



Environmental Action Plan up to Fiscal 2010 and the Results

The Ricoh Group's 16th Environmental Action Plan (FY 2008–2010) * Target year is set for fiscal 2010 unless otherwise specified.

1

Using resources effectively to realize a resource-recirculating society

(1) Develop environmental technologies aiming to reduce the use of resources. [Page 23](#)

- Develop resource-saving technologies to reduce the input of new resources in business and society as a whole.

(2) Increase recirculation of resources and use resources effectively to reduce the use of new resources in products. [Page 29](#)

1) Promote the reuse of parts.

- Increase the use of reusable parts recovered from used products to 1,910 tons by fiscal 2010 (Japan).

- Increase the use of reusable parts recovered from used products to 6,000 tons by fiscal 2010 (outside Japan).

2) Promote PCMR (plastic closed material recycling) (Japan).

- Achieve the fiscal 2010 target for the quantity of recycled plastic used. Fiscal 2010 target: 750 tons.

3) Increase the amount of resources recirculated from used products (outside Japan).

- Increase the amount of resources recirculated from used products (the amount reused + the amount recycled) to 16,000 tons by fiscal 2010.

4) Use biomass resins for products.

- Commercialize biomass toners.

(3) Reduce waste generated by production activities. [Page 43](#)

1) Reduce waste of resources in the thermal media business.

- Reduce the amount of waste generated by 10%, compared to fiscal 2006 figures.

2) Reduce waste of resources relating to packaging materials.

- Reduce packaging material waste per production volume in the manufacturing of imaging products in Japan by 30% compared to fiscal 2006 figures.

- Reduce packaging material waste per production volume in the manufacturing of imaging products outside Japan by 30% compared to fiscal 2007 figures.

3) Reduce waste generated in the manufacturing of polymerized toners.

- Reduce waste generated per production volume by 17%, compared to fiscal 2007 figures.

2

Developing frontier environmental technologies to cope with climate change problems and promoting business activities that reduce energy consumption

(1) Develop environmental technologies for energy conservation. [Page 26](#)

- Develop technologies to increase the energy efficiency of products and production processes that contribute to the reduction of CO₂ emissions from business and society as a whole.

(2) Improve the energy-saving performance of products. [Page 26](#)

1) Achieve Ricoh's energy-saving targets.

(3) Reduce greenhouse gas emissions in production activities. [Page 39](#)

- Reduce CO₂ emissions by 12% by fiscal 2010 (Ricoch and manufacturing subsidiaries in Japan) compared to fiscal 1990 figures.

- Reduce CO₂ emissions by 10% by fiscal 2010 (manufacturing subsidiaries outside of Japan) compared to fiscal 1998 figures.

- Reduce emissions of greenhouse gases other than CO₂ by 10% by fiscal 2010 (semiconductor business sector) compared to fiscal 1995 figures.

(4) Reduce greenhouse gas emissions in non-production activities. [Page 49](#)

- Reduce CO₂ emissions to a level that is below fiscal 2006 figures (Ricoch and non-manufacturing subsidiaries in Japan).

(5) Reduce CO₂ emissions in logistics. [Page 54](#)

- Improve by 1% or more by the basic quantity unit (compared to the previous fiscal year's figures).

(6) Expand CO₂ emission reduction efforts to involve suppliers. [Page 37](#)

(7) Contribute to the reduction of environmental impact at customers' sites. [Page 51](#)

- 1) Survey the frequencies of energy-saving and duplex copying functions used and raise their rates of use.

3

Upgrading chemical substance control aiming at environmentally safer manufacturing and business activities

(1) Improve environmentally-friendly functions. [Page 33](#)

1) Promote measures to reduce chemical emissions.

- Observe Ricoh standards that cover such substances as ozone, dust, and VOCs.

(2) Upgrade risk management relating to chemical substances. [Page 45](#)

1) Establish a global system for management of risks from chemical substances.

2) Reduce environmentally sensitive substances.

- Reduce the amount of environmentally sensitive substances used by at least 30% (Ricoch production sites and manufacturing subsidiaries) compared to fiscal 2000 figures.

- Reduce environmentally sensitive substance emissions by at least 80% (Ricoch production sites and manufacturing subsidiaries) compared to fiscal 2000 figures.

3) Make estimations of environmental debt and reflect the result in the financial accounts.

- Make estimations of environmental debt associated with PCBs and asbestos available for the premises of Group companies covered by the consolidated accounting.

- Incorporate the environmental debt in the financial accounts of the Ricoh Group.

(3) Enhance the management of chemical substances contained in products. [Page 33](#)

1) Respond to the REACH Regulation.

- Upgrade systems for management and information transmission necessary for responding to the REACH Regulation.

4

Conserving biodiversity

(1) Promote ecosystem conservation activities to enhance the self-recovery capabilities of the global environment. [Page 72](#)

Final Results

- ▶ While developing technologies to downsize products and extend their lives, we have been developing technologies to use recycled resources —now approaching 100% reuse and recycling— and to develop and utilize biomass-based materials and other renewable resources.
- ▶ Weight of parts reused reached 1,876 tons (target not met).
- ▶ Weight of parts reused reached 7,672 tons (target achieved).
- ▶ Amount of recycled plastic used reached 1,192 tons (target achieved).
- ▶ Amount of resources recirculated reached 28,161 tons (target achieved).
- ▶ We released the imagio MP 6001GP, a multifunctional digital copier using biomass toner, onto the market in November 2009 (target achieved).
- ▶ Waste generation increased by 8.6%, attributed to increased production and other causes (target not met).
- ▶ Ricoh Gotemba Plant: Reduced by 31.3% (target achieved). Tohoku Ricoh Co., Ltd.: Reduced by 18.4% (target not met). Ricoh Elemex: Reduced by 2.1% (target not met).
- ▶ REI: Reduced by 23.1% (target not met). RIF: Reduced by 14.1% (target not met). RPL: Increased by 20.3% (target not met).
- ▶ Reduced by 19.5% (target achieved).
- ▶ We are developing technologies to make our products more user-friendly and more energy-efficient as well as a production process technology to maximize energy use efficiency.
- ▶ Our copiers, multifunctional copiers, and printers all meet energy-saving goals (target achieved).
- ▶ Emissions attributed to the businesses that already existed in the base year (fiscal 1990) were reduced by 14.1%, meaning the achievement of the target. However, total emissions including those attributed to new businesses started after fiscal 1990 were reduced by 9.6%, falling short of the goal. Therefore, Certified Emission Reductions (CERs) worth 4,279 tons were transferred to Japan's national account (target achieved).
- ▶ Increased by 20.3%, mainly due to the remarkable growth of the thermal media business and the shift of the production base to China (target not met).
- ▶ Emissions of GHGs other than CO₂ were reduced by 45.3 % (target achieved). In addition to the introduction of equipment to decontaminate PCF and other gases, efforts to reduce usage itself contributed to the successful result.
- ▶ Total CO₂ emissions by non-manufacturing subsidiaries in Japan decreased by 10.3% (target achieved).
- ▶ For the three years under review, average CO₂ emissions per ton-kilometer were reduced by 1.9% (target achieved).
- ▶ We collected examples of our ongoing CO₂ reduction activities jointly conducted with model suppliers since fiscal 2009, as well as examples of CO₂ reduction activities at other suppliers.
- ▶ We made proposals to customers to encourage them to use the energy-saving mode. In fiscal 2011, we will continue this as part of our proposal to help customers reduce their environmental impact both inside and outside Japan.
- ▶ We ensured compliance with the Blue Angle requirements enacted in January 2007. Twenty copier, multifunctional copier and printer models released in fiscal 2010 meet the Ricoh standards for ozone, dust and VOCs (target achieved).
- ▶ We started to discuss the risk assessment and management system regarding the emission of environmentally sensitive substances.
- ▶ Reduced the usage by 72.9% (target achieved).
- ▶ Reduced the emissions by 87.9% (target achieved).
- ▶ Greater accuracy was achieved in the estimated group-wide environmental debt by updating the removal, new installation and other relevant costs, and by conducting a more detailed survey on the status of asbestos at the all 22 Ricoh sites which covered up to Level 3 materials (target achieved).
- ▶ The influences caused by asset retirement obligations were identified and analyzed, and were incorporated into the financial accounting (target achieved).
- ▶ We have improved the system for information transmission we established in fiscal 2008 and the operations thereof. We have also established a system to collect chemical substance information for the purpose of REACH notifications (the initial due: May 31, 2011) (target achieved).
- ▶ All the Ricoh Group's targeted organizations (99) conducted biodiversity conservation activities (target achieved).