



KONICA MINOLTA

Giving Shape to Ideas

KONICA MINOLTA

Environmental Report **2011**



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

Corporate Message
The essentials of imaging

The message represents our wish to be acknowledged as an essential company, by offering essential products, services and solutions to our customers in the world of imaging.

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Editorial Policy

Konica Minolta reports on its major environmental efforts in Konica Minolta CSR Report 2011, and posts information in more detail on the website. The Konica Minolta Environmental Report 2011 is available in PDF format, with content focusing on the Group's basic concepts and on activities in fiscal 2010.

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, 2010 to March 31, 2011. Some sections may include information on earlier initiatives or more recent activities.

In this report, "fiscal 2010" refers to the fiscal year starting April 1 2010 and ending March 31 2011.

Publication Date

September 2011 (next report: scheduled for August 2012; previous report: September 2010)

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).

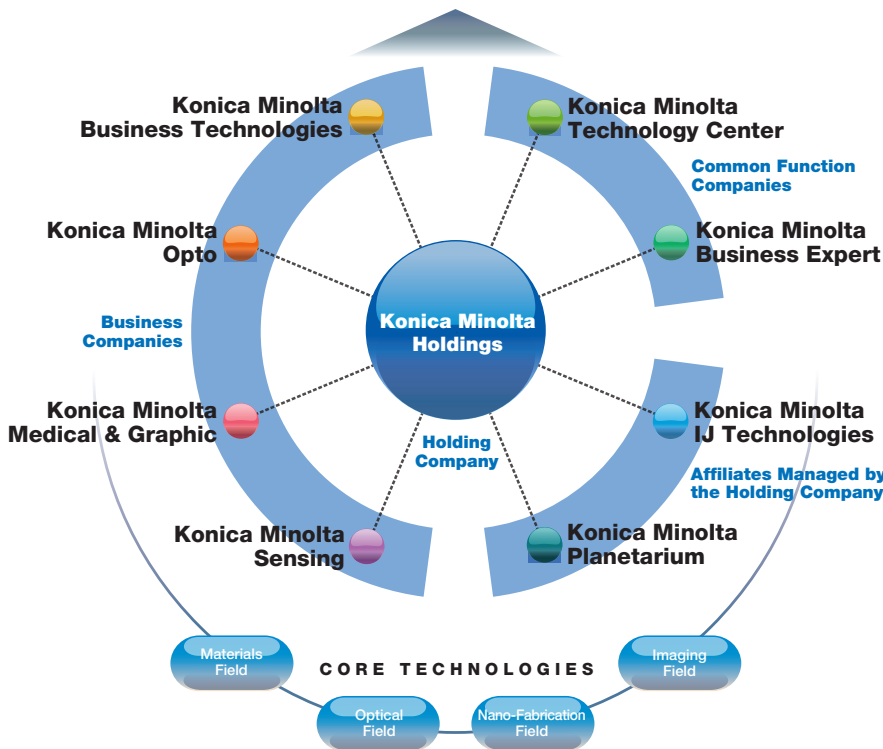
Disclaimer

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



The Creation of New Value



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.

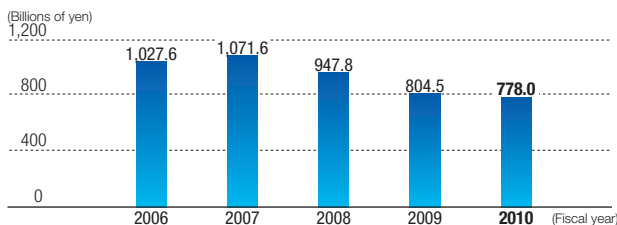
* The Konica Minolta Group consists of Konica Minolta Holdings Inc., 89 consolidated subsidiaries, 17 non-consolidated subsidiaries, and 5 affiliated companies. Group companies are located in 35 different countries (As of end March 31, 2011).

Company Profile

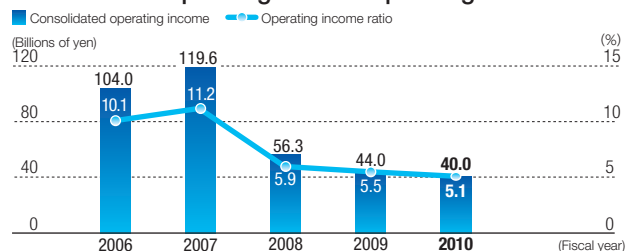
Company name Konica Minolta Holdings, Inc.
Head office 1-6-1 Marunouchi, Chiyoda-ku, Tokyo, Japan
President and CEO Masatoshi Matsuzaki

Established December 22, 1936
Paid-in capital 37,519 million yen
Fiscal year end March 31

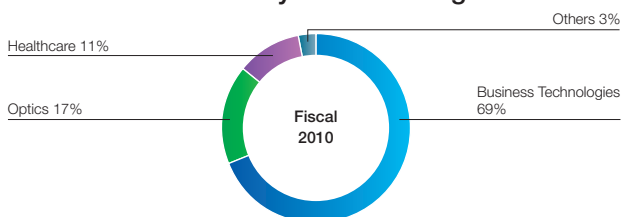
Consolidated Sales



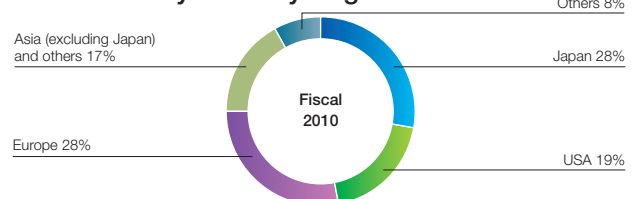
Consolidated Operating Income/Operating Income Ratio



Breakdown of Sales by Business Segment



Breakdown by Sales by Region



* Konica Minolta Medical & Graphic, Inc. transferred its graphic imaging business to Konica Minolta Business Technologies, Inc. on October 1, 2010. The results of the Healthcare Business for fiscal 2010 include those of the Medical & Graphic Imaging Business for the first half.

Overview of the Konica Minolta Group



Holding Company

KONICA MINOLTA HOLDINGS, INC.

As a holding company, drafts and implements group management strategies, as well as supervising, managing and coordinating group management.

Business Companies: Companies entrusted with the authority necessary to execute business activities in their field of expertise.

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

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



KONICA MINOLTA OPTO, INC.

Manufacturing and sale of optical products (pickup lenses, etc.) and electronic materials (TAC films, etc.).



KONICA MINOLTA MEDICAL & GRAPHIC, INC.

Manufacturing and sale of consumables and equipment for healthcare systems.



KONICA MINOLTA SENSING, INC.

Manufacturing and sale of measuring instruments for industrial and healthcare applications.



Common Function Companies: Companies that perform centralized Group-wide functions.

KONICA MINOLTA TECHNOLOGY CENTER, INC.

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

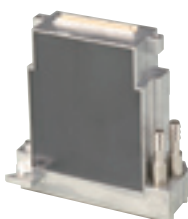
KONICA MINOLTA BUSINESS EXPERT, INC.

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

Affiliates Managed by the Holding Company: Companies that strive to cultivate business with the support of the holding company.

KONICA MINOLTA IJ TECHNOLOGIES, INC.

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



KONICA MINOLTA PLANETARIUM CO.,LTD.

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



Formulation of Eco Vision 2050



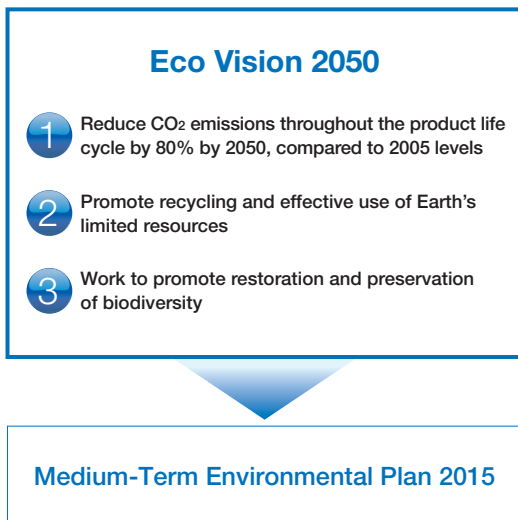
Eco Vision 2050

Formulation of Eco Vision 2050 for a sustainable earth and society

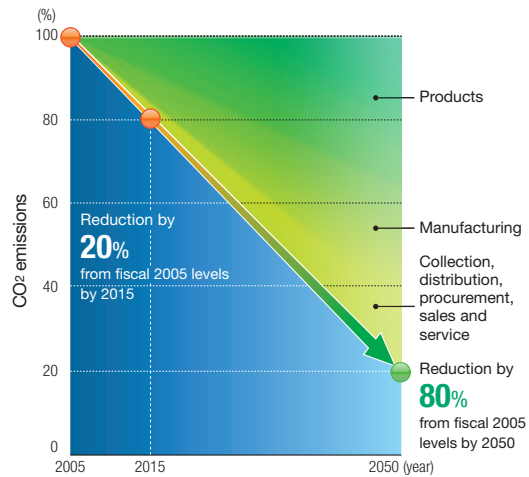
In January 2009 Konica Minolta formulated Eco Vision 2050 as its long-term environmental vision. This vision guides Konica Minolta in the right direction to achieve its future objectives and fulfill its responsibility as a global corporation by contributing to a sustainable earth and society.

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

★ Medium-Term Environmental Plan 2015 (See page 8)



Reductions in CO₂ Emissions



Approach to Setting Targets for CO₂ Emissions

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.

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, and reducing the risk of chemical substances.

Furthermore, in the area of biodiversity, Konica Minolta evaluates the impact of its business activities on ecosystems and examines specific measures for managing the potential effects.

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

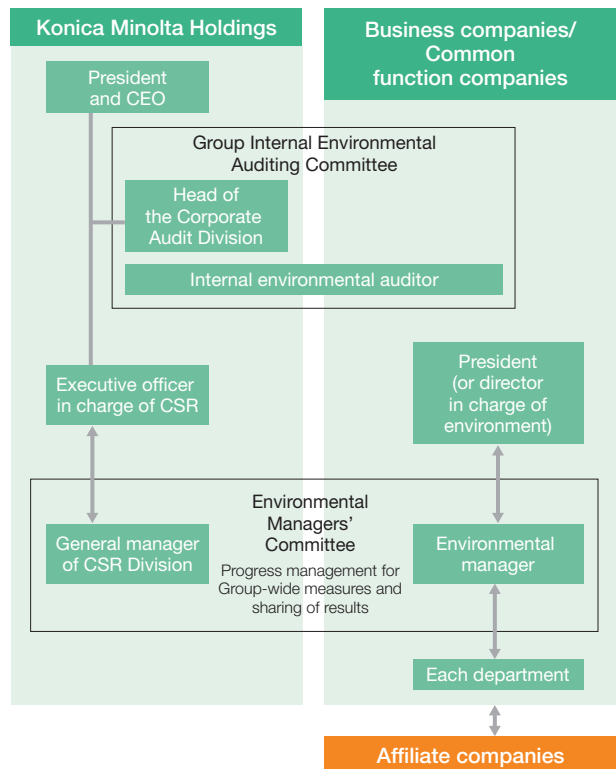
Organization

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

Konica Minolta Holdings, Inc. has appointed an executive officer in charge of CSR 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 CSR 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 compliance system and making provisions for future regulations

As environmental awareness grows around the world, new environmental regulations are being put into place in various countries and regions. These regulatory initiatives focus not only on strengthening and revising existing anti-pollution measures, but also address wider issues of protecting the environment. To reduce the business risks that compliance entails, it is necessary to look beyond existing legislation and make robust provisions for future regulations.

Konica Minolta is implementing its compliance system worldwide using compliance diagnosis in order to understand and comply fully with these regulations. In addition, the Group is reinforcing its systems to monitor regulatory trends in each country and region where it operates. Further, Konica Minolta is building a system that enables a two-way exchange of information between the four specialist compliance organizations located in Japan, China, Europe, and the United States and the production sites that they oversee.

In fiscal 2010, there was no major infringement of environmental regulations.

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: Reduce by 20%	
	CO ₂ emissions from product usage: Reduce by 60%	<ul style="list-style-type: none"> • Develop new energy-saving technologies and incorporate them in products
	CO ₂ emissions from manufacturing: Reduce by 10% (per unit of sales)	<ul style="list-style-type: none"> • Improve energy efficiency by developing better production technologies • Achieve Green Factory Certification standards on a business unit basis
	CO ₂ emissions from distribution: Reduce by 30% (per unit of sales)	<ul style="list-style-type: none"> • Improve distribution efficiency through SCM*2
Supporting a recycling-oriented society	CO ₂ emissions from sales and service: Reduce by 50% (per unit of sales)	<ul style="list-style-type: none"> • Increase efficiency in sales and services
	Petroleum-based resource usage: Reduce by 20% (per unit of sales)	<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
	Packaging materials usage: Reduce by 25% (per unit of sales)	<ul style="list-style-type: none"> • Decrease the volume of product packaging
	Waste discharged externally*3 from manufacturing: Reduce by 50% (per unit of sales)	<ul style="list-style-type: none"> • Reduced production loss through better production technologies and production innovations (zero waste activities) • Achieve Green Factory Certification standards on a business unit basis
Reducing the risk of chemical substances	Product recycling: Build up product recycling systems in each region and aim for a recycling rate of 90% or more	<ul style="list-style-type: none"> • Optimize resource recovery systems in each region
	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
Restoring and preserving biodiversity	Atmospheric emissions of volatile organic compounds (VOCs): Reduce by 75% (environmental impact index*5)	<ul style="list-style-type: none"> • Reduce VOC risk through better production technologies and production innovations • Achieve reduction plan on a business unit basis
	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.

* Green Factory Certification System (See page 13)

Fiscal 2010 Targets and Results/Fiscal 2011 Targets



To achieve targets stipulated in the Medium-Term Environmental Plan 2015, Konica Minolta has set target values for each year for each business company. Although there were some unrealized targets in fiscal 2010, the Group is pressing forward toward its 2015 targets and the realization of its vision for 2050.

Fiscal 2010 Targets and Results, and Fiscal 2011 Targets (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved	Fiscal 2011 Targets
Preventing global warming	CO ₂ emissions throughout product life cycle: -43.5%	-45.5%	Yes	-44.4%
	CO ₂ emissions from product usage: -62.9%	-64.0%	Yes	-64.0%
	CO ₂ emissions from manufacturing: +34.6% (per unit of sales)	+29.5%	Yes	+38.9%
	CO ₂ emissions from distribution: -17.0% (per unit of sales)	+45.8%	No	-23.3%
	CO ₂ emissions from sales and service: +44.7% (per unit of sales)	+48.5%	No	+39.3%
Supporting a recycling-oriented society	Petroleum-based resource usage: +21.2% (per unit of sales)	+24.0%	No	+24.0%
	Packaging materials usage: -24.7% (per unit of sales)	-28.9%	Yes	-27.0%
	Waste discharged externally* ¹ from manufacturing: +9.9% (per unit of sales)	+15.9%	No	+1.6%
	Product recycling: Confirm the current state of recycling systems and develop new plans	<ul style="list-style-type: none"> •Began selling re-manufactured MFPs •Implemented survey on recycling systems 	Yes	<ul style="list-style-type: none"> •Expand sales of re-manufactured MFPs •Enhance recycling systems
Reducing the risk of chemical substances	Chemical substance management: <ul style="list-style-type: none"> •Fully implement the new green procurement system •Complete preparations for compliance with the China RoHS² 	<ul style="list-style-type: none"> •Fully implement the new green procurement system •Complete preparations for compliance with the China RoHS 	Yes	<ul style="list-style-type: none"> •Study alternatives to substances to be reduced •Ensure compliance with the China RoHS
	Atmospheric emissions of volatile organic compounds (VOCs): -71% (in items of environmental impact index* ³)	-73%	Yes	-67%
Restoring and preserving biodiversity	<ul style="list-style-type: none"> •Reexamine the procurement standards for paper •Establish a plan for ecosystem conservation measures 	<ul style="list-style-type: none"> •Prepared revised draft of the procurement standards for paper •Finalized revised draft of criteria of the Green Factory Certification System 	Yes	<ul style="list-style-type: none"> •Revise and implement the draft procurement standards for paper •Pursue compliance with criteria of the Green Factory Certification System

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

*³ **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.

* See the sections below for details

- Preventing Global Warming (See page 15)
- Supporting a Recycling-Oriented Society (See page 22)
- Reducing the Risk of Chemical Substances (See page 30)
- Restoring and Preserving Biodiversity (See page 34)

* Green Factory Certification System (See Page 13)

Reducing Environmental Impact over the Product Life Cycle



For companies involved in manufacturing, the challenge of minimizing the environmental impact of products is becoming more and more pressing. To fulfill its responsibilities, Konica Minolta established its Eco Vision 2050, and at the same time, set priority themes and specific targets in its Medium-Term Environmental Plan 2015. Furthermore, to achieve these targets, the Group is working to establish unique systems across the product life cycle, including product development, procurement, production, sales, and use.

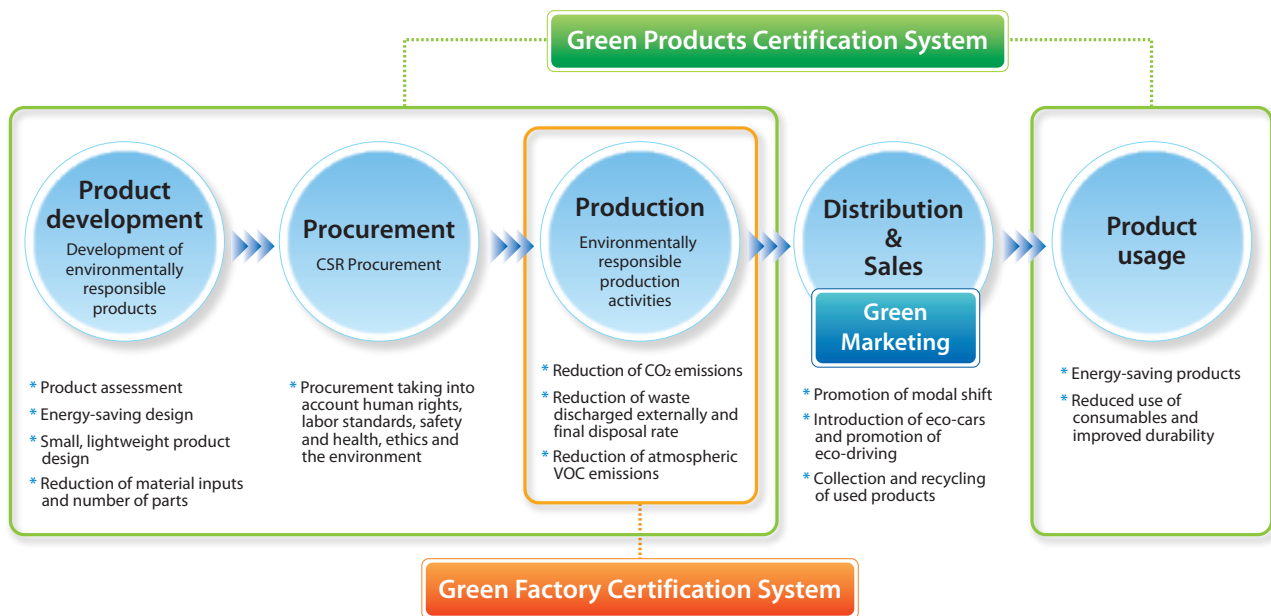
In January 2010, Konica Minolta introduced the Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites. From the first year of its introduction, many sites met the targets ahead of schedule and are achieving steady gains.

In addition, the new Green Products Certification System was started in July 2011. This system represents the core of Konica Minolta's environmental activities. The system has three levels based on the degree to which a product minimizes environmental impact, with "Sustainable Products" being

the highest level. The certification standard for Sustainable Products requires that they not only embody superior environmental performance not typically achieved by earlier products, but that they also incorporate original technology. While we should seek to reduce the environmental impact of all our products as a matter of course, by setting a very challenging certification level, we seek to promote innovation and contribute more proactively to sustainability.

In sales and services, Konica Minolta is promoting Green Marketing. There is no certification system for this, but our business companies and sales companies around the world will plan their own community-based environmental activities, and start putting them into operation from July 2011.

At Konica Minolta, all employees—from product development, procurement, production and sales—are involved in business-based environmental activities. Through these efforts, the Group aims to reduce the environmental impact across the entire life cycle of its products.



*Green Products Certification System (See page 11)
*Green Factory Certification System (See page 13)

Green Products Certification System



Introducing the Green Products Certification System

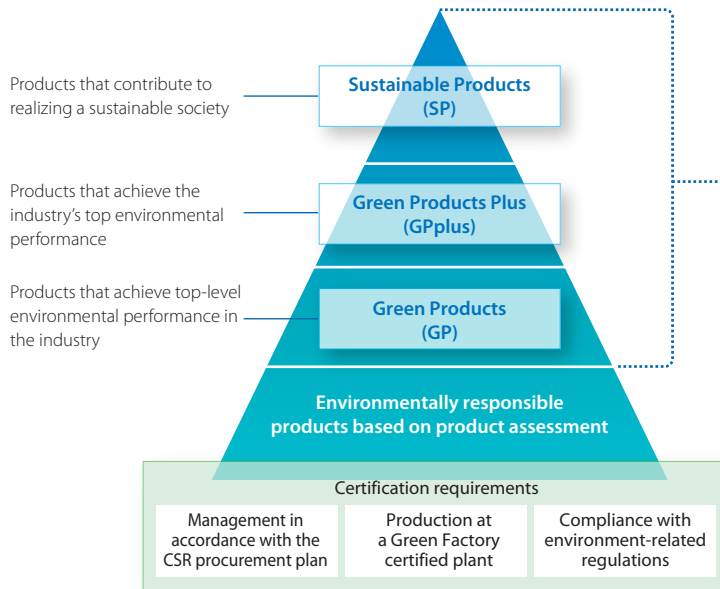
Defining evaluation standards for the environmental performance of products, and promoting the development of environmentally responsible products

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 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

*Green Factory Certification System (See page 13)

Green Products Certification System



Launched Green Products Certification System

The REGIUS Σ desktop computed radiography (CR) and the AeroDR cassette digital radiography detector from Konica Minolta Medical & Graphic, Inc. were recognized as the first Green Products Plus.

Example of Certified Products

The REGIUS Σ desktop computed radiography (CR)



REGIUS Σ

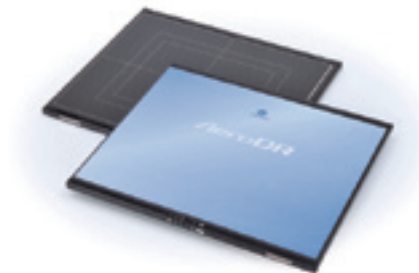


green products

- **Lowest weight CR*** (approx. 28kg)
- **Power consumption is less than one tenth of prior models.**
- **Smallest carbon footprint — CO₂ emissions reduced by more than 64%** (Calculated at lifecycle, compared to our conventional CR)

*As of April 2011

The AeroDR cassette digital radiography detector



AeroDR



green products

- **World's lightest weight*** (including battery): 2.9kg
- **Energy conservation design: 16hr stand-by time**

*As of April 2011

Green Factory Certification System



Enhancing the Green Factory Certification System

Adding new certification criteria to enhance environmental activities at production sites

In January 2010, Konica Minolta launched its unique Green Factory Certification System for comprehensive evaluation of the environmental activities of its production sites. 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 order to further strengthen environmental activities, Konica Minolta added two new items to the Level 2 criteria in April 2011. One of these requires that sites implement measures to restore and preserve biodiversity, according to guidelines set for management of water resources and wastewater, and proper management of greenery at factory sites. The other requires that sites follow the guidelines set for management of soil contamination risk as one aspect of reducing chemical risks.

Green Factory Certification Standards

: Newly added items

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.

*Guidelines for Managing Soil Contamination Risk (See page 33)

*Guidelines for Biodiversity Preservation (See page 35)

Green Factory Certification System



Units achieved certification in fiscal 2010

In fiscal 2010, out of 23 business units,* 12 units achieved Level 1 (11 in Japan and one in China).

* 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 in Fiscal 2010

Business Unit	Product	Benchmark Year	Main Measures
Konica Minolta Supplies Manufacturing Co., Ltd.	Consumables for MFPs and laser printers (photoconductor drum and developer)	4th quarter, fiscal 2006	(Global warming) Effective use of polymerization reaction heat; reduction of steam loss; improvement of efficiency with consolidated facilities; introduction of use of waste heat from dehumidifiers (Recycling) Change in the method of cleaning the machinery when changing over products; reduction of toner collection loss when filling toner bottles (Chemical) Introduction of solvent recovery equipment; technological establishment of alternative formulation of solvent and its implementation in production
Konica Minolta Medical & Graphic, Inc. Kofu Site	Radiographic film	Fiscal 2005	(Global warming) Increase in productivity with faster film transfer in the production process; halting of air conditioning outside production times (Recycling) Expansion of recycling of coating solvent; improvement in production yield percentage (Chemical) Operation and maintenance of deodorization equipment; reduction of changeover losses
Konica Minolta Technoproducts Co., Ltd. Sayama Assembly of equipment such as medical diagnostic imaging systems	Medical diagnostic imaging systems	Fiscal 2006	(Global warming) Reduction of storage area through just-in-time delivery of parts; reduction of assembly area by revising the assembly line configuration (Recycling) Implementation of paperless processes using IT for work instructions; introduction of returnable containers for parts
Konica Minolta Technoproducts Co., Ltd. Sayama Production of photostimulable phosphor plates using vapor deposition method	Photostimulable phosphor plates	Fiscal 2007	(Global warming) Improvement of yield percentage; improvement of operating ratio (Recycling) Increase in yield percentage
Konica Minolta Technoproducts Co., Ltd. Hino Production of photostimulable phosphor plates using coating method	Photostimulable phosphor plates	Fiscal 2005	(Global warming) Reduction of drying load using a new formulation (Recycling) Reduction of loss of coating solution
Konica Minolta Sensing, Inc. Sakai Site	Measuring instruments for industrial and healthcare applications	Fiscal 2007	(Global warming) Improvement of production efficiency; changeover to high-efficiency facilities
Konica Minolta Chemical Co., Ltd.	Electrophotographic chemicals, chemicals for photosensitive materials etc.	Fiscal 2005	(Global warming) Optimization of production methods associated with changes in product lineup; introduction of inverters for pumps and implementation of quantity control (Recycling) Expansion of internal recycling of solvents; expansion of proper treatment of wastewater at company treatment facilities (Chemical) Expansion of scrubbers (flue gas cleaning systems); appropriate operation and maintenance of extraction facilities through maintenance and inspection
Konica Minolta Opto, Inc. Hachioji component business and Konica Minolta Opto Products Co., Ltd.	Pickup lenses for optical disks, lenses for laser printers	Fiscal 2006	(Global warming) Increase in productivity; improvement of facilities and utilities (insulation of mold temperature controllers and hoses, improving efficiency in cold water production) (Recycling) Increase in productivity; recycling of waste runners into containers for shipping
Konica Minolta Supplies Manufacturing Kansai Co., Ltd.	Developer for MFPs and laser printers	Fiscal 2007	(Global warming) Optimization of supply pressure of air compression equipment; improvement of production efficiency by modifying facilities (Recycling) Reduction of the product changeover frequency; improvement of yield percentage during changing
Konica Minolta Electronics Co., Ltd.	Electrical circuit boards, optical sensor and various precision injection molded articles	Fiscal 2005	(Global warming) Improvement of efficiency of production with introduction of energy-saving production facilities (Recycling) Blocking of mold and downsizing of runners; review of part delivery methods; reduction of defective circuit boards
Konica Minolta Business Technologies (Dongguan) Co., Ltd.	MFPs, laser printers and related parts and consumables	Fiscal 2006	(Global warming) Improving assembly process efficiency; changeover to vaporization cooling; switching to energy-saving, high-efficiency lamps (Recycling) Changing packaging materials such as cardboard used for parts to returnable containers; increasing reuse of left-over plastic from molding process of runners

* (Global warming): Preventing global warming; (Recycling): Support for a recycling-oriented society; (Chemical): Reduction of the risk of chemical substances

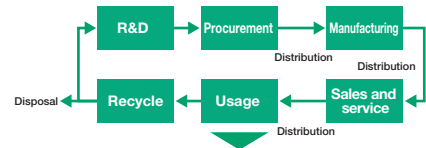
Basic Concept/Targets and Results



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



CO₂ reduction throughout the entire product life cycle

Targets and Results for Fiscal 2010 (Throughout the product life cycle)

Achieving reduction targets for CO₂ emissions across the product life cycle

In addition to its efforts to reduce CO₂ emissions across the entire product life cycle, Konica Minolta sets targets for each stage including product usage, manufacturing, distribution, and sales and services. As a result of achieving the planned values for CO₂ emissions from product usage and manufacturing processes, which account for nearly 90% of the total, the Group succeeded in meeting its overall target in fiscal 2010.

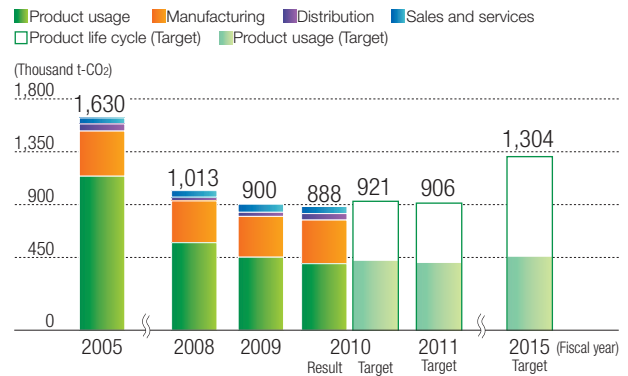
The Business Technologies Business accounts for more than 90% of CO₂ emissions during product usage, so the company is prioritizing efforts to reduce the energy consumed by these products. In fiscal 2010, the company launched the bizhub 184/164 monochrome MFP with industry-top-class low power consumption, which contributed to achieving the reduction target.

Regarding CO₂ emissions resulting from manufacturing processes, the Green Factory Certification System incorporates its own criteria to encourage each business unit to increase its energy efficiency in production, thereby steadily reducing CO₂ emissions per unit of production (output or production volume).

* Green Factory Certification System (See page 13)

The Group did not achieve its targets for CO₂ emissions from distribution, or from sales and services. In particular, the increase in air freight required to respond to volatile demand trends had a significant impact on the emissions, and as a result the Group missed the target by a large margin.

CO₂ Emissions across Product Life Cycle



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

Fiscal 2010 Targets and Results (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Preventing global warming	CO ₂ emissions throughout product life cycle: -43.5%	-45.5%	Yes
	CO ₂ emissions from product usage: -62.9%	-64.0%	Yes
	CO ₂ emissions from manufacturing: +34.6% (per unit of sales)	+29.5%	Yes
	CO ₂ emissions from distribution: -17.0% (per unit of sales)	+45.8%	No
	CO ₂ emissions from sales and service: +44.7% (per unit of sales)	+48.5%	No

* Standards for calculating CO₂ emissions (See page 50)

* For details of the targets, refer to the pages below.

- CO₂ Emissions from Product Usage (See page 16)
- CO₂ Emissions from Manufacturing (See page 18)
- CO₂ Emissions from Distribution (See page 20)
- CO₂ Emissions from Sales and Service (See page 21)

CO₂ Emissions from Product Usage



Targets and Results for Fiscal 2010 (Product Usage)

Marketed products with energy-saving technologies to achieve reduction targets

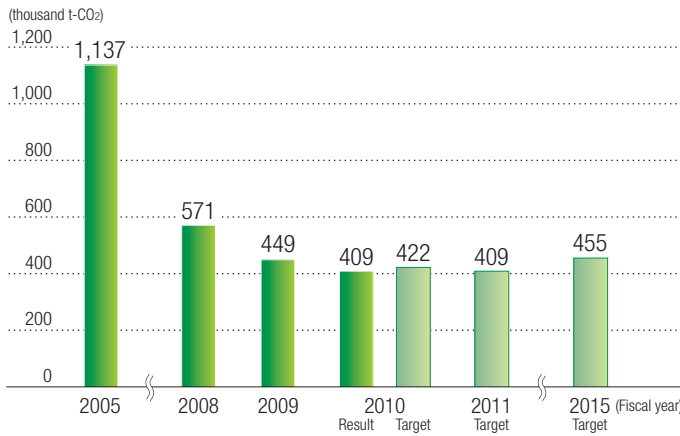
Multi-functional peripherals (MFPs) occupy the largest portion of CO₂ amounts emitted during product usage among all Konica Minolta products.

For this reason, Konica Minolta Business Technologies, Inc. focuses its efforts in developing MFPs that can provide substantial energy-saving performance. The MFPs feature numerous unique technologies, including a toner with a lower fusing temperature and an IH technology-based fusing unit

that reduces power consumption in standby mode.

In fiscal 2010, the company launched the bizhub 184/164 monochrome MFP series for newly developing countries, with industry-leading low power consumption, and the bizhub 423/363/283/223 monochrome MFP with a color scanner designed for energy-saving, which contributed to achieving the target.

CO₂ Emissions from Product Usage



Fiscal 2010 Targets and Results: CO₂ Emissions from Product Usage (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Preventing global warming	CO ₂ emissions from product usage: -62.9%	-64.0%	Yes

* Standards for calculating CO₂ emissions (See page 50)

CO₂ Emissions from Product Usage



Energy-Saving Product Design

Case 1: The bizhub 184/164

The bizhub 184/164 is a series of monochrome MFPs with industry-top-class low power consumption. Sales began in May 2010 targeting small and mid-sized offices in emerging markets where demand for office equipment is increasing.

This series contributes to reducing CO₂ emissions by reducing power consumption during usage to less than half the reference value (TEC value*). In addition, weighing in at only 23.5 kg, the volume of each machine has been reduced by about 30% compared to previous models, and the quantity

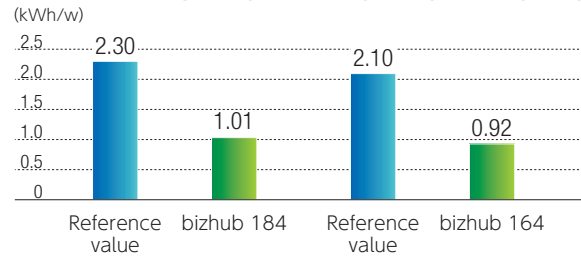
of components cut by about 35%. The mass of the packaging materials used is also about 40% less than that of previous models. Furthermore, the adoption of proprietary polymerized toner achieves both outstanding environmental performance and high-resolution printing.

The bizhub 184/164 and nine other models have received the China Environmental Labeling Product Certification for low-carbon products in recognition of their environmental performance.



bizhub 164

Power Consumption (TEC Value) Comparison (230V)



* TEC (typical electricity consumption) value:

Typical weekly energy consumption specified by the International Energy Star Program. It is calculated assuming an average usage pattern in offices of five days of alternate operation and sleep/off, and two days of sleep/off

Case 2: Technical Features of the MFP

Simitri HD Toner fuses at a lower temperature

Simitri HD Toner is a proprietary polymerized toner developed by Konica Minolta. Polymerization is a method of toner manufacturing that greatly reduces environmental impact during production when compared to conventional toner manufacturing methods. The toner particles are smaller than regular toner particles, so less toner is required for the same print jobs. In addition, the toner is fused at a lower temperature. All of these features contribute to reducing the amount of energy used when the product is in use.

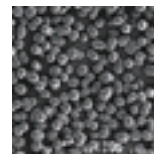
as the means of rapidly heating the fusing unit of MFPs*. By rapidly heating the surface of the fusing roller, a low standby temperature can be quickly increased to printing temperature. This greatly reduces power consumption during standby mode.

*Applies to some bizhub MFPs

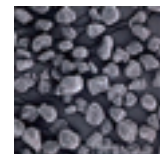
Using IH technology to create an energy-efficient fusing unit temperature

To start printing with an MFP, the fusing roller needs to be heated to a certain temperature. If the standby temperature is kept high, then the roller can be heated quickly to the proper temperature. However, this means that a significant amount of energy is consumed during the standby mode. Reducing this energy consumption is key to making an energy-saving MFP.

Konica Minolta provides a solution with its induction heating (IH) technology. This technology has been applied

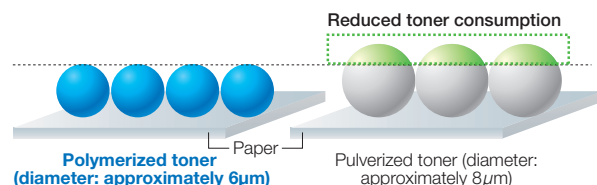


Polymerized toner



Pulverized toner

Illustration of How Smaller Particles Can Reduce Toner Consumption



CO₂ Emissions from Manufacturing



Targets and Results for Fiscal 2010 (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 facilities, Konica Minolta improved its energy production efficiency and steadily reduced CO₂ emissions from manufacturing.

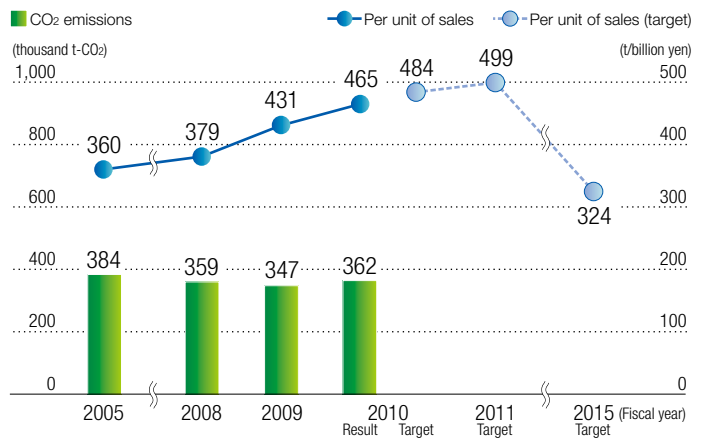
In fiscal 2010, the Group implemented measures including improving the productivity of each business unit, raising the efficiency of facilities, and increasing insulation so that out of 23 business units, 12 achieved Green Factory Level 1 (12% reduction*¹ in CO₂ emissions per unit of production*²). As a result, while CO₂ emissions in fiscal 2010 increased year on year, the Group was able to achieve the targets set for emissions per unit of sales volume.

Konica Minolta aims to ensure that the remaining 11 business units achieve Level 1 in order to meet the target for fiscal 2011.

* Green Factory Certification System (See page P13)

- *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.

CO₂ Emissions from Manufacturing



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

Fiscal 2010 Targets and Results: CO₂ Emissions from Manufacturing (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Preventing global warming	CO ₂ emissions from manufacturing: +34.6% (per unit of sales)	+29.5%	Yes

* Standards for calculating CO₂ emissions (See page 50)

CO₂ Emissions from Manufacturing



Energy Conservation of Facilities and Equipment

Case 1: Initiatives at Konica Minolta Supplies Manufacturing Co., Ltd.

Konica Minolta Supplies Manufacturing Co., Ltd., which produces polymerized toner at its plants in Kofu and Tatsuno, is undertaking measures to improve productivity in addition to various energy-saving initiatives. For example, by changing the method of controlling temperature regulation in the polymerization reaction process of toner manufacturing, it became possible to maintain the polymerization reactor at a constant temperature without frequent heating and cooling. In addition, the company introduced consolidated steam piping throughout the plant and reduced heat loss through

* Green Factory Certification System (See page 13)

improved insulation, among other measures. As a result of these activities, the company achieved a 24% reduction*¹ in CO₂ emissions per unit of production*² and reached the Green Factory Level 1 standard.

*¹ Using the fourth quarter of fiscal 2006 when mass production of polymerized toner started at the Tatsuno Plant as a benchmark.

*² **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.

Case 2: Greenery on Rooftops and Walls (Green Curtain)

At its buildings all over Japan, Konica Minolta is adding greenery to the rooftops and walls, as a "Green Curtain." This initiative will result in CO₂ absorption through photosynthesis, and have a cooling effect on the buildings through natural shading and transpiration (by which plants release moisture vapor into the air). In short, it will help prevent global warming and lower the heat island effect.

Konica Minolta Business Expert, Inc. is examining

environmental technologies for greening the roof of its existing building. The company focused on evaporation from moss as a means of achieving a thermal barrier effect without using soil, developing a unique moss sheet which is being grown on the roof of its Tokyo site Hino. The company will check the energy savings up to March 2012 and will promote similar methods at other Group companies.



CO₂ Emissions from Distribution



Targets and Results for Fiscal 2010 (Distribution)

An increase in airfreight meant that the targets were missed by a significant margin

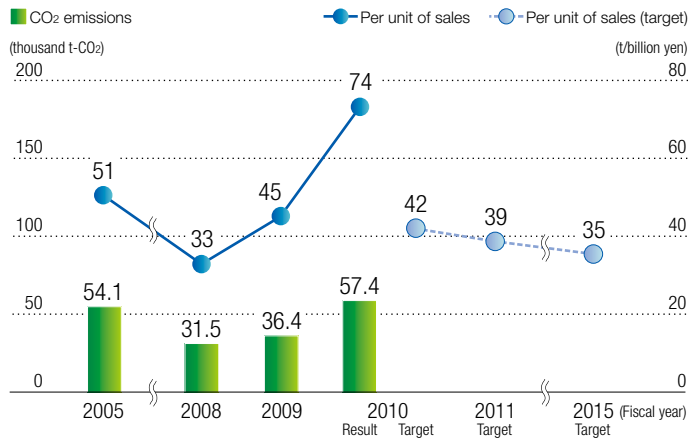
For the same shipment weight transported over an identical distance, cargo shipment by air produces 57 times the amount of CO₂ as shipment by sea (based on GHG Protocol published values). Consequently, Konica Minolta has focused its efforts on reducing air transport.

However, in fiscal 2010, airfreight increased significantly as a consequence of fluctuations in demand. Since the third quarter, the use of aircraft has been reduced through measures to ensure a stable supply of products, but the targets for the fiscal year were not met by a significant margin.

While working to sharpen the precision of its demand forecasts, the Group will pursue efforts to reduce the amount of airfreight by implementing more advanced supply chain management (SCM)*.

* **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.

CO₂ Emissions from Distribution



* New distance data is used to calculate the CO₂ emissions from distribution in fiscal 2010 to unify the calculation methods among different business companies. Distance data used to calculate the emissions in fiscal 2005, 2008 and 2009 is currently under review, and is different from the new distance data.

Fiscal 2010 Targets and Results: CO₂ Emissions from Distribution (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Preventing global warming	CO ₂ emissions from distribution: -17.0% (per unit of sales)	+45.8%	No

* Standards for calculating CO₂ emissions (See page 50)

CO₂ Emissions from Sales and Service



Targets and Results for Fiscal 2010 (Sales and Service)

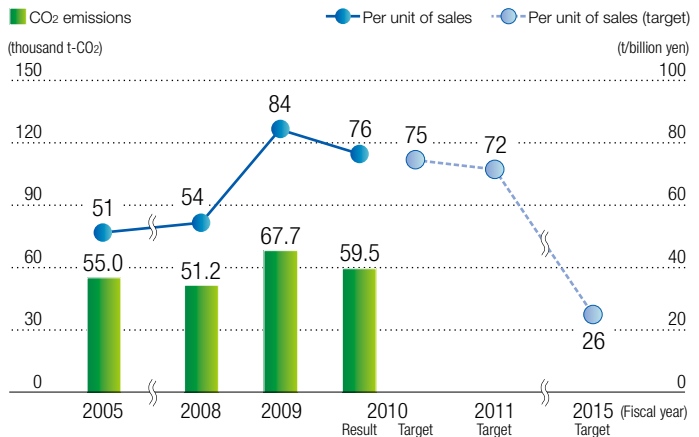
Konica Minolta promotes the management and reduction of CO₂ emissions from its business vehicles

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. As a result of these activities, the Group succeeded in reducing its CO₂ emissions by 12% in fiscal 2010, but it was not able to achieve its targets.

The Group will seek further improvements by promoting more efficient delivery of sales and services.

CO₂ Emissions from Sales and Service



Fiscal 2010 Targets and Results: CO₂ Emissions from Sales and Service (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Preventing global warming	CO ₂ emissions from sales and service: +44.7% (per unit of sales)	+48.5%	No

* Standards for calculating CO₂ emissions (See page 50)

Initiatives in Sales and Service

Case 1: Promoting Eco-Driving

Konica Minolta Business Solutions Japan Co., Ltd., a sales company of office equipment and solutions, has been implementing a vehicle operation management system for company-owned vehicles since fiscal 2009.

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. For example, by checking the data for fuel consumption or sustained idling, drivers of company vehicles can be encouraged to implement eco-driving more rigorously to improve mileage and reduce the environmental impact of vehicle use.

Case 2: Installing a Photovoltaic System to Reduce CO₂ Emissions

Konica Minolta Business Solutions (Belgium) N.V. installed a new photovoltaic power generation system in March 2010. The company anticipates annual energy production of 115 MWh, which will cover 25% of the power consumption of its entire office and lead to reduction of CO₂ emissions by 46 tons per year.



Solar panels installed on the roof of the company building

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 2010

Working to minimize the usage of petroleum-based resources in products

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 that account for more than 60% of the total. Besides making products lighter, thinner, shorter and smaller, the Group is also increasing the use of recycled materials. In fiscal 2010, Konica Minolta Business Technologies, Inc. implemented measures such as adopting two types of environmentally responsible plastic for the first time in the bizhub 652/552 monochrome MFP. However, the Group did not achieve the target value due to failure to meet

the target for reducing fuel consumption in vehicles, among other factors.

The Green Factory Certification System incorporates its own criteria for waste discharged externally from manufacturing, to encourage reductions at each production site. However, the target value was not met due to increased manufacturing of products that generate relatively high levels of waste during production, as well as the unexpected waste that is produced with the start-up of new plants.

Reduction of packaging materials usage and product recycling are progressing as planned. In fiscal 2010, Konica Minolta commercialized a re-manufactured MFP, starting sales of the bizhub 750RM/600RM in Japan in December.

*Green Factory Certification System (See page 13)

Fiscal 2010 Targets and Results (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Supporting a recycling-oriented society	Petroleum-based resource usage: +21.2% (per unit of sales)	+24.0%	No
	Packaging materials usage: -24.7% (per unit of sales)	-28.9%	Yes
	Waste discharged externally from manufacturing: +9.9% (per unit of sales)	+15.9%	No
	Product recycling: Confirm the current state of recycling systems and develop new plans	<ul style="list-style-type: none"> • Began selling re-manufactured MFPs • Implemented survey on recycling systems 	Yes

* 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.

* Standards for calculating petroleum-based resource usage in products, packaging materials usage and waste discharged externally from manufacturing (See page 51)

* For details of the targets, refer to the pages below.

- Reduce Petroleum-Based Resource Usage (See page 23)
- Reduce Packaging Materials Usage (See page 24)
- Reduce Waste Discharged Externally from Manufacturing (See page 25)
- Product Recycling (See page 26)

Reduce Petroleum-Based Resource Usage



Targets and Results for Fiscal 2010 (Petroleum-Based Resources)

Konica Minolta adopted environmentally responsible plastic in an MFP for the first time

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 2010, Konica Minolta implemented measures such as adopting two types of environmentally responsible plastic for the first time in the bizhub 652/552 monochrome MFP.

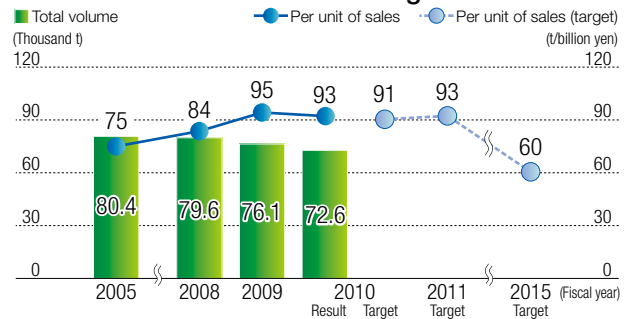
To minimize waste in production, the Group is undertaking reductions as part of the Green Factory Certification System. In fiscal 2010, Konica Minolta worked to improve production efficiency and yield, while continuing the internal recycling of waste solvents and other materials.

As part of its efforts to reduce the fuel consumed by vehicles used for sales and service, Konica Minolta introduced

eco-cars with better mileage, and encourages employees to practice eco-driving.

These measures resulted in further reductions in the consumption of petroleum-based resources compared with fiscal 2009, although the Group did not achieve its targets per unit of sales volume.

Petroleum-Based Resource Usage



* Some of the data for consumable supplies and equipment options was changed to reflect actual values rather than estimates; therefore the past data was revised.

* Green Factory Certification System (See page 13)

Fiscal 2010 Targets and Results: Petroleum-Based Resource Usage (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Supporting a recycling-oriented society	Petroleum-based resource usage: +21.2%(per unit of sales)	+24.0%	No

* 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.

* Standards for calculating petroleum-based resource usage in products (See page 51)

Reduction of Resources Used in Products

Case: Adoption of Environmentally Responsible Materials

Konica Minolta actively seeks to reduce the use of petroleum-based resources. As part of this effort, Konica Minolta Business Technologies, Inc. has adopted two types of

environmentally responsible plastic for the bizhub 652/552 monochrome MFP.

New Polymer Alloy Recycled PET

Recycled material developed by Konica Minolta to make effective use of waste PET material obtained from waste in the manufacturing process.

Strong and fire resistant, it can also be injection-molded.



Used for the lid (vertical transport)

Bioplastic

Plant-based plastic that uses biomass as part of its resources. Compared to petroleum-based plastics, they are characterized by low consumption of petroleum-based resources and low emissions of CO₂.



Used for the cover

Reduce Packaging Materials Usage



Targets and Results for Fiscal 2010 (Packaging Materials)

Reduction targets were met by redesigning packaging materials

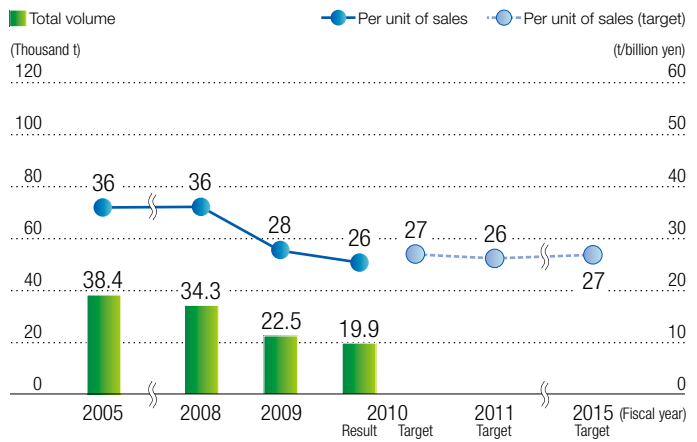
Konica Minolta Business Technologies, Inc., a core business company of the Group, is working to reduce the amount of packaging materials for MFPs, which are its main product.

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.

For products released in fiscal 2010, the packaging for the monochrome MFP bizhub 423/363 and bizhub 283/223 was reduced by 15.5% and 8.1% respectively compared with the previous models, while the packaging for the monochrome MFP bizhub 184/164 series for newly developing countries was reduced by approximately 40%.

With these results, Konica Minolta achieved its fiscal 2010 targets for reduction of packaging. The company will continue to make further reductions in fiscal 2011.

Packaging Materials Usage



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

Fiscal 2010 Targets and Results: Packaging Materials Usage (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Supporting a recycling-oriented society	Packaging materials usage: -24.7% (per unit of sales)	-28.9%	Yes

* Standards for calculating packaging materials usage (See page 51)

Activities at Sales Companies

Case: Recycling Centre for Used Packaging Materials

In 2007, 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.

In addition, in fiscal 2010, the company introduced a crusher for chipping wooden shipping pallets that can no longer be reused.



Pallet crusher

Reduce Waste Discharged Externally from Manufacturing



Targets and Results for Fiscal 2010 (Waste Discharged Externally from Manufacturing)

Konica Minolta pursues activities related to the Green Factory Certification System

By improving production efficiency and promoting internal recycling through the Green Factory Certification System, each business unit is working to reduce waste discharged externally*¹.

In fiscal 2010, out of 23 business units, 12 achieved Green Factory Level 1 (30% reduction*² in waste discharged externally per unit of sales volume). As specific measures, Konica Minolta reduced waste by improving yield in the production process and carried out internal recycling of waste solvents and other materials. However, the Group was unable to meet the target due to increased production of products that generate significant amounts of waste during production, as well as unexpected waste generation associated with the start-up of new plants.

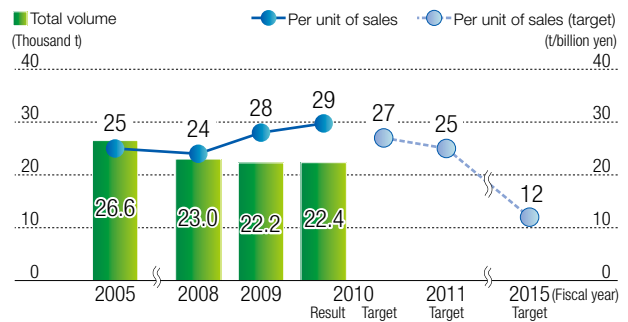
In fiscal 2011, Konica Minolta aims to ensure that the remaining 11 business units achieve Level 1, as well as meeting the target for reductions per unit of sales volume.

* Green Factory Certification System (See page 13)

*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.

Waste Discharged Externally from Manufacturing



Fiscal 2010 Targets and Results: Waste Discharged Externally from Manufacturing (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Supporting a recycling-oriented society	Waste discharged externally from manufacturing: +9.9% (per unit of sales)	+15.9%	No

* Standards for calculating waste discharged externally from manufacturing (See page 51)

Initiatives to Reduce Waste Discharged Externally

Case: Konica Minolta Supplies Manufacturing Co., Ltd.

Konica Minolta Supplies Manufacturing Co., Ltd., which produces polymerized toner at its plants in Kofu and Tatsuno, is undertaking a range of measures to improve yield in its production processes by reducing waste and so on. For example, the amount of toner wasted has been reduced significantly by changing the method of cleaning the machinery when changing over products and by reducing of

toner collection loss when toner bottles are filled.

As a result of these activities, the company achieved a 40% reduction* in waste discharged externally per unit of sales volume and reached the Green Factory Level 1 standard.

* Using the fourth quarter of fiscal 2006 when mass production of polymerized toner started at the Tatsuno Plant as a benchmark

Product Recycling



Targets and Results for Fiscal 2010 (Product Recycling)

Konica Minolta has launched re-manufactured MFP

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 2010, Konica Minolta conducted a survey of

the recycling systems in different regions of the world, and launched re-manufactured MFPs as a priority initiative. In 2011, besides promoting the establishment of recycling systems, the Group plans to promote further development of re-manufactured MFPs.

Fiscal 2010 Targets and Results

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Supporting a recycling-oriented society	Product recycling: Confirm the current state of recycling systems and develop new plans	<ul style="list-style-type: none"> Began selling re-manufactured MFPs Implemented survey on recycling systems 	Yes

Recycling Initiatives in Office Equipment

Konica Minolta Business Technologies, Inc. (hereafter, Business Technologies) is undertaking the collection and recycling of office equipment and supplies in each country around the world.

Machines collected in Japan in fiscal 2010

- Estimated collection rate = 73.6%
- Recycling rate = 98.7% (by weight)

Case 1: Promoting Reuse and Recycling of Parts

Business Technologies collects used MFPs within Japan through its nationwide sales companies and JBMIA* replacement centers. Disassembly and sorting of the MFPs collected is outsourced to contractors in seven locations nationwide.

OMT Co., Ltd., the contractor for the Kanto and Tohoku regions, carries out disassembly by hand instead of using mechanical processing, achieving a high recycling rate. The dismantled parts are sorted into about 20 different types,

*JBMIA: Japan Business Machine and Information System Industries Association

including metal, plastic, and others. Reusable parts are cleaned, inspected and reused. Other parts are sent to be recycled by companies that can process them as feedstock for recyclable materials or fuel.

In addition, a group company of Business Technologies, Toyohashi Precision Products Co., Ltd., selects, cleans and inspects the developing rollers and conveyance springs from used toner cartridges. These are then sent to group companies for use in new products.



Toyohashi Precision Products Co., Ltd.



OMT Co., Ltd.

Product Recycling



Case 2: Re-Manufactured MFPs Achieve 85% Reuse of Parts

Business Technologies markets re-manufactured MFPs, which are built from used products, by disassembling and cleaning or replacing parts as necessary and making adjustments. The finished product comes guaranteed as meeting the same quality standards as a new product.

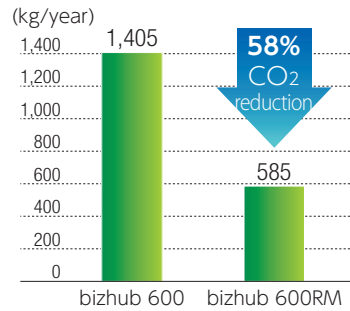
The re-manufactured MFP bizhub 750RM/600RM

released in December 2010 in Japan is a recycled version of the bizhub 750/600 monochrome MFP that prints 75/60 pages (letter or A4 landscape) per minute. Using recycled parts for more than 85% of the mass ratio of the product reduces CO₂ emissions over the product life cycle by about 41% for the bizhub 750RM and about 58% for the bizhub 600RM.



bizhub 600RM

CO₂ Emissions (Life Cycle Assessment Results)



Product Recycling



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.



Japanese website



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).

Efforts to Save Resources



Product Design to Save Resources

Case 1: Achieving Thinner TAC Films for LCD Polarizers

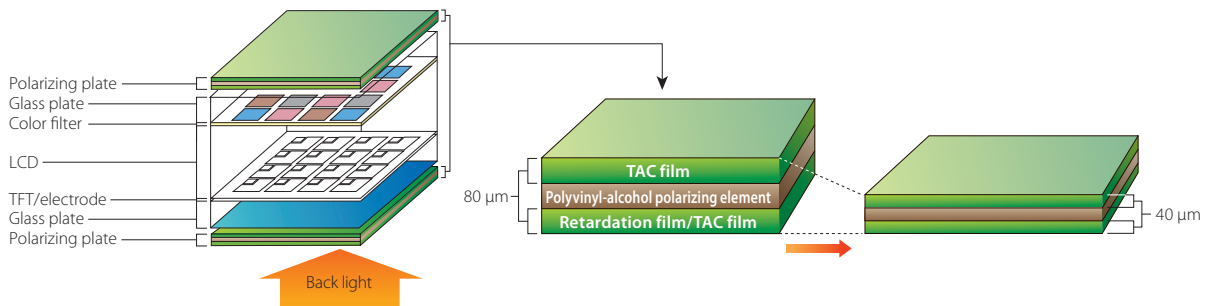
One of the indispensable components of the liquid crystal displays used in mobile phones, PC monitors, LCD TVs, and large screens is TAC* film, which protects polarizers.

Konica Minolta Opto, Inc., got a head start in the development of TAC films for liquid crystal polarizers using technology acquired over the years in the development and production of photographic film. While meeting the quality

requirements of liquid crystal display applications such as high flatness and UV absorption, the company has achieved production of a film twice as thin as conventional films, with a thickness of only 40 μm, thereby reducing the use of material resources by half. In the expanding market for liquid crystal displays, use of thin TAC film is increasing every year, contributing to the conservation of resources.

* TAC: Abbreviation of the substance triacetylcellulose

Structure of a Liquid Crystal Panel



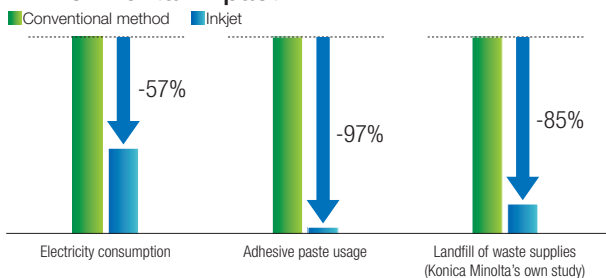
Case 2: Inkjet Textile Printer

There are two ways of printing patterns and images on textiles: screen printing, where a screen is created for each color and the textile is printed with each color in succession, and inkjet printing, where ink is directly sprayed on the textile. Konica Minolta IJ Technologies, Inc. developed and sells an inkjet textile printer that can directly print designs created on a computer.

Inkjet printing uses only the necessary amount of ink to print on specific areas of textiles. As there is no need to create

or wash screens, the amount of waste and resources used is drastically reduced. Furthermore, the production process is simple and allows for rapid additional production in response to demand, which in turn allows customers to reduce the amount of inventory. The printer's low-environmental-impact and high-mix, small-lot production features have been well received in the market and demand for the system has increased rapidly, especially in the apparel industry of Europe and Asia.

Comparison of Screen and Inkjet Printing Environmental Impact



Nasseger VII textile printer

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 2010

Updating the green procurement system and meeting reduction targets for VOC emissions

As part of the strict management of chemical substances across the entire supply chain, Konica Minolta updated its green procurement system in October 2009 in order to establish a system capable of meeting the future requirements of chemical management. In fiscal 2010, the Group carried out a comprehensive survey of around 2,000 suppliers of all Group companies in and outside Japan using the new SIGMA Green Procurement System. Based on the findings, the Group will ensure that banned substances are not used, and will continue to phase out the use of highly hazardous substances.

In addition, since 1993, Konica Minolta has worked to

reduce atmospheric emissions of VOCs at its production sites around the world. VOCs are deemed to represent a high risk in terms of hazard and volume. The Group has worked systematically to eliminate the use of highly toxic solvents by fiscal 2010, eliminating benzene, formaldehyde, and chloroform by fiscal 2004, and the remaining applicable substance, 1,2-dichloroethane, during fiscal 2010. VOC emissions including other solvents increased compared with the previous year due to increased production in response to the economic recovery in fiscal 2010, but the Group achieved the target for the year.

Fiscal 2010 Targets and Results: Atmospheric Emissions of VOCs (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Reducing the risk of chemical substances	Chemical substance management: Fully implement the new green procurement system Complete preparations for compliance with the China RoHS*1	Fully implement the new green procurement system Complete preparations for compliance with the China RoHS	Yes
	Atmospheric emissions of volatile organic compounds (VOCs): -71% (in terms of environmental impact index*2)	-73%	Yes

*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.

* Standards for calculating Atmospheric emissions of VOCs (See page 51)

* For details of the targets, refer to the pages below.

- New Green Procurement System (See page 31)
- Reduction of Atmospheric Emissions of VOCs (See page 32)

Specific Initiatives



Green Procurement System

Implementation of a New Green Procurement System Compliant with More Stringent Chemical Substance Regulations

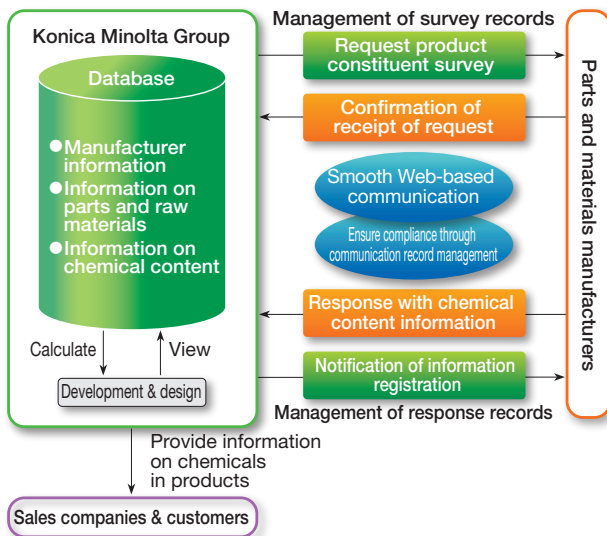
Konica Minolta implements green procurement, assessing the chemical constituents of parts and components and giving preference to those with the least environmental impact. Konica Minolta has established its own list of banned and monitored substances from the perspective of compliance and environmental 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.

Regulations on chemical substances in products will be strengthened in the future with the revision of the RoHS Directive*1 and the addition of approval candidate substances and restricted substances in the REACH regulations.*2 In response to these substances' regulations, the Group began operation of its SIGMA Green Procurement System in October 2009, an updated version of the earlier system.

The tools are now available in Chinese, as well as English and Japanese. Through improved communication with business partners realized by providing Q&A support and regulatory information, survey response rates increased to about 95%. The results of the survey are evaluated by experts in the Group on a regular basis, and feedback given to the business companies to promote more accurate responses and the elimination of parts containing hazardous materials. In this way, the Group will improve the reliability of risk avoidance.

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

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.

Specific Initiatives



Reduction of Atmospheric Emissions of VOCs

Implementing its own 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 as having a high risk in terms of hazard and volume, at its production sites around the world. The Group has worked systematically to eliminate the use of highly hazardous solvents by fiscal 2010, eliminating benzene, formaldehyde, chloroform, and others by fiscal 2004, and the remaining applicable substance, 1, 2-dichloroethane, during fiscal 2010.

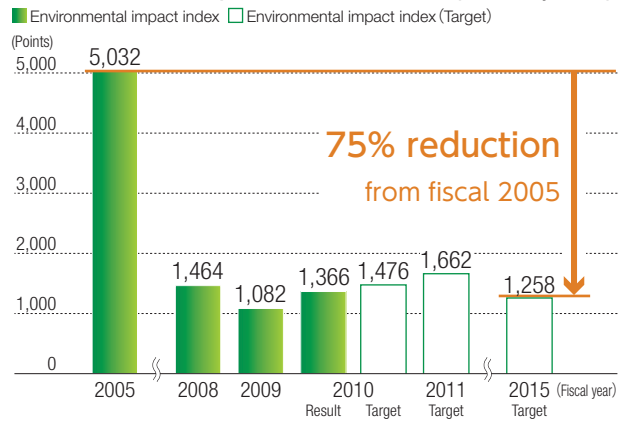
Furthermore, with the switch to the Medium-Term Environmental Plan 2015 in fiscal 2009, the scope of substances subject to reductions was enlarged to reduce riskier substances first. In addition to reducing conventional substances that pose a direct risk to human health and risk of atmospheric pollution, the Group will work to also reduce the use of substances that pose a risk to ecosystems and an indirect environmental impact. Consequently, Konica Minolta has revised its risk management indices, setting new environmental impact index* and new targets based on the index. The targets call for a 75% reduction by fiscal 2015 compared with fiscal 2005.

VOC emissions including other solvents increased compared with the previous fiscal year due to increased production in response to the economic recovery in fiscal 2010, but reductions amounted to 73% compared to fiscal

2005, and the Group achieved the targets set for the year.

* **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 2010 Targets and Results: Atmospheric Emissions of VOCs (compared with fiscal 2005)

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Reducing the risk of chemical substances	Atmospheric emissions of volatile organic compounds (VOCs)(in terms of Environmental Impact Index): -71%	-73%	Yes

* Standards for calculating atmospheric emissions of VOCs (See page 51)

Specific Initiatives



Countermeasures against Contamination of Soil and Ground Water

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.

*Summary of Contaminated Soil or Ground Water at Operation Sites (See page 46)

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.

*Green Factory Certification System (See page 13)

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. The 10th Conference of Parties to the Convention of Biological Diversity (COP10) was held in October 2010 in Nagoya, and medium- and long-term objectives were discussed.

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 2010

Formulating an action plan upon evaluating its dependence and impact on biodiversity

In fiscal 2009, as a first step toward restoring and preserving biodiversity, the Group reviewed the Corporate Ecosystem Services Review (ESR) published by World Business Council for Sustainable Development (WBCSD) and evaluated its dependence and impact on biodiversity in its business activities at each step of the product life cycle.

Based on these results, the Group revised its procurement standards for paper sold as part of the Business Technologies business. In addition, in April 2011 the group established the Guidelines for Biodiversity Preservation. By incorporating these procedures into the Green Factory Certification System, the Group will undertake measures for the conservation of ecosystems at its production sites around the world.

Fiscal 2010 Targets and Results

Objectives	Fiscal 2010 Targets	Fiscal 2010 Results	Achieved
Restoring and preserving biodiversity	Reexamine the procurement standards for paper Establish a plan for ecosystem conservation measures	Prepared revised draft of the procurement standards for paper Finalized revised draft of criteria of the Green Factory Certification System	Yes

* Green Factory Certification System (See page 13)

* For details of the targets, see page 35

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.

* Green Factory Certification System (See page 13)

Guidelines for Biodiversity Preservation

Consideration of water resources

- Reduction targets are set for total water intake, 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.

Procurement Standards for Paper Forms

Procuring copy paper in consideration of forest resource conservation

Konica Minolta Business Solutions Co., Ltd., a sales company of office equipment and solutions 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 procurement standards for paper, reviewed from a global perspective in fiscal 2010, are scheduled for revision in 2011.

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.

Issuing Environmental Reports

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 2011



Environmental Report 2011



The Group's environmental website

Publication of Site Reports

Each year, the Konica Minolta sites in Japan issue their own site reports containing environmental information. These publications provide information to local residents, including an outline of the site's environmental impact. The reports describe environmental conservation activities, health, safety, and disaster prevention efforts, as well as activities for promoting interaction with local communities. Konica Minolta also utilizes these reports for establishing and revising targets and execution plans.



Site reports

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 2010, held in December 2010, the Group exhibited its bizhub 750RM re-manufactured MFP and an inkjet textile printer, "Nassenger V," among other environmentally responsible products. The Group also exhibited future environmental technologies such as flat and flexible LED lights, as well as presenting Konica Minolta's environmental initiatives in a digital planetarium show that appealed for protection of the global environment.

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.



The Konica Minolta booth at Eco-Products 2010



The permanent booth at Osaka ATC Green Eco Plaza

Environmental and Social Contribution Activities

To earn the loyalty and trust of the local communities in which it operates, Konica Minolta is striving to fulfill its responsibility as a corporate citizen by engaging in a variety of activities that contribute to the creation of a better society.

Case 1: Konica Minolta Plaza (Japan)

Konica Minolta Plaza, a gallery space managed by Konica Minolta in Tokyo, plays host to various events and exhibitions aimed at contributing to society, culture, and the arts. Among these are eco-themed exhibitions regularly held to convey the beauty of earth's natural environment and its importance. In 2010, several exhibitions were held on the topic of biodiversity in relation to the tenth meeting of the Conference of the Parties (COP10) to the Convention on Biological Diversity held in Nagoya.

In addition, the Konica Minolta Eco and Art Exhibition has been held every year. Established in 2009, the exhibition calls for young, promising artists to submit works inspired by ideas and design that fuse the environmental considerations with art, with the winning entries to be put on display at the exhibition. This year the exhibition presented 40 winning entries out of a total of 206 entries. Grand Prix recipients were selected on March 21, 2011.



Preparation of the Eco & Art Exhibit

Communication with Society



Case 2: 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 3: Environmental Education Programs with Local Communities (UK)

Konica Minolta Business Solutions (UK) Ltd., a sales company of office equipment and solutions in the United Kingdom, has been working closely with local communities on an educational program to enhance the environmental awareness of children since 2008. The program aims to help children develop understanding of the importance of waste reduction through the 3Rs (Reduce, Reuse & Recycle) and to empower them to make choices that have a positive impact on environmental preservation, through four 90-minute classes per one month. In 2010, the company implemented the program at 30 schools for 600 children. In future, the company aims to offer classes for 900 children.

In recognition of these efforts, the company was awarded the Green Hero Shield by the Green Organisation, a non-profit organization.



Children in class learning about the environment

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

Case 5: Participation in Events to Promote Recycling (Australia)

Konica Minolta Business Solutions Australia Pty. Ltd., a sales company for office equipment and solutions, participated in a nationwide recycling week in November 2010, organized by the Australian non-profit organization Planet Ark. From November 7 to 13, 2010, the company set up paper recycling containers at the head office and each branch. Enough paper to fill 10 large rubbish bins was collected for recycling.

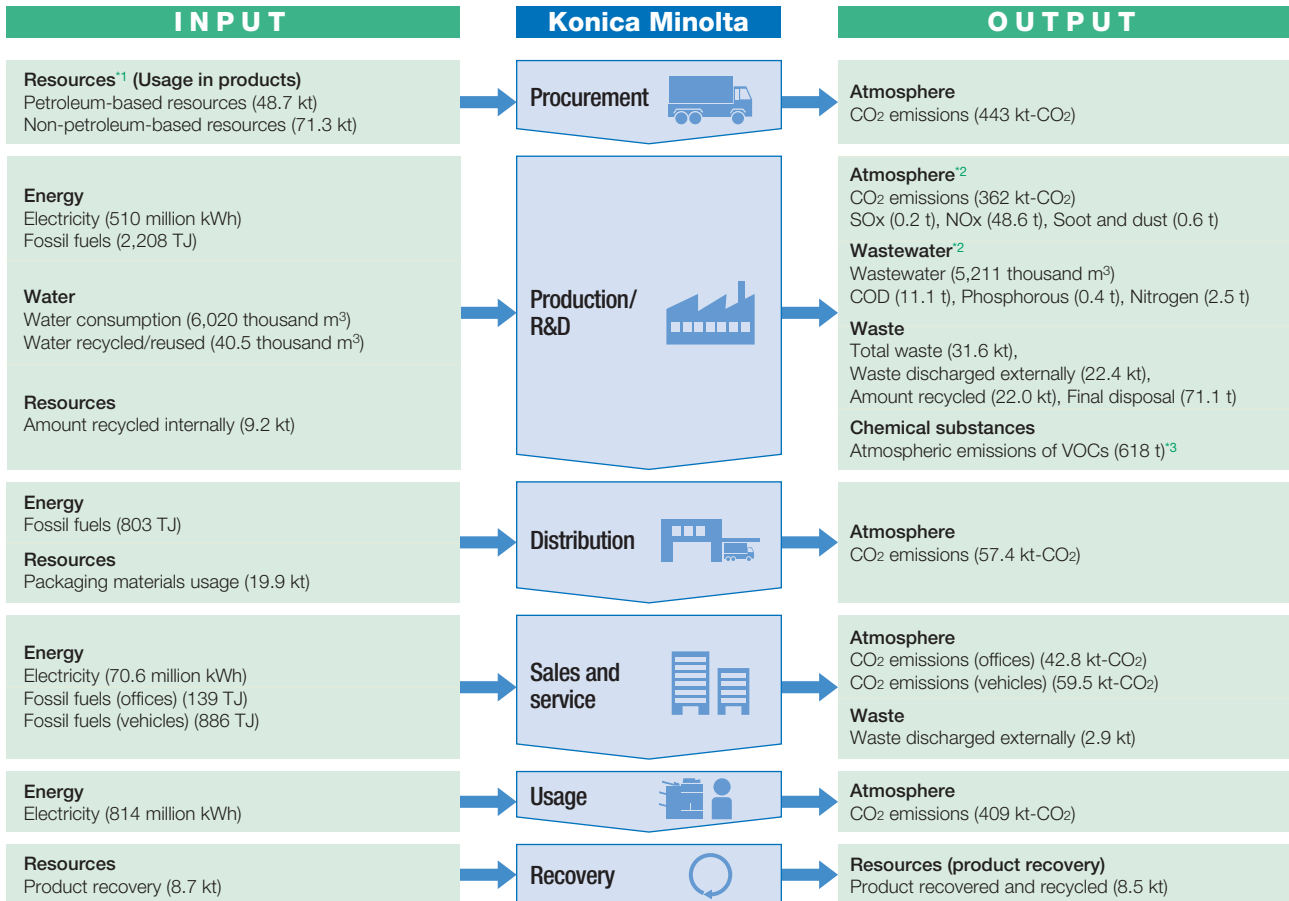


Event to promote recycling

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.

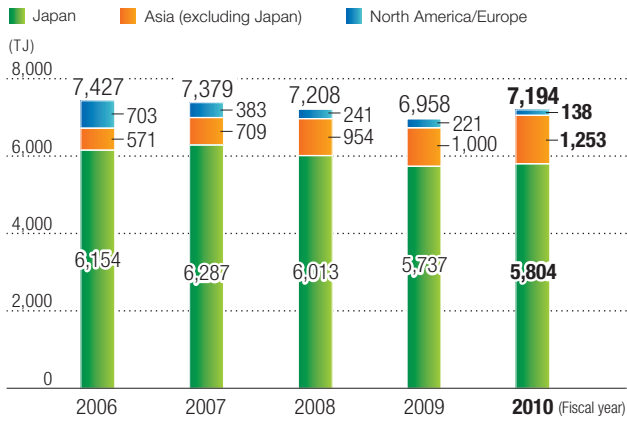
* Standards for calculating environmental data (See page 50 and 51)

INPUT

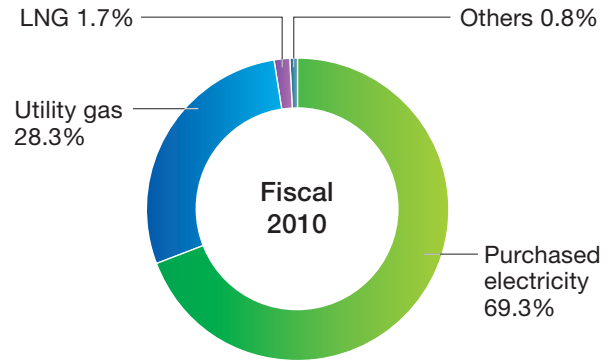


Energy and Water

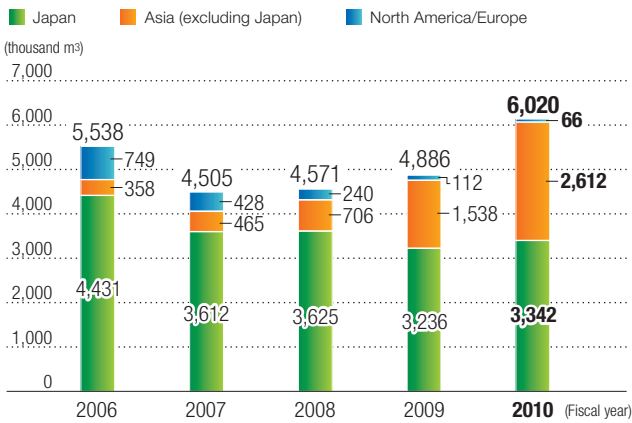
Total Energy Inputs



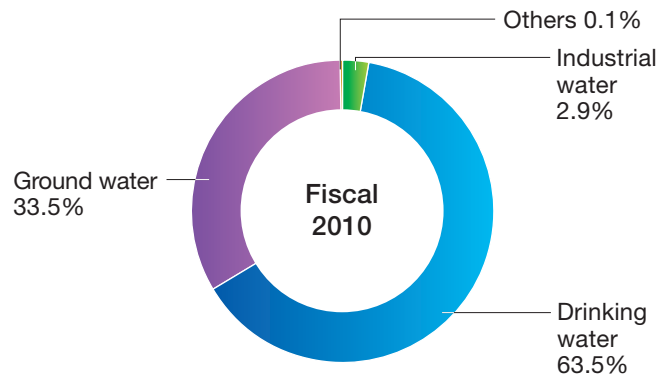
Energy Use by Type



Total Water Inputs



Water Use by Type



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

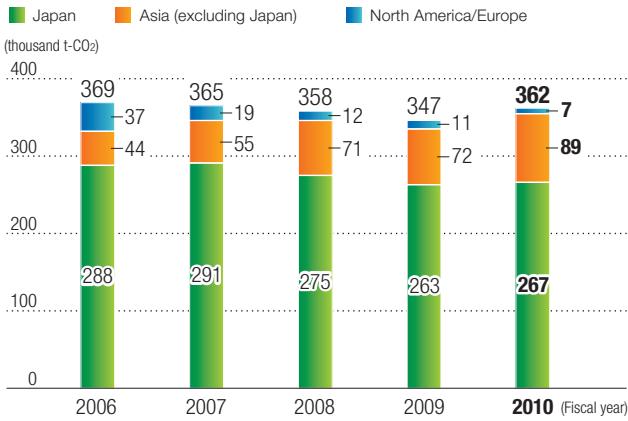
* Standards for calculating water consumption (See page 51)

OUTPUT



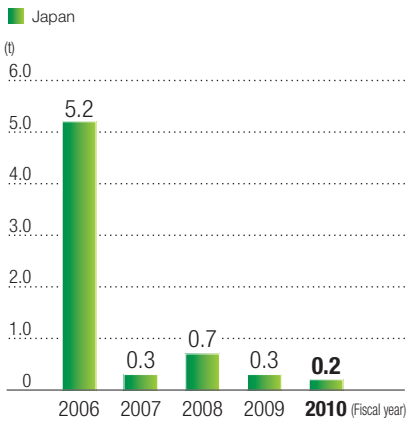
Atmosphere

CO₂ Emissions

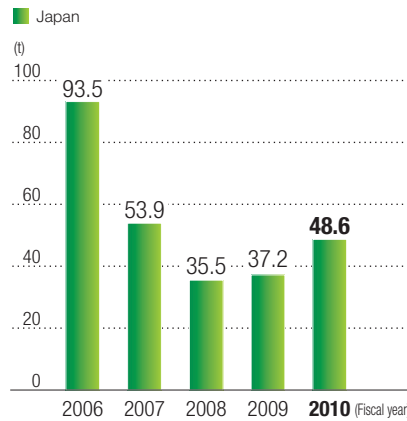


* Standards for calculating CO₂ emissions (See page 50)

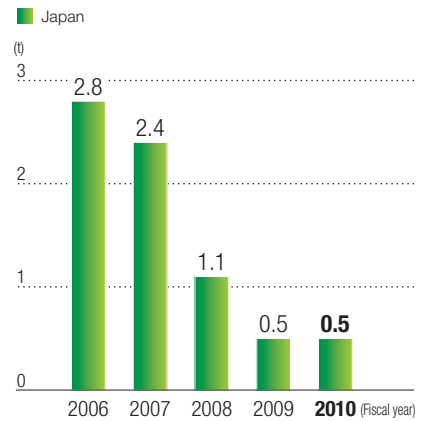
SO_x Emissions



NO_x Emissions



Soot and Dust Emissions



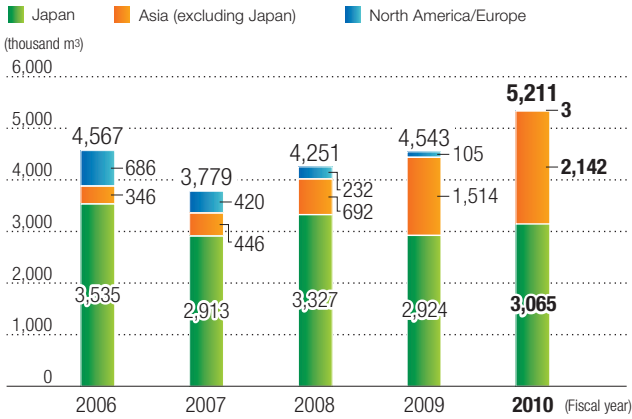
* Boundary of data: Charts cover production and R&D sites in the Konica Minolta Group.
 * The figures for atmospheric pollutants are total values for plants that are legally required to measure emissions.

OUTPUT

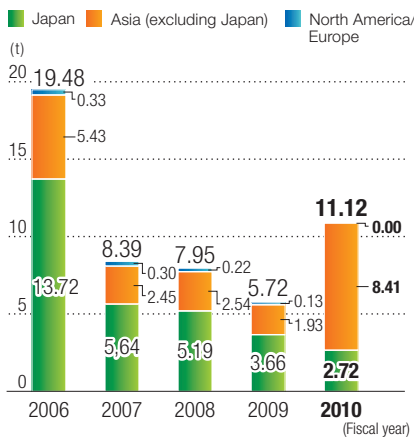


Wastewater

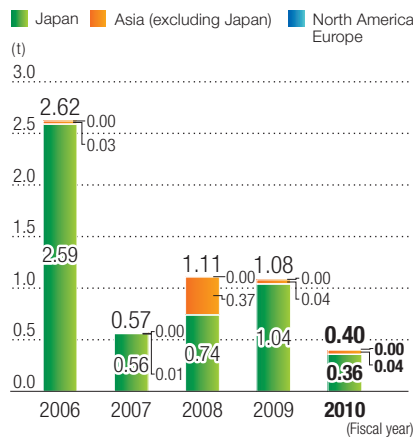
Total Wastewater



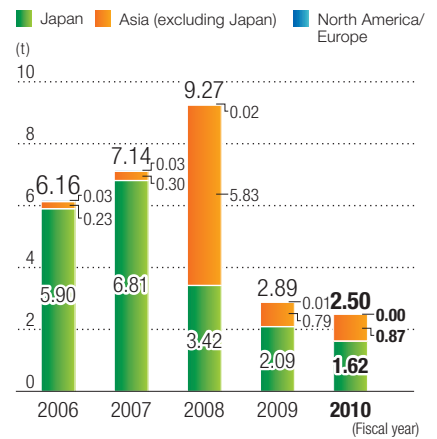
COD



Phosphorus Discharged into Public Waters



Nitrogen Discharged into Public Waters



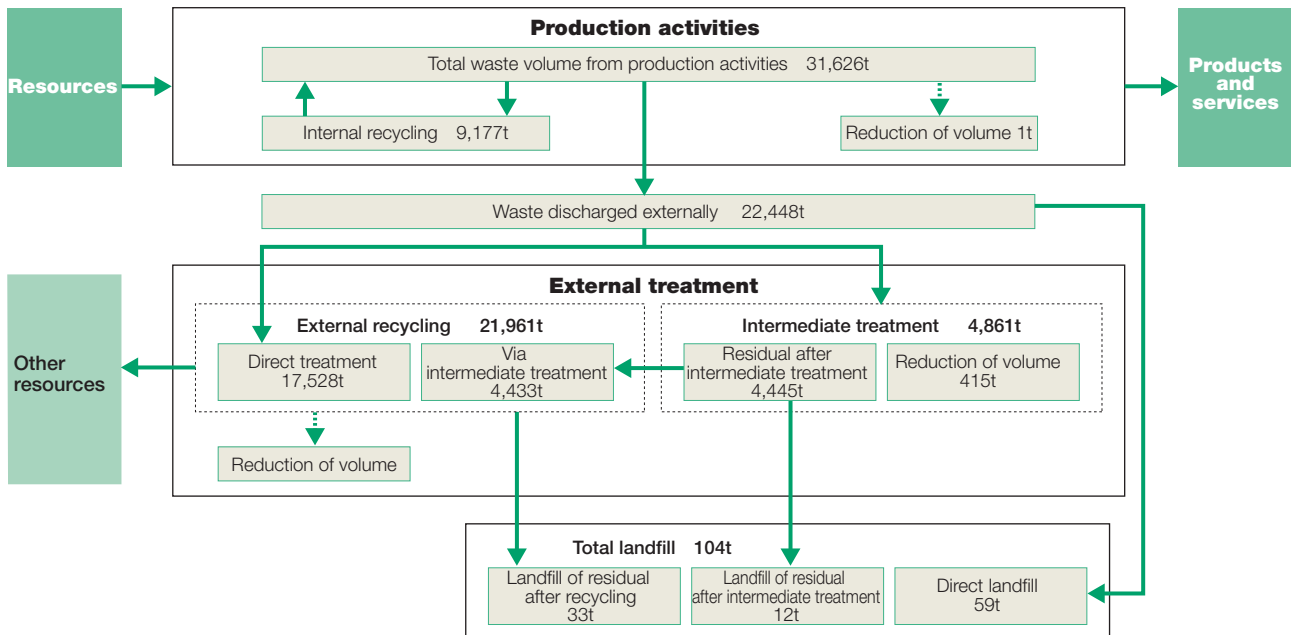
* Boundary of data: Charts cover production and R&D sites in the Konica Minolta Group.
 * The figures of water pollutants are total values for plants that are legally required to measure waste.

OUTPUT

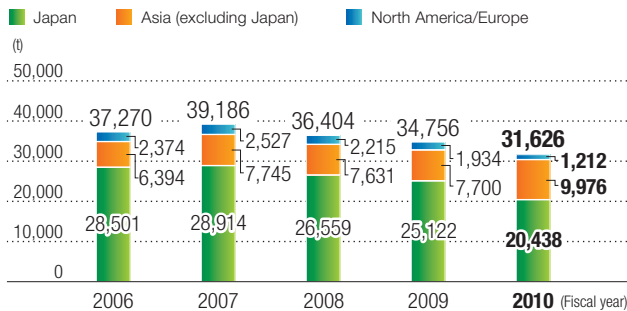


Waste

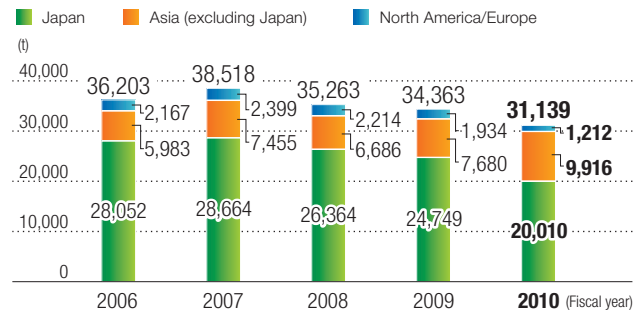
Waste Flows (Results of Recycling and Waste) Fiscal 2010



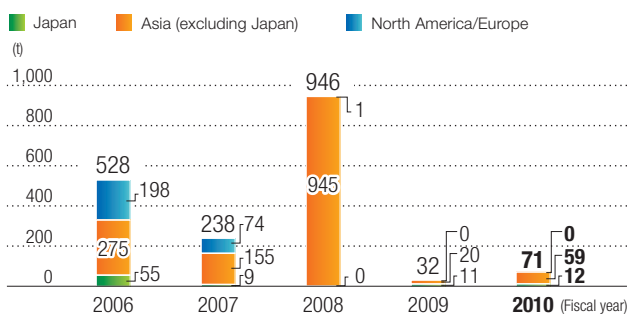
Total Waste Volume



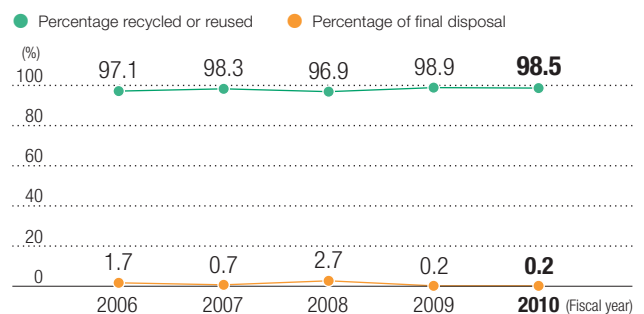
Total Volume of Recycled Resources (Internally and Externally Recycled)



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.

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

OUTPUT

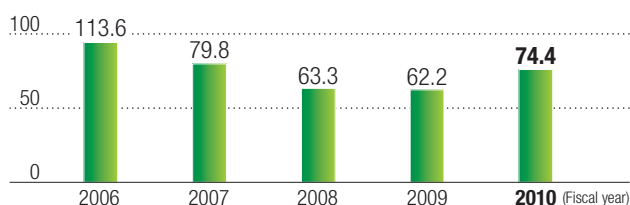


Chemical Substances

Atmospheric Emissions of PRTR Substances

■ Japan

(t)
150



Substances Controlled by Pollution Release and Transfer Register (PRTR) System Fiscal 2010

(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	
3	Ethyl acrylate	1.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0
7	N-butyl acrylate	1,501.2	1.1	0.0	0.0	1,497.8	0.0	2.3	0.0	0.0
13	Acetonitrile	40.3	2.0	0.0	0.0	2.8	3.7	31.7	0.0	0.0
23	P-aminophenol	5.4	0.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0
31	Antimony and its compounds (Sb equivalent)	8.0	0.0	0.0	0.0	6.4	0.0	1.6	0.0	0.0
71	Ferric chloride	104.5	0.0	0.0	0.0	0.0	104.5	0.0	0.0	0.0
82	Silver and its water-soluble compounds (Ag equivalent)	142.5	0.0	0.0	0.0	136.0	0.0	6.5	0.0	0.0
181	Dichlorobenzene	3.8	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
186	Dichloromethane (also known as methylene chloride)	858.3	58.1	0.0	0.0	9.4	0.1	755.7	0.0	35.1
232	N,N-Dimethyl formamide (DMF)	29.3	0.0	0.0	0.0	0.0	0.2	29.2	0.0	0.0
240	Styrene	4,264.2	4.5	0.0	0.0	4,250.8	0.0	8.9	0.0	0.0
277	Triethylamine	2.8	0.0	0.0	0.0	0.6	1.6	0.6	0.0	0.0
283	2,4,6-Trichloro- 1,3,5-triazine (also known as cyanuric chloride)	3.5	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0
300	Toluene	50.6	8.2	0.0	0.0	0.0	0.3	42.2	0.0	0.0
336	Hydroquinone	2.5	0.0	0.0	0.0	2.1	0.0	0.5	0.0	0.0
342	Pyridine	2.2	0.0	0.0	0.0	0.2	0.0	1.9	0.0	0.0
353	Diethyl phthalate	3.3	0.0	0.0	0.0	3.1	0.0	0.2	0.0	0.0
392	N-hexane	51.4	0.1	0.0	0.0	0.0	0.1	51.3	0.0	0.0
395	Water-soluble salts of peroxodisulfuric acid	138.5	0.0	0.0	0.0	13.8	124.6	0.0	0.0	0.0
405	Boron compounds (B equivalent)	3.3	0.0	0.0	0.0	3.2	0.0	0.1	0.0	0.0
412	Manganese and its compounds (Mn equivalent)	258.3	0.0	0.0	0.0	257.6	0.0	0.7	0.0	0.0
415	Methacrylic acid	439.4	0.4	0.0	0.0	434.5	0.0	4.5	0.0	0.0
417	2,3-epoxypropyl methacrylate	2.7	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0
461	Triphenyl phosphate	242.3	0.0	0.0	0.0	222.7	0.0	19.6	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.

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

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 2010
Tokyo Site Hino (Hino, Tokyo)	Fluorine, Boron, Mercury	<p>The company makes periodic observations at monitoring wells located at the site boundary. After remediation of fluorine-contaminated soil was implemented, it has been confirmed that fluorine and other 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.</p> <p>With the removal of aged buildings, the company performed a survey of the soil on the site in accordance with Tokyo Metropolitan Ordinance, and identified contamination with boron and mercury at certain locations within the site. The company reported the contamination to the local government, and is planning to implement remediation by means of excavation.</p>
Tokyo Site Hachioji (Hachioji, Tokyo)	Hexavalent chromium	<p>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.</p>
Mikawa Site, Western Zone (Toyokawa, Aichi Prefecture)	TCE*1, Fluorine	<p>In fiscal 2010, the company implemented excavation and removal of soil contaminated with TCE in the southeast part of the site. The company also continues with measures for remediation of ground water and has been monitoring the effects of such measures.</p> <p>The company has excavated and removed part of the soil contaminated with fluorine, and continues with measures to prevent dispersion of the remaining part.</p> <p>Through continued periodic observation of ground water, the company has confirmed that there is no runoff of TCE or fluorine from the site.</p>
Itami Site (Itami, Hyogo Prefecture)	Lead, Arsenic, Cadmium, Fluorine, Boron	<p>Regarding lead, arsenic, cadmium, and fluorine, the company has completed remediation through excavation and removal of the contaminated soil at the boundary areas within the site in fiscal 2009, and has performed observation of ground water to confirm that there is no runoff of these substances from the site.</p> <p>Regarding the ground water contamination with boron identified in a specific area of the site, the company continues with pumping to prevent dispersion of the contaminant, and has confirmed that there is no runoff from the site.</p>
Sakai Site (Sakai, Osaka)	TCE, PCE*2, c-DCE*3, Lead, Arsenic, Cadmium	<p>Regarding TCE, PCE, and c-DCE, the company continues with remediation through pumping and measures to prevent runoff of contaminated ground water from the site.</p> <p>Contamination has been confirmed at certain locations within the site for lead, arsenic, and cadmium. However, periodic observation of the ground water indicates that, in all the monitoring wells located at the site boundary, the concentrations are below the limit of environmental standard values and have no impact on the surrounding environment.</p> <p>With the demolition of buildings in the east block, the company performed a survey of soil in accordance with Article 4 of Japan's Soil Contamination Countermeasures Act, and reported to the local government that there was no contamination identified within the said area.</p>
Osakasayama Site (Osakasayama, Osaka)	TCE, PCE, c-DCE	<p>In fiscal 2009, the company implemented excavation and removal of contaminated soil at one of the two locations where contamination had been identified through a survey around its effluent treatment facility. In fiscal 2010, the company implemented a detailed survey of the remaining locations, deliberated on a new construction method as a countermeasure, and then decided to implement it in the first half of fiscal 2011.</p>
Site of the former Nankai Optical Co., Ltd. (Kainan, Wakayama Prefecture)	TCE, PCE, c-DCE	<p>The company reported completion of ground water remediation through bioremediation to the local government in fiscal 2009. Henceforward, the company will implement observation through voluntary surveys.</p>
Toyohashi Precision Products Co., Ltd. (Toyohashi, Aichi Prefecture)	TCE, PCE, c-DCE, Hexavalent Chromium	<p>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.</p>
Konica Minolta Opto Products Co., Ltd. (Fuefuki, Yamanashi Prefecture)	TCE, PCE, c-DCE	<p>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.</p>
Konica Minolta Supplies Manufacturing Co., Ltd. (Kofu, Yamanashi Prefecture)	TCE, PCE, c-DCE	<p>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.</p>

*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, 2011)

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 Components Co., Ltd.	Toyokawa-shi, Aichi 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



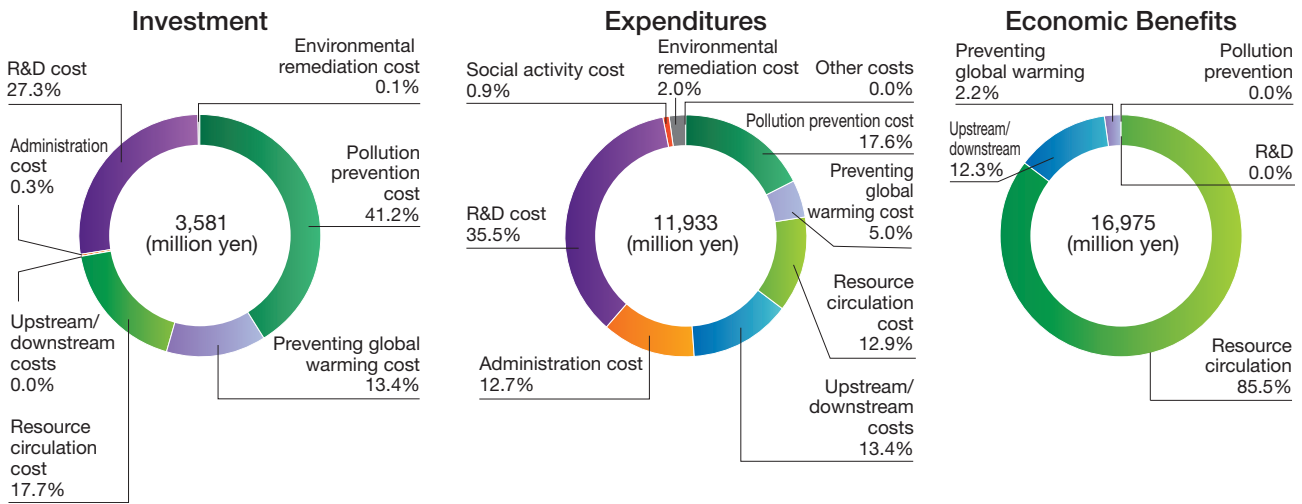
Implementation of Environmental Accounting

At Konica Minolta, an environmental accounting manager is appointed at each Group company and the Group carries out consolidated environmental accounting globally, from research and development to production and sales.

The amount invested in fiscal 2010 was three times greater, at about 3.6 billion yen, than in the previous fiscal year. The main reason for the increase was capital investment in a plant producing TAC film for LCD polarizers, which

was completed in July 2010 in Kobe. Expenses were approximately 11.9 billion yen, similar to the previous year. The main elements of the R&D costs, which accounted for 35.5%, were development of energy-saving technologies for office equipment, creation of new products that make an environmental contribution, and technological development for production processes.

Results for Fiscal 2010 and Budget for Fiscal 2011



million yen

Types of Environmental Conservation Activities	Major Initiatives	Fiscal 2010 Results			Fiscal 2011 Budget	
		Investment	Expenditures	Economic Benefits	Investment	Expenditures
1. Business area cost		2,589	4,233	14,882	717	4,252
1) Pollution prevention cost	Implemented wastewater treatment facilities maintenance, reduced atmospheric emission of VOCs, and carried out chemicals management	1,476	2,094	1	139	1,923
2) Preventing global warming cost	Promoted energy conservation	479	601	375	255	663
3) Resource circulation cost	Recoverd solvents and recovered silver from waste	633	1,538	14,506	324	1,666
2. Upstream/downstream costs	Recovered silver from collected products, and collected and recycled products in Business Technologies Business	1	1,602	2,090	1	1,572
3. Administration cost	Implemented environmental management systems	9	1,511	0	3	1,311
4. R&D cost	Developed energy-saving products and products containing no hazardous substances, as well as new products that make an environmental contribution	980	4,240	2	461	5,313
5. Social activity cost	Implemented environmental conservation activities	0	106	0	0	107
6. Environmental remediation cost	Restored contaminated soil	2	237	0	0	427
7. Other costs		0	3	0	0	24
Total		3,581	11,933	16,975	1,183	13,004

Environmental Accounting



Fiscal 2010 Results: Environmental Conservation Benefits

Stage	Type of Benefit	Benefits
Production	Water use reduced *1	241 thousand m ³
	Electricity reduced *1	12.6 million kWh
	Natural gas reduced *1	2,339 thousand m ³
	Heavy oil reduced *1	115 kL
	Emissions of target chemical substances reduced *1	5.8 t
	Resource input reduced *1	98.7 kt
	External recycling and reuse of waste *2	22.0 kt
Sales	Packaging reduced *1	229 t
	Recycling and reuse of materials from used products *2	8.5 kt
Usage	CO ₂ emissions reduced *3	4.7 kt-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 2010 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 2010 Results: Impact of End User Usage

Stage	Type of Benefit	Benefits
Usage	Electricity consumption reduced *4	9.4 million kWh
	Electricity bills reduced *5	135 million yen

*4 Electricity consumption reduced is calculated for major new products that were shipped in fiscal 2010 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 2010 Results

10 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 Photo Imaging, 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.

20 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 Printing Solutions Japan Co., Ltd.
 Konica Minolta Software Laboratory Co., Ltd.
 Konica Minolta Opto Products Co., Ltd.
 Konica Minolta Components 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 Graphic Imaging Japan 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.

21 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.
 American Litho, Inc.
 Konica Minolta Graphic Imaging U.S.A., Inc.
 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. * 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.

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 In order to standardize the method used for calculation of CO₂ emissions from distribution by each business company, the distance data used has been changed.

*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. 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 ^{*3}
4. Atmospheric emissions of VOCs	1) Boundary	Production sites around the world with ten or more environmental-impact index 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 ^{*4} for atmospheric emissions of VOCs ^{*5}
5. 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 Some of the data for consumable supplies and equipment options was changed to reflect actual values rather than estimates.

*3 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.

*4 **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

*5 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 in products, waste discharged externally, petroleum-based resource waste, 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–June 2011



Site inspection at the Kobe Site



Assurance procedures being conducted

Comments on the Assurance Process

Last year, assurance was performed only for Konica Minolta's data on energy use and CO₂ emissions, but this year, in order to improve the reliability of the report, additional assurance has been provided for data on a number of other indicators, especially those related to the Medium-Term Environmental Plan, such as waste discharged externally (weight of waste material, etc.) and atmospheric emissions of VOCs. In addition, the Group has sought to improve the accuracy of reported indicators by, for example, unifying the distance data used for calculating CO₂ emissions from distribution, which used to vary from one business company to another.

Information systems were used by Konica Minolta to collect data on waste discharged externally and the energy use of domestic business locations, but there were some

indications that the functions of these systems were not being fully utilized. For example, regarding data input that was missing or clearly erroneous, it would be possible to arrange for an alert to be sent out whenever input values differ greatly from those for the previous month, or for the same month of the previous year, thereby avoiding many errors. By taking advantage of the computing power of information systems, Konica Minolta could achieve greater efficiency while at the same time ensuring more accurate numerical data.

Double checking by people is important in order to improve accuracy, but given the limited availability of human resources, it is equally important to exploit information systems to detect and prevent human error.

Naomi Sugo KPMG AZSA Sustainability Co., Ltd.