

## We strive to reduce the environmental impact of our products across their lifecycle by creating solid partnerships with suppliers.

### ■ Concept

The Ricoh Group promotes green procurement activities that place emphasis on partnerships with suppliers. Green procurement refers to the procurement of raw materials, parts, and products with less environmental impact. Parts and products so designed are manufactured in plants that are advanced in environmental conservation. The purpose of green procurement is to reduce the environmental impact over the entire lifecycle of Ricoh products and to reduce the costs to the Ricoh Group and its suppliers by using resources and energy effectively. Moreover, by establishing these activities, we aim to contribute to global environmental protection and reinforce management practices of the Ricoh Group and its suppliers. The basic policies for our activities until fiscal 2010 are to reduce the environmental impact of procured parts; to maintain and update the chemical substance management systems (CMS); and to collect information on the

environmental impact in order to comply with the REACH Regulation. We have also introduced our own paper procurement standards and rules regarding the composition ratio of recycled pulp, and we perform procurement activities by paying full consideration to biodiversity conservation.

### ■ Target for Fiscal 2010

- ◎ Work with suppliers to reduce their CO<sub>2</sub> emissions.

### ■ Review of Fiscal 2008

Activities for reducing CO<sub>2</sub> emissions contribute not only to the prevention of global warming but also to reduction of costs, leading to the reinforcement of suppliers' management practices. Based on this recognition, Ricoh is actively working with its suppliers to upgrade their operational processes and reduce CO<sub>2</sub> emissions. In fiscal 2008, we organized an energy-saving seminar for major suppliers in the area of imaging equipment, and encouraged them to formulate their own

plans and voluntarily work toward the reduction of CO<sub>2</sub> emissions. We are also conducting various activities jointly with model suppliers to help them achieve their targets to create best practices in the reduction of CO<sub>2</sub> emissions. As regards recycled paper, of which we had suspended sales since January 2008 due to the problems concerning the falsification of the content of recycled pulp by paper manufacturers, we resumed sales in April 2009 after auditing the factories and making sure of the quality of the paper, including the recycled pulp content.

### ■ Future Activities

Based on the know-how and experience accumulated through the joint activities with model suppliers, we will compile guidelines on how suppliers can improve their processes to reduce CO<sub>2</sub> emissions. Through these guidelines, we will also share information with suppliers even more actively to help them continue with their efforts to reduce CO<sub>2</sub> emissions.

### Countermeasure against the problem concerning the falsification of the content of recycled pulp

#### <Rico Group (Japan)>

In January 2008, eight papermakers were found to have falsified the content of recycled pulp for their recycled paper products, and at the end of April were ordered by the Japan Fair Trade Commission to stop such practices. Ricoh immediately suspended sales of recycled paper marketed under its brand name in January, but, after factory audits confirmed the quality of recycled paper, including their content of recycled pulp, Ricoh resumed sale of recycled paper, including 100% recycled paper, in April 2009.



Recycled paper marketed by Ricoh

The factory audits conducted by Ricoh were special audits for which check items under the recycled pulp content verification system\* of the Japan Paper Association were combined with Ricoh's own check items (quality of recycled pulp contained, quality stability [flow rate and concentration of the pulp, etc.], and the production line on sites, etc.).

\* Recycled pulp content verification system :  
<http://www.jpa.gr.jp/file/topics/20080404044926-2.pdf>

### Green purchasing

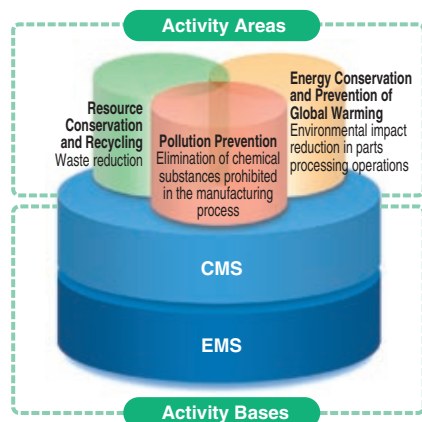
#### <Rico Group (Global)>

The Ricoh Group is promoting green purchasing, which promotes the active use of environmentally-friendly products, as a user of paper, stationery, office equipment, etc. In April 2002, the Ricoh Group formulated Green Purchasing Guidelines in Japan for eight categories: paper, stationery, office equipment, OA equipment, home appliances, work gloves, work uniforms, and lighting. Production and non-production sites outside of Japan are also promoting green purchasing by establishing their own standards.

### Green procurement activities in partnership with suppliers

Ricoh's support for suppliers' environmental conservation activities is provided in three areas: resource conservation and recycling, pollution prevention, and energy conservation and prevention of global warming. As part of this support, we have assisted suppliers in building the foundations of their environmental conservation activities, namely environmental management systems (EMS) and chemical substance management systems (CMS) since 1998. In addition, since the results of analysis of greenhouse gases generated during the lifecycle of Ricoh products show that the emissions during upstream production, such as the production of materials and parts, account for a large share of total emissions, the Ricoh Group began to support and promote suppliers' CO<sub>2</sub> reduction activities in fiscal 2007 by utilizing Ricoh's know-how acquired through its efforts to reduce CO<sub>2</sub> emissions during the production process. In fiscal 2008, about 100 of our suppliers introduced the Ricoh

### Suppliers' activity areas and bases



CO<sub>2</sub> Reduction & Evaluation Tool (RICO<sub>2</sub>RET), which enables the visualization of CO<sub>2</sub> emissions in the parts production process, and started initiatives for reducing CO<sub>2</sub> emissions based on the CO<sub>2</sub> emission level measured for each process and facility using RICO<sub>2</sub>RET.

### Establishing CMS at suppliers <Ricoh Group (Global)>

To ensure that products do not contain environmentally sensitive substances, it is necessary to monitor the upstream manufacturing process at every step. To help establish a chemical substance management system (CMS)\* across its entire supply chain, the Ricoh Group commenced a program to train and certify suppliers' employees as CMS examiners in 2005. In addition to internal audits facilitated by their own companies,

certified examiners will conduct audits upstream at second- and third-tier suppliers that deal with important processes involving environmentally sensitive substances and will support them in establishing a CMS. As of the end of March 2009, 1,250 CMS examiners at 597 suppliers were certified, and CMS was introduced at 1,985 sites of 944 first-tier suppliers, as well as at 147 second- and third-tier suppliers with important processes involving environmentally sensitive substances. The suppliers' CMS is checked every two years for certification renewal, and in fiscal 2008, 181 suppliers completed the renewal procedure. [\\* See page 28.](#)



Seminar for Japanese suppliers

### Utilization of RICO<sub>2</sub>RET—a tool for calculating CO<sub>2</sub> emissions during parts manufacturing

To reduce the environmental impact of its products effectively, Ricoh has developed the Ricoh CO<sub>2</sub> Reduction & Evaluation Tool (RICO<sub>2</sub>RET) to calculate and visualize the CO<sub>2</sub> level emitted during the manufacturing

process of parts, and is promoting the use of this tool at suppliers' sites to expedite the reduction of CO<sub>2</sub> emissions. With this tool, the volume of CO<sub>2</sub> emissions can be obtained by process to manufacture for one single unit of a part or by the facility used for processing, by simply entering the required information, such as the type and quantity of parts materials or manufacturing supplies, and the amount of energy consumed by the use of production equipment, air conditioners, and lighting fixtures. By visualizing the CO<sub>2</sub> level emitted at each stage of the parts production process in this way, the tool allows suppliers to quickly identify any necessary improvement points in the production process, and has brought about the shortening of processes, synchronization of multiple processes, and other effects that could not have been achieved if the production process had not been reviewed from the viewpoint of the environment. In addition, through the improvement activities based on RICO<sub>2</sub>RET, suppliers have come up with new methods and technologies, and other value-added ideas that can be applied to other processes. The visualization of the CO<sub>2</sub> level also proves to be very effective in the reduction of the environmental impact of lights, air conditioners, air compressors, and other equipment that is not directly connected with the production process. We will continue to expand these CO<sub>2</sub> reduction efforts throughout the supply chain.



## TOPIC

### Supporting CO<sub>2</sub> Reduction Activities at Suppliers

#### A seminar was organized to support CO<sub>2</sub> reduction activities at sites of suppliers

A fact-finding survey conducted in July 2008 regarding CO<sub>2</sub> reduction activities at 174 first-tier suppliers revealed that only about 40% of them were conducting some kind of activity aimed at reducing the environmental impact of CO<sub>2</sub> emissions across the lifecycle of their products, while the majority of them had an environmental management system (EMS) in place as the basis of their environmental activities. One of the main reasons CO<sub>2</sub> reduction activities had not been progressed as intended was because there was difficulty on the part of suppliers in measuring the exact amount of CO<sub>2</sub> emitted from their site

facilities. These findings led Ricoh to organize a seminar for suppliers regarding CO<sub>2</sub> reduction throughout their entire site in October 2008 as the first step in the company's efforts to help suppliers reduce their CO<sub>2</sub> emissions. The major items on the agenda included the calculation method for CO<sub>2</sub> emissions using conversion coefficients, basic knowledge on energy management, and best practices at some sites. We also explained effective ways of using RICO<sub>2</sub>RET, our CO<sub>2</sub> level visualization tool, to the 66 attendants from 45 suppliers so that they can fully utilize the tool to upgrade their CO<sub>2</sub> reduction activities.