

# Environmental Action Plan up to Fiscal 2007 and Its Results

The Ricoh Group's 15th Mid-Term Environmental Action Plan (FY 2005-2007) \* For items that do not specify a target fiscal year, the target year is fiscal 2007.

<b>1</b>  <b>Improving environmentally-friendly functions and promoting environmental technological development</b>	<p>(1) <b>Develop new environmental technologies.</b> (* Details of the progress of new technologies not currently released.) <a href="#">Page 25</a></p> <p>1) <b>Develop new environmental technologies to reduce resource use.</b> .....</p> <p>2) <b>Develop new environmental technologies to realize a society that is less dependent on fossil resources.</b> .....</p> <p>(2) <b>Improve environmentally-friendly functions.</b></p> <p>1) <b>Promote the use of energy-saving technologies in products.</b> <a href="#">Page 27</a></p> <ul style="list-style-type: none"> <li>• Achieve Ricoh's energy-saving goals. ....</li> </ul> <p>2) <b>Promote the use of resource-saving technologies in products.</b></p> <ul style="list-style-type: none"> <li>• Improve the quantity of reusable parts used by a factor of at least five (compared to fiscal 2003 figures in Japan). ....</li> <li>• Increase the quantity of recycled plastic used to 1,000 tons or more. ....</li> </ul> <p>3) <b>Observe Ricoh standards that cover environmentally-sensitive substances emitted by products.</b> <a href="#">Page 33</a></p> <ul style="list-style-type: none"> <li>• Observe Ricoh standards that cover such substances as ozone, dust, and VOC. ....</li> </ul>
<b>2</b>  <b>Promoting green marketing</b>	<p>1) <b>Increase the number of recycled copiers sold.</b> <a href="#">Page 30</a></p> <ul style="list-style-type: none"> <li>• Increase the number of recycled copiers sold by a factor of at least 10 (compared to fiscal 2003 figures in Japan). ....</li> </ul> <p>2) <b>Promote the green marketing of paper.</b></p> <ul style="list-style-type: none"> <li>• Improve the recycled pulp use rate for paper products to 60% or more (in Japan). ....</li> </ul>
<b>3</b>  <b>Environmental conservation activities that improve the effect on cost at plants and offices</b>	<p>(1) <b>Promote energy conservation at business sites.</b></p> <p>1) <b>Reduce total amount of CO<sub>2</sub> emitted as a result of business activities.</b> <a href="#">Page 37</a></p> <ul style="list-style-type: none"> <li>• Reduce CO<sub>2</sub> emissions by 12% by fiscal 2010 (Ricoch and manufacturing subsidiaries in Japan, compared to fiscal 1990 figures). ....</li> <li>• Reduce CO<sub>2</sub> emissions by 10% by fiscal 2010 (manufacturing subsidiaries outside of Japan, compared to fiscal 1998 figures). ....</li> <li>• Reduce CO<sub>2</sub> emissions by 4% (Ricoch and manufacturing subsidiaries in and outside of Japan, compared to fiscal 2000 figures). ....</li> <li>• Reduce CO<sub>2</sub> emissions by 4% (non-manufacturing subsidiaries in Japan, compared to figures in the base fiscal year set at each company). ....</li> </ul> <p>(2) <b>Promote resource conservation at business sites.</b></p> <p>1) <b>Reduce generated waste.</b> <a href="#">Page 43</a></p> <ul style="list-style-type: none"> <li>• Reduce generated waste by at least 3% (Ricoch and manufacturing subsidiaries in and outside of Japan, compared to fiscal 2000 figures). ....</li> <li>• Reduce generated waste by the ratio calculated by multiplying the number of years from the base fiscal year to fiscal 2007 by the yearly rate (2%) (non-manufacturing subsidiaries in Japan; the base fiscal year is set at each company). ....</li> </ul> <p>2) <b>Improve the waste recycling rate.</b> <a href="#">Page 43</a></p> <ul style="list-style-type: none"> <li>• Improve the waste recycling rate to at least 95% (non-manufacturing subsidiaries in Japan). ....</li> </ul> <p>3) <b>Reduce water consumption.</b> <a href="#">Page 43</a></p> <ul style="list-style-type: none"> <li>• Reduce water consumption to a level that is below fiscal 2000 figures (Ricoch production sites and manufacturing subsidiaries in and outside of Japan). ....</li> </ul> <p>4) <b>Reduce paper consumption.</b></p> <ul style="list-style-type: none"> <li>• Reduce paper consumption by at least 10% (Ricoch, manufacturing and non-manufacturing subsidiaries in Japan, and manufacturing subsidiaries outside of Japan, compared to fiscal 2002 figures). ....</li> </ul> <p>(3) <b>Promote pollution prevention at business sites.</b></p> <p>1) <b>Completely eliminate the use of chlorine organic solvents.</b></p> <ul style="list-style-type: none"> <li>• Completely eliminate chlorine organic solvents used in manufacturing Organic Photoconductors at manufacturing contractors as well as at Ricoch manufacturing divisions. ....</li> </ul> <p>2) <b>Reduce greenhouse gas emissions (except CO<sub>2</sub>).</b> <a href="#">Page 38</a></p> <ul style="list-style-type: none"> <li>• Reduce greenhouse gas emissions (except CO<sub>2</sub>) in the semiconductor business division by 15% (compared to fiscal 2000 figures). ....</li> </ul> <p>3) <b>Examine and improve soil and underground water at Ricoch's non-production sites and leased land.</b> <a href="#">Page 47</a></p> <ul style="list-style-type: none"> <li>• Complete the examination of soil and underground water at Ricoch's non-production sites and leased land (Ricoch and affiliates in and outside of Japan). ....</li> <li>• Make and implement plans to improve sites where pollution is detected. ....</li> </ul>
<b>4</b>  <b>Improving the sustainable environmental management system and making it more consistent through systems integration</b>	<p>(1) <b>Improve the sustainable environmental management system.</b></p> <p>1) <b>Improve the ISO 14001 system.</b> <a href="#">Page 51</a></p> <ul style="list-style-type: none"> <li>• Integrate the environmental management system with that of Ricoch (in fiscal 2005) and the Ricoch Group (in fiscal 2007). ....</li> </ul> <p>2) <b>Create a system of managing chemical substances contained in products.</b> <a href="#">Page 33</a></p> <ul style="list-style-type: none"> <li>• Create and enforce a management system for chemical substances contained in Ricoch Group products (in fiscal 2005). ....</li> </ul> <p>3) <b>Improve the sustainable environmental management information system.</b> <a href="#">Page 53</a></p> <ul style="list-style-type: none"> <li>• Introduce the information system, which manages real-time information on the environmental impact caused at resource processing sites, to various business divisions other than the imaging equipment division. ....</li> <li>• Introduce the information system, which manages real-time information on the environmental impact caused by transportation processes, to transportation processes outside of Japan. ....</li> </ul>
<b>5</b>  <b>Promoting environmentally-friendly social contribution activities to conserve the ecosystem</b>	<p>1) <b>Promote forest conservation activities and environmentally-friendly social contribution activities to conserve the ecosystem.</b> <a href="#">Page 67</a></p> <ul style="list-style-type: none"> <li>• Promote environmentally-friendly social contribution activities to conserve the ecosystem (regional headquarters outside of Japan; Ricoch production sites, manufacturing subsidiaries, and sales subsidiaries in Japan; Ricoch Logistics System Co., Ltd.; Ricoch Leasing Company, Ltd.; and Ricoch San-ai Service Co., Ltd.). ....</li> </ul>

\* Results for items 1 through 4 were reviewed by a third party.

## Results

- ▶ Elemental technologies are being developed for reducing the size and weight of imaging equipment.
- ▶ Research and development for new materials are being promoted so that plant-based plastic, which has been used only for some of the parts of imaging equipment, can be used in a wider area.

- ▶ Our copiers, multifunctional copiers, and printers all meet energy-saving goals (achieved).

- ▶ Quantity of reusable parts used increased 5 times (achieved).
- ▶ Quantity of recycled plastic used reached 1,346 tons (achieved).

- ▶ Twenty copier, multifunctional copier, and printer models launched in fiscal 2007 meet Ricoh's standards for ozone, dust and VOC, which are as strict as the Blue Angel requirements 2007 (achieved).

- ▶ Sales of recycled copiers increased 7.9 times (not achieved).

- ▶ We would like to refrain from reporting, as it has become difficult for us to announce the progress according to the traditional calculation method due to mislabeling of the recycled pulp composition rates by papermakers.

- ▶ Total CO<sub>2</sub> emissions decreased 15.5%. \* Calculated on the assumption that CDM will be applied to cope with any increase in CO<sub>2</sub> emissions caused by business growth of over 4% per year and changes in CO<sub>2</sub> emissions conversion coefficients
- ▶ Total CO<sub>2</sub> emissions increased 2.6%.
- ▶ Ricoh and manufacturing subsidiaries in Japan: Total CO<sub>2</sub> emissions decreased 10.6% (achieved). \* Calculated on the assumption that CDM will be applied to cope with any increase in CO<sub>2</sub> emissions caused by business growth of over 4% per year and changes in CO<sub>2</sub> emissions conversion coefficients
- ▶ Manufacturing subsidiaries outside of Japan: Total CO<sub>2</sub> emissions increased 8.8% (not achieved).
- ▶ Total CO<sub>2</sub> emissions by non-manufacturing subsidiaries in Japan decreased 17.9% (achieved).

- ▶ Generated waste increased 3.9% (not achieved).

- ▶ Changes in generated waste: 28.4% reduction at sales subsidiaries in Japan\* (achieved); 1.0% reduction at Ricoh Leasing (not achieved); 9.3% reduction at Ricoh San-ai Service (achieved); and 41.7% reduction at Ricoh Logistics System (achieved). Each company's base year for comparison: 2002 for Ricoh Logistics System and 2004 for other companies.  
\* The figure for sales subsidiaries in Japan is the total for all sales subsidiaries in Japan plus Ricoh Technosystems Co., Ltd.

- ▶ Waste recycling rate improved to 95.6%–99.5% (achieved).

- ▶ Water consumption decreased 15.7% (achieved).

- ▶ Paper consumption decreased 9.5% (not achieved).

- ▶ Use of chlorine organic solvents was completely discontinued in the consignment production of organic photoconductors at plants other than Ricoh's in fiscal 2005 (achieved). However, such efforts are still being promoted independently at the affiliates that joined the Ricoh Group after fiscal 2005.

- ▶ The emission of greenhouse gases other than CO<sub>2</sub> was reduced by 28.0% (achieved).

- ▶ The examination was completed in fiscal 2006 (achieved). However, the same examination is conducted for management purposes, if a business or land is newly purchased.
- ▶ No pollution that needed dealing with was found, or no new projects for improvement were started in fiscal 2007.

- ▶ The environmental management systems of the Ricoh Group companies were integrated (achieved). The Ricoh Group's Environmental Management Rules were established to fortify the management system of the Group.

- ▶ The PDCA cycle of the management system for chemical substances contained in products will be promoted so that management in compliance with new laws and regulations can be enhanced.

- ▶ An information system that manages information on the environmental impact of resources used in the semiconductor business sector was established (achieved).
- ▶ An information system was also created to calculate the CO<sub>2</sub> emissions per delivery in transportation processes outside of Japan (achieved).

- ▶ Social contribution activities to conserve the ecosystem were expanded at home and abroad, and sales subsidiaries and plants in various places actively participated in the projects.
  - Regional headquarters and sales subsidiaries outside of Japan: 22 projects
  - Manufacturing subsidiaries and production sites in Japan: 132 projects
  - Non-manufacturing subsidiaries in Japan (RicoH Logistics System, Ricoh Leasing, and Ricoh San-ai Service): 76 projects
  - Manufacturing subsidiaries outside of Japan: 28 projects
  - Sales subsidiaries in Japan: 111 projects