

Combining environmental conservation and business growth

We are pushing ahead with business model reforms from long-term perspectives to help improve social sustainability.

Objectives and processes toward realization

To underpin our efforts for a better tomorrow, we formulated our slogan, “Driving Sustainability for Our Future.”

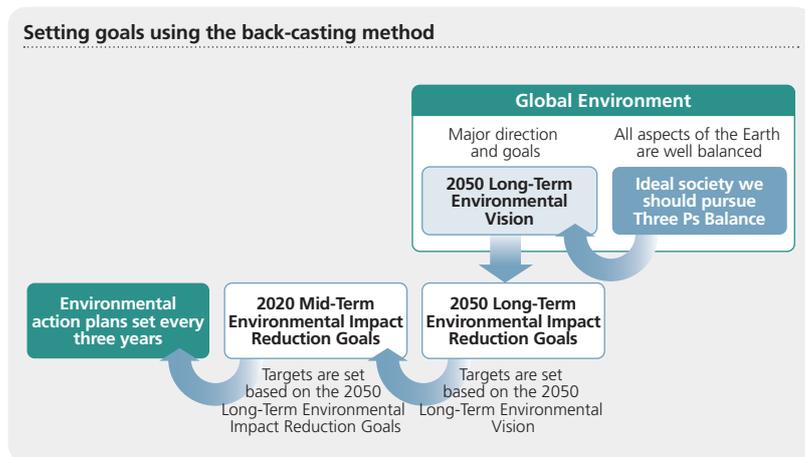
This slogan incorporates a robust determination to contribute to the realization of a sustainable society by providing new value created through business.

To the Ricoh Group, a sustainable society is one that pursues a Three Ps Balance >¹—Planet (environment), People (society) and Profit (economic activities)—and reduces the environmental impact of society to a level that the Earth’s self-recovery capabilities can manage.

This future ideal requires high targets, viewed from the long term, and consistent efforts to reach stated goals.

In setting environmental goals, we apply the back-casting method, through which our ultimate goals are envisioned first and target values are then determined as mileposts along the journey to these goals.

We announced our 2050 Long-Term Environmental Vision >² in 2006 in line with our commitment to balance the planet, people, and profit. We then established mid- and long-term environmental impact reduction goals >³ and three-year environmental action plans.



Ricoh Group Mid- and Long-Term Environmental Impact Reduction Goals

Energy conservation and prevention of global warming	Reduce the Ricoh Group’s total lifecycle CO ₂ emissions by 30% by 2020 and by 87.5% by 2050 from the 2000 base level
Resource conservation and recycling	<ol style="list-style-type: none"> 1. Reduce the new input of resources by 25% by 2020 and by 87.5% by 2050 from the 2007 level 2. Reduce the use of or replace the major materials of products that are at high risk of depletion (e.g., crude oil, copper and chromium) by 2050
Pollution prevention	Minimize risks of chemical substances throughout the product lifecycle by 2020 in compliance with the Strategic Approach to International Chemicals Management (SAICM) *Revised in March 2012; set only 2020 goal

Our environmental management approach

The Ricoh Group’s environmental conservation efforts have progressed through three stages: passive, proactive, and now responsible. >⁴

After adhering to environmental requirements during the passive stage and safeguarding the environment during the proactive stage, we entered the

responsible stage in 1998, pioneering environmental management in a commitment to generating profits while engaging in conservation. It is through ongoing environmental conservation activities that we believe we can contribute significantly to ecological progress.

Refer to our website

- ¹ **Three Ps Balance** www.ricoh.com/environment/management/earth.html
- ² **Long-Term Environmental Vision and Goals** www.ricoh.com/environment/management/vision.html
- ³ **Mid- and long-term environmental impact reduction goals** www.ricoh.com/environment/strategy/target.html
- ⁴ **Three stages in environmental conservation activities** www.ricoh.com/environment/vision/3steps.html

Three stages in environmental conservation activities (from the passive, to proactive to responsible stage)



Measures to mitigate climate change

Tackling climate change is a top management priority, and accordingly we endeavor to reduce carbon dioxide emissions from product lifecycles. In procurement, we seek to reduce input of new resources through product-oriented 3R—reduce, reuse, recycle—activities and limit greenhouse gases that accompany the mining and processing of raw materials. In manufacturing, we apply innovations in production processes, and in sales and logistics, we practice eco-friendly driving and are implementing more efficient distribution methods during product use. We also develop and provide high-performance, energy-efficient products that address heightened energy-saving requirements from customers and satisfy increasingly tougher standards and regulations, and we create solutions, such as paperless conferences, and present new workstyles that translate into new and reduced environmental impact.

Ricoh was an official partner of the 21st Conference of Parties of the United Nations Framework Convention on Climate Change in December 2015. There, representatives of 196 parties from developed and emerging nations and territories all consented to a

landmark global agreement on safeguarding the planet. Our task was to provide comprehensive document management solutions that were ecologically friendly and secure. The mandate was testament to our long engagement in environmental protection initiatives.

Moreover, we encourage external endeavors. For example, coinciding with the UN Climate Summit, in September 2014 we endorsed the Initiative to Support the World Bank Group’s Carbon Pricing and The Trillion Tonne Communiqué, which the Corporate Leaders’ Group on Climate Change, a British corporate group, has spearheaded.

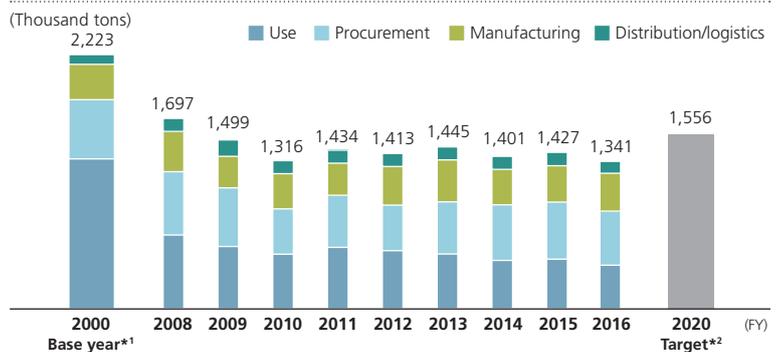


Mid-Term Environmental Impact Reduction Goals: Energy conservation and prevention of global warming

We are undertaking activities to reduce total lifecycle carbon dioxide emissions by 30% by 2020 from the 2000 base level. In fiscal 2016, our emissions were down 6.0% from a year earlier and 39.7% below those of 2000, reflecting a decrease in emissions during product use as a result of the development of energy-saving products. We will continue initiatives to keep emissions below target levels while expanding our businesses.

*1 Fiscal 2001 results
*2 Equivalent to fiscal 2021 results

Change in lifecycle CO2 emissions



Environmental action plan

Under the 18th Environmental Action Plan ¹ (April 2014 to March 2017), we have set out measures and goals in five areas, comprising four pillars, to reduce environmental impact—1) energy conservation and prevention of global warming, 2) resource conservation and recycling, 3) pollution prevention and 4) biodiversity conservation to boost the Earth's self-recovery capability—built upon a basis for

environmental management that underpins efficient and effective execution of various activities. Strategic priorities under the 18th Environmental Action Plan are to reduce environmental impact exerted by our customers, enhance cooperation with stakeholders, and expand environmental businesses. Progress made in fiscal 2016 is highlighted below.

Progress on strategic priorities under the 18th Environmental Action Plan

Reduce environmental impact exerted by our customers	<ul style="list-style-type: none"> • Excellent energy-saving performance recognized with winning the annual award for energy-saving features of color MFPs for the second straight year since 2014 • Reduced CO₂ emissions by 453,000 tons (equivalent to approximately 1.4 times the total amount of CO₂ emitted from Ricoh Group factories around the world) through the provision of videoconferencing systems, paperless solutions, and other products/services
Enhance cooperation with stakeholders	<ul style="list-style-type: none"> • Provided remanufactured machines and solutions (personal authentication, on-demand printing, and equipment management) as an official partner of the 21st Conference of Parties of the United Nations Framework Convention on Climate Change (COP21) • Participated in COP21 as a member of the Japan Climate Leaders' Partnership, exchanging views with businesses, governments, and policymakers • Participated in We Mean Business, a network of more than 500 global companies, encouraging policymakers to undertake environmental action
Expand environmental businesses	<ul style="list-style-type: none"> • Advised customers to try carbon offset printing services, paperless solutions and other environmentally conscious options • Acquired "Gold Rating" in supplier sustainability survey conducted by EcoVadis, ² thereby meeting customer request for performance assessment validation • Reused 6,398 tons of materials in remanufactured equipment as part of efforts to globally optimize reuse/recycling businesses



¹ EcoVadis

A sustainability rating company for global supply chains, based in France, EcoVadis assesses suppliers from 110 countries and across 150 business sectors on corporate policies, initiatives and achievements in CSR management and provides customers with its findings.

Case study on expanding environmental business

Cultivating New Potential through the RICOH Eco Business Development Center ²

We established this facility in Gotemba, Shizuoka Prefecture, in April 2016 as part of efforts to commemorate our 80th anniversary. The center's role is to evolve our environmental management approach in creating and expanding eco businesses in and well beyond our existing operational domains. The center participates in the Gotemba Eco City Plan and the Model Forest Venture to preserve afforested areas of Gotemba, and has started to engage in joint eco business development with local entities.



RICOH Eco Business Development Center

Three components of RICOH Eco Business Development Center

● Environmental technology verification

The center harnesses open innovation between industry, academia, and government in collaborating with partners to accelerate the creation of eco businesses. The center verifies technologies that help conserve energy and other resources. They include technologies for producing energy from

waste plastics, thinned wood, and other untapped resources and for generating electricity from small streams.

● Reuse and Recycling Center

We consolidated our reuse and recycling sites around Japan to enhance efficiency. This operation debuted in May 2015 as our principal location for rebuilding around 20,000 MFPs annually.

● Publicizing environmental activities information

The center informs about our environmental activities, eco-friendly products and services, and new eco technologies. It also contributes to the community by educating about the environment.

Refer to our website

¹ 18th Environmental Action Plan www.ricoh.com/environment/plan/plan18th.html

² RICOH Eco Business Development Center www.ricoh.com/environment/eco_business_center/

Case study on reducing environmental impact for customers

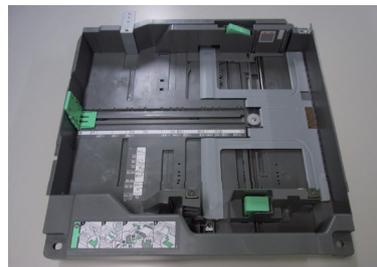
Incorporating commercially recovered plastics in MFPs

We plan to reduce new resource inputs from the 2007 level by 25% by 2020 and by 87.5% by 2050. We have done much in terms of conserving and recycling resources to reach our mid- and long-term environmental impact reduction goals. Our efforts have included employing biomass materials and developing recycled plastics that increase the content of materials recovered from used MFPs.

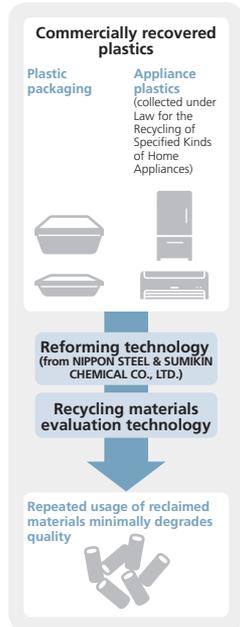
We expanded our recycling efforts in 2016 by launching multifunction printers that incorporate plastics developed from commercially recovered materials. Repeated usage of these materials minimally degrades quality.

Robust, incombustible plastics are essential for MFPs, which has made it difficult to date to use commercially recovered materials. Our reclaimed material incorporates post-consumer plastic packaging containers collected by a voluntary collection system and plastics gathered in keeping with the Law for the Recycling of Specified Kinds of Home Appliances. We jointly developed the materials by drawing on reforming technology from NIPPON STEEL & SUMIKIN CHEMICAL CO., LTD., and our recycling materials evaluation technology.

Such reclaimed materials usage should help cut the extraction of crude oil. We started using the reclaimed material in paper trays, and plan to employ it in other parts.



Paper tray incorporating reclaimed materials



Case study on reducing environmental impact for customers

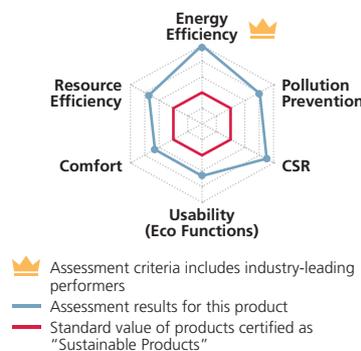
Ricoh Sustainable Products Program for assessing environmental performance and usability of products

We launched this initiative in April 2016 to evaluate products based on strict proprietary standards. The program assesses our offerings in two prime respects. The first is environmental friendliness, its criteria being energy and other resource efficiency and pollution prevention. The second is user friendliness, encompassing comfort, usability, and CSR. We classify offerings that satisfy all six assessment criteria as "Sustainable Products." The rating for industry-leading performers is "Sustainable Products-Premium."

We have worked hard over the years to secure environmental performance certifications around the world. We have also continued to ensure that our products are easy and comfortable for all office workers to use, including the elderly and individuals with disabilities. We developed the Ricoh Sustainable Products Program because to this date, there was no external setup that was assessable for both environmental performance as well as usability and comfort. This initiative is in keeping with our commitment to improving quality of life for customers and driving sustainability through our products.

As well as finished offerings, this program also applies to product development processes and roadmaps. As of May 2016, 84 products, principally MFPs, complied with our sustainability criteria. These represented more than 70% of our products. We look for 100% of our products to satisfy our criteria by 2020.

Sample assessment results



Refer to our website

Ricoh Sustainable Products Program (RSPP) www.ricoh.com/environment/product/sustainable/