water to confirm that there is no runoff of these substances from the site.
Sakai Site (Sakai, Osaka)	TCE, PCE*2, c-DCE*3, Lead, Arsenic, Cadmium	Regarding TCE, PCE, and c-DCE, the company continues with remediation prevention of dispersion by pumping ground water and carries out preventing runoff from the site. Regarding lead, arsenic, and cadmium, the company performed periodic observation of the ground water. It confirmed that the concentrations are below the limit of environmental standard values in all the monitoring wells located at the site boundary, and have no impact on the surrounding environment.
Osakasayama Site (Osakasayama, Osaka)	TCE, PCE, c-DCE	In fiscal 2011, the company implemented remediation of the location where contamination had been identified through a survey around its effluent treatment facility, by mixing and kneading iron powder based on Jet Rinse method. In fiscal 2012, the company continues the measures by the same method for the location where contamination remains.
Site of the former Nankai Optical Co., Ltd. (Kainan, Wakayama Prefecture)	TCE, PCE, c-DCE	The company identified the excess of standard value by the voluntary surveys in fiscal 2011 at monitoring wells located at the site boundary, and continues with measures to prevent runoff by the bio fence method. Through the observation of ground water, the company has confirmed that there is no runoff from the site.
Toyohashi Precision Products Co., Ltd. (Toyohashi, Aichi Prefecture)	TCE, PCE, c-DCE, Hexavalent Chromium	The company has implemented remediation of ground water through pumping, and continued periodic observation to confirm that there is no runoff of the relevant substances from the site. Levels for TCE, PCE, and c-DCE are within the environmental standard values at many monitoring wells.
Konica Minolta Opto Products Co., Ltd. (Fuefuki, Yamanashi Prefecture)	TCE, PCE, c-DCE	The company has implemented remediation of ground water through pumping, permeable reactive barriers, and bio-barriers, and continued periodic observation to confirm that there is no runoff of the relevant substances from the site.
Konica Minolta Supplies Manufacturing Co., Ltd. (Kofu, Yamanashi Prefecture)	TCE, PCE, c-DCE	The company has implemented remediation of ground water through bioremediation, and continued periodic observation to confirm that there is no runoff of the relevant substances from the site.

*1 TCE: trichloroethylene

*2 PCE: tetrachloroethylene (perchloroethylene)

*3 c-DCE: cis-1,2-dichloroethylene (resolvent of TCE and PCE)

Production Sites of Konica Minolta Group

Production Sites (as of March 31, 2012)

Konica Minolta Production Sites in Japan

Site Name or Company Name	Location	Items Produced
Konica Minolta Tokyo site (Hachioji block)	Hachioji-shi, Tokyo	Optical devices
Konica Minolta Itami site	Itami-shi, Hyogo Prefecture	Optical devices
Konica Minolta Osakasayama site	Osakasayama-shi, Osaka	Optical devices
Konica Minolta Kobe site	Kobe-shi, Hyogo Prefecture	Electronic materials such as triacetyl cellulose (TAC) film
Konica Minolta Seishin site	Kobe-shi, Hyogo Prefecture	Electronic materials such as triacetyl cellulose (TAC) film
Konica Minolta Tokyo site (Hino block)	Hino-shi, Tokyo	Medical and graphic imaging materials
Konica Minolta Kofu site	Chuo-shi, Yamanashi Prefecture	Medical imaging materials

Affiliate Production Sites in Japan

Site Name or Company Name	Location	Items Produced
Konica Minolta Supplies Manufacturing Co., Ltd.	Headquarters: Kofu-shi, Yamanashi Prefecture Tasuno facility: Tatsuno-cho, Nagano Prefecture	Consumables of multi-functional peripherals (MFPs) and laser printers
Konica Minolta Supplies Manufacturing Kansai Co., Ltd.	Headquarters: Miki-shi, Hyogo Prefecture Seishin facility: Kobe-shi, Hyogo Prefecture	Consumables of multi-functional peripherals (MFPs) and laser printers
Toyohashi Precision Products Co., Ltd.	Toyohashi-shi, Aichi Prefecture	Consumables of multi-functional peripherals (MFPs) and laser printers
Konica Minolta Electronics Co., Ltd.	Tsuru-shi, Yamanashi Prefecture	Electronics parts
Konica Minolta Opto Products Co., Ltd.	Headquarters: Fuefuki-shi, Yamanashi Prefecture Yamanashi site: Minamitsuru-gun, Yamanashi Prefecture	Optical devices
Konica Minolta Glass Tech. Co., Ltd.	Headquarters: Osakasayama-shi, Osaka (within Osakasayama site) Iruma facility: Iruma-shi, Saitama Prefecture Itami facility: Itami-shi, Hyogo Prefecture (within Itami site)	Optical devices
Konica Minolta Opto Device Co., Ltd.	Osakasayama-shi, Osaka (within Osakasayama site)	Optical devices
Konica Minolta Technoproducts Co., Ltd.	Headquarters: Sayama-shi, Saitama Prefecture Hachioji facility: Hachioji-shi, Tokyo (within Tokyo site)	Medical and graphic imaging equipment
Konica Minolta Chemical Co., Ltd.	Fukuroi-shi, Shizuoka Prefecture	Chemicals

Affiliate Production Sites outside Japan

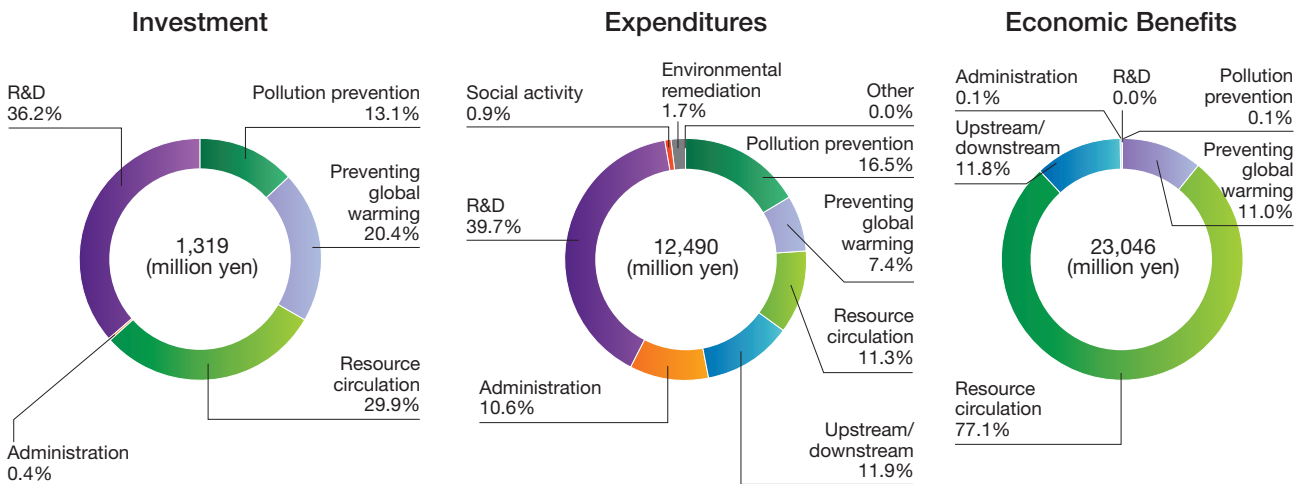
Site Name or Company Name	Location	Items Produced
Konica Minolta Business Technologies (Wuxi) Co., Ltd.	China	Multi-functional peripherals (MFPs), laser printers and consumables
Konica Minolta Business Technologies (Dongguan) Co., Ltd.	China	Multi-functional peripherals (MFPs), laser printers and consumables
Konica Minolta Supplies Manufacturing U.S.A., Inc.	United States	Consumables of multi-functional peripherals (MFPs) and laser printers
Konica Minolta Supplies Manufacturing France S.A.S.	France	Consumables of multi-functional peripherals (MFPs) and laser printers
Konica Minolta Opto (Dalian) Co., Ltd.	China	Optical-related products
Konica Minolta Optical Products (Shanghai) Co., Ltd.	China	Optical devices
Konica Minolta Glass Tech (M) Sdn. Bhd.	Malaysia	Optical devices

Environmental Accounting

Environmental Accounting

Konica Minolta has appointed environmental accounting manager at each Group company to carry out consolidated environmental accounting globally. Investments in fiscal 2011 totaled approximately 1.3 billion yen, a 63% decrease year on year. The decrease was due to the fact that investments in new building construction that were made in the Performance Materials business in the previous fiscal year were not made

again in fiscal 2011. Expenditures totaled approximately 12.5 billion yen, a 4% increase year on year. Specifically, product-related environmental measure costs in the Business Technologies business and cost related to environmental measures implemented at plants in the Performance Materials business made up the major share of the expenditures.



* Percentages do not necessarily total to 100 because of rounding.

million yen

Types of Environmental Conservation Activities	Major Initiatives	Fiscal 2011 Results			Fiscal 2012 Budget	
		Investment	Expenditures	Economic Benefits	Investment	Expenditures
1. Business area cost		837	4,387	20,307	794	3,983
1) Pollution prevention cost	Implemented wastewater treatment facilities maintenance, reduced atmospheric emission of VOCs, and carried out chemicals management	173	2,055	13	79	1,960
2) Preventing global warming cost	Promoted energy conservation	269	923	2,529	618	818
3) Resource circulation cost	Recovered solvents	395	1,408	17,764	97	1,205
2. Upstream/downstream costs	Collected and recycled products	0	1,491	2,724	0	1,437
3. Administration cost	Implemented environmental management systems	5	1,322	14	1	1,231
4. R&D cost	Developed energy-saving products and products containing no hazardous substances	477	4,962	1	653	4,502
5. Social activity cost	Implemented environmental conservation activities	0	107	0	0	114
6. Environmental remediation cost	Restored contaminated soil	0	215	0	72	272
7. Other costs		0	6	0	0	8
Total		1,319	12,490	23,046	1,520	11,548

Environmental Accounting

Fiscal 2011 Results: Environmental Conservation Benefits

Stage	Type of Benefit	Benefits
Production	Water use reduced *1	122,425 t
	Electricity reduced *1	87.2 million kWh
	Natural gas reduced *1	6,085 thousand m ³
	Heavy oil reduced *1	183 kL
	Emissions of target chemical substances reduced *1	14 t
	Resource input reduced *1	143,447 t
	External recycling and reuse of waste *2	21,000 t
Sales	Packaging reduced *1	227 t
	Recycling and reuse of materials from used products *2	13,611 t
Usage	CO ₂ emissions reduced *3	1,605 t-CO ₂

*1 Calculated by subtracting the actual consumption amount from the consumption amount estimated for the case in which the environmental preservation activity was not implemented.

*2 The environmental conservation benefits are calculated as the volume recycled and reused.

*3 CO₂ emissions are calculated for major new products that were shipped in fiscal 2011 by subtracting the estimated CO₂ emissions associated with the new products in use from the estimated CO₂ emissions associated with the conventional products in use.

Fiscal 2011 Results: Environmental Conservation Benefits (Impact of End User Usage)

Stage	Type of Benefit	Benefits
Usage	Electricity consumption reduced *4	3.2 million kWh
	Electricity bills reduced *5	46 million yen

*4 Electricity consumption reduced is calculated for major new products that were shipped in fiscal 2011 by subtracting the estimated energy consumption of the new products in use from the estimated energy consumption of the conventional products in use.

*5 Calculated by multiplying the average electrical power unit price over the Group's production sites in Japan by the amount of electricity consumption reduced.

Boundary for Fiscal 2011 Results

9 Group companies, including the holding company, business companies, and common function companies

Konica Minolta Holdings, Inc.
 Konica Minolta Business Technologies, Inc.
 Konica Minolta Opto, Inc.
 Konica Minolta Medical & Graphic, Inc.
 Konica Minolta Sensing, Inc.
 Konica Minolta Technology Center, Inc.
 Konica Minolta Business Expert, Inc.
 Konica Minolta IJ Technologies, Inc.
 Konica Minolta Planetarium Co., Ltd.

16 Japanese affiliates

Konica Minolta Information System Co., Ltd.
 Konica Minolta Supplies Manufacturing Co., Ltd.
 Konica Minolta Supplies Manufacturing Kansai Co., Ltd.
 Toyohashi Precision Products Co., Ltd.
 Konica Minolta Electronics Co., Ltd.
 Konica Minolta Business Solutions Japan Co., Ltd.
 Konica Minolta Opto Products Co., Ltd.
 Konica Minolta Opto Device Co., Ltd.
 Konica Minolta Glass Tech. Co., Ltd.
 Konica Minolta Technoproducts Co., Ltd.
 Konica Minolta Healthcare Co., Ltd.
 Konica Minolta Technosearch Co., Ltd.
 Konica Minolta Chemical Co., Ltd.
 Konica Minolta Engineering Co., Ltd.
 Konica Minolta Logistics Co., Ltd.
 Konica Minolta Sogo Service Co., Ltd.

19 affiliates outside Japan

Konica Minolta Business Technologies (Dongguan) Co., Ltd.
 Konica Minolta Business Technologies (Wuxi) Co., Ltd.
 Konica Minolta Business Solutions(China) Co., Ltd.
 Konica Minolta Supplies Manufacturing U.S.A., Inc.
 Konica Minolta Business Solutions U.S.A., Inc.
 Konica Minolta Business Solutions Europe GmbH
 Konica Minolta Business Solutions Deutschland GmbH
 Konica Minolta Business Solutions (UK) Ltd.
 Konica Minolta Supplies Manufacturing France S.A.S.
 Konica Minolta Business Solutions France S.A.S.
 Konica Minolta Business Solutions Australia Pty. Ltd.
 Konica Minolta Opto (Dalian) Co., Ltd.
 Konica Minolta Optical Products (Shanghai) Co., Ltd.
 Konica Minolta Opto (Shanghai) Co., Ltd.
 Konica Minolta Glass Tech (M) Sdn. Bhd.
 Konica Minolta Medical Imaging U.S.A., Inc.
 Konica Minolta Sensing Americas, Inc.
 Konica Minolta Sensing Europe B.V.
 Konica Minolta Sensing Singapore, Pte. Ltd.

Standards for Calculating Environmental Data

CO₂ Emissions

Boundary and Standards for Calculation

Stage		Methods of Calculation
1. Procurement	1) Boundary	Office equipment* ¹ and consumable supplies, optical products,* ² equipment for healthcare system* ³
	2) Standards	CO ₂ emissions for office equipment and consumable supplies are calculated by multiplying the sales amount or production amount by the emissions coefficient of each product as estimated by the official value of the Eco Leaf Environment Label provided by the Japan Environmental Management Association for Industry; and for other products, multiplying the amount of resources used by the emissions coefficient of each product.
2. Production/R&D	1) Boundary	All production and R&D sites around the world
	2) Standards	CO ₂ emissions are calculated by multiplying the amount of energy used at each site by the following coefficients. Fuel: Coefficients stipulated in Japan's Act on Promotion of Global Warming Countermeasures Electricity in Japan: Fiscal 2005 average value of all electrical power sources, as specified by the Federation of Electric Power Companies of Japan Electricity outside Japan: Fiscal 2005 emissions coefficients applicable to each country, as specified by the GHG Protocol
3. Distribution	1) Boundary	Japanese domestic distribution, Chinese production distribution (from factory to port), and international distribution of office equipment, optical products, equipment for healthcare system
	2) Standards	CO ₂ emissions are calculated by multiplying transport distance by cargo weight, and then multiplying that value by the CO ₂ emissions coefficient of each means of transportation.* ⁴ Chinese production distribution and international distribution: Coefficients specified by the GHG Protocol Japanese domestic distribution: Coefficients stipulated in Japan's CO ₂ Emissions Calculation Method for Logistics Operations—Joint Guidelines Ver.3.0
4. Sales and service	1) Boundary	Major sales companies around the world
	2) Standards	Offices: CO ₂ emissions are calculated by multiplying the amount of energy used at main sites (including estimated values for some sites) by the following coefficients. Fuel: Coefficients stipulated in Japan's Act on Promotion of Global Warming Countermeasures Electricity in Japan: 2005 average value of all electrical power sources, as specified by The Federation of Electric Power Companies of Japan Electricity outside Japan: 2005 emissions coefficients applicable to each country, as specified by the GHG Protocol Vehicles: CO ₂ emissions are calculated by multiplying the amount of vehicle fuel used by the following coefficients. Fuel: Coefficients stipulated in Japan's Act on Promotion of Global Warming Countermeasures
5. Usage	1) Boundary	Office equipment and equipment for healthcare system ★ Optical products are excluded since they are used as parts of other companies' products
	2) Standards	CO ₂ emissions are calculated by multiplying the number of units operating in the market (inferred from sales units each year and the life of the product) by the estimated annual amount of electrical consumption* for each model and the CO ₂ coefficient equal to the fiscal 2005 world average value specified by the GHG Protocol.

Notes

*¹ Office equipment include multi-functional peripheral (MFP), printer and other products manufactured and marketed by Konica Minolta Business Technologies, Inc.

*² Optical products include pickup lens, TAC film and other products manufactured and marketed by Konica Minolta Opto, Inc.

*³ Equipment for healthcare system include medical and diagnostic imaging systems and other products manufactured and marketed by Konica Minolta Medical & Graphic, Inc.

*⁴ The annual amount of electrical consumption for office equipment is estimated based on the Typical Electricity Consumption (TEC) value set by the International Energy Star Program, and for equipment for healthcare system it is estimated based on each product's specifications.

* The following reorganization took place on April 1, 2012:

1. The commercialization promotion section for new functional materials such as organic light emitting diode lighting, barrier film, and heat insulation film was transferred from Konica Minolta Holdings, Inc. to Konica Minolta Opto, Inc. and the trade name was changed to Konica Minolta Advanced Layers, Inc.

2. The optics business, which primarily manufactures pickup lenses for optical disks, glass substrates for HDDs, and lens units, was transferred from Konica Minolta Opto, Inc. to Konica Minolta Sensing, Inc., which handles the sensing business, and the trade name was changed to Konica Minolta Optics, Inc.

* Figures in graphs may not add up to totals due to rounding.

Standards for Calculating Environmental Data

Emissions Other Than CO₂

Boundary and Standards for Calculation

Item		Methods of Calculation
1. Petroleum-based resource usage in products	1) Boundary	Raw materials and parts used in office equipment and consumable supplies, optical products and equipment for healthcare system*1
	2) Standards	Calculated by multiplying the raw material or part weight by content percentage of petroleum-based resources set for each material, based on the product specification*2
2. Packaging materials usage	1) Boundary	Raw materials and parts used in packaging for office equipment and consumable supplies, optical products and equipment for healthcare system
	2) Standards	Calculated by multiplying the weight of packaging material per single product (based on product specifications, etc.) by the number of units of the product sold, based on sales results*3
3. Waste discharged externally from manufacturing	1) Boundary	All production and R&D sites around the world
	2) Standards	The total actual weight of waste discharged externally from production*4
4. Final disposal	1) Boundary	All production and R&D sites around the world
	2) Standards	The total weight of final disposal*5 (Weight of waste discharged externally from production × Percentage of final disposal*6)
5. Atmospheric emissions of VOCs	1) Boundary	Production sites around the world with ten or more environmental impact index*7 points, when points are added for every compound that is rated of one point or more.
	2) Standards	The sum of the environmental impact index for atmospheric emissions of VOCs*8
6. Water consumption	1) Boundary	All production and R&D sites around the world
	2) Standards	The total amount of water intake (city water, ground water, industrial water)

Notes

- *1 The boundaries for some figures are slightly different between those shown in the Overall Picture of Environmental Impact and those used in the calculation of the petroleum-based resource usage.
- *2 Data for some products have been adjusted to reflect revisions in the amounts of petroleum-based material used in products.
- *3 Data for some products have been adjusted to reflect changes in calculation method for the amount of packaging materials.
- *4 Of the waste (refuse, etc.) generated at production and research and development sites for which Konica Minolta has responsibility as generator of waste, the amount discharged outside the Konica Minolta site. However, some wastes unrelated to production are excluded.
- *5 Except for residues after recycling
- *6 Percentage of final disposal are calculated based on the value from industrial waste disposal companies.
- *7 **Environmental impact index:** An index unique to Konica Minolta.
Environmental impact index (point) = Atmospheric emissions of VOCs [t] × Hazard coefficient × Location coefficient
Hazard coefficient: Set at 1-fold, 10-fold, or 100-fold depending on the severity of the impact on human health and the environment (set independently by Konica Minolta based on the coefficient used in the safety evaluations conducted by Kanagawa Prefecture in Japan)
Location coefficient: Outside the industrial estate 5, inside the industrial estate 1
- *8 The overall picture of environmental impact does not take into account the hazard coefficient and location coefficient, and the atmospheric emissions are shown as is.
- * The petroleum-based resource usage, for which reduction targets are set in the Medium-Term Environmental Plan, is calculated by taking the total amount of (1) petroleum-based resource usage in products; (2) petroleum-based resource waste in waste discharged externally from manufacturing; and (3) fuel consumption of sales and service vehicles.
- * Figures in graphs may not add up to totals due to rounding.

External Assurance

Konica Minolta engaged KPMG AZSA Sustainability Co., Ltd. to provide assurance on whether its CO₂ emissions, energy use, petroleum-based resource usage, waste discharged externally from manufacturing, petroleum-based resource waste, final disposal, packaging materials usage, atmospheric emissions of volatile organic compounds (VOCs), and water consumption have been measured, gathered and disclosed in accordance with the criteria set by the Group. KPMG AZSA Sustainability has expressed its conclusion in its independent assurance report.



Period: March to June 2012

On-site audit of Konica Minolta Supplies Manufacturing Co., Ltd.



Comments on the Assurance Process

Konica Minolta collects and aggregates environmental data such as energy use at the Group's production and R&D sites with an information system. The accuracy of the collection and aggregation of data has been improved for the indicators for environmental impacts from manufacturing and R&D, in particular for the indicators for which medium- and long-term reduction targets have been set, including CO₂ emissions from manufacturing.

However, among those items with medium- and long-term reduction targets, there were some items such as CO₂ emissions from the use of company vehicles and distribution, for which we deem headquarter's confirmation to be not

yet fully in place. The same applies to items such as water consumption and energy use at offices, which were not included in the items targeted for medium- and long-term reductions.

It is a rational approach to apply more strict controls on items with a relatively large environmental impact and target setting. However, we would advise the company to apply appropriate controls to other items as well, since the accumulation of all kinds of data pertaining to the achievements of each of its sites that makes up the entire picture of the Group's performance.

Naomi Sugo KPMG AZSA Sustainability Co., Ltd.